

WITH BURMA

(1587-1743)

BY

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Indian Educational Service
Professor of History in the University of Rangoon



Professor Hall has explored the Indian Of and Madras Record Office sources for fr light upon the almost unknown subject of ea English enterprise in Burma. Beginning w the visit of Ralph Fitch, the first recor Englishman to reach Burma, the book tra the successive attempts of the East In Company and its servants to establish tr with the country until the destruction of old factory at Syriam by the Talaings in 17 Light is thrown upon conditions of trade in Bay of Bengal during the period dealt w and especially upon the Company's relati with the private traders, who became the c exploiters of the extensive trade between Coromandel Coast and the "land of peaco and pagodas."

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POWER CONTROL



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CONTENTS

| CHAPTER | | PAGE |
|---------|--|------|
| | INTRODUCTION: THE TRIUMPH OF THE PRESENT TENSE | I |
| I | THE POWER AND THE GLORY | 10 |
| II | PROPAGANDA TECHNIQUE | 21 |
| | Influencing the Written and Spoken Word | 25 |
| | The Industry in Politics | 37 |
| III | CONCENTRATION OF CONTROL | 47 |
| | The Holding Companies: The Technique of Milking the Public | 50 |
| | The Extent of Concentration | 66 |
| IV | RATES | 88 |
| | Increase in Profits | 91 |
| | Lack of Statistics | 96 |
| | Special Privileges of Power Consumer | 97 |
| | Social Effect of Rate Policies | 104 |
| V | REGULATION: OUR LOST PROVINCES | 116 |
| | Holding Companies as a Means of Voiding Regulation | 119 |
| | Further Reasons for Court's Ineffectiveness | 129 |
| | The Court on Valuation of Utilities | 135 |
| | Some Finer Points of Regulation | 142 |
| | Transmitting Power Across State Borders | 145 |
| | The Massachusetts System | 148 |
| VI | THE ENEMIES OF THE PEOPLE | 158 |
| | Municipal Ownership in Smaller Cities | 159 |
| | In Springfield | 168 |
| | Los Angeles | 170 |

X

CONTENTS

| CHAPTER | | PAGE |
|---------|--|------|
| VII | ACROSS THE BORDER: THE ANNOYING ANGLO-SAXONS | 180 |
| VIII | METERS AND MEASURING STICKS | 193 |
| | Boulder Dam | 198 |
| | The St. Lawrence | 216 |
| | Muscle Shoals | 239 |
| IX | THE RECAPTURE OF CONTROL | 260 |

INTRODUCTION

INTRODUCTION

THE TRIUMPH OF THE PRESENT TENSE

THE staircase of history may not exactly echo, in Jack London's figure, with the constant sound of high heels descending and wooden shoes going up, but there does seem to be a considerable clatter and crashing of institutions which have outlived their social usefulness and been broken by their arrogance. The captains and the kings have a habit of departing. Every so often we slough off ornaments and show our pretentious rulers the door. Not often do we go about this business, but every so often we do get it done.

We in the United States cling less to things our fathers found good than almost any other nation. Other nations have lived in the glamor and memory of their great past so long and thoroughly that now they have become agricultural hinterland for the nations which broke a little with their past. Thus we have been told that the building of railroads in China was long delayed because of the interference with burial customs and ancestral graves. We in this country have never let our ancestors delay our railroads, although the memory of their operations in the stocks of the Erie and the New Haven, for example, lasted long after they were dead.

Nor do we live in and for the future any more than we consciously tie ourselves to the past. Probably not even the pioneers who first crossed the Atlantic to settle here, or those who first crossed the Alleghenies or the Rockies or rushed to California

in forty-eight had the sense of building a nation, of considering the future, to the extent to which we now give them credit for such foresight. They seem to have been about the business of exchanging a job with small pay for a job with better pay and prospects, much as we are about the same business ourselves to-day and with about the same proportion falling by the side of the road. Some of them, it is true, carried banners calling for political freedom, which would seem to lend weight to the idea that they were intending to found a nation on principles. To-day the only serious banners being carried are those calling for personal freedom for woman, child and man, and the interest of most of us is in the present. The future, we might say if we even bothered to think of it, can take care of itself very well: inventors are always inventing things.

What we are subsisting on from day to day is a belief that the present isn't so bad; that we might be much worse off; that we are better off than are other nations; that there is a satisfaction in the possibility of buying a better make of car, and that the new car, a thorough study of the Book of Etiquette and perhaps Dr. Eliot's Five Foot Shelf will soon allow us to move in the class and society of the Jones-Smythes; that, in the meantime, we might as well let well enough alone: the kids will be having better radios and movies than we have ourselves. There is enough to worry about to-day without taking on too much of the future. And the business of consciously planning for the future in any social sense is confusing and difficult.

This triumph of the present tense is useful and baffling. It is useful to those people who have their

own plans for what at least the immediate future of this country shall give them in financial returns and in consequent social standing and who have the power to stake out their claims and keep the claim stakes hammered down. It is baffling to those people who pride themselves upon their hard-mindedness, who point out endlessly in the midst of a general indifference that what a few take possession of the rest of us cannot retain possession of; that, by and large, only a few people can beat the game either in Sioux Corners or Monte Carlo; that the rest of us have to act together to get along, and that, if we don't look sharply and shrewdly after our own interests now, we won't have any interests to look out for after a while, no matter how sharp and shrewd we have grown to be by that time.

This sensible conclusion, however, if it is to be of consequence requires both an attitude and an energy not easily found in the stream of modern tendencies. It is neither intellectually easy nor financially profitable for the individual to break with the dominant hierarchy of business.

—If, in our own hard-minded and skeptical moments, we doubt that the interests of the big industrialists are always and automatically the same as those of the rest of us, workers in white collars and workers in overalls, we are told a number of interesting things which go a long ways to convince us that we were wrong to doubt. The American worker, farmer and business man are far ahead of their European rivals. Our wage and profit level are higher. Not only that but we are better off than we were some years ago. More people smoke more cigarettes and wear more silk stockings and go to more movies and own more automobiles and Grand

Rapids furniture than ever before and go to better schools for longer periods of time and dress better and visit the doctor more often and eat more meat and burn more electric light. This is told to us endlessly by the men who want us to remember it. The question of whether or not we are as well off as we might be is lost in the ample proof that we are better off than Europe, Asia and Africa and better off, in a material way, than our fathers were right here in this country.

From this great pool of pleasant and flattering superiority, several conclusions are made to flow at high pressure like water through a power plant, to light public opinion along certain roads. One of them is that the men who have engineered (or financed, or merchandised as the case may be) our present material superiority may be trusted to continue and increase it still further if we only leave them properly alone and continue to throw our natural resources and franchises open to them. Thus the appointment by the President to the Federal Trade Commission, which was established to maintain competition and prevent monopolies, of men entirely in favor of monopoly; the appointment to the Interstate Commerce Commission of men whose whole experience and social and personal interests are attune with the financiers and managers of the railroads; the appointment of men to the Radio Commission whose interests are at one with those of the electrical industry, and the appointment to the Supreme Court to judge valuation cases, of men who have been employed by the railroads and other public utilities to act as counsel in valuation cases,—*all are in line with the policy of letting the men who now control the industry of the country*

also have the pleasure and privilege of putting the seal of official approval upon the way this same industry is controlled and run. The aim is to take all governmental control out of industry. The result is to leave industry in political control. It has been there a long time. And it is by no means as axiomatic as we are encouraged to assume that such control is in our common interest as either producers or consumers.

In our more skeptical and hard-minded moments, when we refuse to take the benevolent intentions of great industry on faith and begin to wonder if we are not giving up a great deal without any recompense at all, we are invited to imagine the prospect of the Congress of the United States intimately managing an industry! That no one advocates that this be done is sloughed over. Not wishing this, we are invited to permit industry to have pretty much the freedom of activity it desires, to allow it to abolish competition, to raise prices, to increase the tariff, to exploit our water powers and the like. Roughly, this seems to be the intent and purpose of most of the current magazine writing intended to discredit the legislative branch of the Government.

Some industries are more successful than others in obtaining certain privileges, in staking out a claim on the national income. The art of "public relations," as it is called, is showing a constant improvement. The crude work of buying legislatures and city councils without any pretense of concealment is now so behind us that when Mr. Samuel Insull is found to be financing both a Republican and a Democratic candidate in the Senatorial primaries of Illinois, the discovery causes considerable sorrow to many of his colleagues in the power industry. After

all there are other ways of helping a friend who happens to be chairman of a public service commission and other ways of getting national legislators to vote against government development of a few billion national power resources than by buying a seat in the Senate. One can, for example, make them dizzy with statistics collected to prove that the powers-that-be can run an industry, even a public utility industry, and charge lower rates than can the government; that the great industrial and financial figures who are the envied idols of our common life are simple humble servants of the public—they profit most who serve most. Further, for all the light a man uses in his home he only spends a cent or two of each dollar of his own income, certainly too small a sum for a good spender to protest about. There are numberless ways and means of diverting a slightly discontented public opinion.

The state of mind toward industry thus developing, in part very naturally from our indifferences and in part through some hothouse forcing, is of special importance to the electric power industry. Its burst into size and significance in our common life is not exactly a revolution, but it does accentuate and accelerate the industrial revolution that started with the steam engine and changed the character of Western civilization and is about the job of changing the character of all civilization of the earth. Large scale generation of electric power and its long distance transmission lead people to remember what the coming of steam meant to our common life and to wonder whether the coming of electric power is going to mean an accentuation and acceleration of the same thing. Steam power meant abundance of

kind, but it also meant a terrific struggle on the part of labor directly, on the part of the middle class indirectly, to secure even a small division of the increased abundance. The capitalism which grew out of the fact that steam made large scale industry possible and that large scale industry made small scale industry more and more impossible, has been little of an unmixed blessing.

This capitalism has on the whole captured the benefits of the invention of the steam engine so easily that the history-conscious mind is restless in contemplation of the repetition of the process on a similar scale when it comes to the power industry.

The historical ifs arise: If we had only at the start driven a shrewd bargain with these people who were going to change the face of nations and the lives of people for ten per cent a year instead of giving them a free hand to control the hours we got up and the clothes we wore and the way we worked and the pay we received, we would have been better off than we are to-day. If we had even imposed upon them the obligation to see that every man they put out of work by the introduction of machinery would be placed at work elsewhere or would receive as little as three months' pay in compensation for the years he spent in learning a trade now become useless . . . If we had only imposed upon them a sense of responsibility to the community to the effect that any prices which gave more than a hundred per cent return every ten years upon the capital invested were forbidden usury . . . If we had only provided that whenever we decided it was best for the common welfare that industry changed hands the owners would liquidate their investment out of their excess earn-

ings . . . If we had only known at the time that an industrial revolution was under way that was going to concentrate wealth and power in a very few hands and have the control it now has over our common life, we might have laid in a reserve supply of brakebands. We don't exactly welcome the prospect of being caught without brakebands again.

It may be relatively simple to put water into a kettle and fire beneath it and produce steam. It was not so simple to invent the way to force it through a turbine and turn wheels and light houses three hundred miles away. In the same way it is easy to drop a bucketful of water four feet and observe that it lands on the ground with considerable power, as much power in fact as eight men have or as is contained in one horsepower. It was not so easy to invent the way to force that water through a water turbine and produce electric energy which can kill a man and milk a cow three hundred miles away. But once the inventions have been made it becomes a matter of staking out and consolidating the greatest possible gains. And when a good deal over a hundred dollars is invested in mechanical capacity for the generation of every horsepower of electric energy we have all the complications of engineers interested in seeing the wheels go round smoothly, managers eager to advance to greater responsibilities and owners interested in seeing that the bread they have thrown upon the water comes back to them manifold. In short a great industry is under way. There are even consumers willing to imply that they are being charged more than they ought to be charged, an implication indignantly denied. Nothing at all is missing except a little understanding on

THE TRIUMPH OF THE PRESENT TENSE 9

the part of outsiders of what it all means. And that understanding must begin with some description of the power and the glory which is the electrical industry.

CHAPTER I

THE POWER AND THE GLORY

SINCE those days when Jehovah was reported to have said "Let there be light" and there was light, men have been fascinated by the contrast between light and darkness. The little lamp in the mother's window to guide home the erring son, the coastwise lights of England, "the little lights of Luna lure me home," the bright lights of Broadway, the sentinel beacons which blazed over England the news that the Spanish Armada had sailed, the fiery cross and the altar light, are all part and parcel of our history and our sentiment. Into the mouths of men as diverse as Goethe and Cecil Rhodes we have put the dying cry, "Light, more light."

From the smoky oil lights of the ancients and the rush lights of the nineteenth century we went on to the use of natural and artificial gas to break the darkness of night, a darkness of dangerous prowling beasts to our ancestors, a darkness of unknown horrors to young children, the darkness of footpads and murder in our less regenerate days. The change was not without its slight humors. In the long gone and far away days of the last century when ditches were usually dug for melancholy purposes only, some forgotten versifier put the wonder of the people into words:

I said, "Old man, why diggest thou that grave,
In the heart of London town?"
And the deep-toned voice of the digger replied,
"We are laying a gas pipe down."

Although the flickering, jerky gaslights were supplemented after a while with filmy mantles softening the color of the light, the cries of "progress, progress," which greeted them never quite drowned out the anxious mothers' worries that the children would come to harm. The country cousin of those days, accustomed to kerosene lamps on the farm, had a way of distinguishing himself when he came to the city by blowing out the light at night and then lighting a match to find out where the bad smell came from.

Then the electric light came in, marveled over, hailed and acclaimed, and the perversion of the light-giving forces into the way of lethal darkness stopped this side of the electric chair. From the incandescent lights of Thomas Edison with their carbonized bamboo filaments and the arc lights of Brush, invention and discovery followed until now we have the tungsten lights, thanks to Dr. Colin C. Fink's experiments in the process of drawing ductile tungsten, and Langmuir's nitrogen gas-filled bulbs which do not blacken. The new tungsten filament gave a whiter light, and consumed only one-half of the current per candle power which the earlier bulbs consumed, thereby reducing the lighting bill of the country by millions a month. There is authority for the statement that if we were still dependent upon the carbon filaments to give forth the nine billion candle power now used in this country, our power houses would have to burn 35,000,000 tons of coal a year instead of the 10,000,000 tons now used for that purpose.¹ We know the results. The Mardi Gras of New Orleans becomes a burst of light. One city presses on

¹ Waldemar Kaempfert in *Science and Discovery*.

another for the proud title of having the best lighted street in America. Just now it is Portland, Oregon, making the claim for its Broadway. The Broadway of New York City in the Forties glares with 25,000,000 candle power every night, most of it in electric advertising signs, a spectacle which drew from G. K. Chesterton the comment that it would be a wonderful sight for some one who couldn't read.

The spread of electric light has gone on and on. We are told that there are over seventeen million domestic lighting customers of the power and light industry, that there were sixty-three million people, over fifty-four per cent of our total population, living in electric lighted dwellings in 1926. On the farms the rate of progress has, of course, been slower. In 1925, 190,000, or about three per cent of the nation's six and one-half million farmers, had electric service from private central power stations. Some farmers have installed their own Delco plants and meet their needs in this way.

During the same period that the dark nights were passing, the industrial revolution was moving on from steam-driven engines toward an industrial world where the power was furnished by electricity. The necessity of keeping the coal mines dry to get coal to heat homes has changed into a necessity of running them to generate power. The line runs from the Newcomen steam mine pump of 1711 and the perfected steam engine of Watts, Evans, Corliss and Curtis to Faraday's conversion of mechanical motion into electric energy (electromagnetic induction), Fourneyron's water turbine (1827) and De Laval and Parson's rotary engine.

From the primitive mills using water power which

existed in the eleventh century in Southern Germany and Switzerland mechanical evolution in this country has brought us to a situation where we have harnessed to our turbines one-third of the 34,818,000 horsepower of our streams and rivers that is available ninety per cent of the time and one-fifth of the 55,030,000 horsepower available half of the time.² Much of this power is used directly for manufacturing purposes. Five states have almost half of all the nation's steam and water power used in manufacturing establishments.³ The 8,000 private industrial electric plants generate about 11.6 billion kilowatts each year.

The frozen netted cross work of steel and wire even outside the walls indicative of the great generators bedded in their cement foundations inside the powerhouses, are already a familiar landmark in many parts of the country. Great transmission lines, their towers "carrying the thunderbolt captive on their shoulders,"⁴ indicate to the smallest schoolboy in the country town that he is living in the electric age.

Nor are we alone in the use of electric power. As a country we use more than England, France, Germany and all other nations combined, but in the development for each inhabitant, Switzerland, Canada,

² A horsepower is regarded as sufficient to lift 550 pounds one foot in one second.

| | | |
|------------------|----------------|---------------------|
| 1. Pennsylvania | 3,457,471 h.p. | 15.1% of the nation |
| 2. Ohio | 2,291,179 " | 10.3 " " " " |
| 3. New York | 2,208,621 " | 9.9 " " " " |
| 4. Illinois | 1,587,586 " | 7.2 " " " " |
| 5. Massachusetts | 1,346,591 " | 6.5 " " " " |
| | <hr/> | |
| | 11,891,448 " | 49.0 " " " " |

⁴ See article by Robert W. Bruère in *Survey*, March, 1924.

and Norway are ahead of us. The River Shannon has a power plant three miles north of Limerick. The Jordan is harnessed. Lake Belice above Palermo will furnish 25 million kilowatt hours annually for the use of Il Duce's loyal people. Anina and Arad in Rumania sport power plants. The union of Socialist Soviet Republics plans to push the rush of the Dnieper into wires. The rocky mountains of New Zealand are said to furnish 24,000 horsepower at Mongasao. Franco de Lobo in Spain puts up a great plant. The stimulating shock of electric energy seems to be reaching to the far corners of the earth.

We have gone far from the days thirty-five years ago when the generation and transmission of multi-phase alternating currents on a large scale was first successfully demonstrated at Niagara Falls, and when on the Pacific Coast they found it possible to transmit current over two hundred miles. Yet, as men have pointed out, these were once Rubicons to cross, and engineers in the industry live to-day who were among those to make the crossing. Now in times of need power can be shot across watersheds and divides from State to State. In November, 1926, the closing of a switch in the Clarion River Station tied together interconnected transmission lines stretching from Boston to Milwaukee. No great amount of power was transmitted. It was a symbol, a challenging boast as to who indeed would have the temerity "to place a limit to the giant's unchained strength."

What next? Already we have automatic plants. There is one generating 3,000 horsepower on the St. Regis River in New York State. We go up in

the air and make aerial surveys for transmission lines. 1924 saw four steam plants of over 100,000 kilowatt capacity.⁸ The Insull interests are putting up a million kilowatt generating station on the shore of Lake Michigan. A plan is under way to harness the tides at Passamaquoddy and Cobscook Bays in Maine, which are expected to develop 600,000 horsepower.

What next, indeed? Marconi says that transference of power by radio is a possibility. A member of the French Academy of Science seriously considers the possibility of using the two temperatures of the tropical ocean to run industry there. The idea is a simple one. The surface temperature of the sea in the torrid zone is about 84 degrees Fahrenheit. The temperature at a depth of over 2,000 feet is about 40 degrees. The author's plan is to use a vacuum pump to reduce the atmospheric pressure on the warm top water and cause it to boil. The steam generated in this way is condensed by the almost freezing bottom water. A further vacuum is thus created and the stream rushing in to fill this pushes the blades of a turbine and its shaft, and this drives a dynamo. This may be some distance in the future, but after all, who can dare to set a limit?

The character of the industry changes with invention. The industry now furnishes us light and power and in some cases heat in the form of gas. While water power plants will remain water power plants, considerable change is possible in the functioning of

⁸ Kearney, N. J. (The Public Service Electric and Gas), Crawford Avenue Station (Commonwealth Edison), East River Station (New York Edison), Richard Station (Philadelphia Electric). One kilowatt equals 1.34 horsepower.

the coal-burning central station plants which will probably always produce the major part of the power of the nation. At these plants a combination of the light, power, heat and gasoline producing industries is possible. Ordinary city gas is distilled from coal at a high temperature, between 1,600 and 2,200 degrees Fahrenheit. The by-products of the distillation are ammonia, benzol and tar. The latter had no commercial value until the synthetic dye and chemical industry was developed, and the tar became the raw material for some ten thousand drugs, medicines, antiseptics, perfumes, explosives and photographic developers. Experimentation with low temperature distillation produced a semi-coke which is hailed as the artificial smokeless fuel of the future. But because the process produces so much tar for which there is at present no great market, the low temperature coking plants have not been profitable.

In any case we have plenty of coal for years and years. There is more likely to be a shortage of gasoline, however, than of coal in the near future. Germany, essentially an industrial country, found itself without oil. Its scientists went at the process of developing it from coal. Professor Friederich Bergius has developed a commercially successful process which is now controlled by the Royal Dutch-Shell Company, a great British interest, and two German companies.⁶ Their two factories produce a million barrels of gasoline and other motor oils a year. He ground the coal into powder, mixed it with a little oil and kept the temperature under 800 degrees, forced in hydrogen at high pressure, and, by cracking the large molecules into smaller ones,

⁶ The German companies have given American rights to one of the Standard Oil group.

produced motor oil. Out of a ton of bituminous coal he produces about 50 per cent gasoline, some mixed gasoline and oil, and fuel oil. If oil exhaustion in this country is really threatened within the few years mentioned by oil engineers, the high price of gasoline may force an extraction of the fuel from coal, which may do something toward adjusting the overproduction in the coal industry and make possible some new concentration of control.

This is our wonderland. The development of the electrical industry is certainly dramatic enough to make you open your eyes and your mouth. Did you know that the States around the Great Lakes alone are expected to use as much energy in 1950 as the whole country used in 1925, a matter of over 50 billion kilowatt hours? Did you know that they are baking dolls' heads with electric power? Did you know that they are refrigerating ice cream in the retail stores with electrical current in place of the fifty pounds of ice they formerly used for each gallon of ice cream? Did you know that a modern battleship of the *Constitution* type has a generating plant of 180,000 horsepower capacity? Did you know that the power plants are using one and one-half tons of coal a second to generate the nation's power? Did you know that transmission towers 460 feet high have been built to span the San Joaquin and Sacramento rivers in California? Did you know that the city of Milwaukee is getting a new name for itself by low temperature carbonization of coal to get the by-products,—tars, dyes, drugs and gases,—on a commercial basis? Did you know that wherever a farmer has to pay 15 cents a 100 pounds to have feed ground and is able to purchase electricity

for eight cents a kilowatt hour, he can, by grinding his own feed, save one-third of his normal cost, and, in addition to that, the time and labor of hauling the feed to and from the mill? Did you know that cheap power is transforming the agricultural South into an industrial South with almost six million installed horsepower? Did you know that a plant with an installed capacity of over 10,000 kilowatts generates almost eight times as many kilowatt hours per kilowatt installed as one with an installed capacity of under 300 kilowatts (2,525 kwh. as compared with 334)? Did you know that San Francisco and Los Angeles are electrified with current from the Sierras 300 miles away? Did you know that there are only around 200,000 employees in the central station industry in the country? Did you know that by connecting up the cities of Hartford, Turners Falls and Springfield a thousand tons of coal a week were saved?

These spectacular engineering achievements not only make us open our eyes and mouths in wonderment; they likewise cause us to project the engineer as the hero of the industry. He and his works are the outward and visible signs of what we are urged to believe is an inward and spiritual grace. A good many financial doubts have gone with our open-mouthed admiration at massive powerhouses and long-distance transmission lines. There is high authority for attributing our whole American wage level to the efforts of our electrical engineers. For is not our wage superiority to England or Japan directly proportional to our greater use of power? Whatever may be true of wages, certainly these engineers have done more to carry the Rooseveltian

anti-trust movement on their shoulders to its grave than have the power financiers.

Behind our admiration for achievement and our Anglo-Saxon fondness for seeing the wheels go round, the great bulk of the billion dollar investment in the industry has been passing into fewer and fewer hands. Our regulatory commissions have been gradually boxed into ineffectiveness. Our various other efforts to control the industry have not been too successful. It stands united against those who want to put up a few yardsticks by which its service to all of us as consumers can be measured. And in the union of an eight billion dollar industry there is considerable political strength.

We are still in somewhat the same stage as the people who larked and took a holiday on the first railroad trains, who massed before the shop windows in Philadelphia and Boston to see the first gas lights burn. The claims which the railroad and gas companies were to stake out for themselves on the nation's income were not dreamed of then. We did not foresee their power in the nation. Now we are just beginning to see the field which the electric light and power industry has staked out for itself in the national life. We are beginning to see its somewhat unsporting intolerance toward the mildest sort of competition. We are just beginning to see that we cannot develop a single one of our great natural resources ourselves without a vitriolic attack on our presumptuousness. We are just beginning to see that not a light will burn, not a wheel turn in the whole country, without increasing the industry's claim upon the national income. The glory the en-

gineers have wrung for themselves is sold to us by the holding companies. It is a working arrangement. It meets the American pragmatic test; it works. But we pay the bill.

The men of the power industry who stand behind and in the shadow of the engineers know what they want. So they have one simple aim, that the people say, "Oh!" and "Ah!" and that theirs be the power and the glory forever.

CHAPTER II

PROPAGANDA TECHNIQUE

IN a democracy of the type of the United States, if the electrical industry is to succeed in impressing upon the people its claims to "power and glory," it must bring its case constantly before the attention of the public. Hence the necessity of developing an extensive propaganda machine within the industry. This the industry has done in a most effective manner. In the following pages we are indicating something of the ramifications of that publicity machine. We are not here primarily concerned in pointing out whether the facts presented to the public by means of this propaganda are correct or incorrect, except in a few cases of gross misstatement. We are here principally concerned in showing that the public utilities are now engaged in propagating their point of view on an enormous scale in this country. This is being done through numerous channels.

Like many other industries, the electrical industry has special trade associations. One or more electrical associations exists in every state representative of its state companies, and these are usually affiliated with the national organization, the National Electric Light Association.

The latter association holds annual conventions, as well as district conventions, such as that of the Northwest Geographic Division and the Middle

West Power Conference. These associations initiate researches into the extension of electricity into city and rural areas, and the use of electrical appliances in the home and the farm, etc., in coöperation with interested groups, such as the Home Bureaus, the Grange, women's clubs, the domestic science and agricultural departments of universities, etc.

The power companies maintain locally their own domestic science departments run by attractive young men and women who compile dainty recipes that can be cooked on electric stoves, frozen delights that emerge from the electric refrigerator, who give advice as to the use of washing machines, and so on.

Many of these activities are legitimate and useful educational work. The inertia of the human race makes it necessary to demonstrate to the average housewife and farmer the advantages of new electric appliances. Psychologists have shown that children seem to have an instinctive fear of unaccustomed mechanical devices, and this seems to apply to adults who have been committed for years to broom, gas, horses or handwashed clothes. The Ontario Hydro Commission maintains an educational department that is constantly testing and demonstrating appliances and helping its customers to work out the most effective use for them.

In the United States this educational work is not free from other motives. The same domestic science expert who reveals the mysteries of the electric stove is also adept at explaining why the rate must be as high as it is. She has been given a superficial account of production costs, overhead, etc., by her superior officers, and this she recites to the dazed consumer who hardly understands a word and is humbled and awe-struck by the complexity and ex-

pensiveness of the electrical industry. The same officials who coöperate with the women's clubs or farm organizations have probably learned by heart the *Handbook for Speakers* issued by the National Electric Light Association describing the miracles already wrought by the industry and the dangers of government operation.

The industry reaches public opinion not only through its ever busy employees who are engaged in the dual task of selling goods and "selling" the idea of private control. It is constantly at work feeding the public with elaborate and attractive literature, injecting into the stream of public opinion literally tons of leaflets and electrifying the public with eloquent orations delivered by its corps of speakers. In 1921 a Public Relations Section of the National Electric Light Association was organized to reach public opinion, a section which, during the year ending June 30, 1926, reported an income of \$252,300.26 out of a total income to the association of \$1,056,673.84.¹

This section does its work partly through committees, including the Customer Ownership Committee, the Women's Committee, the Committee on Relations with Educational Institutions, the Committee on Relations with Banking Institutions, the Public Speaking Committee, the Information Bureau organizations, etc. The goal of the Public Relations Section, according to W. A. Jones, its chairman, is three fold: to enable the utilities to borrow money on good terms, to increase sales to the public and to obtain fair regulation. The state organizations and

¹ See Convention Report N.E.L.A., Appendix I.

the various utility companies have also organized formal or informal sections or departments for keeping contact with the public mind.

In 1927, six years after the organization of the Public Relations Section of the National Electric Light Association, the Association joined with the American Electric Railway Association, and the American Gas Association in the formation of a Joint Committee of National Utility Associations, the most extensive publicity bureau ever organized by private corporations in America.

George B. Cortelyou, President of the Consolidated Gas Company of New York, ex-Secretary of the Treasury, ex-Chairman of the National Committee of the Republican Party and director of many public utility companies, was selected the committee's chairman, and Philip H. Gadsen, vice-president of the United Gas Improvement Company, the vice-chairman. The committee represents, according to Chairman Cortelyou, corporations with an invested capital of \$17,500,000,000. It is definitely in the field to combat movements toward greater government control over the public utility field.

"We shall try among other things," declared Mr. Cortelyou in his address in Cleveland at a meeting of the Advisory Committee of the American Electric Railway Association,² "to demonstrate that the entry of Government, whether national, state or local, into this field (of public utilities) is constitutionally unsafe, politically unwise, economically unsound and competitively unfair."

The committee, with headquarters in New York City, prepares a weekly digest, which it sends ex-

² *New York Times*, October 5, 1927.

tensively among the press and public utility corporations of the country, is preparing a formidable pamphlet literature on Boulder Dam, and on various problems of public utilities, and its speakers and legislative agents are becoming increasingly active.

Influencing the Written and Spoken Word

In the nature of the case, the industry endeavors to utilize the good services of the newspapers to present its case. Discussing the best means of "securing the public's confidence," the editor of the *Electrical World* quotes with approval the statement of one executive that the industry should "take the newspaper fellows into your confidence," "buy white space in as many newspapers as your appropriation will consistently permit" and "use that space persistently and stick to the truth." "Emphasis," runs the editorial, "is given the newspaper because it affords the cheapest and quickest means of getting a utility's story to the people." And when the policy of advertising is consistently followed, "the fellow on the outside who wants to put 'the public be damned' words into a utility's mouth will not find it quite so easy to get his 'letter to the editor' printed at the top of the column with a display head."⁸

The industry in many instances has followed the advice of the *Electrical World* and, according to an estimate in the National Electric Light Association *Bulletin* for August, 1927, the electric light and power companies were planning to spend no less than \$10,000,000 in 1927 for newspaper advertising and the public utilities in general around \$28,000,000, as compared with \$14,000,000 in 1922. The in-

⁸ *Electrical World*, September 10, 1927, p. 518.

dustry has often found that such advertising has not only had a direct effect on the readers of the "ads," but that it has had a very powerful indirect effect on the editorial columns and on the news stories.

The well paid publicity agents of the utilities and their respective associations are constantly feeding the papers with "news" regarding the electrical industry. The New York State Committee on Public Utility Information sends a weekly bulletin, the *Utility Bulletin*, published under the auspices of the Empire State Gas and Electric Association, to practically every paper—in the neighborhood of 1,000—in the state and other state associations do likewise. The bulletin gives "facts" regarding the industry, mentions coming conventions, and incidentally regales the public with the "voluntary rate reductions" in the electric and gas industries and an account of the "failures" of public concerns. Other state groups publish similar sheets. A large part of the material in some of the bulletins is syndicated. These sheets, in many instances, are sent to college professors and other strategic individuals and institutions, as well as to the press. The weekly service of the Joint Committee of National Utility Associations has been referred to. Again let us say that we are not here arguing the correctness of the claims set forth in these bulletins, but are merely recording the fact that such statements are disseminated by the industry on a very large scale.

Of late the electrical industry is also seeing the very great publicity value of the radio in its campaign of "education." Thus, in dealing with the public relations methods of the Edison Electric

Illuminating Company of Boston, one of the speakers recently declared:

"This company feels that its establishment of a broadcasting station with a well planned program of entertainment has had a marked influence in reaching and obtaining public attention and good feeling."⁴

Throughout the country, the electrical interests have tied up with the great radio stations. The National Broadcasting Company, the greatest of these agencies, which has affiliated with it an ever increasing number of stations and owns in New York WEAJ and WJZ, the two outstanding metropolitan stations, is controlled by the General Electric Company, the Westinghouse Corporation and the Radio Corporation of America. President M. H. Aylesworth of this Company was formerly publicity director of the National Electric Light Association. The New York Edison Company has a weekly radio hour advertising the company and other electrical utilities are doing likewise. Scores of addresses are constantly being given at radio stations throughout the country on the wonders of the electrical industry under private ownership and control, while the advocates of public ownership find less easy access to the air.

Nor do the orators for the electrical industry confine their efforts to the radio audiences. They take advantage of every opportunity to deliver their message from the platform and in the 1927 report of the Public Relations Section of the N.E.L.A., the section's chairman reported that the Public Speaking Committee of the Association had helped to schedule some 18,000 talks before civic bodies, with audiences approximating 2,000,000 people. Illustrated lectures

⁴ N.E.L.A. *Bulletin*, July, 1927, p. 394.

are considered especially effective. In these lectures the technical and the social aspects of the industry are both touched upon.

In the form of propaganda literature, the electrical industry publishes not only bulletins, but many magazines, pamphlets, leaflets and weighty volumes on technical and public aspects of electrical energy.

In the 1926 report of the Public Relations Section of the N.E.L.A., it was estimated that this department during the year received \$119,054.31—probably chiefly from affiliated companies—for its pamphlet literature. Both the speakers sent out by the industry and the pamphlets prepared for it—many of the pamphlets are reprints of addresses given at some important gathering—draw deep satisfaction from the fact that, despite the rising costs of labor and materials, electric light rates did not rise during the war and have come down since the war. This information is generally accompanied by striking charts showing the downward trend of electric light rates and the upward trend of all other commodities. It usually conveys, however, not a word about costs per kilowatt hour, even in 1913 prices; not a word about the great mechanical inventions that have reduced these costs; not a word about the relationship of rates to a rapidly expanding service; not a word about the growing profits of the industry—considerations which, as will be shown in a later chapter, are vital to any valid conclusions on the reasonableness of present rates.⁵

Over and over again in this literature we are told that the state is a poor business man. Ontario's experiment in public ownership is submitted to ridi-

⁵ See Chapter IV.

cule and "facts" regarding this experiment are given—"facts," the critics of the industry claim, which the people of Ontario at times fail to recognize. The decrease in the number of municipal plants is hailed as a proof of the pudding, although the fact that small privately run plants are also rapidly disappearing is not generally mentioned. Russia is occasionally brought in as an awful example, war-time government extravagance is claimed to be the rule, and those who advocate government operation are usually dismissed as demagogues playing upon the prejudices of the ignorant.

The Goddess of History must sometimes smile at the way the companies approve in this literature of the Federal Power Act. The reader might almost think that this Act had sprung full grown from the composite head of the electrical corporations when, as a matter of fact, the electrical interests fought it bitterly for many years. It is now regarded as an agreeable alternative to government operation. The "deplorable" consequences of the government operation of either Muscle Shoals or Boulder Dam are vigorously set forth in many leaflets circulated by the companies.

No opportunity is missed to cite the alleged weaknesses of public ownership and the advantages of private initiative. The pamphlets on Boulder Dam, for instance, published by the Joint Committee of National Utility Associations and edited by Dr. Frank Bohn, erstwhile co-author with William D. Haywood of *Industrial Socialism*, and a frequent contributor on power problems in the country's press, bristle with denunciation of the "wild cat government activity in the water power business" which is urged by advocates of public development at Boulder Dam,

activity that "would spell ruin and paralysis to our successful national policy of creating this great industry by private capital and initiative." ⁶

Certain readers have expressed their wonder why so much energy is wasted in fighting the birth of an experiment that appears to be doomed to failure from the first. Why not try the experiment in public ownership, one might argue, so that the people might learn once for all from actual experience? Is it possible that the industry is just a little doubtful as to whether failure under public development is inevitable?

Some of the larger studies subsidized by the industry have evoked the greatest degree of criticism. Several years ago the National Electric Light Association sponsored a study of the Ontario Hydro-Electric Power Commission by W. S. Murray, engineer. Mr. Murray's report was an elaborate one. It was widely circulated in the nation's libraries. It invited a reply from the Ontario Hydro-Electric Power Commission. Sir Adam Beck of the Commission commented caustically, among other things, on Mr. Murray's comparison between the cost of street lighting per capita in the city of Buffalo, under private ownership, and that in Toronto under public ownership. Murray had maintained that the Buffalo rate of lighting streets with electricity was 60 cents per capita in Buffalo as compared with 67 cents in Toronto. In making his comparison, observed the Commission, Mr. Murray overlooked one fact. In Buffalo about *one-half* of the street lights were electric lights and about one-half gas or gasoline lights, whereas in Toronto *all* the street lights were electric

⁶ See *The Boulder Canyon Dam*, p. 15.

lights. The author had thus taken, as the *Refutation by the Hydro-Electric Commission* shows, "less than one-half of the total cost of street lighting in Buffalo and then compared it with the whole cost of all the street lighting in Toronto." "Had Mr. Murray used the figures necessary to effect a correct comparison," continued Sir Adam Beck, "then he would have had to say that, in 1920, the total cost of street lighting per capita in Buffalo was \$1.15 and not 60 cents per capita as he has incorrectly stated."

In some instances, the various electrical industries have spent thousands of dollars in circulating reports which, by direction or indirection, have obtained the stamp of governmental approval and an appearance of impartiality, but which are, in reality, a part of a definite propaganda campaign. An apparent example of such is a study of Samuel S. Wyer on "Niagara Falls: Its Power Possibilities and Preservation" and published in 1925 by the Smithsonian Institute, with an Introduction by Charles D. Walcott, Secretary of the Institute.

This report gives, among other things, a comparison between the rates in Ontario and those in the United States. In explaining the reasons for the low rates under public ownership in Ontario, it declares that the hydro-electric system there is not taxed, that power customers have to help pay for the cost of delivering cheap electricity to domestic consumers and that \$19,000,000 of the cost of building the system was not at the time of writing included in the electricity rates. These contentions, among others, have not gone entirely unchallenged. Sir Adam Beck, in dealing with the question of taxation, said: "The Hydro-Electric Power Commission pays taxes both to municipalities and to the Provincial

Government, to the extent of hundreds of thousands of dollars annually, not only on land which it occupies, but in connection with other properties which it operates. In addition, the Commission has paid millions of dollars in customs duties to the government of Canada, directly and indirectly, on materials and equipment which must be imported from the United States and other countries,—a charge for which there is no similar expense of comparable magnitude in the construction and operation of United States utilities.”⁷

To the assertion that the domestic consumers are given lower rates than is justified as compared with the power consumers, Sir Adam replied that each municipality in Ontario “is required to keep its detailed records in such form as to permit of an accurate allocation of all costs to each class of service; these records are analyzed annually, and if in any year any class is found to have been bearing either more or less than the actual cost of its own service, the rates for the succeeding year are adjusted to correct such a condition.”⁸

On the other hand, he maintained, “the most cursory examination of relative rates as between domestic and industrial consumers in many cities of the United States will show excessive disparity. Although it is true that the cost per kilowatt hour sold is, in general, greater for residential service than for power service, the differences in cost can hardly be so great as the differences in rates charged in certain cities of the United States. It is, for example, hardly possible that the average cost per kilowatt

⁷ *Misstatements and Misrepresentations Contained in a Report Published by the Smithsonian Institute (1925)*, p. 7.

⁸ *Ibid.*, p. 19.

hour sold to domestic consumers over a whole city should be more than ten times as great as the corresponding average cost per kilowatt hour to the industrial consumers of the same city, yet, in certain instances which have come to the Commission's attention, the 'government regulated' private utilities in the United States charged actually ten times as much, per kilowatt hour sold, to domestic consumers, the averages including all the consumers in the two classes over the whole city." ⁹

To Mr. Wyer's charge that \$19,000,000 of the cost of the system had not been included in the power rate, and that the consumers had failed to pay the full cost, Sir Adam Beck maintained that, notwithstanding its low rates, the Commission had, by that time, collected from its customers about \$7,000,000 *in excess* of cost, as Mr. Wyer defined the term, and that, furthermore, the municipalities had collected from their customers additional sums amounting to about \$15,500,000 in excess of this "cost" of serving their consumers.

The power industry has also given wide circulation to outside studies such as Professor Mavor's *Niagara in Politics*, which consists chiefly of an attempt to prove that the Hydro-Electric Commission in Ontario has sought to dominate the politics of the Province, an accusation which many political leaders have denied; and more recently Ernest Greenwood's *Aladdin, U.S.A.*, a clever book containing numerous misstatements. It often uses other channels of propaganda, such as insurance companies ¹⁰ and "disinterested" public men. Judson King shows this strikingly in Bulletin 115 of the National Popular Government League.

⁹ *Ibid.*, p. 9.

¹⁰ See Chapter VIII.

It has been exceedingly solicitous about reaching the schools and colleges and has seen to it that vast quantities of literature were distributed free to school and college libraries and among college professors. It has watched with an eagle eye the use of text books in the schools; has prepared text books that would give its point of view and has agitated for the removal of books favorable to public ownership. Its committee on Relations with Educational Institutions, in the 1927 convention of the National Electric Light Association, complained that eight states used books favoring government ownership. To combat such a condition, it maintained, was one of the aims of this committee.

In certain instances the industry has spent large sums in the promotion of research work along public utility lines in the colleges.

The chairman of the Public Relations Section in the 1926 convention, in dealing with the coöperation of the industry with educational institutions, declared that outstanding development of the year's work was the inauguration "under the financial support of the Association—under the generous financial support of the Association—of research work in public utility management at Harvard University and in the Institute of Research in Land Economics and Public Utilities housed at Northwestern University."

If the chairman had any word of disapproval as to the conduct of the faculty at Northwestern University, which received several thousand dollars for research purposes, he did not voice it. At Harvard, however, which had likewise been given a generous appropriation for utility research work, the case was different. Professor William Z. Ripley, Profes-

sor of Political Economy at Harvard, had, however, taken occasion, during the year, in the face of the industry's gift to that institution, to question some of the financial practices of the public utilities.¹¹ This proved a surprise and disappointment to many in the electrical industry, and caused the following comment from the chairman of the Section:

"The Association found itself somewhat in the position of having got hold of something by the tail, and not quite being able to let go and not knowing quite where the two beasts were going to carry it. . . .

"During the year there have been two outbursts in particular in the published papers of economic journals which have rather stirred up some of the members of our Association. These came from one of the institutions to which we are giving some financial support. . . .

"There are two aspects of the organization of educational institutions which may not be entirely clear to us. . . . The individual mule in the team of twenty must be allowed to kick over the traces once in a while if he will. Otherwise the search for truth, the advancement of truth, the very credibility of the institution suffers.

"And so if occasionally a professor breaks loose on stuff that does not please us, let us bear in mind always that he may not be expressing the consensus of opinion of his colleagues. . . .

"The one suggestion I would offer is that the professor is most amenable to inspiration. If we can be sure that we have got hold, with reference to our industry, of the will of Jehovah, perhaps we may

¹¹ See Professor Ripley's subsequent book on *Main Street and Wall Street* (1927). Boston, Little, Brown & Co.

also play the part of Jehovah in putting into the mouth of the particular Balaam, whom we are asking to go forth, something of the truth which we would like, which we have a right to expect to have, prophesied." ¹²

The industry has during the last few years made a special effort to reach the women members of the community and to see that every inquiring women's club is given the correct view of the situation.

A special Women's Committee, as has been said, has been organized by the National Electric Light Association to interest women's clubs, and literature is specially prepared for the home-maker. Thus we find *Your Servants the Public Utilities*, a pamphlet prepared by the Women's Section of the N. Y. State Committee on Public Utility Information, purporting to come from "the women engaged in the business of furnishing gas and electric service to the public," and who as such "appreciate the importance of their service to the millions of other women" dependent on such service. The pamphlet endeavors to prove that the industry is owned by the people, is efficiently and soundly run, is adequately regulated and deals honestly with its consumers. It sets forth the community's duty as that of paying enough to cover costs of operation and to yield a fair return to the company, and urges the hearty coöperation of the women with its management. Like other of the utility literature, it fails, however, to burden the women's mind with facts on holding companies, inflated values, increased profits, decreased costs, the corporation's fights against reduced rates, etc.

¹² Convention Report, N.E.L.A., 1926, pp. 310-11.

The farmers are another class in the community which have been carefully cultivated by the publicity bureaus of the electrical industry. Literature and lecturers have been freely supplied to their organizations, radios in farm communities have been utilized and boiler plate matter has been generously supplied to their press. In California, for instance, lecturers, ostensibly representative of the State Grange and other farm groups for years have traveled from one farm organization to another attacking public ownership policies. A recent pamphlet given wide distribution among California farms, entitled "American Agriculture and Putrid Politics," and written by one of these lecturers, deals with Muscle Shoals and Boulder Dam, and vigorously attacks the proposals for public development. This pamphlet contains at its head the following: "Reprinted from October, 1927, California Farm Bureau Monthlies and the California State Grange Bulletin and distributed by the California Farmers' Union, and broadcast over California Farm Bureau Station KQW at San José as a part of the California Farm Bureau Evening Radio News 499th Daily Edition." Despite the inference in the above, the Farm Bureau claims that it has not authorized the distribution of the pamphlet.

The Industry in Politics

The industry has not confined its attention to mere general educational propaganda. It has sent its highly paid publicity men and experts to lobby for it at practically every state and national legislative session where the question of the industry was likely to come up for legislative action.

The utility companies have likewise taken a very active part in a number of political campaigns. Perhaps a classic example of its activities is the campaign urged by the California electrical corporations against the proposed Water and Power Act, an act for the public development of the state's power resources, submitted in 1922 to the people of California in the fall election. The power interests opposed this proposed Water and Power Act and expended large sums of money in opposition. The extent of their participation was not known until after the campaign when the Jones Legislative Investigating Committee was appointed to investigate the matter. Before this committee corporation executives and agents admitted the expenditure of \$501,605.68 to defeat the measure.

Eustace Cullinan, head of the so-called Greater California League, told the committee in his testimony of January 30, 1923, in the course of a searching examination, that his organization alone had expended \$244,941.04 in opposition to the act. His League, he stated, "never had a meeting. . . . I appointed myself president (at a salary of \$25,000). I was employed by the power companies, through Mr. John S. Drum (director of the Pacific Gas and Electric Company and the California Gas and Electric Corporation and formerly president of the American Bankers' Association), who met with myself, after the employment, and organized the Greater California League. . . . No one had access to the account except myself."

He received the money, he declared, from six power companies. The Pacific Gas and Electric Company was the largest contributor, with a sub-

scription of \$133,947.80. The other contributions were approximately as follows:

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|---|-------------|
| Great Western Power Company | \$45,589.20 |
| San Joaquin Light and Power Corporation | 16,205.00 |
| Western States Gas and Electric Company | 16,205.00 |
| California-Oregon Power Company | 4,706.00 |
| Snow Mountain Water and Power Company | 175.00 |

One means of reaching the voters, according to Mr. Cullinan, was to prepare leaflets against the Water and Power bill, and to have these leaflets sent to about thirty bond houses of the city and slipped into envelopes with other printed matter of these houses. The leaflets contained the imprint of the bond houses mailing them, and appeared to the voters as literature especially prepared by these houses. The public service corporations contributing money never asked for any accounting nor did they set any limit to the expenditure allowed.

During the campaign, the power interests employed several leaders of the community to influence their respective groups against the Water and Power Act.

One of these leaders was P. H. McCarthy, for years State president of the Building Trades Council. Mr. McCarthy was employed by John A. Britton, manager of the Pacific Gas and Electric Company, during two or three months' period at the end of the campaign at a compensation of \$10,000 to "do all that he could with the Building Trades organization in educating them against the act." Mr. Britton never inquired what McCarthy did with the money; but he "could feel the influence of Mr. McCarthy's employment almost immediately, in the reaction among the laboring element."

George Skaller, Secretary-Manager of the Civic League of Improvement organizations, was also regarded by the power interests as a strategic molder of civic opinion. After the Civic League went on record against the proposed act, Mr. Skaller visited Mr. Britton and secured for his organization a check for \$4,000, and for his personal services during the last month of the campaign the sum of \$2,000. Mr. Skaller, testified Manager Britton, was, like McCarthy, "a man of very wide acquaintance, and about that time, we were getting a little alarmed; we didn't know whether the people were going to see the sanity of the thing in fighting against the act—a little apprehensive—and we were reaching out for every avenue, legitimately, that we could to inform people." The \$4,000 was used up in postage in mailing out literature to civic bodies and citizens supplied to the Civic League by Mr. Cullinan.

Nor were social leaders neglected. The same witness stated that he had paid one woman prominent in social club circles \$1,000 for "her extended acquaintance." "It occurred to me," he said, "it would be a very good opportunity to get an entrée into these clubs through her to educate the women particularly in the viciousness of that act—and she did her duty well too. I'll tell you she did her duty very well, as the vote shows there." The press also was treated generously.

So much for the activities of the companies in the central part of the state. In the southern end, similar measures were used. The companies had here sponsored an organization with the non-committal name of the People's Economy League, which operated in Los Angeles and bore the brunt of the fight against public development. This organization handled

Southern California Edison money principally. At the head of the People's Economy League, holding essentially the same position as did Eustace Cullinan in the Greater California League, was Herbert L. Cornish. Mr. Cornish testified that he had spent in connection with the fight against the act, including a personal salary of \$26,000 for some eleven months' work, a sum aggregating \$107,605. Of this amount, the Southern California Edison Company, according to R. H. Ballard, vice-president and general manager, contributed the sum of \$97,025.65. In addition it expended \$1,956.97 in a campaign of education, plus the time of its employees on election day, time valued at \$29,152.69, and a further amount of \$5,000 used in part toward securing the services of Engineer W. S. Murray, author of the Murray Report on Ontario, as a lecturer during the campaign. Mr. Murray, however, was not particularly successful in his efforts to decry the success of the Ontario experiment and soon returned to the East.

The employees, according to Mr. Ballard, manned the polls, visited the citizens and made it "convenient for the known negative votes to get to the polls, through the use of these men and automobiles."

The Manager of the Southern California Edison pointed with pride to the fact that these tactics led to the very definite defeat of the act in the districts covered.

Sections of the industry have not spared themselves in trying to show their good will toward legislators—especially when they were likely to pass on legislation affecting the electrical industry.

"Thirty-one members of the state legislature, eleven senators and twenty assemblymen, six members of the Los Angeles City Council, a former

member of the legislature and four others were the guests of the Southern Edison Company in a four- or five-day junket, completed last week," reads the *Fresno* (California) *Bee*, (Sept. 22, 1927), "to view the company's huge hydro-electric development in the high Sierras of Fresno County.

"Assembling here from various parts of the state and representing one-fourth of the voting power of the state law-making body, the Solons and others comprising the party spent three days in the inspection trip, with every expense met by the power concern. . . .

"On these trips the propaganda of the efficiency of privately owned public utility concerns in opposition to the possibilities in magnitude and efficiency of publicly owned enterprises is tactfully, yet forcefully, injected by various means." Many legislators are also given to realize that, for services rendered, they may be considered for certain remunerative occupations in the industry when their term of office expires. And there are still other methods of exercising a control over the nation's legislators.

The industry has also at its beck and call the services of highly paid attorneys, statisticians and special pleaders to oppose any measures prejudicial to those in control. The attempt of the head of the Commonwealth Edison Company to keep on the right side of politicians by contributing \$125,000 to the campaign expenses of a candidate for the United States Senate who himself was once a member of the Public Service Commission, and other thousands to the campaign of an opposing party is too well known to require comment here.

At present writing, according to a dispatch in the *New York Times* (Sept. 24, 1927), "the industry as

a whole is carrying on a campaign to provide speakers and newspapers with material representing the industry's views. The campaign will seek particularly to inform the public on projects such as Boulder Dam, and on its success will probably depend the announcement of further important mergers in the utility field." Senator Hiram W. Johnson has recently maintained that the industry's lobby against the Colorado and Boulder Dam projects is the greatest lobby in history. He asserted that Josiah Newcomb, chief of the Eastern Utility lobby, had recently dined thirty members of the Washington press as one step in oiling up the engine of publicity.¹³

During the past few years, the industry has sought to utilize its enlarged circle of customer and employee stockholders as advocates of its policies. The "customer-employee ownership" policy, in fact, was started in 1914 by the Pacific Gas and Electric Company, for the purpose, among other things, of stalemating "socialistic doctrines that invade the right of private initiative"—¹⁴ in other words, of fighting the demand for public ownership. Since 1914, public utilities throughout the country have conducted widespread stock-selling campaigns among the customers and workers. In these campaigns bonuses have been given to the employees who sell the most stock. No Liberty Loan during the war was put over with more zest and display of stirring posters than have some of these campaigns.

Usually the stocks offered are non-voting debentures. Even when they carry voting privileges, the

¹³ *New York Times*, November 11, 1927.

¹⁴ See Fred Brandt in *New York Times*, September 18, 1927.

individual owners of stock are so scattered that it is impossible for them to come together for the formulation of a policy, and control is further concentrated among those on the inside.

As a result of these various campaigns, the industry now claims 3,000,000 stockholders, and a greater diffusion of ownership than in any other industry. Taking advantage of the prestige acquired by the public ownership movement, the private corporations are now claiming that the industry is "publicly owned" or "popularly owned," as contrasted with "politically owned," in the real sense of that term.

During the 1920 campaign against the proposed Water and Power Act the Southern California Edison Company went on the assumption that the owners of stock in the company constituted a fertile field for agitation against public development. Mr. Ballard of the company testified before the Senate Committee that the work of his company during the campaign "consisted of interviewing through the employees, each of our approximately fifty thousand stockholders residing in Southern California, and acquainting them with the provisions of the Act. That work was done by employees, over 400 of whom are, themselves, stockholders in the concern, and who, in general, sold this stock to the people. Our general plan of stock sales has been very largely to the people." To an increasing extent the utility companies are mailing "little lessons on sound economics" to the stockholders and customers with monthly bills and quarterly dividends as a means of "popular education."

The industry feels that all of its educational work is having its effect. For one thing, "in the last few

years, in fact, more particularly perhaps in the last year, there has been a striking change in public opinion as evidenced by the press on the consolidations of electric companies and electric properties," says a writer in the weekly digest of the Joint Committee (Oct. 8, 1927). "Some years ago, such amalgamations as have been taking place would have been received with bitter hostility and widespread anxiety. To-day, there is a very general realization that consolidation of physical plant and of financial structure is an inevitable development of the electrical industry, making for greater economy, efficiency and service to the people."

Thus the electrical industry, in its propaganda campaign, sets up gigantic publicity departments in its local, state and national associations and corporations. It makes use of its salesmen for propaganda against public control and in favor of the status quo. It feeds the newspapers and magazines with laudatory advertisements, with news and feature bulletins, with articles. It utilizes the new and important agency of popular education—the radio—controlled by forces favorable to it, on innumerable occasions. It subsidizes special researches into the "iniquitous system of public ownership" and gives wide circulation to voluminous reports—not always scientific—published as a result of its subsidies. It prints great quantities of articles and addresses against public control and explanatory of the "supremely successful" character of private enterprise. It conducts extensive political campaigns against proposed legislation in favor of public development—paying large bonuses to civic, social and labor leaders for their influence in reaching their respective con-

stituencies. It engages high pressure lobbyists to appear before legislatures. It provides carefully prepared lessons in the economics of private enterprise to its customers, stockholders and employees, and in a thousand and one ingenious ways, seeks to bring the "power and the glory" of private development adequately before the American public. Not entirely with the public's knowledge or consent, the cost of much of this propaganda is borne by the purchasers of electrical energy. And the publicity machine of the industry is still in its infancy.

CHAPTER III

CONCENTRATION OF CONTROL

THE control of the power industry, like that over many other industries, is gradually passing into fewer and fewer hands. As consumers, we are not sure that we like this. How often have we been told that competition is the life of trade, that it alone allows the slightly disregarded laws of supply and demand to operate! In consequence the concentration of ownership, with its approach to monopoly, is not usually hailed with popular applause or celebrated by dancing on the streets. Social coolness, however, fails to stop development toward monopoly. The financiers in the industry know what they want. They are getting it.

Whenever, as in the past, competition seemed to be going to the bad, we have sought, mildly, to put it back on the right path, feeling that therein lay our salvation as consumers. In some cases we set after those trying to stifle competition. They were Roosevelt's "malefactors of great wealth." To protect us against their activities the Sherman and Clayton anti-trust laws were placed on the statute books and the Federal Trade Commission, with its "cease and desist" powers, was created.

In other cases we looked behind the name and thought we saw elements in an industry which so differentiated it from the mass as to render competition an inefficient principle of organization. To protect us against them our state public service com-

missions, our Interstate Commerce Acts, our Federal Reserve Board system¹ came into being. Thus we gained our conceptions of "natural monopolies," where regulation takes the place of competition. The power industry is in this class.

The trend of opinion has also seemed to favor in late years the development of large scale production, if not of monopoly, in the chain drug store business, the chain grocery store business, the ice industry and their companions. The small business man who runs up against these combinations may dislike them, but, on the whole, the man in the street—the consumer—seems to have made up his mind that there is no objection to the size of the industries and businesses so long as they don't increase his bills. The trend of opinion is to judge large scale combinations by their function and results rather than by their size. Objection to them must run in terms of their specific activity against the common welfare.

One of the grave dangers of these great aggregations of capital from the standpoint of the public is the political influence they wield. For it is becoming to be a truism that any great industry that has much to lose or gain from the discussion of the state is going to acquire a certain political influence. The railroads had it in the days when they were getting land concessions and in the later days when they were subject to regulation by the state commissions.

Some men object to the wielding of this influence by private corporations. It doesn't fit in with their idea of a free and independent electorate. They don't like Mr. Insull's \$237,000 outlay in the Illinois

¹ See May and Keezer, *Legal Control of Competition*, for a general discussion of this evolution.

election in 1926, a large part of which went to a chairman of the public service commission who was running for United States Senator where his vote on the disposal of the nation's water power resources would be useful. They don't like the idea of a man who owned with his family millions of dollars in the power plants of the state running for Governor of New York at a time when the whole power situation was due for an overhauling. They believe that political manipulations of this nature will ultimately redound to the disadvantage of the consumer—will ultimately mean higher rates or the failure adequately to reduce rates. They believe that it has a vitiating effect upon our public life and, from the standpoint of public interest, they think it is absurd and malicious for the spokesman of the power industry, both in and out of the government, to look with favor upon the concentration of wealth and at the same time with complete disfavor upon the concentration of public control over the concentration of wealth.

They think that powerful combinations of capital must be met by a powerful government. They know that any officer of a power industry who spoke out in public for a de-concentration of financial control in the industry would be given his walking papers at once, and wonder how it happens that spokesmen for the government can speak out in favor of a weaker government and stay in office. There are those who think like that. They seem, however, to be in the minority.

Many consumers are also looking at the huge profits made in such industries as the power industry, and are beginning to wonder whether they do not

really lose when the insiders gain such great stakes. Is it really true, the old wisdom of the Chaldeans, they ask, that what some gain, others lose; what some lose, others gain? Or does the prosperity of a few mean the prosperity of all, automatically and without need for proof and demonstration? They present a typical list of stocks, and point to their advance in the five-year period 1921-1926:

| | 1921 (High) | 1926 (High) |
|--------------------------------------|----------------|----------------|
| American Light and Traction Co. . . | 112 | 264 |
| North American Co. | 46 | 670 |
| Middle West Utilities | 24 | 134 |
| Standard Gas and Electric Co. . . . | 17 | 69 |
| Columbia Gas and Electric Co. . . . | 68 | 270 |
| American Waterworks and Electric | 6 | 270 |
| Public Service of Northern Illinois | 82 | 143 |
| Philadelphia Co. | 35 | 91 |
| Philadelphia Electric Co. | 22 | 67 |
| Republic Railway and Light | 7 | 98 |
| United Gas and Electric | 1 | 66 |
| United Gas Improvement | 39 | 120 |

These are mostly holding companies for great networks of operating companies, and the latter are supposedly under regulation. "Somebody has been making a lot of money," our skeptic-consumer says. Somebody has.

The Holding Companies: The Technique of Milking the Public

The holding companies which have been the means by which the power industry has been gathered into relatively few hands maintain that their existence and the tribute they exact are justifiable. They explain

that they render several distinct services. They have, they insist, absolutely no influence in keeping up rates to the consumers. By acting as investment companies, they scatter the risk of their securities by diverse holdings, often in different parts of the country. By unifying companies, formerly separated, by furnishing these companies with engineering and management service, by financing when the market is favorable, they provide, they claim, better service at lower cost to the consumer. The proof of the pudding, they say, is in the fact that rates have gone down somewhat in recent years.

These are claims which should be separated and qualified. Hookups of connectable plants have certainly been one of the greatest means of distributing the load and securing efficiency of which the industry knows. Yet in the main it must be said that these great concentrations of control have not been built on the plan of interconnected systems. Some have been. The Southeastern Power and Light, with its area of influence in the eastern half of Mississippi, all of Alabama, Northern Georgia, Central South Carolina, and Northwestern Florida, is such a company. The interests connected with the Northeastern in New York State have joined with the same plan. On the other hand, the Insull interests are scattered through twenty-one states. The American Waterworks and Electric operates in sixteen states, the Cities Service in nineteen states, the American Power and Light, in eleven states. The power map of the country to-day shows that most of the operating companies were picked up by the holding companies in a fairly random manner. *There has been no great unified planning for the apportionment of the country. The planning has been competitive and hap-*

hazard. Hookups for the more efficient use of power do not seem to have been the main factor in most cases.

Nor, considering the inflated values often paid by holding companies to local plants, and subsequent higher capital charges, has the consumer had any assurance that he would participate in the increased efficiencies brought about by centralized control. With the technical advances in industry, local companies in recent years have been faced with the alternative of expansion, of securing any nearby territory not already preëmpted, in order to effect the economies of large scale production, or of selling out. And in selling out they have often been able to play one large system against another for what it was worth. This explains some of the prices paid for local plants. It was, for instance, competition between the Associated Gas and Electric and the Power Corporation of New York which forced the latter to pay for some of the properties around the St. Lawrence project between three and eight times as much as their book value.² With this fact of the increasing efficiency of the engineering part of the industry as a persuader, the holding companies have been able to make successful use of their function as investment bankers.

Neither can it be said that the superior financing abilities of the holding companies always justify their existence, as far as the consumer is concerned, although they may amply do so for the owners. There are certain possibilities of gain for those engaged in

² For the Malone Company, \$547 for book value of \$155; for the Fort Covington Company, \$1,250 for book value \$358; for the Brasher Falls Company, \$1,687 for book value \$190.

merging companies that have not been lost sight of. There are, for instance, not only the bankers' fees,^a often considerable items; there is a large chance for recapitalization of values and the possibility of getting the benefit of such recapitalizations into the hands of a few people.

It is here particularly that the holding companies are of distinct service to those on the inside. During February, 1926, the hearing before the Connecticut Public Service Commission on proposed mergers in that state, the President of the Hartford Electric Light Company, Mr. Samuel Ferguson, testified that, while the price paid for the stocks of the proposed units was \$2,700,000, the holding company proposed to issue their own bonds for practically this amount, plus 10,000 shares of preferred stock at 6 per cent, plus 25,000 shares of no par common. The promoters intended to retain complete control after selling the bonds to recompense them for practically all of their expenditure and paying themselves well out of the stock sales. Mr. Ferguson, after admitting that unquestionably there were some prospective savings in mergers and consolidations, made this comment:

"But what is the value of the economies to the communities if, in order to effect them, it has been neces-

^a Prof. William Z. Ripley in the *Atlantic Monthly*, November, 1926, points out in this connection the Slaymaker case, in which \$1,136,000 was recovered by shareholders of the Columbus Railway, Power and Light Company in 1923 from the banking house which has assumed charge of the construction work, internal and external financing, management and allied services. Also that, in 1925, \$3,265,000 of the \$5,842,000 net income of the Middle West Utilities Company was "net profit from sale of securities to subsidiary companies and others." See also Ripley, *Main Street and Wall Street*. (Boston, Little, Brown & Co., 1927), p. 303.

sary to capitalize the savings for years to come, and in their capitalized forms to donate them either to the former stockholders or to the speculative banker who has brought the parties together? Obviously the advantages are not mutual in such a case, and as the public utility business is in effect a partnership between capital and the public, I view such action in exactly the same light as I would a transaction in any other line of business partnership in case one partner should take all the profits from a joint transaction."

The recapitalizations which supply the holding companies with one of their most fertile fields of activity are not rare. In some cases the sales are not even between parties with completely different interests. In New York State, in 1926, for example, the Mohawk-Hudson, a holding company, bought the Syracuse Lighting Company, a United Gas Improvement interest, and paid \$347 in market value for stock with a book value of \$106 and a market price a few months before the sale of \$265. Yet the selling company, the United Gas Improvement, held a fifteen per cent interest in the purchasing company, the Mohawk-Hudson!

In the hearings before the Interstate Commerce Commission into the receivership of the Chicago, Milwaukee and St. Paul Railroad, some of the security holders alleged that the premature electrification of the road was one of the main causes of the bankruptcy, and that it had been urged unduly upon the road by John D. Ryan, president of the Anaconda Copper Company, who, with six other directors of the road, was interested in various power companies. It was brought out that Mr. Ryan, who was chairman of the Montana Power Company and director in other power companies, had purchased for a minor

company of his own two power sites from the St. Paul for \$970,000, which sites he then immediately capitalized for \$5,000,000 and sold to the Montana Power Company! His company had contracts to supply the railroad with power. In the power industry the directorates are so held that the business of shaking hands with yourself is not rare. It is, indeed, often unavoidable.

The general public does not hear much about these recapitalizations. The reasons for this are two fold: the stockholders of the operating companies absorbed are usually in favor of obtaining the high prices offered for their securities and therefore no protest comes from this quarter, while the authority of the public service commissions is so restricted in regard to the securities of the holding companies that these commissions fail to act.

Occasionally, however, the true state of affairs is brought to public attention. In a recent proposed merging of the Narragansett Electric Light Company, for instance, it was estimated that the annual savings to be effected through a combined use of the power plants amounted to between \$150,000 and \$200,000. The dividend payments made by this company amounted to \$1,880,000. The Advisory Committee of the directors of the company, commenting on the proposed increase in interest and dividend rates under the reorganized business declared:

"Under the proposed merger the interest and the dividends which the plan contemplates shall be paid, amount to over \$3,300,000, an increase of over 75 per cent. This tremendously increased disbursement must come from earnings and as the customers are the only source of earnings, this eventually means higher prices

than necessary . . . even if rates for light and power should not be decreased as much as they naturally would without this tremendous increase in interest and dividend requirements."

There are several more strings to the holding companies' bow which yield quite rich returns to the holding companies. One lies in their contracts for the engineering, general management and supervision services furnished to their subsidiaries, the operating companies. Certain of our public service commissions are convinced that the danger of inadequately reduced rates to the consumers lies here. The commissions have not had much success with the regulation of holding company contracts. In the telephone industry, for example, where the American Telephone and Telegraph makes contracts with its state subsidiaries, the *Supreme Court has held that the commissions have no right to pass on the wisdom of the contracts, unless collusion can be proved. Yet these contracts are essentially inside of one company, made under different names. The terms of these contracts in the power industry are not made public.* Occasionally only do they come to light. The Indiana Public Service Commission, for example, recently analyzed a contract between the Commonwealth Power Corporation (a holding company on which the American Superpower is heavily represented), and the Southern Indiana Gas and Electric, an operating company. The analysis showed that the holding company was to receive 10 per cent of the total cost of extensions, additions and betterments to the electric, gas heating and other properties, and *two per cent of the entire gross earnings from all departments of the company.* This was by way of compensation for general management and

supervision service. The Commission, although granting the increase in traction rates asked by the company, denounced the contract as "*simply a process of milking patrons of the utility and obtaining an enhanced return on the investment.*"

Nor have the state commissions power to regulate contracts for interstate wholesaling of power. Corporate entities technically different, but in reality the same, may be set up by the parent company partly for the purpose of making contracts with each other across the state lines for the sale of power at wholesale—contracts which the state commission have been forced by the courts to recognize. The whole corporate arrangement at the much discussed development at Conowingo, Maryland, under the control of the Philadelphia Electric, seems to have been made for such a purpose. Recent hearings before the Maryland Public Service Commission brought out the fact that the Consolidated Gas, Electric Light and Power of Baltimore had a contract with the Pennsylvania Water and Power Company to obtain a large amount of its energy from the latter's Holtwood's plant (in Pennsylvania). The Consolidated was contemplating a further ten-year contract for the purchase of electricity at six mills per kwh., although—as it was brought out in the hearings—power was being generated in Baltimore at that time at 4.9 mills per kwh. The two companies were found to have three directors and officers in common.

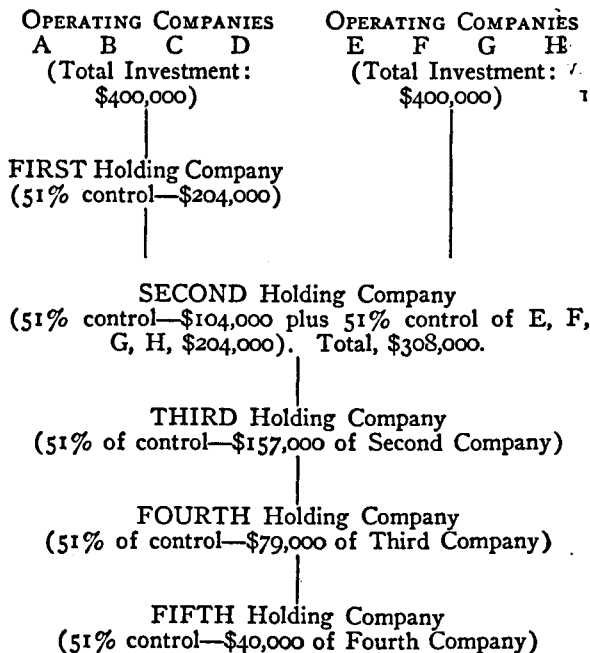
Another instance of this type of incorporation may be sighted in the recent annual report of the President of the Republic Railway and Light Company. In this report, the President explained the company's plan of setting up four different subsidiaries in

Pennsylvania and Ohio with the suggestive (possibly ambiguous) words: "The proposed incorporation of the electric properties separately in the two states has obvious advantages in simplifying the relations of the system with the respective utility commissions."

In other words, the consumer is not justified in regarding the holding company as an instrument set up for his benefit. Its set-up *is essentially a financial arrangement by which a few people with a relatively small investment can control the activities of a very large investment and skim the cream of its profits.* Very few of the holding companies are authorized by their charters to operate light and power companies. The greater number of them simply hold the securities of other holding companies or of operating companies. The Texas Power and Light Company, for example, owns and operates a large number of small and formerly independent power companies. All of its common stock is held by the Southwestern Power and Light, a holding company. The American Power and Light, a holding company with large interests in Washington, Oregon and Kansas, Minnesota, Florida, Nebraska and Arizona, owns all of the common stock of the Southwestern. It, in turn, is managed and directed, although not owned outright, by the Electric Bond and Share Company, which in turn is completely owned by the Electric Bond and Share Securities Corporation. This is a typical holding company setup. Some of them are more complicated.

The way in which a relatively small investment skillfully planned and placed can control a large one through the holding company device, can easily be seen. It can be diagrammed. Supposing each small

operating company has an investment of \$100,000, the successive holding companies need a fifty-one per cent control, first of the voting stock of the operating companies and then of each other to effect an ironclad concentration of control.)



The majority group of the fifth holding company with \$21,000 voting stock (51 per cent control) can in this way exercise a control over the original eight operating companies (A, B, C, D, E, F, G, H,) with their assumed value of \$800,000. All that is

necessary is that, in the proper places, the voting stock be kept in the proper hands. With a wide disbursement of stock, a 51 per cent control is not necessary.

Control in itself, with power to arrange for the financing, to contract for the managing and engineering, is quite a perquisite. The main benefit is, however, in the creaming off the profits. This too is a relatively simple matter of setup and can be diagramed. Let us use the same supposititious companies, with their investment distributed in a typical way between bonds, preferred and common stocks. Let us assume in this case that the eight operating companies are allowed by their state regulatory commissions to earn an eight per cent return on their given investment of \$100,000 apiece. This makes their total annual return \$64,000. Instead of assuming the 51 per cent control of voting stock used in the previous illustration to show the holding company setup in its simplest form, let us take the more usual percentages of securities held by the holding companies in public utilities. Their interest runs more toward common stocks than toward bonds or preferred stocks.

The eight operating companies have their investment split up into \$400,000 in 5.5 per cent bonds; \$120,000 in seven per cent preferred stocks and \$280,000 in common stocks, which common stock, when the corporation earns a return of eight per cent on its total investment, receives 12.0 per cent (\$33,600).

INVESTMENT OF EIGHT OPERATING
COMPANIES
(Total \$800,000)

| | | |
|-----------------------|---------------------------------|------------------------|
| \$400,000 in bonds | \$120,000 in preferred stock | \$280,000 in common |
| <i>Bonds</i> | <i>Preferred</i> | <i>Common</i> |
| | | |

THE HOLDING COMPANY TAKES

| | | |
|-------------------------------------|--|--------------------------------------|
| | | |
| 14% of these bonds (\$56,000) | 50% of this preferred (\$60,000) | 90% of this common (\$252,000) |

The holding company now has an investment of \$368,000 split, roughly, into 15 per cent of bonds, 16 per cent of preferred stock and 69 per cent of common stock. In other words, over two-thirds (69 per cent) of its assets consist of common stock and are claims on earnings only after the operating companies have paid the interest and dividends on the senior securities. It now proceeds to market its own securities on the basis of the \$368,000 investment in somewhat this manner:

| | | |
|--------------------------|--------------------------|--------------------------|
| <i>Bonds</i> | <i>Preferred</i> | <i>Common</i> |
| (25% of its holdings) | (32% of its holdings) | (43% of its holdings) |
| \$92,000 | \$117,760 | \$158,240 |

Where the operating companies are either conservatively capitalized, or where they can secure higher rates through revaluations (which go entirely

to the benefit of the common stock) and where they are prosperous, the common stock of the succeeding holding companies reaps very considerable returns. In the above illustration where an eight per cent return is earned, the common stock of the operating companies receives \$33,600, a 12 per cent return. Of this the first holding company, which, according to the illustration, owns 90 per cent of the common stock, gets \$30,240. It also draws \$3,630 in interest on its share of the operating companies' bonds and \$4,200 in seven per cent dividends on its share of the operating companies' preferred stock, a total of \$38,070, enough to pay interest and dividends on its senior issues (its \$92,000 in bonds and \$117,760 in preferred stock) and about 15.6 per cent on its own common stock.

When the operating companies earn more than their allowed eight per cent, the holding company profits jump. If the operating companies increase their total earnings 10 per cent, giving them an overall net income of 8.8 per cent, it is the common stock that gets the benefit of that, and 90 per cent of the common is held in this illustration, and typically, by the holding company. The holding company gets 90 per cent of the extra \$6,400 or \$5,760, which increases the rate it can pay on its own common to 19.1 per cent, a jump of 23.2 per cent.

A further holding company imposed upon this one and owning in its turn the same proportion of the first holding company's securities (14 per cent of the bonds, 50 per cent of the preferred, and 90 per cent of the common) and issuing its own securities, at a slightly higher rate, in the same proportion as the first holding company issued its securities (25, 32, 43), can pay normally 20.8 per cent on its com-

mon. When the operating companies increase their earnings to the assumed 10 per cent, however, it receives \$5,184 as its share of the increase, which it can then use to increase the dividend on its common stock to 26.5 per cent, a jump of 32.1 per cent over its normal rate. It is here, in the second, third, fourth, and further holding companies where we see the great jumps in market value which lead to the consumer's question as to whether he is one cent the gainer as a result of the assumed economies of the holding companies; whether, on the other hand, he is not distinctly the loser.

It is also here that any drop in the earning power of the operating companies makes itself felt. It is the process here described which explains the great fluctuations of holding company stocks in the market. A drop of 10 per cent in such normal earning power of the operating companies, brings their net income down from eight per cent to 7.2 per cent, cuts the dividend rate on the common issued by the first holding company from the normal 15.6 per cent to 11.8 per cent, a drop of 24.4 per cent, and the rate on the common issued by the second holding company from its normal 20.8 per cent to 15.1 per cent, a drop of 27.3 per cent. A small drop or increase in the earning power of the operating companies means a disproportionate change in the earnings of the holding companies, increasing as they are farther removed from the operating companies. The twelve companies whose stock high levels are listed above, shifted during the year of 1926 from 12 to 85 per cent of their low levels, an unweighted average of about 44 per cent during that one year.⁴

⁴It is interesting to note that in the case of the company which shifted 85 per cent from its low level the fixed charges

This holding company setup, with its involved security issues, presents an opportunity for speculation which is at times taken advantage of and which is likely to have an injurious effect on small stockholders and on industrial conditions. Nor is there any federal or state control of holding company securities to prevent this speculation from going on.

In March, 1926, at least one of the officers of the United Light and Power participated in such a speculation and a consequent crash. The Class A common of that company had jumped on the Curb in the previous year from 123 to 167, while the Class B common advanced from 45 to a high of 160. In February, 1926, it was announced that the authorized amount of Class A common would be increased from 500,000 to 3,500,000 shares and the Class B common from 500,000 to 2,500,000 shares. The Class A then fell to 84, and the new Class A "when issued" fell 11 points to 14. The stockholders lost over \$4,000,000 rather suddenly, and the president of the company was forced out. It turned out that he had been interested in an entirely independent holding company, the American States Securities Corporation, and had raised almost seven million dollars for it by selling its stock through warrants issued to United Light and Power stockholders—a somewhat unusual procedure. A syndicate headed by Otis and Company, bankers, who had been identified with the company, finally took its stock off the market and the president of the company turned over \$3,500,000 of his own holdings to recompense the company.

of its operating companies are so high that a 12 per cent reduction in their income would make dividends on the part of the holding company impossible, and a 17 per cent reduction in their income would even cut off the interest in the holding company bonds.

There are several things in the concentration of control over the power industry through holding companies which are of importance to those considering the functioning of the industry in the interest of the consumer and the general public rather than its security as a field for their investments. Some of the increase in the market value of the power company securities in recent years furnishes bona fide evidence that rates could be reduced. The cost to the operating companies of marketing their bonds is paid for by the consumers in rates and if and when speculation or overissue of holding company securities causes the money rates on power securities to tighten, the operating companies will be indirectly affected in an adverse way.

The situation presents several dangers to the consumer.

(1) It automatically lines up the holders of holding company securities issued at too high a price, against any revision in our regulatory system, no matter how necessary.

(2) Unless all indications fail, it will ultimately force the consumer to bear the burden of the unusually high prices paid in the process of the terrific competition between rival holding companies for certain operating companies, for these prices will be admitted as the rate base upon which consumers must pay a return. The New York Commission has opened this road.⁵

(3) *It will lead to a constant pressure upon the operating companies to increase their earnings, not only through greater efficiency of production, but through greater efficiency in securing increased rate bases from their commissions and in avoiding as*

⁵ Chapter V, Regulation.

much as possible the reductions in rates which large scale production would usually make possible.

Here is a lineup which no one interested in securing to the public the greatest possible advantages of this public utility service can ignore.

The Extent of Concentration

We have thus seen some of the dangers of concentration of control from the standpoint of the consumer. What has been the extent of concentration in this country? The process of concentrating the control of the light and power industry is well under way. In 1925 some four hundred companies with a capitalization of approximately two billion dollars were acquired and reacquired by other companies. Over a quarter of the whole capitalization of the power industry was involved in that year. In 1926 the process continued, notably in the South, Southwest and Middle West, although New England also felt its effects.

The actual concentration of control has been much disputed.⁶ In the following discussion the Federal Trade Commission figures will be followed, with one

⁶ The National Electric Light Association, which among other things, acts as publicity agent for the associated power companies, has frequently stated that, "no holding company or management company has through its subsidiary operating companies, no matter how affiliated, an output of kilowatt hours exceeding 7 per cent of the national output."

"The present writer has previously maintained that five holding companies control 40.8 per cent of the output and that the eight next largest companies control another 25.2 per cent. These thirteen companies have a direct control of 66 per cent of the total, and are further often connected among themselves in many ways which would allow some of them to be considered as working identities of interest." *Annals of the American Academy of Political and Social Science*, January, 1927.

important exception and brought up to date. They show the extent of control toward the end of 1925 on the basis of 1924 production.⁷ Here the extent of control at the end of 1926 on the basis of 1925 production will be given.

Some men may see an importance to concentrated control in itself, but the more interesting thing is the result. This result includes the fact that small plants with older equipment must decide to throw in their lot with one or the other of the big companies; that a power league of municipalities and rural districts like the one established in Ontario is practically impossible here at present; that no big public development like Muscle Shoals, Boulder Dam or the St. Lawrence can be discussed without the open or quietly implied threat that the big power groups will refuse to buy the power once generated and by their boycott discredit the whole undertaking and that united groups of power companies are in a position to do very persuasive legislative work and finance a great amount of publicity. And, in passing, may it be said that when the Senate passed the Norris resolution for investigation of the electrical industry's activity along these lines, the majority of the Federal Trade Commission, which was instructed to make the report, requested an opinion from the Attorney General to the effect that the funds available for the Commission could hardly be expended for that purpose.⁸ They received it. There was no report on that subject.

The power companies are not directly competitive. Where they compete is in the purchase of small com-

⁷ Federal Trade Commission report on *Electric Power Industry*, February 23, 1927, pp. 36-8.

⁸ Commissioners Nugent and Thompson dissenting.

panies or groups of companies. Here the ownership of ten or twenty per cent of a company is often enough to assure a friendly rather than a competitive attitude. This is especially true with the wide diffusion of stock ownership which prevails in some of the companies. In the following tabulation the companies commonly held in the industry and the market to be in certain groups will be listed that way with special notation wherever an incomplete financial control nevertheless represents a well-marked sphere of influence, enough to assure a more than friendly coöperation.

The tabulation will show that the most important *five companies, together with their immediate sphere of influence, control 46.9 per cent of the nation's output as it was in 1925; that the next eight in size control another 22.6 per cent; the following seven, another 13.6 per cent. These first twenty control approximately 83 per cent of the nation's production, over 50. billion of the 61.1 billion kilowatt hours generated in 1925.* The list follows:

(1) *The Electric Bond and Share Group.* This is a sister company of the General Electric which held the Electric Bond and Share until the end of 1924. At this time, criticism was directed against this control. Thereupon the General Electric distributed through a stock dividend the shares of the Electric Bond and Share Securities Corporation to its stockholders. At the end of 1926, the stockholders common to both companies held 78.8 per cent of the shares of the Electric Bond and Share Securities and 74.5 per cent of the shares of the General Electric. The managements are technically distinct. There are no overlapping directors on the two boards.

The General Electric, the manufacturing com-

pany, still has some power interests, which, however, are far less than those now invested in the Electric Bond and Share.

The Electric Bond and Share caused the formation of five separate holding companies at various periods, ranging from 1905 to 1925. It was originally more of an investment banking and engineering service company than a holding company. In 1924 it had, together with the General Electric, a predominant interest in 11.8 per cent of the nation's output, either through direct management or by ownership of a considerable block of voting stock. Even to-day, through its connections, it *probably has, together with the General Electric, a certain influence over half of the power industry.*

The revenues of this great holding company are derived from four main sources:

1. From fees for financing the operating companies and marketing their securities. Some of their subsidiaries were reorganized several times before they achieved their present form.
2. From fees for supervising operating agreements on a stipulated basis.
3. From fees for designing and building operating units.
4. From the securities of its supervised and associated companies in the form of dividends and interest, as well as from its investments in investment companies handling independent power securities. Through the American and Foreign Power Corporation, which it also controls, it has interests in five foreign companies. The total capitalization of its owned and supervised interests has been put at one billion dollars.

| | <i>Per Cent of Total</i> |
|--|------------------------------|
| The Electric Light & Power produces 1.5 billion kwh. | 2.4 |
| It controls: | |
| The Utah Power & Light.. 744,200,000 kwh. | |
| New Orleans Public Service 252,700,000 " | |
| Idaho Power & Light 199,000,000 " | |
| Dallas Power & Light 144,800,000 " | |
| Arkansas Power & Light .. 123,100,000 " | |
| Mississippi Power & Light. 33,048,000 " | |
| The American Power & Light produces 1.9 billion kwh. | 3.1 |
| It controls: | |
| Minnesota Light & Power . 364,600,000 kwh. | |
| Texas Light & Power 264,400,000 " | |
| Fort Worth Power & Light 183,600,000 " | |
| Northwestern Electric Co. . 197,000,000 " | |
| Kansas Gas & Electric ... 177,600,000 " | |
| Pacific Power & Light 155,600,000 " | |
| Southwestern Power & Light 465,000,000 " | |
| Florida Power & Light ... 114,285,000 " | |
| The National Power & Light produces .8 billion kwh. | 1.3 |
| It controls: | |
| Birmingham Electric 224,100,000 kwh. | |
| Houston Lighting & Power 199,800,000 " | |
| Carolina Light & Power .. 160,600,000 " | |
| Yadkin River Power 144,900,000 " | |
| Memphis Power & Light .. 121,627,000 " | |
| The American Gas & Electric produces 1.7 billion kwh. | 2.8 |
| It controls: | |
| Ohio Power Co. 890,500,000 kwh. | |
| Appalachian Power 292,000,000 " | |

*Per Cent
of Total*

| | | |
|---|------------------|-----|
| Scranton Electric | 197,800,000 kwh. | |
| Virginian Power | 148,000,000 " | |
| Indiana & Michigan Electric | 180,900,000 " | |
| The Lehigh Power Securities produces .7 billion kwh. | | 1.1 |

It controls:

Pennsylvania Power & Light 708,000,000 kwh.

These five companies give the Electric Bond and Share 10.7 per cent of the national production. In its immediate sphere of influence is the Southeastern Power and Light, which controls the Alabama Power Company, an active bidder for the Government plant at Muscle Shoals. The Electric Bond and Share owns 14.47 per cent of its stock. One of its stockholders owns a further 1.2 per cent. Some of its larger stockholders possess large blocks of the stock of the American Superpower Company, an investment company, which owns stock in the Southeastern. Two directors of the Electric Bond and Share are on the board of the Southeastern.

The Southeastern Power and Light system (1,196,200,000 kwh.) together with the Georgia Railway and Power Company (435,400,000 kwh.) produce 2.6 billion kwh., 4.4 per cent of the total. This company has also acquired the Georgia Power Company. Taken as being under the immediate sphere of influence of the Electric Bond and Share, it brings that company's total up to 15.1 per cent of the national output and ranks it first among the power groups. The Electric Bond and Share Company is also interested in foreign investments. In the fall of 1927, it was reported to have acquired

public utilities in Brazil, Columbia, France, Japan, and other countries, vesting the title with the South American Power Company, with the proposal of transfer of ownership to the American and Foreign Power Corporation.

(2) *The Northeastern group.* This is a recent combination in New York State and New England. The General Electric has a large interest in one of its companies, the Mohawk-Hudson. It was the largest merger and affiliation of 1925, involving properties valued at over \$600,000,000. The Federal Trade Commission report does not list it among its larger groups, probably because 51 per cent control does not lie always in one hand. In selling stock the president of the company has, however, announced a working identity of interest, and the known ownership of the companies bears him out.

| | <i>Per Cent of Total</i> |
|---|--------------------------|
| Interests affiliated with the North-eastern produce 6.58 billion kwh. | 10.8 |

The Buffalo, Niagara & Eastern controls:

| | |
|--------------------------------|--------------------|
| Niagara Falls Power | 3,161,100,000 kwh. |
| Buffalo General Electric | 872,400,000 " |
| Niagara, Lockport & Ontario .. | 869,300,000 " |

The New England Power (681,700,000) and the Mohawk-Hudson (1,003,208,116) complete the group. The Mohawk-Hudson company is owned 20 per cent by the Northeastern directly. The United Gas Improvement company, from which the Mohawk has recently purchased several companies, owns 15 per cent of the stock, its allied Power Company of

New York, 15 per cent, and the General Electric about one-third (34 per cent).

The Board of the Northeastern has on it representatives of the New England Power Company (of which it owns 45 per cent of the stock), the General Electric, the Power Corporation of New York, the New England Power, the Connecticut Electric Service, the Eastern States Power and the Buffalo, Niagara and Eastern. The Northeastern owns the Power Corporation of the New York system.

(3) *The Insull group. The Insull interests have a clear and admitted 8.7 per cent of the nation's production without counting their third interest in the Indianapolis Light and Heat Company, which brings their total to 9 per cent, or third in national ranking.*

Per Cent of Total

The Insull interests produce 5.5 billion kwh. 9.0

They control either directly or under various names such as Middlewest Utilities:

| | | |
|---|--------------------|---|
| The Commonwealth Edison . . . | 3,091,400,000 kwh. | |
| Public Service of Northern Illinois | 615,100,000 | " |
| Central Indiana Power | 262,900,000 | " |
| Northwest Utilities | 336,700,000 | " |
| Central Illinois Public Service.. | 247,300,000 | " |
| Central Maine Power | 174,900,000 | " |
| Indianapolis Light & Heat (third) | 196,700,000 | " |
| National Electric Power | 351,000,000 | " |
| North American Light & Power (half) | 252,000,000 | " |

In 1926, through the Central and Southwest Utilities, a subsidiary of the Middle West Utilities, the group acquired the Central Power and Light in

Southwest Texas, the Texas Central Power, the East Texas Public Service and the Southwestern Public Service.

(4) *The North American group.* This company was especially active in the merging movement of 1925. It has an interest in Detroit Edison, and is here credited with half of the production of the North American Light and Power Company, in which it shares a half interest with the Insull group. It has assets of \$661,000,000.

| | <i>Per Cent of Total</i> |
|---|--------------------------|
| The North American Co. produces 4.4 billion kwh. | 7.3 |

It controls :

| | |
|--|--------------------|
| Groups in Missouri, Illinois, Iowa | 1,200,500,000 kwh. |
| Cleveland Electric Illuminating . | 989,400,000 " |
| Wisconsin System | 849,000,000 " |
| Great Western Power Co. | 633,300,000 " |
| San Joaquin Light & Power ... | 544,600,000 " |
| North American Light & Power (half) | 252,000,000 " |

(5) *The Byllesby group.* In 1910 H. M. Byllesby organized a holding company, the Standard Gas and Electric, to assist in financing power companies. It also incorporated the Byllesby Engineering and Management Corporation to cover the engineering, managerial and financial supervision. Its control is vested in the Standard Gas and Electric Company which also retained the banking part of the business for itself. Its main systems are in Wisconsin, the Dakotas, Minnesota, and Pittsburgh. The investment is around \$909,000,000.

| | <i>Per Cent of Total</i> |
|---|--------------------------|
| The Standard Gas & Electric produces 2.9 billion kwh. | 4.7 |

It controls:

| | |
|--|--------------------|
| Duquesne Light (Pittsburgh) .. | 1,230,300,000 kwh. |
| Northern States Power | 742,600,000 " |
| California Oregon Power | 251,300,000 " |
| Louisville Gas and Electric | 217,400,000 " |
| Oklahoma Gas & Electric | 157,000,000 " |
| Wisconsin Public Service | 128,800,000 " |
| Western States Gas & Electric.. | 128,600,000 " |
| San Diego Consolidated Gas Electric | 117,900,000 " |

(6) *The Consolidated Gas Company group.* These are all New York State companies and include the New York Edison, the United Electric Light and Power, New York and Queens Electric Light and Power and the Westchester Lighting Company. Together with its gas properties, its investment is over \$661,000,000.

It produces over 2.2 billion kwh., or 3.7 per cent of the total.

(7) *The Pacific Gas and Electric.* Like the New York Edison companies this company operates locally with several subsidiaries.

It produces 2,001,500,000 kwh., or 3.3 per cent of the total.

(8) *The Southern California Edison* is a similar company. It is interested in Boulder Dam.

It produces 1,732,400,000 kwh., or 2.8 per cent of the total.

(9) *The Detroit Edison* is also a local company. The North American Company and the American Superpower both own an interest in it.

It produces 1,732,400,000 kwh., or 2.8 per cent of the total.

(10) *The Hodenpyl-Hardy group* is built on an investment banking company by that name and three holding investment companies, the Commonwealth Power, the Northern Ohio Power, and the Electric Railway Securities. Each of the first two is equipped with its own staff of financial, engineering and managerial experts who render those services to the subsidiaries.

| | |
|----------------------------------|--------------------------|
| | <i>Per Cent of Total</i> |
| They produce 1.7 billion kwh. .. | 2.8 |

They control:

| | |
|--------------------------------|------------------|
| Consumers Power | 685,500,000 kwh. |
| Northern Ohio Traction & Light | 304,100,000 " |
| Tennessee Electric Power | 654,600,000 " |
| Central Illinois Light | 107,000,000 " |

(11) *The Duke-Price group*. This company has a Canadian subsidiary, control of which was recently purchased by the Aluminum Company, a Mellon interest. This group controls the Southern Power Company with a production of 1,187,800,000 kwh. and the Southern Public Utilities. It has three interlocking directors with the Cyanamid Company, one of the bidders for Muscle Shoals. The Federal Trade Commission credits it with 2.5 per cent of the national total.

(12) *The Philadelphia Electric* is another large local system. It recently started construction on a dam at Conowingo that will rank second to Niagara Falls in water power capacity. It produces 1,521,600,000 kwh., or 2.5 per cent of the total.

In the fall of 1927, announcement was made of the

proposal to merge the Philadelphia Electric Company, with a capital of more than \$92,953,000, with the United Gas Improvement Company of Philadelphia, with a capital of more than \$106,000,000. The United Gas Improvement Company has an interest in more than a hundred gas, electric light and street railway companies in twenty-eight states. It is the principal stockholder in the Public Service Corporation of New Jersey, which controls the Public Service Gas and Electric Company. It has relations with the Niagara Falls Power Company. Its partner in the New York State organization is the General Electric Company. The latter company and the United Gas Improvement Company, as has been before indicated, own a majority of the stock of the Mohawk Hudson Power Corporation of New York, which has a commonality of interest with the Northeastern Power Corporation. The General Electric is hoping to build a third huge power plant on the St. Lawrence River near Ogdensburg. It is thought that, when the merger in Philadelphia is completed, the Conowingo plant will be used in the power pool covering Pennsylvania and New Jersey and the Ogdensburg plant to supply New York State and such parts of Massachusetts and Connecticut as are not supplied by an affiliated New England organization.

The Mellon interests of Pittsburgh are represented in the United Gas Improvement Company, as they are in the Consolidated Gas, the Brooklyn Edison, the Brooklyn Union Gas, the American Light and Traction Company, the United Light and Power and other interests. The merger, according to the *New York Times* (Sept. 24, 1927) "places the Mellon

family and its affiliations in an unequaled position in the Eastern public utility field." The merger will likewise assist in the linking together of the New England and Middle Atlantic States in a unified system.

(13) *The Public Service Gas and Electric* through the Public Service Corporation of New Jersey controls a system of interconnected plants throughout the State of New Jersey. In the fall of 1927, it entered into a tri-party contract with the Philadelphia Electric Company and the Pennsylvania Power and Light Company in the pooling of their electric power.

It produces 1,358,300,000 kwh., or 2.2 per cent of the total.

(14) *The Stone and Webster group*. In addition to the listed companies it controls the Engineers Public Service. Many of its subsidiaries are outside the power industry. It produces 1.28 billion kwh., or 2.1 per cent of the total. Its main power companies are:

| | |
|-------------------------------------|------------------|
| Puget Sound Power & Light | 632,600,000 kwh. |
| Virginia Electric & Power | 304,400,000 " |
| Columbus Electric & Power | 204,800,000 " |
| Blackstone Valley Gas & Electric .. | 138,000,000 " |

(15) *The Cities Service Company*. This is the H. L. Doherty group and is generally regarded as a one-man property. This company has large oil interests. In 1920 over 80 per cent of its income came from oil, in 1925, about 38 per cent. Its electric power companies are scattered over sixteen states.

It produced 1.29 billion kwh., or 2.1 per cent of the total. It controls:

| | |
|----------------------------------|------------------|
| Ohio Public Service | 522,000,000 kwh. |
| Toledo Edison | 350,500,000 " |
| Public Service of Colorado | 244,000,000 " |
| Empire District Electric | 178,000,000 " |

(16) *The American Waterworks and Electric.* This group produces 1.24 billion kwh., or 2 per cent of the total. It controls:

| | |
|----------------------|--------------------|
| West Penn Co. | 1,090,200,000 kwh. |
| Potomac Edison | 158,500,000 " |

(17) *The Consolidated Gas and Electric Light of Baltimore* has affiliated with it over the border in Pennsylvania the Penn Water and Power Company, from which it previously received much of its power. The former has a production of 718,200,000 kwh., and the latter a production of 513,900,000, a total of 1.23 billion kwh., or 2 per cent of the national total.

(18) *The Columbia Gas and Electric group*, whose two main companies are the Union Gas and Electric (562,400,000 kwh.) and the Dayton Power and Light (275,500,000 kwh.), is credited by the Federal Trade Commission with 2 per cent of the national total.

(19) *The Montana Power Company*, in which the Electric Bond and Share has an interest, produces 1,234,000,000 kwh., or 2 per cent of the national total.

(20) *The Brooklyn Edison* produces 783,000,000 kwh., or 1.4 per cent. Mr. Nicholas F. Brady, who is president of the New York Edison and Chairman of the Consolidated Gas, its holding company, is also Chairman of the Brooklyn Edison. A summary of the control exercised by these groups follows:

AMONG VARIOUS GROUPS IN 1925

*Per Cent of Total Number
of Kilowatt Hours Gen-
erated in the United
States*

| | |
|---|------|
| 1—Electric Bond & Share | 15.1 |
| 2—Northeastern | 10.8 |
| 3—Insull | 9. |
| 4—North American | 7.3 |
| 5—Standard Gas & Elec- tric | 4.7 |
| Total of Groups 1 to 5 | 46.9 |
| 6—Consolidated Gas (in- cluding N. Y. Edison) | 3.7 |
| 7—Pacific Gas & Electric | 3.3 |
| 8—Southern California Edi- son | 2.8 |
| 9—Detroit Edison | 2.8 |
| 10—Hodenpyl-Hardy | 2.8 |
| 11—Duke-Price | 2.5 |
| 12—Philadelphia Electric .. | 2.5 |
| 13—Public Service Electric & Gas | 2.2 |
| Total of Groups 6 to 13 | 22.6 |
| 14—Stone and Webster .. | 2.1 |
| 15—Cities Service Co. | 2.1 |
| 16—American Waterworks & Electric | 2. |
| 17—Consolidated Gas & Electric Light of Baltimore | 2. |
| 18—Columbia Gas & Elec- tric Co. | 2. |

| | <i>Per Cent of Total Number of Kilowatt Hours Gen- erated in the United States</i> |
|--|--|
| 19—Montana Power Co. . . | 2. |
| 20—Brooklyn Edison | 1.4 |
| | <hr/> |
| Total of Groups 14 to 20 | 13.6 |
| | <hr/> |
| Grand Total Percent- age Generated by Twenty Power Groups | 83.1 |

These twenty companies have control over four-fifths of the national output. Their expansion continues.⁹ There are also certain groups with smaller production but, in some cases, with large investment in the distribution end of the business. The Barstow group has one per cent of the total output. Its chief holding and investment company is the General Gas and Electric. Its service organization is the W. S. Barstow Management Association, Inc. Its properties are in the East, stretching from New York down

⁹ The above statistics, as has been indicated, show the state of control of the industry at the end of 1926, on the basis of 1925 production. During 1927 a total of 828 utility changes in control occurred, according to the *Electrical World* (January 7, 1928). Many of these changes led to increased concentration. The important consolidation of the United Gas Improvement Company and the Philadelphia Electric has already been referred to. The U.G.I. also expanded its holdings in the West. The Electric Bond and Share Company subsidiaries purchased numerous properties.

Insull, Son and Company acquired directly control of the National Electric Power Company which operates properties in ten states in more than 450 communities; of the Inland Power and Light Association, serving 320 communities, the National Public Service Corporation, a former Fitkin property serving 621 communities and other groups. The Middle West Utilities

through Pennsylvania, New Jersey, Maryland, North and South Carolina and Florida. The next group in point of production is the Republic Railway and Light, controlling the Pennsylvania-Ohio Power and Light and others. It has seven-tenths of one per cent of the total production. The J. G. White group with the Associated Gas and Electric as its principal holding company has about six-tenths of one per cent of the total. Here three separate companies have been incorporated to deal with the operating companies,—the J. G. White Engineering Corporation, the J. G. White Management Corporation, and J. G. White and Co., Inc., which controls the other two and handles the financial service.

There are a considerable number of smaller holding companies controlling lesser fractions of the production. In some cases large industries have found it advisable to control power companies operating close to them. The International Paper Company has such interests in the United States and Canada. The Aluminum Company has bought an interest in the Canadian part of the Duke-Price system. It controls the St. Lawrence Valley Power Company

Company (under Insull control) through subsidiaries, purchased a number of properties and, at the end of the year, served 1,920 communities in eighteen states and in addition supplied wholesale energy to 380 other communities. It now controls the Southwestern Power and Light, formerly under the American Power and Light. The Pacific Gas and Electric acquired properties of the Standard Gas and Electric Company in Northern California.

In the East, the New York Power and Light Corporation was formed by the merger of seven utilities which are subsidiaries of the Mohawk-Hudson Power Corporation. The Massachusetts Utilities Investment Trust was formed by forty-five utilities affiliated with the Massachusetts Lighting group and of voluntary associations of groups holding utility shares. In early 1928 the Cities Service Company purchased the Southwestern Gas and Electric Company from the Insull interests.

furnishing power to the territory near its plants at Massena, N. Y. Together with the General Electric and Du Pont interests it put in a bid for the undeveloped power on the St. Lawrence.

The Mellons are also interested in the American Light and Traction and the United Light and Power.¹⁰ Several of the industrialists using the Niagara Power have an interest in the Niagara Falls Power Company. This practice is significant in view of the rate policy followed by the power companies in respect to large industrial and small domestic consumption, which will be discussed later on.

The essential function of the holding companies as investment bankers is illustrated by a trend toward straight out investment corporations. The American Superpower is one of these. Its policy is to secure as diversified permanent investments common stocks of power companies, never, however, exceeding 15 per cent of the common stock of any one company.

¹⁰ A report in the financial section of the *New York Times*, May 27, 1926, states: "Since the beginning of this year the Mellon interests of Pittsburgh have leaped into the public utility and power field with a suddenness that has amazed men in the industry. Nevertheless, utility operating companies in which they now are represented have book assets in excess of \$150,000,000, while power projects in which they are interested involve an outlay of more than \$270,000,000. . . . The influence of the Mellon interests in the American Light and Traction Company and the United Light and Power Company is through the Koppers Company, and on the board are R. B. Mellon and R. K. Mellon, the former a brother of Andrew Mellon, Secretary of the Treasury.

"The presence of Mellon representatives on a company's board is generally accepted as indicating control by those interests, since they never have been known to accept a secondary position in corporations in which they have an influence. Mr. Rust is a director of United Light and American Light and Traction.

"The Mellon interests strengthened their position in the United Light and Power Company through a *tour de force*

Its financial assets amount to about \$31,000,000. It has investments in fifteen of the largest operating and holding companies in the country. On the board of the one in which it has the largest investment (Public Service of New Jersey) it has four directors. On the board of the Commonwealth Power it has five, on two others it has three directors, and on three others one director each. This lineup lends a little color to the Standard Corporation description of the company:

"This company aims to be more than an ordinary investment company . . . serving as a clearing house for exchange of ideas and solution of problems arising out of problems of interconnections and superpower, including corporate relations involved, supply and demand, specified problems of engineering administration, public relations, or law to the benefit of the companies involved, in the first instance and secondly, to the benefit of the American Superpower in increased stability and value of its holdings."

executed early last March. At that time Frank T. Hulswit was President of the United Light and shared influence on the Board with representatives of the Koppers Company. This situation changed overnight after Mr. Hulswit failed disastrously in a spectacular market operation with United Light stock. . . .

"Mr. Hulswit's resignation from the board of the United Light was followed by the resignation of other members who had been associated with his interests and whose places were taken by representatives of the Koppers Company interests. While the banking firm of Otis and Company, which was interested in the affairs of United Light under the Hulswit régime, continues to have representation on the board of United Light, it has given no indication that it is not acting in harmony with the new controlling interests. Thus the Mellons have strong, if indirect, representation in a public utility holding company with book assets in excess of \$87,000,000. Book assets of American Light and Traction, in which the Koppers Company has been interested some time, exceed \$64,000,000.

"In the United Light transaction the names of the Mellons

Many of the best known utility operators in the country are on its board. In addition to the companies already named it has investments in the Consolidated Gas, Electric Power and Light of New York, United Light and Power, Middle West Utilities, Detroit Edison, Brooklyn Edison, Georgia Railway and Power, Southern California Edison, Penn-Ohio Securities, Edison Electric Illuminating of Boston, Pacific Gas and Electric, American Power and Light, and Electric Bond and Shares Securities Corporation. The Electric Bond and Share owns 11 per cent of the voting power of the American Superpower.

No attempt has been made here to trace out in detail the friendly interests indicated by the interlocking directors. For the financially important people in the power industry to be a director is human, and to play with the winners is human everywhere. After all, in this day and age, one doesn't go about cutting off one's nose to spite one's income

were not brought into prominence, and in fact the significance of the move did not become immediately clear. The same reticence was observed when the Aluminum Company of America last month purchased a controlling interest in the Duke-Price Power Company of Canada. Official announcements pointed out that the Aluminum Company of Canada, a subsidiary of the parent organization, would be a consumer of power from the Duke-Price plant, but did not stress the fact that one of the largest of Canadian power installations had passed into new control. . . .

"While the manufacture of aluminum requires large amounts of electric power, it is noted with interest by utility men that the Aluminum's Company's acquisitions in the power distribution field are greatly in excess of what would be its requirements as a strictly industrial organization. Why the Aluminum Company should enter the electrical field on such a large scale has never been officially made clear. Its association with the General Electric Company is also a cause of conjecture among officials of independent companies in the utility field."

and interlocking directorates probably do show beyond reasonable doubt that here the public isn't going to get any of the doubtful benefits of financial competition.

The Federal Trade Commission considered the extent of interlocking directorates in the case of the personnel of the Electric Bond and Share companies. It found 104 individuals who were directors in two or more of the 60 holding companies, 3 investment companies and 1,500 operating companies covered in its inquiry. Of these 104, 45 were common to two or more competitive power groups, or common to one of them and common to one investment company or one of the large electric manufacturing companies, and a holding group company. Some 1,332 individuals were directors of two or more operating companies. Of these, 97 were directors in two or more operating companies in different power groups, and 52 were directors in companies classified as independent operating units. One thousand and seven of these 1,332, or three-quarters, were directors in two to four companies; thirty-six were directors in twenty or more companies and two in thirty-four companies. The average for all was slightly more than four companies apiece.

In this one group then there were at least 194 men directing two or more "different" or "competitive" or "independent" holding or operating companies.

Somewhat the same situation is true for other power companies. There is enough interlocking of interest and men so that no one large company is likely to imitate Ford and give such decidedly cheaper service that states and municipalities will give it the preference in its expanding activities over the other companies. In other words, *the one ad-*

vantage which the competitive system has over a monopoly, that of giving the consumers low prices, is not to be expected from the power industry as it is constituted at present.

The men engaged in controlling the industry may be intelligent, fine and amiable people. Their personalities, however, are beside the point of this particular chapter. It is their corporate functioning which is of importance to the industry and the country. We can only know them by the company they keep.

CHAPTER IV

RATES

WE are constantly told that the promise of concentrated control is lower costs to the consumer. This is to come from increased efficiencies. Lower costs are also put forth as the promise of physically and financially interconnected systems. Lower generating costs will follow from the reduction of the number of, and the idleness of, expensive spare power units. Lower investment costs will follow from a reduction in the number of small central plants needed. Large scale development of the secondary powers of various hydro-electric developments will now become possible. Power shortages will be eliminated. All these advantages will mean constantly lower rates and better service to the consumer. Such is the frequently expressed promise of the industry, and the basis of its plea to be left alone.

This plea, which is invoked against any tightening of our regulatory system quite as much as against proposals for public ownership of any kind, is backed, customarily, by statements and charts showing that, while the cost of living and taxation have gone up since 1913, the cost of electricity has gone down. The reduction, to be sure, has been a slight one. Nevertheless, the rates have decreased. The increased rate of taxation, due in large part to the war, is then thrown at us as an illustration of the inefficiency of government as opposed to private business. The jump in the price of other com-

modities which make up the cost of living, clothing, food and housing are also offered by way of evidence that the power industry, and it, apparently alone, is doing its duty by the consumer.

These are fine, impressive statements. At least in their naked simpleness, they are. What is there to them?

That the cost of living went up after 1913 is true. There would probably be a general agreement that one of the main causes for this increase was the rush of orders for food and equipment from the warring nations, followed by a shortage of labor, accentuated when we entered the war ourselves.

To the extent that the landlords and the makers of food, clothing and house furnishing goods took large profits, the increase in prices might, from a moral angle, be considered to their discredit rather than to the credit of the power industry, although it now happens to be the power industry which seeks to draw a moral to its credit from those events.

Many industries justified their increased prices on the ground that wages went up. A close analysis of actual conditions would often indicate that this argument was not valid since, while individual workers were paid higher wages, less workers were employed, and the labor cost per unit of production consequently was less than it had formerly been. This of course is not universally true, but true in many instances.

When it comes to the power industry, the argument that an increase in wages should naturally lead to increased rates is particularly invalid, since wages here have never played the part which they have in most industries. They are a minor part of the expenses of operation. A comparison of the cost of

power with the costs of transportation or clothing or furniture is not a comparison on all four.

The total number of employees in the whole power industry in 1912 was under 80,000. In 1922 it was 150,700. Even if their wages went up from \$771 in 1912 to \$1,409 in 1922, the labor cost of a kilowatt hour rose not at all, but dropped instead from fifty-two hundredths of a cent to fifty hundredths of a cent.

From 1902 to 1922, the ratio of salaries and wages to total expenses in central electric light and power plants decreased from 30.3 per cent to 24.7. This drop of 18 per cent was far greater than in most industries, as is indicated by the fact that the ratio for all industries during this twenty-year period decreased only from 43.7 (the 1902 ratio) to 42.6 per cent in 1922.¹

A further difference which invalidates comparison between the power and other industries is the fact that none of the other industries which produce the materials making up the cost of living developed over this period into large scale industries in the same manner as did the power industry. From a production of 11.6 billion kilowatt hours in 1912, this industry went to 67.8 billion in 1926 and 75 billion in 1927. It is over six times as big an industry as it was at the beginning of the period used for comparison. There is no big industry in the country that has increased in the last thirteen years in similar proportions. There is no great industry in which labor costs play so small a part, which has increased in comparable size. The nearest illustration is Ford, where increase in the number of units produced also

¹ Census of Electric Industries, *Central Light and Power Stations*, 1922, pp. xiv, 162, etc.

meant lower overhead and reduced prices, although there wages are a very large part of the production costs.

Increase in Profits

A closer study of the production costs and revenues of the industry is necessary before we can see whether the increased size and efficiency of the industry are redounding to the advantage of the consumer or not. The following tables, based on the census figures of 1912, 1917 and 1922, and the estimates of the Statistical Department of the National Electric Light Association for 1926, indicates something of the changes from 1912 on.

Table I indicates that there has been a considerable decrease in the proportion of operating expenses to gross revenues during the years 1922 to 1926, a decrease from 67.1 per cent to 62.7 per cent, while the net operating income has increased by a quarter of a billion dollars. The decline in the operating ratio, as it is called, shows the engineering advance in the industry.² Cheaper power can be given at smaller expense per unit. The average number of pounds of coal used up in the production of one kilowatt of electricity was estimated at 1.85 in 1927 as contrasted with 3.2 pounds in 1919.³ "The dif-

² The estimate of the National Electric Light Association differs somewhat from that of the *Electrical World*, the most important organ of the industry. One of the reasons for this is the fact that the *Electrical World* does not include taxes and depreciation in "operating expenses." According to this organ, the operating expenses (not including taxes or depreciation) was 45 per cent of the gross revenues in 1922; 43.8 per cent of the gross revenues of 1926, and only 43 per cent of the revenues in 1927. The same trend, therefore, is indicated in the figures given by the *Electrical World* of January 7, 1928, as by those given by the N.E.L.A.

³ See *Electrical World*, January 7, 1928, p. 22.

TABLE I
Production and Revenue of the Electric Light & Power Industry ^a

| | 1912 (Census) | 1917 (Census) | 1922 (Census) | 1926 (NELA) |
|--|-----------------------------------|------------------|------------------|----------------|
| | <i>Kilowatt Hours in Billions</i> | | | |
| Total generated ^a | 11.6 | 25.5 | 40.3 | 67.8 |
| Received from other sources ^b | 1.2 | 2.5 | 1.7 | 1.6 |
| | <hr/> | <hr/> | <hr/> | <hr/> |
| Total available | 12.8 | 28.0 | 42.0 | 69.4 |
| Lost in transmission, etc. ^c | 2.4 | 5.3 | 8.3 | 14.1 |
| | <hr/> | <hr/> | <hr/> | <hr/> |
| Sold to consumers | 10.4 | 22.7 | 33.7 | 55.3 |
| Sold between companies | 1.4 | 3.1 | 8.3 | 10.1 |
| | <hr/> | <hr/> | <hr/> | <hr/> |
| Grand total sold | 11.8 | 25.8 | 42.0 | 65.4 |

| | | <i>Dollars in Millions</i> | | |
|--|---------|----------------------------|---------|---------|
| Revenues from electric service | \$271.1 | 472.8 | 945.4 | 1,463.8 |
| Other operating revenues | 10.9 | 23.7 | 83.4 | 105.4 |
| | | <hr/> | <hr/> | <hr/> |
| Gross revenues | 282.0 | 496.5 | 1,028.8 | 1,569.2 |
| Operating expenses and retirement ^d ... | 163.7 | 302.7 | 616.6 | 844.9 |
| Taxes | 13.1 | 30.1 | 73.8 | 136.9 |
| | | <hr/> | <hr/> | <hr/> |
| Total revenue deductions | 176.8 | 332.8 | 690.4 | 981.8 |
| Net operating income | 105.2 | 163.7 | 338.4 | 587.4 |
| Operating ratio ^e | 62.6% | 67.1% | 67.1% | 62.7% |

RATES

^a Includes both "commercial" (private) and municipal plants, but not Federal or District projects.

^b Imported from Canada, purchased from Federal, etc., projects and from industrial enterprises.

^c Including use by companies for their other operations.

^d Retirement refers to charges for depreciation.

^e Ratio: Revenue deductions to Gross Revenue.

ference," declares the *Electrical World*, "is equivalent to a saving in 1927 alone, in all public utility plants in the United States, of 34,000,000 tons of coal."

Development of the fields of use so that the companies have a more constant demand for power, a higher load factor, has also played a very large part in the decrease of the operating ratio, and interconnection of systems has helped toward it. So, where the operating expenses to produce the unit of one kilowatt hour (which is a 20-25-watt bulb burning 40 hours) were 1.64 cents per kilowatt hour—inclusive of depreciation and taxes—in 1922, they were 1.42 cents in 1926, a decrease of 14 per cent. If taxes are excluded, the decrease in the four-year period would be over 16 per cent.

Table II gives a computation showing operating cost, the amount of gross revenue, and the amount of revenue received for each kilowatt hour produced after operating expenses, depreciations and taxes are deducted, according to the estimates of the National Electric Light Association.

TABLE II

Operating Cost and Revenue per Kilowatt-hour
Available for Distribution (cents)

| | 1912 | 1917 | 1922 | 1926 |
|--|-------|-------|-------|-------|
| 1. Gross revenue | 2.20¢ | 1.77¢ | 2.45¢ | 2.26¢ |
| 2. Operating expenses and retirement | 1.28¢ | 1.08¢ | 1.46¢ | 1.22¢ |
| 3. Taxes | 0.10 | 0.11 | 0.18 | 0.20 |
| 4. Total revenue deductions | 1.38¢ | 1.19¢ | 1.64¢ | 1.42¢ |
| 5. Net operating income.. | 0.82¢ | 0.58¢ | 0.81¢ | .84¢ |

As far as the total energy *produced* is concerned it is clear that, while operating costs have gone down in the four years, the revenues per unit of production have gone up. The following table indicates the changes in the unit receipts for the energy actually *sold*. The energy lost in transmission is eliminated. Its cost is spread over the power actually sold.

TABLE III

| Operating Cost and Revenue per Kilowatt-hour Sold (cents) | | 1912 | 1917 | 1922 | 1926 |
|--|--|-------|-------|-------|-------|
| 1. Gross revenue | | 2.39¢ | 1.93¢ | 2.45¢ | 2.40¢ |
| 2. Operating expenses and retirement | | 1.39¢ | 1.17¢ | 1.46¢ | 1.30¢ |
| 3. Taxes | | 0.11 | 0.12 | 0.18 | 0.20 |
| 4. Total revenue deduc- tions | | 1.50¢ | 1.29¢ | 1.64¢ | 1.50¢ |
| 5. Net operating income.. | | 0.89¢ | 0.64¢ | 0.81¢ | 0.90¢ |

From Table III, compiled by the N.E.L.A., we see that, while the gross income per kilowatt hour *sold* decreased from 1922 to 1926, from 2.45 cents to 2.40 cents, the operating expenses, including depreciation and taxes, decreased during these years from 1.64 to 1.50 cents, *while the net operating income per kilowatt hour sold increased from 0.81 cent to 0.90 cent, an increase of 11 per cent.*

The industry may really be considered as having attained the large-scale production class from 1922 on. During the four years from 1922 to 1926 the number of companies generating more than 100,000-

000 kwh. annually jumped from 6 to 126.⁴ In contrast to the output of 11.6 billion kwh. in 1912, these four years saw an increase of from 40.3 billion to 67.8 billion. The development of the industry over the last four or five years lends itself to easy consideration because of the comparatively small fluctuations in price levels over that period.

Considering these four years together it is clear that while operating costs have gone down, the net revenues have increased per unit produced and per unit sold. The industry has been having a profitable time and looks forward confidently to more of the same prosperity.

Lack of Statistics

There is no governmental agency which annually collects figures showing the essential changes in the industry. The Department of Labor in its occasional reports presents only sample rates in a few large cities, a procedure which not only gives no adequate picture of the national average, but, when used out of context, tends to give a picture very much out of focus.

The U. S. Census Bureau gives out a report every five years of a census of the industry taken three years before. The 1922 Census of the Electrical Industry appeared in 1925. The 1927 census may be expected in 1930. Until 1930 we shall have no official information later than 1922 on which to base any consideration of the civic problems raised by the industry, and even that information does not include such essential facts as the unit rate for domestic lighting. In the face of this lack of up-to-date offi-

⁴ *Electrical World*, January 7, 1928.

cial information, we are forced to turn to the figures put out by the industry itself. These are presented in very general form, and examination of the basic data is usually refused.

There is, moreover, a considerable divergence between many of the figures published by the Statistical Department of the National Electric Light Association and the *Electrical World*, a foremost organ of the electrical industry.

Yet even on the basis of the undetailed information, certain trends are clearly established. The figures on energy sold to power customers and to electric railways and railroads are given in simple form, and from them computations of the revenue from other sources can be made. Some checking through the 1922 Census figures is possible for that year.

Special Privileges of Power Consumer

The following table computed from figures supplied by the *Electrical World* (Jan. 7, 1928), shows that, from 1921 to 1926, revenue for industrial power per kilowatt hour dropped from 1.53 to 1.31, over 14 per cent. During this same period the proportion of power sold for industrial uses to the total energy sold increased from 56.6 per cent to 61.7 per cent, while the proportion of revenue it produced dropped from 28.3 per cent to 27.8 per cent of the total income. This proportion, however, increased slightly according to the preliminary estimates for 1927. *In other words, the users of industrial power, according to the Electrical World, now receive over six-tenths of the power sold and pay for it less than one-third of the revenue collected by the industry.*

They are clearly a group benefited by the rate policy the industry has chosen to follow.⁵

It can easily be understood why the rates for industrial power should be lower than domestic lighting rates, for example. Great blocks of power regularly used can be furnished to a few factories more cheaply than small blocks can be furnished to widely spread small consumers who use light and power irregularly. No quarrel has been raised with the existence of some differential between rates to small consumers and rates to large industrial users. The fear which is often expressed is that this differential has become too great, that the large industrialists are getting all the benefits of the industry for the simple reason that they have a bargaining weapon of which the small consumers are deprived.⁶ The factories can threaten to install their own generating plants in case the power companies charge them rates which they consider too high. In fact the industries of the country have a total annual energy consumption not supplied by the power industry of over 30 billion kwh. The small consumers can make no such threat.

⁵ The figures supplied by the National Electric Light Association would indicate that the users of industrial power in 1926 received 61 per cent of the energy sold and paid a little over one-third (34.2%) of the revenue collected.

⁶ Morris L. Cooke, director of the Giant Power Survey of Pennsylvania, says: "At present in Pennsylvania there is a rate spread of 20 to 1, from $\frac{3}{4}$ of a cent, the low level for wholesale power, to 16 cents a kilowatt hour, the highest rate for domestic use. No one, of course, advocates that, in the long run, the domestic user, whether in city or on farm, should get service below cost." *New Republic*, May 26, 1926. In his latest pamphlet, *What Price Electricity in Our Homes* (1928), Mr. Cooke quotes O. M. Rau, who made an exhaustive investigation of rates in Pennsylvania and found an almost general admission by the companies that costs were not allocated as between the various kinds of services rendered, and "that the rate schedules were not arrived at by the elements of cost but from experience and competition" (p. 22).

They must take what rates are given them or go without service.

Another group which, in a smaller way, has been receiving the advantages of the improvement in the technique of the industry, are the electric railways. In many cases these develop their own energy. Table V shows that, if we are to follow the estimates made by the *Electrical World*, where they paid 0.97 cent per kilowatt hour in 1921, they now pay 0.81 cent. In spite of the fact that they represent a constantly declining part of the total energy sold and revenue received, they are getting a very considerable share of the advantages of the large scale production and efficiency of the industry. While their part of the total energy sold by the power industry dropped in the six-year period some 20 per cent, their share contributed to the total revenue dropped 30 per cent.

The *Electrical World's* tables also indicate that the gross revenues per kilowatt hour from all sources *other* than power sold for industrial and commercial purposes (Table IV), and power sold to the electric railways (Table V) have also increased. This means combined revenue from domestic light and power, commercial light, municipal street lighting, power sold to other light and power companies, rents, profits for sale of merchandise, rent from leases of plant, income from interest, dividends and other non-operating income.

Table VI shows that the income per unit from all these sources, applied to the remaining power sold by the industry, has increased from 6.55 cents in 1921 to 6.78 cents in 1926, with an estimated decline in 1927. This includes revenue from domestic and rural consumption.

INDUSTRIAL POWER †

TABLE IV

| | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 |
|---|--------|--------|--------|--------|--------|--------|---------------------|
| 1. Energy sold (millions of kwh.) | 17,400 | 20,620 | 24,810 | 25,810 | 30,130 | 35,154 | 38,486 ^a |
| 2. Revenue from power customers (millions of dollars) | 267.8 | 303.2 | 358.15 | 321. | 367.54 | 461. | 517.9 ^a |
| 3. Return per KWH. (cents) | 1.53 | 1.47 | 1.44 | 1.24 | 1.21 | 1.31 | 1.34 |
| 4. Relation of industrial power sold to total sold | 56.6% | 57.5% | 58.7% | 57.3% | 59.9% | 61.7% | 61.9% |
| 5. Relation of industrial revenue to total revenue | 28.3% | 28.2% | 28.2% | 23.7% | 24.8% | 27.8% | 29% |

^a Estimated, based on ten months' operations.

† The specific figures supplied by the National Electric Light Association for 1926 only are as follows:

| | | | |
|-----------|---------|-----------|---------|
| Column 1— | 34.406 | Column 4— | 61% |
| " | 2—506.8 | " | 5—34.2% |
| " | 3— | | 1.47 |

The Census of 1922 estimated the average revenue per kwh. for commercial and industrial power at 1.8 cents (p. 133).

TABLE V

| | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 |
|--|--------|--------|--------|--------|--------|--------|---------------------|
| 1. Energy sold (millions of kwh.) | 4,600 | 5,642 | 6,000 | 6,200 | 6,301 | 6,810 | 7,350 ^a |
| 2. Revenue from electric railways (thousands of dollars) | 44,650 | 50,750 | 52,200 | 54,400 | 53,270 | 58,100 | 60,600 ^a |
| 3. Return per KWH. (cents) | .97 | .89 | .87 | .87 | .84 | .85 | .81 |
| 4. Relation of railway power sold to total sold | 14.9% | 15.7% | 14.2% | 13.7% | 12.5% | 11.9% | 11.8% |
| 5. Relation of railway power revenue to total revenue | 4.7% | 4.7% | 4.1% | 4.0% | 3.59% | 3.5% | 3.3% |

^a Estimated, based on ten months' operations.

^b The above figures furnished by the *Electrical World* (January 7, 1928) are the only published figures indicative of the possible trend during the years 1921 to 1927. The National Electric Light Association has compiled figures for 1926. Based on an estimated consumption on the part of the electric railways of 4,800 million kwh. for that year as contrasted with 6,810 million, the estimate of the *Electrical World*, the N.E.L.A. maintains that the railways furnished a return per kwh. of .96 cents, a total revenue of \$45,800,000. The energy purchased, according to this source, amounted to 8.6 per cent of the total, while the revenue supplied was 3.1 per cent of the total. These figures, however, seem somewhat questionable in view of the estimate of the Census of 1922 that the electric railways of that year purchased 5,931 million kwh. (as contrasted with the N.E.L.A.'s estimate of 4,800 million for 1926), and that the receipts from this source amounted to \$48,443,831 (1922 census of Electrical Industries, pp. 81, 135). The student will probably have to wait until the appearance of the next census in 1930 before any final conclusions can be made

REVENUE FROM SOURCES OTHER THAN INDUSTRIAL POWER AND RAILWAYS

TABLE VI

| | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 |
|---|---------|---------|---------|---------|---------|-----------|------------------------|
| 1. Lighting energy sold (millions of kwh.) | 8,700 | 9,560 | 11,410 | 12,990 | 13,970 | 15,000 | 16,300 ^a |
| 2. Revenue (thousands of dollars) | 570,500 | 657,120 | 795,000 | 902,670 | 979,500 | 1,018,200 | 1,075,800 ^a |
| 3. Income per KWH. (cents) | 6.55 | 6.87 | 6.96 | 6.94 | 7.10 | 6.78 | 6.60 |
| 4. Relation of this energy to total energy sold | 28.3% | 26.6% | 27.0% | 28.8% | 27.4% | 26.3% | 26.8% |
| 5. Relation of this revenue to total revenue | 60.4% | 61.20% | 62.62% | 66.63% | 66.16% | 61.62% | 60.31% |

^a Estimated, based on ten months' operations.

Unfortunately few official figures showing the amounts paid respectively by residential consumers, commercial lighting consumers and rural consumers are available. Even the public service commissions do not know the average price paid by the various classes of consumers in each state. The 1922 Electrical Industries Census merely gives the average rate for general lighting—commercial, street and domestic—a rate of 5.8 cents for 1922 (p. 133).

There have, however, been a number of estimates based, in many instances, on comparatively inadequate data. Perhaps the most careful estimate made in a limited area was that of the Pennsylvania Giant Power Survey, which found that the domestic rate in that state in 1924 averaged 8.4 cents.⁹

For the nation as a whole the *Electrical World* (May 8, 1926) estimated that the average residence bill in 1926 was 7.64 cents per kilowatt hours; the average rural bill, 12 cents and the average bill for commercial lighting, 5.75 cents. From these estimates it seems likely, considering the relative amounts of energy used by city and country, that the combined bill for domestic and rural uses would be between eight and nine cents.

On the other hand, recent statistics furnished by the National Electric Light Association give a revenue averaging about 7 cents per kilowatt hour for energy supplied "for domestic services (all uses)"—lighting and heating, cooking, etc.¹⁰

⁹ Report of the Giant Power Board of Pennsylvania for 1925, Appendix IX, indicates that the average rates in that state in 1924 were: domestic, 8.4 cents; commercial light and power, 5.5 cents; general power, 1.9 cents; wholesale power, 1.35 cents.

¹⁰ From the Statistical Bulletin of the N.E.L.A., No. 1, December, 1927. The Bulletin estimates a revenue of \$443,612,000 and a purchase of 6,345 million kilowatt hours.

In June, 1927, the Association gave out that prices for electrical energy for residential service had declined from an average of 7.9 cents in 1921 to 7.4 cents in 1926, or about 1 mill a year.¹¹ Unfortunately, however, it furnished little light on the basis for these figures and their accuracy has been open to question in view of the statistics available and cited above regarding the trends in income per kilowatt hour from various categories of customers. It is to be hoped that the next U. S. Electrical Industry Census will give to the public a better basis for calculating trends in this field than has heretofore been the case.

Inside the various rate groups there may be wide spreads. Some power consumers may pay a half cent, others as high as three cents. In some small towns residential consumers may pay fifteen cents, in larger cities as low as five cents. On the farms the average twelve cent rate may include many rates as high as twenty and as low as eight cents.

One of the tendencies of rate structures is to freeze. On the railroads a system of rates grew up giving some sections of the country considerable advantages over others, some shippers a handicap over their competitors. The structure, with all its differentials, froze, and now it almost takes dynamite to change the rates. Millions of dollars have been spent, for example, in litigation before the Interstate Commerce Commission over the lake cargo rates on coal, and the end is not yet.

Social Effect of Rate Policies

The power industry has for some years had a

¹¹ Report of Rate Research Committee, N.E.L.A., released June 7, 1927, p. 3.

startling differential rate structure, favoring the power consumers over the domestic light consumers.

This is a form of social control which the industry has the power to exert. When a rate structure is built on high domestic rates, when the benefits of the industry go mainly to the large power consumers, something is being done to determine the standard of living of the people. Reversely, when a rate structure is built on low domestic rates, when the greater electrification of various forms of domestic toil are encouraged, something else and different is being done to the living standards and culture of a people. This is especially true of the farms. When light and power reach them, they are different places, for work, for men and women to live in, than when light and power are absent or may be obtained at a rate they do not feel they can afford.

For those interested in the development of a homogeneous civilization in this country, in a natural and easy growth rather than in a development proceeding by a series of explosions caused by a head-on collision of different racial and cultural heritages, the development of power on a large scale and its long distance transmission have been of intense importance. These reformers expect the rebirth of small towns, not located as before, of necessity, on a watercourse or at a waterfall, but wherever the soil, timber and other mineral resources are best, drawing their power by wire, able at last to exist economically independent of the great industrial centers which have, in the main, put the small towns and the economic independence and cultural unity they were developing, out of competition.

In other ways the social control of the industry through rate and sales policies is less remote. Shall

a great natural resource give its power to one or two or three industries which can then out-compete others to the extent of their cheap power, or shall that cheap power be spread into a hundred thousand homes? Some years ago a decision was made to give Niagara Falls to industry. The people of New York State let this source of power go by default. In North Carolina about 20 per cent of the total water power developed in the state is used at the Badin plant for the reduction of aluminum. The people are soon to decide on the disposal of the power resources at Muscle Shoals. A corporation consisting of three large industrial groups has bid for the power on the St. Lawrence. It may or may not be well to give industry not only all the benefits of low power rates but also a lease on the bulk of a great natural resource—but it is an important form of social control. Certainly it takes only a very few years of the present policy of giving the greatest benefits of the industry to the large power consumers to cost the small residential consumers a good round sum.

A reversal of the present policy—the policy of lower rates to the small consumers—would not be to the disadvantage of the industry, and the industry is beginning to see the light. In Ontario that low rate policy has jumped the average consumption in domestic service in the six years from 1920 to 1925, a matter of 45 kwh., a 100 per cent of what it was in 1920.¹² The power industry in this country cannot hide that fact. An editorial survey of the future market for power in the *Electrical World*¹³ bases the main expansion possibilities for the industry on a

¹² Chapter VI, *Across the Border*.

¹³ May 8, 1926.

domestic rate of 3.5 cents, less than half of what it now is. On that basis, it foresees a domestic market over 17 times larger than the present one, bringing in a domestic revenue almost eight times the present one. It suggests a reduction in rural rates from 12 cents to 5 cents and if that is done expects an expansion of 34 times the present rural business and revenue fifteen times greater than the present one from that source. The rate for industrial power is to be a little higher than now. Here certainly is a confession of error—an error which the public is paying for.

Certain moves in the direction of lower domestic rates may be expected in the near future. The pressure for them is developing. The greater part of the industry seems able to afford them. The Brooklyn Edison cut rates one-half cent at the beginning of 1927. In Baltimore in 1925 the local company reduced rates \$875,000 a year, but the Public Service Commission, after a rate suit was brought by interested groups, found that they could reduce an additional \$1,000,000 a year and so ordered. It was discovered that the clause in the contracts between the industrial consumers and the power company giving the latter the right to raise rates whenever the cost of coal exceeded a certain figure had resulted in the company's collecting \$4,935,668, while the whole cost of *all* the coal used to generate power had amounted to only \$4,869,243.

There is nothing automatic about our regulatory system which guarantees that when the financial returns on the business exceed a fair percentage rates will be cut, or that one group of rates will be cut in preference to another. In many cases the commis-

sions do not even have the power to start on their own initiative investigations looking toward rate reductions. In Massachusetts, where regulation is in many ways more automatic than in most states, the Department of Public Utilities has as yet no such power. In the early part of 1927 Governor Fuller found and announced that, on the record of their earnings, thirty-eight companies in Massachusetts could reduce rates, including 17 which had already reduced them since 1925. Within twenty-four hours four of these companies had reduced rates and others intimated that they had been intending to do so right along. The announcement was made with the purpose of arousing opinion to have the Legislature give the Department of Public Utilities power to initiate rate reduction proceedings.

While most of the suggested reductions were for small towns, the following reductions in cents on the maximum lighting rates were proposed which would still allow 8 per cent on the capital stock and premiums paid in:

| | <i>Present Rate</i> | <i>Amount of Reduction Possible</i> | <i>New Rate</i> |
|-------------------|-------------------------|---|---------------------|
| Northampton | 8 | 2.5 | 5.5 |
| Cambridge | 8 | 4.0 | 4.0 |
| Worcester | 7 | 4.75 | 2.25 |

The contrast between the proposed new maximum rates for these Massachusetts cities and maximum rates charged in other cities this side of Ontario give a rough idea of the cost of letting regulation become a gambling game. In this, as we know well, the banker always wins.

We have tried and are trying three main ways to secure the benefits of the power industry or to pro-

tect ourselves from its possible extortion. As the technique and field of the industry have changed the small consumers have changed tactics. Now, in view of the present situation, the concentration of control of 46 per cent of the production into the hands of five groups, of over four-fifths into the hands of nineteen groups, the solidification of the rate structure against the small consumer and for the large industrial consumer, a fourth proposal looking to the small consumer has been made. It will be discussed later.

It is thus seen that up to the present time the interests of the consumer have by no means been properly safeguarded in the power industry as against the inner circle of power owners. The power industry is constantly using another argument in the hope of allaying the desire of the public to secure all of the benefits of the work of the engineers. It is constantly pointing to American wage standards and saying: "We did that." Our present wages may, to the off-hand observer who looks at coal and textiles, seem nothing to which one can point with absolutely unrestrained pride. However, it seems that their level is somewhat higher than the European, Asiatic and African one, and for that the power industry claims some credit. Not the power industry alone, to be sure. Thus a vice-president of the United States Chamber of Commerce, in the process of suggesting to the National Association of Railroad and Utility Commissioners that they should watch where they are going, points out: "Through power machinery, we have enabled the American wage-earner to turn out in a day more than the daily production of the worker of any other land. This has meant that

American industry has been able to pay the American worker the highest wages in the world. Higher wages, in turn, have meant a greater public purchasing power and wider markets for American goods."

One of the syndicated industrial-financial news and comment services points out that more unskilled laborers are leaving this country than are coming into it. It goes on: "Under such circumstances is it not comforting to know that our electric power leaders are energetically raising and spending the billions of dollars necessary to back up our man-power with an amount of machine-power not equaled in any other country? Interconnected power is part and parcel of their program. All parts of the country are not yet linked together as they are by our railroads, by our Federal Reserve banking system and by the telephone, but extraordinary progress is being made toward that end."

These are all more or less skillful ways of exercising a social control over public opinion, so that the various groups appealed to will leave the power industry and all the presuppositions on which it is based very much alone. A legitimate and well-paid pastime, this, to which exception can be taken only by the critically minded, and that only in a captious way.

The productivity of the American worker has increased the amount produced by one man per shift. In many industries such as steel and cement, the total amount produced has increased much more than the working force. Ewan Clague points out that, on the other hand, some industries have shown very little increase in recent years and even some decrease.¹⁴

¹⁴ *Monthly Labor Review*, March, 1927. U. S. Dept. of Labor.

Among these are the boot and shoe industry and leather tanning. He shows that the newer industries such as rubber tire manufacturing and automobiles are going through the period of substitution of machinery for hand labor which such older industries as boots, shoes and tanning went through thirty or forty years ago, and that, after a while, a let-up in that process may be expected.

An increase in the productivity of labor does not necessarily mean an increase in real wages, in the amount a worker can buy with his wages. There is nothing automatic about the effect of the greater use of mechanical power on labor's wages. The productivity of American labor increased fairly steadily from 1896 to 1919, and yet during that period there was no improvement in the average real wages of the country, in fact they were sometimes behind the 1896 level.

The increased productivity of labor and increased real wages are not always in positive correlation with the amount of power installed or used. Mr. Clague finds that, while in the rubber-tire industry there has been a fairly good increase in wages and a reduction in hours somewhat greater than the average, the workers in the automobile industry have not benefited in a degree at all similar. Yet we know that the automobile industry has five times as much horse power installed as it had in 1914 and that the rubber industry has only three times as much.¹⁸ This situation in regard to the wages of the automobile workers, Mr. Clague says, "is partly accounted for by the decline in skill of the automobile worker; that is, in 1914, he was a skilled mechanic, drawing high pay

¹⁸ *Elements of Manufacture*. National Industrial Conference Board.

relative to other workers in the country, while in 1925 he is no longer an all-around mechanic, but a narrowly trained specialist who barely escapes being classified as semi-skilled."

This is one of the by-products of increased mechanical power. It applies also to the coal mines. Where increased mechanical power hastens the process of extracting the workers' skill from them and concentrating it in the hands of the plant manager, the workers may be expected to suffer the competition no longer of their skilled peers but of the great number of semi-skilled.

The rates industrial consumers pay for their purchased power are, as we have seen, much lower than lighting rates and these rates have been going down. To the extent that the workers in industry can put in an effective claim to the savings possible through the decreasing cost of power to the industry in which they are working, it can be a gain to them. Where it simply means higher profits, the workers gain nothing as workers but lose as individual consumers to the extent that lower and lower power rates mean high domestic rates. Mr. Lewis E. Pierson, Vice-President of the United States Chamber of Commerce, is authority for the statement that the item of electric power represents on the average only 2.8 per cent of the operating cost of American industry.¹⁶ This would not seem to offer the workers an opportunity for greatly increased wages, even if they received all the benefits of constantly lowered power costs. But labor, some might interject, should rise

¹⁶ Address delivered to the National Association of Railroad and Utility Commissioners, Washington, D. C., October 15, 1925.

above this, be men of large general ideas, and see, in Mr. Pierson's words, "how foolish it would be for the American wage-earner to measure the usefulness of a utility by his small domestic lighting bill when that same utility is serving to create the prosperity which enables him to maintain his whole standard of living."

As lower *cost* of electrical power in an industry is not necessarily reflected in increased wages, so the increased *use* of power in an industry does not necessarily mean a higher wage scale. In some industries, like coal and flour milling, it may mean that men are laid off permanently because machines can do the work cheaper. It may at times mean lower wages. It will not head off attempts to deflate labor such as we saw in 1921 and 1922. By and large, and on the whole, where there are effective unions, wages will stay up better than where there are none, and as long as we have a great tariff-free country of 120,000,000 people to consume our products, richer natural resources per inhabitant than Europe, restricted immigration and a man power not seriously lowered by the war, we may be expected to keep our wage level higher than Europe. To assume that the wage level can be explained merely in terms of our increased use of electricity is to shoot beside the mark.

Thus in summary it may be said that the electrical industry has failed to make its case, that the benefits of recent developments have accrued primarily to the consumer through cheaper rates and to the producer through higher wages.

It is true that rates have not gone up during the past decade as have commodity prices in general.

But this industry is not closely comparable with the average industry. The wage bill here constitutes a comparably small part of operating expenses. The number of workers needed in proportion to the output is, for instance, far smaller than those required in the production of coal. A rise in wages in the electrical industry would have slight effect upon total costs. The industry since 1913 has increased its output six or seven times and has been enabled to make economies resulting from larger units of control far beyond that in most other branches of business.

The operating expenses per unit of production in the electrical business have, in fact, decreased, while the net revenues have advanced.

The discrimination against domestic light consumers and in favor of industrial power consumers and electric railways in the fixing of rates has long been patent to all students of the subject.

The social effects of such discriminations in favor of certain classes of consumers are very great and the present policy of discrimination as between power consumers and as between users of power and users of light have a number of dangerous social implications. Nor have the regulating commissions taken any effective steps to change the situation.

Finally, the electrical industry's appeal to labor has been largely beside the point. Labor is interested in increased productivity, but there is no assurance that either the increased productivity resulting in general from the use of electricity, or the decreased cost of power supplied to large industrial units, will automatically raise the living standards of labor. Nor is

the fact that labor may indirectly benefit from the use of electricity any argument why labor should not insist on a social control which will give the people both as consumers and producers the maximum benefits from all economies in the electrical industry.

CHAPTER V

REGULATION: OUR LOST PROVINCES

THE power companies have monopoly privileges. There is usually no competition to keep their rates down. In place of competition we have put regulation. This is usually exercised by state public service commissions. The power companies and other utilities have public functions and act as agents of the political estate in fulfilling them. They use state rights such as the one of taking property by eminent domain for their purposes. The purpose of regulation is to protect the public from monopoly prices.

The cumulative experience of the last two decades of regulation has convinced many that the job has now gotten beyond the commissions. These at best always operated in a small field of supervision and have been boxed, limited and straitened more and more in contrast with the growth and development of the power industry. Now the public receives through regulation a much less adequate protection than was originally intended. The provinces we once fought for have been lost to us again.

This is not the view of the company representatives, who spread the impression that the commissions take every opportunity to reduce rates, and that the utilities have practically no protection from them.

Here there is a decisive and important difference

of opinion. Mr. Herbert Hoover holds with the utility people. He says:¹

"It is my belief . . . that the public service commissions with very little just criticism are proving themselves fully adequate to control the situation. The laws as written in the state statute books are sufficient to protect both the public and the industry, the two parties to the utility contract."

On the other hand we find, among others, the Massachusetts Department of Public Utilities, with perhaps a slightly more intimate knowledge of the situation, saying, in March, 1927, that, if its regulatory system, which is unique among the states, is to be changed to conform to that prevalent in the other states with a view to give foreign holding companies the same opportunities to exploit the situation which they have in the other states, then "we are confident that the people of this state will conclude that the regulation of the rates of the gas and electric companies is too cumbersome, inefficient and expensive to be tolerated" and will proceed to public ownership or regulation by contract instead of by police power. Most of the economists, not employed by the utilities, who are writing on regulation to-day hold with the Massachusetts view rather than with the utility view. The Giant Power Board of Pennsylvania has come to the same conclusion.

The size of the industry has of itself had an influence on regulation. It is more than five times greater than it was in 1913. Its control, as we have seen in Chapter III, has passed into relatively few hands. Five groups control 46 per cent, eight other groups another 23 per cent of the production. What

¹ Address delivered before the Forty-eighth Convention of the National Electric Light Association, June 17, 1925.

chance has some poor struggling power-hungry state like Alabama or Arkansas to match in its regulating personnel the staff of the Electric Bond and Share or any of the big holding groups so far as the training in the legal side of the case, knowledge of rate cases and general ability to protect its own interests are concerned? When the wealthy and industrial states cannot protect their consumers, despite all the hundreds of thousands of dollars they spend annually in an attempt so to do, it is not within reason to expect the poorer agricultural states, with a smaller population and a much slighter state budget, to have any semblance of adequate control over the situation now growing and freezing on them.

The growing size of the power industry has had the result, even in the large and wealthy states, of overburdening the commissions, which have also had to regulate all the other public utilities in the state at the same time. The technical staffs of the commissions are generally recognized, even by themselves, as being inadequate. Low salaries, one of these short-sighted economies to which there is so much pointing with pride, have in many cases simply made the technical staffs into training schools from which the utilities hire off the best men as they need them. The result of all this has been that, to all intents and purposes, most power rates go unregulated, neither profits nor rate differentials between power and residential consumers are gone into at all, and, so, unless and until some discontented city forces an investigation of the rates, the commissions have no idea whether the rates are too high or not. Most of the commissions, in fact, don't know what the average rates charged throughout their states amount to. They occasionally point with

pride in their reports to some rate reductions, but suppress the rate advances and actually have no idea of whether average rates have gone up or down within the past year or two. Nor do they know how their states compare in rates with neighboring states. Other data of a similar nature is absent. The most kind thing to be said is that possibly the commissioners simply have too many small things to do to take adequate stock of their position.

There are always those who think that the commissions don't fall down on their jobs—they are pushed. Possibly this is less so now than it was formerly. Certainly the list of state commissioners who have later entered service with the utilities is long enough to warrant the guess that there, and not in the work for the state, lies financial success. The latest illustration, almost an Horatio Alger story in itself for the bedtime reading of poor but honest commissioners, is the rapid advance, financially speaking, of the former chairman of the Colorado Commission to the publicity department of one of the great western power companies, to the directorate of the National Electric Light Association, the publicity agent for the whole industry, to the presidency of the National Broadcasting Company, with control over radio stations at a time when the power industry is under fire.

Holding Companies as a Means of Voiding Regulation

Just as the growth of the power industry beyond municipal limits made municipal control inadequate, so its growth beyond state limits makes state control inadequate. One of the several important ways in

which the development of holding company control has changed the regulatory system is in the service contracts between the operating companies and the holding companies. These are not subject to the control of the state commissions unless there is evidence of collusion, and the mere fact that the companies are the same in all except name is no such evidence.² Here, then, is one escape from even the empty form of regulation. In the case of similar contracts between the American Telephone and Telegraph Company and its state subsidiaries, the Supreme Court has held that the local regulating body has no right to pass judgment upon the wisdom of the contract; that unless collusion can be proved it must stand, regardless of its possible improvidence; that the operating company is entitled to earn enough to meet the terms of the contract and in addition to give a reasonable return upon all property locally employed in the industry.

Such contracts may often be exorbitant. They may involve double payments by the consumers for the same thing, first in the form of operating expenses, later in the form of additions to capital charges. Yet the commissions will often know nothing about them unless they happen to stumble on them in the course of a rate case. Such a situa-

² "The books of the holding companies," declares Chairman Lewis E. Gettle of the Wisconsin Railroad Commission, "are in far-off distant works and only the courts are allowed to see them, although the operating companies which are controlled and owned by the holding companies are subject to public supervision." *Electrical World*, October 29, 1927. Earlier in the fall the Wisconsin Commission ruled that arbitrary charges made against subsidiary companies by holding companies for services which may or may not be required will not receive the approval of the Commission and that this practice shall be discontinued by companies involved in the cases investigated by the Commission. *Electrical World*, September 17, 1927.

tion was, as mentioned in Chapter IV, uncovered by the Indiana Public Service Commission in 1926 in the case of the Southern Indiana Gas and Electric Company. Its holding company, the Commonwealth Power Company of New York, had a contract with the operating company, approved by the latter in 1922, giving the holding company six per cent of the total cost of extensions, additions and betterments to the electric, gas heating and other properties, three per cent of the total cost of all extensions and betterments to the railway properties (all under the same local management) and two per cent of the entire gross earnings from all departments of the company as compensation for general management and supervision service.

The whole procedure whereby holding companies make blanket percentage charges to operating utility companies whose stock they own was characterized by the commission as "a process of milking the patrons of the utility and obtaining an enhanced return on investment." The Commission pointed out where the consumer had to pay twice for the same thing. The operating company in 1925 paid to the Commonwealth Power, the holding company, \$43,752 for engineering services on account of extensions and betterments and \$55,440 for other services, a total of \$99,142. The Commission also declared that \$42,000 a year was paid by the operating utility for engineering services and that this amount was carried to the capital account, which is charged up to the investment on which the consumers have to pay a fair return every year. At the same time the utility charges up \$42,000 to the cost of operation, which the consumers also pay in their rates every year, but this \$42,000 it passes on to the company

which owns and holds it. The consumer not only pays the amount in the first instance (in operating expenses) but pays the holding company an annual return on the money thus expended.

A similar situation was handled in the same way by the State Railway Commission of Nebraska in May, 1926. It found that the Northwestern Public Service Company was paying to its holding company, the National Electric Power Company of New Jersey, a management fee of five per cent of the gross revenues, a fee which, taken in connection with a 15 per cent charge for engineering, paid to the Electric Management and Engineering Corporation, a subsidiary of the National Electric Power, was excessive. The commission fixed $7\frac{1}{2}$ per cent as the engineering fee, but found it had no jurisdiction over the management fee and considered it only in determining whether the percentage for engineering, which was partly a duplication of the management fee, was reasonable.

In October, 1926, the Railroad and Public Utilities Commission of Tennessee disapproved, as an item of valuation, of the payment by the Eastern Tennessee Electric Company of a percentage of the cost of improvements to a construction company organized at the expense of the utility company and controlled by the same stock holding interests. *This latter company, the commission found, assumed no risk, furnished no service and paid for no material for which it was not reimbursed by the electric company except as regards the salaries of its general officers who were, with one exception, officers of the utility.* His salary was allowed.

Such and similar contracts, unregulated, or but

slightly regulated, may become one of the greatest money-making opportunities for the holding companies. This is the opinion of the Chairman of the Department of Public Utilities in Massachusetts, who, in recommending to the Massachusetts Legislature that it take another try at the courts and make at least the long-time contracts subject to review by the regulatory body, said:

"The only way in which it will be possible to make these various pieces of paper the mergers are issuing good is, it seems to me, through their being able to obtain valuable contracts with the distributing local companies. Contracts which will run for a long number of years, and although not apparently bearing excessive terms at the outset, at least to the public eye, yet in the process of time, they having the field, with the growth of the business and the growth of the electrical industry increasing much faster than the growth of the invested capital, they will be able to get enough profit through these contracts to pay interest upon a lot of paper which represents practically nothing at the present time except various good wills and theories of people that the values of these various properties are such that they ought to be allowed to issue the paper against them."

In view of the decision of the courts removing such contracts from the province of the commissions, several other suggestions like this one have been made to get around the situation. The Michigan Commission has given notice that when the Court changes its mind the Commission will insist upon a refund of all excess charges from the present date on.⁸

⁸ In March, 1926, after being forced to allow the 4½ per cent contract between the American Telephone and Telegraph and

The New York State Commission has also favored the incorporation of holding companies in New York State, in the expectation that, under these conditions, control over their contracts will be more possible, and, like the Massachusetts body, it has asked the State Legislature for control over holding company contracts. In case of the repeated failure of such attempts, federal regulation waits in the background.

The second way in which regulation can apparently be voided is in the recapitalization of the operating companies not on the basis of a prudent price for them but on the basis of the high competitive prices paid for them by holding companies desperately eager to round out their systems.

Several commissions have taken unfavorable note of the prices now being paid for operating companies, which are still independent, by holding companies, and have announced that they did not care to include such prices in the base on which the consumers had to pay rates. The Public Service Commission of Missouri, for example, went on record to that effect in April, 1926. In February of that year Commissioner Porter Dunlap of the Railroad and

its subsidiary—the Michigan Bell Telephone Company—the Michigan Public Service Commission said: "Although all the operating expenses which the Supreme Court held should be allowed, have been allowed because of its opinion, when and if the position of that court shall be modified, reservation is made of the right to compel the Michigan Bell Telephone Company to disgorge any money taken under the so-called 4½ per cent contract in excess of what it shall ultimately be determined it is entitled to receive, and the right is also reserved to recover such amounts as have been taken from the public by telephone rates to pay a return on reinvested depreciation reserves, used for the purpose of earning and paying dividends thereon to its stockholders."

Public Utilities Commission of Tennessee objected to the purchase of the Fayetteville Electric Power and Light by the Southern Cities Power Company, commenting, "*If public utilities are permitted to continue the practice of purchasing properties of other utilities at prices in excess of their value, they will soon be loaded down with unprofitable properties and will eventually be unable to render the efficient service that the demands of the future development in Tennessee will require.*"

Just what is happening in this particular branch of overcapitalization is not always made public, even by the commissions.⁴ So little information is available for current decisions and formulation of policies that, in February, 1927, the Indiana Commission started a special investigation to find out whether non-used and non-useful property is being included in the rate base, especially in the sale of small utilities to larger companies.

When commissions make a change of front and decide to allow the high purchase prices they have denounced or looked at askance, that change is usually so hidden from the public that nothing is heard about it until, in some rate case much later on, the public is presented with a *fait accompli*. Thus in New York State the Public Service Commission had taken the attitude that, if the holding companies were going to buy operating companies at prices obviously beyond their investment cost, that was their own affair. It was not, however, going to be reflected in the rates or the securities. Then came the shift, a slight matter of dropping a few

⁴For prices paid in New York State by the Northeastern affiliates, see Chapter VIII.

clauses which protected the public, because these clauses would have made it necessary for the holding company involved to issue its stock at two different prices. The clauses in the orders permitting the mergers which were in effect in 1925 and were dropped later are:

"No entries of the capital stock of the (holding company name) issued to acquire the capital stocks of the operating companies shall be controlling or entitled to consideration in any proceeding, suit or matter hereafter involving the rates, charges or service of any such company or any such subsidiary thereof."

". . . the stated capital accounts representing the securities issued by the holding company for the purpose of acquiring the securities of the underlying companies shall in no event exceed the book value of the securities so acquired as shown by the books of the companies whose securities are to be acquired."

The way is now apparently open for the holding company to charge all its high-buying prices into rates, no matter whether the prices paid were the result of real competition between purchasing companies for a key link in a superpower system or were merely wash sales by which they bought control from some of their own people who took the opportunity to make a little pocket money on the side.

In the particular case where the way was first opened for including such high purchase prices in the rate base there happened to be an identity of interest between the holding company and the selling company. The Mohawk Hudson, a holding company, owned 15 per cent by the United Gas Im-

provement, bought from the United Gas Improvement, one of its subsidiaries, the Syracuse Lighting Company, and paid in cash and market value of its own securities \$347.00 for stock with a book value of \$106.00 on the Commission's books. Here another old rule of the Commission was set aside, that "when there is a substantial identity of interest between the vendor and the vendee, the values assigned to tangible fixed capital accounts shall not exceed the original cost of such property to the vendor." But then that rule had been disregarded before. Thus in the New York Telephone case the Commission called attention to this particular instruction (Case 1,789, p. 4) and remarked, "This part of the rule seems to have been ignored by the New York Telephone Company, as it has carried the property acquired to its books on a basis of structural value and not of the original cost to the vendor."

Such high prices, if allowed in the rate base, may be extremely costly to the consumers. The situation was put by President Samuel Ferguson of the Hartford Electric Light Company on a proposal to merge certain power companies in Connecticut. The overcapitalization of the Narragansett Electric Light Company to the extent of \$16,920,000 is another case in point.⁵

In fact this practice of holding companies to pay exorbitant prices for isolated plants has become so general that the *Electrical World*, the organ of the industry (October 5, 1927), was led to call attention to the practice as leading to a deep suspicion against them among the state commissions and the public.

"This suspicion in many cases," it declares, "is

⁵ Chapter III.

based on experience with promoters who have an eye to quick financial gains over and above those made possible by large-scale operation and greater specialization of labor, machinery and production processes.

"For a time it was thought that only the newer and less seasoned of the holding company operators were guilty of paying exorbitant prices for properties of doubtful value and earning capacity, and heaven knows they have certainly discovered ways and means of making fortunes out of junk; but commissions in such states as New York, Maryland, Indiana and Wisconsin, to mention only a few, complain of attempted infractions by many old-line operators . . . Morally as well as legally holding companies should show adequate value behind their issues; but inasmuch as state commissions have no right to investigate holding-company operations, the only scrutiny many issues receive is given by the bankers. Obviously, other indorsement is also desirable if public as well as commission suspicion is to be allayed."

When men so directly connected with the ownership and regulation of the industry not only expect another attempt at overcapitalization but find it in full swing, there is good reason to hold that in this respect too the power industry is putting itself in a position where regulation in really important matters is merely a form to be gone through rather than an effective protection to the public, and that the commissions partly for lack of understanding of the situation and partly because they know their impotence in other fields of regulation, are allowing this position to be taken to the detriment of the consumers.

Further Reasons for Court's Ineffectiveness

A further way in which our present system of regulation is ineffective is the fact that it does not start as a rule until long after a company has built its plant and is furnishing power. Then, when a rate case is brought, the commission has to go back into the books of the company for all the preceding years and try to see whether the money claimed for development was really all spent on it for that purpose or not. It is a task so difficult that unless a commission is especially ordered to hold the whole investment down to the actual money expended, it is not undertaken with much hope of cutting out any water. The Federal Power Commission, however, is so ordered by its law, and its Secretary, Mr. O. C. Merrill, reports that in one case, that of Conowingo, Maryland, a 300,000 horsepower development started in 1926:⁶

"The applicants presented a claim of 'prelicense costs' for the acquisition of lands, for surveys, plans, investigations, et cetera, and for interest on such expenditures, aggregating \$9,000,000. The Federal Power Commission is required to find in such cases whether the figures really represent actual legitimate expenditure, or cost, and to eliminate any claims which are not of such character; but the Federal Commission has authority to act only with respect to projects which it licenses. The difficulty of going back over a period, as in this case, of sixteen years, including two reorganizations, is evident, but if the state commissions were given jurisdiction, and the means to exercise it, over the accounts and expendi-

⁶ *New Republic*, May 26, 1926, p. 21.

tures of public utility companies from the time they obtain their charters they would be better able to protect the interests of the public. Many state commissions have little authority over the affairs of public utilities until the utilities actually engage in furnishing a public service. Until then the company has matters largely in its own hands. During this development period it issues its initial securities. Not infrequently, as at Conowingo, there are reorganizations and changes in ownership and management. Sometimes there are wasteful expenditures. After this has been going on for several years and operations have finally started, a state commission is very badly handicapped in determining the actual amount that has been legitimately, or even actually, invested in the plant.

"When the state commission finally has a rate case and begins to inquire into the investment made it finds that the company has a set of books, that these books have certain 'capital accounts' alleged to show an 'investment' in its plant of a certain amount. In many cases, however, this figure cannot be relied upon as representing actual investment. In such cases the only recourse of a state commission is likely to be an inventory and appraisal made in order to establish a value for rate-making purposes. Generally speaking, however, the state commissions do not require an adjustment of the investment accounts to conform to the value so found. This means that the corporation continues on its books figures which have no particular relation either to the actual investment or to the fair value of the property. They are simply used to make the balance sheet balance."

In the December, 1927, report of the Federal Water Power Commission, Secretary Merrill also maintained that "millions of dollars may be improperly entered in fixed capital accounts of licensees," and that the Commission, having to depend, as it

did, upon experts loaned to it from other departments, could not guarantee to keep down capital accounts to "actual legitimate investment."

Such attempts to supervise the early organization expenses (which later compose part of the investment on which a return is paid annually by the consumers), to stop the first water from leaking in, are rarely successful. *In New York State, for example, a sum of \$163,000,000, is carried on the books of the power companies alone as "fixed capital not classified by prescribed accounts," although ever since the commission's organization in 1908 the power companies have been ordered to classify all their capital so that the commission might get a slight general impression as to the amount of pure water in the companies when the regulatory body was constituted.*

The Niagara Falls Power Company alone, the largest single plant in the country, carries over \$32,000,000 in this unclassified form on its books. The New York Commission knows it. The Federal Power Commission knows it because all hydroelectric companies in existence before the Federal Waterpower Act was passed in 1920 had to secure licenses from the Commission and report their actual investment to it. In 1927 the sum is still on the books. Presumably the consumers are paying rates that give a fair rate of return on it. Probably the very inadequate budget of the Federal Power Commission (limited under the head of governmental economy) and the fact that it is not the custom of most of the state commissions to hold investments in power plants down to the cost of the capital actually spent in them, explain the fact that the Niagara Falls Power Company regularly slips by with its

\$32 million-dollar baby where other water power companies might fail in the attempt. The fact that some of its largest stockholders are very prominent in state and national politics is, in this case, probably only a coincidence.

In the main it is only in such cases of hydroelectric development, where the Federal Power Commission has some authority, and in the proceedings of big rate cases with steam plants, that we ever find out how much more we are paying for service than is needful, and then it is often much too late to effect any change. For example, at Conowingo, the Philadelphia Electric Company tried to issue itself a bonus of 94,200 shares of common stock and, without putting in more than 53 cents equity for them, asked the privilege of selling them for \$25. This is good and regular utility practice, as we have seen elsewhere. It is only because the Federal Power Commission is instructed to hold the rate base down to the money actually spent that this bonus, a matter of \$2,355,000, was refused. Instead only \$50,000 to represent management was allowed—a considerable contrast.

Compared with the gambling on the rise and fall of the dollar which is the main characteristic of our regulatory system to-day these other ways, just cited, in which regulation is voided and avoided, are minor sins of omission and commission. They do, however, illustrate how little control of the whole situation the commissions have succeeded in obtaining and then retaining; how little firm ground and information they have to stand on when they try to pry the power companies loose from what seems to them unfair gains.

The commissions started their careers with a general acceptance of all those light and power rates to which no group brought objection. They are on the whole still in that position. Many of them still have no power even to start rate investigations on their own initiative. They must wait for some outside prod. There is nothing at all automatic about the public's getting the lowest rates compatible with efficient financing and functioning of the industry. They have allowed rates sufficient to cover all operating expenses, state and local taxes and depreciation and to give a very fair return on investment; there has been no difficulty in raising a half billion dollars annually for new investment in the industry.

No sooner had the commissions started to function than they ran into the question of the amount of capital on which they were supposed to give a fair return. Roughly what happened was that they wanted to add up all the money prudently invested in the generating plant, transmission and distribution lines from the time the company started to function to the time the rates were questioned, then to deduct from that sum all that the consumers had themselves contributed in rates (under the head of depreciation) to keep the plant up to date, and to allow 6 or 7 or 8 per cent on that. Such was their plan, their idea of being fair to everybody. It later became the basis for the Federal Water Power Act.

To this the companies, however, objected. *They had, on the whole (except in Massachusetts), issued securities not on the basis of the money actually put into the plant but of the money they expected to be able to take out of it.* Roughly, what happened was that the companies first saw that their rates were

giving them a return on more than they had actually invested. Then they capitalized their income and issued securities on that capitalization. The community they were in grew up and they had a better business and better business prospects. They capitalized that. Land values increased because of the growth of the community. They capitalized these. They looked ahead and saw that increased engineering efficiencies would allow them to produce power more cheaply than before, and make more money at the same rates. They issued and sold securities on the strength of that. Then money started dropping in value, building materials and machinery prices went up. The companies saw that it would cost them much more to build their plant to-day than it actually had cost. So they capitalized that, and people bought their securities. Then along came a rate case.

The commission, in question, which had done little but watch the company at a distance thus far, was now forced to find out to what part of all this capitalization it could grant a fair return. It made a decision, allowing some of it as a justifiable claim upon the consumers, also disallowing some of it, and said rates could be reduced by the amount of the return on the disallowed sum.

Then the company pointed out that the people who had bought the stock had bought in good faith (widows and orphans some of them) and were they to be deprived of the return they had grown accustomed to receive on their property? Not if it could be helped. There was something in the Constitution of the United States—in the Fourteenth Amendment—prohibiting the states to deprive any one of life, liberty or property without due process of law. So

injunctions were had against the commission and cases were taken to the Federal Courts and then to the Supreme Court.

Considerable study of the opinions of the Supreme Court on the technique and procedure to be used in valuating public utilities, from *Smyth v. Ames* in 1898 to the Indianapolis Water Company case in 1926, leads to the conclusion that the Court did not at first realize what a deal of trouble it was stepping into. It said at various times that regulation was essentially a legislative matter, that the Court did not have any special business with it except to prevent actual confiscation. In practice the commissions and lower courts, usually no great valuation experts either, have gone by the various pronouncements of the Court with almost subservient fidelity to the dicta (the explanations accompanying decisions), even when the dicta were at variance with the decisions themselves. So when the Court started leaning in earnest toward the idea that the companies were right in gambling on the dollar, the deadening effect on regulation was felt pretty much all the way down the line. The more intelligent commissioners began to realize that they had nothing much left to do but to try to set an upper limit to the company's guessing ability on how much it would cost them to rebuild their plant to-day if this, if that, if the other circumstance were taken into consideration. . . .

The Court on Valuation of Utilities

The idea which the companies tried and finally succeeded in convincing the court to be a pleasantly inspiring and proper thought amounted to a demand

that the consuming public underwrite the fluctuating dollar. And that not for the sake of their conservative investors, the holders of their bonds and preferred stocks, but all in favor of their more speculative investors, the holders of their common stock. They, poor people, had bought stock at times when the purchasing power of the dividend they received from it was higher than it was later during and after the rise in prices from 1913 on. It was unfair to them not to increase the money rate of return until it equaled the old purchasing power they had once enjoyed. That it was quite as unfair to the bond holders and preferred stockholders who represented the majority of the investment and received a fixed rate of return was not stressed. The companies let them suffer in silence the same injustice to which the stockholders objected so loudly.

The absurdity of the situation may be illustrated by taking as example a company in which most of the money was invested in 1912 when general prices were about half as high as they were after the war:

| <i>Original Investment:</i> | <i>Bonds</i> | <i>Preferred Stock</i> | <i>Common Stock</i> |
|-----------------------------|---------------|----------------------------|-------------------------|
| (1912) | \$600,000 | \$200,000 | \$200,000 |
| Rate of return | (5.5%) 33,000 | (7%) 14,000 | (11.5%) 23,000 |

With an allowed rate of return on the entire investment of 7 per cent, \$70,000, the common stock receives \$23,000, a 11.5 per cent return.

Business improves during the war years. The company earns more than its allowed 7 per cent. It earns \$80,000, then \$90,000, then \$100,000. At that figure the common stock earns 26.5 per cent and climbs to a new high level. It now sells for \$300 instead of \$100 a share. People buy it at that price as an investment, expecting it to continue to

pay \$26.50 a year or more. Things stay this way for some time. The commission is finally petitioned to investigate the rates of the company. Is it giving service at a reasonable price? How about this \$100,000 return on an investment of \$1,000,000? That's 10 per cent and we usually allow only 7 per cent.

The company replies in substance: This may look like a \$1,000,000 company to you because that was all the money invested in it. But look at what it would cost us to build it to-day, to reproduce it new. Prices have risen 100 per cent since we built most of this plant. If we had to buy all our land new and build now it would cost us twice the original million dollars. What we really ought to have from you is permission to earn a 7 per cent return on \$2,000,000, a sum of \$140,000 annually. Think of all the people who have bought our stock expecting it to return \$26.50 annually. You can't deprive them of their property. Think of our original stockholders: they can only buy half what they used to for the \$11.50 return they used to get. Now they get \$26.50, that makes up for the 100 per cent increase in prices. It leaves their real return about the same. You can't take away their property.

The commission, let us say, points out in its turn the inconsistency of pleading for protection to the common stockholders' return from a drop in purchasing value while the original bondholders are still getting \$5.50 and the preferred shareholders \$7.00 in the old purchasing power—now able to buy only \$2.75 and \$3.50 in food and shoes for the baby. Still, there is an issue, and the Supreme Court gets the case.

The Court does not know quite what to say. In one case it upheld the commission when the commission allowed an addition of $33 \frac{1}{3}$ per cent over the actual base value in recognition of the higher price level.⁷ Yet prices were 110 per cent higher than in 1913 and the company expected them to settle around 60-70 per cent higher, so $33 \frac{1}{3}$ per cent was a let-down for the company.⁸

In another case (the second Consolidated Gas case) the Court found that the commission had not even allowed the company to earn more than 3 per cent on the actual cost and threw out its rates. Then in the Southwestern Bell Telephone Company case in 1923 the majority of the court added 25 per cent to the investment to allow for the cost of reproducing the property new, although prices had increased nearly 100 per cent. Here Mr. Justice Brandeis wrote the minority opinion, concurred in by Mr. Justice Holmes, setting forth the adequacy of the return. A month later, in the Atlanta case⁹ there was a difference between the investment as the commission found it to have been (\$5,250,000) and as claimed by the company (\$9,500,000), of \$4,250,000. But here the commission gave at least lip service to the idea of making allowances for reproduction costs and added to the actual cost \$125,000 for appreciation in the value of the land owned by the company. The Court upheld the commission and remarked that "the refusal of the commission and of the lower court to hold that, for rate-making purposes, the physical properties of a utility

⁷ Chapter IV. Dr. John Bauer, *Effective Regulation of Public Utilities*. Macmillan, 1925.

⁸ Galvesti Electric Co. v. City of Galveston, 258 U. S. 388.

⁹ June 11, 1923. Georgia Railway and Power Company v. Railroad Commission of Georgia, 262 U. S. 625.

must be valued at replacement cost, less depreciation, was clearly correct."

Here was some wobbling. But in 1926 the court came right out with it and said that the hypothetical cost of reproducing the plant now was the main factor to be considered.¹⁰

Only Mr. Justice Brandeis and Mr. Justice Stone dissented. It is to date the point furthest south in the procedure of turning regulation into a guessing contest out of sympathy and regard for the interests of those who invested in good faith on the basis of established earnings.

Here the idea behind regulation, that of fixing rates by a commission to prevent the legal monopoly from charging monopoly prices, was pretty well lost sight of. As Mr. Donald Richberg has pointed out:¹¹ "Apparently the argument of the opinion is that if it would cost the public \$19,000,000 in January 1, 1924, to duplicate the service rendered by a privately owned public utility, then the private owners are entitled to charge rates sufficient to produce a fair return on \$19,000,000. This is in fact a monopoly value—or what is called a 'hold-up price'; that is, the most that any sane buyer would pay."

He goes on: "In order to appreciate the significance of the majority opinion, it is necessary to analyze separately its various elements. The opinion seems to rest upon the following series of propositions:

(1) "A public utility property will be 'confiscated' unless rates are fixed so as to yield a reasonable rate of return on 'present value.'"

¹⁰ *McCardle v. Indianapolis Water Company* (47 sup. Ct. 144, U. S. 1926).

¹¹ *Harvard Law Review*, February, 1927.

(2) "‘Present value’ of the physical elements is the (estimated) present (market) value of lands (for other uses) plus the (estimated) present cost of constructing the identical plant (under imaginary and impossible conditions).

(3) "Present cost of construction is found by using the prices of materials and wages of labor prevailing at the ‘time of construction’ (qualified by ‘an honest’ and ‘intelligent forecast’ of future prices and wages.)

(4) "The ‘time of construction’ is the calendar day of valuation and is not the period of time which would be required to construct the plant in order to have it in operation on the valuation date.

(5) "There must be added to the physical value of the property thus found all the intangible values, particularly ‘going value,’ which must equal that percentage of the physical value which is ‘generally included.’”

In other words the whole process of regulation has become a series of estimates checked only by the commissions’ and the court’s sense of the utterly ridiculous. The whole procedure of finding how much it might cost to reproduce a plant has been described by the Michigan Commission in words approved by the Connecticut Commission and cited by the minority of the court in the Southwestern Bell Telephone case:

“This method of determining value included percentages for engineering services never rendered, hypothetical efficiency of unknown labor, conjectural depreciation, opinion as to the condition of property, the supposed action of the elements; and, of course, its correctness depends on whether superintendence was or would be wise or foolish; the investment im-

provident or frugal. It is based upon prophecy instead of reality, and depends so much upon half truths that it bears only a remote resemblance to fact, and rises, at best, only to the plane of a dignified guess."

The way is now wide open for this to become the rule in regulation. There is no certainty to it, no solid ground on which a commission can stand to protect the public. As Mr. Justice Brandeis described the procedure in the Southwestern Bell case, "gradually it came to be realized that the definiteness of the engineers' calculations was delusive; that they rested upon shifting theories; and that their estimates varied so widely as to intensify, rather than to allay, doubts."

In the Indianapolis case the estimates of reproduction cost varied from \$12,200,000 to \$22,600,000, using the same price levels. As Mr. Richberg has pointed out, these experts varied more than \$3,000,000 in their estimates, and experts testifying on the company's side disagreed with each other to the extent of \$800,000, although they were testifying in a common cause. In the New York Telephone case, now in the Federal Court, one of the company's experts estimated the cost of reproduction new at \$586,037,000; a firm of engineers also employed by the company made a similar estimate and arrived at the figure of \$692,666,590. The Commission "giving due consideration to reproduction cost" estimated \$491,554,386. When the rate-making process is so uncertain that the company's experts vary by over a hundred million dollars from each other, and the Commission varies from the highest company expert by over two hundred mil-

lion dollars, the possibilities of the utilities having their rate bases altered upwards are good.

This is all a direct inducement to the companies to use their collective imagination, and private initiative in imagination is wonderful to behold. The New York Edison Company in a case before the commission at the time of writing is claiming the right to add to its capital investment, upon which the consumers will have to pay a permanent fair return every year, the sum of \$7,250,000 for the hypothetical cost of training a staff of new employees in case the present staff were wiped out entirely by plague or other act of God! The expense of training these employees has already been completely paid for by the public in rates. The idea of adding the cost of reproducing them new to the fixed capital is a long step toward the absurd. The next step will be to put in a claim for reproducing their parents new, for without parents obviously there can be no trained Edison employees.

Some Finer Points of Regulation

There is no special purpose to be served here, in going into the finer points where the court hooked the process of regulation. It is not important here that "values" are fixed by earning power and any lowering at all of the earning power might be said to "confiscate" such values—a fact which precludes the court on its own reasoning, and the commissions, from ever lowering rates except on the ground of lower operating costs! Nor is it especially important that in allowing something it calls "going value," the court failed to make any allowance for a possible "receding value" in Mr. Richberg's phrase,

in case business was falling off; in short, that it has simply added on a value which always goes in favor of the investors and against the consumers and never in favor of the consumers, that it is a kind of cost *plus* guarantee, the more a company plunges the more it shall be compensated.

Another important thing, however, which the court has done in the course of its meddling about with regulation is to give to the investors the sums which the consumers, not the investors, contributed in rates—both under the head of a depreciation allowance to keep the property in repair and in excess rates over and above a fair rate of return. Such sums were usually reinvested in the property. The court has held in the New Jersey Telephone case (April, 1926) that the consumers must also pay a return on the "value" of such sums, instead of on their cost, although they contributed these sums themselves.

To this appropriation of consumers' funds for the benefit of the investors the Michigan Commission has vigorously dissented and expressed its intention to putting in a bill to collect such diversions as soon as the court changes its mind. Dr. Robert L. Hale says in this connection:¹²

"In defense of this position of the Court, it is sometimes contended that property bought from earnings is paid for just as truly by the stockholders as if bought from the proceeds of the sale of a new stock issue, for if the property had not been bought, the stockholders would have been entitled to so much additional dividend; and, the claim runs, it makes no difference in substance whether they received the dividend in cash and then bought stock with it on which new dividends

¹² *New Republic*, May 26, 1926.

are now payable, or whether they went without the dividend and now receive a new return on what they went without.

"This is quite true. But it indicates a weakness in the regulatory process, as limited by the Court. The Court might have held the investors to be entitled to additional return (beyond the fair return on the money they originally invested in the company) *only* to the extent that they have failed to receive the stipulated fair return in the past; had the Court so held, any reinvestment by the company of earnings in excess of the fair return would have represented no sacrifice on the part of the stockholders of anything to which they were entitled; for the alternative of taking a dividend of more than the fair return for that year, would have been prohibited. Or the Court might have reached the same result, not by forbidding the payment of dividends in excess of a fair return, but by insisting that whenever such excess dividends are in fact paid, the amount thereof should be credited to the capital account, or treated as a return of part of the principal; and the fair return to which they are entitled in subsequent years would be proportionately reduced. Had the Court taken this position and based the return on the money which actually had to be contributed by investors, then the result under regulation would be that the customers must pay the necessary cost of production, but no more. Such is not the result, because, as indicated, rate reductions are prohibited unless the investors are still permitted a fair return, not only on property bought with past excess earnings, but also on a 'valuation' of all the property that may differ materially from the sums that had to be paid for it; and it may differ not only in number of dollars, but in purchasing power as well."

Transmitting Power Across State Borders

There is a further gap and deficiency in our regulatory system at present in the wholesaling of power in interstate commerce. The Supreme Court has decided that in such wholesaling, as in the wholesaling of gas across state borders, unless Congress has acted there is no authority to regulate. The specific case was decided in January, 1927, when the Court held that the Rhode Island Commission did not have the right to order the Narragansett Electric Lighting Company to increase the rates it was charging to a company across the state border in Attleboro, Massachusetts, which took less than three per cent of the production of the Narragansett company. The commission had found as a fact that continuance of the service to the Attleboro Company at the existing rates would prevent the Narragansett company from performing its full duty toward its other customers and would be detrimental to the public welfare.

When power is transmitted across the state line and retailed there by the same company the rates at which it is sold to the consumers are controlled by the commission in the receiving state. It is only the wholesaling interstate which is unregulated.

This gap in regulation becomes more important as the range of efficient transmission grows and surpasses state limits. Thus Boulder Dam, the St. Lawrence and Muscle Shoals will also transmit power through several states. New York State already has twenty transmission lines bringing and taking power to and from New England, New Jersey and Pennsylvania. Pennsylvania has an import and export of approximately 18 per cent of its pro-

duction. Of the total of 597,000 horse power developed by water power in North Carolina, energy from about 18.6 per cent is transmitted for use outside the state by two companies,¹⁸ and about an equal amount is imported from South Carolina. Here is a problem that is getting to be of some importance, especially as long as the courts persist in holding that as long as corporations have different names they are different legal entities, no matter if they own each other 100 per cent.

Only in cases where the Federal Government has the leasing power over water power developments and where those developments lie in two states does there seem to be the possibility for any really effective regulation of power rates charged in interstate commerce or of investment. The Federal Power Commission is supposed to keep investment on power development in navigable rivers down to the cost of the money actually spent. There is a provision in the Federal Water Power Act of 1920 that the project can be recaptured at the end of a fifty years' license by payment of the net cost of the investment. Where the projects lie entirely in one state, however, the practice is to leave the regulation of rates to the state commission—where they apparently go the way of all rates.

Where the project does lie in two states, as the Conowingo dam and storage reserve does, and the two state commissions have inadequate authority, then the Federal Power Commission by holding securities down to capital actually invested, by preventing the capitalization of the difference in cost between water power and power generated by coal

¹⁸ Circular No. 16, North Carolina Department of Conservation and Development, 1926.

and dependent upon the price of coal, by making the various holding companies and subsidiaries sign contracts providing that rates should not exceed a fixed per cent on actual legitimate investment, have doubtless saved the consumers a great deal of money over ordinary regulation. The Giant Power Board of Pennsylvania estimated the saving to the people of Philadelphia at one million dollars a year.¹⁴

This is the exception. The rule, as we have seen, is something quite different. *The whole regulatory system has now become a series of more or less dignified guesses. There is no adequate or automatic protection to the consumers if the price level keeps on going up. And if it drops it is doubtful that the consumers will be able to gain the advantage of the drop.* The records which make it possible to establish the extent of changes in the situation remain in the company's hands. It is thus not even a fifty-fifty gamble that, when the price level goes up, the consumers lose and when it goes down, the companies lose. Even if it goes down, the commissions are not in the position of having sufficient information to force the rate base down to the extent that the companies can force it up. And there is a limit to which the commissions can fight rate cases. They have at the most a few hundred thousand a year with which to regulate the power industry in each state. That is, with the exception of a small extra appropriation, they soon reach the limit of their capacity to fight. The companies have no such limits. What they pay engineers, accountants and lawyers goes into rates and the consumers thus pay for both sides. Before the present New York Edison case is

¹⁴ Report of the Giant Power Board of Pennsylvania, 1927, p. 17.

decided by the courts, that company will probably have spent \$4,000,000 on that one case alone. The consumers pay, win or lose. Here again there is not even a fifty-fifty gamble for the consumers.

The Massachusetts System

Possibly the difference between the regulatory system as it works in forty-seven of our states and as it works in Massachusetts will show better than any one other thing how far we have gone from the purpose for which regulation was established. The power companies have been looking eagerly to Massachusetts with the idea of bringing the local power companies there up to the regulation size investment. In Massachusetts a certain New England thrift led them to issue securities only for the amount of money actually invested. This meant almost automatic regulation, because it could then be seen from the market price of the stock about what the earnings on the investment were. In no other state than Massachusetts would the Governor have been able to call the roll of the companies earning more than a fair rate of return and suggest they lower rates.¹⁵ There are many companies which have constantly plowed their surplus earnings into their property, instead of distributing them as dividends on revaluated investment, and are now in a position where the reproduction value less depreciation is substantially in excess of their outstanding capital and obligations. They represent an attractive temptation to financial interests outside the state which hope to inflate them under the Supreme Court ruling. The Massachusetts Department of Public

¹⁵ Chapter IV.

Utilities has several forceful things to say about this:

"We think it would be unfortunate for our domestic companies, which largely have grown up under our New England idea of basing, in large measure, the rates upon the investment and which have conducted their business with thrift, to pass under the control of such foreign financial interests." (December, 1926.)

Public ownership would be obviously preferable to regulation as it is exercised at present in the other states, according to the Massachusetts body, which made a report in March, 1927, to that effect:

"The public utility corporations in this state are given the right to organize to perform a public service which the public might otherwise undertake itself. The state gives to them permits to use the public highways; it grants to them the privilege of taking private property by the exercise of the sovereign power of eminent domain and to a large extent protects them from adverse and unwise competition. In exchange for these unusual privileges the public of Massachusetts has assumed that it had the right to regulate the utilities to such extent as would assure their obtaining the public service furnished by the utilities at as cheap a rate as the capital invested in the service could reasonably be expected to produce. When the people of this commonwealth adopted a policy of obtaining that public service, which the utilities are organized to furnish, by the employment of private capital through a regulated monopoly, which service they might otherwise have furnished directly themselves, they little dreamed that they would be required, in the regulation of

rates, to enter into protracted investigations of the fair value of the property employed in the undertaking, ascertained by a theoretical calculation of what it would cost to reproduce the property, less its actual depreciation, on each and every such occasion, with its necessary large expenses, all of which eventually must be paid by the ratepayer.

"If, under the present statutes, it shall be determined by the United States Supreme Court that the gas and electric companies of this state are entitled, as a matter of law, to charge rates based upon the fair value of their property employed in the public service, and that in ascertaining such value the value of the plant and of the structures and equipment in or upon the public highway is to be taken at the reproduction cost less the then actual depreciation, and that the findings of fact in relation to these values are subject to review in each instance by the federal court, we are confident that the people of this state will conclude that the regulation of the rates of the gas and electric companies under such conditions is too cumbersome, inefficient and expensive to be tolerated. Such a method of regulating rates will inevitably lead to conflicts between the companies and the public, to the disadvantage of both. If the public is required to pay a return upon property acquired through excess earnings, it will insist on paying in rates no more than is required to be paid under the rule. This is likely to lead to an impairment of the financial stability of some companies, as dividends will often be paid at the sacrifice of proper reserves for depreciation. This in turn will weaken such a company's credit and require the payment of higher dividends to maintain its stock at par. We must never forget that

while a company is growing, its dividends are in effect guaranteed by the public, so long as we require its stock to be issued at par. The public demands the extension of the company's service. That service cannot be given unless the company can market its stock at par.

"In our judgment the people of this commonwealth will seek a means of escape from such a situation. Two courses will be open to them: (1) Public operation of such utilities, or (2) the operation of the utilities by private capital in those instances where the public utilities are willing to enter into a contractual relationship with the public whereby the rates may be readily, efficiently and inexpensively regulated and adjusted and the initiating of free and unlimited competition by municipalities in those areas where companies are engaged in business which are unwilling to enter into such contractual relationship.

"We have not thought it expedient to recommend any bill at this time providing for the operation of companies under a contractual relation with the state. We think it will be time enough to consider such legislation in detail when it is definitely known to what extent we can, under the federal Constitution, regulate public utilities using our highways. *If the rules that have been made applicable to such corporations in other states apply, we think that the raising by companies of new capital as needed, at a rate of capital charge no greater than necessary and which will at the same time be fair to the companies and their stockholders and also prevent inflations of valuations for rate-making purposes, can be effected only by the establishment of a contractual relationship between the companies and the state.* In sub-

stance, we think such contractual relationship should be established by offering to the companies a re-capitalization of their properties on such basis as, after careful consideration, should seem just, the companies giving to the state the power to regulate their rates in such a manner as the state may determine, so long as such regulation shall not be exercised to reduce the income of the company below an amount which will enable it to pay dividends necessary to sell its stock readily at par. Provision might also be made for limited dividends. At the same time legislation should be passed which would make those provisions of law requiring a municipality before entering into the gas or electric business, to purchase the plant and property of the company operating within its area inapplicable to such companies as decline to enter into such contractual relationship with the commonwealth." (Italics ours.)

In the Worcester Electric Light Case, decided by the Massachusetts Department of Public Utilities on June 3, 1927, a decision which ordered a reduction of the maximum rates to consumers from 7 cents to 5 cents, the commission again protested against the doctrine that rates should be based on reproduction costs, as essentially unsound legally, historically and economically.

"A rate based upon reproduction value," declared the department, "assumes the reproduction of a plant, which as a matter of fact would not be reproduced as is, and on a basis which men of sound business judgment do not consider in determining the value of their plants for other than rate-making purposes. Depending as it does upon the level of prices of labor and materials projected into the future, it creates a constantly varying rate base, which is not

easily or speedily capable of determination, but, on the contrary, involves long and expensive investigations, culminating in a composite guess not based wholly upon facts but upon conjectures as to the future. And when that composite guess, called the reproduction value, is finally determined, the factors may have so changed that it can no longer be of value, and the process must be repeated. It does not enable justice to be done speedily and efficiently either to the public or to the investor. In periods of enhancement of prices, the public, under this theory, is compelled to pay exorbitant rates. In periods of depressed prices the investor is compelled to receive much less than a fair return upon the capital invested. A goodly portion of the plants of many of our electric companies was built after the war in an era of high prices. If there should be a sharp decline in prices in the next ten years, rates, based upon the reproduction theory, would be such as would prevent the investor from receiving a fair, if any, return upon his investment. A theory which produces such results cannot be maintained.

“Regulation should be certain, definite, and capable of speedy application in the determination of rates which will do justice both to the public and to the owners of the utility. We believe that a rate base which takes as the controlling factor capital honestly and prudently invested possesses these qualifications and under normal conditions is sound both in law and in economics.”

The commission went on to state that, even assuming that the company was entitled to earn a reasonable return upon the fair value of its property at the present time, the Worcester public was entitled to relief. The company had earned 46 per cent on its

capital stock of \$2,400,000 in 1926, and 27.2 per cent to the stockholders on their total investment of par and premiums, an investment of \$4,058,232.

In the previous eight and one-half years the rate-payers had contributed in rates sufficient to permit the company, after paying all operating expenses and fixed charges, to pay in dividends \$4,420,946, or more than had been paid by the stockholders of the company since its incorporation. In addition it had carried to depreciation reserve \$2,612,130 and had added to its surplus \$788,238. The company's claims that the rates should be based on an alleged reproduction cost, less depreciation, of \$17,837,965, was thoroughly unreasonable, as was also the claim that rates should yield a return on property put into the plant either from excess earnings or unearned increment. Granting the principles enunciated by the Supreme Court of the United States in the McCordle et al Indianapolis Water Company case and in other decisions, the value of the property for rate making purposes should not, the commissioners held, exceed \$10,000,000.

Some of the commissioners urged a further reduction to 4½ cents maximum rate, and regretted that the commission had even discussed the possibility of any other rate base than the time honored base of capital honestly and prudently invested and devoted to the public service.

The company subsequently obtained an injunction from the United States District Court in Boston, restraining the Massachusetts Commission from enforcing its decision. It hopes ultimately to bring the case to the United States Supreme Court, where it will argue that the Massachusetts decision threatens confiscation to its property.

Finally, the regulatory machinery has thus far failed to compel the companies to make public a complete statement of the varying rates charged for different kinds of services and for different quantities of kilowatt hours purchased by customers. As a result the average investigator is often left completely in the dark regarding the actual cost of electric lighting and power to consumers in a considerable portion of the states and must conduct expensive personal investigations to ascertain the salient facts in the situation. Under the cover of secrecy, the utility companies are thus enabled to discriminate in favor of certain groups of customers in a way which the community would not tolerate if given the full facts. Further, the public finds it difficult properly to appraise the rate situation and to compare as they would rates charged by the various companies, public and private, in different parts of the country.

To recapitulate. Regulation everywhere, with the possible exception of Massachusetts, has thus far failed to assure the consumer reasonable rates and service. The immense size of the industry and its financial power have made it possible for the companies to secure in defense of private interests a far abler staff than the public has obtained in its own behalf. The small budgets of the commissions as compared with the unlimited budgets of the companies in prosecuting rate cases have figured in the commissions' weakness. The commissions, furthermore, have often been burdened with the job of regulating not only the power companies, but all other utilities and the data they have had to work upon has been in most cases exceedingly inadequate.

Many of the most able state commissioners have

constantly had presented before them the possibility of exceedingly remunerative positions in private electrical companies when they left the public employ. Their decision later to enter the employ of power companies has often had a decided effect on their attitude toward corporation practices while still in the public service.

Granting that the state commissioners are able and disinterested, under our present system of regulation, regulation can be voided and has been voided during the past years in a number of ways.

1. By the making of contracts between operating and holding companies, whereby the local companies pay to the holding companies exorbitant fees for nominal services. The state commissions have no power to regulate these contracts, however injurious they may be to the consuming public.

2. By recapitalizing the operating companies not on the basis of a prudent price paid for them, but on the basis of a high competitive price paid by holding companies bidding zealously against each other.

3. By presenting to the commissions figures of past expenditures as a basis for future rate making which it is practically impossible for the public authorities to check up. In this way the public is forced to pay rates often based on fictitious values.

4. By withholding from the commissions power to start investigations on their own initiative, compelling them to wait until outside agencies make formal protest.

5. By depriving the commissions—through recent court decisions—of the power to base rates on actual investment, and requiring them to consider hypothetical reproduction costs as a basis for future rates.

6. By refraining to give the power to regulate the wholesaling of power across state lines even though the companies in one state wholesale the power to identical interests—although under different corporate entities—in other states.

In view of these deficiencies, it may truthfully be said that present day regulation cannot be depended on as any adequate protection to the consumer. Only in Massachusetts among the states has some semblance of effective regulation been observed. Our former provinces of regulation have been lost to the other states. If they are to be recaptured it must be done in a fashion similar to the one suggested by Massachusetts in defense of her present control. The difference is that in the other states it is a question of recapture rather than defense; it is more difficult.¹⁶

¹⁶ As this volume goes to press, the Interborough Rapid Transit Company of New York, operating the New York subways built by the city, is trying to make our regulatory system still less effective by contending that it is not bound to operate under a five cent fare, even though this fare was definitely specified in its contract with the city.

CHAPTER VI

THE ENEMIES OF THE PEOPLE

ELECTRIC power did not burst full blown into every community in the country at the same time. Some were a long time in getting it. Some rural areas have not succeeded in obtaining it yet. What the rural sections are to-day the smaller towns and cities were at the end of the last century and at the beginning of this one—the less profitable places to invest money. The bigger markets were supplied first, naturally, for, by definition, private initiative means keeping a couple of eyes on the main chance. This left the smaller, less profitable places to shift for themselves. But some of these smaller places also had an ambition to grow, to have power for their industries, light for their houses and streets. They did not want to be further handicapped by their size than they already were. So they went into the light and power business themselves.

Municipal ownership of power has been government initiative in the field private initiative refused to enter. "Municipal development," says O. C. Merrill, Secretary of the Federal Power Commission, "has been resorted to primarily to secure domestic service in communities not reached by the distributing lines of existing private central stations or not having a demand for energy sufficient to justify from a commercial standpoint the construction of a station for such purpose by private capital."¹ In short, with a few exceptions like Los

¹ *National Review of Power Resources*, 1923.

Angeles, Tacoma, Seattle, and Cleveland, municipal power plants were originally confined to the smaller cities.

Municipal Ownership in Smaller Cities

The following table shows, even in 1922, when long distance transmission had done away with the difficulty of service to a great extent, the traces of that former concentration of municipal plants in the smaller population groups. It also shows how the private systems concentrated on securing the industrial power users in the small towns and cities even where the lighting was furnished by municipal plants.

During the twenty years from 1902 to 1922, the number of municipal plants trebled, while private central stations increased only 34 per cent and actually decreased in number from 1917 on. In 1922 there were a total of 6,355 power plants, 40 per cent, 2,581, of them municipally owned, and 60 per cent, 3,774, of them privately owned. The municipal plants, however, had only 4.7 per cent of the national production.

This change indicated two things: the increasing tendency toward larger, more efficient units, more modern plants on the one hand and, on the other, the attempts of the smaller communities to secure for themselves the benefits of electricity where no service was being given at all or only on very unsatisfactory terms by private companies.

These small municipal plants were established in many cases by nonpartisan vote. In some cases the Republicans took the initiative, in others, the Demo-

COMMERCIAL AND MUNICIPAL CENTRAL ELECTRIC STATIONS
GROUPED ACCORDING TO POPULATION OF DISTRICT SERVED
PER CENT OF TOTAL NUMBER AND OF OUTPUT FOR LIGHT
AND POWER. BUREAU OF THE CENSUS—1922

| <i>Population Group</i> | <i>Number of Stations</i> | | <i>Kilowatt Hours Consumed for Light</i> | | <i>Kilowatt Hours Consumed for Power</i> | |
|---------------------------------|---------------------------|-------------------|--|-------------------|--|-------------------|
| | <i>Com-mercial</i> | <i>Mu-nicipal</i> | <i>Com-mercial</i> | <i>Mu-nicipal</i> | <i>Com-mercial</i> | <i>Mu-nicipal</i> |
| Under 1,000 | 56.2 | 43.8 | 54.1 | 45.9 | 91.2 | 8.8 |
| 1,000 but under 2,000 | 55.2 | 44.8 | 49.2 | 50.8 | 88.6 | 11.4 |
| 2,000 but under 5,000 | 54.9 | 45.1 | 47.3 | 52.7 | 78.9 | 21.1 |
| 5,000 but under 10,000 | 56.6 | 43.4 | 44.4 | 55.6 | 93.4 | 6.6 |
| 10,000 but under 25,000 | 75.9 | 24.1 | 77.3 | 22.7 | 95.6 | 4.4 |
| 25,000 but under 50,000 | 79.4 | 20.6 | 84.1 | 15.9 | 94.5 | 5.5 |
| 50,000 but under 100,000 | 87.6 | 12.4 | 79.4 | 20.6 | 92.1 | 7.9 |
| 100,000 but under 200,000 | 92.1 | 7.9 | 96.0 | 4.0 | 97.8 | 2.2 |
| 200,000 but under 500,000 | 93.3 | 6.7 | 91.9 | 8.1 | 97.7 | 2.3 |
| 500,000 and over | 84.6 | 15.4 | 95.4 | 4.6 | 97.2 | 2.8 |

crats. It was a matter of civic pride for them to see that their cities were not more backward in the march of progress than larger cities or could not be held up unreasonably by some of their fellow citizens who owned stock in the local private power company. In small localities the sudden riches of a few people raise more question than the great riches of a great number in the larger cities. It was a purely American movement, a matter of local pride, like getting the railroad to come to town or putting up a high school or library.

But for their action, they have often been attacked as dangerous citizens, gnawing at the foundations of a Nordic civilization. Poor people, they simply thought they were doing something for their home town. The matter was, however, made clear to them in 1926 by Mr. John B. Miller, President of the Southern California Edison Company, about whose disinterestedness in the matter there can be no question: *

“The time has come to stop pussyfooting on the question of government ownership. This does not apply particularly, perhaps not at all, to the men of the electrical industry. Those men have generally been outspoken and consistent. The application is to all those men of common sense—and they are many—who have been misled into passive acquiescence in various specific local schemes for government ownership based upon supposed local benefits. Plenty of business men who are opposed to government ownership in principle have nevertheless got behind some local scheme without realizing that it is in the nature of fire to burn. There have even been men in our own industry who have at times looked with friendly eyes at some dis-

* *Electrical World*, May 8, 1926.

guised government-ownership scheme that did not directly affect them. Why is this? Isn't it because we have been pussyfooting on the fundamentals?

"The plain truth should be told. Advocates of government ownership, whether they know it or not, are enemies of society. If some cult of faddists tried to bring yellow fever back to the communities it once ravaged, it would get short shrift. It wouldn't matter if the faddists sincerely believed they were doing good. You can get a sincere lot of cracked-pots to advocate anything at all. Sincerity alone means nothing. Why shouldn't we tell the real story? There is no doubt about the truth of that story.

"Government ownership has been tried ever since there have been governments. It is an old and discarded policy. Government ownership built the pyramids of Egypt, but no one claims that Egypt's form of government was either democratic or desirable. Government ownership brought a dictator to Italy; they were so deep in the mire that a dictatorship was the only way out. Germany, not quite so badly off, turned its railways over to a corporation in order to change deficits into net revenues. The current economic bulletin of the National City Bank comments on the heavy deficits of the state-owned Belgian and French railroads and points out that although the stabilization of those countries seems to demand the unloading of their railway burdens, the political strength of the bureaucratic systems is a stumbling block. A similar situation exists in a part of Canada, where, as Professor Mavor has demonstrated, a government-ownership oligarchy has become the government. Our own experiences with government railroad operation and with government shipping are well known. Out of all the experiments, from Pharaoh to Pinchot, there is not a single known instance where government ownership—national, state, municipal, or other—has been beneficial. It is known that the system cannot continue in a democ-

racy. Either the democracy or the system must go. The evidence is complete. We need no more experiments.

"Let us tell the plain facts. The system is wicked; its advocates are enemies of society."

The enemies of society, the foes of democracy, the government ownership people, have since been so crushed that they have not even risen feebly to ask whether in Mr. Miller's democracy they still had the right to vote at all. A tentative answer was given later in the year in Illinois by Mr. Insull, another president of another power company. It was to the effect that it didn't matter for whom they voted, because the power people managed to make a favorable financial impression with both candidates. In the words of the genial George Brennan, the Democratic nominee for the United States from Illinois, a Senate in which the fate of Muscle Shoals and Boulder Dam will be decided: "Many power industries and financiers give to both parties and even to factions in both parties. They have to. If they gave to just one all the time, what do you suppose would happen when one of the others got into power?" An intriguing question, that, the answer to which would seem to run to the effect that only those people who were making a good deal of money could take care of their interests, and that the more the small consumers were charged in rates the less money they would have to elect their own men and the more money the power people would have to elect theirs.

In some cases the municipalities have gone into the business not where there was no service, but where regulation of the private company had failed to protect them. In Cleveland, Ohio, the private com-

pany charged 10 cents a kwh. for domestic lighting. The Public Service Commission ordered a reduction. The company appealed, demonstrating mathematically that to reduce the price below 10 cents would mean bankruptcy. The Ohio court was convinced and upheld the rates, having no desire to drive anybody into bankruptcy. Then Cleveland went into the electric light and power business itself and started off by cutting the rates in two. The private company was forced to do the same. No bankruptcy ensued. It is carrying on a successful business, only now it is the people of Cleveland, rather than the stockholders of the private company, who are ahead of the game.

The progress of the art of generating and distributing electrical energy has outrun the attempt to control the industry by small municipal stations. Power development has changed from the localized service of small central stations to large interconnected systems extending beyond city and county and even state borders. Municipal ownership can always prevent inflation of values and serves a good purpose in that way. In large cities it can operate as cheaply as, or more cheaply than, private plants there, but in small cities and towns where the plant is small and the equipment old the chances are that current can be bought cheaper from a large interconnected system than it can be generated in the small town. The tendency is for the small municipal plants to become purchasers of current rather than producers.

Small private plants and companies are meeting the same fate as are the small municipal plants. As many private companies as municipal companies—

and possibly more—are either selling out to the larger power companies or purchasing their power rather than generating it. There is no question about the relative efficiency of private versus public ownership from the angle of operating costs. Both have been caught up in a changing art which impinges on the small boundaries they have originally set for themselves. Both have had, theoretically, a choice between expansion and becoming a minor part of a widespread system. Actually the municipal plants had no such choice. Their field was limited by the boundaries of their city and that was all there was to it. For them to put up a large modern plant would have necessitated a wider market.

In some cases approval of the state legislature was necessary for such expansion, and the state legislatures have never been accused of seeing ahead of time the significance of changes in the industrial arts.

Watertown, New York, is a typical illustration of a city that found itself with more power than it could use itself. For two years it has tried to get permission from the New York State Legislature to sell its power to the surrounding area. The private companies which also have an eye to this area happen to be very influential with the Legislature and have prevented consideration of the bill giving Watertown this authorization. When the city of Hagerstown, Maryland, finally received permission from the Legislature to expand, the companies had the Maryland Court of Appeals set it aside on the ground that it applied only to the city of Hagerstown.

The small private plants were faced more really by the alternatives of expansion or subordination. They had no trouble in getting franchises to operate

in territory adjacent to the home field, provided no other companies had gotten in there first, although this sometimes had to be done by incorporating a new company. If other companies had been more far-sighted in securing even a nominal authorization to serve that adjacent territory, the small private company was also doomed to the boundaries it had originally chosen, with the alternative of selling out.

It is only the large companies which can undertake great extensions. They form smaller companies for purposes of complying with occasional laws that only one company can operate in one territory, and then merge the companies. The only figures available on this process are found in the Giant Power Survey of Pennsylvania,⁸ where, it is reported that in that state in 1923 some 363 power companies were incorporated; that 155 of these were merged during the same year and 119 of them during the next year. Thus over three-quarters of them were absorbed by larger companies. The report says of these 363 companies that "only five could be identified as operating companies, the remaining 358 having been brought into existence for the purpose of acquiring territorial rights to serve electric energy. They are for the most part paper companies existing in name only and representing an effort to preëempt territory for an existing corporation or one contemplated as a merger of smaller units."

A small private company, then, must either decide to become a very large one, competing with other very large ones for territorial rights, or it must stay put, or try to sell out as advantageously as it can, for it has no other future. Often it can sell out to

⁸ Appendix C. VI, 1925. *Report of the Giant Power Survey Board.*

great advantage, making the most of the fact that the larger companies are engaged in rounding out their territory and bargaining against each other for rights in certain promising cities.

The struggle for territory has left some states confused patchworks of franchised territories, "with no evidence of a design to guarantee against duplication of transmission lines and the wasteful construction of generating facilities," as the Giant Power Survey found.

Here the effective control of the situation by municipal plants, giving the private companies the competition of contrast, has been ineffective, for no matter how much cheaper power was under municipal operation there has usually been little chance of its extending effectively. The alternative was a league of municipalities either with or without some state agency to get them started by furnishing them credit.

In Ontario, the latter alternative was chosen. The former is getting under way through the linking of Tacoma, Aberdeen and Seattle and the surrounding towns into a system. This system will have a million horsepower available and is expected to stretch through the larger part of the State of Washington. Such a joining of forces may take place in Southern California with Los Angeles and Boulder Dam at first as the central parts of the system. Where such combinations can be made, they will probably be as effective as Ontario in making cheap power available on a large scale. Where no such large water power resources give the impetus to such a combination of municipalities, the most natural development for smaller cities will be to retain ownership of their

distribution system to prevent it from serving as a base for rate inflation, to make the local plant a standby plant and purchase current, where it is cheaper, from the superpower system. According to the director of public utilities in Cleveland, the fact that the municipal plant uses 1.93 pounds of coal per kwh. and more modern plants use only 1.5 pounds offers a good business reason for purchasing some part of the power from them.

In Springfield

Municipal plants in cities as large as Springfield, Illinois, not only have been able to distribute current approximately forty per cent cheaper than other cities of the same size in the state, but seem able to continue to do so for some time. It started when cities were not allowed to carry on industrial business, a severe handicap in most cases, and one which allowed the private companies to cream the best of the business from the point of a high load factor. The Springfield Company got around this difficulty by leasing its commercial business to a friendly company. Some years later the state laws were changed to give cities a right to take on commercial business. It was found that its cost of production per kwh. dropped two-thirds after the city plant took on the commercial business.

The municipal plant, according to the Commissioner of Public Property of Springfield, Willis J. Spaulding,* has forced the private plant, one of the Hodenpyle-Hardy group, to cut rates three times to a level much below that which the other operating companies of the group with approximately the same

* *Public Ownership*, April, 1926.

production costs are charging elsewhere, a situation which has been duplicated elsewhere. He gives the following rates as a demonstration of private and public ownership in cities of about the same size in Illinois.

COST OF ELECTRIC CURRENT IN SPRINGFIELD, ILLINOIS, COMPARED WITH COST IN OTHER CITIES UNDER PRIVATE OWNERSHIP

| | <i>150 kwh. Lighting Domestic</i> | <i>1,500 kwh. Lighting Commercial</i> | <i>400 kwh. 30 h.p. Active Connecting Load</i> |
|---|---|---|--|
| Springfield, Ill. (plant owned by city) | \$5.28 | \$30,000 | \$68.00 |
| In the following cities plants are privately owned: | | | |
| Bloomington, Ill. . | 15.00 | 100.50 | 166.00 |
| Danville, Ill. | 11.25 | 84.00 | 142.00 |
| Decatur, Ill. | 15.00 | 96.00 | 162.50 |
| East St. Louis, Ill. | 7.43 | 64.97 | 101.89 |
| Elgin, Ill. | 15.00 | 73.12 | 213.00 |
| Jacksonville, Ill. . | 16.25 | 116.25 | 192.50 |
| Peoria, Ill. | 6.84 | 55.28 | 98.10 |
| Quincy, Ill. | 13.00 | 97.50 | 174.00 |
| Urbana, Ill. | 13.00 | 97.50 | 174.00 |

The city had the direct alternative of buying out the private company or outbuilding it. A price of \$2,100,000 was put on it, about double as much as its own expert found it to be worth. A referendum went overwhelmingly against this purchase and in favor of bonds to enlarge the city plant. Here ap-

parently the private company threatened to use the compulsion of closing down its plants, including the main industries and mines of the city, in case it were not given a new franchise which restricted all expansion by the municipal plant, a threat later withdrawn.

The effects of successful municipal competition cannot always be estimated. The Commissioner of Public Property in Springfield estimates that by cutting down the household maximum from 13 cents to 6 cents, the difference has been saved not only to the consumers of municipal energy but to the consumers of energy from the private plant which has been forced to lower its rates to the municipal level. On this basis he estimates a saving in 1925 of \$490,000 in addition to a profit after interest, depreciation, and reserves of \$115,432.

Los Angeles

A similar savings to consumers is found in the operation of the Bureau of Power and Light of Los Angeles. In 1905, when the City of Los Angeles began its first surveys for the Owens River Aqueduct, it realized that the construction of this giant water carrier would open the way for the development of a large quantity of hydro-electricity. From the intake on Owens River, 250 miles north of Los Angeles, to its terminus inside the city limits, the aqueduct dropped from an elevation of 3,800 feet to 800 feet, a total of 3,000 feet. To the city engineers this, of course, suggested water power.

E. F. Scattergood, then a consulting electrical engineer with a private practice in Los Angeles, was retained by the city in 1904 and made Chief Electrical Engineer of the aqueduct project. He has

remained in charge continuously from that time to the present.

In 1910, against the bitter opposition of the private power interests, the people of Los Angeles voted the first bonds for the preliminary construction of an hydro-electric plant. In 1914, a second issue of bonds to finance the construction of further generating plants and for the construction of a distributing system was voted and work was started upon the construction of the first of the power plants.

Two years later, in 1916, after negotiations for the purchase of the distributing systems of the Southern California Edison Company and the Pacific Light and Power Company had failed, the city started the construction of its own electrical distributing system. The first consumer was connected in the fall of 1916 and a rate of 5 cents per kilowatt hour (afterwards raised to 5.6 cents, and now again at 5 cents) established. After a few months of intensive competition in which the municipal system was able to take over from the private corporations more than 70 per cent of their business in the limited competitive area, these two private corporations agreed to sell. In 1919 bonds were voted for their purchase but these bonds were held up in court until 1922, through the continuous attack on the extension of the municipal system by the private interests.

In the latter year the bonds were finally sold and the city took over the electrical distributing system of the Southern California Edison Company and that of the Pacific Light and Power Company, which had been previously purchased by the Edison interests.

On purchasing this system, the city found the 117,000 consumers of that company paying 6.2 cents

per kilowatt hour, which rate was reduced to meet the 5.6 cents rate of the municipal system. This reduction meant an immediate saving of \$600,000 a year to these consumers. The remaining private company thereupon reduced its rate to 5.6 cents, —a reduction which saved their consumers some \$400,000.

The Los Angeles Bureau of Power and Light is now recognized as the largest municipally-owned electric generating and distributing system in the United States. An audit of the Bureau's books and financial operations made by the international accounting firm of Price, Waterhouse, and Co., stated that, on June 30, 1927, the Bureau possessed assets totaling approximately \$65,000,000, with outstanding bonds against the Bureau of \$35,000,000, leaving a margin of \$30,000,000 in assets over and above outstanding bonds and a clear equity over all indebtedness of approximately \$23,000,000. One-third of its bonded indebtedness has thus far been paid off, chiefly out of surplus.

Its gross income for the fiscal year June 30, 1927, was \$12,000,000 and its surplus earnings approximately \$3,250,000, after full allowance had been made for operation and maintenance charges, the payment of interest on outstanding bonds and a reserve for depreciation in accordance with public procedure practice. The total surplus earnings of the company, according to the audit of Price, Waterhouse, from 1916 to 1927, were more than \$18,000,000.

Following the purchase of the Edison Company's Distributing System in 1922, the municipal system had a total of 130,000 customers. In the next five years it added 100,000 more customers or 20,000

per year. It is now supplying more than 70 per cent of all the electricity used in Los Angeles, exclusive of that needed for railway work. Its low rates for industrial uses have been particularly attractive and, as a result, more than 90 per cent of all electricity used for industrial purposes in the City of Los Angeles comes from the municipal plant. This exceedingly low rate for electricity for industrial purposes, coupled with an abundant supply of water from the city's municipal water system, has been a real factor in the astonishing development for a great industrial city in a remote part of the United States during the last ten-year period. With apparently none of the advantages of eastern communities, Los Angeles has grown in ten years from a city manufacturing \$160,000,000 of products to a city manufacturing more than \$1,250,000,000 of products. Of the total electricity distributed by the Bureau, 60 per cent of 118,000 horsepower is generated in the five hydro-electric power plants operated along the line of the Los Angeles aqueduct. The remainder needed is purchased from a privately owned power company. It is interesting to note in connection with this purchased energy that the city is forced to pay for this electricity a unit price two and a half times as great as the unit cost of production in its own plants.

The total investment made by the citizens of Los Angeles in this enterprise through appropriations from taxation has amounted to \$4,736,000. This is comparable to the same investment that any individual would make in purchasing common stock of a private corporation.

The first bonds for this enterprise were voted in 1910. As a result rates for electricity in Los Angeles

dropped. In the immediate district outside the city limits the rate did not drop. The difference in rates between the municipal plant in Los Angeles and the private plants in the vicinity from that day to this has saved the people of Los Angeles more than \$32,000,000.

Assuming that this entire investment of \$4,736,000 was made in 1910—as a matter of fact the expenditures occurred in various years from 1910 to 1922—the public may thus be said to have secured dividends in reduced rates of 40 per cent per annum for the seventeen-year period ending in 1927, besides a clear equity in the plant valued at \$23,000,000.

As has been indicated, the rates charged have been low. In fact the Bureau has maintained consistently among the lowest rates for electricity of any city of comparable size in the United States, and has set the pace in Southern California in reducing charges for electricity. In June, 1927, it again reduced its 5.6 cents rate to 5 cents for domestic lighting, and lowered its combination cooking, heating, and lighting rates from 4 cents to 2 cents per kilowatt hour.

Professor C. A. Dykstra, writing in October, 1926, commenting on the financial results of the Los Angeles experiments, and comparing these results with those in San Francisco, declared that if the Los Angeles Bureau were to collect for services at the rates charged by private companies in San Francisco, "the surplus of the Bureau in excess of operation and maintenance, depreciating interest on bonds, and a *deduction for the amount of taxes which a private corporation would pay*, would equal \$3,200,000. In other words, if the Power Bureau operated under the conditions of a private corporation

in the sense of paying taxes, and charged rates equal to costs including depreciation, interest and taxes, as well as operating expenses, consumers would save \$3,200,000. This refers to the consumers of the Power Bureau alone. The consumers of the Los Angeles Gas and Electric Corporation are saving in a corresponding amount because of the necessity of meeting the municipal rates.

"As compared with the average rate of large Eastern cities, the consumers of the Power Bureau alone would save between five and six million dollars per annum on the assumption of the Power Bureau's paying taxes along with the other charges." ⁵

Professor Dykstra, as a result of the Los Angeles experience, concludes, among other things, that municipal ownership of light and power in large cities makes possible the establishment of projects looking far into the future which private capital cannot reasonably undertake. It means "simplicity of organization, elimination of stockselling propaganda and minimizing of general propaganda. This in turn means greater effectiveness of organization with lower costs of construction and operation, and, because of the public credit, less cost of money." It means, he continues, less interference with private initiative in other lines of industrial activity and local control by those immediately interested in providing service, as well as local financing. Finally it stimulates citizen interests in public affairs.

Careful auditing of municipal and private company accounts would doubtless show that almost none of them are exempt from the general principle that a large scale installment has a smaller invest-

⁵ *National Municipal Review*, October, 1926. (Italics ours.)

ment cost and a higher efficiency (granting the same loads) than a small installment. What the municipal plants seem to have done successfully is to lead the way in the reduction of domestic rates and to keep down the inflation of property values. In the preceding chapter we found the Massachusetts Department of Public Utilities recommending that if the revaluations allowed in the other states were to be allowed in Massachusetts it would be well to turn to competition through municipal operation, and to free the municipalities from the obligation to buy out the private plants in their district before going into the business.

Such competition is not the most efficient possible management, yet it seems at times to be the only protection to the consumers. In Seattle the city plant must pay its way in competition with a state-wide private system. Although it reduced the private rates from 12.5 cents to 8.5 cents and later to a 5.5 cent maximum for the first 40 kwh., 2 cents for the next 200 kwh. and 1 cent over 240 kwh., it is reported by its superintendent, J. A. Ross, to be making a substantial profit, paying a city light bill of \$30,000 below cost as a substitute for a tax, and saving, in lower rates millions of dollars annually.*

* Thompson, *Public Ownership*, 1925.

The Annual Report of the Seattle Department of Lighting for 1926 reads: "Every year since 1906, the plant has shown a surplus above all expenses, interest and depreciation charges, and its income has increased each year over the previous year at an average rate of increase since 1906 of 19.13 per cent. The total earnings of the plant in the twenty-two years of its life were \$32,781,212.37. Of this amount, \$12,661,183.57 has been returned to the system in extensions and betterments, being the net earnings above expenses and interest charges. The assets of the system at the end of 1926, after subtracting the depreciation reserve, are \$35,492,767.96, and bonds outstanding against the system are \$22,305,000.00. This showing has been made in

The claim is also made that in Omaha, Nebraska, the very successful operation of several other city owned enterprises and the threat of municipal competition in the power field led the private power company to reduce its rates from 14 cents to 5.5 cents. This was in the state where in December, 1926, it became necessary for the Attorney-General to give an opinion strongly disapproving of the practice of some transmission line companies of financing special elections for the sale of municipal lighting plants to them.

It is somewhat easier for municipal plants to sell out than to buy. The cards are stacked against them in several ways. Thus, if they demand and receive a very high price for their plants, the companies will simply make that part of the capitalization upon which the consumers will then have to pay a fair return year in and year out. Thus if a municipal plant with a book value of \$500,000 sells for \$1,- the face of the bitterest competition of the powerful Stone and Webster interests, and along with periodic reductions in lighting and power rates, which have saved the citizens of this city an amount greater than the entire earnings of the municipal plant, because the private company has been forced to meet the rates set by the city.

"It is to be noted that every reduction in rates has been made by the Municipal Plant and followed by its competitor.

"The average residence rate in all cities of the United States of 200,000 population or more is 8 cents as compared with the average in Seattle for 1926 of 3.28 cents. The Municipal Plant has had a similar effect in reducing power and business rates.

"During the last four years the average rate for current sold has been reduced from 3.403 cents per kwh. to 2.13 cents per kwh., or approximately one-third cent per kwh. reduction each year. With the development of the great Skagit River project, and as its bonds are retired, the Department can make further large reductions in rates, so that the Municipal Light and Power System will be the most important agency for bringing industry for the up-building of Seattle, and for making lighter the drudgery of the home."

000,000, the city is \$500,000 ahead in cash or credit but has to pay annually a fair return, possibly seven or eight per cent, on the whole \$1,000,000.

In many cases the legal difficulties before a city can go into business are almost insurmountable. The people who put them on the statute books had foresight. Thus, in Massachusetts, a city cannot acquire a municipal electric light plant without having the city council pass an order by a two-thirds vote for two consecutive years and then having it adopted by a majority of the voters. Now an attempt is being made to have a petition of ten per cent of the electorate put it in a referendum; and a majority vote put it into effect. Similar difficulties exist in other states.

The municipal plants—despite the obstacles thrust in their path—have had and performed a useful function. They gave service when no one else would give it. The change of the industrial art of power transmission over long distances has changed that function. The plants are now in the main, with notable exceptions, simply outposts in the provinces which were lost when the gamble of regulation was lost. They are means of holding down revaluations, of overcoming, in their small territory, the *ifs* of hypothetical reconstruction costs and going values. To the extent that they can combine and form or take over a system, they can be really effective in holding down revaluations—as in Ontario. To the extent that they fail to combine, to the extent that they are forcibly isolated, their influence is small. And they are not going to be allowed to extend their influence if it can be stopped. The people who are running the power show know what gestures toward public good will they can afford to make and which

ones they cannot afford to make. Illinois produces over four billion kwh. annually. Eighty-six per cent of it is controlled by the Insull interests. There are 99 municipal plants. They control two per cent. There is a difference between the small-town type of mind and the ability to see things in the large—on a national scale, and that difference can be capitalized either by Mr. Insull or by others. To what extent will the advocates of public ownership endeavor to capitalize that difference in behalf of a national public development policy in the days to come?

CHAPTER VII

ACROSS THE BORDER: THE ANNOYING ANGLO-SAXONS

IN our chapter on Propaganda, we had occasion to speak of the misrepresentations of the super-power system in the Province of Ontario owned by the Province, in partnership with some 380 municipalities to whom the province supplies electrical energy for distribution. It is an actual yardstick to our privately owned and regulated power industry.

In the early part of the century the people of Ontario realized that, if they were going to expand and remain the chief industrial province of Canada, they should find some cheaper way of securing power than by burning coal imported from the United States at a great cost. Ontario has Niagara Falls at her front door, much as California has the Colorado River at her door. The small manufacturers of the Province wanted cheap power, accepting the proposition that what the citizens paid out of their income to the power companies they could not be expected to pay out for other goods and merchandise. They decided in favor of coöperative municipal ownership working through an independent administrative commission, in apparently complete innocence of the fact that they were supporting something of a somewhat Socialistic nature.

In 1906 the Hydro-Electric Power Commission of Ontario was created by act of the Provincial Legislature. In 1908 it entered, on behalf of the municipalities of the Province, into contract with one of the larger private companies, the Ontario Power

Company, for the purchase of a maximum of 100,000 horsepower. It then proceeded to build transmission lines for the distribution of this power, and by 1910 was distributing some of it. By 1915 it reached the limit of that contract and leased 75,000 horsepower from other private companies, notably the Canadian Niagara Falls Power Company and the Toronto Power Company. In 1917 it bought out the first company from which it had leased power and, in 1920, purchased the Toronto Power Company. In 1926 it was distributing 980,000 h.p. which it owned and 52,000 which it leased. With its existing plants and contracts, including the immense Queenston-Chippewa development, it has more than 1,300,000 horsepower available. For future needs there remain undeveloped 1,200,000 horsepower on the international portion of the St. Lawrence and more on the interior rivers.

From the angle of organization, the Hydro Commission is distinguished from a single municipally owned plant such as the ones at Cleveland and Los Angeles, and from the loose federation of municipalities at Seattle, by the coöperation between the state and the municipalities. The Commission is appointed by the state government and acts independently in the capacity of trustee. It owns and controls that part of the whole superpower system which relates to the generation and transmission of power at wholesale. The municipalities own the distributive lines and other works within their borders.

Capital for the plant to generate and transmit power wholesale is raised by the use of the Province's credit, extended upon the approval of plans by the Provincial government. The rest is raised by the municipalities issuing bonds representing the

total cost of constructing the local distributing system within the city and its limits. The municipalities repay the whole capital cost out of the earnings, and at the end of thirty or forty years are owners, free of all capital charges, of their distribution plant and their proportionate shares of the joint undertaking.

There are two sales of power. The first is when the Hydro Commission sells the power it has generated either to industrial power users or to the municipalities. The second sale is when the municipalities dispose of it to their customers, either householders or local power users. In the first case the Commission charges the town or city enough to cover all operating expenses and interest plus enough to retire the capital raised in the city's behalf, as well as to provide adequate reserves.

The Commission, much like our private holding and management companies, acts in an advisory capacity to municipalities, arranges for the purchase of construction of distributive systems and assists municipal officials in making their financial arrangements to pay for the cost of these systems. It also gives technical advice where called upon, especially in smaller municipalities which are not of sufficient size to employ a manager with adequate technical training.

There is no dependence upon high profits to spur initiative, nor are managerial salaries unreasonably high. The initiative seems to come entirely from a sort of state patriotism, a feeling that may be expressed: "Here, now, this is by far the best way to push Ontario ahead." It is an attitude which we have not particularly cultivated on our side of the border.

Here is apparently a clear case of where the volunteer patriots have done more for their country than the mercenaries have done for theirs. Domestic lighting rates in the United States return to the companies a revenue somewhere between eight and nine cents. In 1926 the domestic Hydro customers were paying on the average less than two cents, less than a third of what it costs us. The Commission doesn't do it at the expense of its power consumers either. The larger power consumers get rates as low as almost anywhere in the United States (about \$20 per horsepower per year), and seven-tenths of the power retailed by the local utilities is sold in municipalities where the average charge to power consumers is less than \$25 per horsepower per year, much lower than the average in our smaller cities and towns.

This low rate policy, which will yet be followed or tried on our side of the border, has had three results: (1) It has increased the average domestic monthly consumption from about 44 kwh. in 1920 to 98 kwh. in 1926 which may be compared with about 30 to 36 kwh. average monthly consumption at the present time in the United States.

(2) It has increased the average amount of monthly revenue per customer from \$1.15 in 1920 to \$1.79 in 1926. This in turn has made possible (3) a progressive reduction in average cost per kwh. from 2.56 cents in 1920 to 1.81 cents in 1926. These rates differ from ours in that they cover the cost of retiring the capital within thirty or forty years. Ours provide for no retirement of capital at all.

The following table summarizes for a few representative communities—note the populations—the

average charges for electrical service in municipalities supplied by the Hydro Commission:

CHARGES FOR ELECTRICAL SERVICE IN REPRESENTATIVE ONTARIO MUNICIPALITIES *

| Municipality | Population 1926 | Approximate Transmission Distance in Miles | Average Net Charge to Consumers Inclusive of All Charges | | |
|----------------|--------------------|---|--|---|--|
| | | | Residence Service per Kilowatt-hour Cents | Commercial Service per Kilowatt-hour Cents | Power Service per Horsepower per Year \$ † |
| Toronto | 542,187 | 90 | 1.7 | 2.5 | 24.51 |
| Hamilton ... | 122,238 | 50 | 1.6 | 1.3 | 18.73 |
| Ottawa | 118,088 | 1 † | 1.0 | 1.7 | 14.38 |
| London | 63,339 | 120 | 1.5 | 1.7 | 21.60 |
| Windsor | 52,638 | 240 | 1.7 | 2.2 | 32.13 |
| Brantford ... | 28,010 | 80 | 1.5 | 1.2 | 21.45 |
| Kitchener ... | 24,805 | 102 | 1.6 | 1.8 | 22.38 |
| St. Catharines | 21,810 | 9 | 1.4 | 1.6 | 15.74 |
| Peterborough. | 21,726 | 2 † | 2.2 | 1.6 | 15.81 |
| Guelph | 19,219 | 77 | 1.9 | 2.1 | 17.51 |
| Fort Arthur .. | 17,021 | 70 † | 1.5 | 1.9 | 20.52 |
| Niagara Falls | 16,819 | 1 | 1.2 | 1.4 | 21.47 |
| Sarnia | 15,588 | 205 | 2.1 | 2.3 | 33.53 |
| Chatham | 14,118 | 193 | 2.1 | 2.3 | 24.50 |
| Owen Sound. | 12,231 | 32 † | 1.9 | 2.0 | 19.34 |
| Woodstock .. | 10,114 | 94 | 1.5 | 1.8 | 19.90 |
| Ford City ... | 9,204 | 239 | 1.5 | 2.6 | 29.78 |
| Midland | 8,060 | 25 † | 1.7 | 2.2 | 19.14 |
| Sandwich ... | 7,035 | 245 | 2.0 | 2.5 | 24.31 |
| Collingwood . | 6,259 | 24 † | 2.1 | 2.7 | 21.48 |
| Dundas | 5,009 | 52 | 1.8 | 2.5 | 16.91 |
| Paris | 4,167 | 76 | 1.6 | 2.3 | 18.60 |
| Pictou | 3,128 | 33 † | 2.4 | 2.4 | 22.38 |
| Aylmer | 2,145 | 145 | 2.2 | 2.5 | 22.83 |
| Waterford .. | 1,109 | 94 | 2.0 | 2.3 | 26.36 |

* Compiled from Nineteenth Annual Report of the Hydro-Electric Power Commission of Ontario.

† Power supplied to these municipalities is 60-cycle service from smaller generating stations not on the Niagara River.

One of the most significant points for an understanding of this form of social control on our side of the border is the difference between the rates the private companies were charging before the Hydro Commission took over these companies and the rates which the Commission established. In the case of Ontario, as is the case here, the private companies asserted definitely that lower rates were impossible. Notwithstanding this, when the Hydro service was first inaugurated in Ontario the Commission established lower rates based on rate schedules which were designed to encourage use and to be more equitable than the flat rate previously existing. In eight of the twenty-one cities to which the Commission now gives service, the domestic rate before Hydro service came was a flat rate of 8 cents per kilowatt-hour, plus a meter rental of 20 or 25 cents. The average costs per kilowatt-hour in these cities for the first year of Hydro service were 4.8, 5.5, 5.2, 3.9, 3.2, 4.4, 3.7, and 6.5 cents respectively, being reductions ranging from 19 to 60 per cent. Three cities had had rates of 11 cents. The average costs in these cities for the first year became 5.3, 4.9, and 5.9 cents respectively, a reduction of just about half. Similar reductions were effected in most of the other municipalities.

The lower cost and the more equitable rate schedules have resulted in a greatly increased average consumption. Since it is less costly per unit to produce and deliver a larger quantity of any commodity, and since the policy of the Ontario undertaking is to supply service *at cost*, the charge to the consumer has continuously become less each year until at the present time the average cost to the ulti-

mate consumer for domestic service in Ontario municipalities is less than 2 cents per kilowatt-hour, this cost being inclusive of all charges.

The costs of distribution—which are frequently discussed in the United States as the reason for the difference between the one-cent cost of generation and the eight-cent domestic rate—are clearly detailed for Ontario municipalities in the Annual Report of the Commission, and show that in Ontario the cost of distribution does not approach any such difference.

Take the case of Ottawa, a city of about 120,000 population. In 1926, the total of all distribution expenses, including operation, maintenance, depreciation, interest, and sinking fund payments—in fact everything except the wholesale cost of power purchased from the Commission—was about \$270,000. This included the cost of distributing 31,000,000 kilowatt-hours to domestic and commercial light consumers, and in addition the total cost of distributing power for industrial and municipal purposes. Had, however, the whole of the distribution expenses been incurred for distributing just the domestic and commercial load, the average cost of distribution would still have been less than 1 cent per kilowatt-hour.

Or, again, take a small municipality such as Victoria Harbor on Georgian Bay. This town has a population of less than 1,500 and only 175 consumers. It has no commercial power load. The total energy sold for domestic and commercial light service in 1926 was about 75,000 kilowatt-hours. The total distribution expenses of this municipality, including street lighting, were \$1,365, which sum included \$311 for depreciation and \$318 for capital

repayments. Had the whole of this expense been incurred for distributing the domestic and commercial load the cost of distribution would still have been less than two cents per kilowatt-hour.

Here is prima facie evidence that we have not found the cheapest way of doing the job in the United States.

Frequent attempts have been made to destroy the force of this evidence. It has been said that the Hydro has some political influence in the Province. The only evidence supporting this claim is that it continues to exist, that it has not been turned over to private ownership. Such a consideration would make out an equally strong case for the possession of political influence by our own private companies, which alone prevents the industry being turned over to public ownership—a proposition absurd on its face.

It is further contended that the Ontario system is subsidized. So far the rural distribution has been subsidized to the extent of one-half of the cost of the rural lines and secondary equipment. It is the only part of the system that is subsidized. It is done on the same theory that on our side of the border we build roads in the rural sections, maintain a rural mail delivery that does not pay for itself, maintain farm bureaus, departments of agriculture, agricultural colleges and the like. These things do not pay for themselves directly, yet they seem to be as important for agriculture, as, let us say, the tariff is for infant industries, and Ontario is preëminently an agricultural state.

It should be appreciated that the electrical service given to rural districts is only a very small part of

the activities of the Ontario undertaking. From the standpoint both of total energy distributed and of financial operations involved, it represents at present less than three per cent of the total. The Provincial grant-in-aid towards the capital cost of rural service is of no advantage to the power system as a whole, because the demand for power at present, altogether apart from the small amount distributed to the rural districts, is such as readily to absorb all the available supply.

A misconception has existed in certain quarters respecting the extent and effect of the Ontario Government's financial assistance with respect to the distribution of power in rural districts. It has sometimes been contended that the provincial government pays half the cost of rural service. This is by no means the case. Having made its grant-in-aid, the Government's participation in operations respecting the property to which the grant applies ceases. Each rural power district not only pays its cost of operation, maintenance and administration of these lines, but also sets up reserves for renewals and contingencies on the whole of the equipment and lines, as well as for sinking fund on the investment made by the local authorities. At the present time the average annual saving to the rural consumers due to the operation of the Government "grant-in-aid" is about 12 to 15 per cent.

It is frequently stated that the governmentally owned system is not taxed and that this accounts for the fact that rates are cheaper in Ontario than in the United States. As has been indicated in Chapter II, the Hydro-Electric Commission pays several hundred thousand dollars in land and other taxes every year, as well as special business taxes

where it merchandises electrical implements. It purchases some of its equipment in the United States and in customs' duties pays a tax from which the companies on our side of the border are free. In addition it furnishes the street lighting and other municipal power at cost, a difference from our procedure, which alone just about offsets any difference in the rate of taxation. It must be remembered that in the United States the companies receive their seven or eight per cent return on their investment, *after* all state and municipal taxes have been paid. They are in that respect simply tax collecting agencies, taking from the citizens as consumers of light and power a sum which they have to hand over to the state or town for the use of its citizens, who are on the whole pretty much the same people.

The 1922 census shows a charge for taxation of about two mills per kwh. on the amount of energy the industry reports that it sold in that year. Disregarding for the moment all the taxes the Hydro-Electric Commission pays and the service it renders at cost in lieu of taxes and the increase in its expenses through customs duties on equipment imported from the United States, an increase of 2 mills per kwh. in its rates would still not bridge the remarkable gap between its rates and the rates charged in the United States.

The further objection, as has been asserted elsewhere, is raised that the power consumers are charged more than necessary, so that the domestic rates may be low. This is frequently described as a political maneuver to assure the continued existence of the Commission.

If the low rates for domestic service in Ontario

had occasioned any loss, naturally it would be expected that the greatest losses would be found in the city where the domestic consumers paid the least per kilowatt-hour. Reference to Statement "D" of the Annual Report of the Commission indicates that the lowest domestic rate occurs in Ottawa, Ontario, where the average cost to domestic consumers is slightly less than one cent per kilowatt-hour. Turning now to the financial operating report for this city's electrical utility—Statement "C"—in order to ascertain the deficit supposed to result, it is found that no deficit, but on the contrary actually a surplus of over \$47,000 was made in 1926 on the year's operations, besides paying \$19,000 off the capital. Now, municipal power and street lighting are required by the Power Commission Act to be given at cost, and the total revenue from the commercial power users in Ottawa was only \$52,000. The conclusion, therefore, cannot be escaped that since the surplus cannot possibly have resulted from the charges for commercial power alone, the domestic rates *per se* must have produced a surplus, not a loss. If this is the case in the city where the domestic consumers pay the least for their electrical energy it should be obvious that there is no basis for the assertion that domestic rates in other municipalities where the consumers pay more per kilowatt-hour are below cost.

A reference to the published schedules of rates for power service in Ontario will show that the power rates are in general low, and, as compared with rates elsewhere, especially favorable to the small industrial consumer. If the Ontario municipalities followed the theory of our American companies to the conclusion that power rates must be

only low enough so that the industrial users will not build their own generating plants, they certainly would have room for increasing their power prices, for coal is more expensive in Ontario than in the Eastern, Southern Atlantic and Middle Western parts of the United States.

Another criticism which has been made, notably by a Commission of Inquiry appointed by the former Government of Ontario in 1922, known as the Gregory Commission, was to the effect that instead of showing too little initiative the Hydro-Electric Commission had been showing too much. In one case it chose the larger of two power sites for development—a site on the Nipigon River rather than on the Kaministikwia River. It was the long term planning for the needs of the district which was attacked, both by the Commission of Inquiry and by the National Electric Light Association in the United States. The year after the attack, 1923, was a low water year and the company using the smaller river was unable to supply its customers and actually purchased power from the Hydro Commission. The paper and pulp industry fell off in 1922 and a deficit appeared. This was only temporary. The demand for power in the subsequent years has apparently justified the larger development to the extent that the Commission has already started to develop further sites in the district.

The Ontario Hydro-Electric Commission does not consider itself a governmental ownership development. It grew out of the immediate need of the consumers, industrial and residential, for more and cheaper power and light. It furnished and is fur-

nishing much cheaper power than the private companies gave. Where it is in competition with private companies they have reduced their rates to meet its rates. In localities where its service might be used, its existence acts as a plain argument to the private companies to be a little more reasonable. *It has succeeded in doing a public job in an unbureaucratic, non-political way. It has established its efficiency so that more municipalities are using its service every year. The Commission is solvent. At the end of 1926 it had accumulated reserves of \$55,000,000. At the end of thirty or forty years it will have returned all the capital it has borrowed to date. It will then furnish service from plants now existing at rates which not only carry no profit, but contain little or no interest charges.*

It has done this and is doing this not to present a contrast to the privately owned power industry of the United States but solely because it was the best way the people of Ontario knew to work out their problem of developing their province without paying too high a price.

The Commission worked out its job so successfully that the Ontario development stands up in contrast to plans for private development of Boulder Dam, Muscle Shoals and the St. Lawrence on our own side of the border—though of course the people of Ontario were not aiming at this particular objective. The Ontario development gives us a rough and ready means of telling how much more we are paying than Ontario is, but at the same time it shows the people of that province how much less they are paying than we are. It shows us that we are no pikers and it shows them that they are no fools.

CHAPTER VIII

METERS AND MEASURING STICKS

WITHIN the last few years four great hydroelectric projects have taken public attention—Boulder Dam on the Colorado, Muscle Shoals on the Tennessee, the St. Lawrence in the northern part of New York State, and the Columbia River in the State of Washington. Large groups are saying that these are too big to give to private industry. Each one has a separate cause and interest: Boulder Dam is primarily for flood-control and irrigation; Muscle Shoals was built during the war because we needed nitrates for munitions; the St. Lawrence is considered because New York State and Ontario need power. The Columbia is looked upon as a source of power and irrigation for the Northwest. But one thing they have in common: the groups favoring them in each locality know from their separate experience that if the public is to get better service and lower rates it must have some leverage over the power industry, which it does not now possess. These four great developments with a combined installed capacity of two and a half million horsepower producing around 12 billion kwh. represent the possibility—the last possibility, they say—of redeeming a social control in the public interest which has slipped from our hands. They can furnish the competition of contrast—a spur to the well known private initiative not only to look out

for itself but to look out for the small consumer.¹

A decision on the character of their development means political discussion. There has been a good deal of sneering about political discussion in recent years and the power industry has done its share of it. We are slowly being made ashamed of the fact that there is any political discussion at all. The inference we are left to draw is that the utility people could take care of all matters in a less noisy, a more dignified way. There is here a subtle appeal to our snobbery. The great men who in our simple belief once sat in the House and Senate and whom we heard with some awe on the Fourth of July are, it is now inferred, but a crowd of worthless buffoons. Instead of admiring them, let us now laugh at them. It gives us a keen sense of our own superiority. The sneer is not carried quite to the place that we are all a crowd of rogues, which might have some logic if not plausibility, but it is applied only to our legislators. No sooner does a man take an oath of office to support the Constitution, to do his best for the country, than suddenly he becomes a slippery

¹ It has been estimated that 4,000,000 h.p. can be developed on the St. Lawrence River (Hydro-Electric Power Commission of Ontario, *St. Lawrence Report*, 1925, p. 54); 2,000,000 h.p. on the Columbia River (*ibid.*); 595,000 h.p. on Muscle Shoals (*Electrical World*, October 10, 1925, p. 741), and 6,780,000 h.p. on the Colorado River from Dark Canyon southerly to Bulls Head (F. E. Weymouth, Senate Resolution 320, December, 1925, p. 807), making a total of 13,375,000 h.p. if the projects are considered as a whole. Several studies are being made of the possibilities of the Columbia River Basin, although no final report has as yet been completed. See *Professional Engineering*, May, 1927; Reports of the Federal Power Commission; Proceedings of the American Society of Civil Engineers, December, 1925; Columbia River Basin Hearings, Committee of Irrigation and Reclamation, 69th Congress, First Session, etc.

customer to whom certainly we cannot be expected to intrust our interests.

Of course the power industry is in politics. Any group that has as much to lose and gain as they would be in politics. The railroads were when they were in that stage of their development. Sometimes the power men are in it crudely, as in Illinois, as in the case of the counsel for the Electric Bond and Share who went down to Washington in the session of 1926-7 and told the reporters that he represented a nine-billion-dollar investment and his clients did not propose to allow the government to develop Boulder Dam.

All this was crude work. The general tack is much suaver. Discredit the legislators. Place in contrast to them men favorable in the Cabinet, quote them, invite them to speak to you, listen to them, support them, make them big national personages. See that only men favorable to your interests are nominated (never mentioning power); see that the men who oppose you are not nominated. When an important vote is coming on, on Boulder Dam, on Muscle Shoals, on an investigation of the industry, spend a few thousands in telegrams to senators—(it is loose change compared to what is involved, and the small consumers have no money or nation-wide organization to represent them, to be on the job twenty-four hours a day) break down the regulatory system in an inconspicuous way, see that the State Commissions are packed, then turn around and say, "See what happens when politics interfere with industry—and you would trust men like that to run a state or national power plant!"

This is the system to-day. Coöperation, so much for every kilowatt hour produced to finance generously* a central publicity bureau, to scan the public statements of every utility executive, to watch the press. High-class entertainment of reporters. Control of the radio by the companies. Control of the Radio Commission. Advertisements in rural papers. Discredit Ontario. Call it political. Try to get the Government to call it a failure. Reach up into the Smithsonian Institute and have, for want of a better, an associate mineral technologist make a report on the financial condition of the Ontario Hydro-Electric Commission. People will think it is official. Kid the unions along on power and productivity. Sell stock to your patrons so they won't kick against rates, so they'll oppose tighter regulation. Over 1,800,000 customers own power company stock to-day. That's a good proportion of the voters, but keep it up, add another quarter million of customers every year. But be noble about it, as noble as you can be. Between us we know that if they happen to buy some shaky stock that drops heavily they'll be more scared about anything that might lower rates still further than if they own pretty steady stock, but nevertheless sell them good stock, good non-voting preferred stock. It gives them a sense of ownership without a voice in the management. It automatically lines up votes for the industry.

This works. A fine gentleman in New York State informed the present writer that he had put \$120,000 into Northeastern stock, the securities of a large holding company in that State, at 34. The stock had since dropped to 17, a loss of \$60,000. He was

inclined personally to favor the idea of a Power Authority to develop the St. Lawrence for the State, but if such a Power Authority went into effect it was his opinion that his stock would never get back to 34, while if the Power Authority did not go into effect the stock would probably climb back. He couldn't be expected to cut off his hands, could he? After that he was not asked to do so.

It works. It ramifies. An impression is given that the power utilities are in danger of being unfairly treated, a contingency which means that the people of the country all suffer, especially their dependents. They should rally to the support of the companies. We are almost on the verge of being told that the stock is held mostly by widows and orphans. The Metropolitan Life Insurance Company goes in for this sort of thing, distributing over three million little nudges in the ribs to their policyholders to look where they're going or they'll step on their own toes,² or worse, on the toes of their widows and orphans.

² Copy of statement sent to policyholders of the Metropolitan Life Insurance Company, quoted by the signer to the Convention of the National Electric Light Association, San Francisco, 1925.

"THE METROPOLITAN LIFE INSURANCE COMPANY has in force 32,500,000 policies, insuring over 22,000,000 individual lives—nearly one-fifth of the population of the United States and Canada. Its assets of over \$1,620,000,000 belong to its policyholders. This huge sum of money is their savings, held for their protection.

"You, the policyholders in the METROPOLITAN and in other insurance companies, are the real governing body in this Republic because you elect legislatures and executives. You have the right to fair treatment on the part of supervising and regulating officials. The METROPOLITAN owns over \$75,000,000 of the securities of electric light and power companies. When one of these companies is unfairly treated, it is the people of the

Of course the power industry is in politics. The spoken or implicit program of more business in politics has elected and will elect more than one man. There will be some crude work, some smooth work, but there is too much at stake for the power industry to be out of politics.

Boulder Dam

The proposals for the development of a power project at Boulder or Black Canyon on the Colorado River have their significance for this discussion in the underlying presupposition that more than a loose regulation over a great water power resource is necessary and that unless the government has at least the liberty and authority of constructing the power plant itself, it is automatically deprived of its bargaining position in relation to private bidders for the plant. They also throw a light on what may

community, the voters and their dependents who suffer. It is their savings that are depleted.

"Your life insurance company does not speculate. It makes investments to keep. There can be no doubt that light and power distribution is a most important element in our life, in the community, in the neighborhood, in the household. The life insurance company has the right to insist upon honest, wise, prudent administration on the part of the companies; the demand that there shall be no exploitation of population or investors, that the customers shall be fairly and generously treated and that the public utility shall be fairly and honestly regulated.

"It must be recognized that *not corporate abstractions* but the *American people* are the owners of the bond capital of the companies. Every policyholder is ipso facto a capitalist, and attack upon capital investments is an attack upon the wage-earners of the country. It is the working people who suffer first when there is lack of service afforded by the public utility corporations, because it is they who are chiefly dependent upon such service. It is their capital invested through banks and insurance companies which develops this service for the people. It

be expected from regulation through interstate compacts.

Seven Southwestern states are interested and involved in the development of this project and negotiations toward its completion have been going on since before 1922. In that year, the states appointed commissioners, and Congress authorized Secretary Hoover to act as a Federal Commissioner. A compact was signed by the commissioners not dividing the water nor the power among the seven individual states, but dividing the water of the Colorado River between two groups: the upper basin states of Utah, New Mexico, Colorado, Wyoming, and the lower states of California, Arizona, Nevada. The former were to receive 7,500,000 acre feet of water, and the latter 8,500,000. The distribution of these two allotments as between the individual upper states and individual lower states was to be the subject of further compacts. Arizona failed to ratify

is the poor and the people of moderate means whose aggregate savings are invested in these enterprises.

"Plans for municipal, state or Federal ownership of public utilities often sound well as presented by their advocates. But before assenting to them every policyholder should examine them carefully, asking himself how political ownership can possibly give him results to be compared with those attained through private ownership. Your life insurance company has invested in the building of highways, schools, and in fact all community development. You should be proud of your participation in the financial and social progress of your country.

"The ownership of the electric light and power companies is now in the hands of more than 2,000,000 direct investors in public utility stocks, and indirectly in the hands of millions more of bank depositors and holders of life insurance policies through their ownership of public utility bonds. This is people's ownership under public regulation, and as such should be defended against assault from those who would wantonly destroy public utility investment values.

(Signed) **HALEY FISKE,**
President."

the original seven-state compact. Later, California made her ratification conditional and then Utah followed Arizona's example. The result is an apparent stalemate, with a bill in Congress offered by Senator Johnson and Representative Swing, both of California, which both Arizona and Utah threaten to attack on constitutional grounds as soon as it is passed.

The Colorado River has a length of 1,750 miles. It rises in the mountains of Colorado and Wyoming, and flows down through these states and the states of Utah, Arizona, Nevada and California, tributaries crossing the boundary line of New Mexico. It is the third largest river in the country and supplies annually from 9,000,000 to 25,000,000 acre feet of water, varying greatly from year to year, the average being about 17,000,000 acre feet.³ It carries down with it annually 100,000 acre feet of silt, more matter than was excavated from the entire Panama Canal.⁴ It represents to the arid states of the southwest the main source of wealth in the form of irrigated land, and to the lower states, especially California, it represents also cheap power and a domestic water supply.

The proposal to build a 550-foot dam between Arizona and Nevada at Boulder or Black Canyon has three main purposes. It is a means of effecting a much needed flood control to protect the rich lands of the Imperial Valley and Palo Verde Valley in California and Yuma in Arizona, which have in the past been flooded at great economic loss. The alter-

³ F. E. Weymouth, in Senate Resolution 320, p. 80, 1925.

⁴ *Ibid.*, House of Representatives, 2903, p. 716, 1924.

native to such flood control is the constant raising of the levees along the river, made necessary by the rise of the river due to the deposition of its silt every year. The second purpose is irrigation, the reclamation of large areas in Arizona and California. It has been estimated that there are 1,500,000 acres of irrigable land in Arizona, Nevada and California.⁵ One of the reasons for Arizona's objection is that the dam is too far down the river to be of much benefit to the agricultural development of those sections of the state susceptible of irrigation by the waters which will be conserved.

The dam will back up water for 100 miles. A large part of the land along the river lies in the public domain. Some 400,000 acres lie along the rim of the present irrigated area in Imperial Valley. To preserve these lands would require an All-American canal.

All of the water used on the more than 500,000 acres of farming land in Imperial Valley after leaving the Colorado River goes into a canal which a few miles from its source in the river crosses the international boundary line, circles through Mexico for a distance of approximately sixty miles and then reenters the United States, where it is used for irrigation purposes in Imperial Valley. Farmers on Mexican land have the right, by terms of a treaty, to the use of one-half of all the water flowing through this canal. Large American interests have been developing this Mexican agricultural land. This development has reached such a stage that in the

⁵ A number of authorities, however, including Arthur P. Davis and F. E. Weymouth, formerly of the Reclamation Service, estimate that not over 600,000 acres of land can be economically irrigated from the Colorado River.

summer of 1924 during the low water period, which is August, September and October, there was not enough water in the Colorado River to irrigate all of the farming land needing water for irrigation in Imperial Valley and on these farms in Mexico. By the terms of this treaty the American land owners in Mexico demanded and received one-half of all the available water flowing through this canal running through Mexico. This gave them an ample supply of water for their needs, but the farmers in Imperial Valley, American farmers on American soil, who had built this canal, were paying the major portion of the cost of its maintenance and upkeep, and were spending thousands of dollars every year on levee work to keep the Colorado River within its confines, were forced to see one-half of this water go upon Mexican land and more than \$5,000,000 worth of their own crops destroyed because the other one-half of the water was not sufficient to irrigate all of the crops on the American side of the line.

In addition to the danger of flood, there is also the danger of drought due in part to the increased uses of water from the river in the upper states and to the rapidly increasing irrigation uses in Mexico. Southern California in the United States expects to draw out its domestic water supply from the Colorado River.

The third purpose is to secure power to aid in the development of the nearby states and to pay the operating costs of the dam, and power house or practically so, to pay interest on the proposed investment of \$125,000,000, and to amortize the cost of the dam and power house. The cost of All-American canal, on the other hand, will be paid, according to the

plan, by the farmers benefited thereby. The sum of \$125,000,000 is less by \$25,000,000 than the amount which the Southern California cities are intending to spend in securing their domestic water supply from this river. It has been this feature of the project which has concentrated a greater part of the discussion and antagonism.

The bill before Congress which was cut off and side-tracked in the filibuster at the end of the Congress in March, 1927, provided that the Secretary of the Interior might, at his discretion, erect the power plant and then, (1) contract for the sale of electrical energy at the busbar or (2) contract for the lease of a unit or units of the power house with the right of generating energy or (3) enter into contracts for the use of water for the generation of electrical power, in which case he would not erect the power plant himself, but would leave that entirely to the bidder or bidders for lease of the waters.

The power resources in the surrounding states, with the exception of the large municipally owned system at Los Angeles, those in a few other California cities, and certain small reclamation projects, are controlled by private companies. They expect to secure, under the Federal Water Power Act, the remaining power resources on the Colorado, which have been estimated by engineers to run over 6,780,000 horse power inside of the state of Arizona alone.⁶ The Southern California Edison, for one, has applications in for six dams with an esti-

⁶ This includes the ultimate horsepower from a point near the juncture of the Green and Colorado Rivers that is Dark Canyon southerly to include Bulls Head damsite, a point on the Colorado River about 45 to 50 miles north of Heedles, California. (F. E. Weymouth, in Senate Resolution 320, p. 807, December, 1925.)

mated capacity of 4,500,000 horse power. In a large nationally owned plant such as the Boulder Dam project, power generated much cheaper than in any private project in the southwest would not only deprive them of some expected business from their present development, but might frustrate their expectations of securing other power rights along the river.

The changing tactics of the power interests in regard to the development of the Colorado River are illuminating. Beginning with 1920, the Southern California Edison Company filed applications for certain power sites on the Colorado River, and later made public declaration that they were prepared to finance the completed power development of the Colorado River and to spend as much as \$30,000,000 a year upon its development—developing power at the rate of 300,000 horse power annually. The company indicated by this action that, in its belief, power from the Colorado River could be developed, sent to the markets of the Southwest and readily sold.⁷

When, however, the city of Los Angeles made application at Boulder Canyon, the power companies endeavored to show that this was not a proper place for a water site, and when the Reclamation Service, with a twenty-five-year record of reconstruction of power, irrigation and flood control projects back of it, recommended the construction of a high dam at Boulder Canyon, the power interests did what they could to belittle these recommendations.

Later, when Los Angeles and other Southern Cali-

⁷ Hearings before the Committee on Irrigation and Reclamation, House of Representatives, 68th Congress, 1924, Part 3, pp. 485, 527, 532.

fornia cities declared that they must obtain an additional domestic water supply from the Colorado River to supply their growing needs, the Edison Company sent their engineers to Washington to prove to the legislators that Los Angeles had sufficient water from its present source to supply ten million people,⁸ despite the contention of other experts that the then existing water supply was not adequate for a community of more than two million people.

During the hearings on the Swing Bill on March 12, 1924, Mr. R. H. Ballard, Vice-President and General Manager of the Southern California Edison Company, came out with the real cause of the company's opposition to the bill as originally presented, namely, the preferential treatment accorded to the municipalities in the use of the power from Boulder Dam.⁹ Can this opposition be based on the fear that the development of power at Boulder Canyon by the Federal government and its sale to the municipal electrical system of Los Angeles would set up a measuring stick which would force the power companies to exert themselves as they have never done before; that the public at large would then have something by which they could measure the efficiency and adequacy of the service and the cost of the service being rendered by the great private power corporations?

Dr. Frank Bohn, formerly left wing socialist, now writer for the Joint Committee of National Utility Associations, in a pamphlet on Boulder Dam edited by him and published by this Committee, has tersely expressed the industry's fear not only of municipal

⁸ *Ibid.*, p. 489.

⁹ *Ibid.*, pp. 466, 477, 536.

distribution but of government development of generating plants at Boulder Dam. If the government should go into the building of a dam with the object in part of generating hydro-electric power, he declares, the defenses against public operation "will have been irreparably breached, and the United States government will be in the hydro-electric business from one end of the country to another."¹⁰ The same fear is expressed by Samuel Ferguson, President of the Hartford Electric Light Company, who, in dealing with the proposed Boulder Dam development, maintains that, "once the government is in the power business, there is no stopping place."

There is this difference between Boulder Dam and our experience with small municipal plants. We went into the development of the latter because service in those small towns was for the most part too unprofitable for the private companies to undertake at that time. The Boulder Dam project, on the other hand, promises to be not only sound, but the profitable way of improving the situation of the southwestern states. It is a proposal which requires that no burden be laid upon the taxpayers.

Secretary of the Interior, Hubert Work, in whose department the construction or disposal of the plant as well as the dam and reservoir would be vested, has stated:

"An approximate estimate of cost, operating expenses, and income leaves no question as to the ultimate solvency of this undertaking if carried out along the lines proposed. The main source of revenue will be power, and the rate assumed is lower than the wholesale prices now being paid in the

¹⁰ See *Boulder Dam*, edited by Frank Bohn, p. 36.

West. Those of which we have information range from $3\frac{1}{2}$ to 8 mills per kilowatt hour, measured at the switchboard. As the largest consumers of this power would be distant, a low figure of 3 mills per kilowatt hour at the switchboard has been assumed in the estimates which follow:

“Colorado River Development—Boulder Canyon Reservoir, All-American Canal.

CAPITAL INVESTMENT

| | |
|--|---------------|
| Estimated cost for— | |
| 26,000,000 acre-foot reservoir | \$41,500,000 |
| 1,000,000 horsepower development ... | 31,500,000 |
| The All-American Canal | 31,000,000 |
| Interest during construction on above, 5 years, at 4 per cent | 21,000,000 |
| | <hr/> |
| Total | \$125,000,000 |

ANNUAL OPERATION

| | |
|--|--------------|
| Estimated gross revenues from— | |
| Sale 3.6 billion kilowatt hours power at $3/10$ cent | \$10,800,000 |
| Storage and delivery of water for irri- gation and domestic purposes | 1,500,000 |
| | <hr/> |
| Total | \$12,300,000 |
| Estimated fixed annual charges for— | |
| Operation and maintenance, storage and power | \$700,000 |
| Operation and maintenance, All-Amer- ican Canal | 500,000 |
| Interest on \$125,000,000 at 4 per cent. | 5,000,000 |
| | <hr/> |
| | \$6,200,000 |

"Estimated annual surplus, \$6,100,000, or thought to be sufficient to repay the entire cost in twenty-five years.

"Although the difficulties of construction and magnitude of the proposed structure compared with any other for similar purposes are unprecedented, assuming that it is a feasible engineering possibility, the Reclamation Bureau of the Department of the Interior as now organized, with its present commissioner, is competent to construct the works contemplated."

The project came before Congress originally in the form of a bill authorizing and directing the Secretary of the Interior to construct the dam and power plants and giving him some power to use public lands for the construction, operation and maintenance of main transmission lines to transmit the power developed. The desire to have some action taken toward relieving the Imperial Valley from the danger of flood, led the proponents of the bill to modify it by amendment so that there is now no compulsion upon him to construct the power plant unless he sees fit. As a further check upon the solvency of the development, it was proposed before Congress that before any money was appropriated or any construction work done or contracted for, he should have contracts insuring an income necessary to pay all the expenses of the operation and maintenance of all the works, including the dam, and to repay the whole sum within fifty years with interest.

Many of the proponents of the bill are not public ownership men, but see here a situation which involves a combination of flood control, irrigation and arbitration on the future development of the various

states through the control of the power and the dam, a matter too hazardous to be entrusted to any private company. Dr. Elwood Mead, Commissioner of Reclamation, under whose supervision the dam at least would be built in case this bill passes Congress and is upheld by the Supreme Court, says:

"The Government has been drawn into this great enterprise because no private company has offered to assume the risk and incur the expense of building the dam and related irrigation works, and no private company could adequately deal with interstate and international water rights, provide domestic water for the needs of cities, protect the rights of existing irrigators, and construct works for the irrigation of new areas. These complex factors make this a national enterprise in the truest sense.

"It is fortunate, therefore, that building the dam creates great power possibilities. Without the revenue to be obtained from the sale of power at the switchboard, or the lease of the power privilege, this project would entail a burden of many millions of dollars on the taxpayers of the whole country. The power possibilities ought to be utilized and the revenue therefrom ought to be used to help pay for the works. The bill is so drawn that contracts to furnish the needed revenue must be signed before construction begins. It is a unique, safe, solvent, businesslike scheme.

"The act is so drawn that the Secretary of the Interior is not required to build the power plant. He can lease the power privilege to private companies or municipalities who would erect their generating works, or he can build a power house and lease it with the water to those who would install electric machinery. These alternatives for dealing

with the power opportunity are necessary in order to enable the Secretary to bargain to advantage. If he is deprived of authority to invite alternative proposals, I am convinced that competition will be restricted and the result will be an unworkable measure because of lack of revenue."

Interests of the seven states involved are not always the same, and at times seem to be in very definite conflict. Part of this argument has run in legalistic terms, a question of whether on an un-navigable river like the Colorado the Federal government has any right at all to authorize any agency to build any works at all, even a dam, or whether the river bed does not belong entirely to the state of Arizona.

In the arid western states, there is a rule of priority of water use. Wyoming and Colorado litigated over the division of water of a common river and the Supreme Court decided (*Laramie River Case*, 259 U. S. 419) that the first state to appropriate water from a river common to both of them was entitled to its continued use. This principle led the upper states to fear that in case the lower basin states appropriated the Colorado River water first, vested rights would be established which would make the future development of the upper basin states problematical. The upper basin states expected to develop, but to develop much more slowly than did California.

It is in this form that the question will come before the Supreme Court in case no further agreement is reached among the seven states. While this is the legal objection, the various states interested have made certain bargaining propositions to the

other states upon which they would waive the legal question and join in the compact.

The four upper states—Colorado, Wyoming, Utah and New Mexico—do not expect to use their share of the water for irrigation for many years, but want their rights to it safeguarded and protected for the future.

Arizona, which failed to ratify the original compact and which has led the opposition to the Swing-Johnson Bill in Congress, has asked the right to collect each year from any hydro-electric power produced by the Federal government on the Colorado River, a sum equal to the taxes which will be paid on the same site owned and developed by private enterprises.

Arizona's first demand was a royalty tax amounting to about \$6.00 per horse power, which, assuming a constant capacity of 600,000 horse power at Boulder Dam, would come to the sum of \$3,600,000 annually. With this principle once established, they might expect to collect from the entire 4,000,000 horse power available on the Colorado within Arizona, the sum of \$24,000,000 annually or approximately \$60 for every inhabitant of the state. This \$3,600,000 royalty would so lower the annual return on Boulder Dam that its entire cost would take much longer to pay off. At one time some of the advocates of immediate development in California were willing to agree that some royalty should be paid to Arizona, although, if such an agreement were consummated, it would merely mean the giving away of rights which California did not possess. Senator Hiram Johnson has not approved of any such arrangement. After the entire investment of the gov-

ernment has been repaid, all the revenue, whether from power sold at the switchboard of a government plant or from water leases to private companies, should go to the government to repay its advance of credit. After this has been returned, the policy of allocating the revenue from power will be a matter for further decision.¹¹

Utah, which at the last followed Arizona's lead in insisting that the project should be a source not only of water control to it, but also directly of revenue, made at first through its water commissioner the suggestion that the fund of \$125,000,000 provided for the construction of Boulder Dam be converted into a revolving fund and used for the development of the entire basin, bit by bit. Instead of being repaid, this fund would be impounded, kept in a special Colorado River improvement fund and put into the next unit of power to be developed on the river.

This would change the whole financial situation from a loan of credit to a permanent appropriation of the revenues. The committees shaping the bill

¹¹ A later proposal of Arizona was that it be permitted to tax government projects in the same manner in which they would tax any private development upon the Colorado River, reserving the right to place any valuation their assessor saw fit upon the intangible value of such power projects. Miss Mary Austin states Arizona's position in somewhat different terms in her article in *The Nation*, November 9, 1927, maintaining that, in the belief of the citizens of that state, the Swing-Johnson bill sacrifices the demands for irrigation to power prospects; utilizes the natural resources of Arizona and Nevada to develop California and "initiates the taking of natural resources from one state to another without compensation." Should the waters be so utilized by outside states that Arizona could not at some future date draw off water for irrigation purposes, she continues, a territory the size of France, with unique natural and cultural possibilities, would remain undeveloped.

would have none of it and later Utah also withdrew from the compact. Its representative on the House Committee on Irrigation and Reclamation opposed the consideration of the bill on the ground that it was an attempt by the State of California to gain special privileges and advantages in the development of the river at the expense of the rights of other states having equal, if not superior, rights to it; that the plan was misrepresented as primarily a flood control and reclamation measure, whereas it was in fact a gigantic government power project; that it was a reversal of the traditional policy of government in business and that it was uneconomic and extravagant. His proposal was that the Federal Power Commission should lease all the power. Paradoxically this was based on the assumption that the river was navigable, for only on navigable rivers does the Federal Power Commission have authority, while at the same time Arizona's whole claim to possession of the river bed is based on the supposition that the river is not navigable.

These compacts and withdrawals have a background of poverty. Certain of these southwestern states are very undeveloped, have only slight natural resources other than this water power and want in any way possible to secure an income from it. If a project of a government-owned plant fails because of their opposition, they may receive some additional revenue through the taxes paid by private companies which develop power. To the extent that they consume the power themselves, they will of course pay back to the company such taxes. Otherwise the consumers in the other states will pay them.

A further suggestion has been made by Representative Frederick Davenport of New York, that a more effective way of securing the desired ends would be through a Colorado River Water Power Authority modeled on the Port of New York Authority. It would consist of sixteen commissioners, two from each of the seven states parties to the Colorado River Compact, to be appointed by the President, on nomination of five from each state by the Governor of each state, and two at large, without nomination, by appointment of the President. It would exercise the federal power to improve navigation and as a means thereto to preserve the channel, control floods and, as an incident thereto, sell hydroelectricity. The commissioners would have full power to issue bonds, tax exempt, without the credit of the Federal government but supported, as in the case of the Port of New York Authority, by revenues to be derived from the plan. They would have the power of eminent domain to acquire sites, to contract, lease or sell surplus waters or power, making it a condition with the companies buying this power from them that they should not charge the consumers more than a given sum per kilowatt hour, differentiating between consumers, so that agricultural, domestic, industrial and municipal uses may be treated differently. Such prices could be written into the contracts with the companies purchasing the power for transmission and distribution, based on a fair capital return on the actual investment, subject to modification in the event that such a return does not come, but also subject to reduction to the extent that the return is exceeded in the earnings of the company.

A further provision is that no bonds would be

issued, no contracts or leases made, until the commissioners agreed upon allocation of water rates and power, the subjects now in dispute between them. The terms of the Colorado River Compact as to the division between the upper and lower basins (to which no objection has been taken) should be written into the act as a starting point. Decisions would be by a majority vote of the commissioners, but five states would have to cast at least one vote. Failure to nominate by a state would give the President the right to pick residents of the state.

This plan bases itself upon the well-established power of Congress to regulate navigation. It offers opportunity for compromise and agreement between states. It provides a machinery for proceeding with the development as soon as the states agree upon the allocation of water rights and power, protects the consumers and saves the Federal government from raising money on its own credit. Without any contribution of capital from the Federal government, it preserves in public control the natural resources of the states and the government in the Colorado River basin. It combines the compact-making power of the states under the Federal constitution with the police power of the Federal government to accomplish a combined Federal and State purpose in which it parallels the case of the Port of New York Authority.

The Swing-Johnson Bill, as it now stands, giving the Secretary of the Interior the alternative of leasing the water from the plant once built or any part of the plant, is no great guarantee for those who feel that the regulation of our public utilities has become inadequate. The proponents of the bill have found in the strenuous opposition offered to it the

realization on the part of the power companies that the example of such a large government-owned plant would be a blow to their dominance in the southwest. Mr. Davenport's proposal, which is similar to that made by Senator Norris for Muscle Shoals, has the immediate advantage of offering a possible compromise in a situation which is at the moment deadlocked for want of agreement, due to the relative economic advantages to be obtained by each state rather than to any possible conflicting function of state and nation.

The St. Lawrence

A problem somewhat similar to the development of Boulder Dam has arisen over the St. Lawrence development in the northern part of New York State. Here again it is a question of control.

New York State has seen one of the largest combinations of power interests in the country. The companies affiliated with the Northeastern are estimated to represent an investment of approximately \$600,000,000 in New York State and New England. They control approximately three-quarters of the total water power developed in the state, including Niagara Falls. New York State has more developed water power than any one of the other states, with the exception of California. The public utility and municipal plants have developed approximately 80 per cent of the total, and 348 manufacturing plants divide the remaining 20 per cent between them, over one-quarter of which is controlled by the Aluminum Company of America. The state still has large undeveloped resources, mainly on the St. Lawrence, an international river where New York

State's possibilities amount to at least 1,200,000 horse power; there is also 800,000 horse power to be developed on the lower Niagara. These two projects represent firm power, available practically all the time. On the interior rivers of the state and on the Delaware, there is a further 1,200,000 horse power capable of development only part of the time. The Northeastern affiliates have rights to 366,000 horse power, 35 per cent of the undeveloped water power in the interior rivers of the state.

Seven companies operating in New York State rank among the 135 companies of the country producing over 100,000,000 kilowatt hours annually. They include both hydro and steam power plants. Together these seven companies, which really fall into three groups, the Northeastern affiliates, the Edison group and the much smaller Rochester Gas and Electric, account for 15½ per cent of the total power production of the country. Their production is divided as follows:

| | |
|----------------------------------|--------------------|
| <i>(Northeastern Affiliates)</i> | |
| Niagara Falls Power Co. | 3,161,130,010 kwh. |
| Niagara, Lockport & Ontario.. | 872,402,171 " |
| Buffalo General Electric | 869,317,170 " |
| Mohawk-Hudson Power Corp. | 1,003,208,116 " |
| | <hr/> |
| | 5,906,057,467 kwh. |
| Edison-United Companies | |
| (N. Y.) | 2,262,620,409 kwh. |
| Brooklyn Edison | 783,019,562 " |
| Rochester Gas & Electric | 296,678,980 " |
| | <hr/> |
| | 3,342,318,951 |
| Total these companies | <hr/> |
| | 9,248,375,418 kwh. |

The St. Lawrence represents the single largest natural resource which the state has. The power to

be developed there is expected to be used mainly in the industrial Mohawk Valley, but also for the farms and small towns in the northern and central part of the state. A large part of it is to go across the line to New England, and transmission lines already connect up the system of the Mohawk-Hudson Company with Boston. Some plans have been made to ship it on high power transmission lines to New York City, although the Edison companies there are constantly building new plants to take care of the city's demand. The Province of Ontario is also eager to have the benefit of the power developed on the St. Lawrence and in its official reports states that while it has made some short-term leases of private power in Quebec, it is counting on the St. Lawrence power to furnish the largest part of this development.

The undeveloped St. Lawrence power has been the subject of discussion for many years. In 1907, the Legislature granted a charter to the Long Sault Development Company, subsidiary of what later became the Aluminum Company of America, to develop this power. The return which the state was to receive was nominal. The company failed to begin construction, and in 1913 the charter was repealed. It has been estimated that the failure to develop this power has cost the state the price of 10,000,000 tons of coal annually. Every increase in the cost of coal makes water power more valuable.

The New York State laws provide for a general policy of private leasing of water powers within the state, under control similar in many respects to that of the Federal Power Commission, except in the very important fact that in place of the net cost of investment which must under the Federal Water

Power Act be the rate base, the State laws allow for "reconstruction cost," which is another term for the reproduction cost discussed in Chapter V. While the market for this large block of power, twice as large as that to be developed at Boulder Dam and eight times as large as that already developed at Muscle Shoals, has not yet been completely developed, engineering surveys show that by the time the project would be completed, in 1935, the larger part of the power could be used providing that New York State and New England develop in a satisfactory way, industrially.

The feeling against turning the remaining water power resources of the State over to the privately owned companies had been developing for some time before Governor Smith in 1926 proposed a Power Authority to act as an agency of the government and develop the St. Lawrence. In a state referendum on the proposal to lease a small part of the water power resources in the Adirondacks, to the private companies, a majority of approximately one-quarter million votes was cast against it. Governor Smith's first proposal was for state generation and wholesale transmission of the power. His present proposition is for state construction and ownership of the generating plants and sale to private transmission companies at the bus bar. He draws a distinction between such a Power Authority and a branch of the government like the Department of Conservation. It is his idea that any defects which may be inherent in the bureaucratic administration of government can be avoided by the creation of an agency essentially independent of politics, taking the corporate form of existence which has been so successful

in our industrial life and to which we are all accustomed, and putting it to an essentially business job.

The Port of New York Authority is an illustration of the effectiveness of that particular instrument. It is composed of representatives of New York State and New Jersey who are charged with bringing some order out of the chaos of the Port, building the necessary terminals, tunnels and bridges, for this purpose. The two states provided approximately 20 per cent in cash of the expenditure for two of the bridges. The bonds of the Port Authority, which sold at 4.65, therefore had behind them an equity of approximately 20 per cent. It is expected that the Power Authority would be able to raise its funds, including interest toward construction, on the basis of the expected revenues from the developed power on the St. Lawrence.

The development of a large sentiment in the state in favor of such development by an agency of the state has been due to the same reasons which have also elsewhere led to distrust of our regulatory system. This was accentuated by the leases which certain combinations of interests offered for the St. Lawrence and which the State Water Power Commission was on the point of giving them a few weeks before its life ended. It was apparent that if this natural resource were leased for fifty years, there would be little or no possibility of getting it back. The previously discussed danger of constantly paying the rates which would allow the stockholders a gain on a perfectly hypothetical increase in investment was stressed by the announcement, in 1926, of the Supreme Court decision in the Indianapolis Water Company case. At the same time the fact that there was no control at all over wholesale inter-

state transmission of power was accentuated by the Supreme Court decision in the Narragansett case. The function of holding companies and the fact that they cannot be controlled by the State Public Service Commission was a matter of common knowledge to the people who had been aware of the attempt of the state to secure reduction of the charges made by the American Telegraph and Telephone Company on the New York Telephone Company.

The fact was brought out that the Niagara Falls Power Company had succeeded in writing a sum of approximately \$30,000,000 into its investment and having the consumers pay a return upon it, in spite of the realization of the state commission and the Federal Power Commission that such a large inflation had taken place.

The fact that whether the consumers win or lose a particular rate case, they do have to pay all the expenses of litigation, was strengthened by the fact that the New York Edison Company had spent over \$3,000,000 in fighting a current rate case.

The actual control over the development of self-government of the cities by the power group was keenly realized by the City of Watertown and the surrounding area. It has a municipal plant in condition to sell beyond the city's immediate needs 17,000,000 kwh. annually to the neighboring territory. The Power Corporation of New York, the chief Northeastern company, controls all the surrounding territory and has, under the leadership of the President of the Northeastern, former Speaker of the Assembly, H. E. Machold, held up the necessary permissive grant by the Legislature which would allow Watertown to utilize its facilities.

Here is a case where "control by the power companies" has taken on an easily understood significance. By blocking the expansion of the city's power system a mandate is issued to the effect that city plants are to stay small; they are consequently to become unprofitable; they are in no way to interfere with the mandates of the great powers. It is a way the great powers have of talking to "backward people," and it is probably not without its effect upon other cities which might be contemplating ownership of their own plants and participation in a state-wide system. The State Conference of Mayors and Municipal Officials has several times endorsed state-owned development of the St. Lawrence.

There was also some awareness among the citizens of the state of the difference between rates charged in the small towns of New York State by private companies and those charged by the publicly owned Hydro-Electric Commission in Ontario across the border. The rates in the small towns of New York State, those with less than 500 consumers, ranged from 8-15 cents and had been reduced only in a minor way in the last five years.

The same class of towns in Ontario had paid 6.81 cents for domestic power in 1920 and by 1924 had been cut to 5.05 cents, a drop of 26 per cent. No similar cutting of the rates had taken place in the New York towns. A somewhat similar situation applied to the cities, even where, like Buffalo, they were getting the larger part of their power from Niagara Falls.

Nor were the merging activities of the big holding companies in the state accomplished without some realization on the part of the citizens of the towns affected, that the companies would not per-

manently expect to get blood out of a stone and that the price they paid for the local companies would sooner or later be seen in the rates—at least to the extent that the rates would not be reduced as much as they otherwise might be.

The prices paid in some of the recent purchases by holding companies in New York State give prima facie evidence either that (1) the operating companies have been making far more than a fair return on their investment, or (2) that the holding companies are going to absorb all possible advantages of more efficient operation through power and service contracts with the operating companies, or (3) that they are expecting to have their system values recognized by the Public Service Commission on a larger rate base on which rates can be kept at least at their present level. Probably all three of these are true.

The following table gives some of the prices paid by the holding companies in 1925 and 1926 for the operating companies. The difference between the book value of the stock and the price paid for it and the rise in the market values due to the mergers or combinations indicate the capitalization of expected efficiencies due to interconnection and concentrated control, and the ability to put it over.

During the discussion over the development of the St. Lawrence, the New York State Public Service Commission changed its policy in regard to allowing an increase in rate base, on the ground that the company had been bought for an amount greater than the previously allowed rate base. In permitting the various consolidations in 1925, the Commission had said:

TABLE I

| | <i>Book Value of Security Purchased</i> | <i>Cash or Market Value of Stock Paid</i> | <i>Market Price at End of Preceding Year of Security Purchased</i> | <i>Market Price at Date of Merger of Security Purchased</i> |
|---|---|---|--|---|
| Power and Electric Securities, buying: | | | | |
| Malone Light & Power ... | \$155.08 | \$ 547.62 | | |
| Fort Covington Light | 358.46 | 1,250.00 | | |
| Milling & Lighting | 190.75 | 1,687.00 | | |
| Buffalo, Niagara and Eastern, buying: | | | | |
| Niagara Falls Power | \$ 26.17 | \$ 50.00 | \$ 45.00 | \$ 69.00 |
| Niagara, Lockport, Ontario | 32.61 | 62.50 | 47.00 | 78.00 |
| Buffalo General Electric .. | 27.10 | 55.00 | | 69.50 |
| Tonowanda Power | 33.52 | 62.50 | | |
| Mohawk-Hudson, buying: | | | | |
| Syracuse Lighting | \$106.00 | \$347.00 | | |
| Cohoes Light & Power ... | 124.03 | 194.00 | | |
| Adirondack Power & Light | 55.85 | 58.33 | \$ 34.00 | \$ 92.00 |
| Utica Gas & Electric | 141.77 | 220.00 | | |
| Municipal Gas of Albany.. | 110.13 | 180.00 | 154.00 | 197.00 |

“. . . the stated capital accounts representing the securities issued by the holding company for the purpose of acquiring the securities of the underlying companies shall in no event exceed the book value of the securities so acquired as shown by the books of the companies whose securities are to be acquired.”

In the purchase in 1926 by the Mohawk-Hudson Power Corporation of the Syracuse Lighting Company and others, however, this safeguarding provision was left out as well as the one that none of the entries of the capital stock of the holding company on the books of the operating companies “shall be controlling or entitled to consideration in any proceeding, suit or matter herewith involving the rates, charges or service of any such company.” This, as was pointed out in Chapter V, leaves the way open for the holding companies to recoup any extravagances from the rate payers.

Certain objections against the Power Authority were raised, notably by former Congressman Ogden L. Mills who, unfortunately for the argument, was with his family interested to the extent of \$1,662,000 in the Niagara Falls Power Company, the stock of which jumped, due to a merger, from 47 to 69, and also in the International Paper Company which has large power holdings in New York State and Canada.¹² The proponents of the Power Authority were called upon to show definitely:

1. That the Power Authority could build and operate power plants as cheaply or more cheaply than private enterprises.

2. That the benefits to the consumer would be

¹² Mr. Mills sold his interest in the Power Company on or before entering the gubernatorial campaign in 1926, although his family retained their interest in this company.

sufficiently great to justify the abandonment of private initiative and enterprises in favor of government operation.

3. That the plan would safeguard the business interests of the state and protect the public from exploitation.

4. That the system of leases under the Federal Power Act and the State Power Law would be adequate to protect the public interests.

The argument turned at first upon the leases offered by private companies for the St. Lawrence and the protection they promised to give to the state and to the public. These leases were taken as representative, as the best the state could secure from power companies in case of private development, and spokesmen for the bidding companies stated that no better leases would be offered. While there is no danger of these leases being accepted by the State, as long as a Governor unfavorable to them is in office with veto power over the acts of the State Water Power Commission, the leases are in the background of all discussion of the Power Authority. It is the hope of those who favor them that when a Governor more favorable to private development is in office, they will be put into effect.

While there are few power projects of similar size or importance in other states to be leased or developed by those states, a brief summary of the leasing provisions offered in New York State will be found quite generally to be applicable. The leases turned over the regulation of rates to the Public Service Commission and did not in any way change the present practices of that body in fixing rates. They did not safeguard the rates to be charged

through the contract power of the state, but simply turned them back to the police power which is the one exercised by the Commission. The practice of the Public Service Commission to fix rates on reproduction cost rather than on the original and actual cost of the investment was not changed, nor was the customary practice of costly litigation over rates changed.

Certainly if the people of the state were to foresee the results of what is not impossible, another 50 per cent rise in price levels such as took place between 1913 and 1923, they would never stand for it. If, instead of paying rates which would not only give a fair return on \$125,000,000, but retire it, they are called upon to pay a return upon and retire \$187,500,000, including an extra \$62,500,000 which nobody invested—the result of an elaborately artificial, expensively dignified guess of what it might cost to rebuild the St. Lawrence plant in case it were by chance completely wiped out—they would have none of it. If there were any certainty that the price level was going to increase in any such proportion, the state would probably be unanimous for public construction. For lack of that certainty there is a disposition to gamble, to gamble that within the next fifty years prices will not go up either 50 per cent or at all. Private ownership of a great natural resource under commission regulation is to-day a bad gamble on the fluctuating purchasing power of the dollar.

The leases did not hold down the transmission companies, which are expected to invest \$100,000,000, to the net cost of their investment. In fact, no provision at all was made for safeguarding the public from high transmission charges either in case the

transmission companies were financially allied to the leasing company or not. Here the existence of the Federal Water Power Commission, with its authority to see that rates are fixed on the basis of net investment cost only, many people felt to be no guarantee, for the Federal Commission can regulate only where the states have no commissions exercising a regulatory power over rates. There are no known cases in which the Federal Power Commission has actually fixed the rates to be charged to consumers or in which the consumers have been protected by some order of a state regulatory body based upon the capitalization fixed in the books of the licensee under the accounting rules of the Federal Power Commission. The conclusion reached by many students was that the leases allowed rates higher than would be necessary under a State Power Authority or even higher than necessary if the lease actually conformed to the provisions laid down in the Federal Water Power Act.

The leases made no provision for the recapture of excess earnings or for the establishment of an equalization fund. The absence of a provision for the recapture of excess earnings, such as the one in the Interstate Commission Act, means that surpluses piled up out of earnings accumulated from rates higher than necessary to pay a fair return on the investment, can be reinvested in the property and become a property of the investors. Then the consumers have to pay rates on the capital they have themselves contributed through rates which were higher than necessary in the first place. Furthermore, this capital which the consumers themselves contributed will be subject to revaluation, for the

rate of return under the present regulatory practice will be based on "fair value" of the property without any regard to the source of funds. This has been discussed in Chapter V. There was no provision in the licenses that the security issues could be regulated by the commission so that the par of all outstanding securities would be at all times equal the rate base, the rule set up by the Federal Water Power Act in the Conowingo case.

The leases carried provisions under which the state might recapture the property upon due notice, but only upon payment of a 15 per cent bonus upon the then outstanding capitalization. This is more than the necessary premium on callable securities. There was also no guarantee that the state would not have to pay this bonus upon a revaluated capitalization rather than upon the actual capital invested in the project. The market premium of callable stock ranges from nothing to 20 per cent, the average being close to ten. The premium on callable bonds is much lower. The license at Conowingo, a development comparable in many ways, authorized \$36,000,000 first mortgage gold bonds due and payable in 1972. They were to bear interest at the rate of $5\frac{1}{2}$ per cent per annum and were callable in part or in whole after half a year or after that on any interest date upon payment of the principle and accrued interest to the date of redemption plus the premium of a certain percentage of the principle as follows: 6 per cent if redeemed during the first fifteen years, $5\frac{1}{2}$ per cent if redeemed during the following ten years, and 5 per cent if redeemed during the following ten and after that, reductions of one-half per cent a year for the final ten years. These bonds were issued in March, 1926, price 100 and interest to

yield $5\frac{1}{2}$ per cent. The premium after the first ten years on the preferred stock of the Conowingo development was held to 12 per cent. There was no premium allowed on the common stock.

The St. Lawrence licenses, on the other hand, proposed a steady 15 per cent on all unamortized capital up to the end of the fifty-year duration of the license. There was no graduation downward at all. The common stock was included in the premium. On the plan proposed by one of the bidding companies which provided for \$72,000,000 in bonds, \$24,000,000 in preferred stock and \$24,000,000 in common stock, the Conowingo premium rates applied to the St. Lawrence project would come to \$11,000,000 less than the flat 15 per cent bonus on the whole investment, for example, on a recapture at the end of fifteen years.

The other recapture provisions were so loosely drawn that the state, in case of recapture, might have to pay more than the actual capital invested in the project.

Article 15 provides that the State may recapture "at the cost as determined and approved by the Commission," etc. This may or may not mean reconstruction costs. In view of the following articles it is a fair inference that it will be so interpreted by the courts. Article 17, dealing with recapture in cases where the licensee fails to comply with any of the terms of the lease, uses the language ". . . and the State shall have the option at the same time to take over the remainder of the property . . . at the reconstruction cost thereof. . . ." Also, in the same article: "In the event of such termination the State shall . . . pay to the licensee the enhanced value, if any, of State property covered by the license, re-

sulting from any improvements to the same made or effected by the licensee, not, however, exceeding the *reconstruction costs*. . . .”

Although Article 18 seems to hold the recapture price down to actual cost other provisions in the license render that doubtful. Article 18 reads in full:

“Unless reconstruction cost is specified, the term ‘cost’ as used in Articles 16 and 22 hereof means one-half of the actual expenditures incurred in the entire development, wherever the same may be located, as approved by the Commission, but not to exceed in any event the amount actually expended by the licensee.”

In spite of this, Article 22 opens two ways for a payment by the State of more than the actual cost for the property, specifically at the end of the fifty-year term of the license. The Commission is given the privilege of reducing the licensee’s rates by relieving it in part or in whole from its obligation of making payments to the amortization reserves. In case the Commission does that, “with the result that at the expiration of the original license term the actual original cost of the entire project works is not thereby completely retired, the State may as it then deems best (1) receive in fee simple absolute the entire property of the licensee . . . upon the payment of a sum of money equal to that portion of the *reconstruction cost* of the project works as determined by the Commission which had not been completely amortized at that time, or (2) extend the license period in accordance with Section 631 of the Water Power Act for a sufficient time to completely amortize the *reconstruction cost* of the project works. . . .”

At the best this writes the practice of paying reconstruction costs into the lease. At the worst a Water Power Commission that wanted to favor the licensee could relieve it of paying amortization reserves to such an extent that the whole property would, at the end of the fifty years, not revert automatically but have to be paid for at reconstruction costs.

The licenses left the way open for the company developing the St. Lawrence to collect more in amortization reserves than it actually invested and, consequently, to charge rates higher than would otherwise be necessary. They stipulated two conditions (Article 22 B) upon which the amortization reserves could be collected on the basis of reconstruction costs rather than actual costs. The one was in case the cost of the project went over \$125,000,000, the original estimate, the other was that when the project was completed the remaining period available for amortization would be less than forty-two years. In either case, according to the license:

"If it is then found that the rates charged by the licensee for power, which have been established by the Public Service Commission . . . are not sufficient to completely amortize such cost of the project works as determined by the Commission within the license term, then the license shall be extended . . . for a sufficient time to completely amortize the *reconstruction cost* of the project works. . . ."

Here certainly is proof that the system of leases under the state power law are inadequate to protect the public interest. They put no stop to that particularly effective private initiative which consists in the seeking of ways and means to receive from the consumers a return upon more money than it has

invested. They do not safeguard the business interests of the state from revaluations or protect the public from exploitation. They do not even measure up to what, in theory, is the content of the Federal Water Power Act. They do not even guarantee that securities will not be issued greater than the investment or cut out the speculator's profit in stocks for which no cash is received, which was thrown out as unsound at Conowingo.

The case for the Power Authority in New York State lies essentially in the failure of both the regulatory system and the proposed conditions for private development of the St. Lawrence to protect the consumers. It rests positively upon the efficiency of this new form of state organization, the state-owned corporation, to do work which is either too important to leave to private development or where the known terms of private development promise to be too expensive in one way or another. It seems to avoid, as far as possible, the dangers of political bureaucracy and any minor favors and advantages which might come out of that. In this particular case, there is also a feeling, right or wrong, that the various private companies bidding for the St. Lawrence have several axes to grind other than that of making money out of the state-owned power. The most important bidder, the Frontier Corporation, is owned one-third by the Aluminum Company of America, which controls a considerable power area in northern New York State and uses a large block of power for its own factories on the St. Lawrence and which may be expected to divert as much power as possible from the St. Lawrence to its own factories. It is owned one-third by the General Electric

which is thought to have some interest at least in selling its own products. The General Electric also happens to own a large share of the Mohawk-Hudson Power Corporation, which would be one of those affected by the development of the St. Lawrence power. The final one-third of the stock of the Frontier Corporation is owned by the Dupont Corporation, which is not only in the electro-chemical industry but has a subsidiary construction corporation occupied, among other things, with construction of power houses.

The St. Lawrence project is complicated somewhat by the fact that there is a large body of opinion which believes that an international canal must be constructed through the St. Lawrence. This would involve the coöperation of the state and the federal government in the construction of the power plants as well as the canal. The question arises whether a private company would be more careful of the interests of New York State than a state-owned power authority would be.

Half of the St. Lawrence will be developed by the Hydro-Electric Commission of Ontario, which is really a Power Authority in that state, with the additional factor of being in the transmission and distribution business as well as that of developing the power. On its share of the development, it will charge prices only large enough to pay off the actual investment in the plant in thirty years and after that furnish service at cost. The contrast between that and private development under the leases on the American side of the river is too startling for the people in New York State to accept private ownership with any satisfaction.

The power companies and the banking groups

have a large part of the situation in their control. Even when the Power Authority is established, it will have to go to the open market to float \$125,000,000 in bonds. Unless it has been able to secure contracts for the power when available these bonds cannot be floated. The power groups control the plants in all but a few municipalities in New York State. They can refuse to contract for the power, preferring instead to build their own plants to take care of the increasing demand. This will not make for cheap power, but it will make for a continuation of their own control over the situation. The Public Service Commission has authority to refuse to authorize the securities of the private companies for such purposes unless they can be proved to be necessary. As long as the St. Lawrence power was not ready and available, the Commission would hesitate to refuse such authorization for the construction of private plants and these plants could then be built.

But even if contracts were available for the St. Lawrence power and the building of the generating plant went ahead, there is no guarantee that the money market would decide to absorb a further \$100,000,000 which might be necessary for the construction of the high tension transmission lines even under a privately owned transmission company. The power to control credit is the power to destroy. The state would then be called upon to do two things, build about eighty miles of transmission lines to connect up with the existing high power lines down to the Mohawk-Valley, and declare the transmission lines common carriers. Political control of the Legislature could block either one of these two things.

The situation would then be that most of the power would have to be used near the source and

there would be a great industrial expansion around it, presumably by the aluminum and other electro-chemical industries which live on cheap power and have tied up Niagara power and have constantly attempted to tie up Muscle Shoals power. These groups would, of course, have no interest in constructing and financing transmission lines which would carry the power to the farms and cities of the state.

Such an arrangement would be in line with the Ontario experience but with an important difference. The Hydro-Electric Commission sells the bulk of its power very cheaply to large industrial consumers on both the Canadian and American sides of Niagara Falls. But it also supplies the municipalities of the Province, an arrangement which not only protects it in case some of its power customers fail or move away, but protects the municipalities. The Commission can develop other power projects as the demands of the municipalities grow. In New York State, with practically all of the municipalities under private power control, there is no certainty of a demand on their part for St. Lawrence power, no matter how much cheaper it is. Nor is there, in case they had decided to sabotage the enterprise, any effective way of forcing these companies to take the cheapest power available.

None of this sabotage may happen. It can be checked, step by step, if the checking starts with a keen public realization of what is intended. The power to be produced will cost, it has been estimated, between 3 and 4 mills at the bus bar. In Ontario power produced at this cost is sold to the cities scattered throughout the Province for an average of 9 mills and to the big industrial users around the

source for about 4 mills. Similar prices in New York State would make it the cheapest power in central and eastern New York State with the exception of the newest plants in New York City.

Some picture of the difference in rates and consequently in advantages to be expected may be gained from the figures compiled in 1922 by the Northeastern Super Power Committee as showing the expected costs in 1935 for power developed at the St. Lawrence and by steam in the various cities.¹⁸

In the Mohawk Valley where most of the power would come from hydro-electric developments, the expected costs per kwh. are:

| | |
|--|------------|
| Local steam developed power only | 10.5 mills |
| Local steam and local hydro-power only ... | 10.0 " |
| Local steam and St. Lawrence power | 7.2 " |

Here St. Lawrence power means a reduction of from 3.5 mills to 2.8 mills over other forms of power.

In the Hudson Valley, from Schenectady and Albany south to Newburg, where over half of the power would then come from hydro-electric development, the expected costs per kwh. are:

| | |
|--|------------|
| Local steam developed power only | 10.3 mills |
| Local steam and local hydro-power only ... | 9.5 " |
| Local steam and St. Lawrence power | 8.0 " |

Here St. Lawrence power means a reduction of from 2.3 mills to 1.5 mills over other forms of power.

¹⁸ Plate XVII Superpower Studies for the Northeast Section of the United States.

In the metropolitan district, including New York City, Northern New Jersey and a part of Western Pennsylvania, where less than one-half of the power would then come from hydro-electric developments, the expected costs per kwh. are:

| | |
|--|------------|
| Local steam developed power only | 11.1 mills |
| Local steam and local hydro only | 11.0 " |
| Local steam and St. Lawrence power | 9.8 " |

Here St. Lawrence power means a reduction of from 1.3 mills to 1.2 mills over other forms of power.

In the metropolitan district, including New York City, Northern New Jersey and a part of Western Pennsylvania, where less than one-half of the power would then come from hydro-electric developments, the expected costs per kwh. are:

| | |
|--|------------|
| Local steam developed power only | 11.1 mills |
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| Local steam and St. Lawrence power | 9.8 " |

Here St. Lawrence power means a reduction of from 1.3 mills to 1.2 mills over other forms of power.

If the companies in this area, for example, can after 1935 reduce their costs 1.3 mills below these engineering estimates and build new plants on that basis the main advantage to the consumers of the district in having St. Lawrence power available as an alternative will be in case of a rise in the general price level and an attempt by the companies to increase their rate base on a new hypothetical reconstruction cost. Light and power rates, even in the metropolitan area, may then be expected to keep on speaking terms with costs.

But even if none of the St. Lawrence power is used in New York City and all of it is used in the Mohawk and Hudson Valleys and in New England, a saving averaging as little as 3 mills a kwh. means, on a production of six billion kwh., an annual saving (after all capital charges) of at least \$20,000,000, and even in New York State that is nothing to be scorned.

Muscle Shoals

The chemical plant, power houses and dam built by the Federal Government during the war on the Tennessee River for the manufacture of nitrates for munitions have long been the center of a struggle about the ways and means of affecting the most intelligent social control for the common welfare.

The United States invested \$158,000,000. The plant was built up by government engineers. It can furnish one of the largest single blocks of power in the country east of Boulder Dam and south of the Niagara and the St. Lawrence. It includes a steam plant of 90,000 horsepower capacity. Current shipped from Muscle Shoals in a 300-mile radius can take in all or large parts of ten states: Alabama, Mississippi, Tennessee, Georgia, Kentucky, Arkansas, Missouri, Florida, Illinois and Indiana.

At the end of the war, Congress refused to spend any more money on the project. We needed no more munitions. We were going in for "economy," penny wise and pound foolish, perhaps, but "economy." The farmers, however, wanted the plant to be converted to furnish cheap fertilizer in great quantities. The chemical plants seemed adapted for that purpose. The power groups gave for a while no evidence of being interested in it at all. When the

government engineers looked around for bidders for the whole plant, the power companies informed them:¹⁴

"The usable primary continuous available power output of the dam and hydraulic power plant at Muscle Shoals, Tennessee River, cannot be sold delivered to the public service market at an average price that will pay operating expenses, taxes, reserve for renewals and replacements, and a fair rate of interest on the estimated cost of the proposed plant as planned and upon necessary transmission system to reach the distant only market, nor can the United States afford to invest additional public money to complete the dam and hydraulic power plant at Muscle Shoals, Tennessee River, as planned, if the same tests which control the investment of private capital are applied, because on the latter basis it cannot be made to derive a reasonable rate of interest on the estimated total investment from the sale of the commercial, usable available power to the public service markets, nor even upon the amount necessary to complete the plant as estimated by the Government engineers."

In short, they were not having any. Then Henry Ford submitted an offer to take the whole plant off the hands of the Government for one hundred years and to pay a little by way of return. Hearings were held. The chemical companies interested in cheap power for their own uses, as well as in the production of fertilizer, also bid. Certain power groups then declared the Ford offer to be a governmental subsidy, a principle abhorrent to them, and began to bid. This was a change of front which some of the representatives of the farmers have considered an

¹⁴Tennessee Electric Power Company, to the Chief of the Army Engineers, hearings before the Joint Committee on Muscle Shoals, 69th Congress, p. 689.

evidence of bad faith and which even six years later affected their attitude towards a very revised bid by the same interests. A representative of the Tennessee River Improvement Association, who had formerly been vice-president of the Alabama Power Company and a director of the American Cyanamid Company, said:¹⁸

"It is very unfair to Congress, and the committees that have been considering this offer . . . for the interests to represent, as they did in 1921 that neither the government with its capital nor private capital could afford to complete that dam, and then come back here in 1924 . . . and offer \$2,000,000 for it. Not only so, but it is very unfair to have represented that the Ford offer was a subsidy and then come to ask for one. That is not treating Congress right. It is not treating the government right."

The House of Representatives passed a bill giving the project to Ford in a rush of elation which seemed later to have had as its only adequate cause the impression that Mr. Ford was a good man and, given enough government property, would do right by the farmers. In the Senate, the situation was examined a little more carefully. Senator George W. Norris of Nebraska, chairman of the Senate Committee on Agriculture and Forestry, who, with the committee, spent months in careful investigation, found that the government was giving away its property for one hundred years for a song and a bad one at that and one that the people of the United States would have to sing themselves. He found that there was no adequate guarantee of fertilizer production and that it amounted in effect to a grant of very important power resources and that, if Ford was granted this

¹⁸ *Ibid.*, Testimony, J. W. Worthington, p. 503.

concession, the Federal Power Act of 1920, passed against the stiffest opposition of private interests, and limiting leases to fifty years, would have been virtually wiped off the statute book. Bills leasing the project were held up by him in 1924, and in 1926 Congress appointed a joint committee to secure and negotiate bids which were as good or better than the Ford offer.

In April, 1926, the majority of this joint committee recommended that the whole project be leased to a group of Associated Power Companies which are Electric Bond and Share interests.¹⁶ They at-

¹⁶ The two companies in whose name the bid was to be taken are the Muscle Shoals Fertilizer Company and the Muscle Shoals Power Distributing Company, corporations organized under Florida laws. The latter company is the controlling one. It has subscribed for all the stock of the Fertilizer Company, 100,000 shares with a par of \$100,000. The authorized capital stock of the Muscle Shoals Power Distributing Company (200,000 shares of no par common) has been subscribed for as follows:

| <i>Name of Subscriber</i> | <i>Number of Shares Subscribed for at \$80 Each</i> | <i>Amount</i> |
|--------------------------------------|---|---------------|
| Tennessee Electric Power Co. | 12,500 | \$1,000,000 |
| Memphis Power & Light Co. | 9,375 | 750,000 |
| Jackson Railway & Light Co. | 6,250 | 500,000 |
| Mississippi Power Co. | 12,500 | 1,000,000 |
| Mississippi Power & Light Co. | 6,250 | 500,000 |
| Mississippi Delta Power & Light Co. | 3,125 | 250,000 |
| Alabama Power Co. | 31,250 | 2,500,000 |
| Gulf Power Co. | 6,250 | 500,000 |
| Kentucky Utilities Co. | 3,125 | 250,000 |
| Gulf Electric Co. | 6,250 | 500,000 |
| Georgia Railway & Power Co. | 31,250 | 2,500,000 |
| Louisiana Power & Light Co. | 6,250 | 500,000 |
| Arkansas Light & Power Co. | 9,375 | 750,000 |
| New Orleans Public Service, Inc. ... | 9,375 | 750,000 |
| Central Georgia Power Co. | 6,250 | 500,000 |
| Total subscriptions | 159,375 | \$12,750,000 |

tempted to secure the passage of legislation to this effect during the final session of the 69th Congress, but the threat of opposition was so strong that the matter has been postponed.

Senator Norris has proposed that the whole project be operated under a Federal Power Corporation with provisions for distribution of power to the public and experimentation under government experts in the development of the fertilizer process.

Meanwhile, the Alabama Power Company is securing the power at 2 mills from such units of the plant as are operating. In 1926 the government sold to it 428,266,000 kwh. and received, after paying the operating costs, a net operating income of \$698,839.

The discussion of the disposal of the plant must be first of all against this background: Operating only half its equipment and selling at the low rate of 2 mills usually only paid on short-term contracts for uncertain dump power, the net operating income has been nearly \$700,000 a year. Colonel Spalding, one of the Army engineers advising the Joint Congressional Commission, estimated that "in ten years, without considering the enhancement due to improvements of the stream, that power ought to be worth \$3,500,000 annually, without considering anything else."¹⁷ This was based on the expectation of selling primary power at 5 mills per kwh. and secondary power at 2 mills. The steam plant together with Dam No. 2 represent 156,000 primary horsepower and 104,000 secondary horsepower. In other words, we are making only a partial use of the plant now. A full use of the present power without

¹⁷ *Ibid.*, p. 327.

any further big investment would soon amount to \$3,500,000 a year in case we devote none of the power to fertilizer. The bids for the present plant (unimproved) do not reach half that sum.

The discussion of the disposition of Muscle Shoals has taken place in the middle of the uncertainties of two advancing arts. The use of power has grown more rapidly than may have been expected when the plant was built. The development of high power transmission over long distances has also changed the aspects of the situation.

The striking feature of the whole power situation at present is that, while the present power plant at Muscle Shoals alone is worth a good deal, its real value lies in its functioning as part of a Tennessee River superpower system. It has been estimated that developments on the upper river, operating in connection with Muscle Shoals to give it a primary firm power, which it would not otherwise have, will add at least seventy-five per cent to the present value. The real value of the present plant at Muscle Shoals is directly comparable to the Conowingo project in Maryland. There a primary 50,000 horsepower was to cost \$52,000,000, or about \$1,000 per horsepower, about ten times more than is usually considered economical to invest. But the Philadelphia Electric Company, the company to use the Conowingo power, can utilize a very large proportion of the secondary power. The dam has sufficient capacity to hold up the day's runoff and to release it for a short period of from three to six hours and transmit the energy to Philadelphia to take up the high peak of the daily demand. By operating in this fashion, an average daily capacity of 50,000 primary horsepower can supply an amount of energy at peak which

would require an installation of from 150,000 to over 200,000 horsepower of steam plant. When there is plenty of water in the river, the hydro plant at Conowingo can be operated all day, thus saving large quantities of coal which would otherwise be burned in the company's steam plants in Philadelphia. The Muscle Shoals plant similarly will acquire its greatest value from being operated in connection with developments on the upper Tennessee River at Cove Creek, almost four hundred miles up the river, and elsewhere.

This fact has been somewhat neglected in the public discussion of the disposal of the plant. The chemical and power companies have been very much aware of it and have based their bids for Muscle Shoals on the presupposition of control of the whole river. In other words as long as the Federal Government confines its negotiations to the disposal of the present plant it can expect to receive much less than if it deals in terms of the whole system. The associated power companies have already offered to pay a net return to the Government of \$93,000,000 more during the fifty-year period of the lease for the whole system than for the present plant alone, and that hardly expresses the difference in value.

The real question for public discussion as far as power is concerned, and that is by all odds the most important consideration, is that of possession of the monopoly of the Tennessee River. Secretary O. C. Merrill of the Federal Power Commission has pointed out that the power projects on present plans if completed, "will have an installation of 1,220,000 horsepower or 55 per cent of the total hydro-electric power now installed in the six southern states of

Alabama, Georgia, North and South Carolina, Tennessee and Kentucky. They will have an average annual output of 4,490,000,000 kilowatt hours, equivalent to 80 per cent of the total electrical energy, steam and hydro, produced in the above six states in 1926. It is estimated that the maximum probable requirement of electric energy for fertilizer will be 625,000,000 kilowatt hours per annum, leaving for the lessee's own use over 3,800,000,000 kilowatt hours of electric energy, or 6 times the requirement for fertilizer production."¹⁸

Do we then wish not only to give but to subsidize such a large control to the companies which already have fairly complete control of all the power in the Southeastern states? Or would it, in view of the inadequacy of regulation and the great financial returns involved, be more advisable to see that the consumers in those states received the advantage of a great block of cheap power and that the Government received a reasonable adequate return on its investment?

The uncertainty of the advancing art of fertilizer production has also conditioned the discussion. Only one of the bidding companies proposed to utilize to its utmost the cyanamid plant at Muscle Shoals. The others preferred to work along the lines of synthetic fixation of nitrogen. The latter, known also as the Haber process, uses much less power for its production than the cyanamid process. Expert testimony was given to the effect that, in fixing 10,000 tons of nitrogen through the cyanamid process, 28,500 horsepower would be used directly, plus 6,500

¹⁸ Federal Power Commission Memorandum of Feb. 10, 1927; see also House Document No. 463, 69th Cong., 1st Session.

horsepower to make the acid to go with it. The synthetic process would use 5,000 horsepower to fix the nitrogen and the same 6,500 to make the acid, a total of 11,500 horsepower. The desired quantity of highly concentrated fertilizer is 40,000 tons. For this purpose, the cyanamid process would use 114,500 horsepower and the synthetic process only 46,000. It can be seen that the desire of all companies was not to commit themselves to the more costly and obsolescent process, for what they did not use in fertilizer they could sell as power. In the bid reported favorably by the joint commission, the power companies provide that about half of the rental from power shall be earmarked to go into the development of new fertilizer processes.

There was at first an over-emphasis on the probable savings to the farmer in the way of reduced costs of fertilizer due to the cheap power available at Muscle Shoals. Dr. F. C. Cottrell, the head of the Government Research Laboratory for Nitrogen Fixation, gave testimony to the effect that under the synthetic process the power cost was about 5 per cent of the total cost of producing nitrogen.

The whole situation began to turn about the fact that private initiative, in the fertilizer industry at least, had fallen down. Dr. Cottrell said "the greatest thing we have to overcome is the inertia of old business as developing new methods, and writing off the cost of obsolescence. . . . The early stages of the development are a large risk and are expensive things to do, and companies hesitate to spend that themselves."

This same conclusion that there was no hope for the farmer in the initiative of the fertilizer business laid the basis for a very elaborate arrangement for

co-partnership with the government on the part of the Atterbury, White, Hooker interests. They thought that, inasmuch as the farmers were not accustomed to buying concentrated fertilizer, and private capital would scrap its antiquated fertilizer plants and processes only under governmental pressure, the government was, in spite of their own antipathy to government in business, justified in going into this industrial enterprise. Their plan was to become plant managers for the government on a profit sharing basis—the government to receive three-quarters of the net profits and the promoters one-quarter. On a fifty-four-year lease they estimated that the government would receive a return of approximately \$305,000,000. Their plan involved further investment and promotion activity by the government. In fact, Mr. Elon H. Hooker felt so strongly about the necessity for governmental participation that, when the Joint Committee showed a marked preference for leasing the plant completely, he said, "(speaking for General Atterbury who represents \$2,000,000,000 worth of property, Mr. White, who represents the largest construction organization in the world, and myself as president of the Chemical industry to-day) I want to be excluded from this thing if you are going to keep the government out of the business, because it cannot be done. I have lost all interest in it, if that is so. I am sure it cannot be done in any other way."

On the other hand, representatives of the War Department testified that the commercial development of nitrogen was coming along so rapidly that the War Department did not contemplate the use of Muscle Shoals for that purpose for more than the next five years.

The various bids that were put in were all subsidies to the extent that they do not pay the entire value of the property. There was a strong sentiment, especially in the farmers' organizations and in the Department of Agriculture, that some sort of subsidy for agriculture should go through. Analysis of the bids, however, does not lead to the conclusion that the subsidy of the lessee by the government will automatically or inevitably go to the benefit of the farmer. Probably it will not. Neither the bid of the power companies nor any of the others gave any guarantee that the subsidies they might receive in the form of low rentals would reach the farmers. The report of the Joint Congressional Committee favoring the bid of the power companies stated that it "evidently does not carry a definite guaranty on the part of the Muscle Shoals Power Company for the performance of the (subsidiary) fertilizer company beyond the provision of capital."¹⁹

The bids all count primarily on using or selling the power. The concessions to agriculture are nominal. Even the recommended power companies' bid provides that, after the first 5,000-ton unit has been installed, a fund is to be established from the annual rentals paid to the Government to finance additional units.²⁰ They also took care to provide that their fertilizer company should sell them power at cost. On the bid of the Air Nitrates Corporation, Secretary O. C. Merrill of the Federal Power Commission commented: "These increases in capacity would involve new expenditures of \$8,285,000 by the United States and \$5,400,000 by the lessee. This

¹⁹ Senate Report 672, 69th Congress, p. 10-11.

²⁰ *Ibid.*, p. 284. Testimony of Paul S. Clapp, then Assistant to the Secretary of Commerce.

energy would be produced at an average cost of 1.75 mills per kilowatt hour for the total and of 2.25 mills if primary power alone is considered. This amount of energy is four times the principal requirement for the maximum fertilizer production named in the proposal. Since fertilizer production is to be self-supporting, is to yield a profit of 8 per cent and is to return in ten years the lessee's investment in fertilizer producing property, it would seem that a surplus of electrical energy of over $1\frac{3}{4}$ million kilowatt hours per annum, having an average sale value of \$2,800,000 per annum on an investment by the lessee of \$5,400,000 and having this value because of the use of \$65,000,000 to government property at an actual average payment of 2.35 per cent, would be an adequate subsidy for the United States to pay in order to induce private capital to produce fertilizer at Muscle Shoals under restrictions limiting profits thereon to 8 per cent.

"If to secure such private operation it is necessary to grant an additional subsidy of 2,000,000,000 kilowatt hours, having an additional sales value of \$4,400,000 per annum with an additional investment by the United States of \$69,000,000 but with no additional investment or obligation upon the part of the lessee, it would seem time for the United States to abandon efforts in this direction and to proceed itself to operate Muscle Shoals. A few years of operation and experimentation on a commercial scale would demonstrate the possibilities of utilization of the Nitrate properties and would put the government into a position if it then wishes to dispose of the properties where it could negotiate a business deal instead of sitting in at a poker game as at present."

This particular bid would seem to have made

possible (at $3\frac{1}{2}$ mills for primary power and from 1 to 3 mills for secondary power) that the lessee could earn an average annual profit from \$1,650,000 to a maximum of \$7,321,000, and this on an investment of the lessee and power plants of only \$5,400,000. Or if they devoted all the power to the electro-chemical industry they could, with control of such cheap power, put every competitor in the electro-chemical field at a great disadvantage, if not out of business.

There was, under this bid, no incentive to produce cheaper fertilizer because the earnings would increase with increased costs, as they did under the cost plus contracts in war time. If the fertilizer produced could not be sold at an 8 per cent return, the company could write off the loss of \$5,400,000 out of power returns very quickly.

Similarly the bid of the Cyanamid Company promised 10,000 tons of fixed nitrogen and not less than 40,000 tons of plant food. But first only one producing unit was to be installed, at Dam No. 2, and that at the end of the third year of the lease. Then after, and if they had succeeded in selling the product of that first unit for three years at 8 per cent over cost, they would install a second unit. But the installation of the third and fourth units (necessary to complete the promised total of fertilizer) would be conditional upon having 200,000 primary horsepower made available to them at Dam No. 2, a condition which, it was estimated, would require more than the development of Cove Creek Dam; it would also require the building of Dam No. 3 and three others in the Clinch River Section, at a total cost of \$75,000,000.²¹

²¹ Senate Report 672, 69th Congress, p. 304.

Some picture of the constantly increasing appreciation of the value of the present plant as part of a growing superpower system can be had in the various bids offered by the Associated Power Companies for the plant alone, for the plant with some improvements and additions and for the plant with the development of further headwater storage hundreds of miles away. The majority report of the Joint Congressional Committee stated what the monetary return to the Government would be under the power companies' bid in each of the several cases.²²

1. In case no further money is invested by the Government, the return during a fifty-year lease on the properties as they now stand will be at the average rate of \$1,766,000 annually, not discounting for the lower value of future returns. This revenue would come in the following form:

| | |
|---|--------------|
| a. From rentals on Dam No. 2 (the present dam) | \$83,800,000 |
| b. From rentals on additional units in Dam No. 2 to be installed at the expense of the lessee | 4,500,000 |
| c. Maintenance of Dam No. 2, an indeterminate amount | |
| | \$88,300,000 |

This is, of course, a very small per cent on the original investment by the Government of \$158,000,000, and does not provide for any retirement of the original investment. The original investment, however, covered nitrate plants for which there may now be only a small use, if any. This bid would probably leave the power companies free to develop

²² U. S. Senate Report 672, 69th Congress, 1926.

the remaining water power resources on the Tennessee and utilize the present Muscle Shoals plant as part of their system.

2. On the condition that the Government constructs a new dam (Dam 3) near the present one within five years and equips it for 250,000 horsepower and brings the present dam (Dam 2) up to a capacity of 600,000 horsepower, it will receive a net return of \$2,186,960 annually during the 50-year period of the license. This involves an additional expenditure by the Government of \$39,460,000. This revenue would come in the following form:

| | |
|---|----------------------|
| a. Rental on Dam No. 2, as before | \$83,800,000 |
| b. Rental on Dam No. 3 | 52,400,000 |
| c. Interest on additional equipment | 12,608,000 |
| d. Maintenance of Dams No. 2 and 3, indeterminate | |
| | <u>\$148,808,000</u> |

From this should be deducted the additional capital to be invested by the Government, made up of the following estimated costs:

| | |
|----------------------------|---------------------|
| Dam No. 3 | \$32,500,000 |
| Additional equipment | 6,960,000 |
| | <u>\$39,460,000</u> |

The net return to the Government over 50 years would thus be \$109,348,000, or \$2,186,960 annually. This is already \$21,048,000 more than was offered by the same companies for the plants as they now stand. This means that an increase over the present capacity of the plant (which is: steam plant 90,000 primary h.p., Dam 2 estimated at 66,000 primary

h.p., 104,000 secondary h.p., total 260,000 h.p.) of 590,000 horsepower would bring in a net return of only \$420,900 annually more than before the addition of the extra 590,000 horsepower. Yet this extra capacity should produce about two billion kwh. annually. If they all are sold at the lowest possible rates, those for dump power, two mills per kwh., the annual income is \$4,000,000, or almost ten times what the power companies offer to pay. If the very low rate of 4 mills is received for this power, the annual income is \$8,000,000, or almost twenty times what the power companies offer to pay.

3. In the event that either the Government or the private companies develop additional headwater storage on the upper river, which can then be let run down through the power houses at Dams 2 and 3 when their storage reserves are low, further revenues will be received by the Government up to a carefully guarded limit, after which the companies receive the power free. They offer to pay up to \$1,200,000 annually for all primary horsepower over the present 80,000 developed at Dam 2, and up to \$600,000 annually for all the primary horsepower over the already counted on 40,000 horsepower at Dam 3. This amounts to \$1,800,000 annually, or \$72,000,000 in the course of the forty years of the lease during which the headwater storage would be completed. It is at the rate of \$20 a horsepower for 90,000 primary horsepower. Everything above that they do not pay for, and yet the whole system has been estimated to have a developed capacity of 1,220,000 horsepower, including secondary and primary. Of this 260,000 may be considered as forming part of the present plant, 590,000 of the total is covered in the previously discussed bid, 90,000 is

covered here, leaving a possible remainder of as much as 280,000 horsepower for which there will be no return to the Government. The additional \$72,000,000 for this headwater storage increases the amount the Government will receive to \$181,348,000, a matter of \$3,626,900 annually.

Even this, which is, from the point of view of financial return to the Government, the best of the bids, allows up to 280,000 horsepower to go unpaid and does not bring into the Government as much as the \$48,000,000 annually it could receive alone from the extra power developed by improvement of Dams 2 and 3 alone. Under this provision the headwater storage dams would be constructed by the associated power companies under a Federal Power Commission license which would allow the Government to buy them back at the end of the fifty-year period for the actual investment in them. In case the Government preferred finally to keep Muscle Shoals as a yardstick to the monopolized power industry of the Southeast and to develop these auxiliary storage dams itself and have them paid for out of the rates, the immediate return might be slightly less while after the fifty-year period, when their cost had been entirely paid off, the return would be much greater.

To meet this situation Senator George W. Norris has probably made the most valuable proposal.

Senator Norris' bill, introduced January 5, 1926, contains the following provisions:

(1) The Secretary of War shall complete Dam No. 2 and construct storage dams on the Tennessee River and its tributaries for the purpose of obtaining from these rivers the maximum amount of hydroelectric power obtainable, and, at the same time, of

improving the navigation of these streams and controlling, as far as possible, the flood waters thereof.

(2) A corporation shall be created to be known as a Federal Power Corporation. This corporation shall be controlled by a Board of Directors, consisting of three persons to be appointed by the President of the United States with the advice and consent of the Senate. These Directors shall hold office during good behavior, shall receive a salary of \$10,000 a year and shall give their entire time to this public work. The bill adds that the appointment of officials and the selection and promotion of employees in the Federal Power Corporation shall be made on the basis of merit and efficiency, and that "no political test or qualifications shall be permitted or given consideration." It goes further and provides that the official giving such consideration to political affiliations shall be deemed guilty of a misdemeanor.

(3) On completion of the corporation, the President and Secretary of War shall turn over to it all equipment at Muscle Shoals now in the hands of the government and pertaining to the generation of hydro-electric power, and, as the various dams under construction are completed, these also shall be given over to the federal corporation. The cost of the dams thus transferred shall be repaid to the government, however, together with four per cent interest payable semi-annually. The corporation shall also arrange to amortize the cost of all dams possessed by it, so that the government will be completely repaid or as nearly as may be within the space of fifty years.

(4) The Board shall have power to *construct the transmission lines* and to charge such rates for electrical energy as it believes will be sufficient to pay for

maintenance and depreciation, for the construction of the necessary transmission lines, for repayments to the government, for reasonable surpluses, etc.

Whenever the corporation sells electricity to a private concern for the purpose of resale and distribution, it may charge, at its discretion, an amount in addition to that necessary to cover the items above enumerated. However, in the sale of electricity to a state, municipality or other public body where a distributing system is owned by such public authority and is not operated for a profit, "the Board shall charge a rate that shall be as near actual cost as good business operations would indicate."

The Board shall also "give preference in the sale of such power to states, counties, municipalities, and districts," and if the sale of such power is made to private companies for distribution or resale, the Board may, as one of the conditions of such sale, provide in the contract for the regulation of the price charged by these private firms to the ultimate consumer.

(5) The Board shall be authorized to *enter into an agreement with the owners of other transmission lines for the exchange of power* whenever that can be advantageously arranged. It shall have power to contract with other public or private bodies for the joint construction or use of transmission lines, "having always in view that one of the objects of this act is to give as wide a distribution as possible at the smallest practicable cost," to the electric current developed at the dams. It shall be empowered to purchase or lease lines owned by other parties; to complete the steam auxiliary plant at nitrate plant numbered 2 and to construct other steam auxiliary plants as occasion arises.

The bill contains further sections providing for the free distribution of power to the government for the operation of locks established in the dams; for the establishment of a surplus fund sufficient for all emergencies, and for turning over excess profits to the United States Treasury.

The federal corporation is also permitted by the terms of the bill to furnish power at as near cost as possible for the construction or operation of any plant or plants used by the Secretary of Agriculture or any other agency established by Congress for the experimentation and manufacture of fertilizer. It shall make a complete audit of its accounts and a complete annual report to Congress each year.

The second portion of the bill deals with nitrates. It provides that the equipment necessary for the production of nitrates at Muscle Shoals shall be placed under the control and jurisdiction of the Secretary of Agriculture, while the operation of the nitrate plants shall be left to the Fixed Nitrogen Research Laboratory. The Secretary of Agriculture, in an effort to prevent a monopoly of the fertilizer business or an undue enhancement of the price, may sell fertilizer products directly to farmers or farm organizations and fertilizer by-products to the trade generally.

In case of war, the President shall have power to take over the properties at Muscle Shoals, and operate them as he deems best, in behalf of national defense.

In a later joint resolution introduced by Senator Norris the next year, February 17, 1927, the Senator proposed that the Secretary of War complete Dam 2 and the steam plant at Muscle Shoals, and be empowered to sell current generated at such plants to

public or private agencies, entering into contract with them for not exceeding ten years, and that preference in the sale of such current should be given to municipalities, states and other public agencies. The bill also authorized the Secretary to construct any transmission lines that seemed necessary, and to turn over any surplus to the Treasury of the United States for experimentations in the making of cheaper fertilizer. It provided as well for the construction and maintenance of fertilizer plants by the Secretary of Agriculture, through the Fixed Nitrogen Research Laboratory.²³

With the progress of the months, an increasing amount of attention is being paid to the proposals for the development of water power not only at Muscle Shoals, but along the Tennessee River.

Will these great sources of electrical energy—Boulder Dam, Muscle Shoals, the St. Lawrence—be held and developed by the nation with the ultimate view of supplying the consumer with power and light at cost and of providing a better means than at present exists of measuring the relative advantages of public versus private development, or will they be given away to private concerns organized to obtain maximum profits for the comparatively few insiders? The future alone can tell. If the people want the former policy adopted, they must organize immediately and bring effective pressure to bear upon the nation's legislators. They have no time to lose.

²³ For a discussion of the Muscle Shoals and Boulder Dam projects from various angles, see *The Annals of the American Academy of Political and Social Science*, Jan., 1928.

CHAPTER IX

THE RECAPTURE OF CONTROL

THE situation which the consumers of power and light and, in fact, our whole growing industrial country now find themselves faced with, is clear. There is little competition in the power industry. To keep the power monopolies from charging monopoly prices, we set up regulating agencies. These agencies have slowly but surely been stripped of their effective power. They can no longer keep the power companies from charging monopoly rates. To secure for ourselves some small amount of protection through competition, we set up plants owned by municipalities. In some instances we started these plants also for the purpose of obtaining power and light where the power industry did not find it profitable to operate. These municipal plants have been hampered by laws and law suits from expanding into large systems at a time when expansion was life and standing still was retrogression, and, except for a few large cities, they no longer give either a protection or a measuring stick of protection. In a country where a cut of one-half cent per kilowatt hour in the price of all the power sold by the industry would mean, as in 1927, an annual saving on the national income of over \$300,000,000—the annual interest on over five billion dollars—and perhaps double that saving by 1936, the people have as yet adopted no definite plan of constructive action.

Have we neglected this task of trying to get the utmost possible social advantage out of the great civilization changing inventions, because we want to get the reputation of being a good spender while we have the resources to spend? Or because of a real and profound pessimism about attempting any social control through our government? Or because we simply do not know how to go about the job of facing such a great, ramified and powerful institution as the power industry?

Do the advertisements telling us regularly that we only spend two cents of every dollar for light make us forget that across the border in Ontario other people get about twice as much light for one cent? Do they really touch a social sensitivity about being considered pikers to quarrel about very little, or does the whole question go deeper, and do the intelligent and socially minded group in our population decide to stand pat, on the ground that the man who dares dispute great industry finds himself alone and futureless among his fellow men who have decided to go along with the big men in our new feudalism? If the latter is the case, then our present policy will obviously be our future policy.

Perhaps our attitude toward our government is an important factor in the inactivity of our people in the present situation. Our nation is unwieldy. Our industrial frontiers and state frontiers never coincide, and many important people stand to lose through a strong and active government. If, on this account, we are led to go the way that Germany went before the war and Italy has proceeded after the war, where the struggle of great industry for unchallenged dominance carried with it a discrediting

of parliamentary government, we shall face great industry here with nothing more powerful than a confused and abdicating pessimism.

A high spokesman for the present administration has already struck this note of pessimism and has been applauded by the industrial and trade press. He said: "I am in favor of reducing, rather than expanding, government bureaus which seek to regulate and control the business activities of the people. Every one is aware that abuses exist and will exist so long as we are limited by human imperfections. Unfortunately, human nature cannot be changed by an act of the Legislature."

This is a canny choice among several equally valid pessimisms. With quite equal force he might have said: "I am in favor of reducing, rather than expanding, the unrestricted advantages which monopolization of great invention and increasing control of our natural resources involves, and which will increasingly affect the standard of living and the whole social and industrial life of the people. Every one is aware, in considering our Government from the President down to the page boy, that abuses exist and will exist as long as we are limited by human imperfections. Unfortunately, human nature cannot be changed by the constantly increasing control over our life which great industry possesses. There is no particular point, therefore, in expanding that control. In fact, if there is any evidence concerning the effect of the increasing control of great industry upon officials of the government, it would seem that that effect is to make human nature worse rather than better. A reduction of that control of private monopoly over society would thus seem to be in order." These two pessimisms are of equal validity,

but the latter leads to more social control and the former means that our present policy will obviously be our future policy in regard to the power industry.

If, however, we do not feel carelessly flush with prosperity or confident that it will last forever, or particularly pessimistic about the government as a social agency, but do feel that the power industry presents so many staked out claims to our income that we are certain to lose out in any struggle to regain the lost provinces of our social control over it, then our policy toward it may change. For while the controls that have been flooded out by the rise of the industry will never be so easy to reestablish as they would have been easy to maintain if they had been deeply imbedded in rock and steel and concrete in the first place, they can be more readily reestablished now than in ten or twenty years from now. What we have let go by default in the past cannot exactly be recovered; but we can prevent the same thing from happening all over again, and happening again and again.

If we set about to recapture control there are several things which should be done, and done at once. Those who have considered the situation from the public point of view are fairly well agreed upon them.

We can set up alongside of the nation-wide system of private monopoly with nominal commission regulation a few meters and measuring sticks to show us how much cheaper the one system of control is than the other. We have them made to order conveniently in different parts of the country. The six million horsepower they represent are not a large part of the nation's total, but they are so placed

that they can measure the rates of large areas of the country for us. The St. Lawrence development, if and when undertaken by a Power Authority in New York State, will not only influence rates in that state—one of the largest power-consuming states in the nation—but in New England as well. Muscle Shoals will affect rates in the whole Southeast. Boulder Dam will influence rates in the Southwest and California. The Tacoma-Seattle development can furnish a rate index for the whole Northwest, with all its great water power resources. Taken together these four projects can furnish a competition in operating efficiency and in giving the benefits of our natural resources to the people of a kind that is much needed. No other competition than large scale competition is possible. No better opportunity for contrast is available. When any one of these projects is let go by default, it cannot be replaced in strategic importance by another. If they all go by default, the possibility of controlling the industry by giving the contrast of greater social efficiency may be lost for fifty years or longer.

The social function open to these great natural resources is seen less often by the public than by the power people. Muscle Shoals has been discussed largely in terms of its possibilities as a producer of cheap fertilizer, Boulder Dam in terms of paying for the reclamation projects and canal that go with it. We need to make a shift from the agricultural way to the industrial way of considering these projects. The power companies consider them as industrial projects. It is the chance to cash in on the industrialization of the New South, on the industrial growth of lower California, that interests them.

The companies that want them are hardly infant industries in need of a subsidy from our national and state resources. Neither would the groups seeking the St. Lawrence,—the General Electric, the Aluminum Company or the Dupont people,—nor the associated power companies under the ægis of the Electric Bond and Share seeking Muscle Shoals, nor the Southern California Edison seeking the rights in Boulder Canyon and elsewhere along the Colorado River, exactly starve to death if we decided to set up public power authorities and develop these natural resources ourselves. These resources represent such a small part of the power capacity of the whole country that there is even something unsportsman-like in the vicious opposition the power industry has offered to their control by some agency of the government. Unless such control meant that the companies in the nearby territory would have to cut their rates very considerably, the opposition to it would seem to partake of the character and classification of shooting birds on the ground, something not customarily done by our best people.

Development and operation of these projects under public control might well be expected to have the salutary effect of cleaning house among the financiers who have been making a very good thing out of high rates, out of the regulation of regulation, the re-organization fees, the recapitalizations and the other devices by which two dollars are made to grow where there was only one before. It should be of definite advantage to the engineering profession engaged in the construction and operation work of the industry. One of the characteristics of professions as opposed to trades is that the interest of the professions lies in

social betterment and that part of their income lies in the general public appreciation and recognition of that fact. This is the main thing that differentiates them from trades like financing. Lawyers are special pleaders, but they are also officers of the court and can be debarred for too definitely anti-social conduct. The constantly increasing monopolization of the power industry, the need for being a yeoman to the financial heavyweights in it or finding yourself without a field for the further exercise of your ability, has apparently been having its effect on the engineering profession. Only a few go into Government service and take the low pay that goes with that.

There are very few engineers found on record as critical of any of the policies of the industry. Yet in private some of them will admit that they hold such doctrines as that power is as much a right of the rural citizens as is education for his children, and admit to a considerable disgust with some of the ways in which the Ontario project has been attacked from this side of the border. This public silence is natural. The industry employs them. They are equally trained for no other industry. Many of the engineers graduate into the higher executive positions. They are not in a position to cut off their nose to spite their income. Their social advice is lost to the rest of us. *It is not impossible that the public operation and development of these large public projects may, by giving the engineering profession another field of employment, release, directly and indirectly, a social force of considerable importance.* We may see the anomaly of their present position as a profession if we consider the probable character of the professional comment in public on the conduct of a hospital if all the doctors had to get them-

selves jobs in it. *The sooner the great body of the profession in the industry feels itself as free to discuss the social implications of the industry as Steinetz did, the sooner do the rest of us stand a chance of gaining more from the progress of the industry.*

The second thing to be done is to substitute the contract power of the state for the police power and to *limit by contract new companies and new investment in the power industry to a fair return on the actual amount of money invested.* Here is a way of preventing the snowballing of valuations that has been going on and which has been discussed in Chapter V, from applying to all of the future investment. *This is a fundamental principle of the Federal Water Power Act: nothing but actual legitimate investment shall be recognized in cases of rate-making or of public purchase of properties under license.* Let us tell the investors beforehand what earnings they may count on. Let it be written into the contracts between the companies and the state that the company will only receive a return on what the property actually did cost rather than on the hypothetical basis of what it would cost. This is fair to all concerned. It is constructive statesmanship. It has, both in Massachusetts and under the Federal Water Power Act, been attractive enough to draw capital. It will put the common stockholders in a power company on the same basis as the majority of security holders in the company, the bondholders and preferred stockholders, who expect a return on a known and limited sum, the one they invest. It will protect the public in times of rising prices and the common stockholders in times of falling prices. It will make the great bulk of the regulation of the

power industry in the future automatic.¹ Inside of the next ten years alone probably as much new investment will be added to the industry as has been put in altogether so far. If we step in now and see that the future is not allowed to imitate the past, one of the biggest parts of the control job is done. Then we can turn to clearing up the mess and confusion of the past.

The third thing to be done is to clear up the best we can the revaluation confusion of the past. Here we may expect to pay for our sins of omission and our sins of commission. What we have let go by default we cannot expect to regain entirely. To make regulation an automatic procedure with the investment equaling the rate base as it does in Massachusetts and as it does nominally at least in projects licensed by the Federal Power Commission, is a more difficult task than holding future investment down to a "fair" return. But unless the past investment is fixed and certain, regulation can never even approach a reasonable regularity and automaticness.

The economic interests of the power industry are not entirely against this proposal. Much of the plant and equipment now in use has been installed at high price levels. If the price level should drop, all the rate bases would be valuated downwards, perhaps not as much as they are valuated upwards when the price level rises, but still downwards, in favor of the

¹ This was proposed and is discussed at length by Dr. John Bauer in his *Effective Regulation of Public Utilities*, Macmillan, 1925. It was also proposed to the Legislature of Pennsylvania by the Giant Power Survey of that state in 1925 and by the Giant Power Board in 1926. In the same year it was proposed for the State of New York by the Committee on Coal and Giant Power.

public and against the companies. Values would tumble and company after company might well find itself in a bankruptcy resulting from its present, too confident, gamble on the proposition that the dollar is going to continue to rise. Prices even in this country have been known to drop. They dropped after the Civil War for about thirty years until 1895. In view of the uncertainty of their future course and the desire which at least some of the power executives have expressed in favor of conservative financing, it would be strange if there were not a good many power companies which would agree to base their rates on a fixed initial valuation which could thereafter be increased only by the amount of actual new investment out of excess earnings or out of the sale of securities.

To secure an agreement upon that initial valuation of past investment without going to the expense of a complete physical valuation of the whole industry, some compromise on a figure which would probably exceed actual cost might be necessary. If that compromise were kept within limits it would probably not be too high a price to pay for order and regularity in the future. The Giant Power Board of Pennsylvania established by Governor Gifford Pinchot in line with his activities in regard to conservation of natural resources, and which was at first under the directorship of Mr. Morris Llewellyn Cooke and later of Mr. Philip P. Wells, recommended such a fixing of past investment for the power industry of that state, and held an initial appraisal of the whole property as an essential to it. Dr. John Bauer, who also holds the proposition of fixing the past investment to be of essential importance, holds, in his *Effective Regulation of Public Utilities*, that a com-

promise basis fair to both companies and the public and cheaper to the public than an inventoried appraisal, can be worked out.

Such a valuation should determine once and for all a definite rate base for existing properties. This is a job that could be completed, if it had the cooperation of all parties, within a few years and would do away with the necessity for finding the same facts again and again through costly hearings without any permanent result from the process. The investment accounts would be made to square once and for all with the rate base and would be kept that way. Dr. Bauer suggests a compromise to affect the common stockholders only on the basis of the price changes since their stock was issued.²

The fourth thing to be done is to reestablish the control over holding and management company con-

² *Effective Regulation of Public Utilities*, pp. 125-9. He says: "In all the vast amount of discussion favoring the reproduction basis of valuation, there has never been a proposal suggesting even remotely that any adjustment should be made in the return allowed to the bondholders or preferred stock. The argument has proceeded throughout from the standpoint of making the higher valuation on all of the properties employed in the public service, whether the funds were provided through the issue of securities with a fixed return or through the issue of common stock. . . . Since the reproduction cost basis has been urged in recent years principally as a matter of justice to the investors, in order to compensate them for the loss in purchasing power of a fixed return, it would be utterly unreasonable to allow an increase on all the properties when, as a matter of fact, the bulk of the investors would get no benefit. The most that could be expected would be compensation to stockholders who were not given a fixed return and who did undertake considerable risk in the business. . . ."

"The significance of this point can be made clearer by illustration. Assume a property whose total original cost amounts to \$50,000,000, contributed 75 per cent of \$37,500,000 by 6 per cent bonds and 25 per cent or only \$12,500,000 by capital stock. Assume, moreover, that an average 50 per cent increase in price

tracts. When the long, exhausting and expensive procedure of fighting rate cases has been changed for a simple and automatic procedure such as the one described above, the commissions will have the time to do somewhat more constructive work in the public behalf. They will be able to get around to studying the rates charged the various classes of consumers and to determine, for example, how much more the domestic customers are paying than the service costs the companies, a matter the commissions now rarely touch. They will have time to see whether all these management and service and engineering company contracts which take a certain per cent of the gross revenue are justified in practice in an industry which is itself becoming more standardized and automatic. They should be given the means of seeing that new contracts for service, con-

level has taken place since the time of the installation. A full adjustment, therefore, on the entire property would amount to an increase of \$25,000,000. But, because of their contractual relations, the bondholders would still be held to their 6 per cent on \$37,500,000 contributed by them. Consequently the full \$25,000,000 adjustment on the entire property would go to the benefit of the stockholders who contributed only \$12,500,000, and who would thus get 200 per cent increase in the valuation on which they would obtain a return compared with the 50 per cent increase in price level. Such a result is obviously absurd and cannot seriously be urged on the ground of justice. . . .

“ . . . The practical procedure in such an adjustment would be, first, to make a determination of the net investment equal to the original cost of the properties, less depreciation. From this amount would be deducted the face value of the various bonds outstanding. The balance would represent the net original investment made by the stockholders. Then the time of the issuance of the stock can usually be accurately determined from the corporate records, and the change in the general price levels could be approximately ascertained through standard price curves. Then the original stockholders' investment would be increased by the percentage by which general prices have risen since the time of the issuance of the stock. By this adjustment the stockholders would be fully compensated for the change in

struction, lease, management and brokerage are kept within their control.

Massachusetts has given its regulatory body control over contracts running for longer than three years. New York State has been asked by its commission to give it control over holding company securities. In that state the commission has tried to make a practice of seeing that all the holding companies are domestic companies (incorporated in New York) over which it might more easily secure control in relation to contracts than over those the local operating companies make with foreign corporations. Here again the contract power of the state can be used. It can be a part of the contract between the state and the power company exactly as a state would sign a lease or contract with a private company for

price levels and the decrease in the purchasing power of money. . . .

"Such an adjustment would not only be reasonable, but in most cases would not seriously affect the valuation. On the average, probably not over 25 per cent of the investments have been provided by stockholders. On this basis, a full adjustment for the change in price level allowed to the stockholders would affect the valuation only to a minor extent. Assuming a 25 per cent stockholders' investment and a 50 per cent increase in prices, this would mean an adjustment of only 12½ per cent upon the total cost of the properties. In our illustration of \$50,000,000 actual investment we should have a total adjustment of only \$6,250,000 or a total valuation of \$56,250,000. In many important instances, the stockholders' percentage of the investment would be smaller, and the effect on the total valuation would be correspondingly less. There are cases, however, where the adjustment would be substantial because the stockholders' investment is relatively high.

"If such an adjustment as here suggested were attempted, perhaps further attention should be directed to the probability of future price decreases. In view of the fact that we are now on a relatively high level of prices, and that whatever adjustments are made would remain permanently fixed in the valuation, it might be reasonable to allow only 50 per cent of a full adjustment. . . ."

the use of its water power resources for a period of years. This would apply to new contracts. The old ones, according to the decision of the Court, cannot be touched by the commissions, even when one company makes them with itself under another name, unless collusion can be proved. This is one of the amazing legal fictions of the day. Because the holding companies are not at all under commission supervision the commissions, unless they are given further powers, can do little more than the Michigan Commission did in the Telephone case,—announce to all concerned that when and if the Court changed its mind on that particular holding company contract, it would make an attempt to have the company return all the extra money it collected from the consumers to pay the unreasonable part of such a contract.⁸

The situation in regard to such contracts now in effect which, with the improvement of the technique of the industry, are clearly unreasonable at present, no matter how reasonable they were ten years ago, is not, however, entirely a lost cause. The state has a means of exerting a pressure on the companies through the fact that they constantly must come to the government for further privileges and grants in the course of extending their interests inside the state.

Mr. Philip P. Wells, former Deputy Attorney General of Pennsylvania, and Chairman of the Giant Power Board, points out that, "notwithstanding the finality of the United States Supreme Court decisions, until the Court achieves a better mind, there is a way of escape open to the states which they

⁸ See Chapter V.

have successfully followed before in other matters. . . . The corporate form of organization is essential to public utility business. The corporation is a creature of the state and the creator could destroy its creature by charter repeal, thus throwing the ownership back into the copartnership form. . . . But repeal of power company charters is unnecessary and unwise. New charters of merger, consolidation, etc., are required by the process of regional organization now in full tide. Moreover, the companies have great need to exercise the right to condemn property (eminent domain) which right they must get from the state. Therefore . . . the state needs only to refuse new charters, except upon a condition that the company accept the new rule as a condition of its charter or as a contract condition upon the future exercise of the right of eminent domain or upon the acceptance of other aid from the sovereignty of the state or its political subdivisions."⁴

Here, then, is a not impossible means of protecting such local operating companies as may have made improvident contracts to give a large percentage of their gross annual revenue to some engineering corporation whose services they no longer greatly need, and of protecting the consumers of such companies.

The fifth thing to be done is to stop the gap in regulation of power where it is wholesaled across state lines. Here, as we have seen in Chapter V, unless and until Congress acts, there is no regulative agency empowered to control the rates charged. The

⁴ Philip P. Wells, from an article in the *National Municipal Review*, Vol. XV, No. 10, October, 1926, quoted in the *Report of the Giant Power Board, 1926*.

Supreme Court has held that it is interstate commerce, and that the paramount interest is not local but national, admitting of and requiring uniformity of regulation. It has said on occasion (*Pennsylvania Gas Company v. Public Service Commission*, 252 U. S. 23), "such uniformity, even though it may be uniformity of governmental non-action, may be highly necessary to preserve equality of opportunity and treatment among the various communities and states concerned." Here again a company operating under two names in two states, can, through the fiction of different legal entities, secure the somewhat desired uniformity of governmental non-action and escape regulation as far as its interstate business is concerned.⁸ Here the answer to the old query, "What's in a name?" is clearly, "Escape from regulation." And an increasing amount of the nation's power is going across state lines.

There is no particular agreement as to how this gap in regulation had best be closed. Perhaps if

⁸ There has been some general misapprehension, to say the least, about this situation. In the *New Republic*, May 26, 1926, Mr. William Boyd Hunter discusses as an example of this misapprehension a statement by Secretary Herbert Hoover made in an address before the National Association of Railroad and Utilities Commissioners at Washington, D. C., on October 14, 1925. Speaking of the instance when a local utility buys power from an interstate utility, Secretary Hoover said:

"... Here the question is simply as to whether the rate paid for the purchased power is unreasonable. If unreasonable, the commission may refuse to allow its full amount in settling the rate base. It is open to the commission to fix a rate for resale to consumers within its jurisdiction based upon what the commission considers a fair price; the companies have the usual recourse to the courts for redress against injustice."

Mr. Hunter comments: "If by this he means that the state commission can fix the rate to be charged by the interstate

the legislatures asked the commissions for their recommendations for positive control in this matter, there would be more chance for an agreement than there seems to be at present. Interstate compacts in regard to the development of Boulder Dam and control of interstate transmission between New York, New Jersey and Pennsylvania, have both failed within the last few years. There have been suggestions that the whole problem be handled through the Interstate Commerce Commission, which is already crowded with work, and through the Federal Power Commission, which has so far been so handicapped by meager appropriations that it has had to borrow its employees from other departments of the government and has consequently confined its regulation only to license conditions.

A third proposal, applicable to the situation, was presented at the 1925 meeting of the National Association of Railroad and Utility Commissioners in connection with motor interstate traffic. Its object was to place interstate bus traffic in the complete control of the state commissions. Dr. John H. Gray, whose experience with the Interstate Commerce Commission leads him to hold that, apart from any

utility, the answer is *Missouri v. Kansas Natural Gas Company* (the case laying down the principle for interstate regulation of natural gas which was later affirmed for the power industry in the *Narragansett* case —R.), and if he means that the state commission, in fixing a reasonable rate to be charged by the local utility, has constitutional power to allow to the independent local utility as an operating expense item only the amount of a reasonable charge by the interstate utility and to disallow the balance of the amount paid to the interstate utility, the answer is that the law affords no basis whatever for such an assertion in the normal case. Only under such circumstances as collusion by the local utility or its failure to seek some competitive supply at a reasonable rate, which of course will rarely exist, could its payments be disallowed."

constitutional questions, it seems administratively inadvisable for the Federal Government to undertake the direct regulation of the power industry, makes the following comment on that suggestion: ⁶

"The proposition is a simple one: namely, for Congress by a simple act to declare that . . . each state commission as from time to time constituted shall become a federal agency or commission for carrying out the purposes of this act, to give to the interstate commerce commission the power in any state whose commission refuses to act as such federal agency, and to provide for the union of any two commissions temporarily when necessary, the two acting as a single commission. An appeal is reserved to the Interstate Commerce Commission in case of disagreement or failure of such commissions to deal with the matter satisfactorily." He comments further, "The constitutional provision on interstate compacts has virtually lain dormant for one hundred and thirty-six years, and is wholly unfamiliar to the public mind. The experience of the states in trying to settle the Colorado River problem does not hold out much promise of dealing with complex industrial problems by state treaties. The necessary agreements seem unlikely to be achieved. Furthermore, if the states should once agree, changes in the industry would soon require modifications and the bringing of new states into specific agreements. The results would certainly lack uniformity. But the trouble would scarcely have begun when the states agreed, if they ever should agree. There would be literally a bombardment of Congress to approve these numerous and amended treaties. In an overloaded Congress, it is not likely that such treaties

⁶ *National Municipal Review*, March, 1926.

would ever be adequately considered or in most cases ever approved. If this federal power is ever to be locally administered, it must be done in some simpler way. The electrical industry is a national industry. Economically, it knows no state lines. It ought to be dealt with by uniform laws and not by a multitude of divergent tactics. . . . Such an act would not involve any ultimate delegation or surrender of federal power. It would have all the advantages of appealing to local sentiment; it would cover the whole field and bring about the necessary uniformity."

When these five things have been done, regulation of the power industry under private ownership will have been reestablished about to the point where it now is in Massachusetts. It will have reduced some of the most unreasonable claims of private ownership upon the national income. The commissions will not be forced to spend so much time on rate cases and will be able to give consideration to the improvement of the service, for example, to ways and means by which rural citizens can best be furnished service,—a subject hardly considered by them at present. The private ownership and control of the industry will be in a constant state of being measured and judged by the public operation of four great natural power resources. It will be kept on its toes, even though a whole series of public service commissioners should be willing to let the newly regained control slip through their fingers again. The friction inherent in the present situation will have been reduced to a point where we can look at the planning of the industry for the future with a somewhat more impartial eye than we can now, when we are sure

that every single step toward consolidation and concentration means an overcapitalization, at our expense, of every engineering economy obtained. We will then be able to take stock of the way in which power stations and lines are being built and see whether they are, for example, repeating the paralleling of lines which characterized some of the railroad expansion.

Such a survey of the engineering features of the situation for every state, or every group of states that seem to form a natural power zone, is highly desirable. Governor Gifford Pinchot of Pennsylvania inaugurated such a study for Pennsylvania which was unique in its thoroughness. The survey considered the future power development of a state rich in bituminous coal and yet at some distance from the great metropolitan power market of New York and Northern New Jersey. It was based, in the words of the engineer who directed the survey, Mr. Morris L. Cooke, "upon recognition of the fact that there is quite generally a radical difference between the public and private point of view, as the latter is very naturally influenced strongly—sometimes exclusively—by immediate financial results. In current discussions of power problems perhaps the most fundamental way in which the public and private attitudes differ has to do with the time factor. The business man, especially the modern corporation manager, is necessarily interested in the balance sheet. Very crudely stated, this is frequently a two to three years' point of view. On the other hand, with society and its agent, government, a generation passes quickly. It is therefore mutually advantageous for the public and private interests involved

in power development that some proper balance be established as between two radically different tempos." With this in mind the Giant Power Board of Pennsylvania drew a distinction between "giant power," the integrated development of the industry from raw coal through generation, transmission and distribution, and the present kind of development, "super-power," which it characterized as the interchange of small quantities of surplus power at the ends of the distribution wires of each separately operated power system.

It made five recommendations looking toward such integration on the ground that it would have to come sooner or later and that the sooner it came the cheaper it would be for the public. They were (1) Mass production, meaning cheap production, at the sources of the raw material, the coal mines. A large part of the expense of generating power would be covered by the recovery of by-products from the coal used to generate power. For this end legislation was recommended authorizing (2) the incorporation of giant power generating and giant power transmission companies empowered to construct steam electric stations of not less than 300,000 kilowatts capacity, to condemn land with fifty years' supply of coal, to make and sell coke, gas and other by-products, to sell electric current at wholesale and to purchase surplus current from other generating stations. (3) Mass transmission to all parts of the state by an integrated system of transmission lines under companies distinct in name at least from

⁷ *New Republic*, May 26, 1926. *Integrated Development of Power* by Morris L. Cooke.

generating and distribution companies. To cover the rural areas which are now very inadequately served two new classes of distribution systems were to be authorized, rural electric districts under local public ownership and mutual profit sharing electric companies. Low rates for small consumers and the rural population were advocated. (4) Effective regulation from the coal mines to the power consumer. The present rate base is to be accepted but all new investment is to be held down to a fair return on the actual money put in. Permits for the construction and operation of giant power generating stations and transmission lines were to be limited to a maximum period of fifty years and conditioned upon the right of the state or a company designated by the state to take over and operate at the end of that period upon payment of the actual cost of the investment. Here the principle laid down in the Federal Water Power Act in regard to licenses for water power was followed. Coal, which is the most important natural resource of Pennsylvania, was treated as a natural resource in the same class as water power. It plays the same part in the generation of power as water power does. In Pennsylvania, which has only limited water power resources, it plays a far more important part. Coal, East of the Mississippi, will be the great source of power development in the future. Yet its similar function to water power has not yet crept into our legal jargon and this proposal for a fifty-year permit to be issued by the state was regarded as something of an innovation, although limited franchises granted to public utilities by municipalities are no longer an innovation. The final major recommendation (5) was for com-

pacts with other states to secure fair and justly regulated interchange of electric current.⁸

While these were proposals made originally for a coal mining state, they are not limited in application by that fact. They were accompanied by a statement by Governor Pinchot that "if the people of the United States ever turn to the nation-wide public ownership of electric utilities, it will be only because the companies have driven them to it. It will be directly and only because the utility companies have so opposed and prevented reasonable and effective regulation by the states and the nation that the only choice left was between servitude to a gigantic and unendurable monopoly and the ownership and operation of that monopoly by the people."

So here as well as in Massachusetts a public agency instructed to study the situation reported that in case regulation cannot be reestablished the direct alternative is public ownership. In Massachusetts the Department of Public Utilities, as we have seen,

⁸ *Report of the Giant Power Survey Board, 1925, and Report of the Giant Power Board, 1926.*

In the latter (p. 21) is a summary of the principles proposed for a compact between Pennsylvania, New Jersey and New York, which failed through the withdrawal of the representatives of New York after Pennsylvania and New Jersey had voted in favor of making a compact. They included: "The setting up of a joint tribunal with power (as to interstate transmission): to regulate the accounting rates, service and security issues of all companies doing interstate power business, with liberty, however, to each state to compel, and to each company to bring about, the segregation of interstate transmission business in separately organized corporations; the rate base to be the amount prudently invested in the enterprise; par of securities issued to equal the rate base; no par securities to be prohibited; the fair return to be computed and tentatively fixed at the sum necessary to enable a properly financed company under efficient management to pay prudently as dividends on its common stock a sum sufficient to keep it slightly above par in a normal market, reserving the right to any company thereafter

said that if its system were changed to conform to that now in existence in the other states, public ownership was the alternative, and it recommended that the restrictions on the municipalities which now prevent them more or less effectively from operating their own plants be removed, especially the one forcing them to buy out the local private plant before they entered upon the business. Public ownership stands in the background of all these proposals to make regulation of private ownership effective. If those proposals fail, as they did in Pennsylvania, through the shortsighted opposition of the companies, those companies will have themselves to thank for launching the states into complete control of power.

The future of public ownership in the United States seemed settled for some years when Mr. William McAdoo decided that he would not raise railroad rates during the war to the point where they would cover the full expenses of transporting the
to demand a valuation so far as necessary to comply with the controlling rulings of the courts; the construction or enlargement of interstate facilities by a corporation to be conditioned upon an agreement by the corporation to accept the 'prudent investment' rate base; difference in the cost of service to different classes of consumers to be the basis of different rates for such service; all interstate business to be conducted by corporations organized under the laws of some one of the contracting states; voting of stock in any operating companies of the contracting states by or for holding companies not organized under the laws of any one of them prohibited; orders for the production of books, accounts, etc., issued by the regulatory commission of any one of the contracting states to have full effect in the other contracting states; interlocking directorates restricted; taxation of interstate utilities not to be affected."

The chairman of the Giant Power Board, Mr. Philip P. Wells, stated that these proposals "are believed to be the first constructive attempt to provide by state initiative for the regulation of interstate power service."

troops and supplies and the extraordinary demands upon the railroad system during the war years. Probably if rate increases had been made at that time sufficient to make up the deficit of operation they would have raised the cost of living to the ultimate consumers, several times the several hundred millions which they would have brought into the Railroad Administration and would have allowed it to face the country with a more readily understandable record of success. But, for one reason or another, upon which it is somewhat idle to speculate after these years, another social policy was followed—a policy afterwards approved by many students of social progress—the railroads were allowed to accumulate the deficit; largely on the strength of its existence they were turned back to their private owners, who raised rates, and the future of any large scale public ownership in this country seemed decided for at least a generation.

In the years since then, we have never been allowed to forget that decision about railroad rates. In spite of it there have been several changes in our industrial scene, or rather, several changes have become clearer, which are leading to considerable social discontent. *In industry after industry control and production are passing into fewer hands or trade associations limiting competition to the sales end of the business, where it becomes a matter of pretty packages, imposing names and hypnotizing the buyers.*

In return for giving up competition—the principle we have lived by for over a hundred years—in favor of a more or less complete monopoly we have, outside of the public utility field, made no condi-

tions guaranteeing us in any way from price increases or securing a share for us in excess earnings; the excess profits tax was done away with. And in the public utility field the conditions we made in return for monopoly grants have, as we have seen, turned out to be more nominal than real.

Another principle we have been going on since the beginning of the civilization which rose with the industrial revolution is that the owners of a business controlled it and, because they were responsible people and citizens of a community as well as investors in an industry, would control it in the public interest. Professor William Z. Ripley in his *Main Street and Wall Street*, has pointed out how far we have gotten away from that. *The people who own do not control.* In numerous cases, the people who control hardly give the people who own any real idea either as to how the business is conducted, or as to how much property the owners possess.

Another feature of the present scene which has been raised out for general inspection is *the fact that private ownership, when given control of some great natural resource like our coal deposits, does not always make a glittering success of the acquisition. The coal industry has told us four times in the last decade that it cannot regularly furnish its workers with steady work and a decent living nor its owners with security of profits. Roughly speaking, private ownership of our coal deposits has meant headlong oversupply with a consequent confiscation of the values invested by some of the owners and operators and of the skill and years of training invested by a large part of the workers. It has not been a pretty picture of the kind that would lead us to imitate it*

with any other natural resources in our power to give or withhold. The same is true with our oil fields which, according to certain geologists, have not much longer than thirty years to go. *There is a real and widespread feeling against giving up any more natural resources, especially now when the few of them we have left constitute almost the last compelling leverage of control.*

The proposals for public ownership and operation have in recent years been taking on a new form. Senator George W. Norris, in his proposal for the ownership and operation of Muscle Shoals under a Federal Power Corporation, and Governor Alfred E. Smith, in his proposal for the ownership and operation of the power resources on the St. Lawrence under a New York State Power Authority, have both combined the essential need for public operation in each case with the best features of private ownership, those involving the corporate form of activity, with directors free to use their best initiative in the public interest. It provides an opportunity for our more capable industrialists, financiers and engineers to devote their abilities to the public service without going into politics. It is not forced to draw upon the members of our civil service which was constituted for, and is excellently adapted to, fact finding and which has for a long time drawn upon men whose abilities, with some notable exceptions, lie perhaps more along that line than along executive lines. It can pick what the state or nation offers in ability and willingness to act in the public behalf. In New York State, for example, Governor Smith has proposed the name of Mr. Owen D. Young, the chairman of the General Electric Company, for the

Power Authority. For the Federal Power Authority Senator Norris proposed men of the professional standing and public reputation of Mr. Morris L. Cooke, director of the Giant Power Survey, James A. Ross of the State of Washington and John R. Neal of Tennessee. Here is a chance for high caliber men to do something for their fellow citizens in a way where they would be free from the compromising cost plus contracts and pegging of essential commodity prices at high levels—practices which cast a slight shade of suspicion over the unselfishness of some of the activities of some of the dollar-a-year men who served both the industries and their government during the war. Across the border Sir Adam Beck found such public service an unfrequented road to public esteem and gratitude.

To recapitulate. The marvelous development of electricity may be an inestimable boon to the housewife, the farmer and the artisan. Few things yet achieved by man promise so much release from the drudgery of back-breaking toil as the intelligent application of electric power. But for us the economic conditions under which electric power is developed and distributed have not only delayed the coming of its blessings to farmers and domestic users generally; they have also brought a very real threat of new dynastic control over us through the economic and political mastery exercised by the feudalism of superpower. To regain our lost provinces and to make electricity at reasonable rates available to the people there are, broadly speaking, just two alternatives. One is a rather complete system of public ownership. At present this does not appeal to the dominant political consciousness of America. Ob-

viously public ownership has no self-working magic. It must be carefully planned through the coördination of the federal government, the states and municipalities. The agencies which we create must be taken out of politics in the sense that the Ontario Hydro-Electric Commission or the Port Authority of New York is out of politics. The cost of purchase by the substitution of government bonds for the outstanding securities of the power companies would be great, especially if the present rules of the courts on valuation go unchanged. It might be less great than the continual cost to the consumers of rates based on the continual inflation of securities. In purchasing public utilities, every effort should be made to follow the old Massachusetts doctrine of valuation as opposed to that based on reproduction costs. The difficulties of public ownership are by no means insurmountable if there is an active social will to overcome them. Ideally it affords the basis for a more far-seeing and less bureaucratic integration of the power industry in the service of the people than the best system of regulation that can now be devised.

In such instances as Boulder Dam, it clears the way for a better coördination between the work of irrigation, flood control, navigation and the generation of electrical energy than is possible under private ownership. Usually also it carries with it the payment of lower interest charges on borrowed capital; the reduction—through a policy of amortization—of capital charges, rather than a constant increase of these charges as under private control; the fairer treatment of the smaller domestic consumer as opposed to the big power user; more adequate service to outlying communities which do not

furnish an immediate return; smaller operating charges and the rescue of a great, basic industry from private monopoly and its restoration to popular control.

The second alternative and, probably the line of development in the United States most likely to succeed in the immediate future is a struggle to regain control without complete establishment of public ownership. Some steps along this line of approach, such as the public development of power projects at Muscle Shoals, Boulder Dam and the St. Lawrence, will serve as a means of measuring the relative merits of public *v.* private control and may be a distinct aid to a more complete community control.

Other steps toward public control should include a much more effective regulation than we now have of the electrical industry. In the case of new electrical companies, only actual, legitimate investment should be recognized as a basis for rate making or of the public purchase of properties under license. In already existing companies, the value of past investments should be immediately fixed, in an effort to determine once and for all a definite rate basis for these companies. The control of regulating bodies over contracts made between holding and operating companies should be at once reestablished. And the regulating commissions should be given authority to regulate the rates charged for power wholesaled across state lines.

To secure even the small measure of protection and control possible through these proposals will probably be no easy matter. The power companies employ shrewd and not at all simple-minded gentlemen to influence public opinion, to fight and delay unfavorable legislation and then make out of that

delay an argument against public control. They have money to spend. They are in politics. Even where they do not appear upon the scene, they can be counted upon to back a man whose general position in our new feudal hierarchy links his interests to theirs. They have something to lose. Roughly, what they have to lose in the way of undue claims upon our income the consumers have to gain, if they can. It is no inconsiderable sum in money. When we consider its possible effects in controlling the course of our whole civilization the trouble it may give us now to set up measuring sticks to the present ownership and to recapture our lost controls over it will seem insignificant compared with the gain. If the men now in charge of our affairs were a little less reluctant to do anything else for the public welfare of as positive a character as call on the young men to go to war in its behalf, we would have been about the business of recapturing our lost economic provinces long ago.

INDEX

- Aberdeen, 167
 Adirondack Power and Light,
 224
 Agriculture, Department of,
 248
 Agriculture, Secretary of,
 258-9
 Air Nitrates Corporation, 249,
 250
 Alabama Power Company, 71,
 241, 242, 243
 Aluminum Company of Amer-
 ica, 76, 82, 85, 216, 218, 233,
 265
 Aluminum Company of Can-
 ada, 85
 American and Foreign Power
 Corporation, 69
 American Cynamid Company,
 241
 American Electric Railway
 Association, 24
 American Gas Association, 24
 American Gas and Electric, 70
 American Light and Traction
 Company, 50, 77, 83, 84
 American Power and Light
 Company, 51, 57, 70, 82, 85
 American States Securities
 Corporation, 64
 American Superpower, 56, 71,
 75, 83, 84, 85
 American Telephone and Tele-
 graph Company, 120, 123,
 221
 American Waterworks and
 Electric, 50, 51, 79, 80
 Anaconda Power Company,
 54
 Appalachian Power, 70
 Arkansas Power and Light,
 70, 242
 Associated Gas and Electric,
 52, 82
 Attleboro, Mass., 145
 Austin, Mary, 212
 Ballard, R. H., 41, 44, 205
 Baltimore, 107
 Barstow Group, 81
 Barstow, W. S., Management
 Association, Inc., 81
 Bauer, Dr. John, 138, 268, 269,
 270
 Beck, Sir Adam, 30, 31, 32,
 33, 287
 Birmingham Electric, 70
 Blackstone Valley Gas and
 Electric, 78
 Bloomington, Ill., 169
 Bohn, Dr. Frank, 29, 205, 206
 Boulder Dam, 29, 37, 43, 67,
 75, 145, 163, 167, 193, 195,
 198-216, 219, 239, 259, 264,
 265, 276, 288, 289
 Brandeis, Justice, 139, 141
 Brennan, George, 163
 Britton, John A., 39, 40
 Brooklyn Edison Co., 77, 79,
 81, 85, 107, 217
 Brooklyn Union Gas Co., 77
 Brush, 11
 Buffalo, 30, 31
 Buffalo General Electric, 72,
 217, 224
 Buffalo, Niagara and Eastern,
 72, 73, 224
 Building Trades Council, 39
 Byllesby group, 74
 California Farm Bureau, 37
 California-Oregon Power
 Company, 39, 75
 Cambridge, 108

- Canadian Niagara Falls Power Company, 181
 Canadian ownership of utilities, 180-192, 236
 Carolina Light and Power, 70
 Census, 97, 100, 101, 103, 104, 188
 Central and Southwest Utilities, 73
 Central Georgia Power Company, 242
 Central Illinois Light, 76
 Central Illinois Public Service, 73
 Central Indiana Power, 73
 Central Power and Light, 73
 Cities Service Company, 51, 78, 80, 82 [40
 Civic League of Improvement, Clague, Ewan, 110, 111
 Clapp, Paul S., 249
 Clayton anti-trust laws, 47
 Cleveland, 159, 163, 168
 Cleveland Co. *vs.* Public Service Commission, 164
 Cleveland Electric Illuminating, 74
 Cohoes Light and Power, 224
 Colorado, 43, 193, 194, 198-217
 Colorado Commission, 119
 Columbia Gas and Electric Co., 50, 79, 80
 Columbia River, 193, 194
 Columbus Electric and Power, 78
 Columbus Railway, Power and Light Co., 53
 Committee on Coal and Giant Power, 268
 Commonwealth Edison Co., 42, 73
 Commonwealth Power Corporation, 56, 76, 84, 121
 Concentration, 47-87
 Connecticut Electric Service, 73
 Connecticut Public Service Commission, 53, 140
 Conowingo, 57, 75, 77, 129, 130, 132, 229, 230, 244, 245
 Consolidated Gas Company group, 75, 77, 79, 80, 138
 Consolidated Gas, Electric Light and Power of Baltimore, 57, 79, 80
 Consolidated Gas, Electric Power and Light of New York, 85
 Consumers Power, 76
 Cooke, Morris L., 98, 269, 279, 280, 287
 Cornish, Herbert L., 41
 Cortelyou, George B., 24
 Cottrell, Dr. F. C., 247
 Court Decision; *see* Decisions
 Cullinan, Eustace, 38, 39, 40, 41
 Cyanamid Company, 76, 251
 Dallas Power and Light, 70
 Danville, Ill., 169
 Davenport, Representative Frederick, 214, 216
 Dayton Power and Light, 79
 Decatur, Ill., 169
 Decisions, of courts and commissions, 127, 138-141, 143, 145, 152, 154, 164-165, 220-21, 273, 275, 276
 Department of War, 248
 Detroit Edison, 74, 75, 80, 85
 Doherty, H. L. Group, 78
 Duke-Price Group, 76, 80, 82
 Duke-Price Power Co. of Canada, 85
 Dunlap, Porter, 124
 Dupont Corporation, 83, 234, 265
 Duquesne Light (Pittsburgh), 75
 Dykstra, Prof. C. A., 174, 175
 Eastern States Power, 73
 Eastern Tennessee Electric Co., 122

- East St. Louis, Ill., 169
 East Texas Public Service, 74
 Edison Electric Illuminating Co., 26, 27, 85
 Edison group, 217
 Edison, Thomas, 11
 Edison-United Companies (N. Y.), 217, 218
 Electric Bond and Share Securities Corp., 58, 68, 69, 71, 79, 80, 81, 85, 86, 118, 195, 242, 265
 Electric Light and Power, 70
 Electric Management and Engineering Corp., 122
 Electric power, development, 11, 12, 13, 14, 15
 Electric power, future development, 15, 16, 17
 Electric Railway Securities, 76
Electrical World, 25, 81, 91, 94, 96, 97, 99, 101, 103, 106, 120, 127, 161, 194
 Elgin, Ill., 169
 Empire District Electric, 79
 Empire State Gas and Electric Association, 26

 Fayetteville Electric Power and Light, 125
 Federal Courts, 134, 135, 141
 Federal Reserve Banking System, 110
 Federal Reserve Board, 48
 Federal Trade Commission, 4, 47, 66, 67, 72, 76, 79, 86
 Federal Water Power Act, 29, 131, 133, 146, 203, 218, 219, 226, 228, 229, 230, 231, 232, 233, 242, 267, 281
 Federal Water Power Commission, 129, 130, 132, 146, 158, 194, 213, 218, 221, 223, 245, 249, 255, 268, 276
 Federal Power Corp., 256
 Ferguson, Samuel, 53, 206
 Fitkin, 81

 Florida Power and Light, 70
 Ford, Henry, 240, 241, 242
 Fort Covington Light, 224
 Fort Worth Power and Light, 70
 Frontier Corp., 233, 234
 Fuller, Governor, 148

 Gadsden, Philip H., 24
 Galvesti Electric Co., 138
 Galvesti Electric Co. *vs.* City of Galveston, 138
 Galveston, 138
 General Electric Co., 27, 68, 69, 72, 73, 77, 83, 85, 233, 234, 265, 286
 General Gas and Electric, 81
 Georgia Power Co., 71
 Georgia Railroad Commission, 138
 Georgia Railway and Power Co., 71, 85, 138, 242
 Georgia Railway and Power Co. *vs.* Railroad Commissions of Georgia, 138
 Gettle, Lewis E., 120
 Giant Power Board of Pennsylvania, 98, 103, 117, 147, 166, 167, 268, 269, 273, 274, 280, 282, 283, 287
 Gray, Dr. John H., 276
 Great Western Power Co., 39, 74
 Greater California League, 38, 39, 40, 41
 Gregory Commission, 191
 Groups of Power companies, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 166, 167
 Gulf Electric Co., 242
 Gulf Power Company, 242

 Haber process, 246
 Hagerstown, Md., 165
 Hagerstown, Md., case, 165
 Hale, Dr. Robert L., 143
 Hamilton, Ont., 184

- Hartford Electric Light Co., 53, 127, 206
Harvard Law Review, 139
 Harvard University, 34
 Hodenpyle-Hardy group, 76, 80, 168
 Holding companies, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 166, 167
 Hooker, Elon H., 248
 Hoover, Herbert, 117, 199, 275
 Houston Lighting and Power, 70
 Hulswitt, Frank T., 84
 Hunter, William Boyd, 275

 Idaho Power and Light, 70
 Indiana and Michigan Electric, 71
 Indiana Public Service Commission, 56, 57, 121, 125, 128
 Indianapolis Light and Heat Co., 73
 Indianapolis Water Co., 139, 220
 Indianapolis Water Co. case, 220
 Insull (Mr.), 163, 179
 Insull group, 73, 74, 80, 82, 178
 Insull, Son & Co., 81
 Interior, Department of the, Reclamation Bureau, 208, 209
 Interior, Secretary of the, 209-10, 215
 International Paper Co., 82, 225
 Interstate Commerce Commission, 4, 54, 104, 276, 277
 Interstate Power regulation, 145-47, 274-78

 Jackson Railway and Light Co., 242
 Jacksonville, Ill., 169

 Johnson, Senator Hiram W., 43, 200, 211
 Johnson-Swing Bill, 200, 205, 211, 215
 Joint Committee of National Utility Associations, 24, 26, 29, 45, 205
 Joint Committee on Muscle Shoals, 242, 243, 249
 Jones Legislative Investigating Committee, 38

 Kansas Gas and Electric, 70
 Kansas Natural Gas Co., 276
 Kentucky Utilities Co., 242
 Koppers Co., 83, 84

 Labor, Department of, 96, 110
 Langmuir, 11
 Lehigh Power Securities, 71
 London, Ont., 184
 Long Sault Development Co., 218
 Los Angeles, 158, 167, 170-74, 203-05
 Los Angeles Bureau of Power and Light, 172-75
 Los Angeles Gas and Electric Corp., 175
 Louisiana Power and Light Co., 242
 Louisville Gas and Electric, 75

 Machold, H. E., 221
 Malone Light and Power, 224
 Maryland Commission, 107, 128
 Maryland Legislature, 165
 Maryland Public Service Commission, 57
 Massachusetts, Department of Public Utilities, 108, 117, 123, 148, 152-54, 176, 282
 Massachusetts Legislature, 123
 Massachusetts Lighting group, 82

- Massachusetts Utilities Investment Trust, 82
 Massena, N. Y., 83
 Mavor, Professor, 33, 162
 McAdoo, William, 283
 McCardle *vs.* Indianapolis Water Co., 139, 154
 McCarthy, P. H., 39
 Mead, Dr. Elwood, 209
 Mellon, Andrew, 83
 Mellon interests, 83, 84
 Mellon, R. B., 83
 Mellon, R. K., 83
 Memphis Power and Light, 75, 242
 Merrill, O. C., 129, 130, 158, 245, 249
 Metropolitan Life Insurance Co., 33, 197, 198-99
 Michigan Bell Telephone Co., 124
 Michigan Commission, 123, 124, 140, 143, 273
 Middle West Utilities, 50, 53, 73, 81, 85
 Miller, John B., 161, 163
 Milling and Lighting, 224
 Mills, Congressman Ogden L., 225
 Minnesota Light and Power, 70
 Mississippi Delta Power and Light Co., 242
 Mississippi Power Co., 242
 Mississippi Power and Light, 70, 242
 Missouri *vs.* Kansas Natural Gas Co., 276
 Missouri Public Service Commission, 124
 Mohawk-Hudson Power Corp., 54, 72, 82, 126-28, 217-8, 224-25
 Montana Power Co., 54, 55, 79, 81
 Municipal Gas Company of Albany, 224
 Municipal Ownership, 158-92
 Murray, W. S., 30, 31, 41
 Muscle Shoals, 29, 37, 67, 71, 75, 106, 145, 163, 193-95, 216, 219, 236, 239-65, 286, 289
 Muscle Shoals Fertilizer Co., 242
 Muscle Shoals Power Distributing Co., 242
 Narragansett Case, 221
 Narragansett Electric Light Co., 55, 127, 145
Nation, The, 212
 National Association of Railroad and Utility Commissioners, 109, 112, 275-76
 National Broadcasting Co., 27, 119
 National City Bank, 162
 National Electric Light Association, 21, 22, 23, 24, 25, 27, 28, 30, 34, 35, 36, 66, 91, 94, 95, 97, 98, 100, 101, 103, 104, 117, 119, 191, 197
 National Electric Power Co., 73, 81, 122
 National Industrial Conference Board, 111
National Municipal Review, 277
 National Power and Light, 70
 National Public Service Corp., 81
National Review of Power Resources, 158
 Neal, John R., 287
 Nebraska State Railway Commission, 122
 New England Power, 72, 73
 New Jersey Telephone case, 143
 New Orleans Public Service, 70, 242
New Republic, 98, 129, 143, 275, 280
 New York and Queens Electric Light and Power, 75 .

- New York Commission, 65,
 124, 125, 128, 131
 New York Edison Co., 27, 75,
 79, 80, 142, 147, 221
 New York Legislature, 124,
 165
 New York Power and Light
 Corp., 82
 New York State Committee
 on Public Utility Informa-
 tion, 26
 New York State Public Serv-
 ice Commission, 223, 225
 New York Telephone case,
 127
 New York Telephone Co.,
 141, 221
New York Times, 42, 43, 83
 Niagara Falls, 76, 106, 184,
 185, 216, 217, 222, 236
 Niagara Falls Power Co., 72,
 77, 83, 131, 217, 221, 224,
 225
 Niagara, Lockport and On-
 tario, 72, 217, 224
 Norris, Senator George W.,
 216, 241, 243, 255, 258,
 286-87
 Norris resolution, 67
 North American Co., 50, 75
 North American group, 74,
 80
 North American Light and
 Power, 73, 74
 Northampton, 108
 North Carolina Department
 of Conservation and Devel-
 opment, 146
 Northeastern group, 72, 73, 80,
 216, 217
 Northeastern Power and
 Light Co., 51, 73
 Northeastern Power Corp.,
 77
 Northern Ohio Power, 76
 Northern Ohio Traction and
 Light, 76
 Northern States Power, 75
 Northwestern Electric Co., 70
 Northwestern Public Service
 Co., 122
 Northwestern University, 34
 Northwest Utilities, 73
 Ogdensburg, 77
 Ohio Power Co., 70
 Ohio Public Service, 79
 Ohio Public Service Commis-
 sion, 164
 Oklahoma Gas and Electric,
 75
 Omaha, Neb., 177
 Ontario, 28-33, 180-94, 218,
 222, 236, 266
 Ontario Hydro-Electric Power
 Commission, 30-33, 180-94,
 196, 222, 234, 236, 288
 Otis and Co., 64, 84
 Ottawa, Ont., 184, 186
 Owens River Aqueduct, 170
 Pacific Gas and Electric Co.,
 38, 39, 43, 75, 80, 82, 85
 Pacific Power and Light, 70,
 171
 Penn-Ohio Securities, 85
 Pennsylvania Commission, 275
 Pennsylvania Gas Co., 275
 Pennsylvania Gas Co. *vs.*
 Public Service Commission,
 275
 Pennsylvania Legislature, 268
 Pennsylvania-Ohio Power and
 Light, 82
 Pennsylvania Power and
 Light, 71, 78
 Pennsylvania Water and
 Power Co., 57
 Penn Water and Power, 79
 People's Economy League, 40,
 41
 Peoria, Ill., 169
 Philadelphia Electric Co., 50,
 57, 76, 77, 78, 80, 81, 132,
 244
 Pierson, Lewis E., 112, 113

- Pinchot, Governor Gifford, 269, 279, 282
- Pittsburgh, 77
- Political activities of power industry, 37, 38, 41, 42, 44, 45, 48, 49, 193-95, 198, 205
- Port Authority of New York, 288
- Potomac Edison, 79
- Power and Electric Securities, 224
- Power Corporation of New York, 52, 72, 73, 221
- Profits, 91, 93
- Propaganda and Publicity, 21-45, 109-14, 196, 197
- Public Service Corporation of New Jersey, 77, 78, 84
- Public Service Gas and Electric Co., 77, 78, 80
- Public Service of Colorado, 79
- Public Service of Northern Illinois, 50, 73
- Puget Sound Power and Light, 78
- Quincy, Ill., 169
- Radio Commission, 4, 196
- Radio Corporation of America, 27
- Rates, 88-115, 148-50, 169-74, 183-89
- Reclamation Bureau, 208-09
- Regulation of power companies, 107, 108, 116-53, 267-68, 270-79
- Republic Railway and Light, 50, 57, 82
- Return on investment, 133-38, 154, 268-70
- Revenue, 93-102
- Rhode Island Commission, 145
- Rhode Island Commission vs. Narragansett Electric Lighting Co., 145
- Richberg, Donald, 139, 141, 142
- Ripley, Professor William Z., 34, 35, 53, 285
- Rochester Gas and Electric, 217
- Rust (Mr.), 83
- Ryan, John D., 54
- San Diego Consolidated Gas Electric, 75
- San Joaquin Light and Power Corp., 39, 74
- Scattergood, E. F., 170
- Scranton Electric, 71
- Seattle, 159, 167, 176, 177
- Second Consolidated Gas Case, 138
- Sherman anti-trust laws, 47
- Skagit River, 177
- Skaller, George, 40
- Smith, Gov. Alfred E., 219, 286
- Snow Mountain Water and Power Co., 39
- South American Power Co., 72
- Southeastern Power and Light Co., 51, 71
- Southern California Edison Co., 41, 42, 44, 75, 80, 85, 161, 171-72, 203-05, 265
- Southern Cities Power Co., 125
- Southern Indiana Gas and Electric, 56, 121
- Southern Power Co., 76
- Southern Public Utilities, 76
- Southwestern Bell Telephone Co., 138, 140; case of, 140-41
- Southwestern Gas and Electric Co., 82
- Southwestern Power and Light, 58, 70, 82
- Southwestern (Texas) Public Service, 74
- Spaulding, Willis J., 128

- Springfield, Ill., 168-70
 Standard Gas and Electric Co., 50, 74, 75, 80, 82
 St. Lawrence, 52, 67, 83, 106, 145, 181, 193, 194, 197, 216-39, 259, 264, 265, 286, 289
 St. Lawrence Valley Power Co., 82
 Stocks, Public Utility, 50, 53, 54, 59-65, 68, 127, 130, 131, 132, 242
 Stone, Justice, 139
 Stone and Webster Group, 78, 80, 177
 Supreme Court, 4, 56, 120, 134-38, 145, 150, 154, 209, 210, 220, 221, 275
 Swing-Johnson Bill, 200, 205, 211, 215
 Syracuse Lighting Co., 54, 127, 224, 225
 Tacoma, 159, 167, 264
 Tennessee Electric Power Co., 240, 242
 Tennessee Railroad and Public Utilities Commission, 122, 124, 125
 Tennessee River Improvement Association, 241
 Texas Central Power, 74
 Texas Power and Light Co., 58, 70
 Toledo Edison, 79
 Tonowanda Power, 224
 Toronto, 30, 31, 184
 Toronto Power Co., 181
 Union Gas and Electric, 79
 United Gas and Electric, 50
 United Gas Improvement Co., 50, 54, 72, 77, 81, 126, 127
 United Electric Light and Power, 75
 United Light and Power, 64, 77, 83, 84, 85
 United States Census Bureau, 96
 United States Chamber of Commerce, 109, 112
 United States Treasury, 258, 259
 Urbana, Ill., 169
 Utah Power and Light, 70
 Utica Gas and Electric, 224
Utility Bulletin, 26
 Valuation of Utilities, 135-41, 154, 224, 268, 269, 270
 Virginia Electric and Power, 78
 Virginian Power, 71
 War, Secretary of, 255, 256, 257
 Water and Power Act, 38, 39, 40, 44
 Watertown, N. Y., 165, 221
 Wells, Philip P., 269, 273, 274, 283
 Westchester Lighting Co., 75
 Western States Gas and Electric Co., 39, 75
 Westinghouse Corp., 27
 West Penn Co., 79
 White, J. G., and Co., Inc., 82
 White, J. G., Engineering Corp., 82
 White, J. G., group, 82
 White, J. G., Management Corp., 82
 Windsor, Ont., 184
 Wisconsin Public Service, 75
 Wisconsin Railroad Commission, 120, 128
 Wisconsin System, 74
 Worcester, 108
 Worcester Electric Light, 152, 153; case of, 152, 154
 Work, Hubert, 206
 Wyer, Samuel S., 31, 33
 Yadkin River Power, 70
 Young, Owen D., 286

The
POWER
FIGHT

by
STEPHEN RAUSHENBUSH



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CONTENTS

| CHAPTER | | PAGE |
|---------|---|------|
| I | THE POWER PRESSURE | 1 |
| | Mass Formations | 2 |
| | The Pressure on the Press | 14 |
| | Non-partisan Politics | 25 |
| | Private Initiative in Public Education | 36 |
| II | THE TRIUMPH OF THE PRIVATEERS | 47 |
| | The Pound of Flesh | 47 |
| | The Profitable Use of Imagination | 63 |
| | Profiting by the Birth Rate | 76 |
| | Appropriating the Consumers' Contribution | 79 |
| | The Miracle of the Bread and Water | 85 |
| | Stacking the Cards | 89 |
| | The Unregulated Half | 101 |
| | The Managers "on the Spot" | 110 |
| | A Million Dollars a Day | 115 |
| III | THE CONQUERED CITIES | 127 |
| | The Growing Function of the Cities | 127 |
| | The Arbitrary Limits to Public Service | 128 |
| | Gentlemen and Professionals | 130 |
| | The Purpose of the Commissions | 133 |
| | Cancelling the Franchise Power | 134 |
| | Making It Hard to Buy | 137 |
| | No Expansion Allowed | 138 |
| | Attempts at Competition | 139 |
| | Capitalizing the Triumph | 143 |
| IV | NATIONAL DEFENSE LINES | 148 |
| | The Federal Waterpower Defense | 148 |
| | The Couzens Defense | 168 |
| V | THE OUTPOSTS OF CONTROL | 176 |
| | Boulder Dam | 176 |
| | Muscle Shoals | 184 |
| | The St. Lawrence | 202 |
| | The Development of the West | 210 |

| CHAPTER | | PAGE |
|---------|--|------|
| VI | THE HOME GUARDS | 215 |
| VII | THE CITIES LEAGUE TOGETHER | 230 |
| VIII | GOVERNMENT CORPORATIONS AND FINANCING | 250 |
| | The Present Problem | 250 |
| | Government Planning—Mixed Ownership | 252 |
| | Part or Full Government Participation | 257 |
| | Considerations of Administration | 265 |
| | Government Owned Corporations in America | 270 |
| IX | A PROGRAM OF PEACE WITH POWER | 280 |
| | APPENDIX | 293 |
| | INDEX | 299 |

The
POWER FIGHT

CHAPTER ONE

THE POWER PRESSURE

DEMOCRACY is a social system where the people control their own destiny. Feudalism is a system where it is controlled for them. In the former they take risks. In the latter they have security, and others have the responsibility for maintaining that security. Today we have neither system. We appear to be shifting from democracy into an economic feudalism, retaining some of the worst features of both systems. We vote, and have the impression of being free and independent. Yet those votes have almost no effect on the economic arrangements, which stand aside from the political ones, and outrank them in importance. They are far more important to the prosperity of the country and the peace of the world. Even a great and prolonged business depression produces no far reaching plans for an overhauling of the industrial system through political means. There is a growing opinion that war for political ends, such as our war to save the world for democracy, is only "spilling blood over toys we have outgrown," that the economic rulers are the real rulers, and that the heads of governments are of that class for whom the people have invented the phrase "stuffed shirts."

To the extent that a man has no alternative place to seek work he is not free. He is dependent. To the extent that small business men find it impossible to compete with the rugged corporations of the country they are not free. To the extent that the white collar workers and the workers in overalls can find no other job than the one they have, or lose that job as punishment for striking, or lose it as

punishment for having a forty-fifth birthday, or as punishment for their political opinions or their refusal to curry the favor of their immediate superiors, they are not free. They are living in a feudal system, but in a feudal system which does not offer them even that ease which people had four hundred years ago, security in the job.

The main characteristic of the long mechanical progress of which we are so vicariously proud is dependence without security.

The interest of the "power fight" is essentially in the ways and means through which this particular industry has used our semi-feudal situation to attain its present situation in the world, how its success has solidified that situation, and what opposition it has called forth in the course of its triumphant progress.

I. *Mass Formations*

The most startling development in recent years has been the open entry of J. P. Morgan & Company into the field of electric power. They also went into the grocery business at the same time, thus justifying in part the retort elicited many years ago when the elder Morgan sailed back to our shores from Europe and remarked that he liked this country very well. The retort, it will be remembered, was, "Well, if the time ever comes when he doesn't like it, he can give it back to us." Morgan combined with Drexel and Bonbright, old working allies, to start the United Corporation, which rose rapidly to a control in 1930 of over 19 per cent of the total power capacity of the industry. On the Street the Morgan and Bonbright influence in Electric Bond and Share has long been known, and Electric Bond and Share (sister corporation of General Electric) owns part of the United. In view of the fact that hostile corporations are not allowed in on each other's ground floors, I believe it is correct to group United and Electric Bond and Share together. The latter group con-

trols over 12 per cent. In addition the National City Bank's influence in Consolidated Gas of New York is so strong that a direct affiliation with United is frequently discussed. This company controls over 6 per cent of the capacity. These allied interests together control 37.7%.

From here on it becomes more difficult to trace the threads of control. Taking as authoritative an account in the financial section of the *New York Times*,¹ the grouping of the Chase National Bank interests with the Harris, Forbes interests of Boston, late in 1930, was an event second only to the Morgan groups. According to that account a total of over five billion dollars in various forms of public utilities was centered under one sponsorship. The Chase Securities Organization has financed the Utilities Power and Light and has large holdings in the International Paper and Power Company. Harris, Forbes were associated with several other banking groups, including the Chase group, in the Standard Power and Light arrangement with United States Electric Power in 1930. It has, according to this report, large holdings in the Associated Gas and Electric system, in International Paper and Power and in the Central Public Service. It also provides banking sponsorship for the Cities Service system and has headed financing for various groups including the Southern California Edison. Through its United States Electric Power it has affiliations with the American Waterworks and Electric Company and the Mellon-Koppers utility interests. Without including Cities Service, Southern California Edison, or American Waterworks and Electric, the sphere of influence of this banking group would, according to this report, cover 11.57 per cent of the industry's installed capacity. If these three groups were to be included a total of 17.83 per cent would be listed under its influence.

The degrees of control exercised by the banking groups vary from direct to quite indirect control. As far as the

problems of determining combination are concerned the only essential question is whether these various companies would be likely to act contrary to the guiding interests of the banking groups with which they are connected. To the extent that the answer is in the negative, it is reasonable to group them for working purposes into "spheres of influence," in the language of diplomacy. Following this procedure, with proper reservations, we see that a few large groups, more or less tightly connected, are emerging as economic empires within the country.

The following statement of the amount of installed capacity of individual systems is based on figures issued by the companies either through the *Electrical World* in May, 1931, or through Moody's *Manual of Public Utilities* in 1931. The grouping of units under the holding companies follows standard financial manuals. The grouping of the holding companies together, however, is subject to reservations made above. Detailed production by systems is given in Appendix A.

According to available information the control of the industry is exercised somewhat as follows:

| | | |
|---|-------------|---|
| 1. Morgan-Bonbright-National City spheres of influence. | | |
| | | <i>Per Cent of Installed Capacity</i> |
| United Corporation and allies..... | 19.14 | |
| Electric Bond and Share..... | 12.05 | |
| Consolidated Gas of New York..... | <u>6.49</u> | |
| | | 37.68 |
| 2. Chase National-Harris, Forbes spheres of influence. | | |
| Standard Gas and Electric..... | 4.87 | |
| Utilities Power and Light..... | .95 | |
| International Paper and Power..... | 2.19 | |
| Associated Gas and Electric..... | 2.73 | |
| Central Public Service..... | <u>.83</u> | |
| | | 11.57 |
| 3. Insull interests..... | | 10.31 |

These three groups, if current financial news is not incorrect, control systems having 59.6 per cent of the industry's production. The North American Company comes next with 8.70 per cent. In order follow the Pacific Gas and Electric, 3.52 per cent; the Southern California Edison (sometimes considered a Morgan interest), 2.95 per cent; Stone and Webster, 2.47 per cent; Duke Power, 2.45 per cent; United Light and Power, 2.19 per cent; Cities Service, 1.68 per cent and American Waterworks and Electric, 1.61 per cent. These eight groups control together 25.57 per cent of the installed capacity. Eight smaller groups, details of which are furnished in Appendix A, control together a further 4.45 per cent. Some of these smaller companies are held in part by some of the larger interests.

These private groups together account for 89.66 per cent of the installed capacity of the industry in 1930 of 31,836,243 kilowatts. The various larger government plants operating in that year represented an installed capacity of 789,730 kilowatts, which is 2.48 per cent of the industry's total. The remaining 7.86 per cent, not listed here, is spread among smaller private and municipal plants.

In passing it may be of interest to note the assets of some of these companies. Many of them are in the gas or street railway business in addition to electric power. Following, with a reminder of reservations, the former grouping, the assets of these companies as of the end of 1930 are as follows:

| | |
|--|-----------------|
| 1. Morgan-Bonbright-National City groups | |
| United Corporation and allies..... | \$2,810,878,133 |
| Electric Bond and Share..... | 2,698,624,682 |
| Consolidated Gas of New York..... | 1,265,260,292 |
| | <hr/> |
| | \$6,774,763,107 |

THE POWER FIGHT

| | |
|---|-----------------|
| 2. Chase National-Harris, Forbes groups | |
| Standard Gas and Electric..... | \$1,204,858,329 |
| Utilities Power and Light..... | 447,120,264 |
| International Paper and Power..... | 328,332,276 |
| Associated Gas and Electric..... | 922,008,796 |
| Central Public Service..... | 364,127,426 |
| | <hr/> |
| | \$3,266,447,091 |
| 3. Insull companies..... | |
| | \$1,523,828,666 |
| 4. Eight other companies or systems | |
| North American..... | \$ 344,425,331 |
| Pacific Gas and Electric..... | 684,687,467 |
| Southern California Edison..... | 376,063,707 |
| Stone and Webster..... | 413,727,026 |
| Duke Power..... | 210,747,921 |
| United Light and Power..... | 573,646,485 |
| Cities Service..... | 1,282,624,854 |
| American Waterworks and Electric..... | 421,786,642 |
| | <hr/> |
| | \$4,307,709,433 |

The actual control may be far closer than outlined in these tables. The Federal Trade Commission, for example, in the course of its study of the industry remarked that the North American group "has various close relationships with the Electric Bond and Share group. It has been practically controlled since 1920 by individuals whose interests are largely identified with the General Electric and the American Gas and Electric, one of the principal holding companies of the Electric Bond and Share."² If this is correct the companies grouped in the Morgan-Bonbright-National City alignment could be said to control close to half the country's production today.

Such control means use of the natural resources of the country, waterpower, coal, gas and oil. We find that, according to its 1928 report, the Federal Power Commission had granted to these large companies the bulk of the available waterpower sites on the navigable rivers of the country. A total licensed capacity of 1,973,690 horsepower

had been granted to the companies listed here as being affiliated with the Morgan group, another 1,207,947 horsepower to those listed in the Chase-Harris, Forbes group, 680,000 horsepower to the North American, 309,700 to Insull, 304,600 to the Pacific Gas and Electric and 80,000 to Stone and Webster. The total to these six groups is 4,555,937 horsepower, over 84 per cent of all the waterpower rights granted. These figures do not, however, give an adequate picture of the amount of waterpower developed by the power companies. Thus Insull reports a total of 286,000 horsepower and the Duke Power Company a use of 664,700 horsepower.

In addition to waterpower a certain number of other natural resources have been used for the benefit of the power industry and, in some cases, a certain amount of ownership has been established. The Peabody Coal Company, in Illinois, one of the largest operators in that state, is usually considered to be an Insull subsidiary. Thus also, Cities Service has acquired a great deal of oil and gas land. The Standard Gas and Electric has also done so, as have several of the others. Preliminary study indicates that the large electric power companies are allied with close to 70 per cent of the gas production of the country.

One of the immediate results of this control is that the consumers do not get the benefit of competition between the utilities. In most of the cities of the country the gas utility and the electric power utility have combined. They no longer compete with each other for trade, no longer offer competitive rates. Nor are our natural resources being used to reduce prices to their limit. In 1930 the Columbia Gas and Electric, the largest natural gas company in the country, had brought its pipelines close to the gates of New York City and Philadelphia. There, companies affiliated with the Morgan group supply manufactured gas to the small consumers and the large industries.

In fact Philadelphia, Eastern Pennsylvania, New Jersey and New York City are supplied almost entirely by manufactured gas from the Morgan group. The threat of natural gas to that monopoly was considerable. Price-cutting might have started at any time. Instead, the United interests (Morgan) bought a large section of the stock of Columbia Gas and Electric, thus avoiding any price-cutting, and any particular benefit the consumer might have derived from the fact that one of the great natural resources was at the gates of the greatest industrial area of the country. As *Fortune* commented, "There is not much likelihood of fratricide between the Manufactured Cain and the Natural Abel—not, at least, as long as each can so pleasantly and profitably contrive to become his brother's book-keeper." ³

Now this tendency toward control of allied industries is not confined to the electric power industry. In general the banking groups have tended to broaden the base of industrial control. They do not mind if people switch from gas to electricity if they also have a finger in both industries. They do not mind so much if passengers switch from street cars to busses and if freight switches from railroads to trucks if they also have control over the busses and trucks. While we have made some feeble attempts to control the elimination of competition inside an ordinary industry, we have made no attempt whatever to restrict the elimination of inter-industry competition between utilities.

Another, somewhat minor form which the growing power control has taken is that of owning its chief customers. One of the largest of these is the electric railway industry, and preliminary studies indicate that about a third of it is affiliated with the power industry. If you can sell power to the street car lines instead of having them generate it themselves you are assured of a large demand. If you own the street car lines you can, within limits, sell

the power to them very profitably. Control has, in some cases, gone beyond street cars into other industries which are large power consumers. During the past few years Insull bought into the cotton textile industry in Maine. A New England subsidiary acquired four textile companies in Augusta and Lewiston, operating 9,362 looms and 354,000 spindles. This led the *Electrical World*, the organ of the industry, to comment: "Through the purchase of industrial firms by the parent holding company in a power group, a portion of the investment is today being diluted in some of these enterprises from a strict light and power distribution. . . ." It pointed out that not only investors but consumers of the subsidiary operating utilities were concerned in such expansion. Certainly if such textile mills received lower power rates than nearby competing mills it would be a case close to the kind of discrimination which brought the railways into disrepute.

The financing by which this concentrated control was established in the power industry is now fairly familiar. The public contributed the bulk of the investment in the industry and received in return bonds and preferred stock, giving no control. Sufficient common stock to secure the real control was held by insiders. Using their common stock holdings as a base they set up holding companies, one on top of the other, always retaining a sufficient share of the common stock, the voting stock, to control the top company and all the subsidiaries. In this way relatively little capital was needed to control a great deal of investment. The Federal Trade Commission reported that in the case of the Standard Gas and Electric an investment of less than one million dollars was sufficient to control over \$370,000,000. The ratio is 1:370. In the Commonwealth Power, (Morgan) the ratio is 1:25. This holding company arrangement, no matter what else

is claimed for it, makes it exceedingly easy for control to be concentrated into a very few hands.

There is, perhaps, little point in speculating as to the exact number of individuals who may still be said to have an active effective voice in this ten billion dollar industry. If the first five groups control around 72 per cent of the production, something like seven billion dollars of power investment may be said to be in the hands of the leaders in those groups, perhaps ten men. That is a very rough-and-ready way of getting at it, however. The Federal Trade Commission offered another way when it pointed out that voting control of twenty-three holding companies was in the hands of twenty-five men. The properties controlled represented an investment of \$1,860,000,000. On this basis the whole industry would be in the hands of 135 men. These Commission figures date back, however, to 1925 and 1926 and since that time not less than a quarter of the whole industry has submitted to unification. The number of real controllers would then be close to one hundred men.

Not even these liberal estimates give a full picture of the influence of the power group in the country. A study in 1929 took 184 directors in various utilities in the Morgan-Bonbright-National City group and 18 directors in the two major Insull utilities and placed them according to other industrial connections.⁴ It found that these 202 men held 586 directorates in the power and gas utilities, 91 in oil and coal, 158 in railroads, 43 in electric railways or busses, 537 in financial houses, 479 in other industrial or commercial companies, 22 in engineering or construction companies, 28 in commercial electric companies, 33 in mining and 7 in communications. In view of the influence of banking in modern large scale industry, the connections of these power officials with banks and financial houses is significant. They average 2.9 positions in the electric power industry and 2.6 financial posi-

tions. A group such as this can fairly be described as having a very important say in the major financial and industrial life of the country. Their connections may explain, to some extent, the attitude which the business groups have, on the whole, taken toward the utilities.

While such narrowing of control has been going on there has also been a great deal of shirt-fronting to the public about the establishment of ownership by the consumers of the industry. For some reason it was felt necessary to keep the public from seeing what was really going on. On the whole the public was encouraged to buy those securities which carried no control whatsoever. The real control was getting into a very few hands. Still, today, spokesmen for the utilities talk about the way in which they are democratizing industry. What they have been doing with the utility may be good or bad, but it is certainly not what they say they have been doing. John T. Flynn in his *Investment Trusts Gone Wrong!* characterized the procedure this way: "The democratization of this industry was seen to be at hand and the great point was that ownership of the utility corporations was being diffused among a multitude of small stockholders. All the time precisely the opposite tendency was at work."⁵ The real say about the industry was passing away from the small stockholders.

Just what effect these holding companies have on the consumers will be dealt with later, but one illustration is in point here to show how important it is for the controlling groups to mobilize sufficient public influence to keep the utility commissions powerless while they are carrying on their many marriages.

The almost successful attempt of one banking house (W. C. Langley and Company) to secure an unusual favor from the New York State Public Service Commission was brought out in 1930, shortly before the chairman of that Commission resigned to join the banking house. It was

brought out by a special commission appointed to investigate public service procedure in that state.⁶ The minority report, not challenged in this respect by the majority of the special commission, gave a description of holding company procedure which should be kept in mind. The holding company in question was the Long Island Capital Corporation, the operating subsidiary was the Long Island Lighting Company. The report states:

"The Long Island Capital Corporation program . . . appears to us an example of one of the dangers in the holding company idea. The evidence shows that this corporation was created primarily to bolster up the value behind the highly speculative common stock of the Long Island Lighting Company. . . . Briefly summarized, it shows that the E. L. Phillips interests, associated with W. C. Langley and Company, controlling probably a large majority of the 3,000,000 outstanding shares of the Long Island Lighting Company, petitioned the Public Service Commission to permit the newly created Long Island Capital Corporation to take over 1,600,000 or more shares of the Long Island Lighting Company by exchange of an equal number of shares of the Capital Corporation. . . . The books of the (Long Island Lighting) company showed these shares at \$3,000,000, or \$1 a share, and including their full equity in the property, their book value did not exceed \$1.70 . . . at the time the petition was presented to the Public Service Commission their market value was in the neighborhood of \$70."

In short here was a holding company proposing to set up shop on the basis of acquiring \$2,720,000 book value of stock of the operating company, and, with nothing else in its treasury, issue its own bonds, preferred stock and common stock to the extent of \$22,000,000 at least. The banking group and holding company group were speculating on the market value of the common stock of the operating company staying at \$70, or some 43 times more

than the real money invested in it and accumulated in the surplus account.

The report continues: "The purchasers of the senior securities of the Long Island Capital Corporation would have a lien not on property but on the highly inflated common stock of the Lighting Company, and the soundness of their investment would depend to a large extent upon the continued willingness of the Public Service Commission to allow the Long Island Lighting Company to maintain rates high enough to provide profits approximating those which the company is now making. . . . It is too clear for argument that the sanctioning of this plan by the Public Service Commission would later bring strong pressure to bear on the Commission to perpetuate the present net earnings of the Long Island Lighting Company and so to help it sustain the artificial market value of the \$1 common stock. Any other course would mean that the Commission was exposing innocent investors in the senior securities of the Long Island Capital Corporation to gross exploitation."

Here the bondholders and preferred stockholders of the holding company would be the ones to suffer if the very high rates charged to consumers by the Long Island Lighting, and its high profits, were cut down by the Commission supposed to do exactly that. A situation, similar to many others, was being created where the body protecting the consumers against monopoly would have been rendered ineffective. The report continues: "Yet Chairman Prendergast, the sitting Commissioner in the case, recommended the granting of this request, after brief hearings in which there was no representation of the public and practically no cross-examination of Messrs. Phillips and Langley. The case is an outstanding instance of the danger when commissioners are not thoroughly alert to the public interest."

Here the interest of the consumers happened to be at

one with the interests of some of the potential buyers of the holding company's securities, nevertheless the chairman of the most expensive and one of the strongest state commissions in the country moved as far as he could quietly to disregard these interests for the benefit of the banking group which he later joined.

In the tremendous concentration of control over wealth, in the huge stake for which they were playing, sums running into hundreds of millions of dollars a year beyond what the consumers might be expected to pay, it is not difficult to see how important it is to the power industry to keep the state public service commissions working in a manner satisfactory to them. They have become the ardent advocates of the regulatory system. It plays into their hands.

2. The Pressure on the Press

The men who organized this job of entrenching the system which is so favorable to them, and of molding a public opinion to their uses, have been doing it with public money. Their expenses for these purposes come not from capital contributed by investors but from the sums paid by consumers in their light and power bills. Under the regulatory system which they are trying to entrench still more firmly, they are generally allowed such expenses as are needed for advertising and propaganda. State regulatory bodies which are, to say the least, indifferent about the matter, often let them charge rates sufficient for a profit even after such expenses for molding public opinion have been paid.

Here the emasculating of the initiative of the local managers and owners, resulting from concentration of ownership and control, had its first effect. These men, living in a community directly affected by their rates and by the propaganda expenses they charged up against rates, might have felt themselves in the position of semi-public servants,

administering public funds. They were conducting an industry which the Supreme Court had held to be a governmental function. They might have felt under some obligation not to use those funds for non-operating purposes. They might have felt responsible to the consumers for giving service and for letting that service be weighed on its merits. But the responsibility had passed from them to men in the holding companies who did not come into direct contact with the localities being served, who were not officers of companies performing a governmental function but simply officers of companies controlling the others. It was these men who made and stood behind the plans for expending such sums as seemed necessary for their purposes. The others were forced to carry them out.

One of the organizations they used to carry on this work was the National Electric Light Association. To this, companies contributed according to their production. It thus received its main support from the big groups. Its director, since promoted into another industry of equal importance to the power companies in controlling public opinion, the National Broadcasting Company, gave a very plain statement of the attitude which the big companies wanted the others to take about the expenditure of public moneys. The work of influencing public opinion in schools, press and civic groups had been going on for some time. The men of the industry were having conventions all over the country, at its gayest resorts, their expenses being paid from funds contributed by the public. In these circumstances he announced that there was no limit.

"All the money being spent is worth while. And may I leave this thought with you executives. Don't quit now. At the next convention have more young ladies here so as to do the job right, and let off more men from the departments, so they may come here. Don't be afraid of the expense. The public pays the expense. Let us continue with big meetings!"

The sums spent by the utility industries for advertising have been estimated to be between twenty-eight and thirty-five million dollars a year. The amount has been growing steadily. Through the N.E.L.A. another million was raised for its various purposes. The large companies also had public relations departments, but the fact that many of them operate entirely inside the boundaries of one state has prevented the Federal Trade Commission from going into many of their expenditures. With these sums, all contributed by consumers under the impression they were paying for electric light, considerable could be done to keep intact the system which was so favorable to the controllers of the industry. Almost everything that could be done was done.

One of the most important forces in the country is the press, and many ways were used to influence it and make it serve the purposes of the industry. That story has been brought out by painstaking work on the part of the Federal Trade Commission. Some of their findings I summarized in *High Power Propaganda*.⁸

A rural press service which reached 14,000 rural newspapers was subsidized. General Electric, Insull, United Gas Improvement, Electric Bond and Share and American Telephone and Telegraph leaders started it. Two other rural syndicates were later also subsidized. Much was made of the advertising fund available to the companies and its influence on editors of small papers. The classic remark on the subject was made by the utility director in Missouri, J. B. Sheridan. He said: "Unquestionably, when you talk advertising to most newspapermen they warm to you." He wrote one of his friends: "Gee, Mr. Buck, what the country press is worth to people who are honest and use it honestly is beyond calculation. I have spent as much as \$300 in three years 'entertaining' editors. . . . All of them are God's fools, grateful for the smallest and most insignificant service of courtesy. . . . If we could

stimulate a little local advertising for some of the leading newspapers, I think we will have the newspapers and the operators so closely associated that it will be impossible to split them in the near future."

The power people had two things to go on in this work: some communities were so glad to get power that they would take it as they would a gift horse, without looking at any teeth; second, the small papers are hard up. As the Illinois director put it: "We are trying to promulgate the idea rapidly among the newspapers that public utilities offer a very fertile field for developing regular, prompt-paying customers of their advertising columns. When that idea penetrates the United States, unless human nature has changed, we will have less trouble with the newspapers than we had in the past."

There were few states where the buying process reached such a point as in Georgia. Here the utility people seem to have persuaded the editors that all news about the utility problem had to be paid for. The industrial representative of the Georgia Railway and Power Company wrote: "Our greatest distress before we started the Committee was the printing by newspapers free of charge of propaganda written by public ownership fanatics. We answered those articles with paid advertisements and then insisted that the newspapers require the public ownership fanatics to also pay for the space they wanted. The result is that out of 250 newspapers in Georgia only four will publish anything at all from the public ownership people. . . ." The power to insist was the power to destroy. In Ohio it was pointed out to editors that they should be against municipal plants because municipal plants never advertised. It was an appealing argument.

The method of controlling community opinion through having local utility managers bring pressure on the editors and through handling advertising funds in a way to appeal to what they called the human nature of the editors, in-

volved some finesse, some slight of hand in darkened rooms. The Hofer service to rural papers simply involved fooling editors and their reading public as to the self-interested source of editorials. The N.E.L.A. publicity men, grouped in states and regional divisions, set about the business of fooling editors and public in regard to the news. Their achievements along this line have been characterized as "impudent impositions" by *Editor and Publisher*. It said editorially: "For years this journal has sought to have this flagrant abuse of public confidence in the press whipped out by organized newspaperdom. Journalism has roundly endorsed our theory, but the practice has been permitted to grow and snarl into a public scandal. In the light of the impudent impositions of the 'Power Trust' agents, newspaper men might now proceed really to deal with the wreckers and spoilers of the people's interests and democratic government."

The impositions were partly on the press, but in a larger way were all on the public. The publicity director in the Carolinas, S. E. Boney, whom *Editor and Publisher* characterized as one of the prizes, sent his own reports out on the North Carolina State circuit of the Associated Press, and the Washington-Atlanta trunk wire circuit of the same association. His neatest trick was to have editors, prominent political men such as Governor McLeod, Senator R. M. Stewart of Lancaster, Colonel Dawson, formerly chairman of the State Democratic Committee, judges and presidents of men's and women's clubs sign, with minor changes, statements he had written himself. Thus, he secured authority for his views and spot news value. The people who helped him do this were pleased at seeing their names in print, together with their pictures. He would then write around to the editors telling them that certainly the views of such prominent people warranted editorial comment.

A similar procedure was apparently adopted with a

pamphlet signed by the late Haley Fiske, President of the Metropolitan Life Insurance Company, in which he told the policy holders to lay off any attack on the utilities. Twenty-five to thirty million copies of it were circulated. In the letter from George Oxley, the general publicity director of the National Electric Light Association, transmitting that pamphlet to the directors of the State Committees, he sincerely trusted that they would not in any way mention the N.E.L.A. in connection with it, although the association "furnished the ideas, the facts upon which he based his message;" everything, in short, except the paper, the ink and the name.

The main job was to get the newspapers to print stories from the weekly or monthly news sheet sent around by the publicity director, and to have it printed in such a way as to fool the public into believing that it was not propaganda news sent out from a source very directly interested in decrying municipal plants, Ontario, the Boulder Dam and Muscle Shoals bills and any tightening of regulation. To the extent the editors would print and comment favorably in their editorials on this material the directors considered themselves successful. Alfred Fischer, the director in Michigan, accepted congratulations on this process, which was described as "learning them there dumbbells how to do the vox populi . . . and do the dear public fall for it!"

Judge Healy, in charge of the investigation, asked the national publicity director, Oxley: "I want to ask you if you think that the editorial information brought about in this way is fairly presented to the public without knowing to what extent the people in your industry have had something to do with its getting into the editorial columns?" Mr. Oxley made what was probably the only answer possible: "To say anything else would be a reflection upon the integrity of the editorial opinion of the country." That reflection had been made steadily for eight years.

The utility directors of publicity knew that they were, in the current phrase, getting away with murder. There were several written admissions of it. One was printed in a pamphlet by Willard Cope, vice-chairman and executive-secretary of the committee in Georgia: "It is possible to interpret the work of a public relations director in two ways. You may look on him if you wish (and many within and without the industry do) as the head of the Alibi Department, the Fixer—the undertaker's assistant, suave of manner, discreetly clothed, who moves about here and there during the inquest trying to put the best possible face on the murder. It may be that this is the proper view of him. Indeed it is quite possible to get such a focus that this will be the picture the negative prints. . . ." Cope, who spent about \$30,000 a year in Georgia, was the one who destroyed every pen mark, paper and checkbook in his office before the Federal Trade deputies visited him, and all record of the sums—which probably came to a quarter million he had spent in eight years—was removed from sight. He had apparently learned how to avoid inquests after the murder.

While, on the whole, the work of the utility committees in controlling the press met, at first, with little objection on the part of the editors, the purchase of newspaper properties met strong objection. The International Paper Company, affiliated with the International Paper and Power Company, one of the big companies, sent two young newspaper men into the South with almost unlimited credit and expense accounts. They bought up the *Augusta Chronicle* in Georgia, the *Columbia Record* and *Spartanburg Herald-Journal* in South Carolina, and negotiated for many others. The International Paper itself bought the *Boston Herald* and *Boston Traveler* in Massachusetts. It also purchased an interest amounting to \$1,600,000 in debentures and preferred stock and 10,000 shares of common stock in the

Chicago Journal in Illinois, one of the Bryan-Thompson papers. Mr. Archibald R. Graustein, President of the company, bought in his own name \$250,000 of preferred stock and 5,000 shares of common in the *Chicago Daily News*. The company took part in an offer for the *Cleveland Plain Dealer* in Ohio, which was not accepted, and for *Il Progresso*, an important Italian paper published in New York City. The company also secured an interest in three papers of the chain owned by Frank Gannett, the *Brooklyn Daily Eagle*, the *Knickerbocker Press* and *Evening News* of Albany and the *Ithaca Journal-News*, all in New York State. This interest was bought back by the owner of the chain shortly after the utility connections of the International Paper Company had become clear.

The investigation established that the paper company was affiliated with the power company, that the investment of the power company and its subsidiaries amounted to almost half a billion dollars, and that 54 per cent of its revenue came from its power properties. Mr. Graustein stated that the paper company had had a deficit for the year 1928, that it needed to secure a market upon which it could rely, and that the purchase of the papers was to secure such a reliable market. He also made a statement which is of interest in the whole problem of concentrated control.

“As a matter of fact, the manufacture of newsprint requires, as we have said, so large an investment, and the supply of newsprint absolutely every day is so vital to the paper that some community of financial interest is natural and not infrequent. . . . More than that, competitors of the International have assisted in financing of newspapers and the poor showing of International in 1928 is partly ascribable to the loss of a large account through financial assistance extended by a competitor.”

The influence of such competitors on the press has not been discovered by the Commission, although at least one

other paper company has large power interests in New York State.

The ownership by the power company in these papers was not disclosed by their statements to the postoffice. The public was not informed, until the investigation brought it out, that the power company had an interest in the papers it was reading. The company maintained that it did not influence and did not intend to influence the editorial policies of the papers. The editors and publishers involved stated that they had in no way been influenced. The editor of the *Spartanburg Herald-Journal* announced that he was surprised to learn that the International Power and Paper Company had financed the purchase of the papers, and resigned. The editor of the *Columbia Record* accepted Lavarre's statement that he was the real owner. The editor of the *Augusta Chronicle* announced that he had been left his freedom. Mr. Frank Gannett made the statement, which can hardly be challenged, "All readers of the Gannett newspapers know that we have consistently opposed the aggressions of the so-called power trusts. No papers in the country have more vigorously advocated retention of all water-power resources by the government, and we will continue to do so." He broke the connections with the paper company shortly afterwards. The International Paper and Power later disposed of its holdings in the Boston papers.

The extent to which the business interests in the community influence a paper was described by Mr. Robert Lincoln O'Brien, former editor of the *Boston Herald*, shortly after the sale of that paper had been discovered. He remarked:

"Highly as I appraise the management which Mr. Graustein has set into motion, frankness compels the acknowledgment that there are certain by-products of the whole affair that seem destined to have a far-reaching effect upon the political life of the community and may even transcend State limits.

Intelligent people need not waste much time in discussing whether an ownership finds any way of relating itself to the news policies of newspapers, to say nothing of the editorial opinions. No one need go further than to contrast the reporting only last week of the Graustein testimony in the *New York Herald Tribune*, whose managing owner, Ogden Mills Reid, is also a director of the International Paper and Power Company, with the reporting of the same events in the *New York Times*. In one place the story was minimized and obscured; in the other it was set forth in fullness and detail. . . .

To put the case concretely, the *Worcester Evening Post* has been conducting a drive of great vigor and enterprise for a reduction of electric light rates in that city. Does anyone suppose that even the high-minded men to whom the destinies of the *Herald* and *Traveler* have been wisely committed will direct their editors to instigate a corresponding onslaught in Boston? It is no disrespect to these excellent men to say that no one would expect this of them. . . .

But the political relations are not so easy to dismiss. If the *Herald* remains the chief vehicle of Republican opinion in this community may not the party leadership be ultimately affected thereby? Would aspirants for distinction in Republican ranks feel safe in selecting for themselves such an issue as the *Worcester Post* has made in our neighboring city? Would they not be afraid of losing caste with the newspaper upon whose favoring publicity they must chiefly depend? May it not be possible that this very alliance will vitally affect the attitude of the Republican party upon the great issues of public utilities? . . .

Is not our newspaper of opinion throughout the country destined to pass out in this era of big business control? The time may come when the newspaper will dodge the appearance of political interest or the expression of a political preference, much as would a great insurance company or a great dry goods store, because it would 'hurt business.' This is a possibility."

The antagonism of the editors of the country to the method of outright purchase was increased somewhat by certain events which had been taking place in the State of Maine. The Insull interests have control of most of the power in the state. They were attempting to have the

law which prevents export of power removed from the books. The Republican party was split into two camps on the question. In 1927 Dr. Ernest Gruening, formerly an editor of the *Nation*, became editor of an evening newspaper in Portland, the *Evening News*. Up to that time there had been only one morning and one evening paper there, both controlled by the same man, Guy P. Gannett. He is also vice-president of the Fidelity Trust, of which Walter S. Wyman, the Insull representative in Maine, is president. His papers were in favor of exporting the power. The new *Evening News* began to demand that rates in Maine be lowered before Insull began to ship all the power out of the State. It endeavored to show that Insull would sell current in Boston for less than in Maine. It pointed out the extremely high dividends of the Insull holding companies, to demand that there be a referendum on the matter of exporting power, and otherwise to make itself objectionable to the power people.

There followed a refusal on the part of the important department store advertisers to use the paper which seemed to amount to a boycott, and which *Editor and Publisher* characterized as "the ugliest situation we have noted on the newspaper map of the United States in a long time." One of the department store owners is a director in the power company and the Fidelity Trust. Dr. Gruening has charged that an owner of another store had his notes called by the bank as soon as he began to advertise in the *News*. The representative of the local power company, an Insull interest, told his representative, "I am extremely sorry, but my orders are not to give the *Portland Evening News* a line of advertising. I got these orders from Mr. Gordon. Mr. Gordon gets his orders from Mr. Wyman. Mr. Wyman gets his orders from Mr. Insull. Go to Chicago." The paper is not sold in the Augusta House at the capital, a hotel owned by Mr. Wyman.⁹

When the activities of the International Paper and

Power Company became known, one of those Insull papers, the *Portland Press Herald* wrote: "The successful newspaper today must publish the news, regardless of whether or not it harmonizes with the opinion of its owner. . . . No newspaper which is being published as a commercial enterprise could be influenced to suppress or 'doctor' the news." Very shortly after that the former President and counsel of the Central Maine Power Company declared that the referendum measure, upon which the voters were being asked to express their opinion of exporting power, was clearly unconstitutional, and would crumble at the first test. The *Evening News* pointed out that this was such important news that it was published by all but four dailies in the State. Those four were the two Insull papers in Portland, the *Waterville Sentinel* and the *Kennebec Journal*. They suppressed it.

3. *Non-Partisan Politics*

The utilities have been and are definitely in politics. They gained their original franchises, in many cases, through political manipulation and bribery. They keep their present favored position under regulation through an active participation in the political life of the community, which knows no party bonds. This is nothing new. Years ago Theodore Roosevelt, defending himself in a libel suit, pointed out that the founder of the Consolidated Gas of New York, Anthony Brady, always contributed to the Democratic and Republican campaign funds. In 1926 Samuel Insull of Chicago contributed largely to the fund which helped to elect Frank Smith, the chairman of the Regulatory commission, to the United States Senate. He also contributed to the opposition party, which led George Brennan, who was running against Mr. Smith, to remark, "Many power industries and financiers give to both parties and even to factions in both parties. They have to. If they gave to just one all the time, what do you suppose

would happen when one of the others got into power?"

The extent of the political activities of the power industry has never been gone into in any detail. The Federal Trade Commission was authorized only to inquire into any contributions made by the companies to the election of United States Presidents and Senators or for the purposes of combating government ownership. In many states corporations are not allowed to contribute to political expenses. It is done through individuals, who may give in the name of persons other than themselves. Two things did develop, however. The first was that the power industry, together with the gas and electric railways industries, had established what was called the Joint Utility Committee to represent them at Washington. This organization had \$400,000 to spend at the time the Walsh resolution for an investigation of the utilities and also the Boulder Dam bill were before Congress. The other discovery was that the state organizations of the N.E.L.A., usually labeled information bureaus, were in politics. Some of the larger companies apparently had their own political agents at work, but many of their eggs were scrambled in the state or regional committee of the N.E.L.A. This was nothing new, either. The famous insurance investigation of 1906 discovered that "the large insurance companies systematically attempted to control legislation in this (New York) and other states. . . . The three companies divided the country outside of New York and a few other states so as to avoid a waste of effort, each looking after its chosen district and bearing its appropriate part of the total expenses."¹⁰

The economic interests at stake knew no party division. It may be said that in the North they were predominantly Republican. In the South they were Democratic. Senator William J. Harris of Georgia informed the Senate: "I am not unmindful of the great political influence which the Water Power Trust wields in my State. . . . I know

that they can give me trouble in my next campaign if they wish. . . . In the election of Frank Smith to the Senate from the State of Illinois by the use of hundreds of thousands of dollars in a corrupt campaign, the traction and power trusts in that section showed what they could do. They bought a Senatorship for this man Smith who had served their interests instead of serving the public. . . . From what I hear from Senators and others there has not been such propaganda and lobbying against any measure since I came to the Senate as there has been against the Walsh resolution."¹¹ The Northern connections of the Georgia utilities are usually considered to be in the other party. In New York State, by some happy chance, the power trust men in the Republican up-state counties are also of that party and their colleagues in Democratic New York City are mostly Democratic, although they contribute to such activities as their up-state friends wish to carry on.

Some of the men in charge of the information committees wished to stay out of politics, but were very often over-ridden. Then they went along. One of them wrote from Illinois to the national director: "The Legislature is in session here and it looks like a very stormy session and I could use a little J. Walker to very good advantage, and it occurs to me that you could do me a very great favor, if the first time you are coming West you would call on a friend of mine in New York and bring me half a dozen." The idea that there was a shortage of whiskey in Springfield is one of several possible interpretations. In Pennsylvania a special Public Policy Committee dealt with the Legislature, receiving funds directly from the member companies. A sum of \$113,000 was spent there between 1922 and 1928, a large part of it, apparently, to defeat the Giant Power bills. About \$19,000 was spent by the chairman of the Public Policy Committee, Walter H. Johnson of Philadelphia, for which no receipts or vouchers were obtainable. He was President of the N.E.L.A. in

1924. He claimed not to know what was done with the money paid over to him. It was secured in a roundabout way and handed to him in cash.

In 1930 the utilities were interested in defeating Senator Norris of Nebraska for reelection. Walter W. Head, chairman of the Nebraska Power Company, an Electric Bond and Share interest, financed a survey to see if Senator Norris could be beaten. A Lincoln attorney, Victor Seymour, received the money. He was asked by the Nye Committee on Campaign Expenditures whether he had any contact with the Senatorial campaign. He replied: "None whatever. No personal contact—no connection."

When the survey paid for by the utility discovered that Senator Norris could not be beaten openly by another candidate, a certain other George W. Norris, a grocer of Broken Bow, filed in the Republican primaries, obviously in order to split the vote with the Senator. Having filed he collected some money from his backers and skipped the state. The money to induce him to file was furnished by W. M. Stebbins, the chief Republican rival of the Senator. Mr. Seymour, who at first denied all knowledge of this back alley method of defeating Senator Norris not only helped choose the grocer, but wrote his announcement for him and handed over to him the cash with which to leave the state. Mr. Seymour was then assistant vice-chairman of the Republican Senatorial Committee in charge of the Republican election campaign throughout the country.

As everybody knows, a small technicality prevented the trick from being effective. The Court held that the grocer Norris had filed too late for his name to go on the ballot.

This was not the end of the campaign, however. Mr. R. H. Lucas, executive director of the Republican National Committee, foregathered with Senator Norris's opponents and flooded the state with savage attacks on the Senator,

intended to react in favor of his Democratic opponent. The order for the printing of these attacks in Washington was concealed under a fake name. Later the Nye Committee secured from Mr. Lucas the statement that he had paid the printing bills out of his own funds. However, he had authorized the bank to hold a balance from the Republican National Committee against his personal loan.

There is certainly very little that is clean or open or aboveboard in this attempt to defeat a man who had saved the country from the greatest power grab in history. The campaign involved also violations of the primary law against contributions of over \$1,000 from individuals by former Governor McKelvie and Mr. McCloud, Republican National Committeemen from Nebraska.

Illinois invented what was apparently the most successful trick in the political arena. Rob Roy McGregor, assistant director, outlined in a letter his method for defeating a Senator who favored government ownership of power plants.

"This, of course, is not an attempt at writing a speech. My idea would be not to try logic, or reason, but to try to pin the Bolshevik idea on my opponent."

He was asked by the Commission: "You simply tried to raise a prejudice against the men that proposed it (Government ownership) and tried to pin the Bolshevik idea on him?" The answer was, "Yes, sir."

This committee, started by Samuel Insull and directed by men known as his right hands, was plunged into some confusion when Insull's contribution to the Frank Smith campaign fund became known. Letters interchanged show that they were afraid that a meeting of municipal officials at Rockford might discuss the matter, and suggested that "some of the municipal officials might be gotten to go and offset that sort of thing."

It circulated 19,000 copies of a speech calling all public

ownership advocates "reds" or "communists," and worked against the Boulder Dam bill, as well as against many state bills.

The method of using men who have been in political life is common. The director of the Nebraska bureau wrote about Thorne Brown, defeated in his campaign for reelection to the State Railway Commission, "Our people were particularly interested in him and lost immeasurably in his defeat." They appointed him director. The director of the N.E.L.A. during the inauguration of the great propaganda and school campaign, M. H. Aylesworth, had been chairman of the Colorado Commission. The publicity head of the N.E.L.A., George F. Oxley, was formerly secretary of that Commission. The present director of the N.E.L.A., Paul S. Clapp, came from the Department of Commerce. The director of the Arkansas bureau was formerly Governor of that State. The counsel of the Joint Utility Committee came from the Department of Commerce. In the Boulder Dam matter the former Governor of New Mexico was retained. In the fight on the Walsh resolution ex-Senator Lenroot of Wisconsin received \$20,000. He appeared several times before a committee of his former colleagues, the Senate Committee on Interstate Commerce. Senator Norris of Nebraska commented on this choice: "Did they hire him because he was a lawyer? Why, God bless you, no! They knew he was not a lawyer. They had good lawyers of their own. They had another reason for hiring him. As a matter of fact, ex-Senator Lenroot up to the time he left this body never tried a real law suit in his life. He was not admitted to practice before the Supreme Court of his own State. They were not looking for a lawyer. They were looking for an ex-Senator."

Where favorable decisions have to be secured from municipalities there are still some slips. In July, 1929,

the Fort Dodge Gas and Electric Company of Iowa pleaded guilty to illegal expenditures in a municipal campaign in that city and was fined \$800 on each of several counts. In February of that year the *Nashville Banner* made this comment on a local occurrence :

"The Kentucky-Tennessee Light and Power Company in 1926 secured a thirty-year lease of the Paris plant upon the consideration of \$30,000 annual rental, assumption of \$355,000 bond issue of the city to be paid off over a period of 30 years and the option of purchase upon payment of \$45,000. Judge Harry B. Anderson, of the Federal Court, after receiving elaborate testimony taken at the hearing in Jackson, held that the contract was obtained by the bribery of former city attorney George H. Freyer, of Paris, to whom it was shown \$2,000 had been paid by agents of the power company.

The thread of ownership or control leads directly from Paris to New York. The Kentucky-Tennessee Light and Power Company is but another of these euphonious sounding concerns with Southern names and Chicago or New York ownership. It is a subsidiary of the Associated Gas and Electric Company, one of the big holding companies of the country.

The taxpayers of Paris were led to believe that they were getting a big price for their property; and it required a hard fight in the courts to uncover the fact, as Judge Anderson asserts, that they were grossly deceived and would have been defrauded of a heavy sum."

The work of reaching the public was done in many cases under cover of some other organization. In one case some 450,000 copies of a pamphlet bearing the imprint of the Investment Bankers' Association were paid for by a power company. Another means of reaching the public was through the lecture platform. Here prominent speakers, secured by the utilities, were given opportunities to lecture, and their speeches were made news.

At a time when several national measures, such as Muscle Shoals and Boulder Dam were before Congress, one of the women's organizations, the League of Women Voters, after considerable study, decided that the policy

of government ownership and operation, was the one to support. Its meetings were watched and reported. Women employed by the utilities were urged to join it and similar organizations with a view to placing utility speakers before their meetings. At this time the N.E.L.A. contributed a sum of \$80,000 to another women's organization, the General Federation of Women's Clubs. This money was used over a three-year period for a survey of household appliances. In Ohio the utility director reported:

"The Ohio Federation of Women's Clubs is at present time conducting a campaign for 'adequately equipped homes.' This is taking the form of a state-wide school essay contest. . . . Behind this campaign is the Ohio Committee on Public Utility Information which has done the actual organization work. A fund of \$12,000 was raised. . . ." The Federation apparently at no time has criticized the power industry or taken any stand on public power matters.

The situation was somewhat complicated by the fact that while Mrs. John D. Sherman was President of the Federation an arrangement was made with the N.E.L.A. by which it provided a revolving fund to underwrite certain articles she was preparing for the magazines. Through an advertising agency it paid her \$600 a month for twenty-four months, a total of \$14,400. The receipts from any articles accepted by magazines were to be refunded to the N.E.L.A. It received in that way a sum of \$116. The net subsidy to the President of the Federation was \$14,284. She kept the money. This was in addition to the \$80,000 contributed to the Federation.

The importance of the banking interest has been mentioned in the preceding chapter. The N.E.L.A. has a special committee whose function seems to be that of lining up the nation's banks, especially in rural communities, be-

hind its legislative program of opposition to government ownership. The chairman of the Public Relations Section, James F. Owens, reported in 1927: "This year that committee will broaden its activities so that a contact shall be made with every banker in the country. No man outside of an editor has greater influence on the public opinion in the communities we serve than the local banker, and, above all, he should know our industry and the job we are doing."

The President of the Philadelphia Company, a holding group in the Standard Gas and Electric system, A. W. Robertson, wrote one of the N.E.L.A. officials, "Too much emphasis cannot be laid on the desirability of having local public utility officers kept in personal contact with local bankers. This is a vital factor of this partnership relation between the banker and the utility." But here again, the most initiative has apparently been shown by the California utility men. The President of the Pacific Gas and Electric, A. F. Hockenbeamer, wrote a letter to Mr. Robertson, which he requested be kept confidential, for "we have already been suspected of undue connivance with bankers." It will be remembered that in California there is an active public ownership fight.

"Owing to the fact that for about 25 years we have operated an interconnected system, serving a large number of communities and requiring one or more bank depositories in each of these centers, we 'discovered' the country banker quite a number of years ago.

The bankers as a rule are economically minded about as we are, but, nevertheless, we came to the conclusion about 15 years ago that as a practical incentive to get them to work with us there is no substitute for deposits. A worthwhile account, therefore, has been the keystone of our policy and to assure its application it is our practice to regulate balances in country banks from the head office.

I may add, in passing, that we have at this time accounts with 230 country banks scattered all over our territory and, while our policy keeps an average of around a million and

a half dollars tied up in balances in these country depositories, we believe it is worth while; first, because the service they render to us as banker is worth something, and secondly, because it cements their friendship and cooperation. Incidentally, we require no interest on these deposits.

A second step on retaining friendly relations with our country bankers has been to have our local managers keep in close touch with them. This they do, and I feel safe in saying that our district managers not only enjoy the friendly acquaintance of the presidents of these banks, but of all the directors, usually influential business and professional men, and of practically the entire personnel. . . .

Before beginning our first customer campaign in 1914, we saw to it that every one of our bankers was fully informed as to the stock we were about to offer and what our plans were for disposing of it. Every banker was also told at that time that any checks drawn on his bank in payment for any stock sold by us would be immediately redeposited with him and the money left there as long as we did not need it. This removed the fear of deposits being drawn down to pay for stock. Some of this money stayed in the banks for quite a long time, and the result was, with one exception, the bankers became, and still are, boosters of our stock, and an effective influence in spreading its sale."

Not only the bankers were appealed to by these small bribes (which increased the cost of electric energy) but a similar appeal was made directly to the consumers. They were urged to become investors in the stocks of the utilities. After they held stock the companies figured that they would care little whether the rates were as low as they might be. No one would then be able to interest them in the rights of the poorer people who were not in a position where they could become investors. This idea gained a large hold on the Pacific coast, notably in California. The Pacific Gas and Electric Company declared that the purpose of customer ownership was to stop socialistic doctrines that invaded the right of private initiative. This was urged upon the N.E.L.A. at Chicago in March, 1928, by its former President, R. H. Ballard, who in addition to stressing the importance of customer owner-

ship as a means of combating the growing tendency for public ownership, complimented "the present owners" of the N.E.L.A. upon the progress the association was making. Somewhat the same thing was said by Mr. Chester Corey, Vice-President of the Harris Trust and Savings Bank of Chicago: "The political value of the customer ownership of the stock of public utilities is well understood and many instances could be cited of the appreciation of the politicians of the unwisdom of favoring legislation adverse to the safety of the investments made in small units by a very large number of their constituents." Here again was the appeal to a financial interest other than the one of lower rates.

The interest of the investment bankers, of course, was direct. We see the vice-president of Bonbright and Company, one of the houses behind the United Corporation, writing to the counsel of the Joint Utility Committee at the time the Walsh resolution was defeated, "My heartiest congratulations on the vote in the Senate yesterday. . . . I know how much this was due to your personal work and strategy, and I think it is a great triumph. The point of it is to tell you how much we up here appreciate your share in yesterday's proceedings."

The farmers were the object of considerable attention. Many of the states organized committees to investigate the possibilities of extending rural electrification. Utility men were on them and they were financed by the utilities. In some cases, a report claiming that the situation was not ripe or that Ontario was not making a success of rural electrification, was forthcoming. In other cases a rich inactivity resulted. But the utilities stayed interested. Aylesworth wrote to Richardson, then still in Pennsylvania, "I am very much interested in the resolutions adopted by the Grange. This is a radical executive committee and I do not believe they will have much influence,

but we must get busy at once. I have been working on some of our people in the States where these people reside, and have been unable to get up very much interest until now. I am sure that we will be able to convince them that they are on the wrong track." We find Willard Cope of Georgia writing Sheridan of Missouri, "If Missouri is in any way like Georgia . . . it might be a good idea to consider directing your fire on the farmer and countryman as we are doing. In Georgia the farmer is absolutely in control." The subsidizing of agencies covering rural papers as well as the activities of the directors in connection with the rural press have been cited in an earlier section. In the case of Muscle Shoals the farmers' representatives were used.

The whole story of how general public opinion was influenced runs into tons of letters, constant watching of every opportunity to place men favorable to the utilities in spots where they could say something, write or do something that would bit by bit establish a favorable opinion, an uncritical, accepting opinion.

4. *Private Initiative in Public Education*

The interest of the power men in the public school system has probably brought forth more criticism than all the rest of their activities combined. There is a feeling that this is one thing too precious to be touched by self-interested people. We have seen it controlled before and we know the results well enough not to want any more of it. Professor Maurice Clark puts the situation clearly in *Social Control of Business*. "Education," he writes, "may fortify class prejudices, or break them down, rouse mental independence or lull it to sleep. It can go far to make bigots or adaptable coöperators, docile subjects or capable citizens, to spread a gospel of democracy and service, or to cultivate a self-conceited and self-satisfied snobbery, either of abstract culture, aristocratic privilege or com-

fortable middle-class complacency. It has been controlled in the interests of the church, of a militaristic aristocracy, of communism and atheism, and often it has worked wonders." ¹² It is the hope that education will yet help people to live more intelligently in their personal and increasingly complex social lives, that it alone can work the necessary wonders in adjusting men and women to the new world, which is at the bottom of the common faith in democracy.

Two findings are of immediate significance here. The first is a statement of the Federal Trade Commission of the evident purpose of the power men in penetrating into the schools. The second is by the Secretary of the National Education Association, indicating why the teachers let it happen. The day of their prestige and standing in the community has, to some extent, already gone by. Like many of the smaller business men they are dependents. The Commission states:

"The various activities described above, namely, teaching public-utility economics in schools of various grades, through special lectures by officers or employees of utility companies; financing or assisting in financing, the establishment of courses and research organizations for the study and teaching of public utility economics in colleges and universities; compiling or financing the preparation of text books and reference materials of various grades suitable for use in schools from grammar to university, the text books in particular to be written or issued by well-known authors or institutions of learning, whose reputations for 'impartiality' lend credibility to the productions; and, finally, the payment of retainers or salaries to college professors and instructors whose favorable interest is desired, all obviously are a part of a plan not only to get into the curricula and text books of schools of all grades those things desired by the leaders of public utility industry but also to influence teachers, instructors, and professors to such an extent that the subject matter will be taught in the way desired by the industry. Furthermore, the expressions of desire to put into the mouth of the professor the words the industry wishes spoken and of the feeling that state universities often have considerable influence with state commissions are significant in connection

with the scope and nature of the plan to mold opinion for the economic benefit of the industry.

The right of the industry to present its case before the bar of public opinion is unquestioned, provided such presentation is made openly in the name of the industry, and therefore without even a semblance of deception such as may be involved in subsidizing authors, teachers, universities or research organizations in order that inspired text books or other materials may be given greater credibility issued over the names of supposedly impartial writers, research organizations, or institutions of learning. Where this is done, the general public may well question whether the scientific attitude and integrity of established institutions of higher learning are not being undermined. Truly no greater calamity could happen either to industry or to the public than for educators, or educational institutions, to become the paid mouthpieces of economic groups."

The second finding, by the secretary of the teachers' organization, Mr. H. W. Crabtree, summarizes the activities of the power men in somewhat similar language, saying, "The purpose, it was stated, was to provide useful up-to-date information and to prepare the next generation of voters to appreciate and stand for private ownership of utilities. . . . To let these agencies, because of their millions and the strength of their organizations, have the right of way at this time would mean that all other agencies must also have free access to the schools. . . ." The crux of this report, however, and the explanation for a large part of the success of the penetration, undercover and otherwise into the schools, lies in the following:

"Owing to the power of these agencies in some localities and states, it may be unwise and dangerous for a given educator to raise his voice against what is going on, but there is no such handicap on the actions of this Association as a whole. Perhaps individuals need this type of backing. . . ."

Before the work of education could be undertaken on a high power scale, it was necessary to have authoritative text books favorable to the utilities. It would seem that

in all the college and university faculties of the country there were almost no men who would write the really hundred per cent text books that were wanted. With two exceptions, the books circulated by the N.E.L.A. were subsidized by it or by associated companies. The latest of these is by Ernest Greenwood, entitled *Aladdin*. It was published by Harper's, who made the sale of 5,000 copies through the author a stipulation in the contract. The author was directly on the payroll of the utilities and his contract was assigned over to the N.E.L.A., which carried on the distribution. Another book widely circulated and quoted by the power people is *Niagara in Politics* by the late emeritus professor James Mavor of Toronto University. In 1929 the investigation brought out that the N.E.L.A. had in August, 1925, shortly before the appearance of that book, sent a check for \$1,000 to an official of the Southern California Edison, who had billed it "for checks mailed to mutual friend." This mutual friend who received his pay in this way was the author of that book, Mavor. The N.E.L.A. circulated 5,423 copies of it. Another report on the power system owned by the league of municipalities in Ontario was prepared by two engineers. It is generally known as the Murray-Flood report. They received for this work the payment of \$8,830. It appeared in time for the California companies to use it against the Water and Power Act.

The attempt to get text books favorable to them used in the schools and colleges took three forms. One was censorship of existing books, exercised through local utility men or chambers of commerce. The other was a survey of all the colleges of the country to locate men who were writing on utility matters with the hope of helping them with material and the promise of stimulating the circulation of a favorable book. Some care was used to keep these activities under cover. The Missouri director wrote: "The fact that a Committee of the Wisconsin

Utility Association reported on text books used in the Wisconsin schools did receive some publicity through the Associated Press I deprecate very much. It is a matter for executive session between leaders of the industry, writers of text books and printers thereof." That director had received his guidance directly from the general manager of the St. Joseph (Mo.) Gas Company:

"I think this is very good work but great care must be used to avoid going too far since if the public were to get the idea that textbooks were being used as propoganda for public utility companies, the reaction would be worse than the original misinformation. I presume that the Committee fully appreciated this phase of the question."

Interest and concern were aroused by the surveys made, and within the next two years, similar surveys were made in New York, Pennsylvania, the Carolinas, Ohio, Iowa, Wisconsin, and Colorado, and at a meeting in 1927 of state committee officials, directors of state committees which had not made surveys "were urged to read the books used in the public schools of their respective states."

The text book surveys drew numerous suggestions for remedying the situation. It was arranged to have one of the text books, *Community Life and Civic Problems*, by Howard Copeland Hill, a Ginn publication with a circulation of 500,000 and an annual sale of 150,000 copies, revised by Onken, the editor of the *Electrical World*, and Jackson, the counsel for the N.E.L.A. The only change referred to in the record which the author accepted was elimination of the information concerning Insull's contribution of \$200,000 in Illinois politics.

A comprehensive outline of the activities of these committees is given by Carl D. Jackson, Chairman of the Committee of Coöperation with Educational Institutions of the N.E.L.A., in a letter written to a Michigan Committee man in December, 1927:

"You remember the question was not brought up at our Chicago meeting. There are reasons why it should not be brought up. People connected with the higher institutions of education are very touchy on that subject. Something which has occurred since, about which I will tell you when I see you, has confirmed me in my belief that we were right in not taking that up at Chicago specifically. There seems to be a feeling abroad that in some way the Committee on Coöperation with Educational Institutions can immediately control the nature of text books. This subject, while it did not come up in Chicago formally and was not mentioned was a matter of a good deal of conversation among the Educational Committee members at their meeting in Chicago. The reports which I received in respect to what was said were not such as to encourage a very high-handed attempt to directly control what should go into any text books.

I think largely the books you refer to were the books used in the secondary schools, and I know that the N.E.L.A. has actively taken this up with the publishers but it seems to be the most practical way of trying to get at the matter.

I am strongly in favor of trying to get at the best way of getting proper text books in the secondary schools as well as in other places. Contact with the publishers appears to be the very best way of bringing this about, although it is quite possible that something may be done locally through the local Chambers of Commerce and that is being worked on at present."

Mr. Jackson was not the only one to feel that there might be opposition to these methods of replacing unfavorable texts. Regarding a survey of text books made in North and South Carolina, Committee Director Boney wrote: "Please for the present regard this as confidential, for we are hoping through quiet and diplomatic measures to have some of these inimicable text books discarded." Secretary Sheridan of the Missouri Committee also voiced an opinion to this effect: "You will agree with me that it would be most unwise to give this work any publicity."

Of the two books not directly subsidized by the utilities and yet circulated by them, one was *Public Utilities*, by Dean Raymond of Iowa, who was offered various kinds of

help in preparing the manuscript. This he submitted for criticism and suggestion, writing, "If it should prove satisfactory to your committee, of course, I should be pleased to have your assistance in marketing the book." The other one was *Guiding Principles of Public Utility Regulation*, by A. C. Spurr, who is employed by the organization which furnishes reports on public utility cases. It is subsidized by the utilities and several prominent power men are on its board.

There were several successful uses of professors as false faces. In Minnesota a Committee on the Application of Electricity to Agriculture was formed, which employed Professor E. A. Stewart, of the Department of Agricultural Engineering of the State University. The organization was supported to the extent of \$7,500 by the power companies. He was also given a trip to Europe at the cost of \$500 a month and expenses. He made another of the series of subsidized unfavorable reports on Ontario, representing himself as coming from the university. The Ontario officials pointed out several errors in his report,¹⁸ but he published it, with his title, as having been approved by them. The report has been widely circulated by the power companies.

Several other men were used in a way somewhat similar to that in which Stewart was used. In Alabama Professor J. S. Thomas, director of the university extension work, was quietly in charge of the utilities information bureau for some time, drawing \$2,532 for it. He went about the State lecturing to Rotary, Kiwanis, Civitan and other civic bodies. He was asked, "Was it disclosed at any of the meetings that you were receiving a monthly salary from the power company?" He answered, "I do not think so." A delicate irony lies in the fact that when he addressed the utility men he chose as his topic, "Trade and Culture." More openly, with the consent of his president, a professor of journalism at Tulane, H. M.

Blaine, became director of the Louisiana-Mississippi Committee. One of his activities was to write himself questions about utilities and answer them in the papers.

There began to be some interest in this business of purchasing respectability by associating with university professors. In the old days business went to the church for its prestige. The great banking house of Fugger in the Middle Ages financed the expedition William Eck made into Italy in his attempt to get religious authority for his theory that it was ethical to charge interest on money. In the modern days business goes to the universities. One man interested in finding out how such prestige could be had wrote to Major Richardson, the director of the Joint Utility Committee, who had succeeded in having a utility man teach utility courses at the University of Pennsylvania. He received the reply:

"We laid the groundwork circumspectly and with care so that actual suggestions that such courses be started came from the faculties of the institutions themselves. The rest was routine."

The man in question, Mr. Grayson, who is a lawyer, was secretary of the New Jersey Public Service Information Bureau, as well as a professor at the Wharton School of Finance and had lectured under pay from the Joint Committee. His speeches, although paid for by the utilities and his written statements when reported in the press and given circulation by the utility directors usually stressed the professor part of his employment and left out the rest. For this he himself could probably be held responsible only in part—but the utilities thus secured apparently respectable, disinterested academic authority for their opinions on current economic and political problems.

A large part of the doubtful credit for beginning the utility drive on the secondary schools goes to the Illinois Committee, which Samuel Insull organized. It began the

inspection and classification of text books and the system of approaching school superintendents and boards with a view to having the unfavorable ones removed. There is no evidence of any considerable opposition by local superintendents and boards to such approaches. New England took the Insull lesson to heart and reported to the local companies: "More than three-quarters of this great number (of talks by utility people) were given before groups of high school students—once more emphasizing the fact that this is a most important way of getting correct information to the public. Those students will not only become your customers within the next few years, but at the present time are direct contact points with your present customers—their parents."

A great promise was held out to the utility men as a result of this educational work. One director informed the American Gas Association in 1925, "In the coming five years the work of the State Committees on public utility information should result in a very great change in the economic education of the American people. . . . Great educators have said, 'Give us the child at seven years old, and we care not who educates him thereafter, he will be ours.'"

The practice of sending doubtful and gamy information into the schools has been going on for over six years. There is an impression that it has stopped since the investigation. It has not stopped in full. The utility men see nothing wrong in what they have done, nothing wrong in what they have said to the children. Utility men have announced that no apologies are to be made, that the business is to go on as usual. As late as July, 1929, Mr. Martin Insull stated formally in the organ of the industry: "Our educational efforts in the schools have been purely factual and have dealt only with the physical and economic aspects of our business." Examination of some of the literature sent into the schools shows that the facts re-

cited as authoritative are from men who were bought and paid for, that they are hand-combed to prove that private ownership of the utilities and the present system of regulation are perfect, that some of the alleged facts have since been denied by the men to whom they were accredited, and that they deal at length with the theory of government.

The significant facts about this propaganda are two: In the schools, in the press, in political activities the utilities have played on the relative poverty and insecurity of the people with whom they dealt. Just as it was "unwise and dangerous" for an educator to raise his voice against what was going on, so it was the all important matter of making a living for editors to receive all the advertising they could, so also it was important for men in political life not to be opposed by the great wealth of the industry, so also it was important to local utility men not to antagonize their financial and industrial superiors by opposition to their activities. The second important fact is that it goes on because of their financial interest in retaining a docile and assenting public opinion behind their freedom from interference, and that as long as that financial interest remains there is no reason to believe the activities in schools, civic groups, press or politics will stop. They are one of the natural benefits that come to us from individual initiative and private ownership of power.

NOTES

¹ *New York Times*, August 2, 1930.

² Federal Trade Commission report, Senate Document 213, p. 238.

³ *Fortune*, July, 1930.

⁴ Committee on Coal and Power, *Report on Concentration of Control in the Electric Power Industry*, 1929. Out of print.

⁵ John T. Flynn, *Investment Trusts Gone Wrong*, Republic Publishing Co., 1930, p. 125.

⁶ Report of the Commission on Revision of the Public Service Commissions Laws, New York State, 1930, pp. 312-14.

⁷ M. H. Aylesworth, Vol. 7, p. 129, Federal Trade Commission investigation into Public Utility Corporations, record of the 13th Annual Convention of the Southeastern Division of the National Electric Light Association, Chattanooga, 1925.

⁸ *High Power Propaganda*, H. S. Raushenbush, pamphlet, Republic Publishing Co., 1928.

⁹ Silas Bent, "The Battle of Portland," *New Republic*, March 20, 1929.

¹⁰ New York State Legislative Investigation Committee, Report, Vol. 10, p. 23, 1906.

¹¹ *Congressional Record*, February 15, 1928.

¹² John Maurice Clark, *Social Control of Business*, p. 252.

¹³ Reply by Sir Adam Beck, issued by the Hydro-Electric Commission of Ontario, Toronto, Ont.

CHAPTER TWO

THE TRIUMPH OF THE PRIVATEE.

I. *The Pound of Flesh*

A CERTAIN amount of decent human sympathy to be available for the young men and women are employed by the utilities and then put into those positions described in the preceding chapter, where they are forced to become slick and crafty liars. It is not a very decent life for honorable people and some of them know it. The one man who spat it all out, in confidential letters to a friend, who called his superiors crooks, masquerading patriots and the like, ended his life not long after his own views became known to the country and to his superiors. It was an impossible situation for him. He had been brought up to expect something better. His trouble was idealism. Not all people are troubled that way. Future generations may have an easier time of it. If the teachers and ministers of the country would only stop giving the young people ideals about life they might get on much more comfortably.

There are, however, some comforts at present. The huge stakes the electric power industry has been playing for are not shared equally among the public relations men who create the public opinion which enables their superiors to win, but they are rather handsomely rewarded. Salaries as high as those of Governors of states are paid to many of them. They do not exactly starve for the cause they would like very much to believe is a good and true one. A reasonable share of what we pay for light dribbles into their pockets so that they may be fed and clothed and be amused and hearty the next day while making us continue

THE POWER FIGHT

usual. Now the jingling of the guinea honor feels only when there has been has been no hurt, it is so much velvet, des. In that case we are getting very little ssy, indeed.

the stakes in the electric power utility that ng sums to be spent in persuading people that lers of the industry are righteous and must be rule in their own fashion?

industry is almost as important to the American hyle as shelter. For shelter people must pay rent or buy R. eir homes. We can understand the size of the power stakes by analyzing the situation of people who want to buy a house instead of paying rent.

The people of the country, let us say, weigh the question of paying rent forever or of buying the industry out, the question of having a constant acrimonious and expensive lawsuit with the agents about the amount of the rent, over against owning their own power utility. They look at the figures. They see that the rent amounts to about $7\frac{1}{2}$ per cent a year on the amount claimed to be invested. In some states or cities a little less is charged, in others it runs as high as 10 per cent a year. The average is about $7\frac{1}{2}$ per cent.¹ How much does that come to in real money? In 1931 about 10 million dollars was invested in power property. The companies have other investments and assets which figure in their balance sheets, but ten billion may well represent the actual investment in power properties used in the public service. The rent at $7\frac{1}{2}$ per cent is \$750,000,000. Every year the property gets larger, and the rent gets larger. At the end of 30 years—in the year 1960—the rent will probably be at least \$1,500,000,000.

In short, if we keep on paying rent, the bill for the thirty years from 1931 to 1960 will add up to the very impressive total of about thirty-five billion dollars (\$34,800,-

000,000). That is a large sum for rent, and after paying that we go on paying more every year as the industry grows bigger.

With that rent bill ahead of us, we begin to weigh the question of owning our own home, or the power utility which serves us. How do we come out on that? We find that cities and states, or corporations organized by these governments, have to pay a rent for the money they want to use which is much less than $7\frac{1}{2}$ per cent every year. It is closer to 4 per cent. It is very rarely more than $4\frac{1}{2}$ per cent. That difference of three per cent a year looks small. But when it can be saved on large sums it makes an impressive saving.

How much saving does it really mean? Let us say for purposes of illustration that in 1931, at the beginning of the year, our states or cities or government power corporations organized by them, buy out the privately owned power industry and issue ten billion dollars' worth of bonds to pay off the outstanding private securities. For the use of that money they have to pay $4\frac{1}{2}$ per cent rent a year, \$450,000,000 in 1931. This is a saving of \$300,000,000 for that one year on the present rent. That saving is immediately invested in other government bonds and starts drawing interest. When the interest comes due it is immediately used to buy more government bonds and draw more interest, probably at 4 per cent. The next year, 1932, the saving is larger. The industry has grown to an investment of ten and a half billion. The rent under private ownership would be \$787,500,000. But we pay less. We pay \$472,500,000. Our saving is \$315,000,000. That is put aside also into a retirement fund, and invested in other government bonds, and collects interest.

In short, our outright savings for the thirty years from 1931 to 1960 would be \$13,920,000,000. These savings, however, have been drawing interest year by year, and we have reinvested the interest. During the thirty years that

interest has piled up, compounded, and our savings and interest combined amount to over twenty-five billion dollars, \$25,379,109,000.

Are we ready to buy the house now? We are, indeed. The industry has been growing. Instead of representing 10 billion dollars' worth of investment, it represents 20 billion dollars' worth. But we have a sum collected that is larger than that. We can retire all the public power corporation bonds, completely clear the industry of all necessity of paying rent. More than that, we have a sum of \$5,379,109,000 on hand. Every year it is collecting interest, and that interest is enough to pay for the necessary growth from year to year after that for 20 years.

At the end of thirty years we have paid off the mortgage and own the house. Under private ownership our rent would have been \$1,500,000,000 in 1960 and \$1,521,500,000 in 1961. Under our own ownership we collect the same rent in 1960, pay out \$900,000,000 for the actual use of money, and put aside in savings \$600,000,000. In 1961 our rent bill is 0. We are absolutely clear. From that time on to eternity we pay nothing for rent. Our children pay nothing for it. Their children pay nothing for the use of funds. We own the house free and clear.

What the power fight is about now becomes clearly apparent. The people who believe in owning your own home see that if they buy out the utility now, they can put aside enough out of their rent to pay off every penny of the indebtedness on the industry and have a reserve of over five billion on hand. They will not have to pay 54 billion during the 30 years after that. Instead, they will not have to pay one cent for rent.

The private owners have been exerting their social and financial and political pressure to prevent a public saving averaging, when the reinvestments of the savings at interest are included, \$845,970,000 for each of the next 30

years, and also to prevent a public saving (taking the form of rate reductions) which averages \$1,822,500,000 for each of the thirty years after that, 1961-1990.

Thus far the rugged individuals of the power industry have been successful in the fight. They have prevented the saving. They have also accomplished something more difficult, the greater moral victory of making it seem unpatriotic and radical for any citizen to stand up and try to save these sums for the people.

In order that these figures may be clear they are tabulated on pages 54 and 55. But it may be well to keep in mind several factors in this home-buying calculation. The most important is that there are no expenses which offset the public gains. In this calculation the operating expenses for coal, labor, taxes and the like are not changed. The high salaries now paid to the power officials are not changed. The depreciation charged to the consumers at present is not changed. The public would get such rate reductions as are possible through unification and engineering improvements, through abolition of regulatory expenses and lawsuits and of the political and advertising expenses now paid by the private owners. In this plan the reduction of rent on money would come only after the thirtieth year, and then the capital charges would drop to nothing. It is with that reduction of rent which we are concerned here.

In the first column, on the left of the following table, is given an estimated amount of investment in public service from 1931 through 1960. It rises at the rate of half a billion dollars for the first four years, at the rate of 400 million dollars for the five following years, and then the increase stands at 300 million dollars for each of the succeeding twenty-one years. If it turns out that the necessary increases are larger, the savings would be larger. The extra investment each year would be raised through bonds bearing $4\frac{1}{2}$ per cent interest. The rent charged on them, in this plan, is the same rent charged the con-

sumers at present under private ownership, $7\frac{1}{2}$ per cent. The savings would be put aside for a retirement fund.

In the second column is given the rent on the investment each year which would be charged under private ownership, and which is, under this plan, also collected each year from the consumers. It is charged at $7\frac{1}{2}$ per cent on the investment figure in the first column, year by year.

In the third column is given the sum actually paid each year by the city or state or governmental corporation for the use of the money borrowed to buy out the industry. It constitutes $4\frac{1}{2}$ per cent of the investment listed for that year in the first column.

In the fourth column are given the savings put aside each year into a fund to retire the debt. These savings are the difference between the second column and the third column.

In the fifth column a different calculation is presented. It shows the amount which the savings for each year would total if they were reinvested in government bonds and draw 4 per cent interest for the length of time still to be run through before the end of 1960. It counts on reinvestment of interest each year. If the interest were reinvested every half year the sum would be considerably larger. The present figures are in that respect conservative. Thus, at the end of 1931 there is a saving of \$300,000,000. Compounded at the rate of 4 per cent for 30 years that sum becomes \$972,990,000. The total at the bottom of the fifth column thus represents the savings plus the interest on that saving.

When the people of the country get around to buying rather than renting their power industry this plan will not, I take it, necessarily be the one they will put into effect. Under it the bulk of the financial benefit goes to those of us who will still be smoking a pipe and reading the papers in 1961 and to those who are now children.

The plan more likely to be adopted eases the rent burden on the present-day consumer to the extent of several hundred million dollars each year. The main reason for presenting this plan is to show very simply how much is at stake on one item alone, the cost of money to the consumers under private ownership.

The question at once arises: How does it happen that the electric power utility is allowed to collect such an ample return when money can be secured so much more cheaply, even by the companies themselves? They can raise a large part of the capital through bonds at 5 per cent, and additional sums through preferred stock at 6 or $6\frac{1}{2}$ or 7 per cent. Why must they have a 7 or 8 per cent return? The answer given by the companies is that they must protect their common stock dividends. They have to pay 8 per cent on their common. This is their claim. To make sure of being able to do that regularly they ask a little margin, a little more than 8 per cent for that stock.

At this point the commissions seem to have let down the public through indifference. They have rarely looked at the cost of money in the open market. They accepted the cost of money during the war, which was high, and allowed the utilities to charge the consumers the same high rent in all the years since then, during which the cost of money has been lower. This was neglect of the public interest. The public interest demanded that the service be given as inexpensively as possible. The cost of money is a large part of the elements of service. When a higher rent than necessary was given legal sanction by the state commissions they did two things which were bad. First, they made the consumers pay each year unnecessary sums. They allowed the establishment of claims for further payment on those sums for all time to come. In short, whenever in the last ten years of the money market the regulatory bodies allowed a rate of return of

TABLE I

(All column figures in millions)

| | 1 | 2 | 3 | 4 | 5 |
|------------|--|---|---|--------------------------|--|
| | <i>Total Investment End of Each Year</i> | <i>Annual Capital Charges under Private Ownership</i> | <i>Annual Sums Paid on Public Bonds</i> | <i>Annual Saving</i> | <i>Sum of Each Saving Plus Reinvested Interest to 1961</i> |
| 1931 | \$10,000. | \$ 750. | \$450. | \$300. | \$972.9900 |
| 1932 | 10,500. | 787.5 | 472.5 | 315. | 982.3275 |
| 1933 | 11,000. | 825. | 495. | 330. | 989.5710 |
| 1934 | 11,500. | 862.5 | 517.5 | 345. | 994.7385 |
| 1935 | 12,000. | 900. | 540. | 360. | 998.0640 |
| 1936 | 12,400. | 930. | 558. | 372. | 991.6776 |
| 1937 | 12,800. | 960. | 576. | 384. | 984.3072 |
| 1938 | 13,200. | 990. | 594. | 396. | 976.0212 |
| 1939 | 13,600. | 1020. | 612. | 408. | 966.9192 |
| 1940 | 14,000. | 1050. | 630. | 420. | 957.0540 |
| 1941 | 14,300. | 1072.5 | 643.5 | 429. | 939.9819 |
| 1942 | 14,600. | 1095. | 657. | 438. | 922.7784 |
| 1943 | 14,900. | 1117.5 | 670.5 | 447. | 905.5326 |
| 1944 | 15,200. | 1140. | 684. | 456. | 888.2424 |

the utility field are the only ones who get the real benefit from it. They do not allow it to be carried to its logical conclusion. The theory of revaluing on the basis of price changes stops where the pockets of the holding companies and other common stockholders begin. It does not go on and work for the benefit of the people who loan money in the form of bonds or preferred stock. The argument largely advanced comes close to this: Property built during a period of low prices is worth more now than it was before. The investors in the industry can buy less with the money they receive from the industry as rent for their money than they could in the days of lower prices. Therefore they must be given by the industry enough money to buy as many shoes and yachts as they could buy when prices were lower. Their real money return must remain the same, or at least not drop any.

Here is a definite attempt to single out utility investors from bank depositors and investors in industry, and give them a special and protected preference. The man who put a hundred dollars into the bank in 1910 and drew it out in 1930 might find that he could buy only half of what he could have bought with that money in 1910. He did not go to the courts to have them make the bank give him an extra hundred dollars so that he might buy as much as he could have bought in 1910. But the utilities, on the other hand, feel that they have a right to a form of governmental insurance against any possible drop in the purchasing power of the dollar.

Up to this point it was an unusual and impudent demand, but not wholly implausible. But then it began to be funny. It developed that the owners of utility bonds and preferred stocks were not included in the raffle. Somehow they had failed to make the assumption that they had any right to such special favors. Although they had put in their money at the same time as the common stockholders, their five or seven per cent return was to stay the same

in the coinage of the realm. It was only the common stockholders, in some mysterious and unique way, who suffered and demanded justice and redress. It was they alone who were the widows and orphans in the case. They must be reimbursed for any loss in purchasing power of their money. No, more than that. They must be allowed to take the bitter with the sweet. They must be reimbursed for all the loss in purchasing power of all the bondholders and preferred stockholders as well. It must all go to them.

This is something to sit up and pay attention to. It is nothing less than alchemy, changing brass into gold. A power company in Missouri, let us say, was built, largely before the war. The plant cost \$10,000,000. Bonds were sold to the extent of half that sum, to pay 5 per cent. Preferred stock was sold to the extent of \$2,500,000, to pay 7 per cent. The remaining \$2,500,000 is in common stock. In 1930 the company gets into a rate case. It asks to be allowed to earn an 8 per cent over all return on twenty millions, which is, it claims, the estimated cost to reproduce the plant at 1930 prices. The commission allows an increase on the rate-base of 30 per cent, \$3,000,000. Although this is not as much as they wanted the common stockholders celebrated enormously. They were getting \$375,000 a year before the decision. After the decision they collect \$615,000, an increase of 64 per cent.

| | <i>Before the decision</i> | | <i>After the decision</i> | |
|-----------------|----------------------------|-----------------|---------------------------|-----------------|
| | (equity) | (annual return) | (equity) | (annual return) |
| Bondholders .. | \$ 5,000,000 | \$250,000 | \$ 5,000,000 | \$ 250,000 |
| Preferred | | | | |
| Stockholders .. | 2,500,000 | 175,000 | 2,500,000 | 175,000 |
| Common stock. | 2,500,000 | 375,000 | 5,500,000 | 615,000 |
| | <hr/> | <hr/> | <hr/> | <hr/> |
| | \$10,000,000 | \$800,000 | \$13,000,000 | \$1,040,000 |
| | | (8%) | | (8%) |

The commissions are not unaware that this is the way the game works when it is played according to utility rules, but they have to play it. The New York Transit Commission in 1928 phrased it: "Until the rule as laid down receives some qualification, the commissions must act on the assumption that the law calls for a full return on the total value of the property regardless of the fact that the increase is shared in unequal proportions by those who have invested in the property—or rather that it is not shared at all by those who furnished nearly two-thirds of the capital." ¹⁴

Many odd things happen when many men use many imaginations to make much money. In Albany, New York, the traction company asked for an increase in fares on the basis of an estimate of what it would cost to build its property all new, \$14,293,933. The state regulatory commission allowed them to collect rates on a figure of \$12,000,000. Shortly afterward, the whole company was sold for \$7,500,000, close to half of what they had claimed was their value, and only 62 per cent of what the commission had decided was their value. Immediately the new owners scrapped several of the lines which had contributed to the high valuation. They scrapped them as so much junk. The cities affected immediately said, which seems to be reasonable: With all those lines scrapped the company is worth less than it was before. The valuation should be lowered. But the commission absolutely refused to reopen the case. One of the New York commissioners told a story to the investigating body of a case where the United Traction Company put a reproduction cost new on two old cars put together and painted, with their ends cut off to form a center entrance car. Another New York Commissioner allowed the Plattsburg Gas and Electric Company some \$171,000 for a steam generating plant that had not been used for three years. A Buffalo engi-

neer placed a \$1,000,000 valuation on generator units in a power house, which he termed a reasonable estimate of what it would cost to build that kind of a unit. The only trouble with that was that they were out of use and scrapped and that, in the second place, no one had built or wanted to build that kind of generator for twenty years.¹⁶

Now this bullying and bulldozing of the commissions to the point where they are afraid to start rate cases, where they are reduced to secret negotiations with the utilities, as the recent chairman of the New York Commission explained, was not accomplished by taking the Supreme Court seriously. The utilities have been far from taking it seriously. That is their record. Over fifty years ago, when the Court held that utilities could be regulated by the states, it said that the job of regulation was up to legislatures, not to the courts. It was called "a legislative and not a judicial question" by the Supreme Court. The Court repeated itself to that effect several times in the following years. The utilities were not dismayed. They kept bringing suits, insisting on their contention that "due process of law" meant the review and possible disapproval by the courts of any action by the state legislatures or their agents. Finally, in 1890, the Court reversed itself and held that rate cases had to be reviewed by the courts whenever the utilities felt that the rates set by state commissions hurt the value of their property. This was the beginning of a series of great utility victories which led to the present result: the utilities spend time on the state commissions only to get a favorable verdict, or to delay action. When a real point is involved they rush over the heads of the commissions to the Federal Courts.

While their latest triumph is that of getting the Court to say that there was something in their imaginative idea of reproducing their plants (and then using such decisions to inform the commissions that they were not allowed to

pay attention to anything but that idea), they have not stopped in their efforts to convince the Court that they are right and it is wrong. Their latest concerns the questions of fixing boundaries to their imagination. A utility enters a town where the roads are as yet unpaved. It digs trenches and puts in mains of gas pipe or conduits to carry electric wire. Afterward the city, at its own expense, paves these roads and streets. The utility gets into a rate case. It tells the Court that if it had to build its plant new it would have to tear up the pavement and repave it after putting in the mains or conduits. That would cost money. The money that it would cost, it says, ought to be added on to the amount on which it can now and ever after earn an eight per cent return. When the Gas Company in Des Moines, Iowa, tried this out on the Court in 1915 the Court balked. That was going too far. It said there should be no allowances for the merely theoretical cost of paving over mains. That did not discourage the utilities. They have submitted the point several times since. No imaginary dollar is too unreal for them to disregard. And the Court, having gone as far down their alley as it has already done, may yet give in and go all the way. Professor Edwin C. Goddard puts it thus: ". . . The injustice of increasing the returns to the utility because the city at its own expense has laid a pavement over utility mains has been recognized by the courts. It does not, they say, add to the value of the utility. But if cost of reproduction is value then it does add to the value, and this may encourage the continued insistence by the utilities."¹⁶

Still another imaginative product, very recently put forth, was tried out by the New York Telephone Company with some preliminary encouragement. No doubt it will be heard from again in the near future. For that company, being permitted to collect rates on an estimated idea of what its own huge plant would cost to reproduce,

was not enough. It cast around and hit upon an idea for new worlds to conquer which it called by the engagingly technical name of "inexperience factor." What that turned out to be was this: The telephone company bought material from an allied supply company. Obviously that company was well equipped to furnish exactly what the telephone company needed. In fact, if one of these theoretical fires or earthquakes that have been so useful to the utilities came along, and that supply company were wiped out of existence, the telephone company would then have to pay more for its equipment, buying it from companies not accustomed to supplying it. So the telephone company duly and legally petitioned to have the estimated difference between the present cost of its supplies and their hypothetical cost in the event that all these catastrophes happened (not to it, but to a supply company) added to its own rate base. It got as far as persuading a special master, appointed by a Federal Court, to include \$17,393,214 in its present rate-base, and to allow an eight per cent return on it. That meant that consumers today and next year and forever would pay \$1,391,440 a year in rates to defray the imaginary costs of an imaginary fire. A superior court threw the idea out, but it may be only for the moment.

Most of the ways here described of using imagination to drain the consumers for the benefit of the common stockholders are, to all appearances, perfectly legal, but what they have to do with performing a governmental function in the most efficient way possible must also be left to the imagination.

3. *Profiting by the Birth Rate*

The population of the country has been increasing persistently and has been shifting from the farms to the cities. In the course of this increase and shift the cities,

counties and states have made a great many public improvements. The public improvements and the increasing number of people in the towns and cities have raised the value of land. The utilities have stepped in and claimed successfully that all the increase in values touching the land they held, belonged to them rather than to the consumers or the cities.

This claim has been pronounced perfectly legal. It has, again, nothing whatever to do with furnishing an essential service as cheaply as possible. It is simply the appropriation of values created by others. It is cashing in on all the taxes men pay to improve the city, on the time and money other men spend attracting industries, on the buildings put up by those industries. On all this progress the utilities claim a toll.

The social effect of such appropriation of community values by the utilities is indicated by Commissioner Eastman of the Interstate Commerce Commission in his comment on two cases coming before that commission from Chicago. He was in the minority in both cases. The first involved the sale of certain lands in Chicago to a railroad terminal company. He said:

"These lands were bought for the most part many years ago, but it is here proposed that they shall be sold, with our approval, to the Terminal Company at a price based on a 1926 valuation, controlled, I assume, by the values of the privately owned adjoining property . . . In substance the transaction is equivalent to a huge marking up of book values with book profit of about 1,217 per cent in the case of the Santa Fe and 897 per cent in the case of the Illinois Central. . . .

"I have fully stated my reasons for believing that the public served by the railroads cannot without gross injustice be compelled to pay a return upon the increment in assumed value of railroad lands over and above their fair cost, an increment which in general is constantly growing, especially in great cities like Chicago. Under public ownership of the railroad properties a claim that such a return should be paid

would be unthinkable, and there is no good reason why private companies when they undertake to perform a function of the State, which is the situation in the case of the railroads, should be given huge profits which are unnecessary to induce investment and which the State, if it performed the function itself, would not think of claiming."¹⁷

The second case in which Commissioner Eastman pointed out the social expensiveness of this legal utility practice involved a Chicago junction. Here the majority of the Interstate Commerce Commission felt itself forced to allow a rental of \$2,000,000 a year on property which the companies claimed was now worth \$33,000,000. Of this no less than \$23,800,000 was made up of claimed land values. He said:

"The provision of the public highways for rail transportation is a function of the State, according to numerous decisions of the Supreme Court. If this public work is to be performed by private companies, they should be fairly compensated . . . But it is not right nor just nor economically sound that these private companies should be given, in addition, an opportunity to earn a return upon a further amount which does not represent funds which have been invested, but which represent increments in the estimated value of property, particularly lands which they own or use.

The result of the latter policy is that the community gains no benefit whatever from the timely devotion of property to public highway use, but must always pay as if the property were being acquired anew each year in the most untimely and improvident fashion. If the State had itself acquired the property originally, a return upon such an increment in values would not only never be sought, but in due time the original debt would be retired and cease to be a burden.

Such gradual return of debt is sound and constructive public finance, but under the prevailing policy, when a private railroad company undertakes the same work, the corresponding burden upon the public never grows less, but on the contrary continually increases and with menacing rapidity where terminal lands in great cities are involved. The notion that a policy which produces such results is right, just and economically sound is not the product of clear thinking,

but rests upon assumed property rights which in truth have no solid foundation."¹⁸

The utilities must be marked up with a great success against the public in this policy of appropriating other people's labor. It is neither "right, just nor economically sound," but they have forced the commissioners to accept it. As the cities grow larger the sum of this appropriation, on which we pay an annual return, will grow larger and larger. We are made to face the future with the burden of our own progress saddled onto our backs.

4. *Appropriating the Consumers' Contribution*

It is not only the social contributions of the cities and states which the utilities are bent on appropriating for the benefit of their common stockholders, it is a large part of the direct annual contribution of their consumers. So far we have been discussing the cost of money charged by the utilities against the consumers, and the amounts of money, fictitious or real, on which they are able to force an unnecessary return to themselves. Every year the consumers pay in a certain amount, as part of their rates, to keep the plant furnishing them power and light or telephone service or gas in perfect shape. When a generator has been used up and the company wants to replace it, it has already collected from the consumers a sum large enough to pay for the new generator. Such charges as these are allowed by all the commissions, and are usually known as depreciation charges. They represent capital contributed in rates by the consumers, not raised by the companies through the issue of stocks and bonds.

This sum paid annually for this purpose by the light and power users is not small. According to the best figures available it was about \$125,000,000 in 1928 and about \$160,000,000 in 1931.¹⁹ It amounts to about 6½ per cent of the annual gross revenue. Every year this

sum is collected and piled up. It is supposed to be held in reserve to replace worn-out equipment. But sometimes it is used by the utility to buy new plant and equipment, extending the property. It is not known at present how much of the industry has been built up out of depreciation funds collected from the consumers.

The great drive has been to have all or a large part of these accumulated depreciation funds added to the rate base (subtracting some lesser sum in their place) and thus have the consumers pay twice, once when they contributed the funds and again in the form of interest on their own contributions. And it has gone further. They have tried, with some success, to have an imaginary value added to these funds as well as to those raised by themselves.

Here is another instance where the utilities found it profitable not to take the Supreme Court too seriously. Years ago the Court upheld the commissions in their understanding that the utility consumers did not have to pay twice for the same thing. In the Cumberland Telephone case (212 U. S. 414) the Court declared that the utilities had the right to earn a fair return on such of their property as they had invested themselves, but what the consumers had invested was to be deducted from the rate base in figuring out what could be collected by the utilities. The depreciation charges, in so many words, could not be included in the sum on which the consumers had to pay capital charges. But year after year the utilities have returned to the Court claiming that the property created out of these depreciation charges contributed by the consumers really should belong to the common stockholders of the utilities. Against this effort the commissions seem to be waging a losing fight. And the cities which have tried to get the commissions to act also seem to be losing. Thus, in 1927, the West Virginia Supreme Court of Appeals, in a case brought by the City of Elkins against the commission, refused, in fixing the rate base, to deduct

the depreciation reserve, and held that the public had no interest in it. The Supreme Court of the United States held to this effect in 1926, in the case of the Board of Public Utility Commissioners *vs.* N. Y. Telephone Co. (271 U. S. 23).

The main thought seems to be that of adding to the rate base as much of the reserves already piled up as possible. The railroads, which had been reporting depreciation on their equipment, as well as on their plant, claimed that it was no longer necessary to make such reports on their equipment. The Interstate Commerce Commission concluded that, in that event, the railroads had understated their income during the years up to 1922 by no less than \$1,181,383,000. This Commission reported at the same time that as early as 1921 the electrical utilities had attacked depreciation before the newly set-up Federal Power Commission. After reiterating that the Supreme Court had definitely upheld the doctrine that depreciation must be deducted, it added: "Notwithstanding these decisions of the Supreme Court, however, the railroads, gas and electrical companies are not ready to concede this doctrine, and hence their insistence upon the retirement method of accounting."²⁰

The "retirement method" is one which the electrical utilities have favored for years. It was adopted by the association of state regulatory commissions in 1923. The famous unsigned letter which appeared in 1929 and concerned the attempt of the power companies to rid themselves of the Federal Power Commission's Chief Accountant, William V. King, gave the utilities credit for having the state commissions adopt this particular method. In 1930 Professor James C. Bonbright of Columbia, acting as Commissioner in the New York State investigation, said of this system, now in effect in most of the states: ". . . We believe that the system . . . is subject to grave defects. For it permits these companies to charge

to operating expenses such annual reserves for retirement as they see fit, at the same time that it makes no definite provision that these reserves must be deducted in the determination of the rate base."²¹

The hope of the utilities is very clear here. It is that while there is some danger that they may not be allowed to add to the rate base all of the "depreciation reserves," they may, by calling them "retirement reserves" and collecting them on a slightly different basis from the consumers, win the right to appropriate most of them. In commenting on this situation in New York State, Professor Bonbright says:

"That the danger which we have mentioned is a real one, and that the electrical and gas companies may take advantage of the opportunities which the danger affords, is indicated by the testimony of Mr. Nickerson, Vice-President of the Consolidated Gas Company, and also by the testimony of Mr. Sloan, President of the New York Edison Company. When questioned on the nature of their retirement reserves, both of these officials insisted that the property which has been purchased by means of these reserves belongs to the company just as much as does any of the rest of its property, and they insisted that this property is entitled to a 'reasonable rate of return' for the benefit of the stockholders, despite the admitted fact that it had been secured by charges to operating expenses—charges which have been paid for by the customers."²²

What can be done in the direction of trying to take money that doesn't belong to you, has been laid out in fine broad lines by the telephone companies. The Interstate Commerce Commission commented that in rate cases before the commissions the telephone companies were contending that their depreciation reserves should be disregarded and only the observed actual depreciation be deducted. "It was shown, for example, that one telephone company having a depreciation reserve equal to about 30 per cent of the recorded investment in the property is

ontending for an accrued depreciation for valuation purposes of no more than 9 per cent; and this illustration is typical." ²³ This was a proposal to appropriate not less than 70 per cent of the money contributed by the customers. The New York Telephone Company case furnishes a good public illustration of the intentions and purposes of the utilities in this matter.

In this case the Special Master appointed by a Federal Court found that there were \$71,000,000 in unexpended depreciation reserves, which had been used by the company for extending its plant. He quoted the state commission to the effect "that it is unjust to allow the stockholders of the company to get a return on property in which they have no money invested, but which is bought by the subscribers' money, and thereby depreciation is built upon depreciation, and there is every incentive for the company to build up large depreciation reserves and thereby increase the investment and return on property which is being financed by subscribers." With this view of the matter the Master was inclined to agree, but said that, "The decisions hold that, if unexpended reserve for depreciation is invested in the property, the company is entitled to a return upon property represented by the investment." Thereupon he allowed an 8 per cent return on it, \$5,680,000 a year. ²⁴ The lower Federal Court decided that the Master was wrong, but the case has not yet reached the Supreme Court.

This cool attempt to appropriate \$71,000,000 at one blow drew the comment from Commissioner Bonbright that it was "the most extreme instance of unfairness to the public" on this question. He went on: "We call this situation to public attention because it constitutes, in our opinion, one of the most shocking examples of duplicity and bad sportsmanship that has ever been perpetrated upon the public by any large and reputable public utility in this country." The history of the incident is that the

former president of the American Telephone and Telegraph, owner of most of the telephone lines in the country, pledged the good faith of the company that it would pay no more than reasonable dividends, investing all earnings above this amount in capital improvements which would never constitute a claim for a boost in the returns of security holders. Depreciation funds, he pledged, would never be charged against the consumers. On the strength of these assurances the state regulatory commissions allowed unusually large depreciation charges to be taken from the consumers. Since President Vail's death the telephone companies around the country have gone on collecting these large charges, and have secured in that way hundreds of millions of dollars' worth of property. However, far from keeping the pledges on which these large charges were allowed by the commissions, the telephone companies now deny that these tremendous reserves represent, in any sense, property of the customers, and they insist on their right to earn a return on the entire estimated reproduction cost of their property.

It met with the opposition of the commissions. The company took one case from New Jersey to the Supreme Court, and won it. The utility was allowed to collect a return from the consumers on excess depreciation reserves piled up by the consumers, and to revalue those excess reserves in the well-known way. The more the New Jersey telephone subscribers paid to the company in excess of what it needed, the less certain the subscribers were of reductions in rates. In New York State the federal statutory court sustained the commission and deducted the whole depreciation reserve from the amount on which the customers have to pay a rent. The case has not yet gone to the Supreme Court, and there is a good chance that the utilities will win there.²⁵

If not stopped in some drastic way this appropriation of the consumers' contributions may be used to return to

the companies an even greater increment on the actual investment than the additions for cost of reproduction at present prices. The practice of the Court has gradually changed into one of allowing very small depreciation deductions. If it persists in this practice and at the same time permits companies to claim the very large depreciation reserves which seem to be called for in the recent Baltimore case, the utilities may be expected to succeed better than ever in playing both ends against the public.

The Chicago Telephone Co. case of December 1, 1930, indicates a change of Supreme Court's position. (*Smith vs. Ill. Bell Telephone Co.*, 51 Sup. Ct. 65.)

5. *The Miracle of the Bread and Water*

State regulation was established to prevent the utilities from exercising monopoly practices. It was our substitute for competition. But at present there is hardly a utility in the country that does not go into a rate case and claim that it shall be allowed a return annually on a sum representing the simple fact that it exists—by city or state permission. The cities gave franchises, the state commissions gave as their equivalent, certificates allowing the companies to serve the communities. These were their bread of life. Without them they could not have begun living. They have managed to turn this bread into water. In this day of scientific miracles, financial miracles such as this are too apt to go unnoticed.

Here again there was a humble beginning and then audacious pursuit. When the power utilities started there was a period of a year or two during which the buildings were going up and the wires being strung, when there was no income. Interest on money was paid out, without any income. These were necessary costs involved in getting going. The commissions properly allowed the utilities to capitalize these costs, although in most cases they had no evidence that such costs did not represent large

promotion fees to allied banking and contracting interests. Ever since that time we have been paying an annual return on those "get-going" costs. In the early days they may have represented as much as ten per cent of the utility's entire investment. But since that day there is no such situation in most cases. The utilities are constantly expanding, and keep on supplying power at the same time. Nevertheless, they continue to ask the commissions for ten per cent or more of their total investment, to be added to the actual or revalued investment so that the consumers may be charged a return on it in rates. This claim is sometimes called "going-value," and is sometimes based entirely on the idea of get-going costs, and sometimes on the idea of being active and operating businesses—through city or state grant of privilege. In the latter case, the attempt to capitalize the monopoly right, it is asked for over and beyond the get-going costs.

Here some of the commissions surrendered entirely, and did so unnecessarily. Others fought the claim with varying success. In New York State the commission arbitrarily allowed, in most cases, a going value of one tenth of the claimed investment to be added. In many other states it is not lower. Thus in Tennessee in 1928 the commission fixed a value on the Tennessee Eastern Electric and its traction company of \$2,725,000. The special commissioner appointed by the court allowed a going value of \$275,000. In the same year the Pennsylvania commission allowed the Equitable Gas Company, serving Pittsburgh, to capitalize \$17,000,000 as overheads and, on top of that, \$10,000,000 as going concern value. The total valuation was \$88,602,978, which made the going value alone 11.2 per cent.

What the companies carry on their books representing the equivalent of going value, whether in the form of "water rights," "intangibles" or "franchises" rarely appears until a rate case is started. The Chief Accountant

of the Federal Power Commission, William V. King (whom the power companies have been trying to get rid of), made a report to the Commission on certain companies licensed by the Federal Power Commission. This report was to be submitted by the Commission to Congress in an attempt to secure funds adequate for its work. At the request of one of the companies affected, the Niagara Falls Power Company, the report was withheld by the Secretary of the Interior. The report cites for that company a claimed investment of \$77,671,451, of which \$5,762,143 (7.4%) was for "intangible property," \$8,718,334 (11.2%) for "over-head costs," and \$32,000,000 for "water and rights," or 41 per cent. He stated: "This aggregate (\$77,671,451) represents what appears to be the claim for 'fair value' of the property which was transferred on the books at the time of the consolidation at \$34,500,000, and which appears to have represented not more than \$20,500,000 of actual investment."²⁶ Here an amount which is somewhere between 7 and 48 per cent of the total seems to represent a capitalization of "rights."

Another instance of the very considerable sums which companies attempt to add to their actual cost by way of capitalization of monopoly privileges was brought out by Mr. King in 1930 when the Montana Power Company (one of the Electric Bond and Share interests) was attempting successfully to get a license for the Flathead site in Montana. On the basis of the company's own figures he found that they had appraised their tangible property at \$45,746,598. However, the company added to this an item for "water rights, contracts, franchises, etc." of \$51,491,269, thereby increasing the total valuation to \$97,237,867. Of this the capitalized rights account for 53 per cent.²⁷

Here we have the utilities attempting to capitalize their monopoly privileges at anywhere from 7 to 89 per cent. Only when the commissions start rate cases are these

going values questioned, and even then, in New York State, Pennsylvania and Tennessee, they are often allowed as much as 10 per cent of their total. It is interesting to note that the California Commission apparently does not allow this, and that no appeals have been taken on this point from the commission to the Court. The reason may well lie in the active municipal competition in that state, which makes it undesirable for a private utility to charge rates as high as it might legally secure.

What this amounts to throughout the country is hard to estimate. If as little as 5 per cent has been added to the claimed capitalization of the utilities for such going value, it would add up to \$500,000,000, on which the return of $7\frac{1}{2}$ per cent would come to \$37,500,000 annually. In the light of the Montana Power Company and Niagara Falls Power Company figures, cited above, it may be much more than 5 per cent of the total claimed value.

The significant fact is that the commissions were apparently so soured by defeat on other points that they left this one go by default.

The late Dr. E. W. Bemis pointed out to the National Association of Railway and Utility Commissioners that the leading decisions of the Supreme Court from 1915 to 1926 had held, whenever the point was raised, that the only necessary measure of going value was the overheads usually associated with the physical value, and reasonable expenses for organization. Yet during those years the commissions allowed going value, in many cases, in addition to general overheads, apparently ignoring what the Court had said in the leading cases, the Des Moines Gas case in 1915 and the Galveston Electric case in 1922. In the McCardle case (*McCardle vs. Indianapolis Water Co.*, 272 U. S. 400), however, the Court through Mr. Justice Butler held that 9.5 per cent for going value was not excessive. Dr. Bemis pointed out that this decision

was at variance with the Des Moines decision (*Des Moines Gas Co. vs. Des Moines*, 238 U. S. 153, 165), and that the majority of the Court did not rule on the specific point of going value in that it was not the deciding point in fixing the valuation at \$19,000,000. He concluded, "Since Mr. Justice Butler did not meet the reasoning in the Des Moines and Galveston cases and did not show how the Indianapolis case differed therefrom or on what basis a going value was allowed in the latter, it is still open to our public service commissions to measure going value as it was measured in the first two cases just mentioned, setting forth a clear analysis of these cases, and thus see whether the Supreme Court will again misinterpret or ignore them as in the Indianapolis case." ²⁸

6. *Stacking the Cards*

One of the most dangerous things which the electric power utilities have been busy doing in recent years is that of loading the industry with securities which have no relation to the actual money invested in it. They have not only loaded the holding companies in that way, they have also loaded the operating companies. This can be taken as a concerted move to set up claims for the future which neither the state regulatory bodies nor the states and municipalities interested in purchasing the utilities will, they hope, be able to ignore. It is a process of stacking the cards so that they cannot lose either way.

In many cases the commissions have given such loading their approval, perhaps through indifference, perhaps through impotence, perhaps, however, through sheer blindness to its significance. In some cases they allowed the sales to be made, the securities to be issued, exchanged and marketed, making the provision that such securities should never be governing in rate cases. If they are really under the impression that this will protect the consumer from the claims being established they are probably in

for a rude awakening. In fact, some of them seem to know it now.

The extent to which loading has been going on during the past few years is being uncovered by the Federal Trade Commission in the investigation which followed the costly but successful lobby of the utilities to prevent the United States Senate, under the leadership of Senator Thomas J. Walsh of Montana, from going into the matter itself. Some of it was uncovered by the investigating commission in New York State in 1930, some by the City Club of New York. Only a beginning has been made to date, and it is still too early to say that the average write-ups of 80 per cent found so far represent the trend for the rest of the industry.

In view of the great probability that these write-ups will soon constitute the base on which the utilities will be fighting to keep their rates high, the following figures will be of interest to the consumers in such widely separated states as Arkansas, Utah, New York, Louisiana, New Jersey, Mississippi, Pennsylvania, West Virginia, Tennessee, Ohio, Indiana, Virginia, Michigan, Washington, Texas, Minnesota, Kansas, Nebraska and Florida. More than half the population of the country is in these states.

In the table the name given is that of the holding or operating company effecting the transaction. In the first column is the actual value carried on the books of the companies which were bought or sold. When it represents common stock it includes the equity represented by surplus. In the second column is given the amount of securities issued as purchase price or entered on the books of the new company. The third column represents the extent of the write-up, the amount by which the new capital entries on the books exceed the actual book value or first cost.

In these cases the securities were carried on the books

of operating companies, mostly, at \$441,246,680. Sales or mergers of these operating companies were arranged by the holding groups controlling them. When the merger

TABLE V

| | <i>Book Value or Actual First Cost</i> | <i>Purchase Price or New Capital Entries</i> | <i>Excess</i> |
|--|--|--|----------------------|
| 1. Electric Power and Light (Arkansas)..... | \$30,301,937 | \$37,272,539 | \$6,970,602 |
| 2. Electric Power and Light (Louisiana)..... | 9,190,757 | 19,076,594 | 9,885,837 |
| 3. Electric Power and Light (Mississippi)..... | 9,726,966 | 20,441,510 | 10,714,544 |
| 4. Buffalo, Niagara and Eastern (New York)... | 54,878,574 | 107,836,022 | 52,957,448 |
| 5. Consolidated Gas (N.Y.) | 102,401,398 | 154,575,000 | 52,173,602 |
| 6. Rochester Empire (N.Y.) | 7,550,082 | 25,140,284 | 17,590,202 |
| 7. Mohawk-Hudson (N. Y.) | 44,697,535 | 75,296,354 | 30,598,819 |
| 8. Electric Bond and Share (Utah) | 6,433,118 | 29,433,118 | 23,000,000 |
| 9. American Power and Light (Mont., Wash., Tex., Minn., Kas., Neb., Florida) | 55,284,426 | 123,725,358 | 68,440,932 |
| 10. Appalachian Electric (West Virginia, Virginia, Tennessee)..... | 72,621,455 | 139,039,648 | 66,418,193 |
| 11. Ohio Power Company (Ohio, West Virginia). | 14,253,000 | 17,029,000 | 2,776,000 |
| 12. Atlantic City El. (N. J.) | 3,483,283 | 5,696,057 | 2,212,774 |
| 13. Scranton Electric (Pa.) | 17,350,976 | 21,777,303 | 4,426,327 |
| 14. Indiana and Michigan Electric (Indiana, Mich.) | 13,073,173 | 19,031,648 | 5,958,475 |
| Totals: | \$441,246,680 | \$795,370,435 | \$354,125,755 |
| Excess over book value or actual first cost | | | 80.0 per cent |

or sale was completed the sum of \$795,370,435 stood on the books of the new companies ready to draw interest or dividends. It represents write-ups of 80 per cent over the cost carried on the original books. Or, expressed differently, the present claimed capitalization of these com-

panies consists only 55.5 per cent of first money put into them, and 44.5 per cent of write-ups or forced purchases. If the average write-up for the claimed investment in the whole industry should turn out to be no more than half of this, perhaps only 20 per cent of the present claimed capitalization of \$10,000,000,000, it would still represent the not inconsiderable sum of two billion dollars.

A few details on some of these transactions may have local interest. The transaction in Arkansas involved the Arkansas Power and Light Company. The fixed capital on the books after the reorganization was 23 per cent greater than immediately before. In Louisiana the company involved was the Louisiana Power and Light and the fixed capital on the new books was 109.64 per cent higher than before the reorganization. In the case of the Mississippi Power and Light it was 110.15 per cent higher. The average write-up for these three Electric Power and Light groups was 56.4 per cent.²⁹

In the case of the New York State companies the counsel for the investigating commission reported: "More examples could be given of the resultant increase of capitalization over actual investments. Mr. Carlisle, for instance, agreed that the capitalized value of the three holding companies which were acquired upon the formation of the Niagara Hudson Power Corporation, namely, the Buffalo, Niagara and Eastern, the Mohawk Hudson and the Northeastern Power Corporation, was increased by approximately \$77,000,000 over their book value on the books of the issuing companies; and further that the capitalization of each of these subsidiary holding companies was substantially in excess of the book values of the operating companies which they control."³⁰ The minority commissioners, not disputed by the majority, reported on this matter: "We have before us evidence that recent upstate mergers have inflated the capitalization of

the properties by approximately \$145,000,000. This represents the excess of the securities issued in exchange over the book values of the equities acquired. It includes \$52,957,448 in connection with the Buffalo, Niagara and Eastern, \$30,598,819 in connection with the Mohawk Hudson, but belonging to the Niagara Hudson combine of which Mr. Floyd Carlisle is Chairman, \$43,000,000 in connection with the Mohawk Valley Power and \$17,590,202 in connection with the Rochester Central Group, both the latter now included in the Associated Gas and Electric. Mr. Carlisle in his testimony dealt at length with this question and indicated clearly, that by a process of reappraisal of the properties on the cost of reproduction theory, they intended to put value behind the excess at which the stocks of the subsidiary companies were carried to the books of the merger. . . . This over-valuation, which in its various forms is defeating efforts at public utility regulation, is still an attempt to determine capitalization, even in a regulated industry, on the basis of profits."⁸¹ The figures given for the Consolidated Gas Company of New York were compiled by the City Club of New York following the purchase of the Brooklyn Edison, a company allied in interest.⁸² The counsel for the investigating commission pointed out that the Public Service Commission had fixed the book value of the Brooklyn Edison stock without deducting the retirement reserve and other reserves built up by charges to operating expense. The minority of the commission, uncontradicted, stated that, "The New York Public Service Commission never acted more openly as an ally to the utility companies than it did in connection with the absorption of the Brooklyn Edison Company by Consolidated Gas in 1928." Here a non-partisan organization, The Public Committee on Power in New York State, had attempted to secure some guarantees that the merger would be for the benefit of the consumers. Mr. Morris L. Ernst, counsel for the

Committee, and the only consumers' representative, "was almost crudely brushed aside at the demand of Mr. John A. Garvin, counsel for and director of the Consolidated Gas Company," although the Public Committee "was the only party in the entire case to consider seriously any issue save the mutual satisfaction of the stockholders involved." Within thirty days after the Commission allowed the exchange of stock at over \$52,000,000 more than its book value, the dividends were increased over \$7,000,000 annually.⁸³

In Utah the situation was that the Electric Bond and Share was the holding company and the Utah Power and Light the operating company. Mr. Kenneth A. Miller, Federal Trade Commission accountant, testified: "Securities and properties costing Electric Bond and Share \$6,433,118 were capitalized by the Utah Power and Light at approximately \$23,000,000 more than such cost to Bond and Share within a period of three months after the transfer of such securities to the Utah Securities Corporation."⁸⁴

In Minnesota, according to Trade Commission accountant Mr. Ludvall, the book value of the Great Northern Power Company was \$13,326,328. After its reorganization it was \$33,578,006. This he termed a write-up of \$20,251,682, amounting to 152 per cent. Including this with the various other companies of the American Power and Light, again one of the Electric Bond and Share group, he found a total write-up as given in the table, of over sixty-six million dollars.⁸⁵

The write-ups of several of the operating companies of the American Gas and Electric group were gone into in some detail. Like the others they were accomplished through mergers in which all, or almost all of the merging companies were controlled by the holding company group, which also held most of the common, and so gets most of the benefit. The Appalachian Electric Power

Company was constituted in its present form on April 1, 1926. On March 31st the plant and investment account carried the seventy-two million figure. The next day it carried the hundred and thirty-nine million figure. The holding company received from the new operating company \$49,438,602 more for the assets it owned than it had paid for them.⁸⁶ In the course of discovering the inflation in the Ohio Power Company, operating in Ohio and West Virginia, the Federal Trade Commission accountants also found that the company had under-reported its revenue in 1928 to the Ohio Public Service Commission by the net sum of \$2,111,000.⁸⁷ The write-up of the Indiana and Michigan Electric was allowed by the Public Service Commissions of those two states.⁸⁸ The Scranton Electric received the approval of the Pennsylvania Public Service Commission for its write-up. In this the sum of \$2,239,537, or about 12½ per cent was included for "going value." The Atlantic City Electric also received the permission of the New Jersey Commission to effect its write-up.⁸⁹

The attempts to stop the establishment of claims such as these have been sporadic and, on the whole, feeble, outside of California, Massachusetts and Maryland. The New York Commission, which has allowed all the big companies to engage in the process, recently, after it was under fire, refused to do so in the case of a much smaller company, the Ticonderoga Electric Light and Power.⁴⁰ The Illinois Commission apparently does the same. When things got to the point that a holding company in Maine issued \$3,000,000 of securities without Commission approval and after that was accomplished asked to be treated as a public utility in order to consolidate fifteen operating companies, even the Maine Commission called a halt. The Maryland Commission recently was confronted by an attempt of a purchasing company to put \$518,000 on the books where the commission's engineer found a reproduc-

tion cost of only \$242,540. The Commission was taken into court by the company, and was there ordered to allow the sale, on the ground that it could not be disallowed unless it could be shown affirmatively that it was not in the public interest. After this the Maryland Legislature passed a law making it incumbent upon the companies to show that sales were in the public interest rather than leaving the burden of disproof on the Commission. The California Commission has frequently refused such permission, but the situation there, through the example of several large and successful municipal plants, is different. In Massachusetts the Commission has, on the whole, prevented over-capitalization.

Generally the state regulatory bodies have allowed such capitalizations to take place, making a proviso at the same time that the amounts should never influence rate cases. This has not been the practice of the Federal Power Commission, in so far as that body has been allowed to be effective. When the lack of power on the part of the Pennsylvania Commission led the Philadelphia Electric Company to attempt to issue itself a bonus of \$2,355,000 on the Conowingo development in Maryland, putting in an equity of 53 cents a share and proposing to sell those shares for \$25.00 the Federal Power Commission stepped in to reveal what was being done and to prevent the issue of all but \$50,000 of that sum. When in 1929 it discovered that the Cumberland River Power Company, an Insull interest, was trying to include as part of its actual expenses some 30,000 shares of stock which it planned to issue to its two parent Insull companies and to value at \$250,000, the Solicitor of the Commission, Mr. Charles Russell, observed: "We have a situation wherein the whole program is one instituted and fostered by the Middle West Utilities Company, and all the dealings through the other companies involved the same property and were in the interest of the Middle West Utilities Company.

. . . To say now that it should receive compensation for developing its own property, for financing its own interest, and for the advancement of its own future cannot be conceived or recognized. . . . The result of including this item would require the rate payers to pay rates sufficient to net a return on that sum and require the Government at the end of the term of the license to pay that sum to the licensee." It is claims which differ from this only slightly that the state commissions have allowed very cheerfully.

The result of allowing the free and easy issue of securities can be seen at its worst in the case of the bankruptcy of W. B. Foshay Company. Here was a company in the forefront of the "boosters." It advertised liberally "no loss to any investor." It built the great tower in Minneapolis for its offices. Its plan of operation was to buy utility properties anywhere on the continent and sell them to a subsidiary, Public Utility Consolidated Corporation, incorporated in Delaware and Arizona, two states somewhat inclined to indifference in regard to what is done under their protection. The subsidiary did not turn over the price which the Foshay company had paid, it turned over much more, based on reappraisals and the like. The head company then tried to market these securities. It also collected a management fee from the operating companies. Between 1927 and 1929 some \$29,000,000 of securities were passed on to the public. Approval of the sales by the Arizona Commission automatically permitted the sale of securities in many other states, including Minnesota, without investigation by the agencies of the other states. In California, however, the commission disallowed almost \$800,000, a third of one of these revaluations. The only effective result of that, outside of California, was that the Public Utility Consolidated added a "going concern" value of \$1,430,000,

a write-up of 92.6 per cent. After that there was fudging of the accounts, covering up unprofitable transactions, and finally bankruptcy. As far as their advertisements go, their management fees, their revaluations, there was almost no difference between the Foshay system and that of other companies here described.

While the utilities and the commissions have excused the practice of loading the companies with securities having no relation to the original investment, on the ground that the rates will not be affected, the claim seems as specious as the similar one that whatever holding companies did had no effect on rates. Apparently by way of preparing the ground for the utilities, or giving warning, the Committee on Public Utility Rates of the National Association of Railway and Utility Commissioners recently made a report which seems to throw all such old claims into the waste basket. It was composed of representatives of the state commissions of Indiana, New York, North Carolina, Alabama, Tennessee and Vermont. It told the other commissioners very definitely that the loading of operating companies with securities could not be disregarded in rate cases. The language it used was that one of the elements to be taken into consideration in determining value in rate cases is "the price paid for utility property by its owners within a reasonable period of the time of inquiry."

This report which seems to give the lie to all the previous public assurances by the commissions and utilities was written and signed by the chairman of the Indiana Commission, Mr. F. T. Singleton, after an experience in Indiana which taught him a valuable lesson. There a utility, the People's Motor Coach Company, became involved in a rate suit. The Commission had, in this case, previously objected to a security issue by the utility and had been silenced by the court. So in the rate case it threw up its hands and said it had no option but to accept

the value shown by the securities. The language it used in the rate case is clear on this matter :

“Although considerable evidence was submitted at the hearings as to the value of the property of the People’s Motor Coach Company, the fact remains that on November 5, 1927, the Public Service Commission of Indiana, by order of the circuit court of Marion City, Indiana, authorized the Indianapolis Street Railway Company to purchase all of the stock of the People’s Motor Coach Company and to issue \$500,000 of its 8 per cent notes for the purpose of purchasing such stock . . . the Commission fails to see how it could, in this proceeding, find a lower value at this time for all the property of the People’s Motor Coach Company. It was ordered by the court upon the basis of revenues derived from the ten cent fare which is at issue in this cause . . .”⁴¹

What the Commission said was that the securities were issued. They were issued on a basis of capitalized profit. The capitalized profit was based on a high charge to the consumers. It could not attack the high charge to the consumers because it was the basis of the securities. The security issue kept the rates high. This was the discovery of the Indiana Commission. A situation had been created in which it was helpless. It is the contention here that the loading down of utilities by such security issues, whether it involves an over-capitalization of 80 per cent or 20 per cent leads always to the same result, regardless of the disclaimers of the utilities and the commissions.

After that experience the Indiana Commission seems to have taken a slightly different attitude from what it did in the case of the Indiana and Michigan Electric, mentioned in Table V. In the case of the Associated Telephone Company, in 1928, it said: “If utilities are bought at too high a figure a raise of rates is inevitable. . . .”⁴²

In the key case the Indiana Commission had the excuse that it was obeying a court. While that does not change the economic significance of its action or lessen by one

cent the burden put on the consumers, it does raise the further question, what happens if a state security commission passes on holding company securities? Will the state regulatory commissions be bound to recognize that these securities now fix the value of the utilities? The answer to that seems to be the same answer to the question of whether the allowance of such security issues by the commissions themselves will not be binding on the commissions in rate cases as well as in security cases. That the answer is "yes" can be seen from the language of the Rate Committee of the National Association of Railway and Utility Commissioners after the Indiana experience. The representatives of six state commissions said:

"Since the world war and the prevalence of high prices brought about by it, there has been a strong tendency to speculate in utility stocks, securities and utility properties. Commissions have been liberal in their scrutiny of evidences of value offered in such cases. *Value found in one case cannot be excluded as evidence of value in any other case affecting the same property. The amount of bonds and preferred stock authorized in a security case must bind, to a greater or less degree, the commissions to grant rates sufficient to pay the dividends on securities so authorized.* Rates must provide the money for such payments." ⁴⁸ (Their italics.)

Thus the excess security issues, representing in the cases cited before some 80 per cent of the actual cost, seem to be on their way into the rate base, and the stacking of the cards against the public begins to be effective. This is nothing new. We have been through it all with the street railways. In the days before the war when a five cent fare meant big profits they stuck to their contracts and franchises like glue. After the era of high prices began they threw their franchise obligations overboard and made their successful plea for higher rates on the basis of the securities they had issued, the well known widows and orphans who had bought those securities and the like. Mr. Justice Brandeis recently pointed out, in the

O'Fallon case, that the railroads in connection with the Act of 1920, proposed that the investment account be made the sole element in determination of the rate base.⁴⁴ Even more recently, in 1930, the vice-president of the New York Edison, on the stand in a rate case stated that valuation must take investments into consideration.⁴⁵ This was, in effect, a warning to the people of New York City that now they might begin paying returns on the excess \$52,173,602 which the Public Service Commission allowed the companies in the merger of 1928.

Here we have sufficient indication of what has already begun to happen and may be expected, under regulation, to continue. By overloading the companies with securities the utilities have accomplished a number of things. They have made it seem more expensive and difficult for municipalities and states to buy them out. They have also secured for themselves an alternative to the revaluation practice which has been so valuable to them in recent years. In case prices tumble, as they have done in 1930 and 1931, and revaluation would mean a lower rather than a higher rate base they can now turn to the securities issued and claim that "value found in one case cannot be excluded as evidence of value in any other case affecting the same property." It promises to offer them even greater protection than the idea of revaluing on the basis of price changes. What it has to do with furnishing service as cheaply as possible is quite another matter.

7. *The Unregulated Half*

Regulation at its most efficient has some resemblance to the cost plus system, with which we became so familiar during the war. No matter how great the costs are, the utilities are allowed to earn them plus a return on their real or fancied capital. It is here that our regulatory system works backward most brilliantly. Where there

is a commission, alert to check excess profits, the utilities are under pressure to increase the size of their operating costs and lower the apparent profits. Where the commission is not alert they are under pressure to reduce their costs only for the benefit of the stockholders. In practically no cases can the commissions step in and regulate operating costs. This leaves close to half of the gross income of the utilities unregulated.

The importance of this sum can be seen from a look at the way the gross income of the industry is divided. The following estimate is based on the figure of \$1,924,000,000 gross income for 1928, given by the National Electric Light Association,⁴⁶ and on the percentages for other items found to be working in the case of 52 companies, representing 76 per cent of the industry, by Mr. C. O. Hardy, of the Institute of Economics.

| | <i>Per Cent of Gross Income</i> | <i>Estimated Amount</i> |
|--------------------------------------|-------------------------------------|-----------------------------|
| Payments on capital | | |
| Bond interest | 15.1 | \$290,524,000 |
| Dividends | 9.1 | 175,084,000 |
| Balance (undistributed dividends) .. | 13.1 | 252,044,000 |
| | <hr/> 37.3 | <hr/> 717,652,000 |
| Depreciation | 6.5 | 125,060,000 |
| Taxes | 8.5 | 163,540,000 |
| Operating Expenses | 47.7 | 917,748,000 |
| | <hr/> 100.0 | <hr/> \$1,924,000,000 |

These operating expenses, which apparently passed the one billion mark in 1930, are not touched to any great extent by the commissions. Nothing short of positive proof of collusion and fraud will warrant a commission in deciding that the sums paid for coal or copper or other supplies have been excessive. It is almost impossible for them, handicapped by lack of funds and far behind in keeping up with their job on other points, to obtain such

proof. The result is that incompetence in management is rewarded by high rates. Not only that, but a deliberate and purposeful incompetence may even be encouraged. Professor Philip Cabot expresses it: ". . . The system puts the management under very severe temptation to extract indirect or concealed profits through the operating accounts which are so casually glanced at, and the suspicion with which many of the holding companies, which seem to be designed to make such manipulation possible, are regarded, indicates that much of this sort of thing may be going on." The discoveries by the Federal Trade Commission of the extent to which it is going on will be cited later. He says further:

"If there are any who think that this point of view is fanciful and that the dangers here suggested are unreal, let them consult any investment banker familiar with public utility securities. He will recommend this form of security and almost the first advantage that he will urge is that they are less dependent than competitive industries upon exceptional managerial ability . . . It is easy to understand the bankers' affection for the present methods of regulation because it works in his favor, but it is hard to see the advantage to the customers for whose benefit the scheme was originally devised." 47

Here is a heavy blow at the managerial efficiency about which the public utility men speak so often and with so much self-applause. It can be explained simply by the fact that while the engineers and managers may be the best in their world, they are no longer free to pass on their social contribution to the public. They are subordinates and dependents. The holding company and banking interests have the real control and their interest is not a professional engineering one.

Before illustrating what this may amount to in real money loss to the consumers, it should be pointed out that the utilities have continued until 1931 to manipulate their operating expenses through a tricky little point of law.

It is one of many cases where the law laid down in our early agricultural days had not caught up with the changed economic and financial order. As interpreted by the Supreme Court, prior to the Chicago Telephone case in December, 1930, the law held that a regulatory body had no control over unreasonable charges made by a parent holding company which is not under the control of that state body. It could not refuse to allow charges unless fraud is shown. The idea was that two companies, if they only had different names, were really different in interest and might be assumed to be dealing with one another at arm's length. The idea grew up before there were holding companies. What happens today is that an operating company is bought by a holding company. The latter owns the voting control. It puts its directors on the board of the operating utility. It chooses and dismisses the president of the operating company. Its own treasurer is also treasurer of the operating utility. Its directors make a contract with themselves (acting for the operating utility) to charge (and to pay) a certain percentage for management or construction or engineering fees. These fees may drain the operating utility for the benefit of the holding company, but fraud can not possibly be proved. As long as the legal fiction was maintained that when two companies retained different names they were different in interest, no fraud could ever be proved. No man could ever be convicted of cheating himself.

The utilities have taken large advantage of this tricky little point of law. The accountant for the Federal Trade Commission who examined the record of one of the holding companies in the Electric Bond and Share group, the American Gas and Electric, reported that in 1927 that holding company received \$2,499,000 in fees, for which it performed actual services costing \$708,934.⁴⁸ In 1928 the fees collected were \$2,228,019 and the service cost

the holding company only \$586,759. For the thirteen years up to and including 1929, the holding company collected in fees \$381, for every \$100 of actual service given the operating company. Another accountant reported that the Electric Bond and Share itself had collected in 1927 in fees \$9,373,172, which exceeded the actual cost of the services furnished by \$4,809,654, or at the rate of \$211 for every \$100 worth of actual service.⁴⁹ This company refused the Commission the right to examine its books. On the basis of available figures over the 24 year period including 1929 it was reported to the Commission that on supervision fees amounting to \$51,096,767, there was a minimum profit of \$30,591,428. For every \$100 of service, \$249 had been collected.⁵⁰

The two significant facts about such overcharges are that they are, as a matter of routine, unregulated and that a good share of them, those for servicing and construction, are charged to the capital account of the operating companies. On these the consumers of the operating utility pay an annual return. Some of the general supervision fees may also be charged to fixed capital and thus obtain the right to an annual return. In this second fact lies the complete refutation of the contention of the utilities, still accepted by a few editorial writers, that the management and conduct of the holding companies is a matter of indifference to the consumers. From this false contention also is drawn the conclusion that the holding companies should be left unregulated.

There are other ways in which the utilities yield to the temptation to be free and easy about operating expenses. The record is by no mean complete on this point, since it is one which the commissions do not often investigate. The Consolidated Gas properties in New York City paid to a tax expert, a Mr. Witbeck, the sum of \$1,302,782, which was charged against rates, to secure tax reductions. Before being employed by the utilities he had been in the

State Tax Commission fixing the very tax assessments he was employed to reduce. The facts of the matter were admitted by Mr. Matthew Sloan, President of the New York Edison, and recently President of the National Electric Light Association. Governor Roosevelt's appointees on the New York investigating commission in 1930 raised certain questions in this connection: "Why was the Consolidated Gas System interested in conniving at the payment of large sums of money to Mr. Witbeck on such an obviously artificial basis? There is also the important question as to why the Commission never checked up to find whether such payments were legitimate or not. The facts so developed press for further investigation. If the tax reductions shown in Mr. Sloan's report were bona fide they mean in the aggregate millions of dollars lost to the taxpayers of New York City. If the tax reductions prove to have been really fictitious the charging to operating expenses of payments to Mr. Witbeck might prove in the nature of a fraud. It might be well to get to the bottom of this transaction. In any case a system which requires the expenditure of over \$1,300,000 in 12 years along the lines indicated could well be modified. . . . Valuable information is being withheld. We feel that it can only be brought to light by more searching inquiry." ⁵¹ The matter was promptly dropped when the investigating commission went out of existence.

Another clear instance of the indifference of commissions to operating expenses, true or false, was chalked up against the expensive and powerful New York Public Service Commission in 1930. The minority of the investigating commission (the majority did not touch on the point nor contradict these findings) found that the electric utilities in New York City had charged against the consumers a certain sur-charge above the regular rates because of the high cost of coal during the war years. Although the consumption of coal per kilowatt hour was

steadily declining the companies figured the sur-charge as if it had not declined. The Commissioners said: "At the 1916 cost of 0.416 cents per kilowatt hour it would have cost \$76,551,792 for the fuel necessary to produce the required amount of electricity. Consequently the actual excess in the cost of fuel for the eight years over the 1916 basis was \$35,730,566. But, according to Mr. Sloan's figures, the companies actually collected from consumers through the sur-charge \$55,701,490, or an excess of \$19,970,924 over and above what the increased fuel cost warranted. In the single year 1928 . . . the excess collection was \$5,579,240. . . . These facts, we believe, contribute another striking example of the way in which the utility corporations have undermined effective regulation." ⁵² When a commission as well equipped with accountants as the one in New York State lets an average of almost \$2,500,000 a year be charged unnecessarily for eight years against the consumers of New York City through sheer neglect, some indication is had of what less powerful and well equipped commissions are doing.

In Missouri the City of St. Louis was found protesting to the commission the management fee of \$212,000 which the Laclede Gas Light Company paid to its holding company, the Laclede Gas and Electric Company; it also protested the fact that the company was buying gas at 22½ and 25 cents per 1000 feet from an allied company when it could manufacture the gas itself at considerably less, 20.3 cents per 1000 feet. ⁵³ In 1929 the Wisconsin Commission complained of the practice of the Wisconsin Fuel and Light Company in charging to its fixed capital accounts amounts equal to 10 per cent of the direct charges to those accounts representing services of the Interstate Fuel and Light Company or the Utilities Operating Company rendered in connection with construction work. In 1930 the vice-president of the American Gas and Electric admitted that the sums they paid a Mr. Glenn Marston

for going around the country for them doing publicity work against municipal ownership were charged up to the operating companies.⁵⁴ The West Virginia and Kentucky commissions found that one of the Columbia Gas and Electric group, the United Fuel Gas Company, had been siphoning revenues from its operating subsidiary, with an average yearly profit to one of the chain companies of 119 per cent.⁵⁵ In Philadelphia, in 1930, the Controller started suit against the Mitten Management which then controlled the transit system in partnership with the city. He charged the Mitten interests with "draining and diverting" the revenues of the company in such a manner that the city has never collected any of the revenues which rightly belong to it. The suit was based on an audit by Dr. Milo R. Maltbie, later appointed Chairman of the New York Public Service Commission, who analyzed expenditures of more than \$9,500,000 and said that they should be charged directly to the back dividends due stockholders. This amount included \$3,600,000 in fees to Mitten Management, which Dr. Maltbie declared illegal. The report pointed out that traffic, miscellaneous and general expenses totaling \$24,000,000 were \$8,600,000 in excess of "an estimated reasonable amount."⁵⁶

These are only a few cases from the recent years. Others were commented on in *Power Control*.⁵⁷ The commissions have objected to such overcharges when brought to their attention. There have also been protests against the policy of "charging it to the public" and letting the expense go hang, in rate cases. The West Virginia Commission found that a charge of \$100,000 which the Cumberland and Alleghany Gas Company had set up to defray the expenses of its rate case was "excessive and cannot be justified, and never would have been expended had it not been for the fact that it could be passed on to the public—besides, it may be that certain of this expense was incurred for reasons other than presenting

this case to the Commission." ⁵⁸ The Indiana Commission in 1928 also disallowed some of the rate case expenses and ordered the company to amortize them over a four year period.⁵⁹ In some of the larger industrial states the expenses incurred by a utility in a rate case extending over several years may easily run in excess of \$1,000,000, or up to four million, as in the case of New York City and the electrical utility there. In the main no serious challenge has as yet been offered to the practice of making the consumers pay the lawyers and accountants hired to keep their rates high. The utilities are in a position where they can afford to spend more than the cities or state involved can hope to.

The really significant fact about this unregulated half of the income, this billion dollars a year, is that there is almost no encouragement to the engineers and managers of the operating companies to cut expenses, to be competent and efficient in the best social sense. If construction costs are high, value is high, as far as regulation is concerned. As Professor Cabot points out, "The more a utility company pays for its property, the better for the company. Its customers may suffer, but not its stockholders . . . the investors are protected at the public expense . . . the interest of the customers which should be the prime concern of regulation, is relegated to second place."⁴⁷ It is the same thing with operating expenses. If the commissions are at all alert they try to turn over the savings from economical management to the consumers. It does not pay the manager to insist on the lowest possible costs. When he is controlled by a holding company it even pays him not to insist upon the lowest possible cost, on pain of losing his job. The men who control the spending of a billion dollars of consumers' money annually are in a tough spot.

8. *The Managers "on the Spot"*

The popular language has recently created two phrases which in themselves tell quite as much about the contemporary scene as Van Loon's well-known summary of American history, "Washington. Jefferson. Lincoln. Go up two flights and ask for Joe." These two phrases are "in a tough spot," and "on the spot." They come to us from the world of the racketeer, where force is used violently to preserve that honor which is supposed to prevail among thieves.

Not all force is violent, however. When men are thrown onto the street, unemployed, no actual violence is being done to them or to their homes and families. It is an undramatic force that is used on them, but it amounts to an almost irresistible pressure to go out and seek work at almost any wages. The same sort of pressure can be brought to bear on men who do their work in white collars and belong to a profession. For all their long years of technical training, for all their high standards, for all their devotion to the larger social ends, they are in much the same position as the workers in overalls. They have security only as long as they have the freedom to quit and find a job elsewhere. If they have that they can keep some of their professional ideals. In the same way the workers in overalls can retain some of their union ideals. But as soon as they have no other place to go they have no security. They are dependent. They become something less than members of a great profession interested in using their skill and achievements for the promotion of the common welfare.

This appears to have happened to the engineers in the electric power field. The great holding company and banking combinations of recent years have created a situation where a man who wants to move forward in his chosen field can exercise very little freedom in the choice

of the groups he will work for. Any opposition he expresses to the policies of the non-professional groups controlling the industry will make work for him impossible in a very large portion of the industry. To this extent the engineer has been "put on the spot." He must behave himself according to the standards of the controllers of the industry or go without his living.

This applies particularly to those engineers who have risen to be managers of companies, and there are many in these positions. As subordinates in a large system, taking orders at a distance, under pressure to make good for the benefit of the holding company owners who bought their companies on a speculative basis, they are no longer free to pass on engineering efficiencies and managerial economies to the public to any great extent. Their initiative and enterprise is exercised on behalf of the real owners of the business, the proprietary interests in it.

There is an unfortunate conflict of interest here. The professional attitude is one evidenced by researchers in medicine who give their discoveries to the world free of charge. But the engineers now face the question of how their skill and efficiency can most help the banking group owning the utility. How can it? Obviously not always by cutting rates to any great extent. The holding company gains when the cost of arranging security issues is high. They gain when the operating expenses are high, for a large share of those expenses goes directly to them. They gain when the rate base is larger, for then the greater is the return allowed. They gain when company assets are written up, following purchases and mergers. They gain when a large capitalization of franchises is secured in the form of going value. They gain when the property is revalued at high prices. They gain when high depreciation charges are made and later appropriated by the utility. In short, they gain by many things which the engineer, in his capacity as a professional man and social

servant, would desire to eliminate from the burden on the public.

It is here that good men are forced to go wrong. It is here that private initiative is perverted from the engineering field and from professional standards into the field of imaginative fiction. The most desirable company official becomes one who can use his professional training to think up new ways of increasing the rate base. It is only with that explanation in mind that we can understand the Curtis Pond incident, for example. In Worcester, Massachusetts, the utility bought a pond and a few acres of land surrounding it for \$69,000. Two years later the question arose of swelling the rate base. How could it be done? Well, if the value of your plant is what it would cost to reproduce it new, obviously the value of your pond is what it would cost to reproduce that new. So we sit down and imagine that the pond isn't there, and estimate how much it would cost for water, buying it from the city. We estimate what machines it would take to dredge a pond, what pipes would have to be laid through city streets, their cost plus interest. We use our initiative and enterprise and arrive at a figure of \$1,200,000, some seventeen times what the pond actually cost two years before.⁶⁰ Or we think up the "inexperience factor," in the same way that the New York Edison discovers it would cost a great deal to train a new staff of employees if an earthquake or pestilence wiped all the present ones from the face of the earth, and, although the consumers have paid already for training the present employees, the power company asks for the right to capitalize \$7,000,000 against the emergency, on which the consumers are to start paying a return of eight per cent at once.

Now all this is very admirable in its way, but it is not what we look to from the engineers. Here the holding companies and the regulatory system together have, it seems clear, ~~put~~ the engineers in a desperate position.

They cannot pass on the public benefits of their work to any great extent but must use their imaginations to load the dice as heavily as possible against the public.

We have put the engineers in a bad place for good men to be in. The utilities perform functions the state might itself perform. The state authorizes one group or another of private persons to perform those public functions for it for a number of years. It can take over their function. In many cases it has done so. It can yet do so in the rest. Meanwhile the men who run the utilities are supposed to be the economic servants of the public. In the power industry they collect some two billions of public money each year. But, on the other hand, they live and rise through the favor of the proprietary owners of the utilities, now mostly banking groups. The pressure from this side is the strongest. It is the old story of a man not serving two masters, but always serving the paymaster. That being so, we can at present not count on very much more than lip service from our potentially most useful citizens.

This is a bad paradox. It was phrased recently by Mr. Donald Richberg, whose long study of the railroads and his efforts to have the work of the Interstate Commerce Commission sustained by the Supreme Court, lend value to his observations of the electric utilities in action. He said, "The foundation and primary purpose of public utility regulation must be recognized as the necessity for preventing the making of an unfair profit out of public business by a public agent who is privately selected for the very purpose of making as much profit as can safely and regularly be extracted from operating public business."⁶¹

From the point of view of social engineering this seems to be a wasteful smashing against one another of two strong and good forces. It is not efficient. It is not cheap. One would have to be a profound and conquered pessimist to believe that it is the best that America can do.

Here is one of the most notable weaknesses of the system under which we are now living. Industry in general, and the utility industries in the forefront, are trying to accomplish their purposes by conquering professional feeling instead of using it. To the extent that they succeed they achieve a kind of Roman peace, for the Romans too destroyed and conquered and built their empire on submissive and dependent people.

Some sort of resentment against the position in which they are placed may, in an odd psychological way, be expressed in the large sums which some of the heads of great concerns have been voting themselves by way of salaries and bonuses. When there is no longer any satisfaction in functioning in a socially useful way, or when a man is caught up in a process which frustrates him in that line of action, then he wants to get paid for what he does, and get paid to the limit of the market. We have recently seen the large sums taken in one year by officials of the Metropolitan Life Insurance Company. We have seen the \$3,055,786 paid in 1929 by way of bonuses to seven officials of the Bethlehem Steel Corporation. We have seen the stockholders charge that in the merging of the Duke waterpower interests and the Mellon Aluminum interests Mr. Duke arranged a bonus, by a secret agreement and without knowledge of the stockholders, of 147,262 shares at a profit close to \$20,000,000. Here are men who, if not setting themselves up as worth a payment which the business world considers exorbitant, are using their positions of trust and power to recompense themselves for the lack of that satisfaction which others obtain from less exorbitant remuneration.

The frustration of men who, at one time, may have thought they were contributing to the social progress of their country through their economic activity and now, for various reasons, have thrown up their hands, is signalized somewhat similarly by the changing ethics of the

business world. There was a time, not long ago, when it was considered not quite Hoyle for a manager or president of a company to procure himself an additional income by holding positions in companies doing business with his own company. That time has passed. It was then also not considered quite proper for a manager or president to profit by his inside knowledge of the affairs of the company through speculation in the company's stocks on the market. That time has passed. A great number of salaried officials have become millionaires in this way. What is now considered unethical is for a manager with inside knowledge to sell short on the market. There is nothing against his buying on margin all the wants to, but he must not use his inside knowledge to depress the market value of the shares of other owners of the company. In this change is symbolized the passing of the trust officer and his replacement by the money-making officer.

9. *A Million Dollars a Day*

The furnishing of public utility service is not a private business and those engaged therein are public agents performing a function of the state. These essential functions of the state can be performed by the state itself with money borrowed from the public. Or the state can authorize private persons to use their own money and money borrowed from the public. The public business is the same whether the government selects the men who are to run it or authorizes certain private companies to do it. The only difference lies, not in the object of exercising state authority, but in the method of exercising it. In the electric power industry, with some notable exceptions, we have chosen the method of authorizing private individuals to operate the public business. They are supposed to be engaged in furnishing a public necessity in the most economical way possible. Their social usefulness depends on their success at this task. If they are not successful

at this task we still have the alternative of having the state perform the function itself if it can do it more economically.

We have seen the way in which the men to whom we delegated this public business put the country to school to learn the lesson-*lie* that they furnished light and power more cheaply than it could possibly be furnished by anyone else, and that criticism of them was practically sacrilegious, or at least unpatriotic and treasonable. We have seen the way in which they claimed in public to be the bulwarks of the old tradition of individualism, and in private sat down at once to take a leading share in combinations and groupings which wiped out the individual initiative of thousands of men and helped move the whole country into an era of industrial feudalism.

Was all this effort spent in order to furnish a public service as economically as possible? What results have they to show?

At present the public is paying at least \$1,000,000 a day more than it needs to pay for light and power. For three hundred days of the year we pay that sum daily because the private controllers of the industry insist upon such high payments for the capital they supply. For the remaining sixty-five days of the year we pay a return on sums that would not for a moment receive a payment if the state were running the public business itself. Those sums include capitalized monopoly privileges, the addition of an imaginary dollar for every four or five real ones through revaluation on the basis of price changes, appropriation of sums contributed by the consumers to keep the plant intact, the addition of imaginary dollars to those real contributions, and sums that come from the appropriation of values added to land by the community's own progress and own expenditures. They include also sums which we pay directly for operating expenses in fees that carry a two hundred per cent profit, in rate case expenses,

in legislative activity, and in the process of having ourselves schooled in the lie that the power industry is furnishing service as cheaply as it could be furnished.

As we have seen, the consumers are charged such a high rent for the money invested that they are paying enough to buy out and own free of debt the whole industry in thirty years, saving future consumers an average of \$1,822,000,000 a year on this item alone. There is little pressure on the utilities to lower the cost of money and considerable pressure to resort to means which raise it. They are asking for a return on twice as much as was actually invested in the industry, one hundred million imaginary dollars to be added to each hundred million actually invested. They are successful in getting one hundred million imaginary ones added to every three or four hundred million real ones. On these the consumers are now paying them a return. All this extra money, the reward of imagination, goes unequally to the owners of utility securities. It goes entirely to the common stockholders, now usually holding companies and banking houses. They have not yet reached their limits in swelling the sums on which the consumers are asked to pay. They are ever trying out new tricks. They have been successful in charging a toll on birth rates and municipal progress, appropriating community values which do not represent funds invested by them. The result is that the community gains no benefit from the timely devotion of property to public use, but must always pay as if the property were being acquired anew each year in the most untimely and improvident fashion. They are attempting, and in some cases most successfully, to appropriate the consumers' contributions and to have imaginary dollars added to them, so that the consumers may not only pay double but more than double. They have been successful in capitalizing the monopoly rights given to them by the states to protect them from competition. They have,

stacked the cards against the future consumers by over-issue of securities, and thereby piled up a protection in case revaluation ever ceases to protect their conquests.

While this was going on the state commissions, with some few exceptions have, at the best, been duped, at the worst have played partners with them. In the billion dollars collected in operating expenses items which gave holding companies profits of from 149 to 281 per cent have been included. There have been payments to insiders to get city taxes reduced, charges for coal not used, payments of millions to engineers employed to guess at rate bases, payments to fight legislative action, payments to get editorial support through judicious use or refusal of advertising, high payments to construction companies allied in interest. The engineers and managers have been put under pressure to show results of the kind that are profitable to the holding companies, making it impossible for them to remain true social servants.

These are some of the results of turning over a great public business to private companies at the beginning of our period of industrial expansion, but the whole result can by no means be summarized in the conclusion that we are paying at least a million dollars a day more than we need to for the service.

In view of the above, it is little wonder that the spokesmen for the big companies are in favor of continuing exactly as at present. They want regulation to go on, and fight every chance to improve it. The President of the New York Edison, one of the Consolidated Gas group whose activities have been touched on from time to time, said recently:

"State regulation of utilities has not broken down or failed. On the contrary, it has proved, in my judgment, to be one of the best examples in our governmental structure of how capably a public agency as free as is humanly possible from

politics can deal with important, complicated and frequently highly technical matters." ⁶²

Their proclaimed approval of the present system, coupled with a determined fight on every important attempt to improve it, simply means, in view of the record discussed in this chapter, that these private individuals who have been authorized to carry on the public business, have entirely forgotten their social obligations. They have been amazingly successful in disarming the policemen who were set to stand between them and the public purse and now they are pointing to those policemen and insisting that the consumers are more than adequately protected.

Here is fraudulent intent. In view of this record it is nonsense to talk about the companies being restricted in their profiteering through regulation. Regulation has been a boon to them. They are making far more money than a great many unregulated industries which have to stand up against competition. If they had been left completely unregulated and subject only to competition there is little doubt that their rates would be much lower than they are today, and their profits would be lower, too. The proof of this is very simply shown in their present earnings. For the operating companies of the American Gas and Electric group the Federal Trade Commission found results that few competitive industries can equal year in and out. The Scranton Electric was earning on its investment in common stock and surplus, in 1923, 34.08 per cent, 1924, 35.66 per cent, 1925, 40.13 per cent, 1926, 49.27 per cent, 1927, 43.10 per cent, and in 1928, eliminating the write-up of that year, 38.28 per cent. The capital was paid back two and a half times in those six years. The Ohio Power Company was earning on its common and surplus, 35.5 per cent in 1926, 39.8 per cent in 1927 and 51.8 per cent in 1928. The capital was being

paid back at the same rate. Based on the cost of the common stock of the Appalachian Electric to its holding company, its earnings on common and surplus were 35.3 per cent in 1926, 33.9 per cent in 1927 and 28.5 per cent in 1928. At this rate the capital was being paid back almost twice every six years. The earnings on the cost of the common and surplus of the Indiana and Michigan were smaller, 17.21 per cent in 1926, 20.23 per cent in 1927 and 29.32 per cent in 1928.⁶⁸

In the report of the New York State Commission of the Public Service Commissions Law, in 1930, the minority commissioners cite figures showing excess returns. They were calculated by the Public Service Commission without any deductions for depreciation, a most unusual process which had the result of lowering the rates of return. A generous allowance for working capital was made. The figures showed that in 1928 "56 out of 75 electrical properties, or roughly 75 per cent of those subject to the jurisdiction of the Public Service Commission, make a profit of more than 8 per cent on the capital so computed. Electrical properties making more than 9 per cent numbered 46, or more than 60 per cent of all the companies. There were 34 properties out of the 75 with profits of more than 10 per cent and 30 of them showed a return of more than 12 per cent. In the group making more than 15 per cent we find 15 companies, and those exceeding 20 per cent numbered 10.

"Thus the evidence before us shows that under the present system of regulation electrical rates in effect in 1928 were returning to majority of the companies a profit of more than 9 per cent, with profits running up to 31.66 per cent in the case of the Corinth Electric Light & Power Company.

"The evidence before us reveals the extraordinary complacency with which the Public Service Commission viewed a rate situation which produced such profits. Apparently

with the constant threat of dragging rate cases into the courts on the valuation question the corporations had practically paralyzed the Commission's initiative and emasculated regulation." 64

The Utility Investigation Committee of the House of Representatives in Pennsylvania in 1931 reported:

"Evidence was also offered from the reports of the utilities to the Commission for the year 1930 that the lack of regulation persisted throughout last year, and that the electric industry had earned an excess over 7 per cent on invested fixed capital in plant and property of \$31,864,414 during 1930. In order to justify such excess earnings the Commission would have had to grant the utilities the use of \$455,205,914 for going value and working capital. This sum is 48.6 per cent of its actual depreciated fixed capital.

"The Committee, therefore, finds it a fact that the utility companies in Pennsylvania have been permitted to enjoy an income which far exceeds a fair return on invested capital; that these facts were all contained in the reports from the companies and filed with the Public Service Commission; that the Commission should have had knowledge of these flagrant violations of their orders; that the Commission has remained indifferent to the enormous stock issues that have been foisted on an innocent and unsuspecting public. We, therefore, find that the Public Service Commission has been negligent in its duties, indifferent to its stewardship, and a menace to proper utility regulation. We recommend that the members of our Public Service Commission be immediately removed from office." 65

Some detail was given in the counsel's report. He pointed out that the Public Service Commission had found that all except three of the electrical utilities were earning over 7 per cent in 1928; that it had then included 10 per cent of fixed capital depreciated for going value and

had found in 1929 that 39 companies were earning over a 7 per cent return on that basis, including write-ups, 16 of them over 14 per cent and 7 over 20 per cent. He commented:

"In this connection it should be noted that the Commission knew that the depreciated fixed capital of the electric companies including write-ups was \$937,928,906, and that the operating income alone was \$86,779,697, or a 9.2 per cent return; an excess over 7 per cent of \$21,124,674. At that time known write-ups amounting to \$80,273,136 had been added to the depreciated fixed capital. When these write-ups are deducted the fixed capital depreciated becomes \$857,655,770 and the rate of return becomes 10.11 per cent, an excess over 7 per cent of \$26,743,793. This excess is a 7 per cent return on an investment of \$382,054,186, which is 45 per cent of the depreciated fixed assets less write-ups.

"The essential figures for 1930 (Class A and B electrics, excepting the Pennsylvania Power Company, whose report had not been received by the Commission up to May 13, 1931) are:

| | |
|---|---------------|
| Depreciated Fixed Capital Less Write-ups.. | \$936,274,926 |
| Adjusted Gross Income..... | 97,403,658 |
| Excess over 7% Return..... | 31,864,414 |
| Capitalized Excess at 7%..... | 455,205,914 |
| Ratio of Capitalized Excess to Depreciated Fixed Capital less Write-ups..... | 48.62% |

"The significant fact is that in a year of low prices such as 1930 the Commission allowed excess earnings close to thirty-two million dollars. To justify these it would have had to grant the companies allowances for going value, working capital and reappraisals amounting to 48.62 per cent of the total, a sum of \$455,205,914. This sum would presumably be larger if the Pennsylvania Power Company were included.

"A similar situation apparently exists in the natural gas industry. Adopting the Commission's rate of 7 per cent, calculations show excess earnings in 1926 of \$7,626,665. In order to justify such a return the Commission would have had to add the sum of \$108,952,357 to the depreciated fixed capital of the plant for going value and revaluations, an increase of 87 per cent. After 1926 there were write-ups of \$18,216,806. Excluding those write-ups and two companies showing deficits, those which made a profit show an excess over 7 per cent of \$6,843,856. In order to justify such a return the Commission would have had to add the sum of \$97,769,371 to the depreciated fixed capital of these companies, an increase of 79 per cent." 66

What the Federal Trade Commission has begun to show for those companies it has investigated can also be seen, more roughly, from the reports furnished to the financial manuals. From them it is not possible to discover how much capital was actually invested in the common stock, but on the basis of the amount carried on the books as representing the value of the common stock, all of the following companies earned over 20 per cent, and up to 50 per cent in 1929, including the year's dividend and the year's surplus: the Los Angeles Gas and Electric, the Rochester Gas and Electric, the Buffalo General Electric, the Knoxville Power and Light, the Nebraska Power, the Duquesne Light of Pittsburgh, the Ohio Edison, the Milwaukee Electric Railway and Light, the Potomac Edison, the Dayton Power and Light. The list is by no means complete.⁶⁷

When a record like this can be rolled up twenty years after state regulation began it is about time to admit that no matter how legal the various moves of the companies have been, they result in an unnecessary expense of huge sums to the consumers. And the unnecessary payments

extracted by the electric power industry are so large that whatever individual initiative remains in our public spirited citizens should be evoked to try and do better for themselves and the country.

NOTES

¹ C. O. Hardy, Institute of Economics, *Recent Growth of the Electric Light and Power Industry*, 1930.

² Minority Report of the Commission on Revision of the Public Service Commissions Law, New York State Legislative Document 75, 1930, p. 270.

³ Public Utility Reports, 1928, N. 274.

⁴ New York State report, *supra*, p. 134.

⁵ Testimony of Commission accountant Thomas Keeney, *New York Times*, December 6, 1929.

⁶ Cross-examination of Mr. Nicholas F. Brady, Chairman of the Consolidated Gas Company, transcript of hearings by New York Commission.

⁷ New York State report, *supra*, p. 135.

⁸ Maurice C. Waltersdorf, *Yale Law Journal*, January, 1928.

⁹ *Idem*, p. 341.

¹⁰ Interstate Commerce Commission Report 124, St. Louis and O'Fallon R. R.

¹¹ New York State report, *supra*, p. 16.

¹² *Idem*, p. 62.

¹³ *Idem*, pp. 246, 247, 248, 263, 265, 267, 268.

¹⁴ Long Island Railway case, P.U.R., 1928, C. 769.

¹⁵ New York State report, *supra*, pp. 277-8.

¹⁶ Professor Edwin C. Goddard of the University of Michigan Law School, *Harvard Law Review*, Vol. 41, p. 576.

¹⁷ Interstate Commerce Commission Finance Docket 6880.

¹⁸ Interstate Commerce Commission Finance Docket 1165.

¹⁹ C. O. Hardy, *supra*, compare p. 102. The figure for the gross income in 1928 is from the bulletin of the National Electric Light Association, p. 32. The bulletin gives a claimed investment for that year of \$10,100,000,000. The *Electrical World* of January 4, 1930, claims \$10,300,000,000. Both of these figures are believed to represent considerable property not devoted to the public service, and some municipal plant property. The operating expenses reported in the *Electrical World* amount to 2.7 per cent less than the Hardy estimate of 47.7 per cent, i.e., to 45 per cent of the gross income. The *Electrical World* gives taxes of \$165,000,000 for the year, which is .1 per cent more than the Hardy estimate of 8.5 per cent, i.e., 8.6 per cent.

Adjusting the operating expenses and taxes according to the *Electrical World* figures brings the total payments on capital to

7.45 per cent on a claimed investment of \$10,300,000,000 and to 7.6 per cent on a claimed investment of \$10,100,000,000.

²⁰ Interstate Commerce Commission Report 15,100, August 15, 1929.

²¹ New York State report, *supra*, p. 358.

²² *Idem*.

²³ Interstate Commerce Commission Report, 15,100, *supra*.

²⁴ Report of Special Master Oelands, 1929, Federal Court, District of Southern New York.

²⁵ Compare Commissioner Bonbright in New York State report, *supra*, pp. 355-6. The holding of the Federal Statutory Court was not that the amount of depreciation reserve is *ipso facto* to be taken as the amount of deductible depreciation in the valuation, but rather that it was persuasive evidence of this later depreciation in the absence of adequate proof that the actual depreciation in the property differed from the reserve. This leaves a wide opening for the utility to produce such proof.

²⁶ *Congressional Record*, March 4, 1930, p. 4879.

²⁷ George Soule, "War in the Power Commission," *New Republic*, March 5, 1930.

²⁸ *27 Columbia Law Review*, May, 1927.

²⁹ Federal Trade Commission Exhibit 4643, Public Utility Corporations.

³⁰ New York State report, *supra*, p. 146.

³¹ *Idem*, pp. 282-3.

³² City Club of New York, 1929, *Report on Consolidated Gas Company of New York*.

³³ New York State report, *supra*, pp. 305-7.

³⁴ Transcript of Federal Trade Commission hearings on Public Utility Corporations, p. 4627.

³⁵ *Idem*, pp. 10677-80, exhibit 4627.

³⁶ Testimony of accountant Asel R. Colbert, Vol. 22, Federal Trade Commission report on Public Utility Corporations, pp. 185-9.

³⁷ Federal Trade Commission report on Public Utility Corporations, Vol. 22, p. 252, p. 238.

³⁸ *Idem*, pp. 265-8.

³⁹ *Idem*, p. 529.

⁴⁰ P.U.R., 1928, A. 776.

⁴¹ Indiana Public Service Commission, *Schaub vs. People's Motor Coach Company*, July 13, 1928.

⁴² P.U.R., 1928, D. 380.

⁴³ Report of Committee on Public Utility Rates, Proceedings of the 1926 Convention of the National Association and Railway and Utility Commissioners.

⁴⁴ Supreme Court No. 131, October term, 1928, *St. Louis and O'Fallon Railway Co. vs. United States and I. C. C. Brandeis, J.*, dissenting opinion and footnote 14.

⁴⁵ Statement of John C. Parker, Vice-President, New York Edison Company, *New York World*, August 29, 1930.

⁴⁶ Compare Note 19, *supra*.

⁴⁷ Philip Cabot, Professor of Public Utility Management, Harvard Graduate School of Business Administration, *Harvard Business Review*, April, 1929.

⁴⁸ Transcript, Federal Trade Commission hearings on Public Utility Corporations, p. 8966.

⁴⁹ *Idem*, p. 10142.

⁵⁰ *Idem*, p. 10373.

⁵¹ New York State report, *supra*, pp. 320-23.

⁵² *Idem*, pp. 295-6.

⁵³ P.U.R., 1929, A. 575.

⁵⁴ Transcript, Federal Trade Commission hearings on Public Utility Corporations, p. 9530.

⁵⁵ Edward W. Morehouse, *Journal of Land and Public Utility Economics*, February, 1929, p. 99.

⁵⁶ *New York Times*, August 17, 1930. *Philadelphia Public Ledger*, August 17, 1930.

⁵⁷ *Power Control*, H. S. Raushenbush and H. W. Laidler, Republic Publishing Co., 1928.

⁵⁸ P.U.R., 1928, B. 77.

⁵⁹ P.U.R., 1928, E. 725, Logansport Home Telephone Co.

⁶⁰ An illustration cited in testimony by Commissioner Louis Goldberg of Massachusetts before the New York State Commission on Revision of the Public Service Commissions Law, 1929.

⁶¹ Testimony of Donald R. Richberg, counsel of the National Conference on Valuation of Railroads, before the New York State Commission on Revision, etc., January 13, 1930.

⁶² *New York Times*, October 23, 1930.

⁶³ Federal Trade Commission report, *supra*, Vol. 22, pp. 231, 256, 194, 1008.

⁶⁴ New York report, *supra*, pp. 288-9.

⁶⁵ State of Pennsylvania, *Final Report of the House Committee on Investigation of the Public Service Commission and Public Utilities Companies under Resolution No. 10*, 1931, p. 3.

⁶⁶ *Idem*. Counsel's report by Harold Evans.

⁶⁷ *Poor's Manual of Public Utilities*, 1929.

CHAPTER THREE

THE CONQUERED CITIES

1. *The Growing Function of the Cities*

OUR cities are very slow in forgetting that they were once agricultural towns. They received their first delegation of power from the states at a time when the political philosophy of America was pure individualism, and when that was more than a vote-catching battle-cry uttered looking backward. The right of the strong to become stronger and the rich to become richer was accepted, and with it went the condition that the government should have no initiative. Meanwhile the country was becoming industrial. Factories and business houses were set up. The great movement from the farms to the cities got under way. The cities became crowded, were forced to expand, to spend huge sums in educating, transporting, furnishing water, parks, sanitation, police and fire protection and a hundred other services to the new community.

On the whole it is very slowly that the cities have organized to perform efficiently the new social services devolving on them in the industrial age. They are mostly like "Middletown," still organized along the lines of a small town government instead of a great business enterprise, still dividing the functions of officials along arbitrary ward and borough lines and paying, generally, little for the men they employ. Like the Constitution of the United States which still remembers the day when it took weeks to travel from Boston to Washington and consequently allows a year to pass before a newly-elected Congress assembles,

the city charters are not built for the new age. Changes in them are made slowly, against great opposition.

2. The Arbitrary Limits to Public Service

In organizing the cities and delegating power to them the states set no arbitrary limit on the social functions they could perform. But they did set a very real limit by fixing the amount to which a city could bond itself for public improvements. The many new needs of the cities for highways, schools, parks, sewage systems, waterworks, hospitals and the like have, in many cases, brought the cities so close to their bonding limits that it is a sheer legal impossibility for them to engage in further public service, such as the operation of the electrical utilities, without exceeding the debt limit imposed on them by constitutions.

These debt limits, coupled with a growing demand for a variety of services which can only be paid off gradually through bonds, are the main reason for the relatively small development of municipal ownership of electrical utilities in the United States. Added to this is a second important fact, that where the bond limits are more reasonable, bonds must be approved, usually, by so large a proportion of the voters that it is not difficult for the private utilities, by electioneering and political maneuvering, to defeat them.

There are, according to one authority, eight states which put the limit to all bonded indebtedness on the part of the cities at 5 per cent or less of the assessed valuation of the real property in the city.¹ There are nine others in which the bonding limit is between 5 and 10 per cent.

In many of the states the relative liberality of the bonding limits is offset by the necessity of going through the political routine of carrying a bond referendum by a very large vote of the citizens or the property-owning tax-paying voters. This is a handicap no efficient private business

is subject to. In nine states a two-thirds vote is necessary to carry a bond issue, California, Georgia, Idaho, Kentucky, Missouri, New Mexico, North Dakota, Ohio, and Texas. In four more a three-fifths majority or over is necessary: Michigan, Nebraska, West Virginia, and South Dakota (petition of five-eighths of the voters is necessary).

Although the National Municipal League, which has been perhaps the most effective force for good city government in the country, has recommended from 1900 onward that cities be given power to furnish all local services and that bonds issued for such purposes should not come under the general debt limit unless the utilities for which they are issued fail to be self-supporting after five years, there are only eleven states which now allow such revenue bonds to be issued.

Where the cities have tried to vote bonds for utilities they have met, in most cases, a determined opposition from the utilities affected. In San Francisco the opponents of the bond issue by which that city hoped to buy out the local light and power systems in 1930 stressed the fact that the city was within \$89,000,000 of its bonding limit and if \$85,000,000 of power bonds were issued there would be no money left for the many other civic enterprises needed. There was also insistence on the need of spending some fifteen to twenty-five millions to acquire the competing privately owned street-car system. With such arguments they were able to persuade the one-third of the voters necessary to defeat the power bonds. But these tactics, often engineered by the utilities, are nothing new. They were busy back in 1913 defeating a bond issue for a light plant in Kansas City, Kansas. In several Nebraska cities they have attacked the financing of additions to municipal power plants by warrants on future earnings, claiming that it should be done through municipal bonds. In Pasadena the Southern California Edison

not only fought the bond issue in the elections but took the city into court. In *Public Ownership on Trial*, Bird and Ryan lay the blame for three years' delay in starting the municipal plant in Los Angeles to the power companies and their litigation and political influence.² Speaking of that city they say, "Obstructive litigation has proved a most adroit and effective method of sabotage against the Los Angeles municipal system, and a total of more than thirty law suits, brought directly by the private power companies, or by dummies using company attorneys, or by friends, have been directed against the Power Bureau."³ In concluding their study of the California cities they comment: "The right of a municipality to acquire or improve a plant without undue expense or delay should exist in fact as well as in theory. So long as the issuance of bonds for such purposes can be vetoed by a one-third minority influenced by customer-ownership campaigns and company propaganda, municipal ownership will continue under a severe handicap. The financing of self-sustaining municipal utilities should be distinguished from the incurring of general indebtedness which must be met by taxation."⁴

This, then, is the situation: more than half of the states of the country do not leave their cities free to engage in public service if that involves bonding themselves for more than 10 per cent of the value of all their real property. Only eleven states allow what is common business sense, the issuance of bonds based on revenues from self-sustaining utilities. In many cases the usage of having a large proportion of the voters pass on each issue makes their defeat by opponents easy.

3. *Gentlemen and Professionals*

During the past thirty years a very considerable number of public-spirited citizens have engaged in the attempt to secure good government at cost in the cities. What

has been accomplished is not inconsiderable, but the adaptation of city machinery to the crowded industrial age still has wide gaps. Another Lincoln Steffens could still, in the 1930's, write another *Shame of the Cities*. Much of the fighting against the forces which stood to gain by the weakness of city governments was done by amateurs and gentlemen. They fought when an issue presented itself out in the open. Opposed to them were the professionals of the contracting firms and utilities who did their very best to keep issues from seeing the light of day. In the unequal contest the professional soldiery won more often than they lost.

The restriction on the bonding limits of the cities was only one of their victories, and in it they had many innocent allies. The cities soon found that they were tied up in many other ways and unable to move.

The story is not new. Back in 1914 Mayor Carter Harrison of Chicago was telling the American Academy, "Take away private ownership of public utilities and you will have removed one of the principal causes of and incentives to corruption, to the seeking of public office for the purposes of corrupt gain, to commercialism in politics."⁶ At the same time Newton D. Baker, then Mayor of Cleveland, was saying, "The adversaries of municipal ownership are claiming that municipal utilities, public utilities, ought not to be in politics. I have had thirteen years of perfectly joyous experience on that subject. I have been for thirteen years combating public utilities in Cleveland. Every campaign in these thirteen years, no matter how remote its issues might be from public utilities questions, I found the forces of the public utilities engaged in politics." Going even a little further back we find the *Toledo News Bee*, which has no history of flaunting the red flag, commenting on Tom L. Johnson's experiences as Mayor of Cleveland, "The modern public service corporation is the most desperate and

dangerous criminal in the modern city . . . When more mayors show the same intelligent contempt of corporation controlled courts there will be more chance of getting justice on the spot, instead of after you are dead." St. Louis had its experience with corruption about city lighting contracts, Philadelphia had hers with the gas ring, New York with the gas and subway groups as well.

The story is not obsolete, either. The chapter dealing with the political influence of the utilities at present mentioned several instances of clear continuation along these lines. Insull's influence in Chicago and Maine, the Montana Power Company's power in Montana, the influence of the upstate companies with the New York State Legislature and of the Consolidated Gas in the affairs of New York City has never been seriously questioned. The sums spent in the West coast states have been scandalous. But apparently not even the smaller towns have been entirely neglected. A letter from one of the Foshay men to the main offices in Minneapolis, written in 1928, concerning the acquisition of the municipal plant at Burlington, Colorado, shows that the tradition has not died out. The letter reads :

"I know that you do not look with favor on the plan of 'oiling your way' through these municipal sales, and I agree with you that such practice is detestable and it has been hard for me to finally be compelled to admit, regardless of my feelings contrary to such practice, that at least eight out of ten councils I have contacted during my brief acquisition experience can only be handled through the 'oiling system.'"⁶

But there is no claim made here that this is typical. At present the utilities can get almost everything they want through the state commissions and do not need to bother much with the cities.

4. *The Purpose of the Commissions*

The good government literature of the day, before the establishment of the first state commissions in 1907, indicates with fair clearness why they were established. On all sides there was a strong and growing demand for municipal ownership. Mayor McClellan of New York City was recommending it, and the city was asking the Legislature for powers to go ahead. Mayor Carter Harrison of Chicago was fighting for it. Detroit had a municipal plant and cut street light costs from \$102 to \$61.65. Columbus, Ohio, was planning the acquisition of a plant. Under threat of municipal competition street light rates were lowered in Kansas City from \$116 to \$65.⁷ Chicago had a plant to furnish street lighting. The indignation against the utilities, aided by some exposures of franchise corruption, was becoming similar to the Populist reaction against the railroads, with its demand that they be taken over by the government. That demand was met by federal regulation. The demand in the cities that the utilities be owned by the cities was met by state regulation.

The people of the time were not unaware that these state commissions might be used against the cities, and many of the states do not, as yet, have state regulation of the electric utilities. In 1913 Iowa was defeating for the third time a utility commission bill as legislation in favor of the corporations. The utility corporations lobbied for it heavily.⁸ The Minnesota Home Rule League made a study of Wisconsin, one of the first states to enact regulation. It reported in 1914: "One of the reasons for the cordial support of the state regulation law in 1907 by the public utilities was to stop the wave of municipal ownership of water plants by Wisconsin cities then sweeping over the state. Many of the franchises were to expire in that and the following year. It was believed that

the Public Utility Act would stop this tendency, and it has." 9

This is a bit of twentieth century history which has been somewhat neglected. More often than not it is assumed that state regulation was always a great public victory over the utilities. We have seen in the previous chapter how far that regulation has gone astray from its function. It is even more significant to notice how it cramped the powers of the cities to protect themselves.

5. *Cancelling the Franchise Power*

With the establishment of the state commissions the powers which the cities had previously exercised, largely through franchises, of regulating the utilities, were transferred to them. At first the cities did not realize what was happening. Later they were to see the concessions and payments they had wrung from the utilities wiped out by the state commissions.

When that occurred there was loud but largely futile indignation. The statement of Professor Charles E. Merriam of Chicago University, who was at the time active in Chicago municipal affairs, is typical. He said in 1914: "The City of Chicago was the victim in 1913 of as daring a raid as a private crew ever made upon a rich and defenseless city. . . . The home-rule article was taken out of the bill creating a Public Service Commission in Illinois . . . [which] swept away most of the powers Chicago had slowly wrung from the state legislature through a long series of efforts, and snatched away the hope of adding others . . . passed in the interests of the public utility corporations, and was the crowning climax of the corporation legislation of our state." 10 In 1919 the Illinois Supreme Court was saying that the municipal authorities of Illinois had never been clothed with power to fix, by binding contract, rates for any definite term of years. 11 A year later Chicago insisted on its right to en-

force its franchise terms on the street railway lines, was taken to court and told by the Supreme Court of Illinois that "the General Assembly has never conferred upon any municipality power to make inviolable contracts for rates for a public utility."¹² In the same year Judge Wade of the United States District Court was refusing to dissolve a temporary injunction restraining the city of Des Moines, Iowa, from enforcing its ordinance rate for gas service against the company, many other courts—although not all—were also declaring that when the state took over the regulatory powers the city powers were thereby, in effect, cancelled, and the utilities freed from the major responsibilities that had been laid upon them.¹³ This was a hard blow at the cities.

In several states the cancelling of city victories by turning regulation over to the state commission was accompanied by an arrangement called "the indeterminate permit." On its face this was a franchise granted by the state commission in order to avoid the disadvantages to the cities of perpetual franchises and the disadvantages to the utilities of short-term grants. In Indiana, Minnesota and Wisconsin it provides that the grant shall end when the city authorities desire, but on condition that the city thereupon buy the plant at a cost fixed by the state commission. It has effectively prevented any competition by other utilities or by public plants, although such competition is permissible. The guaranteed right of a municipality to purchase does not, however, necessarily mean a simple and expeditious transaction. The city counsel of Racine, Wisconsin, Judge R. R. Burgess, described the process of taking over the private waterworks there. No sooner had the necessary application for a valuation been made to the Commission than a taxpayer instituted suit, claiming that the legal procedure was wrong, and asking that the city be enjoined. The Circuit Court dissolved the injunction. The matter was then appealed to the State

Supreme Court and the city was again upheld. No sooner had the valuation proceedings started afresh than the Farmers Loan and Trust Company of New York, which held a mortgage on the plant for about a million dollars, secured a temporary federal injunction. The city then had to go to the Federal Court and fight that. After the second injunction was dissolved, an appeal from the valuation of the commission was taken to the Circuit Court for review. Here it appeared that the private waterworks had an agreement with the bank to keep a separate fund to fight the proceedings. All this litigation took five years. Only at the end of it did the company begin to negotiate about the sale.¹⁴

The type of indeterminate permit existing in Oklahoma under the revokable permit law of 1925 was declared unconstitutional in 1929. The Supreme Court of Oklahoma held that the act authorized the conversion of a limited franchise into a perpetual one, in violation of a constitutional provision against perpetuities and monopolies, that it deprived the electors of the right reserved to them of granting and renewing franchises and that it prevented the electors from petitioning for such grants.

Now while the switch of power from the cities to the state commission, where such exists, has taken away most of the long-fought gains of the municipalities, and to a certain extent has seemed to abrogate that part of the Constitution of the United States which declares that no state shall pass any law impairing the obligation of contracts, the old franchises still work against the cities. Not only do the companies capitalize their going value, their monopoly rights, as we have seen in the preceding chapter, but they insist that the cities cannot purchase them or compete until the end of the franchise period.

In taking away the obligations of the utilities without also relieving the cities of their obligations, state regulation has worked in a very one-sided way. But, although

franchise obligations are considerable, the main burden is the bonding limit. Today we see the city of Chicago, with all the main franchises of its utilities run out, unable to proceed to take them over.

6. *Making It Hard to Buy*

On top of these other limitations on their powers the cities meet still others. Not only does a city like Cleveland encounter a hundred injunctions in its nine-year war on the traction corporations, but there remain even greater uncertainties. In most states the cities are obligated to buy out existing properties, which may often be run down and quite undesirable. Thus, until two years ago the Massachusetts cities had to vote twice, through their councils, to acquire a plant and thereafter wait for the Commission to set a price on the old property before they knew what they were voting to buy. In some cases it was not only an obligation to purchase junk, it had a great similarity with buying a pig in a poke. The pig was known but the price was not. In other cases the great difficulty was that of fixing a price, the companies insisting on capitalizing their privileges, the cities denying that right. In Dallas the city expert valued the street car and light systems at six and a half million, the utilities at \$9,700,000. The differences in valuations in San Francisco have already been listed. In Detroit, Mayor Couzens had to threaten to build municipal lines in competition with the private street railways before they would come down to a reasonable price. In states where the commissions can give or withhold permission to the cities such means of lowering the purchase price are ineffective.

A more simple and common way of making it difficult for the cities to buy utility property is illustrated in New York City. Here the city signed a contract with the utilities allowing them to construct the elaborate conduit system under the city streets, subject to recapture by the city

at cost plus the amount by which net earnings were below ten per cent. That was a very liberal contract which the city made for the invaluable privilege of using the city streets. The utilities immediately arranged a series of construction and subsidiary companies which ran the construction costs way up. The Roosevelt appointees to the 1930 investigating commission reported that "every device has been used to inflate the investment and keep the rate of return down so that the City, if it wanted to recapture, would have to pay a large accumulated back deficit."¹⁸ In 1916 the City brought suit for an accounting, and seven years later, in 1923, was informed that the actual costs of the conduit (including all the charges of the subsidiary construction companies), were over \$53,000,000, and that there were arrears in the 10 per cent earnings of over \$17,000,000, making the total cost of acquisition to the City \$71,000,000. The Commissioners mentioned commented: "This figure was probably excessive, but it would seem that even at that price it would pay the City to acquire these conduits under the old contract. Their ownership constitutes a monopoly control of the means of transmission for both high and low tension service. If the City owned and completely controlled the conduit systems it would not only derive income from the rentals, but, of greater importance, by using its contract power it could lay down certain rates as conditions to using the conduits and so could control the cost of electricity and telephone service to its citizens." They also pointed out that the City would need these conduits if it were to try municipal competition as a means of keeping down the rates.

7. No Expansion Allowed

One of the conditions of success has been expansion. Here is where the cities have been held back most effectively. They have not been allowed, in most cases, to expand their service outside of the city limits. The result

of this limitation has been almost as severe as the bonding limitation. Private plants were allowed to serve the villages surrounding a city, and when these were taken into the city, or even when they were not, the city found its own field of growth limited.

In half the states the cities cannot expand beyond the city limits. In some of the twenty-four states where they can expand beyond there are limitations which make the permission of little value. In some of them it amounts only to owning a plant outside the city limits. In several others they are allowed only to sell "excess power" outside the limits. In still others they may sell outside but not construct lines. In still others they may sell outside only in case the villages there own their own plants. In short the city plants have simply not been allowed to expand as private plants have been allowed to do.

8. *Attempts at Competition*

A considerable number of municipalities are served by both municipal and private plants. The extent to which municipal plants have succeeded in reducing rates will be considered later, but it is important to note here the inequality of the competition. Private plants have been allowed to expand freely. Municipal plants have been kept inside or very close to their own city limits. The result is that private companies not infrequently can cut rates in cities where they are in competition with municipal plants, meanwhile making their remaining territory foot the bill.

This has happened in several cases. The latest is in Georgia. In 1930 a county in that state with a population of 20,000 developed a waterpower plant of 15,000 horsepower and opened for business on August 1st. Their bond issue met the usual opposition and delay. When the plant opened it offered rates ten per cent below those of the Georgia Power Company, which operates through-

out the state and in Crisp County. The private company then countered with a 35 per cent cut in its rates in the county. This looked like the beginning of a rate war of the kind that the West Coast has frequently seen. But in this case the Georgia Public Service Commission simply called on the private company to show cause why it should not extend its rate cut throughout the whole state, if it could afford to put it into effect in Crisp County. The company immediately rushed into court and enjoined the Commission from asking it to show cause why it should not extend the rate cut. Fifty other cities throughout the state immediately demanded that the rate cuts be made applicable to them. But the Commission was enjoined successfully, and then proceeded to allow the discriminatory competition.¹⁶

In Nebraska, where the state commission has no regulatory power over all the electric utilities the situation was described by the director of the Nebraska Information Bureau, "Think as you will, it is competition that brings the price down and not regulation."¹⁷ The cities have had some experience with it. United States Senator Robert Howell, who was formerly city engineer of Omaha, described the local experience:

"In Omaha we secured authority to build ice plants. The rate for delivered ice had been raised from 50 cents to 70 and 80 cents. This was in the midst of the war. We installed ice plants. The result was that immediately, as soon as we began operating, the rate for delivered ice dropped back to 50 cents. The rate for cash and carry ice dropped to 30 cents. Although we could produce but one-third of the ice used in the city of Omaha, at 30 cents per 100 pounds, the rate at which we sold to the public, the proceeds of the sale of the ice produced enabled us in seven years to pay off the \$700,000 invested in the plants, so that they are today 'velvet,' as it were, as far as the people of Omaha are concerned. It was our position from the beginning that we did not want to do all the ice business in the city of Omaha, merely sufficient to regulate rates. In my opinion public competition is de-

cidedly more advantageous and safer than public monopoly. Public competition could keep the privately owned ice plants good, and they would necessarily keep the publicly owned plants on their toes or they would go out of business." ¹⁸

Such an attitude on the part of the Nebraska cities has resulted in an attempt on the part of the power companies to put competing plants out of business by rate cutting, relying on the rest of their territory to pay the bill. A key case was fought up to the Supreme Court of the State in 1929. The Court held that electricity was a commodity and subject to the law forbidding discrimination between various sections of the state. "From the record the Court found that it was the settled and controlling policy of the company to preserve the monopoly it enjoyed at Hartington at all costs; that its efforts were carried even to the extent of adopting a policy of intimidation—diplomatic, but no less effective, forcible and efficient in accomplishing the desired object; that by a multiplicity of forms it sought to circumvent the commands of the statute, one entity maintaining a 6 cent rate at Hartington and others maintaining elsewhere in Nebraska under like situations rates exceeding that at Hartington by 100 per cent; that the 6 cent rate is inadequate and non-compensatory to a degree that renders permanent competition on this basis wholly impossible and the ultimate destruction of its competitor at that point unavoidable." ¹⁹ Here was a case where the Interstate Power Company had reduced rates from 18 to 14 cents, which was unsatisfactory to the Council. The Council gave a franchise, as several other city councils did, to the Western States Utilities Company, which built a plant under a contract to turn it over to the city when the profits repaid the cost. It started with a 9 cent rate, and can now continue.

In 1929 also the Missouri Commission refused to allow the Missouri General Utilities to cut rates below those of

the municipal plant at Salem, on the ground that the burden fell on consumers in other parts of the company's territory.²⁰ In Oregon the commission seems to be changing its policy a little and allowing competition where the rates are very high.

A picture of the difficulties of municipal plants competing with private companies which can make outside consumers pay the bill is given by Bird and Ryan in *Public Ownership on Trial*.²¹ At San Diego the Southern California Edison was charging 15 cents per kwh. and the municipal plant began with an 8 cent rate.

"These years of competition made municipal ownership history. A rate war with political complications provides the thread of the narrative. When the city placed the first unit of its street lighting plant in operation the company dropped its rate from 15 to 11½ cents . . . The company then offered a flat rate of \$1.25 a month for domestic lighting. The city council put a stop to these tactics by requiring the sale of energy by meter measurement. The company immediately filed a new schedule of rates lower than that of the city. The city, following a policy of making its plant pay its way, continued its 8-cent rate until earnings justified a reduction to 7 cents. Whereupon the company reduced its charges to 5 cents. Citizens who remembered the 15-cent rate . . . continued to patronize their own plant. . . . This support made possible a further reduction to 5 cents. . . . The company immediately reduced its base rate to 4 cents with the announcement of willingness to go further if necessary. . . .

This last reduction by the company, while it was charging much higher rates in neighboring communities, led to consideration of the situation by the state Legislature. The Legislature adopted the Unjust Competition Act prohibiting the furnishing of electrical energy in one community at discriminatory rates which would affect other communities. . . .

With resulting equalization of rates between the city and the company, the last six years of competition degenerated into guerilla warfare for customers. In some years the city would connect approximately 2,000 customers and lose 1,000 to 1,500 through the efforts of the company's solicitors. The gain always favored the city and by 1920 it was serving 12,000 consumers to the company's 4,000; but such compe-

tion made the development of business unnecessarily expensive."

Most of the state commissions do not allow competition, however, and the result is that the cities have no way of protecting themselves except by appealing to that process of regulation which has been seen to afford so little protection.

9. *Capitalizing the Triumph*

Through these various restrictions municipal ownership has often failed to expand. Many towns and cities found that they needed the limits of the bonding rights for other public improvements. Others found that, unable to expand, they were unable to install new machinery and charge rates in competition with the private super-power systems. In some cases they sold or abandoned their generating system, keeping their distribution systems. In still other cases they sold both systems to private companies. What the cities experienced in part through restrictions laid on them and in part through advance in the arts of the industry which the restrictions made it impossible for them to use, the small private plants also experienced.

Between the census years 1922 and 1927 for every municipal plant going out of existence there were three private plants doing the same.²²

In spite of this fact and of all the barriers put in the way of municipal growth and expansion, the electric power industry has done its best to spread around the claim that municipal ownership is a failure, and that it is a failure because of what they describe as "political interference." This is rather shameless suppression of truth. It is much as if the advocates of municipal ownership attempted to circulate the story that private ownership was a failure because three private plants went out of existence to every one municipal plant that did so. Yet

this is exactly what the National Electric Light Association has been doing assiduously for a long time. Every year a new edition comes out of a book entitled *Political Ownership* which lists, with many mistakes, the number of municipal plants that have sold out and draws one and only one conclusion, that the main cause is the fact that they are administered indirectly by people elected by popular vote instead of appointed by a business organization. No attention is given at all to any of the restrictions on the cities.

The utilities have not only defeated many of the efforts of the cities to secure a public service at cost but they capitalize their triumph by laying the blame where it does not belong and where it can do them the most good.

Meanwhile they go on defeating bills both to improve the regulatory system and to extend the powers of the cities. Most of the state legislatures met in 1929. Investigations of the regulatory system or waterpower situation were defeated in Kansas, Missouri, North Carolina, Minnesota, Pennsylvania and Georgia. They were begun in New York State and Massachusetts. In Texas, Florida, Kentucky and Delaware bills for state commissions were introduced. In Kentucky the utility men appeared for the bill. They were defeated. In Maine the utilities carried a bill to export power out of the state through the legislature, subject to a referendum. The voters defeated it. In Wisconsin, however, a bill to forbid the export of power in case its sale outside the state was cheaper than rates charged inside the state was defeated. Bills in Texas, Missouri and New York to reduce the rate of return to the utilities were defeated. Practically no improvements in the regulatory system were carried.

In several states an expansion of the power of the cities was demanded. The Illinois Municipal League asked for a law authorizing the establishment of municipal utility districts, but was unsuccessful. In Minnesota a proposed

bond issue of \$50,000,000 for state development of water-power was defeated in the legislature. In Wisconsin the constitutional amendment to allow the state to recapture its waterpowers and develop them itself was defeated in the Senate. In Texas a bill to revoke all permits for dams on public streams when the dams had not been started, was defeated. In Nebraska a bill to establish a bureau of water conservation and utilization was indefinitely postponed. (In Nebraska the political interest of the power companies was emphasized in 1930 by the discovery that the chairman of the Nebraska Power Company had spent \$4,000 in trying to discover a man who could defeat Senator Norris in the 1930 election.) In New York the Conference of Mayors recommended legislation giving the cities the right to build or acquire power plants, but the Legislature paid no attention. In the 1930 session it ignored bills providing for municipal operation and competition.

There were a few small victories for the cities. In Nebraska first class cities were allowed to expand 15 miles into the surrounding territory under certain restrictions. In North Dakota a law giving municipalities the right to operate power properties was passed. In Nebraska the power district bill was amended to meet constitutional objections and repassed.

However, these victories were offset by defeats. In Minnesota a bill to allow city councils to contract for the payment of plants out of their future earnings was defeated. In Wisconsin the amendment to remove from the existing debt limit any debt created for purposes of acquiring municipal power plants was defeated. In Pennsylvania the action of the utilities in opposing Governor Pinchot drew fire from one of the stockholders of the United Gas Improvement (one of the Morgan group). He wrote to its President, John E. Zimmerman: "You have flooded Pennsylvania with letters to the stockholders

of the United Gas Improvement Company in which you appeal to them to vote against Gifford Pinchot for Governor of this State because of his attitude toward public utilities. The sole purpose of this letter is to intimidate the voters of this State by creating in their minds the fear that the dividend on the stock which they hold in your company would be endangered should he be elected Governor of the State of Pennsylvania. As a holder of both your preferred and common stock I resent this as a vicious and sordid use of the power lodged in your hands by reason of the position which you hold as president of the United Gas Improvement Company."

Certainly the utilities and those who worked with them either purposefully or blindly have won in the struggle with the cities in most states. The cities are and remain hampered in their endeavors to secure the fulfillment of their needs without profit to outsiders. Where their political machines are strong the utilities have treated the cities as feudal acquisitions. In the language of the Supreme Court of Nebraska, they may be said to have adopted a policy of intimidation—diplomatic, but no less effective, forcible and efficient in accomplishing their desired objects.

NOTES

¹ Compiled from Poor's *Manual of Municipals*, 1931.

² *Public Ownership on Trial*, Bird and Ryan, Republic Publishing Co., 1930, p. 109.

³ *Idem*, footnote, p. 110.

⁴ *Idem*, pp. 179-80.

⁵ *Annals of the American Academy of Political and Social Science*, 1914, Vol. 57, p. 61.

⁶ Federal Trade Commission Transcript on Public Utility Corporations, Exhibit 4668.

⁷ Bulletin, League of American Municipalities, 1905, p. 10.

⁸ *American Municipalities*, May, 1913.

⁹ *Idem*, September, 1914.

¹⁰ *Annals*, *supra*, p. 170.

¹¹ 290 Ill. 366, 1919, cited by Charles M. Kneier in "State Regulation of Public Utilities in Illinois," 1927.

¹² *Idem*, p. 71, *Chicago Railways vs. City of Chicago*, 292 Ill. 190, 195 (1920).

¹³ *Idem*, p. 76.

¹⁴ *National Municipal Review*, April, 1920.

¹⁵ Report of the Commission on Revision of the Public Service Commissions Law, New York State, 1930, p. 333.

¹⁶ Compare Judson King, "Crisp County Bucks the Utilities" in *New Republic*, October 29, 1930.

¹⁷ Federal Trade Commission Report on Public Utility Corporations, Vol. 2, p. 116.

¹⁸ *Congressional Record*, February 15, 1928.

¹⁹ *Electrical World*, July 27, 1929, p. 203.

²⁰ *Electrical World*, November 16, 1929.

²¹ *Public Ownership on Trial*, *supra*, pp. 97-9.

²² Compiled from base figures given in Census release August 17, 1929.

CHAPTER FOUR

NATIONAL DEFENSE LINES

1. *The Federal Waterpower Defense*

IT has been our habit to erect our defenses against the utilities a little belatedly. The power companies had grown beyond the boundaries of the individual cities before the state-wide defenses, the regulatory commissions, were set up. They have long since grown beyond the state boundaries, but, as yet, the national defense lines built to protect the consumers are in almost skeletal shape.

The first comprehensive move to aid waterpower development on a national basis and at the same time to protect the consumers of the power and light developed from the national waterpowers, was made in 1920, when the Federal Waterpower Act, creating the Federal Power Commission, was passed. Prior to that there had been outright gifts of certain waterpower resources as well as limited gifts. Today the Forestry Service in the Department of Agriculture supervises some 272 projects with a development of 540,000 horsepower, and the War Department a further 43 projects with a development of 830,000 horsepower.¹ Since 1920 the licenses to use waterpowers on navigable streams, over which the national government has control, have been issued by the Federal Power Commission. It has licensed 2,489,978 horsepower installed capacity between 1920 and 1929, and has applications for a further 5,744,239 horsepower ultimate capacity pending.

In this act one principle was definitely established, and several protections were laid down. The principle was that the national government retained ownership of the

waterpowers on navigable rivers and could take them over for the benefit of municipalities or states desiring to develop them at the end of a fifty year license period. The protections laid down were three: 1. There could be no inflation of costs. The price to be paid by the government at the end of the fifty years of private development was actual cost plus severance damages. This was intended to eliminate revaluations, so popular with the utilities under state regulation, and the issuance of securities not based on sums actually invested. It meant that the companies had to report all additions to plant under license from the Federal Power Commission, and also all expenditures made for the sake of the development before the license was granted. 2. The second was that of regulating the issuance of securities on these developments where the state commissions involved had not been granted sufficient power to regulate such securities. 3. The third was regulation of rates charged for power developed from these plants where the state commissions had not been granted adequate power to regulate them. It involved the taking of excess profits in the form of higher license fees, a form of excess profits tax.

What use has been made of these three powers to protect the present consumers? The answer, given by the Federal Power Commission itself, is "almost nothing." In its 1928 report it states, on the first point (prevention of the inflation of pre-license costs), that it has settled \$21,851,000 of such claims, but that \$275,000,000 stand unsettled. If all of the projects now licensed are completed it will be necessary to pass on claimed expenditures of about one billion dollars. On the second point (preventing the issuance of unsupported securities where the states involved do not have sufficient authority to do so), it has acted in only one case, that of the development at Conowingo, in Maryland. On the third point it has done nothing at all. In 1928 the Commission re-

ported that while it has acted rapidly in authorizing the development of new waterpowers, it had not been able to perform the other duties "which related primarily to the protection of the public interest in the waterpowers so licensed."²

The admitted failure of the Commission to use its powers to protect the consumers led to criticism. The point was made that its three heads, the Secretaries of War, Agriculture and the Interior were active party politicians and responsive to the considerable political power of the electric power companies. The Commission itself pleaded that it had been kept practically helpless through insufficient appropriations. It said in 1928:

"Neither sufficient time nor qualified employees were available for inquiring into the financial arrangements of applicants, the cost of construction of their projects, or the items which they were entering into the fixed capital accounts of their projects, all matters upon which costs to consumers are so largely dependent."

It is true that the Commission has been hampered in not being allowed sufficient workers to handle the great task which it was supposed to do. Whether this hampering was done intentionally or as a sincere part of the penny-wise pound-foolish economy which characterized a large part of the period of its activity, is a matter of opinion. Since 1920 it has persistently asked for more employees, and for the freedom to hire them directly. Both of these requests have been refused by Congress. The result is that the Commission was dependent on employees assigned to it from the three departments of Agriculture, War and Interior, who were always subject to recall to their own departments. Not until 1929 were funds directly appropriated for 29 employees.

Some evidence is available as to the causes for such hampering of the Commission. In 1928 its request for more employees was defeated in the House of Representa-

tives by 11 votes. Later it was brought out that this defeat was really caused by one of the power companies, the Niagara Falls Power Company, with the aid of the Secretary of War. The Commission had prepared a statement showing the extent of the problems before it, the sums involved in the claims of the various power companies which the Commission was challenging. The Niagara Falls Power Company was one of them. One of the reporters for the organ of the electric power industry, the *Electrical World*, managed to see the report. News of the matter was thereupon received in Niagara Falls. The Secretary of War was approached. The statement showing the claimed inflations was then, at his request, not presented to Congress, and the Commission was thereupon refused the additional employees necessary to challenge those claims. This held the work back very definitely. The first result was that the Commission suspended its orders to the licensees to report on the securities they were issuing. This was a complete surrender on one of the three protections. The excuse, insufficient staff, may have been valid. The cause for its being valid was the Niagara Falls Power Company and its associates.

The report suppressed at the instigation of the power companies was later made public by the Senate Committee on Interstate Commerce in its hearings under Senator James Couzens. It is valuable in indicating the work the Commission might do it if were left free. It is also corroborative evidence of some of the methods of the utilities described in Chapter Two. The Niagara Falls Power Company was given a license in 1921 covering 312,450 horsepower, and for an addition of 210,000 horsepower. The license provided for finding the cost of the plants. The Federal Power Commission tried to establish these costs. Its report, in the language of the suppressed memorandum, "could not be completed because access to certain records of the constituent companies was refused. The

examination disclosed that considerable property which had been abandoned and demolished was still carried in whole or in part in the plant investment; that many large amounts in connection with new construction appeared to have been erroneously charged to property investment; and that many millions of dollars carried in the plant investment account did not represent actual investment either by the company or by its predecessors." The first charge, then, is one of inflation.

The second charge is that of organizing to escape state regulation. The inflations involved in the process are also given, and provide a commentary on the New York State Public Service Commission.

"The Niagara Falls Power Company was formed by the consolidation in 1918 of a former corporation by the same name, of Hydraulic Power Co., and of Cliff Electrical Distributing Co. The last-named company had been organized on March 16, 1909, and there had been transferred to it that part of the property of Niagara Falls Hydraulic and Manufacturing Co. which was used in generating and distributing energy for use in public service. The Public Service Commission of the State of New York had been created in 1907 with authority over accounts, rates, services and securities of public utility corporations. It was presumably for the purpose of avoiding supervision by that commission over the major parts of its operations that such transfer was made by Niagara Falls Power and Manufacturing Co. The transferred properties appear to have been carried on the books of the transferor for approximately \$422,000. The transferee paid for the properties \$500,000 in bonds and \$250,000 in stocks, or \$328,000 in excess of book costs to the transferor, an increase of 78 per cent."

In 1910 the stockholders of this Hydraulic and Manufacturing Company organized still another company, the Hydraulic Power Co. The assets of the former stood in that year at \$3,973,716. "The new corporation set up on its books under the caption 'Purchased Property' as an asset item, \$15,771,208, or nearly \$12,000,000 in excess

of the amount carried in the fixed capital account of its predecessor. This transaction and that connected with the organization of Cliff Electrical Distributing Co. added \$12,123,964 to investment accounts which prior to transfer had aggregated \$4,395,245, an increase of 282 per cent." 4 The Federal Power Commission found still further inflation in some construction costs, bringing the total to \$14,000,000 out of an aggregate property investment in 1918 of \$34,500,000.

Since the Commission has never prosecuted the case the cost of the company has never been determined, "and the company has never filed a formal statement of its claims." The company did transmit an appraisal showing:

| | |
|-----------------------------|--------------|
| Tangible fixed capital..... | \$31,190,974 |
| Intangible property..... | 5,762,143 |
| Overhead costs..... | 8,718,334 |
| Water and rights..... | 32,000,000 |
| | <hr/> |
| | \$77,671,451 |

The report of the Commission which was suppressed by this company with the aid of the Secretary of War said: "This aggregate represents what appears to be a claim for "fair value" of the property which was transferred on the books at the time of the consolidation at \$34,500,000, and which appears to have represented not more than \$20,500,000 of actual investment." There have been additions to the properties since then in which the Commission found many questionable items. It puts the difference between actual cost and "value" claimed by the company on the theory that it is allowed to revalue its property, at \$46,000,000, the sum of the items of "intangible property," "overhead costs" and "water and rights," not including the \$14,000,000 of earlier inflations. The total is \$60,000,000. In its suppressed plea for more employees the Commission said that the costs to be estab-

lished would have to be fought through the courts and that the Commission was without adequate staff to do this. "To do so without technical preparation and without experienced legal assistance would be foolishly to risk scores of millions of dollars, for the amounts finally determined in these proceedings will be the amounts which the United States would be required to pay if it ever exercised its option to purchase at the termination of a license. They are likewise the amounts which would serve as a rate base if the Commission ever exercised its authority of rate regulation."

In 1926 the development of Conowingo was authorized, and the Commission, together with the Pennsylvania and Maryland Commissions, prevented an over-issue of securities. The pre-license costs have never been agreed to, however. Out of a total pre-license costs of \$7,246,832 claimed by the various companies involved in the project "\$3,443,708 appeared not to be a proper charge to the project, and the balance of \$712,870 was doubtful." Another example was the Chelan Electric Company in the State of Washington. Acting in its behalf the Washington Water Power Co. claimed \$516,600 in pre-license costs, alleging that this was the compound interest on certain preliminary expenditures running over nineteen years. No evidence was presented to show that it had actually been paid to anybody. "There have been many other cases where accrued but unpaid interest charges comprise a very substantial part of alleged pre-license costs." Still another case happened in Minnesota. The Minnesota Utilities Company acquired certain rights in the Winton development for \$48,000, and entered them on its books at \$300,000. In 1923 American Power and Light (an Electric Bond and Share company) acquired these rights. The licensee, the Minnesota Power and Light, a subsidiary, bought them from its holding com-

pany for \$534,500. Thus by re-sales among allied companies the "cost" had been driven up from \$47,000 to \$534,500.⁶

The attempts of the power companies to write into their accounts various fictitious expenditures have not taken place only in New York, Maryland, Washington and Minnesota. The Commission's accountants report involves the Alabama Power Company, formerly one of the chief bidders for Muscle Shoals. A joint examination of the records was made by the Federal Power Commission and the Alabama Public Service Commission. "The total cost of the Mitchell dam project is shown on the books of the power company as \$10,968,000. It is doubtful if more than \$7,000,000 of this amount can be considered as actual legitimate cost." The development on the Saluda River in South Carolina was accompanied by very large payments to the holding companies for engineering services as well as excess capitalization of water rights. On the former score the holding companies proposed to take \$1,250,000 and on the latter score \$1,035,000 "representing alleged values which probably cost less than \$100,000."

Activities in South Carolina have also interested the Commission. In September, 1930, it sent to the Carolina Power and Light (an Electric Bond and Share subsidiary) a preliminary accounting report, cutting the sum of \$779,329 from its claimed pre-license costs of \$924,850. In other words it stated that the actual legitimate expenses were about \$145,521, instead of being over five times as much. Most of the eliminated sum represented claims for land and water rights. The development involved was the Pigeon River. The group of that name is a company which has played a considerable part in the financial manipulations of the Electric Bond and Share in the South. According to the Federal Trade Commission reports the National Power and Light secured control of the old

Carolina Power and Light in 1925 and issued its own shares in the ratio of 15 to one of the old Carolina company. This old stock had been carried at \$126 a share, including surplus. It was entered on the books of the National Power and Light at \$500 a share, \$23,818,000. It was turned over in the same year to the Pigeon River Power Company plus other properties carried at \$4,284,160, for \$28,094,860. In 1926 there was a new merger, forming the new Carolina Power and Light Company, in which the old stock was eliminated, but the sum of \$19,048,000 was left on the books. The Federal Trade Commission accountant reporting said: "In addition to this write-up of \$19,048,400 there was an additional write-up in the fixed capital account of the new Carolina Power and Light Company, due to the reserve account of \$3,000,000 created at the organization of the Pigeon River Power Company, through a charge of like amount to its plant and investment account. Thus the total 'write-up' in fixed capital accounts of the new Carolina Power and Light was approximately \$22,048,400."*

Inasmuch as the companies involved here have a license from the Federal Power Commission to develop the water power and the Pigeon River Power Company was an operating company as well as a holding company, use of the Commission powers to regulate securities might have helped avoid some of this \$22,048,400 inflation.

When the companies are engaged in this kind of financial transactions it is inconvenient to have a Commission empowered to act. The Commission, however, may be kept silent and be hampered in its work to the point where it refuses to retain responsibility. But nevertheless it might sometime act. So now the companies are threatening to take the Commission into court to test its powers. There have been indications of this in two cases. One of them is the Columbia Electric and Power Company

which has a development on the Chattahoochee River between Georgia and Alabama. The Commission's accountants eliminated some \$650,070 from its claimed pre-license costs. Some of this was for claimed interest which had not been actually paid. The larger part consisted of \$459,249 in fees paid to Stone and Webster. This was disallowed on the ground that "such fee represents an arbitrary overhead charge for services of officers of one or both of the corporations performed only incidentally to other multitudinous duties. . . ." The Solicitor of the Commission, Charles A. Russell, held that the contract between the several parties was not a valid contract between parties dealing at arm's length. The firm of Stone and Webster is fighting this contention, and says that the contracting parties were separate and distinct corporations and that on the board of directors of the Columbia Gas and Electric were three officers and stockholders of Stone and Webster, three who were stockholders in other companies managed by Stone and Webster, but five others who had no interest in Stone and Webster or in any of their companies. This promises a law suit on the old question of whether the corporate fiction validates acts between closely allied parties. And it is very important to the many companies which have paid allied parties very large sums for more or less nominal services in connection with water powers.

The constitutionality of the act has also been attacked. The Clarion River Power Company of Pennsylvania attempted to enjoin the Commission in the Supreme Court of the District of Columbia from holding any hearings or making any report regarding the amount of net investment in the company. It is owned by the Associated Gas and Electric. In its suppressed report the Commission cited the company "as an example of inflation of fixed capital accounts through charges for construction as well

as pre-license costs." The company claims \$11,032,816 under this head. The Chief Accountant of the Commission, Mr. William V. King, states that \$6,387,731 of that amount is irregular and unlawful. The report says: "The book costs of this project are probably inflated by not less than \$4,000,000 and possibly by much more. Vouchers and other original records in support of less than \$5,000,000 of total book costs have been furnished for inspection. More than \$6,000,000 of alleged costs is represented merely by entries on the books and is unsupported by evidence of expenditure or cost. Original records necessary for determining costs are supposed to be in possession of H. D. Walbridge and Co., but access to them has been refused." The Court, however, upheld the Commission.

Further attack on the Federal Water Power Act has been made by the Appalachian Electric Power Company, some of whose financing has been described in Chapter Two. This company desires to develop a waterpower on the New River, a tributary of the Kanawha, in West Virginia. The question raised is whether the tributary of a navigable river can be considered as part of that river system and as such under Federal control. The law states that navigable waters are

"those parts of streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several states, and which either in their natural or improved condition, notwithstanding interruptions between the navigable parts of such streams or waters by falls, shallows or rapids compelling land carriage, are used or suitable for use in the transportation of persons or property . . . including therein all such interrupting falls, shallows or rapids, together with such other parts of streams as shall have been authorized by Congress for improvement by the United States or shall have been recommended to Congress for such improvement after investigation under its authority."

While this language seems to be inclusive, Attorney General Mitchell has delivered an opinion in which he holds that the rights of the Federal Power Commission to retain jurisdiction over tributaries to navigable rivers are limited. If this opinion holds, a considerable number of power companies are expected to seek cancellation of the licenses they have received from the Commission.

These various attacks on the powers and acts of the Federal Power Commission headed up in 1930. During that year Senator Couzens held hearings on his bill to form a new power commission, which was finally passed by Congress. In the course of the hearings it developed that the Chief Accountant of the Commission, William V. King and the Solicitor, Charles A. Russell, had been at some pains to prepare the work so that the Commission's protests against inflations could be made effective. To circumvent their efforts to eliminate fictitious entries, it was proposed that "the work could be done better by the Departments of War, Interior and Agriculture than by the Commission's staff directly. If this committee (of the United States Chamber of Commerce) is successful in presenting this argument to the Secretaries who form the commission . . . it is believed that these departments will not have men especially trained for this work. At least they will be removed from the direct supervision of Mr. King."

The Couzens hearings drew attention to the fact that there was a considerable difference of opinion within the Commission staff. The Chief Accountant and the Solicitor seemed to be more eager to press the issues presented than did the new Secretary, Mr. F. E. Bonner. The Federal Trade Commission made public a letter written by Richard B. Scandrett, one of the officials of the Electric Bond and Share group and formerly Mr. Coolidge's Western campaign manager, in which he communicated to S. Z. Mitchell that he had reliable information that

Mr. O. C. Merrill was going to resign as Secretary, that the National Electric Light Association had been busy in putting spokes into the wheels of candidates for his position who were unacceptable to it, and that "apparently the most likely selection is Mr. F. E. Bonner of San Francisco." When Secretary Merrill resigned to become director of the World Power Conference, Mr. Bonner was appointed in his place. He was recommended by Mr. Merrill and endorsed by the Pacific Gas and Electric Company. He reversed Mr. Merrill's policy of asking Congress for the necessary additional facilities with which to carry on the work. He announced that no increase was needed in the accounting or legal staff but that the work could be done in other departments. He tried, by bringing the Solicitor of the Commission, Russell, into conference with the Washington representative of the Electric Bond and Share interests, M. O. Leighton, to convince Russell that the Chief Accountant, King, was obstructing the granting of power sites to these companies. Mr. Russell held that the Chief Accountant was obeying the law. A deadlock resulted. Secretary Bonner and Secretary of the Interior Wilbur, prevented the securing of further funds to prosecute the disputed claims and the Chief Accountant and the Solicitor refused to approve claims which had not been properly audited. This situation prevailed at the time that the Couzens bill was enacted, providing for the appointment of five commissioners who would devote their full time to the work. It was brought out that the Secretaries of War, Agriculture and the Interior had, during the previous nine years, devoted only an average of five or six hours a year to the work of the Commission.

Further evidence of utility control of the Commission appeared to be shown in the action of the old Commission in June, 1930, in the matter of giving a license for development on the Flathead River in Montana to the Montana

Power Company. In Chapter Two, in the discussion of the capitalization of monopoly privileges, it was pointed out that the Montana Power Company (an Electric Bond and Share interest) had appraised its tangible property at \$45,746,598 but had added to this for "water rights, contracts, franchises, etc." the sum of \$51,491,269, thereby increasing the total valuation to \$97,237,867. If the Montana Power Company had sought a direct license for itself some of these items might sooner or later have been questioned by the Commission. It sought the license through a dummy corporation, the Rocky Mountain Power Company.

The situation was complicated by two unusual factors. One was that the site in question was on Indian tribal land. The other was that an active competitor appeared and asked for the lease. This competitor wanted to use the very cheap power for chemical purposes. He guaranteed to undertake an initial development of 214,000 horsepower and to sell the power at \$15 a horsepower and to pay the Indians a rental of \$240,000 a year. These were better terms than those offered by the Montana Power Company interests.

Hereupon the Army Engineers prepared a plan which charged a very low rental for the first 68,000 h.p. which was all the Montana Power Co. proposed to develop, with a rising rental for all above that amount. This hit at the Wheeler proposal for a much larger development. On exposure, this scheme was hurriedly withdrawn, but the Secretary of the Interior, Mr. Wilbur, promptly issued another proposal, and transmitted it to the Montana Power Co., ignoring Walter H. Wheeler altogether. This proposal, which was finally made the basis of the license, cut the rental to the Indians to \$104,000 a year for the amount of power which the Montana Power Co. proposed to generate.

According to F. L. Bird, formerly Secretary of the

Committee on Coal and Power, the fact that a dummy corporation was used invalidates all the essential controls of the Commission. In the license the dummy company agrees to sell all of the developed waterpower to its owner, the Montana Power Company. It can sell this power at such a low rate to its owner that there will be no excess profit to itself, giving cause for a rate reduction. He commented:

"If the dummy licensee could be thus adequately controlled under the Federal Water Power Act, why was not this control imposed upon the actual licensee, where it would have been of direct benefit to the people of Montana? The rate control applied to the dummy licensee is of little or no value except to the Montana Power Company. . . . If the Montana Power Co. were the licensee, it would have been required to submit its financial structure and operations in all particulars to the direct scrutiny of the Commission. Under the convenient arrangement of the dummy organization the Montana Power Co. is saved all such embarrassment. It can capitalize its contract with the Rocky Mountain Power Co., include this fictitious value in its rate base, and retain its excess profits from the sale of Flathead Power with absolute impunity in so far as Federal control is concerned. . . .

True, the Public Service Commission of Montana will now have available important information as to production costs which it may use in determining rates. But the work of the Montana commission has been singularly ineffective. It has not prevented the excessive rates to industrial and domestic consumers which offset the cut-rate sales to the Montana Copper Co. It has no jurisdiction, under Montana law, over the issuance of securities by the utility companies. It was unable to prevent the purchase by Mr. Ryan of the Thompson Falls power plant for \$925,000 and its immediate sale to the Montana Power Co. for \$5,000,000 worth of stock in that company. It has not been able to prevent the Montana Power Co. from carrying over 50 per cent of its total capitalization on its books as "water rights, franchises and contracts," and from charging the people of Montana interest and profits on that amount of water in its capitalization. It will be impotent to prevent the capitalization at more millions of dollars of the contract for the purchase of power from the Rocky Mountain Power Co.

The Flathead license is, in brief, but another of the magnificent fictions of regulation. . . .”⁷

The members of the Federal Power Commission have stated that the cause for their decision to grant the license to the Montana Power Company interests was that the competitor had not given essential proof of his ability to finance the undertaking on the large scale proposed. Actually the rental scheme proposed by the Commission under the stress of this competition was such as to discourage complete development of the power at the sites involved.

The work of the old Federal Power Commission for the eleven years of its life may be summed up. It had been established to aid in the development of the country's waterpower resources and to protect the interest of present consumers and future governmental owners of such developments. It was given several powers with which to make such protection effective. First, it was to hold down the investments in the projects to actual cost. During the years of its life hundreds of millions of dollars of claims have piled up which have not been settled. On only a very small share of the claimed costs did the Commission and the companies agree. The others have been held in abeyance. They are important because they go to constitute the price the government will later have to pay when recapturing such projects at the end of the license periods. They are also important because they affect rates to present consumers. The Commission stated that it has not prosecuted these claims, in which it has found millions of dollars of padding and inflation, because it had no adequate staff, and did not care to risk the sums unless the cases were thoroughly prepared. It laid the blame for this delay not only on the inadequate appropriations given to it but on the companies for withholding essential information which would have made

final agreement on the claims possible. The companies have protested the findings of the Commission in regard to inflation of pre-license costs, and are now taking the Commission into court, in the eleventh year of its life, to test its authority. One case is being brought on the same point that defeated the state commissions, the contention that holding companies, because they are separate entities, can charge their subsidiary companies all sorts of prices for more or less real services, and that these prices must be allowed as part of the development costs of the project. If the companies win and the bulk of the inflation is allowed by the courts, all the accounting work the Commission has done will be cancelled, and the protection its existence promised to consumers destroyed. By waiting for eleven years to bring their suits the companies have gained exactly that much time in which to carry on these transactions. The amendment to the act which will probably follow the defeat on this point will be eleven or twelve years belated.

The authority of the Commission is further challenged by a suit to limit its powers to fewer sites than the Commission had taken under its jurisdiction. Success of this suit, indicated in an opinion by the Attorney General of the United States, would cause the cancellation of a number of licenses now granted, or amendment of the act to include the tributary streams, on which control is challenged.

The second power of the Commission was to control security issues of its licensees. The Commission has only once during its life exercised that power. This was at Conowingo in 1926 when it prevented the Philadelphia Electric Company from issuing itself a bonus of \$2,355,000. Otherwise it has done nothing about the many hundreds of millions of dollars issued by its licensees. One of the reasons given for this failure to function is inadequate appropriations and staff. Here the penny-wise

pound-foolish economy of the period was very effective, and its advocates have a great deal to answer for. The other reason given was complaint by several of the state commissions that regulation of securities might conflict with their functions.

It is difficult to understand the objection of the state commissions on this ground. Those which have security regulation among their own powers would not be interfered with. Only those states, over half of the total, which do not have such powers would be affected. But there are other considerations. Limitation of security issues would immediately throw into contrast the workings of regulation in the various states. The public would see very clearly the difference between regulation on the basis of actual cost and regulation on the basis of revaluations. The contrast would be entirely in favor of the former. It would doubtless increase rather than diminish dissatisfaction with the regulatory commissions, and perhaps even increase the demand for public ownership. This affects the regulatory commissions rather directly. So instead of inviting regulation by the Federal Power Commission in order that it might bring effective pressure on the non-licensed power companies, they fought against it.

The third power given to the Commission was regulation of rates changed by licensees in the states which had no regulatory commissions of their own. This has not been exercised at all. Somewhat similar explanations for the failure to function here have been given. Now the companies have, apparently, found a way in which to circumvent even the threat of any such regulation. They are procuring licenses in the name of dummy corporations, which they own, and which are obligated to sell the power generated to them at cost. They are willing to let the dummy corporation be regulated, while they take their own chances with the state commissions, reselling the low-

cost power as high as is warranted by their own revaluations, capitalization of contracts, going value and the like.

In 1930 Congress passed the Couzens bill which created a new power commission, and President Hoover appointed to it five men, who were confirmed by the Senate. They were George Otis Smith, chairman, Marcel Garsaud of Louisiana, Ralph D. Williamson of Washington, Claude L. Draper, chairman of the Public Service Commission of Wyoming, and Frank McNinch of North Carolina. Their terms range from one to five years, after which the terms are to be for five years. The salary is \$10,000. No more than three commissioners are to be from one political party and no commissioner is to hold stocks or bonds in any corporation affected by the act.

No sooner had these men been confirmed than they dismissed Charles A. Russell, the solicitor of the old Commission and William V. King, its chief accountant. These two men had been carrying the burden of the real attempt to enforce the waterpower law. The Senate immediately adopted a resolution requesting the President to withdraw their names, which Mr. Hoover refused to do. The Senate took advantage of a clause in its rules giving it the power to withdraw confirmation within two legislative days and withdrew confirmation from Mr. Smith. Its right to do so was successfully contested in the courts.

At this point it began to appear to some observers that the new administration was quite as actively intent on sabotaging the waterpower act as its predecessor had been. One of them, Mr. Amos Pinchot, pointed out a series of connections between the Hoover administration and the power companies. Mr. Hoover's first secretary of war, the chairman of the old Federal Power Commission, was the late James W. Good, who was counsel for the Alabama Power Company, one of those most interested in securing Muscle Shoals. The new chairman, Mr. George Otis

Smith, had "as director of the Geological Survey, supported Secretary of the Interior Ballinger during the Taft administration when he cancelled the power-site withdrawals made by his predecessor, Secretary Garfield, and turned the immense power resources of the federal domain over to private exploitation." The fact that the dismissals of Mr. Russell and Mr. King took place within twenty-four hours after Mr. Smith became the new chairman was taken as indication that he was acting under instructions from the President. Colonel Marcel Garsaud is described as being "locally identified with the Public Service Corporation of New Orleans, a subsidiary of the Electric Bond and Share Company." Mr. Pinchot points out further that the Secretary of State, Mr. Henry L. Stimson, has as partners in his law firm Mr. Winthrop, who signed a brief presented to Congress in an attempt to block the Walsh resolution; also Mr. Roberts who was a director in the Niagara-Hudson and other power companies and a vice-president of Bonbright and Company. The firm is counsel for the Georgia Power Company and had been employed politically by the head of the utility lobby, Josiah T. Newcomb. Mr. Hoover's Attorney General came from the firm of Butler and Mitchell, "one of the most prominent utility firms of the Northwest." The Solicitor-General, Mr. Thomas D. Thatcher, came from a firm which acted for the Electric Bond and Share in most of its mergers. The Chairman of the Republican National Committee was Claudius H. Huston, head of the Tennessee River Improvement Association, a lobbying agency devoted to fighting the Norris Muscle Shoals bill.⁶

This fairly close line-up of the administration with the power group may explain in part the extraordinary step taken by the President on July 31, 1930, when he requested from his Attorney General an opinion on the attempts of the Appalachian Electric Power Company to invalidate the law in two ways. The Attorney General replied up-

holding the contentions of the power company to the effect that New River was not a navigable stream and that the Commission could issue a minor-part license, i.e., one not subjecting the company to control. He also questioned the constitutionality of the whole law. The Commission, however, refused to give the minor-part license and referred the question of the navigability of the river to the courts.

In view of the importance of the decisions of this Commission on the future of regulation the appointments of new members to the Commission, and their confirmation, should be matters very closely watched by all those who are interested in saving something from the wreckage.

2. The Couzens Defense

A proposal for more adequate control of the whole situation has been made by Senator Couzens of Michigan. It intends to meet, after a fashion, two of the most serious weaknesses of regulation at present. One of these is the partly unregulated movement of power in interstate commerce. The other is the growth of unregulated holding company activities prejudicial to the general welfare. In this attempt to supplement the weakened state powers with some measure of Federal control he is supported by Governor Pinchot of Pennsylvania.

The interstate movement of power in 1929 totaled 30,411,322,000 kwh., which is over 32 per cent of the electrical energy available for public use in that year.⁹ This is split 52-48 between imports into states and exports from states. There is some duplication involved in these figures and not all of the power crossing state lines is unregulated. In some states the export of power is a very large proportion of the total.

The holding company situation, however, affects almost every state in the union, and only a very few states, including Massachusetts and New York, have tried to meet

the problem by claiming some measure of control over their activities.

What Senator Couzens has proposed is to include under the jurisdiction of the Federal Power Commission all parent companies, and by a parent company he means any person or group of persons controlling one or more utility corporations and/or their operations or management, whether by ownership or control of stock, or by interlocking directorates, or otherwise. These parent companies, where they control licensees of Federal waterpowers, or control operating companies transmitting power interstate, are to be subject to the same requirements of the proposed act as their subsidiary licensees or their subsidiary companies shipping power in interstate commerce. This applies also to management companies.

These utilities, licensees of the Commission, or shippers in interstate commerce, or their holding and management companies, are to furnish complete annual reports to the Commission as to their assets and liabilities, capitalization, net investment, gross receipts, interest, depreciation, cost of generation, of distribution and the like. These must be in the form prescribed by the Commission, which may also require special reports. The Commission is especially charged with classifying property for depreciation purposes and fixing the proper percentages to be charged in each classification. The importance of this charge was discussed in Chapter Two.

The Commission is ordered, within six months after the act is passed, to start to make a valuation of all the property used in the generation, transmission, distribution and sale of power by all persons subject to the act. This includes holding and management companies. This valuation is to ascertain the original cost of the property, the cost of reproduction new and the reason for the differences between the two. The properties of licensees of the Commission is not to include any valuations in excess

of the net investment, following the old waterpower act. After hearings on the preliminary valuations and any necessary changes, the valuations are to become final, following the procedure of the Interstate Commerce Commission. Appeals from the Commission's valuations can be taken to the courts.

General regulatory principles are laid down to the effect that the rates to any distributor, consumer or other purchaser of power transmitted in interstate commerce for ultimate public consumption or to any interstate transmission company shall be "just and reasonable." Discrimination in rates giving any undue or unreasonable preference to any particular person or locality is declared to be unlawful. Distribution or transmission service in interstate commerce cannot be abandoned without permission, except for nonpayment of bills. The value of franchises or other public donations shall not be considered in rate cases.

Under this proposed Couzens bill rate cases can be started by the Commission itself, or by any State Commission or by a distributor or by a substantial number of consumers of the utility involved. Such a petition about rates is then to be referred to a joint board, which is to act as an agency of the United States. It is to be composed of one representative from each State in which the utility involved in the rate case, is produced or consumed. These state representatives may be chosen as the states see fit. Anybody having an interest in the case is allowed to intervene in the proceedings before the joint board, and to be heard. These joint boards can decide the matter presented to them by a majority vote. They can function even if some states refuse or fail to appoint representatives to them. But if a majority of the states which have a right to representation on any joint board fail to appoint representatives, then the Federal Power Commission takes control of the rate case. Otherwise it has nothing

to do with the joint boards, except to delegate some of its authority to them, and to furnish them with assistance. The arrangement, up to this point, simply calls in the various states affected by a case about rates in interstate commerce to decide it. Their majority vote becomes the order of the Federal Power Commission unless appeal is taken from the decision of the joint board. In case of appeal, however, the Federal Commission takes jurisdiction, but has to determine the case on the record of evidence before the joint board in question. It is made very clear that neither the Commission nor any joint boards composed of several state representatives have anything to do with rates charged for power which does not enter into interstate commerce. Appeal from the decisions of the Commission can be taken to the Court of Appeals of the District of Columbia, and the decisions of that court are subject to review only by the Supreme Court of the United States.

In addition to the rate regulation the Commission is given power over the issuance of securities, extending beyond the powers of the present Commission which apply only to licensees of Federal waterpowers. The new Commission, according to Senator Couzens, should be given power to pass on all security issues, not only of licensees but of their holding and management companies and of companies transmitting power in interstate commerce, and shall not approve such issues "even though permitted by the laws of any State" unless it finds them to be for some lawful object, and compatible with the public interest. When one of the utilities affected by this act wants to issue securities there is to be a hearing at which "the public service or utilities commissions or other appropriate State authorities of the State shall have the right to make before the commission such representations as they may deem just and proper for preserving and conserving the rights

and interests of their people and the States, respectively, involved in such proceeding." ¹⁰

This proposal by Senator Couzens is planned to block two of the largest breaches in the wall of regulation, the unregulated shipment of interstate power and the holding company control.

There is a danger in regulating holding companies. You cannot regulate them without starting from somewhere. If you start from the present you run into the same situation that the state commissions ran into when they undertook regulation of operating power utilities in 1907 and since. They had to accept the financial manipulations up to that date, and they were on a much smaller scale than those confronting us in the present holding companies. You may try to go back of the present into the past, but the courts, in their reverence for the past, have been quick to say that milk once spilt is spilt for all eternity.

When the regulation of public utilities in the states is an expensive farce and when the national defense lines are merely in skeletal shape, it is interesting to note the means employed by interested parties to defeat all attempts at more effective regulation. The state commissions blame their own ineffectiveness on the courts, which allow revaluations of an almost fantastic kind, and which forbid control of holding companies and of power shipped under certain circumstances in interstate commerce. When Senator Couzens proposes to stop the last two of these three gaps in the wall the state commissions turn on his proposals, not with the objection that they would not work, but with the objection that they would work, and in the course of working would take away some of the authority of the state commissions. The officials of the Federal Power Commission were charged with doing

some of the things now proposed by Senator Couzens, such as taking control of security issues. They failed to do that, as they failed to fight out the inflations charged by their licensees. Are they interested in fighting out the inflations, in controlling security issues? No, they propose to scatter the work involved over other departments, give it to men who know little about it, who have other, more pressing duties. They hold up the activity of their Chief Accountant and Solicitor. They do not even ask for enough money to prosecute the claims against the companies, which, if unprosecuted, mean a gift to the power companies out of public funds and out of consumers' pockets, both, of hundreds of millions of dollars. When faced by the Couzens proposals for really effective regulation of interstate transmission, do they welcome it? Or do they point out that it may mean giving the holding companies a present that has not been equaled since we gave away land to the railroads? No, they suggest the one thing which will leave the whole situation exactly where it is. They announce their decision to pursue a policy of Federal inactivity, applying "a minimum of interference with the existing machinery of the State agencies."¹¹ To justify this they even close their eyes to what is happening in the industry, the fact that 32 per cent of the power generated is shipped across state-lines, and in Secretary Bonner's words claim that, "It has been recognized that electric power must of necessity be consumed in the immediate vicinity of its place of production." Quite the contrary has been recognized. Probably if the power companies had been paying a secretary of the Power Commission out of their own pockets he could have thought of no better ways of delaying and hampering regulation than those which have been employed.

The difficulties are mentioned here not only to illustrate

how fragmentary and ineffective Federal regulation has been up to the present, but to raise the question whether it is worth the time and energy and money to continue the effort of policing companies which do not want to be policed. It is a long and unprofitable struggle between the government and the lawyers of the power companies. Whenever a government, either state or national, decides to regulate, the country's brightest minds are hired by the power companies to find ways of doing the things they want to do in spite of the law. They succeed. Then the struggle begins all over again. And each step in the struggle creates vested interests in the present order of things, which drag their feet when other people want to move the defense lines ahead and make them effective. Then prices have to be paid by the government to reconcile the opponents of improved regulation. If the price to be paid for federal regulation is the acceptance of all the speculative values piled up by holding and banking companies, running into hundreds of millions of dollars, then it is about time to call for a new deal all around, to admit that the private initiative for which we are paying such a high price is really private initiative exercised for the purpose of laying heavy burdens upon the consumers, and that instead of paying for it we ought to eliminate it from public business.

NOTES

¹ Paul Webbink, *Federal Waterpower Policy*, Editorial Research Reports, January 22, 1929, p. 72.

² *Federal Power Commission Report*, 1928.

³ *Congressional Record*, March 4, 1930, p. 4879, section 27.

⁴ *Idem*, section 29.

⁵ Drew Pearson, *Baltimore Sun*, December 3, 1929.

⁶ Federal Trade Commission report on Public Utility Corporations, Exhibit 4676 B 1, p. 59 *seq.*

⁷ F. L. Bird. Report by the National Committee on Coal and Power, New York.

⁸ "President Hoover's Record," by Amos Pinchot, *The Nation*, August 12, 1931.

⁹ Department of Commerce figures, reported *United States Daily*, September 20, 1930.

¹⁰ Senate 3869, 71st Congress, 2nd Session, Section 34, e.

¹¹ Frank E. Bonner, then Secretary of the Federal Power Commission, before the American Society of Mechanical Engineers, *New York Times*, December 3, 1930.

CHAPTER FIVE

THE OUTPOSTS OF CONTROL

SEVERAL outposts of control are projected outside the battered trenches of regulation in the invaded and hostile field of private operation of the public power business. Boulder Dam is the first of them to be undertaken. Muscle Shoals, the St. Lawrence, and the Columbia River are expected to follow. They constitute the bulk of what is left in public hands of the great remaining natural waterpowers of the country. The erection of these outposts of control will, judging by past experience, be accompanied by years of hidden sniping and open battle on the part of those private interests which have so much at stake in the present system of privately regulated regulation. Their establishment by the consumer interests of the country will probably spell the end of power utility extortion in the large sections which will be touched by them.

1. *Boulder Dam*

On the Colorado River between Arizona and Nevada has begun what promises to be the greatest engineering achievement in the continental United States. The river drains a huge area, including in its watershed large parts of the states of Colorado, Arizona, Wyoming, Utah, New Mexico, Nevada and California. Along its banks and those of its tributaries some 2,500,000 acres of land are irrigated, and it is expected that another 5,500,000 acres will be added when Boulder Dam begins functioning as a water control and power project. Construction of a preliminary character was begun in 1930, and it is ex-

pected that the 408 yard dam, rising 242 yards from the bedrock, will be finished in 1937. It will be engineered by Mr. Walker R. Young and Mr. Raymond F. Walter of the Bureau of Reclamation, which has done so much to add greater value to many of the arid lands of the West.

This dam, which will be the highest in the world, will back up the river into a lake 115 miles long, and the 26,000,000 acre feet of water in the lake would be enough to cover the State of Kentucky to the depth of one foot.¹ There will be an installation of 1,000,000 horsepower, and of that 550,000 will be primary horsepower available all year around, day in and day out, like the power at Niagara Falls. A large part of this power will be needed to pump drinking and commercial water across the mountains to the coast cities of California. The Federal Government is not generating the power. It is selling the falling water to various private companies and municipalities for their use. They must install their own generators and transmission lines.

None of the expenses of this dam and development are to be paid out of taxes. There is no subsidy of Government plant and property such as the one asked for at Muscle Shoals first by the power companies and then by the chemical companies. The cost of the dam, which is to a large extent an irrigation and flood control project, is to be repaid, with interest, within fifty years, out of the revenues to be received from the sale of the falling water. The Secretary of the Interior has fixed this price at 1.63 mills for every kilowatt hour developed. This is expected to be sufficient to repay the costs of the dam, and power house, the interest on the bonds issued, and also to furnish sums in lieu of taxes to Arizona and Nevada ranging from \$350,000 to \$700,000 a year. The falling water was all contracted for at this price before building of the dam was begun.

The development also involves the building of an All-American canal which will divert water from the lower Colorado to the Imperial and Coachella Valleys in California. This will be about 75 miles long, the longest irrigation canal in the country. Its costs will be borne by the irrigators affected. Some power can be developed along its route and may help pay the cost.

The costs are expected to be:

| | |
|-----------------------------------|---------------|
| Dam and Reservoir..... | \$70,600,000 |
| Power Plant..... | 38,200,000 |
| All-American Canal..... | 38,500,000 |
| Interest during construction..... | 17,700,000 |
| | <hr/> |
| Total | \$165,000,000 |

This flood control, water supply and irrigation project is the largest single one of its kind supported by the Federal Government. It was not adopted without vehement opposition on the part of the power companies, not only of the West Coast, but of the whole country, to the principle which seemed to them to be involved. Because the development affected so many states some distribution of both power and water was necessary, and the project was opposed by several of the states on the ground that they were treated inequitably. At times it seemed to some observers that the power companies and the objecting states were united for the same purpose, that of keeping the government from repaying the costs of the dam by the sale of power. This, however, is not entirely accurate. Some of the opponents, such as Senator Carl Hayden of Arizona, were not opposed to government development of waterpower projects, but believed that they could best be administered by the groups most affected, in this case the Southern California municipalities. He proposed therefore, that they do the financing of the whole project, under license from the Federal Power Commission. To others, however, it seemed a national project, not only be-

cause of the expense of building the dam and related irrigation works, but also because of the very involved questions of interstate and international water rights, which neither a private company nor a municipality leasing the site could deal with adequately.

One of the great points of division is the distribution of the water for irrigation purposes among the several states on the river. The population of California has grown very rapidly. The population growth of some of the other states has been slower, but they naturally have hopes for the future. They are interested in protecting themselves. The original Colorado River compact of 1922, never ratified by Arizona, provided that 8,500,000 acre feet of water should be allocated to the lower basin states, California, Arizona and Nevada. The State of Nevada proposes to use about 300,000 acre feet, leaving 3,200,000 for distribution between California and Arizona. Each of these two states claims to have acquired rights to about 3,000,000 acre feet apiece, leaving 2,200,000 subject to dispute. This is, however, not going to be sufficient to supply both of these states with their more or less immediate future needs. Each state thinks that it will need a further 3,000,000 acre feet. There is a shortage, then between demand and supply as it is arranged, of 3,800,000 acre feet. The Boulder Dam act allocated 4,400,000 acre feet to California and 2,800,000 acre feet to Arizona, which is less than that state claims as a vested right. Some additional water may come from the non-use by the upper basin states of some of the 6,500,000 acre feet allocated to them.

The second point at issue was the division of water-power between the various states and private companies. The private power companies had fought the act for many years because it contained the provision that municipalities should have preference in the allotment of the water-power. The municipalities had fought for the act and

had planned great expenditures of money to secure the water and the power. The Metropolitan Water District expects to invest \$250,000,000. The question of allotment was left in the hands of the Secretary of the Interior, Mr. Wilbur. He first made a tentative allotment of power which seemed to many to be in clear violation of the provision in the act specifying that preference should be given to the applications of states and cities. This allotment gave Nevada 18.5 per cent of all the power and Arizona 18.5 per cent. Since neither of these two states have any interconnected municipal systems such power as they receive is expected to go into the hands of the private companies operating in those states. The Metropolitan Water District, a unit of Southern California cities undertaking the pumping of water across the mountains and needing power for that, received, under this allotment, 31.5 per cent of the total. Los Angeles received 15.75 per cent and the Southern California Edison received 15.75.

The Southern California cities objected that such an allotment gave 52.75 per cent of the power into the hands of the private companies, and was hardly showing any preference for the municipalities, which were willing to take all the power. At this point another situation arose which made the proponents of the act feel that it stood in danger of being used entirely for the benefit of the private companies. Mr. Paul Y. Anderson described the proceeding, "Within the past few days Secretary Wilbur has propounded to Solicitor Finney of his department a series of questions, the purport of which was this. Would I be legally warranted in ignoring the preference rights of the States and cities and giving the power to 'other applicants,' if I decided that the 'other applicants' offered better financial security and greater contractual responsibility? It seems impossible to mistake the purpose which inspired the questions. And nobody familiar with Solici-

tor Finney's record could doubt what his answer would be. Solicitor Finney, who advises Secretaries of the Interior as to their legal authority for doing the things they wish to do, furnished the celebrated opinion that the then Secretary, Albert B. Fall, was legally authorized to lease the Teapot Dome and Elk Hill naval oil reserves—which the Supreme Court, in an even more celebrated opinion, rather drastically overruled. He did not fail Secretary Wilbur any more than he had failed Secretary Fall. After sweating manfully for several days and nights he produced a document which declared that 'the public interest' was the Secretary's paramount concern, and that the paramount element in 'the public interest' was financial security and contractual responsibility on the part of the recipients of the power. The preference rights guaranteed the States and municipalities by Congress, he stated, would be amply conserved by providing that they could make subsequent applications for power to the parties receiving it from the Secretary. In other words, the will of Congress would be fulfilled if Secretary Wilbur awarded all the power to the Southern California Edison and its associates, on condition that the States and cities might afterward try to get some of it away from them! One could almost hear the companies adding under their breath: 'Try and get it!'"²

This action drew the fire of former Judge George W. Woodruff of Pennsylvania, who was Assistant Attorney General for the Department of the Interior under President Roosevelt and who drafted the Federal Water Power Act. In an open letter to President Hoover he said that the allocation of Boulder Dam power to the private companies would be illegal, and that any such action by the Secretary of the Interior would be, in effect, the action of the President, and the President's responsibility. He said, "The Boulder Dam law is an arrow aimed directly at the heart of the power trust. It not only hurts the trust

by freeing the municipalities in California, Nevada and Arizona from its domination, but it will be an example leading gradually to nation-wide freedom. The future of the whole country is at stake." ^a

In view of the protest by the cities and the California representatives in Congress, notably Senator Hiram Johnson and Representative Phil Swing at this apparent attempt to invalidate the act by executive action, the tentative allotment was changed and contracts were finally signed on the following basis: Arizona and Nevada are each to have 18 per cent of the firm power. The Metropolitan Water District is to have 36 per cent for pumping purposes. The small municipalities of Southern California are to have 6 per cent. The City of Los Angeles is to have 13 per cent, and the Southern California Edison is to have 9 per cent. This division in effect gives 45 per cent to private companies and 55 per cent to municipalities.

Boulder Dam will furnish a much needed aid in water and power to the Southwest. It is, however, not particularly aimed at the power companies of that section of the country. The final allotment of power does give the Southern California cities a certain amount of freedom from the companies; they will not have to buy all their power from the Southern California Edison and its allies. But the power generators are not to be installed with the use of cheap Government money. This was an alternative open to the Secretary of the Interior. He chose not to use it. Instead he worked out a complicated scheme by which the Federal Government builds the power plant but the generating machinery which must be fastened to the foundations of the power plant is to be furnished by the City of Los Angeles, and the costs of its installation and operation must be borne jointly by that city and the Southern California Edison Company. It has been estimated that this will cost three million dollars more than

if the Federal Government installed the equipment.* The control of the machinery is to be under a board on which Los Angeles and the other municipalities are to have two representatives, the power companies two, and the Federal Government one. This gives the private power companies an excellent chance of capturing control. Nor is there any guarantee that the power taken by the private companies in Nevada, Arizona or California will get to the consumers without those revaluations which the Federal Waterpower Act, for example, forbade to the licensees of waterpower. The proposal made by Representative Davenport of New York that as a condition to every contract for the sale of power a clause be included that the companies "shall agree that the property . . . used and useful in connection therewith shall be valued . . . whether for regulation of rates or for taxation, or for State or municipal acquisition and use, at its fair value, not to exceed the net investment," was defeated. This is a step backward from the standards of the Federal Waterpower Act, and withdraws protection from the consumers of the power furnished by private companies, which is 45 per cent of all the firm power generated at the dam.

The objection of the adjoining states of Arizona and Nevada that private development of the river would result in taxes for them and that public development would not have this advantage, was met by a provision that certain portions of the revenue should be allotted to them.

The final arrangement seemed to Arizona to be inequitable in several respects, and the State instituted suit to contest the validity of the act. One of the claims made was that the contracts between the United States and the Metropolitan Water District and the City of Los Angeles were invalid because both units would have to spend very considerable sums to secure the water and the power and, at the time of signing the contracts, neither unit had

voted the necessary bonds. In the water district a majority vote is necessary and in Los Angeles a two-thirds vote is required. Here again the legal restrictions laid on the cities by our laws threatened to have a hampering effect on their development. The Supreme Court of the United States failed to sustain Arizona's objections.

2. *Muscle Shoals*

The Federal Government owns a large waterpower on the Tennessee River, at Muscle Shoals in Alabama. It acquired the waterpower and built a dam, steam power plant and a chemical plant for the purpose of manufacturing nitrates for munitions during the war. After the war a movement was started by interested parties to turn this government property over to private interests. Several times Congress came close to disposing of it. But each time it became clear that the group desiring to lease it was unwilling to pay a price anywhere near what the property was worth. Each group offered a sum so low that it meant, in effect, a large subsidy from the Federal Government. Each time Congress took the matter up, something like a stampede was staged in the name of disposing of the property quickly. And each time certain of the progressive Senators, notably Senator Norris, were able to point out the self-interested motives behind such action and the essential fact that disposal of the property on any of the terms proposed meant a great gift on the part of the Government.

At first the power companies tried to discourage the idea that this waterpower was worth anything at all. They said that the power generated at Muscle Shoals or the power generated from an interconnected Tennessee River waterpower system could not be sold cheaply enough to compete with privately developed power plants already in existence.⁵ Whether they thought this to be true or not is uncertain, but it remains a fact that three

years later, in 1924, they returned and offered a considerable sum for the development. A factor in their change of attitude may have been an offer made by Mr. Henry Ford for the property.

The farmers desired to have the government chemical plant operated in peace time as a producer of fertilizer materials. In Mr. Ford's offer there were some general statements which made an appeal to these interests. The House of Representatives passed a bill giving him the properties for a period of one hundred years. In the Senate, Senator Norris subjected the Ford offer to an analysis which showed that there were no guarantees at all that the farmers would be given cheap fertilizer or that the property would be used otherwise to the best interests of the country. The Senate refused to give away this valuable property under the proposed terms. In 1926 Congress appointed a Joint Committee to secure bids that were better than Mr. Ford's.

At this point the power companies reentered the picture. Certain companies, then largely Electric Bond and Share interests but now under the control of the United Corporation, grouped together to submit bids, and they received the support of the Joint Committee of Congress. Their bids illustrated a certain truth which had been neglected or under-emphasized during the first discussions of Government policy in regard to Muscle Shoals. This truth was that while the Government dam and powerhouse and steam plant had a very considerable value by themselves, they increased in value enormously if they could be operated as part of a larger waterpower system, developing the other waterpowers on the Tennessee River. This was, in effect, the truth the power industry had been putting into operation elsewhere during these years. The hooking up of power plants throughout the country had increased the amount of primary power, available all the time, and valuable because of that quality, and had

also diminished the amount of capital needed to supply standby power plants. Muscle Shoals was in the same situation. The Wilson Dam and the steam plant represented 156,000 primary horsepower and 104,000 secondary horsepower. But with a relatively small investment at other places on the river, including Cove Creek, the flow of water could be so regulated that the amount of primary power would be made at least five times as large. The increase in value through a combined system was very considerable. In 1927 Mr. Ford said: "The real goal and objective of the power combine at this time is the Cove Creek Reservoir Dam. The power combine knows that that reservoir dam is worth \$50,000,000, and perhaps \$100,000,000, and the combine knows that this dam belongs to the people of Tennessee, yet the combine asks the Federal Power Commission to make a gift to them of Cove Creek."⁶

The danger that the power companies, which had earlier in the fight claimed that even the power from an interconnected system could not be developed economically, would gain control of such an interconnected system by grant of the Federal Power Commission, was obviated when Congress withdrew the other Tennessee River sites from the jurisdiction of the Commission until Muscle Shoals had been disposed of.

With this record of what seemed to be double-dealing before it, Congress analyzed the various proposals of the power companies. It had on record a statement of one of the Army Engineers, Colonel Spalding, to the effect that the Wilson Dam and steam plant could, without further improvements on the river, produce power worth \$3,500,000 annually.⁷ For these properties on which the Government had spent \$55,714,000, the power companies proposed to pay a rental of only \$1,766,000 annually. Any increase in value from further development and interconnection of the other courses on the river was to go

to them. Their second proposition was that in case the Government spent a further \$40,000,000 on a second dam and on additional generators at Wilson Dam, the annual rental would go higher, amounting to \$2,976,160 a year, which would be about 3.1 per cent on the total Government investment. Their third proposition was that if the Government, or the companies, developed the reservoir dam at Cove Creek there would be further payments up to a carefully guarded limit, after which the increased value was to go entirely to the companies. Apparently some 280,000 horsepower could be developed under such an interconnected system on which the government would receive no return. This was a considerable gift and subsidy to one group of power companies.

At this point it became clear that the Government was in the position of a man who has an automobile out in the country which is in good shape except for the fact that two wheels are missing. The motor is there, the chassis is in excellent condition. If the man is unable to spend the money for the new wheels, he must sell the car at a low price to someone who is willing to buy missing parts. The buyer has the advantage over the man who is convinced he should spend no more money. In spite of the objections of the power companies and their supporters to the effect that it would be unthinkable for the Government to spend any further money on the two missing wheels, that it would be "throwing good money after bad," the discussion of Muscle Shoals from this point on began to take into consideration the value of the Government properties as the keystone of a Tennessee River power system.

Despite the fact that the power companies were offering a return to the Government so low that it would not even pay the interest on Government bonds, their bids did not provide for cheap fertilizer. The Joint Congressional Committee reported that there was no definite

guarantee on the part of the power company for the performance of the fertilizer company which was to be put in charge of the chemical works.*

At this point the power companies dropped out of the picture to give place to the chemical companies. First the Air Nitrates Corporation and then the American Cyanamid Company bid for the Muscle Shoals power and the power of the Tennessee River. Their bids illustrate what the bids of the power companies had already made reasonably clear, that the value of the interconnected system on the Tennessee was many times the value of any single water power there. The Cyanamid Company bid was at first seriously considered. It proposed an installation of 1,220,000 horsepower, largely at Government expense, and an annual rental amounting to 2.6 per cent on the Government's investment in power properties alone. This amounted to about half of the total power installation in the six Southern States of Alabama, Georgia, North and South Carolina, Tennessee and Kentucky. It was pointed out that with this huge volume of cheap power, a considerable part of the cost of which would be paid by the United States, the company "could establish a dictatorship in the electrochemical business and put every competitor out of business."

The bid of the Cyanamid Company involved, on the face of it, some production of fertilizer for the farmers. A large part of the cheap power available from an interconnected system seemed destined for the use of fertilizer production. Because of this fact it received the endorsement of certain farmers' organizations. However, it was brought out by Senator Norris that the cyanamid process of manufacturing the chemical ingredients for fertilizer had been supplanted by more recent discoveries. Throughout the world the more recent synthetic process has been replacing the cyanamid process. The synthetic process fixes nitrogen from the air and uses only about

a third as much electric power as the cyanamid process. The conclusion was that the Cyanamid Company proposed to produce fertilizer by a relatively inefficient process, resulting in prices which would probably not stand the competition of prices charged for fertilizer produced by the synthetic process.

It then appeared that the Cyanamid Company had adequately protected itself for an occasion such as this. It proposed to produce not less than 10,000 tons of fixed nitrogen or 40,000 tons of plant food. If it could sell this at manufacturing cost plus a ten per cent write-off of the value of the plant plus an eight per cent profit, it would continue manufacturing, and double the capacity of the plant at the end of ten years. But if ever a quarter of the production stayed unsold at these prices the company could stop fertilizer production entirely. In view of the relative inefficiency of the cyanamid process of manufacturing and the growth of manufacturing by the synthetic process it seems unlikely that any great amounts of fertilizer would be sold at the prices to be asked by the company.

The surplus power, above the need for fertilizer production (625,000,000 kwh.) would go to the company, and according to Mr. O. C. Merrill, then Secretary of the Federal Power Commission, this surplus power meant a profit which would be in excess of \$7,000,000 annually with the power plants in full operation. This involved the investment by the Government of further sums sufficient to develop the whole Tennessee River system. Mr. Merrill pointed out that the Government was really being called upon to give a very considerable subsidy.

| | |
|---|--------------|
| The present Government investment in power plants is..... | \$55,714,000 |
| The proposed additional Government investment was..... | 77,300,000 |

The total Government investment in power properties alone would be \$133,014,000. Only a small part of this would be devoted to extension of the facilities at the present Wilson Dam. Here the private company would invest \$5,400,000 of their own. Yet this dam alone would produce four times the amount of power needed for their fertilizer requirements. According to Mr. Merrill this surplus energy (1,750,000,000 kwh.) would be worth at least \$2,800,000 a year in clear profits after operating expenses and rentals, and should in itself "be an adequate subsidy for the United States to pay in order to induce private capital to produce fertilizer at Muscle Shoals under restrictions limiting profits thereon to eight per cent." 9

But this was not all that was asked by the company. It wanted the Government to put in a further \$69,000,000 in other waterpowers along the river. This drew from Mr. Merrill the comment: "If to secure such private operation it is necessary to grant an additional subsidy of 2,000,000,000 kwh., having an additional sale value of \$4,400,000 per annum, with an additional investment of \$69,000,000, but with no additional investment or obligation upon the part of the lessee, it would seem time for the United States to abandon efforts in this direction and to proceed itself to operate Muscle Shoals. A few years of operation and experimentation on a commercial scale would demonstrate the possibilities of utilization of the nitrate properties, and would put the Government into a position, if it then wished to dispose of the properties, where it could negotiate a business deal instead of sitting in on a poker game." 10

In spite of these facts a bill was drawn to give the company the power resources, and met with considerable support in Congress at first, especially in the House of Representatives. It proposed to develop at Government expense and turn over to a private corporation for its

use a greater power capacity than is in the hands of any one power company in the country. The proposal involved the following installations:

| | <i>Horsepower</i> |
|---|---|
| Dam 2 (Wilson Dam to be expanded) | 610,000 |
| Dam 3 (to be built) | 250,000 |
| Cove Creek (to be built) | 200,000 |
| Steam Plant (at Dam 2) | |
| existing installation | 80,000 |
| new installation | 80,000 |
| | <hr style="width: 100px; margin-left: auto; margin-right: 0;"/> 160,000 |
| Total | <hr style="width: 100px; margin-left: auto; margin-right: 0;"/> 1,220,000 |

This installation was to be composed of the \$55,714,000 of present Government investment in power plant, \$77,300,000 of new Government investment and \$5,400,000 of company investment in power plant, a total of \$138,414,000.

Just what the value of all this power is, used as a combined system, can be seen from Mr. Merrill's calculation:¹¹

Dam 2 (Wilson Dam), with the steam plant used as an auxiliary, with a capacity of 610,000 horsepower, and a 75 per cent load factor, will produce in the average year, he states, 2,480,000,000 kwh. Of this 78 per cent is primary power and 22 per cent secondary power.

With the addition of Dam 3 the total becomes 3,550,000,000 kwh. Of this 67 per cent is primary and 33 per cent secondary.

When Cove Creek is added in, the total becomes 4,449,000,000 kwh., of which 94 per cent is primary and 6 per cent secondary power. At the very low rate of 3.5 mills per kwh. for primary power and at 2.2 mills per kwh. for secondary power, this means a gross income approaching \$15,280,300 a year. The company proposed to pay an average of 2.6 per cent on the Government investment, amounting to \$3,390,285 a year. The costs

of operation to the private company are calculated at \$3,280,000 a year for the full development. The net income to the company, before payments to the government, would be \$12,000,000 a year. After the payments to the Government it would amount to \$8,610,000 a year. This is net profit. This sum, capitalized at 6 per cent, represents an investment of \$143,442,000, and is a little above the figure given by Mr. Henry Ford as the value of the Cove Creek Dam as part of an interconnected power system. The estimated value of the development is based on waterpower sold after all payments to the Government and all operating expenses are deducted. It is based on prices lower than those available almost anywhere else east of the Mississippi, with the possible exception of Niagara Falls. If the private interests are able to sell the primary power at a rate equal to 4 mills per kwh. instead of 3.5 mills the additional profit is \$2,112,500 a year. If they are able to sell it at 5 mills, one-half cent, the additional profit is \$6,337,500. Again capitalized at 6 per cent these sums represent respectively \$35,194,250 and \$105,582,750. Under the circumstances of such higher charges for power, up to one-half for primary power, the Muscle Shoals gift that is sought by private interests approaches \$249,000,000 in value.

The Muscle Shoals fight may be said to be around the question of whether an outright gift, ranging from \$143,000,000 to \$249,000,000 in value, should be given to the power companies or chemical companies or retained by the Government.

With prospects such as this at stake there has, of course, been a great deal of talk about the value of private initiative, and a very considerable lobby at Washington. At first the power groups, with their well organized system of popular education, carried on the struggle. Then the chemical companies carried it on. It was discovered that they had financed the Tennessee River Improvement As-

sociation in large part. This organization was active in politics. Its treasurer, Mr. Claudius H. Huston, left it to become Chairman of the National Republican Committee. He admitted that he had received \$36,100 from the Union Carbide Company, one of the chemical companies involved in the Cyanamid bid. This was apparently not part of the \$168,706 spent by the Cyanamid Company in its efforts to acquire Muscle Shoals.

It is indicated that there was some kind of a gentlemen's agreement between the chemical and power companies which resulted in the silence of the power industry while the chemical companies were attempting to secure the lease from the Government. The Chairman of the Tennessee River Improvement Association, Col. J. W. Worthington, might write letters saying, "These power ambushes have ceased to have any respect for decency, or facts or merits of the case,"¹² but meanwhile the Vice-President of the American Cyanamid Company was apparently writing to officials of the American Farm Bureau Federation to the effect that under a proposed change in their bid (which would have eliminated Government money from the construction of Dam 3 and Cove Creek) "the power companies would have no reason to be concerned about competitive distribution of power from Muscle Shoals affecting their rate structure," and that the chemical companies, in the event that this modified proposal was accepted, "would agree to keep out of public utility distribution for a period of ten years all the surplus power that the power companies did not desire to distribute over their own lines. Such a definite agreement obviously would not receive the approval of Congress, where it would be attacked as a measure to protect a power monopoly. But if there were any way that the matter could be adjusted by such assurance, with the effect of eliminating the opposition which has prevented the adoption of a fertilizer solution of the Muscle Shoals

problem, the American Cyanamid Company could have no objection to such an adjustment. Any threat of competitive power distribution under this plan would, in practical effect, be completely removed." ¹³

During the period that the power companies had been active in their attempts to secure the development a great many organizations, including Chambers of Commerce, had been mobilized to influence Congress. The Cyanamid Company secured a valuable ally in Mr. Chester H. Gray, representative of the American Farm Bureau Federation. He was very active on behalf of their bid, and later admitted to a Senate Committee that he played a rôle very similar to that played by the officials of the Niagara Falls Power Company when they secured the aid of the Secretary of War in suppressing the memorandum of the Federal Power Commission on their claimed values. Mr. Gray secured the aid of President Coolidge in suppressing a bill that was being drafted in the Department of Agriculture for Government operation of its Muscle Shoals plant. He also admitted to having persuaded President Coolidge to assign his Secretary of Commerce, Mr. Herbert Hoover, to attempt to iron out the differences that then existed between the power and chemical interests, an undertaking which failed. He also admitted to having dictated the paragraphs concerning Muscle Shoals in one of President Coolidge's speeches. He also persuaded other officials of the Farm Bureau Federation to allow a field worker to lobby against the Norris bill for government ownership in the name of the American Farm Bureau Federation when he was actually being paid \$725.00 a month by the Union Carbide Company. He let the American Cyanamid Company send out circulars advocating the Madden-Wright bill to farm journals and other newspapers as though they came from the offices of the American Farm Bureau Federation. This cost them \$7,000. On the stand he stated that this expense

had been borne by his own organization. Later he changed the record, without permission, to read that it had been borne by his own organization "coöperatively." This seemed to Senator Norris to make his original testimony resemble perjury, and Gray might have been put behind the bars for it except for the fact that the chairman of the committee had neglected to put him under oath.

While these private groups were mustering forces in order to secure the gift from the Government of values ranging from \$143,000,000 to \$249,000,000, and while they were making their mistakes of thinking that Congress was more subservient to their interests and principles than it actually turned out to be, Senator Norris was introducing his proposals, first for a Federal Power Corporation in 1926 and then for a Muscle Shoals Corporation of the United States.

In 1928 a joint resolution for the establishment of a Government owned corporation to develop the power at Wilson Dam and Cove Creek was carried in both houses of Congress. President Coolidge did not veto it, but did not sign it. It had been carried in the last days of Congress, and, the Supreme Court decided later, bills not signed by the President in such circumstances could not become laws. In the campaign of 1928 the Republican candidate for President was asked by the editor of one of the Scripps-Howard papers, Mr. Edward J. Meeman of the *News Sentinel* of Knoxville, about his attitude toward Muscle Shoals. The candidate of the Democratic Party favored government operation, and there was a considerable belief around the country that the Government could use the waterpowers there to greater advantage than private companies. This belief was shared by the Scripps-Howard papers, which had endorsed Mr. Hoover. In the course of his Elizabethton speech, Mr. Hoover said: "There are local instances where the Government must enter the business field as a by-product to some great

major purpose such as improvement in navigation, flood control, irrigation, scientific research or national defense. But they do not vitiate the general policy (of private ownership) to which we would adhere."

That afternoon the editor of the *News Sentinel* asked the candidate if the statement just quoted did not particularly refer to Muscle Shoals. "You may say that that means Muscle Shoals," Mr. Hoover replied. Three days later he issued a further statement confirming and clarifying his remarks. In this statement the candidate declared definitely that the Scripps-Howard editor had quoted him correctly in using the words, "You may say that that means Muscle Shoals," and added, "There is no question of Government ownership about Muscle Shoals, as the Government already owns both the power and the nitrate plants. The major purposes which were advanced for its construction were navigation, scientific research and national defense. After these purposes are satisfied there is a by-product of surplus power. That by-product should be disposed of on such terms and conditions as will safeguard and protect all public interest. I entirely agree with these proposals."¹⁴

In spite of this declaration the new administration did not give any support to the Norris bill. It passed the Senate by a large vote. In the House of Representatives it met with opposition from the House Military Affairs Committee, which had, under the chairmanship of Representative James of Michigan, previously been favorable to it. That Committee was entirely reorganized and new members hostile to Government operation were added. In the closing days of the 1930 session they threw away the Norris bill and proposed in its stead a bill giving the President the right to lease the properties to the best bidder. In conference Senator Norris suggested a compromise by which the chemical plants should be leased to the best bidder and the waterpower be developed by the

Muscle Shoals Corporation of the United States. This was not accepted. Action on the development was thereby postponed again. One of the men who had been to the forefront in opposing the measure, Representative Reece of Tennessee, received the unusual distinction of a letter from the President urging his reelection in the campaign of 1930. He was defeated by an independent Republican who entered the campaign during the last three weeks on the platform of Government operation of the development. After this election, in which many of the opponents of the Norris bill had been defeated, Congress carried the Norris bill for Government operation of the Shoals and development of the river.

The Norris proposal for a Government owned corporation is described in Chapter Eight. He did not propose building Dam 3, which the Cyanamid Company had included in its proposals. He planned for the enlargement and development of the Wilson Dam and the Auxiliary steam plant there and for the building of the Cove Creek Reservoir Dam. This latter will act as a means of flood control and navigation control. He stated that sooner or later the Government would probably build it for these purposes even if it developed no power. But as an addition which almost doubles the value of the Government's other property he favored it. In addition he favored the whole development by the Government because it could be expected to act as a yardstick to private development of the other waterpowers of the South. His speeches made constant reference to a similar Government waterpower development, the one in Ontario, and its value as a yardstick to private ownership and operation in the United States. He saw it as the cheapest and most efficient manner of operation of a public business, and desirable on that score.

Outside of the always amazing attempt of the power companies to insist that power is not a public business but a private one, there were other objections to be met. One

was that private development would give the states of Alabama and Tennessee a certain revenue, to the extent that the private companies would act as tax-collecting agencies. This was met by the inclusion in the bill of a provision that 5 per cent of the gross proceeds for the sale of power at the Wilson Dam would go to Alabama in lieu of taxes, and that 5 per cent of the gross proceeds from the sale of power at Cove Creek, in Tennessee, would go to the State of Tennessee. The construction of the Cove Creek Dam would cause a greater power to be generated at the Wilson Dam, and $2\frac{1}{2}$ per cent of the proceeds from this additional power are to go to Alabama and $2\frac{1}{2}$ per cent to Tennessee. This is an arrangement somewhat similar to the one made at Boulder Dam, where the equivalent of taxes is paid to Arizona and Nevada.

A further objection to be met was that the power companies in the vicinity of the development presented a united front, and could refuse to take any of the power, or to carry it over their lines to near-by cities which might desire to use it. This is the same situation confronting the St. Lawrence development in New York State, where about 80 per cent of the power developed in the State is under the control of allied banking groups. New York State is meeting that danger by proposing state owned transmission lines to carry the power down to the metropolitan area of New York City. The Norris Muscle Shoals bill meets it by providing that the Government corporation may do the same thing, build transmission lines to carry the power to the cities needing it.

On March 3, 1931, President Hoover vetoed the Norris bill. He objected to it on the ground that it involved competition with private business, and that it necessarily involved control by Congress. He also cited the War Department as authority for a statement that the plan was not economically feasible.

As far as the estimates drawn from the War Department go the veto is doubtless one of the most careless government documents issued in many years. The best criticism of it was made by Dr. John Bauer, formerly consultant to the St. Lawrence Power Development Commission.¹⁵ The War Department estimated a total cost in power development of \$127,000,000, with an annual interest of \$5,080,000. Dr. Bauer points out that the expense of the Wilson Dam and steam plant, totaling \$42,000,000, has already been incurred and cannot be avoided even if the Government does not go on with the power plan. To test the soundness of going on with the power operation this already unavoidable obligation should be excluded from the calculation. Further, the War Department assigned only \$5,000,000 of the \$41,000,000 development on the rest of the river to navigation, and charged up \$36,000,000 to power. Dr. Bauer properly increased that low assignment to navigation to \$16,000,000. The War Department estimated \$40,000,000 for transmission lines, an arbitrary figure which would mean 3,500 miles of lines, and which is not contemplated in the bill. The transmission feature is optional, and no lines would be constructed if the local companies bought the power at a reasonable price. Dr. Bauer reduces this to \$6,000,000 for major connections with the large systems. These deductions bring the total for power development down to \$40,000,000 instead of \$127,000,000. The interest on that would be \$1,600,000 annually instead of \$5,080,000 annually.

The War Department generously estimated amortization at $1\frac{1}{2}$ per cent on this \$127,000,000. Dr. Bauer follows the St. Lawrence Power Development Commission engineers in estimating 1 per cent, and applies it to the \$40,000,000 properly allocated to new power development. He also reduces operating expenses on the transmission lines from \$550,000 annually to \$100,000 in view

of the cut in estimate of the lines themselves from \$40,000,000 to \$6,000,000.

The total annual cost due to additional power development is thus brought down to \$3,725,000 instead of the \$9,145,000 estimate of the War Department. The three main errors so far in the War Department calculations, that of assigning only five million to navigation, that of assigning forty million to transmission lines and that of assuming that the interest on the forty-two million already invested in power plant would stop if the government did not go on with the development, are not engineering matters.

There was another gross error on the part of the War Department. It calculated that there would only be 466,000 kilowatts available at the maximum, that a load factor of only 33 per cent could be obtained, bringing the average power down to 155,000 kilowatts, and that this would produce for sale an average annual output of only 1,300,000,000 kilowatt hours. Further, a rough allowance for transmission losses brought the net total down to 1,000,000,000 kwh. actually to be sold.

In view of the earlier calculations by Mr. Merrill, given above, of a load factor of 75 per cent, this rough reduction to 33 per cent was the big surprise of the year. On top of that apparently no calculation for secondary power was made. Dr. Bauer uses the same base figures to find 2,000,000,000 kwh. of firm power available and another 1,000,000,000 kwh. of secondary power. He points out that while 33 per cent may represent the average load factor of all the steam plants in that part of the country, it does not represent the load factor of the hydro-electric plants. On an 80 per cent load factor about 2,400,000,000 kwh. could be sold. If the combined primary and secondary gross revenue brought in as little as 3 mills per kwh., totaling \$7,200,000 annually, the total annual cost due to new power development would be covered with

\$3,475,000 to spare. That extra \$3,475,000 would also cover 4 per cent interest on the \$42,000,000 represented by existing power development, and previously excluded from the calculations.

In view of this analysis, it looks very much as if the engineers in the War Department did whatever they were told to do, and did it badly.

There was one further error of fact in the veto which can not be attributed to the War Department. The President stated that it would deprive the states surrounding the river of the taxes they might collect from a private plant. In fact the bill provides that the states shall receive 5 per cent of the gross revenues, which is more than they would collect in taxes from a private plant.

After Congress adjourned in 1931 the President chose a commission to secure leases for the plant. It was a hand-picked commission of the variety later made celebrated by the group chosen to decide that the Navy League was in error in its charges. One of its members, Mr. William A. Caldwell of Jackson, Tennessee, resigned on the ground that he was unwilling to subscribe to a "pre-conceived plan to devote the property primarily to the production of fertilizer . . . I am inclined to believe that the plan referred to omits from consideration . . . the possibility of devoting the property, in connection with any other which may be necessary, to the quantity production of cheap electric power for distribution to the small as well as the large consumer, both rural and urban, having in mind always the necessity of flood control and navigation in the Tennessee Valley."

The President made public the report of his commission on November 19, 1931. The group went back several years and decided that Muscle Shoals should be devoted primarily to fertilizer production. It did see that the construction of Cove Creek Dam would greatly enhance the value of the Wilson Dam at Muscle Shoals

itself. It recommended turning all the power over to a private chemical company, and leaving the President free to negotiate a lease for the whole Tennessee River system. This conclusion about fertilizer production was made in the face of a memorandum to the commission from Dr. Henry G. Knight, chief of the Chemistry and Soils Bureau of the Department of Agriculture, to the effect that other methods for producing nitrogen had been developed which would take care of the demand more economically. The long debate has thus been turned back on itself.

3. *The St. Lawrence*

The St. Lawrence River winds along the Northern border of the United States for some distance before it goes into Canadian territory. On part of the stretch which is international there is a very considerable water-power. It is sometimes estimated at 2,000,000 horsepower, of which 1,000,000 is on the American side, in the State of New York. On the purely Canadian stretch of the river there is an additional 3,000,000 horsepower. The plans for developing all or part of this power have been taking form as the value of waterpower has been growing. In New York State there has for years been a political struggle over the question of private and public development.

The question has been complicated by the fact that large sections of the Western grain growing states have desired to have the whole river developed as a waterway. Their hope is that their grain would get to the seaboard at a lower price than the farmers must now pay for the rail-water haul or the rail-water-rail haul that takes it to the Great Lakes and from the Great Lakes at Buffalo down to New York or Philadelphia. They want the international waterway as a supplement, if not a competitor, to the railways. They hope that some part of the cost of the project can be borne by the power to be gen-

erated on the river. On the other hand New York and some of the other Eastern states are fearful of losing the grain trade that now goes through their ports.

The Government of the United States has been interested in the furtherance of the project. Immediately after the war, when additional transportation facilities seemed of supreme importance, an International Joint Commission was set up by Canada and the United States. In 1921 this body reported favorably on the idea, recommending further investigation by engineers. In 1924 President Coolidge established the St. Lawrence Commission, with Mr. Hoover as chairman, and at the same time Canada set up The National Advisory Committee. These two appointed a Joint Board of Engineers, with three Canadian and three United States members. This board of engineers found the project feasible from an engineering viewpoint. It said that a 25 foot canal could be constructed through the Great Lakes to the sea and all the power could be developed, at a combined cost of around 625 or 650 million dollars. The United States body, the St. Lawrence Commission, reported in 1926, favoring improvement of the river for navigation and power purposes, if an agreement with Canada could be arranged. The Department of State, in 1927, began negotiations with Canada. The Canadian body, The National Advisory Committee, reported somewhat later to its government, and its report was transmitted to the United States in 1928.

Canada was not impetuously eager to advance the project. She said that her railroad facilities were overdeveloped, rather than underdeveloped; her rates for wheat and other commodities coming from the West to the Atlantic seaboard were already lower than those in the United States; since most of the Canadian railroad mileage was owned and operated by the Government, the St. Lawrence project would affect state revenues adversely;

since public opinion in Canada was adverse to the export of power it was essential that the power development on the Canadian side of the river should not be faster than the Dominion required; its expenditures on the channel from the sea to Montreal and on the Welland Canal around Niagara Falls had been so considerable that it did not look with favor upon further heavy investments in waterways; certain problems of power control remained unsettled as between the Dominion and the two provinces of Ontario and Quebec. Finally, an arrangement might be worked out under which the United States might deepen the channel through the international section and in the upper lakes and construct the power development, while Canada would do the work in the purely Canadian section of the river.

The United States made some objections to the proposed division of costs between the two countries, stating that Canada really ought not to have full credit for her expenses on the St. Lawrence channel and Welland Canal, and that she should bear her full share of the power expense. Canada in return insisted on a development of power sufficiently graduated so as not to outrun her capacity to absorb it. Pending negotiations between the Dominion and the provinces affected, further agreement between the two nations has hung fire.

The power companies in New York State have attempted to secure the rights to develop the waterpower on the international section. They own the bank along which the dam and powerhouse must be built. In 1926 they persuaded the State Waterpower Commission to give them a license for the development. Governor Smith threatened them with the legal opposition of the State on all sides, and under this pressure they declined the licenses. In 1930 the Legislature, in which the majority had been consistently hostile to public development of the St. Lawrence, consented to the appointment by Governor Roose-

velt of a St. Lawrence Power Development Commission to examine plans for public development.

The Report of the St. Lawrence Power Development Commission¹⁰ is a most interesting public document. The Commission found that from an engineering viewpoint the construction of a dam was feasible, and that the costs would be much lower than those usually mentioned. A plant able to produce two million horsepower, 72 per cent of which would be primary power, was recommended. Estimating the sales price at \$10 per horsepower the commission found that the capital cost could be amortized in forty years. It recommended public construction of the generating plant and sale to private companies of the power on a contract basis which would protect the consumers. One commissioner favored empowering the state agency to build transmission lines in case the private companies would not consent to favorable contracts.

The commission found that if the power plant should be built in advance of the international canal, the costs would run as follows:

| | |
|---|---------------|
| Works required for power if built in advance | \$151,920,000 |
| Interest during construction..... | 18,500,000 |
| | <hr/> |
| | \$170,420,000 |
| Works required to coördinate power and navigation | \$ 1,127,000 |
| Future works required for navigation..... | 50,499,000 |
| | <hr/> |
| Grand total | \$222,046,000 |

The Report of the Marketing Board to the Commission found that five billion kwh. of firm power and one and a half billion kwh. of secondary power could be sold from the development on the New York side of the line. New York would pay half of the estimated \$170,420,000 for the power development, about \$85,210,000. The average capital cost was calculated as follows:

| | <i>Private</i> | <i>Public</i> |
|-----------------------------------|----------------|---------------|
| Interest | | 5.0 % |
| Cost of money | 7.0% | |
| Amortization | | 1.0 |
| Taxes | 1.5 | |
| Renewal | | 0.89 |
| Depreciation, renewal and general | 2.5 | |
| | <hr/> 11.0% | <hr/> 6.89% |

On the basis of this report the Legislature set up the Power Authority of New York in 1931, and Governor Roosevelt appointed to it Frank Walsh of New York City, Professor Bonbright of Columbia University, Morris L. Cooke, who directed the Giant Power Survey in Pennsylvania, Delos M. Cosgrove and Fred J. Freestone. This Power Authority immediately began to enter into negotiations with the Federal Government. The whole question of ownership and control of this power was slowly opened. The debate was spiced somewhat by a general feeling that the Federal administration was opposed to public development and in favor of private development. The State Power Authority of New York was interested in early public development.

Several steps must be taken before this development can get underway. There must be a treaty in regard to the use of the waterpower and any international waterway to be constructed at the same time or later. This whole question is complicated by the expenses already incurred by each government in constructing part of the waterway. Before the treaty can be ready for ratification the Province of Ontario, the Dominion of Canada, the State of New York and the Government of the United States must agree on what is to be done, and how, and who is to have the benefits.

The Power Authority of New York, in its turn, must have a contract for the sale of the electric power and on the basis of such a contract must arrange for the issuance

of bonds for construction purposes. Such contract must be submitted for approval to the Governor, who may spend two months examining it. It must be in accordance with the principle that the power "shall be considered primarily for the benefit of the people of the State as a whole and particularly the domestic and rural consumers to whom the power can economically be made available." On the acceptance of this contract by the Power Authority and its approval by the Governor the Authority will be authorized to issue bonds to pay the cost of constructing the generating station. They will not be considered as obligations of the State itself.

The contract with the private company taking the power will contain clauses intended to protect the interests of the ultimate consumers as well as the Power Authority itself. Professor Bonbright, a member of the Authority, has stated that the contract form of rate control "bid fair to change the entire basis of rate control by which rates of electrical consumers are determined. . . . The plan of the commission contemplates either a partial or a complete abandonment of rate regulation by a public service commission in favor of rate control by reference to contractual obligations. . . . If the experiment works it will eliminate most of the tedious delays, uncertainties and expensive and time-consuming litigations which brand the American system inefficient." 17

In case the power company groups, the Niagara-Hudson and the Consolidated Gas, affiliated interests, do not choose to take the power at a rate satisfactory to the Power Authority the latter will be faced with the decision of building its own transmission lines down to the large cities of the Hudson Valley. Or the Legislature might declare the existing transmission lines to be common carriers and authorize that they be supplemented by only such new lines as are necessary to furnish an effective link between the remote section of Northern New York State

and the industrial section in the Hudson and Mohawk Valleys.

During the time taken to discuss the Power Authority and to bring it into being, the private companies grouped together more and more closely. By 1930 several companies under one allied banking control had over 80 per cent of the power production of the State in their hands. This put the private companies in the position where they could refuse to purchase any power generated at the St. Lawrence, and have no fear that any important competitor would take it. It put the State in the position where it was forced to consider the possibility of constructing transmission lines itself to take the power down to the cities wanting it.

The New York situation is further complicated by the fact that the State has rights and claims to waterpower not yet used by private companies at Niagara Falls and on some of the interior rivers of the State, amounting to about another 1,000,000 horsepower. The development of some of this power might increase greatly the value, either of private steam power plants or of the State's other power resources, by furnishing standby power at a low expense. Its development would thus convert that other power into firm power, good twenty-four hours a day, and increase its value correspondingly, much as the value of the Wilson Dam at Muscle Shoals is increased by the development of Cove Creek. A Legislature favorable to the power companies put through a scheme of development which would give the advantages of such development almost entirely to the private companies.

In *Water Power in New York State* Mr. A. Blair Knapp has pointed out the significance of the River Regulating Districts which are allowed in New York State. To some they have seemed to be the equivalent of power districts. This is not the case. These districts may build dams, and assess the cost of them to both the private and

public property affected. But the State receives in return for the use of its property only 6 per cent of its value. Much of this power is on state forest reserves. The land is valued at \$10 an acre. One project was proposed on the Salmon River in the Adirondack reserve. Its development would have increased the primary horsepower of the private plants along the river and in the vicinity to the extent of 120,000 primary horsepower, which meant a net gain to the private companies ranging from \$158,000 to \$287,000 a year. It involved the use of 1,290 acres of state land, valued at \$10 an acre. The 6 per cent return on the value of this land, which was all the State would receive, would be \$774 a year. Attempts to increase the income to the state have so far been defeated by the power companies.¹⁸

New York State, with the richest waterpower resources of any state in the East, is handicapped in their development by the fact that it has hampered and restricted the municipalities so much that very few of them have developed municipal power systems. Even if it develops its waterpowers it will have to sell to the private companies which control the production of the State. For lack of cities able to purchase the power generated by the State, or free to develop it themselves, it will have to turn over some of the waterpowers to the private companies, or, failing that, to make terms advantageous to them. The difference can clearly be seen by a contrast with the Boulder Dam development. In California the cities had their own power systems developed to the extent where they were willing and eager to take all the Boulder Dam power, and to distribute it without profit to the citizens in that section of the country. In New York State, with only a few exceptions, most of the power will be taken by private companies. The State thinks it can force these companies to sell the power at a limited profit. The com-

panies are sufficiently in control of the distribution systems to refuse to make any such terms. They have the power to convert the State's waterpower plants into white elephants. Partly to meet this situation the Governor's appointees to the 1930 Commission on Revision of the Public Service Commission Laws recommended that municipalities be authorized to serve the surrounding territory, to form power districts, to undertake public competition and to replace private plants with municipal plants at the end of the franchise period of the private plants without obligation to purchase the often antiquated private plants. The cities are not allowed to exercise any of these rights now. The fact that they have been restricted in their exercise for so many years now creates a situation where the private companies have the advantage in any development of the State's waterpowers.

4. The Development of the West

Power projects of some importance have been developed under the Reclamation Service. The largest of these, now under control of the Salt River Water Users' Association, developed 188,000,000 kwh. in 1929. The outstanding structures are the Elephant Butte Dam in New Mexico, the Roosevelt Dam in Arizona, the Coolidge Dam in Arizona, the Pathfinder and Shoshone Dams in Wyoming, the Arrowrock Dam in Idaho and the Tieton Dam in Washington.

The Reclamation Service was established in order to develop an independent farmer population in the West, and to increase the value of the Government lands in that part of the country. It functioned at first during a period when there seemed to be no likelihood of overdevelopment of agriculture. It was based on the financial principle of loaning Government money without interest for the development of these irrigation projects, with the expectation that the farmers settling on them would repay

the entire cost of the development to the Government within ten or twenty years. With the over production of the agricultural products in the years following the war the irrigation projects have failed, in many cases, to pay their obligations.

The Reclamation Service was essentially supposed to improve the value of public lands. Actually some 513,163 acres have been improved and 2,951,987 acres of private land have been improved.¹⁹ The special committee of advisers on the workings of the service reported that "in many cases the owners of the land capitalized the Government expenditures and the liberality of its terms of repayment by selling the land to the settlers at much higher prices than could otherwise have been obtained. The benefits of the reclamation act, therefore, went in such cases almost entirely to these speculative owners, and an obligation of paying interest on inflated land prices was imposed upon the settler, in addition to his other burdens."²⁰

The Reclamation Service under the direction of Dr. Elwood Mead, undertook the investigation which finally resulted in the proposal to build Boulder Dam, and its construction is being carried on by engineers of the Bureau of Reclamation. It is now being asked by the State of Washington to undertake supervision of an irrigation project in the Columbia River basin, where 1,883,000 acres are believed to be irrigable, an area equal to that of the States of Connecticut and Rhode Island. President Hoover and Secretary of the Interior Wilbur have been quoted as favoring the project. An investigation is being made, and its report is expected to be presented to Congress in 1932. Doubtless the unfavorable financial circumstances of the present agricultural areas of the country will raise the question of social policy as to developing further agricultural lands.

To meet this objection it is proposed to develop the

land slowly, a quarter of the area at one time. The development is estimated at present to cost \$150,000,000, a little less than Boulder Dam and the All-American Canal. The land lies between Yakima and Spokane, between the Columbia and Snake Rivers.

The power possibilities of the development are considerable. They are on top of the 1,125,000 horsepower which Seattle expects to develop on the Skagit River. Two plans for development of power have been proposed. One is the Pend Oreille-Spokane plan, which would bring the water down by gravity through a long canal and develop only 145,000 horsepower. The other proposal, called the Grand Coulee Lake plan, involves the construction of a huge reservoir at Coulee, with an estimated power development of 1,250,000 horsepower, of which 450,000 horsepower would be used for pumping the water to the lands. This plan is strongly opposed by the power companies. In both cases the water resources of several states are involved, and the aid of the Federal Government appears to be necessary.

Citizens in the states of Washington, Oregon and Idaho have organized to form the Umatilla Rapids Association to urge power and reclamation development on the Columbia River. Preliminary reports indicate that a dam can be constructed for \$45,000,000 to generate 420,000 primary horsepower at a cost of 1.2 mills at the powerhouse. This is less than Boulder Dam power will cost. The irrigable lands are estimated at between 94,000 acres and 121,000 acres. The estimated cost of the irrigation development is \$16,579,000.²¹ While this project does not conflict with the plans for development of the Columbia River basin, it does encounter the same difficulties as that project and the St. Lawrence project in New York State encounter. There is no assurance that the private companies will take the power generated, even if it is cheaper than their own power at present or their own

future supply. This is one of the unsatisfactory results of un-unified and competitive planning of power development. It is a strong argument for unified planning under some agency which will be interested in the progressive development of the whole country.

In these various developments at Boulder Dam, Muscle Shoals, the St. Lawrence and the Columbia River the country may secure a series of yardsticks by which it can measure the efficiency of the private developments and the value of their loud claims to public service. Where municipal plants have been large enough to be successful the influence of their low rates has extended far beyond the territory they served. Where municipalities have established an interconnected system, as they have done in Ontario, their influence has stretched across the national border into the United States, and has confronted the private power systems of this country with a contrast in costs and rates which is a challenge to all their claims. The utilities have hired many people to discredit the Ontario system. But they have not succeeded in destroying its challenge. They are influenced by it perhaps more than by the whole system of regulation, which is something they have managed to handle to their own advantage. There is no reason why Government operation of our remaining waterpower resources should not add to this challenge to their efficiency and claims of service.

NOTES

¹ Dr. Elwood Mead, Commissioner, Bureau of Reclamation, *New York Times*, July 13, 1930.

² Paul Y. Anderson, *Nation*, February 12, 1930.

³ *New York World*, February 18, 1930.

⁴ Los Angeles estimate quoted by Ruth Finney, *Nation*, December 11, 1929.

⁵ Quoted in *Power Control*, Raushenbush and Laidler, Republic Publishing Co., 1928, p. 240. Statement by the Tennessee Electric

Power Company to the Chief of the Army Engineers, Hearings, Joint Committee on Muscle Shoals, 69th Congress, p. 689.

⁶ Quoted by Representative Lister Hill, *Congressional Record*, July 7, 1930, p. 12991.

⁷ Hearings, Joint Committee on Muscle Shoals, 69th Congress, p. 327.

⁸ Senate Report 672, 69th Congress, pp. 10-11.

⁹ *Congressional Record*, April 2, 1930, p. 6624.

¹⁰ *Idem*.

¹¹ *Idem*, pp. 6626-27.

¹² Reported *United States Daily*, March 15, 1930.

¹³ *New York Times*, February 28, 1930.

¹⁴ Quoted in *Congressional Record*, April 10, 1930, p. 7114, from an editorial in the *Chattanooga News*.

¹⁵ "Muscle Shoals and the President's Veto," Dr. John Bauer, *National Municipal Review*, April, 1931.

¹⁶ Submitted January 15, 1931.

¹⁷ Interview in the *New York Evening Telegram*, January 19, 1931.

¹⁸ A. Blair Knapp, *Water Power in New York State*, School of Citizenship, Syracuse University, 1930.

¹⁹ Senate Document 92, 68th Congress, 1st Session, p. 133. Report of the Committee of Special Advisors on Reclamation to the Secretary of the Interior.

²⁰ *Idem*, p. 38.

²¹ Report of E. R. Crocker, assistant engineer, U. S. Reclamation Bureau, quoted in the minutes of the Umatilla Rapids Association, December 20, 1924.

CHAPTER SIX

THE HOME GUARDS

WHILE the state defenses against the utilities were being broken down, and the first skeletal lines of a national defense blocked out, the home guards have kept a great number of municipally owned plants busy furnishing service at cost.

The legal limitations imposed on the cities which have made municipal ownership a relatively unimportant factor in the situation were discussed in Chapter Three. These legal limitations have made it impossible for the cities to swing along with the new technical developments in the industry. The question arises as to what extent single municipal plants can be successful today. The propaganda of the power companies has been to the effect that they can never be successful. It has been contradicted only in the cities having large municipal plants.

An answer to the question can be found in a report by the Special Committee on Generation and Distribution of Electric Power of the National Association of Railway and Utility Commissioners. The Committee under the chairmanship of Commissioner Adolph Kanneberg of the Wisconsin Railroad Commission, made its report in 1928. It challenges somewhat sharply the current impression that the savings possible through large systems are much greater than those in relatively small municipal systems.

"The general trend of all costs over the fifteen year period has been downward. . . . The decreases have been, usually, greater for the small systems than for the larger ones, so that the margin of advantage of the large over the small systems has contracted noticeably. . . .

In the field of costs connected with distribution systems

we find a condition contrasting with the variations which are the rule in generating costs. . . . Looking at each of these expenses separately we discover a remarkable standardization of unit cost for all systems from the largest to the smallest. . . . It appears, therefore, that a small distributing system can be operated at a cost comparing favorably with that of a large one.

Comparison of systems and plants in any given period points strongly to the conclusion that the decisive factor controlling the cost of generation is volume of output. . . . This relation of output to cost enters into the determination of the size of steam plants necessary to generate cheaply enough to compete at the present time with the huge central stations of super-power systems. . . . The data show that, in the range of smaller outputs, costs drop rapidly as output increases, but that there soon comes a change in this rate, and that beyond the point of this change the reduction with increase in output is very gradual. The transitional point falls at or near the volume of 8,000,000 to 10,000,000 kwh. per year."¹

In other words, municipal ownership of distribution systems is apt to be as efficient and cheap as large-scale private distribution. Also municipal ownership of generating plants in cities of over 20,000 population is not greatly handicapped in competition with large private super-power systems. The report continues:

"The conclusions regarding generating and distributing costs have an interesting bearing on the question of municipal ownership of electric utilities. The really small independent generating and distributing system handling under 5,000,000 kwh. only, if operated by waterpower, can run at a cost comparable with service from large systems. A small system using steam power, however, has too high a generating cost to be economical under present conditions. For the large number of small cities, then, which lack the gift of an adequate waterpower, there remain several possibilities for securing electric service at low cost.

One course is to be served entirely by a super-power system, privately owned, or possibly state-owned in the future. Another is to own and operate only their distributing systems for themselves, since the operation of a small distributing

system costs approximately the same as a large one, and purchase their energy from a super-power transmission line, either privately or state owned. Still another plan, if the laws and the constitution permit it, is for several communities to form a power unit and own and operate a generating plant and transmission system to supply energy to the community distributing systems, which might be owned either by the power unit or by the community alone.

This device would secure complete public ownership of the electric utility, combined with a cost that is in line with the cost of service available by other methods. . . . Since steam plants need an output of only about 10,000,000 kwh. annually to produce energy at reasonable cost, the power units could be modest in size, combining only three or four communities with a population of 5,000 each. These should be easily formed and easily arranged to cover territories geographically most suited for such units."

The conclusions of this report to the National Association of Railway and Utility Commissioners, a group never notable in its advocacy of anything but private ownership and regulation, are to the effect that small distribution systems are as efficient as large ones, that small water-power plants are likely to be as economical as super-power, that municipal generating systems in towns over 20,000 population are economical and that interconnection between smaller communities under joint ownership is likely to be at least as efficient as private ownership. These conclusions are at complete variance with the customary utility propaganda.

The larger cities have been in no doubt about the success of their municipal plants. In commenting on this fact Senator Norris took the illustration of Tacoma, Washington, and said: "Tacoma is showing the country what a city can do for its people." Current, generated by waterpower, is supplied to the consumers so cheaply that the people of Tacoma can heat their homes with it. He cited the case of a man using 2,249 kwh. in December, 1928, at a cost of \$16.55. The Insull rate for steam

power in Chicago for such service is \$98.97. Allowing 3 mills per kilowatt hour as the difference between water-power and the most efficient modern steam plants (\$6.75), the Tacoma cost would become only \$23.30, and the difference against Chicago would become \$75.67 on the monthly bill. Tacoma now pays 7.5 per cent of the income of its plant to the city in lieu of taxes, so that no correction need be made for this item in the comparison. Senator Norris pointed out further that farmers outside the city had formed non-profit, non-stock companies and bought power from Tacoma at the rate of 5 cents per kwh. for the first 20 kwh. used and at 1 cent after that. "This is cheaper than the Alabama Power Company would give electricity to a city of 100,000 people." ²

An interesting commentary on some often disputed points is made by Mr. Homer T. Bone, who is connected with the Tacoma plant:

"The operating costs of the Tacoma light system are lower than those of its private competitors in this State. It does not carry in this account the inevitable political contributions so necessary to the program of the private combines. And it pays union scale of wages to its men, which, incidentally, are considerably higher than those paid by its private opponent.

Underlying the principle of public ownership is the sane and healthy practice of retiring any debt against the plant, in large yearly installments. . . . This practice should be contrasted with that of private companies which never retire their stock and bond issues. If a bond issue is retired, it is generally a refunding process which leaves the debt intact. . . . Stocks and bonds of private power companies constitute a perpetual debt upon which the public must forever pay interest and dividends. Systems of private financing do not permit of any relief from this burden. The defects are inherent in the system of private financing. . . ." ³

The success of the Tacoma and Seattle plants in Washington has had its effect on the neighboring State of Oregon, which in 1930 elected an independent for Gov-

ernor who ran on a municipal ownership program. It also passed a constitutional amendment for power districts at the same time. The Seattle plant, which has had the services of J. D. Ross as Superintendent of Lighting, has a remarkable rate and financial record. Its rates are half of those charged by the private power company competitor just across the street at the city limits.* Mr. Ross reports: "The rates throughout the State of Washington increase as the distance from Seattle increases, showing the great influence of Seattle rates in all other parts of the State. . . . The demand on the city plant has doubled every five years in the last 20 years and is now expanding at a still faster pace. In order to meet the demand the City is rushing the building of the second unit of the Skagit project of 1,120,000 horsepower potential capacity. . . . At the present rates for light and power the 1,120,000 h.p. of the Skagit will bring \$50,000,000 every year to the citizens of Seattle either in cash or in further rate reductions as they elect. . . ."

Here, as in Los Angeles, there was competition with a private company. The threat of a city plant brought the rates down from 20 to 12 cents. The city started in with an 8.5 cent rate and the company came close to it, meeting it in 1911. After that the city made five rate changes, the company meeting all of them. The rates are now 5.5 cents per kwh. for the first 40 kwh. monthly, 2 cents for the next 200 kwh. and 1 cent for all over 240 kwh. The company charges higher rates outside of Seattle and thus makes up its losses in the city. This plant has been a leader in the field, using a transmission line of 45,000 volts when that was the highest transmission pressure in the world, and was the first to use gas-filled lamps and to discard arc lights. The city is handicapped by the expense of competing with the private company for customers, and states that without such competition it

could eliminate future underground construction duplication that will cost each one \$3,000,000.

The Los Angeles plant is another of the large and successful municipal plants which have led neighboring cities to consider the advantages of public ownership. It has had the engineering services of Mr. E. F. Scattergood. The financial results of eleven years of operation are summarized by Bird and Ryan: "The City of Los Angeles has during that period acquired a \$71,000,000 light and power system in which it has an equity of \$24,133,000—\$3,736,000 of this being the unpaid remainder of funds raised from taxation for the purpose of financing original development and losses during the early operation period, and \$20,397,000 from surplus earnings. On this investment the city is now earning net profits of over \$3,000,000 a year."⁵

In contrast with the private companies the municipally owned systems in California are required by law to pay off each year a part of the principal in outstanding bonds. This accounts for the large equity in the Los Angeles plant now free from interest charges. In 18 smaller municipalities the same authors found a book value of the plants of \$4,692,043, covered by a bonded debt of only \$719,135, thus giving the cities involved \$3,966,577 worth of plant free from interest charges. During the year 1928 one of the 18 plants received \$6,330 from city taxes, and six of the plants on which figures were available made contributions to their cities of \$3,405,636. The Pasadena municipal plant, which has had the engineering services of Mr. C. W. Koiner, shows a similar situation. The surplus and reserves are \$3,382,093. The bonded debt is only \$734,000. Assemblyman Alvin Reis reported that in Wisconsin the debt against municipal utilities was only 12.7 per cent of the investment, and the debt against private companies was 88 per cent.⁶

Many smaller plants elsewhere in the country have been

very successful. The success of Jamestown, N. Y., has been mentioned before. Its steam plant is underselling the Niagara power of one of the super-power companies. The Borough of Wallingford, Conn., under the direction of Mr. Alfred L. Pierce, has not only kept rates lower than most of the privately owned plants in the State, but has built up assets of \$462,074, with a bonded debt of only \$10,000 outstanding against it.⁷ The plant in Springfield, Ill., under the direction of Mr. Willis J. Spaulding, has rates lower than most of the private companies in Illinois and earns a considerable yearly profit. The Cleveland municipal plant forced a very considerable reduction in rates in that city. It is in competition with a private company. It appears to have fallen into the hands of people who are not interested in expanding its services, and instead of soliciting customers in competition with the private company as Seattle and Los Angeles have done with great success, it has dismissed many of its solicitors. The city manager was ousted by the machine in 1929. In spite of this policy of non-competitiveness the plant has an equity of \$6,765,000 in an investment worth \$13,870,000, added in spite of its low rates. In recent years the City of Lansing, Mich., has taken its place among the big municipal producing plants of the country.

In Pennsylvania the growth of municipal ownership has been definitely stopped by a law providing that municipalities have no power to condemn electric light plants. The counsel to the House Committee on Investigation of the Public Service Commission, Mr. Harold Evans, reported to the effect that the larger municipal plants in the State had been successful. He said:

"Officials of some of the larger municipal light plants in Pennsylvania testified before the committee. Mr. Mowrey, Manager of Utilities of Chambersburg, stated that the borough had a total budget of \$306,813 and produced by revenue from taxation only \$44,082. The difference is covered by the

profits made from the light and water plants. The profit from the electric light plant in 1930 was \$134,101, after operating expenses and depreciation had been deducted and after free light and power to the extent of \$36,637 had been furnished to other departments of the city. The rates run from 7.2 cents to 3.6 cents for lighting and the average domestic light charges, according to Mr. Mowrey, are 5 cents per kwh.

The Borough Manager of Aspinwall, Mr. Lea, stated that the budget of \$100,000 was practically all covered by the profits of water and light departments, amounting to about \$88,000. The rates are 6 cents after discount for the first 800 kwh.

The Borough Manager of Ellwood City, Mr. Monroe, testified that the borough sold domestic light at a rate of 5 cents per kwh., and announced new rates as of June 1st of 5 cents for the first 30 kwh. and 4½ cents for the next 170 kwh. On top of the low rates a profit of \$71,563 was made in 1930.

The Burgess of Middletown, Mr. McNair, testified that the borough bought its power from the Metropolitan Edison for one cent per kwh. and sold it to domestic consumers for 6.4 cents and less, and on top of these low rates made an annual profit between \$20,000 and \$30,000, after deductions for sinking fund appropriations." 8

This Committee also heard evidence about the effect of municipal operation in other states. The Counsel's Report continues:

"Testimony was offered by Chairman Atwill of the Massachusetts Department of Public Utilities to the effect that there were 30 to 40 municipal gas and electric plants in Massachusetts and that their existence was helpful to regulation. After citing certain low municipal rates he said:

"It is very helpful because a private company says, we cannot sell around five cents, and you naturally are able to turn to them and say, you ought to be ashamed of yourself.

Q. When you speak of 4½ cents you mean the top step?

A. The maximum,—you ought to be ashamed of yourself, you have been telling me that a municipal plant was inefficient, filled up with politics, and you with all your experience and with an absence of politics, cleanliness, elaboration, cannot make 5 cents, we cannot understand it. Of course, it is helpful; it makes the private owner ashamed that he cannot approach the public owner." 9

Testimony from Ohio was given by Mr. Roy Husselman, engineering consultant to the Committee and formerly engineer of General Construction, Division of Light and Heat of Cleveland, pointed out the effect of municipal freedom in Ohio. He said:

"We do not have many rate cases in Ohio, except for some few telephone and natural gas cases. We hardly ever have an electric rate case, because the cities of Ohio have home rule. The Constitution of the State provides that every municipality may own and operate a municipal plant. The municipal councils of the cities are the fundamental rate-making bodies. They can pass an ordinance fixing and establishing the rates that any utility company may charge for service. If the company accepts that rate it becomes a contract and a binding contract for the period of the ordinance. If they choose not to accept it they can appeal to the public utilities commission. Then they have a rate case. Very seldom is there a case going to the federal court out of the utilities commission.

We haven't had a large electric rate case to my knowledge for a good many years, because,—I am saying this with knowledge, the municipalities have found that competition was a better regulation than the commission, and the threat of competition is as good a regulation as they need, and if the municipal authorities find that they are paying too high a rate, in place of making a rate case before the commission, they propose to build a municipal plant, and, by the way, the Constitution of Ohio also provides that this plant may be financed by the sale of mortgage bonds, which are not a liability upon the taxpayers, which are over and above the limit of indebtedness prescribed by law." ¹⁰

Each one of the big municipal enterprises has fought against the heavy odds of private company competition or obstruction. For example in the Los Angeles bond campaign of 1923 the private power companies were very active and the Bureau of Power and Light spent \$12,000 in advertisements to counteract some of their statements. Suit was immediately brought by a friend of one of the power companies against such use of funds and the Bu-

reau was ordered to restore the funds to the treasury. The effect of the ruling was that while the power companies were free to spend unlimited amounts in propaganda the Bureau had no right to spend a cent. A very different decision was rendered in Winnipeg at about the same time on the same point. The court there held that the municipal power plant had every power to expand its business, and advertising was a proper use of such powers.

The old question of corruption by public utilities still remains. In 1930 the City Manager of Woodward, Oklahoma, Mr. H. M. Renner, said:

"Two corporations wanted to buy the light plant. One offered something better than a half million dollars. There was a legal question involved as to whether the old commission had the right to sell the plant without a vote. In the general confusion which resulted, we know bribes were taken and given, and votes were sold at so much per head over the counter the same as so much merchandise. I wish again to emphasize the unscrupulous tactics which corporations are using, the frenzy with which they are fighting the spread of municipal ownership."¹¹

The activities of some of the Foshay men in similar transactions have been mentioned before.

The legal obstacles shoved up against the cities are, however, equally effective. The situation in Texas is not untypical of several other states. It is described by Mr. C. A. Winder, Supervisor of Public Utilities at Fort Worth:

"Some cities are fortunate in having a franchise whereby the utility, if there is a question about rates, can be taken over by the municipality at a fixed price. . . . We do not have that arrangement either in Fort Worth or any other cities in Texas. If we want to take over a utility for municipal operation, it must be done by agreement or condemnation. If we do it by condemnation, we are handicapped if the city does not agree with the board of condemnation on the price. Then we have to file with the board double the amount set, take over the utility and settle the question later

as to valuation for sale purposes. The only recourse left is for the city to compete with the private company and that is uneconomical." ¹²

The Texas situation was further described by Mr. Joseph F. Nichols of Greenville, Tex., before the 1929 convention of the League of Texas Municipalities. He said, after sketching the social influence of the power combinations:

"Government and municipal ownerships are the Verdun to the battle fronts of the armies of the Power Trust, and as long as the Government and municipal ownership lines are not weakened or destroyed, the onward march of the power trust forces 'shall not pass' and will not pass. . . .

During the 1929 Legislature of the State of Texas, the Power Trust sought to obtain legislation to destroy, hamper or prevent municipal ownership. These interests had purchased, largely at extravagant prices, the great majority of the plants in Texas, leaving only a comparatively small number of municipally owned plants that had not been taken over by them. Hence, if the power interests could destroy, curtail or seriously hamper any right of any municipality to install and operate a municipal plant in competition with the power group plant, the conquest of Texas would be most complete. . . ." ¹³

In 1929 some of the Illinois towns sent out a cry for help to their fellow municipalities in that State. The cities of Mt. Olive and Staunton, which have had municipal plants for over twenty years and never granted any private franchises were faced with the alternative of buying power or selling their plants. They were offered several times the value of the plants, but realized that any price paid would be capitalized by the private companies, and they would have to pay a 7 per cent return on it. They refused to sell. Then the Illinois Power and Light refused to sell current to them. They had to look elsewhere, and finally bought off-peak current from some neighboring coal mines. The private company brought suit

to enjoin this purchase from the coal mines, alleging competition. It brought this suit without having any franchises in the two cities. In Nebraska the Nebraska Power Company has been active buying up the small town distributing systems fed by current from larger municipalities. The *Electrical World* reports that in one case it paid \$110,000 for a plant, in North Bend, which the City of Fremont, which had been selling it current, claims is worth only \$30,000. Fremont charges that the Nebraska Power Co. simply desired to cancel the Fremont contracts, thus causing heavy damages. According to the trade organ: "In power circles it is said that this method is necessary to fight the municipal plant monopoly planned through a state wide hook-up."¹⁴

To judge success of municipal plants in comparison with the larger and connected super-power systems is a difficult process. The latest available figures on a national scale are from the Bureau of Census. In its report for the year 1927, published late in 1930, it gave the average private company charges for domestic service at 6.9 cents per kwh. and the municipal charges at 5.5 cents. The small light and power service of the private companies averaged 4.2 cents, and the large power service 1.4 cents per kwh. The two classes brought the municipalities a revenue of 2.5 cents per kwh. The private companies averaged 5.1 cents for street lighting, and the municipal plants averaged 2.4 cents. On the item reported as "undistributed by class of service," the private companies received a revenue of 4.8 cents per kwh., and the municipal plants 5.6 cents.

In such a rough comparison of private and municipal rates several considerations should be remembered. One is that most municipal plants are forced to set aside a certain share of the earnings for retirement purposes,

which the private companies are under no obligation to do. Their rates include this contribution from the consumers to freeing the plant from debt. Another consideration is that most municipal plants make a contribution to the cities in the form of rates for street lighting lower than the private plants charge. In many cases the municipal plants contribute to the city funds. On the other hand it should be remembered that the private companies act as tax collecting agencies for the states and cities. They turn over an average of 8.5 per cent of their gross revenue in taxes.¹⁵ On a 7 cent rate this is about 6 mills, a little over half a cent per kwh. Comparison of modern steam plants with waterpower plants should take into account a further differential of about 3 mills per kilowatt hour. Cities of about the same size should be compared. A rough balance may be drawn:

| <i>Municipal Plant</i> | <i>Private Plant</i> |
|--|-------------------------------|
| Rates include retirement of debt | Rates include taxes |
| Low charges on street lighting | |
| Financial contributions to city in lieu of taxes | |
| Water power often cheaper | Steam power often more costly |
| Steampower often more costly | Waterpower often cheaper |

While exact comparison of rate advantages at present involves taking these and other items into consideration, some preliminary evidence can be offered for the states of New Jersey, New York, Kansas and Massachusetts. The following figures are compiled from the rate sheets filed with the state commissions in 1929 for domestic

lighting. They show a difference in favor of the municipal plants as far as the small consumer is concerned.

TABLE VI¹⁶

| | | <i>Private</i> <i>40 kwh. over Public</i> | <i>Private</i> <i>80 kwh. over Public</i> | |
|--------------------------------------|---------|--|--|------|
| New York (Cities under 25,000) | | | | |
| Private | \$3.621 | 18.3% | | |
| Municipal | 3.059 | | | |
| Kansas | | | | |
| Private | 3.188 | 12.0% | \$5.059 | .4% |
| Municipal | 2.845 | | 5.039 | |
| Massachusetts | | | | |
| Private | 2.995 | 15.6% | 5.189 | 2.3% |
| Municipal | 2.590 | | 5.071 | |
| New Jersey | | | | |
| Private | 3.485 | | 5.856 | |

It will be seen at once that the rates of the municipal plants are somewhat below those of the private companies in spite of the fact that they are, for the most part, in the smaller cities, and are compared with state-wide private superpower systems, not only operating in the large cities in each of these states, but gaining all the efficiencies of interconnected load. In New York State, where figures were available only for the users of 40 kwh. a month, the comparison is more accurate because it is for cities of about the same size. The difference shown is larger than in the other states where small municipal plants are compared with large private ones, as well as small private ones.

It also stands out that the rates in Kansas and Massachusetts where there are a considerable number of efficient municipal plants, are lower, even for the private plants

than in New Jersey where there are almost no important municipal plants. It appears to be prima facie evidence that municipal plants have a very definite effect on the rates of near-by private plants, a contention which is also supported by the experience in the West Coast states.

While the municipal plants, and especially the larger ones, seem to be performing their social function of doing a public business at a lower cost, their real service may be expected when they are free to follow the engineering developments in the industry and combine into interconnected public power systems. Some evidence as to their success at this is available.

NOTES

¹ Report of the Special Committee on Generation and Distribution of Electric Power, Proceedings of the 1928 Convention of the National Association of Railway and Utility Commissioners, Hon. Adolph Kanneberg, Chairman.

² Senator George W. Norris, *Congressional Record*, June 5, 1930.

³ Quoted in *Congressional Record*, May 26, 1930.

⁴ Annual Report, Seattle Department of Lighting, 1928.

⁵ Bird and Ryan, *Public Ownership on Trial*, p. 114, 1928 audits.

⁶ Transcript, hearings of the New York State Commission on Revision of the Public Service Commission Laws, p. 4161.

⁷ Detroit Convention of the International Association of Municipal Electricians, 1925.

⁸ Final Report of the Committee of the House of Representatives on Investigation of the Public Service Commission, Pennsylvania, May, 1931. Report of Counsel.

⁹ *Idem*, Record, p. 4155.

¹⁰ *Idem*, Record, pp. 3131-2.

¹¹ H. M. Renner, *Public Management*, March, 1930.

¹² C. A. Winder, *idem*.

¹³ Quoted in *Congressional Record*, June 8, 1929, pp. 2675-6.

¹⁴ *Electrical World*, February 22, 1930, p. 380.

¹⁵ Compare p. 102.

¹⁶ From "Government Ownership and Control," H. S. Raushenbush, Vol. CXLIX, *Annals of the American Academy of Political and Social Science*, May, 1930.

CHAPTER SEVEN

THE CITIES LEAGUE TOGETHER

TWENTY years after the private power companies began interconnecting cities, some of the cities are freeing themselves sufficiently to do the same thing. In California, Nebraska, Washington and Oregon they have secured permission to establish power districts. In Wisconsin a constitutional amendment is before the electorate. In New York it was recommended by the Governor's appointees to the investigating commission of 1930 and by Governor Roosevelt. In Pennsylvania Governor Pinchot in 1926 supported a plan for regulation which involves such power districts. The belief of its advocates is that the people can gain the chief advantages of the engineering in the industry only by the creation of public super-power systems. They have the remarkable success of an operating league of municipalities in Ontario to support their contentions.

The Pennsylvania proposal for "Giant Power" in that state resulted from a survey under the direction of Mr. Morris L. Cooke, and attracted a certain amount of attention in the East. The first proposals of the plan were directed toward an improvement of the regulatory system. The private power companies were asked to accept changes in their charters which would allow the fixing of rates on "net investment plus additional fair value, if any, at a rate reasonably sufficient from time to time to attract into the enterprise new money in sufficient volume to meet the needs of its public service duty."¹ It will be noted that this had some similarity to the proposals made by the Massachusetts Department of Public Utilities a little later

The sanctions invoked were also very much the same. In case the private power companies did not accept the changes in their charters which would allow such regulation, then they were to lose certain privileges, that of exercising the right of eminent domain, that of acquiring ownership in other electrical utilities, that of beginning the exercise of any franchise, that of renewing their charters and that of selling or leasing their property to any other electrical utility. In other words they were restrained from using further state consent to expand.

The plan was interesting also in that it resembled the British General Electricity plan of 1926. It proposed a certain amount of social control over the development of the industry. It included the incorporation of generation and transmission companies for a 50 year period. Each such "Giant Power Company" would become a common purchaser and seller for the transmission district in which it was located. In this way it arranged for a pooling of power with the transmission lines as common carriers. These companies, too, would be held to a fair return on their actual investment.

The plan was supplemented by a proposal which is of more interest at this point. Electric districts might be incorporated and have the power of borrowing up to 2 per cent of the valuation of the property covered by the districts, and more than that upon majority vote of the electors in the district. These electric districts could interconnect with any company's transmission lines, and have the right to buy power at a fair price. Provision was also made for mutual electricity companies which would be limited to 8 per cent dividends and would have power to construct and operate electric facilities and to condemn property and to distribute power to people who were not stockholders. It was expected that these two plans would be used largely by farmers in the rural areas, for at the time they were proposed, in 1926, only six per

cent of the farms in Pennsylvania had electric service. All these Giant Power proposals were beaten by a hostile Legislature.

In Nebraska a power district bill was carried, but was later declared unconstitutional on the ground that the Legislature had delegated some of its legislative powers. It was re-passed on popular initiative in 1930 to avoid this difficulty. In 1930 the States of Washington and Oregon carried initiative petitions for the formation of power districts.

According to the Nebraska law there must, first, be a petition signed by at least 25 per cent of the electors in the proposed district. In the Washington law 10 per cent of the electors must sign such a petition. In Nebraska the petition then goes to the District Court, which holds open hearings and declares that the proposed power district is, or is not, to be incorporated. After that it goes to the voters in the proposed district. In Washington it goes to the Board of County Commissioners, which holds open hearings and has power to exclude certain sections from the proposed district. In both states a majority vote of the electors establishes the district. In Nebraska the District Court can exclude from the district any units which voted against it.

After the districts have been properly approved officials are elected to take control, and in both states care is taken that all units of government represented in the district are also represented in the control of the power district. The districts are given broad powers to make surveys of the district's needs, to issue bonds and to develop power plants. The Nebraska law reads in part:

"Said hydro-electric district shall be a corporation and possess all the usual powers of a corporation for public purposes, and in its name may sue and be sued, purchase, hold and sell personal property and real estate; and shall have the sole management and control of hydro-electric and auxiliary

steam electric power plant or plants, and transmission lines within or without said hydro-electric district, now or hereafter owned or leased by said district. Said power plants and distribution lines connected therewith are hereby declared to be works of internal improvement. Said hydro-electric district shall also have the power of eminent domain for condemnation and appropriation of private property, so far as may necessarily be required by said district in the construction of new power plants, transmission lines and necessary distribution lines only."

When bonds are to be issued they must be approved by the voters in the district. In Nebraska this applies to all the bonds. In Washington it applies to bonds that exceed one and one-half per cent of the total value of the real property in the district. In both states 60 per cent of the voters must favor the bonds, or they cannot be issued. In Nebraska if the first bonds proposed by the district fail to be approved, the district ends, and must wind up its affairs at once. Various other safeguarding provisions are included. In Nebraska all work over \$500 in amount must be let by contract to the lowest responsible bidder. In Washington any materials purchased or work ordered over \$5,000 in amount shall be awarded by contract. In condemnation proceedings the Washington law exempts municipal plants from condemnation except upon the vote of the people of the municipality owning such a plant. It orders that in condemnation proceedings the court shall submit to the jury the values placed on the property involved by the local taxing authorities, and in respect to the condemnation of privately owned utilities operating without a franchise, orders the court to consider the fact that such property, plants and facilities are subject to being removed from the highways by reason of being operated without franchises.

The new Nebraska law permits cities and towns which own plants and distributing lines to extend them beyond the municipal borders to cover such territory "as may be

deemed expedient." It also provides that such extensions are to be paid out of earnings. No municipal plant is to be sold until sixty per cent of the voters approve. There is a definite limit set to the amount which can be spent in a campaign to influence such sales. This law is aimed to help the rural districts.

The significant fact here is that even with all the limitations imposed upon their liberty of action through votes on bonds and appeals to the courts, they are nevertheless free to combine the power facilities of considerable areas for the common benefit of all people in those areas, and to plan the power development in connection with the irrigation, flood control and drinking water needs of the areas. The existing irrigation districts in California have developed power largely as a means of paying for their irrigation work. They have been able to do this while charging rates which seem low in comparison with the rates given in the previous chapter for such heavily settled states as New Jersey and Massachusetts. A comparison may be made:

| | <i>40 kwh.</i> | <i>80 kwh.</i> |
|-------------------------------------|----------------|----------------|
| Turlock District ² | \$2.25 | \$3.25 |
| Modesto District | 2.15 | 3.15 |
| New Jersey (private) | 3.485 | 5.856 |
| Massachusetts (private) | 2.995 | 5.189 |

This is first hand evidence that power districts can operate efficiently and give lower rates, even in small sparsely settled communities, than the private super-power systems covering well populated and industrial states such as New Jersey and Massachusetts.

Further evidence to this effect is given by the working of the league of Ontario municipalities under the leadership of the Ontario Hydro-Electric Commission, just North of the states of Michigan, Ohio, Pennsylvania and New York. Here is a publicly owned super-power system. It can be compared, after due consideration is given:

to certain factors, with the private super-power systems operating in this country. In the comparison it should be remembered (1) that the Ontario plants contribute to the city funds in the form of street lighting rates which are lower than those of the private companies in the United States, (2) that their rates include charges devoted to retiring the debt for the benefit of future consumers, which are not paralleled by the private plants in the United States, (3) that a large part of the Ontario power, although not all, comes from cheap waterpower sources, (4) that the Province of Ontario is more sparsely settled than many states South of the border, (5) that the Ontario system acts as a tax collecting agency, much as the private companies in the United States, but collects less in taxes than they do.

Comparisons of private systems in the United States with Ontario have frequently been made by the private power companies, but as far as I am aware no comparison made by anyone, who was not paid by them, has been unfavorable to the Ontario system. Every unpaid student of the situation finds the advantage more or less heavily on the side of the public super-power system.

Stating that his Muscle Shoals bill was modeled after Ontario and that, "keeping in mind the difference in conditions between this country and Ontario, the same things that have been done there can be done in Tennessee, Alabama, Mississippi and Georgia if the bill which the Senate has passed will be acted upon favorably by the House and signed by the President," Senator Norris made certain important comparisons between rates.⁸ His first comparison was that of the average cost of domestic lighting in 32 big cities in the United States with the same costs in all the larger Ontario cities, 21 in number. The figures for United States cities up to 1927 were taken from a memorandum furnished by the Joint Committee of the National Utility Associations, and for 1927 and 1928 by

the Commissioner of Labor Statistics of the Department of Labor. The Ontario figures were taken from the reports of the Commission. The cities compared were:

| <i>United States</i> | | <i>Ontario</i> | |
|----------------------|-------------------|--------------------|-------------------|
| | <i>Population</i> | | <i>Population</i> |
| Atlanta | 250,000 | Brantford | 28,010 |
| Baltimore | 819,000 | Chatham | 14,118 |
| Birmingham | 217,000 | Galt | 12,686 |
| Boston | 793,000 | Guelph | 19,219 |
| Buffalo | 550,000 | Hamilton | 122,238 |
| Chicago | 3,102,000 | Kingston | 21,621 |
| Cincinnati | 412,000 | Kitchener | 24,805 |
| Cleveland | 984,000 | London | 63,339 |
| Denver | 289,000 | Niagara Falls ... | 16,819 |
| Detroit | 1,334,000 | Ottawa | 118,088 |
| Houston | 256,000 | Owen Sound .. | 12,231 |
| Indianapolis | 374,000 | Peterborough ... | 21,726 |
| Jacksonville | 137,000 | Port Arthur | 17,021 |
| Kansas City | 383,000 | St. Catharines ... | 21,810 |
| Los Angeles | 1,300,000 | St. Thomas | 17,152 |
| Memphis | 179,000 | Sarnia | 15,588 |
| Minneapolis | 447,000 | Stratford | 18,888 |
| Mobile | 66,000 | Toronto | 542,187 |
| New Orleans | 424,000 | Welland | 8,942 |
| New York | 5,970,000 | Windsor | 52,638 |
| Norfolk | 179,000 | Woodstock | 10,114 |
| Philadelphia | 2,035,000 | | |
| Pittsburgh | 665,000 | | |
| Portland, Me. ... | 76,000 | | |
| Portland, Oreg. . | 340,000 | | |
| Richmond | 191,000 | | |
| St. Louis | 839,000 | | |
| San Francisco ... | 576,000 | | |
| Savannah | 96,000 | | |
| Scranton | 143,000 | | |
| Seattle | 411,000 | | |
| Washington | 540,000 | | |
| Total | 25,377,000 | Total | 1,179,247 |

It will be seen at once that the American cities include the public plants of Los Angeles, Jacksonville, Cleveland

San Francisco and Seattle. For some of the years the United States' average is lowered by the weight of the lower rates in these municipal plants.

The following chart was presented to show "the net average cost per kilowatt-hour for domestic electricity" in the two groups of cities from 1910 through 1928.⁴ It should be noted that the 1910 cost in Ontario was under private ownership, and is higher than the cost in that year in the United States cities. The drop in rates since that day has been fairly constant in both countries, but almost four times as much in Ontario as in the United States cities.

| <i>Year</i> | <i>United States, cost</i> | <i>Ontario, cost</i> |
|-------------|----------------------------|----------------------|
| | <i>kilowatt-hour</i> | <i>kilowatt-hour</i> |
| | <i>cents</i> | <i>cents</i> |
| 1910 | 9.2 | 9.30 |
| 1911 | 9.0 | |
| 1912 | 8.9 | 6.00 |
| 1913 | 8.7 | 5.06 |
| 1914 | 8.5 | 4.86 |
| 1915 | 8.0 | 3.83 |
| 1916 | 8.05 | 3.08 |
| 1917 | 8.1 | 2.89 |
| 1918 | 7.9 | 2.72 |
| 1919 | 7.8 | 2.55 |
| 1920 | 8.0 | 2.29 |
| 1921 | 7.9 | 2.20 |
| 1922 | 7.8 | 1.98 |
| 1923 | 7.7 | 1.83 |
| 1924 | 7.6 | 1.73 |
| 1925 | 7.5 | 1.71 |
| 1926 | 7.4 | 1.66 |
| 1927 | 7.4 | 1.63 |
| 1928 | 7.2 | 1.55 |

This chart can be recast in simple form to show how much the domestic consumers of electricity in the United States cities have had to pay year in and year out in comparison with the amounts paid by similar consumers across the border in Ontario. Throughout this compari-

son, however, it should be remembered that Ontario rates have been so low that people there use the electricity very freely and get low rates for large use. In the United States cities smaller amounts are used and the rates for those smaller amounts are high. A comparison of bills for similar amounts would show a somewhat less lopsided advantage in favor of the Ontario system.

Keeping in mind that only the average net costs of all domestic lighting are being compared, and that the Ontario consumers receive the advantage of lower rates due to larger use, the figures above show the following differences:

| | <i>Ontario Cities</i> | <i>United States Cities</i> |
|------------|-----------------------|-----------------------------|
| 1912 | \$100 | \$158.07 |
| 1913 | 100 | 173.13 |
| 1914 | 100 | 175.18 |
| 1915 | 100 | 208.80 |
| 1916 | 100 | 260.82 |
| 1917 | 100 | 280.26 |
| 1918 | 100 | 289.93 |
| 1919 | 100 | 305.76 |
| 1920 | 100 | 348.80 |
| 1921 | 100 | 358.66 |
| 1922 | 100 | 393.90 |
| 1923 | 100 | 420.42 |
| 1924 | 100 | 438.52 |
| 1925 | 100 | 438.00 |
| 1926 | 100 | 445.48 |
| 1927 | 100 | 453.62 |
| 1928 | 100 | 464.40 |

A closer comparison of domestic lighting rates can be made. On the basis of 1928 rates I compiled figures for all the Ontario towns over 1,000 population, showing the rates for users of 40 and 80 kwh. a month. These can be contrasted with the figures previously given for the private companies in the cities of some of our states. They do not include the smaller towns in those states. The bills for users of such amounts were the basis for

the calculation. The result is also heavily in favor of the cheapness and efficiency of the Ontario public power system, although not as heavily as the above comparison of net costs to consumers for all domestic lighting.

| | 40 kwh. | 80 kwh. | <i>Difference over Ontario</i> | |
|-------------------------|---------|---------|--------------------------------|---------|
| | | | 40 kwh. | 80 kwh. |
| New York (private) .. | \$2.936 | \$ | 168.6% | |
| New Jersey (private) . | 3.485 | 5.858 | 218.8% | 267.5% |
| Massachusetts (private) | 2.995 | 5.189 | 174.0% | 225.5% |
| Kansas (private) | 3.188 | 5.959 | 191.6% | 273.8% |
| Ontario (public) | 1.093 | 1.594 | | |

These figures are conservative. They include many small Ontario towns where costs are relatively high, and exclude such towns in the calculations for the states on this side of the border. For example, the New York charges in 1928 for consumers of 40 kwh. a month were \$3.21 when the towns and villages in that state were included. In the comparison here those towns and villages are not included, and only the average charge for the cities is given, which is much lower, \$2.93. This table may be restated in terms similar to the restatement of the figures given by Senator Norris. It shows the essential figures when contrasted with payments of \$100 by Ontario consumers.

| | <i>Users of 40 kwh. monthly</i> | <i>Users of 80 kwh. monthly</i> |
|---------------------|-------------------------------------|-------------------------------------|
| Ontario | \$100.00 | \$100.00 |
| New York | 268.60 | |
| New Jersey | 318.80 | 367.50 |
| Massachusetts | 274.00 | 325.50 |
| Kansas | 291.60 | 373.80 |

These figures indicate conclusively that as far as the four states involved in the first comparison go and the three states involved in the second one, the average con-

sumer of 40 kwh. a month pays our private companies close to three times as much as the Ontario consumer (\$288.25 to \$100), and the somewhat larger domestic consumer in our states, who uses 80 kwh. monthly, pays over three and a half times as much (\$355.43 to \$100).

In attempts to answer evidence such as this the power companies have made two claims, one to the effect that while the domestic lighting rates may be lower in Ontario, the power rates are higher; the other to the effect that the taxes collected by the private companies here are so much larger than the contributions made by the Ontario plants that they account for the higher rates of the private companies. If either of these two claims is true, a good part of the weight of Ontario as a successful demonstration of social planning and financing for the common good would be lost.

In answering the first point, Senator Norris in May, 1930, presented figures showing the average cost to the ultimate consumers of industrial power in the United States and in Ontario for a period of four years through 1928. The United States figures are taken from the organ of the industry, the *Electrical World*. The Ontario figures are taken from the reports of the Hydro-Electric Commission.⁶

| Year | Total United States | | |
|------------|------------------------|---------------------|--------------------------|
| | Kilowatt-hours sold | Revenue | Average kwh. cents |
| 1925 | 36,431,000,000 | \$420,810,000 | 1.15 |
| 1926 | 41,964,000,000 | 519,100,000 | 1.23 |
| 1927 | 47,093,000,000 | 636,545,000 | 1.35 |
| 1928 | 51,140,000,000 | 686,015,000 | 1.34 |
| | <hr/> 176,628,000,000 | <hr/> 2,262,470,000 | <hr/> 1.28 |

Total Ontario Hydro

| | | | |
|------------|---------------|--------------|-------|
| 1925 | 1,894,440,816 | \$11,580,778 | 0.61 |
| 1926 | 2,156,391,288 | 13,088,534 | .60 |
| 1927 | 2,219,738,463 | 13,924,606 | .62 |
| 1928 | 2,426,384,841 | 14,655,714 | .60 |
| | <hr/> | <hr/> | <hr/> |
| | 8,696,955,408 | \$53,249,632 | .61 |

These figures indicate that the industrial consumers of the United States, far from paying less for power than the Ontario consumers of industrial power, pay more than twice as much. For every hundred dollars paid in Ontario our industrial consumers pay \$209.79.

In spite of such evidence the National Electric Light Association takes the lead in attempting to misrepresent the situation entirely. In March, 1930, for example, one of the news releases from their Department of Public Information claims that one of the fundamental principles of the power industry here is that each service shall carry its own load and that under no circumstances shall any particular class of service be penalized to subsidize any other class of service, while, "in Ontario, with Government ownership and operation, the theory is entirely different. There business and industry, as well as the general taxpayer, have been penalized for the benefit of the small consumer, and more particularly the rural consumer."

In addition to giving the above figures by way of answer, Senator Norris quoted the Chamber of Commerce of Niagara Falls, N. Y. It petitioned Congress for an increase in the tariff on cyanamid salts, which are produced there with Niagara Falls power. The Chamber of Commerce said:

"Large units of power are consumed in the manufacture of this product, and the cost of power is a very important item in its manufacture; and partly as a result of our treaty

arrangements with Great Britain and partly as a result of the wisdom of the Canadian Government in the handling of its power matters, the Canadian manufacturer gets his power at approximately one-half of what the American manufacturer on this side of the river has to pay for power. He is therefore able to undersell the American in the American market and the American cannot compete in the Canadian market. . . ."

The National Sand and Gravel Association, in asking for a tariff on their products in 1930, made somewhat similar statements to the effect that the Ontario power is supplied to Ontario sand and gravel people approximately at cost and was about 60 per cent lower in Ontario than in the United States.

In view of the widely differing statements on this important matter of rates the whole subject was gone into recently by Dr. William E. Mosher and other faculty members of the University of Syracuse. Their conclusions were published as part of a book, *Electrical Utilities*, which appeared in 1929. They took the form of rate comparison for Ontario and New York cities. It was recognized that there were important differences between the two units, Ontario being sparsely settled and primarily rural while New York State is highly industrialized and well-populated. Further, when the Hydro Commission began operations in Ontario it had a relatively clean slate and could work out an integrated system. In New York State consolidation of recent years has meant the scrapping of a great deal of investment that did not serve the unified system to the best advantage. New York State produces much of its power from steam plants, while Ontario produces most of its power from hydro plants. Finally, the differences from source of supply vary in both governmental units.

The authors discard as unreliable the method of combining revenues for all electric service classifications in one territory and division by the sum of kilowatt hour:

sold as a method that would show accurate costs to consumers. In proof they state that an "example of the gross errors which the method gives rise to is afforded by a comparison in a recent report (September, 1928) of the Rate Research Committee of the National Electric Light Association, concerning the operation of privately owned and municipally owned plants in the United States. Among other things it compares average revenue per kilowatt hour for both light and power, erroneously assuming such data to be criteria of average rates." ⁶ This resulted in a claim by the N.E.L.A. that if the customers of the municipal plants of the country had paid for their energy at the same rate paid by the customers of the private plants they would have saved some \$25,900,407. The authors of *Electrical Utilities* show that the jumbling of light and power classifications is incorrect. Far from such effecting a saving through the payment of private rates, if the customers of the municipal plants had been forced to pay the rates charged by the private plants they would have actually had to pay \$5,268,825 more than they did. Again, if the customers of the private plants had been free to pay the lower municipal rates they would have had to pay \$7,907,977 less than they paid to the private companies.⁷ The authors conclude that "the above comparisons clearly demonstrate that it is possible to arrive at conclusions by the use of kilowatt hour averages, which run directly counter to basic facts." They therefore discarded the comparison between Ontario and New York cities on the basis of averages and substituted comparisons of monthly bills for corresponding services.

They chose nine typical monthly bills and listed six cities in Ontario and 18 in New York according to payments required for such bills in March, 1929. The results were as follows:

Case 1. The domestic consumer using 36 kwh. monthly. All the Ontario cities were under \$1.04, ranging from

\$.95 to \$1.03. The New York cities were all higher ranging from \$1.59 in Buffalo to \$3.60 in Yonkers.

Case 2. The domestic consumer using 175 kwh monthly for lighting and cooking, etc. All the Ontario cities were lower than the New York cities, ranging from \$1.93 to \$2.97. The New York cities ranged from \$4.85 to \$15.00.

Case 3. The commercial lighting consumer using 200 kwh. monthly for lighting. All the Ontario cities were lower, ranging from \$3.24 to \$5.49. The New York cities ranged from \$6.75 charged by the public plant at Jamestown to \$19.00.

Case 4. The commercial lighting consumer using 1,000 kwh. monthly. Five of the six Ontario cities were lowest ranging from \$16.16 to \$23.03. One New York city ranked sixth. One Ontario city ranked seventh at \$27.45. The remaining New York cities had higher costs, ranging from \$28.35 at Jamestown (public) to \$73.00 at Yonkers.

Case 5. The commercial consumer using energy for lighting, cash-carriers and elevators, 3,000 kwh. monthly. Five Ontario cities were lowest, ranging from \$35.44 to \$50.63. Three New York cities followed, ranging from \$55.00 to \$60.50. Toronto, Ontario, is in ninth place with \$64.80. The other New York cities follow, ranging from \$73.35 to \$174.27.

Case 6. The commercial consumer using energy for lighting, cash-carriers and elevators, 6,000 kwh. monthly. Three Ontario cities are lowest, ranging from \$62.22 to \$88.88. Niagara Falls, N. Y., is in fourth place with a \$90.00 charge. Two more Ontario cities follow, then two more New York cities, then Toronto, Ont., at \$117.00. Eleven New York cities are higher than Toronto, ranging from \$128.00 to \$306.25.

Case 7. The small industrial user of 2,000 kwh monthly, on a 10 kw. connected load and an 85 pe

cent load factor. All the Ontario cities are lower, ranging from \$22.75 to \$28.04. The New York cities range from \$35.00 in Buffalo to \$131.40 in Yonkers.

Case 8. The industrial user of 10,000 kwh. monthly on a measured demand of 30 kw. and an 85 per cent load factor. All the Ontario cities are lower, ranging from \$73.22 to \$94.01. The New York cities range from \$95.45 to \$500.00, and sixteen of them are above \$100.00 and eight of them above \$200.00.

Case 9. The industrial consumer using 21,600 kwh. monthly on a measured demand of 100 kw. and an 85 per cent load factor. Here the order is Buffalo, N. Y., Niagara Falls, N. Y., Ottawa and Kitchener, Ont., North Tonawanda, N. Y., then the remaining four Ontario cities with \$258.50 as a high, then 14 New York cities ranging from \$284.00 to \$1,080.00.

Case 10. The industrial consumer using 75,600 kwh. monthly, on a measured demand of 300 kw. and an 85 per cent load factor. Two New York cities are lowest, then follow three Ontario cities, one New York city, three Ontario cities and 15 New York cities. The highest Ontario city is \$804.56. The 15 last New York cities range from \$806.25 to \$2,500.00 and 14 of them are above \$1,000.00.

Case 11. The industrial consumer using 288,000 kwh. monthly on a measured demand of 1,000 kw. and an 85 per cent load factor. Two New York cities are lowest, three Ontario cities follow, two New York cities are sixth and seventh, three Ontario cities follow, the highest being \$2,778.65, then the remaining 13 New York cities ranging from \$3,288.00 to \$5,409.97. Ten of them are above \$4,000.00.

In order to facilitate comparison the authors of *Electrical Utilities* expressed the comparisons as ratios, with the Ontario average cost for each case expressed as unity (\$1.00).⁸

Case Numbers

| | Domestic | | Commercial | | | | Industrial | | | | |
|---------------------|----------|------|------------|------|------|------|------------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Ontario | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Western New York.. | 1.93 | 2.06 | 2.06 | 1.63 | 1.38 | 1.34 | 1.60 | 1.62 | 1.07 | 1.03 | 1.00 |
| Upstate-West (N.Y.) | 2.76 | 3.19 | 2.51 | 2.09 | 1.93 | 1.76 | 2.37 | 2.55 | 1.88 | 1.63 | 1.61 |
| Upstate-East (N.Y.) | 2.95 | 2.92 | 4.10 | 3.05 | ... | ... | 2.44 | 2.74 | 1.82 | 1.74 | 1.76 |
| Lower Hudson (N.Y.) | 3.00 | 3.79 | 3.90 | 3.37 | 3.13 | 3.29 | 3.58 | 3.96 | 2.69 | 2.34 | 1.91 |

The conclusions from this study may be expressed as follows.

1. Cost of domestic service in most of the cities in New York State varies from about two to three times as much as in Ontario. For every \$100 paid by the very small Ontario consumer the New York consumers pay from \$193 to \$300. For every \$100 paid by the larger domestic consumer in Ontario the New York consumer pays from \$206 to \$379.

2. Cost of commercial lighting is over 40 per cent higher in New York State than in Ontario, for each \$100 spent in Ontario the New York consumers in four groups pay from \$206 to \$410, from \$163 to \$337, from \$138 to \$313 and from \$134 to \$329.

3. Large power users in New York State, outside of Buffalo and Niagara Falls, pay from 60 to 170 per cent more than in Ontario. For each \$100 paid in Ontario cities, the large industrial users in New York State cities pay, in each of the five groups, from \$160 to \$358, from \$162 to \$396, from \$107 to \$269, from \$103 to \$234 and from \$100 to \$191.

To the extent that the rates charged in the New York cities are typical of the country at large this study would seem to add conclusive weight to the belief that the Ontario system is not subsidizing its low domestic rates by charging high rates to the power consumers. There remains only their further contention that the rates are

higher in this country because of the taxes the private companies collect from their consumers and turn over to the cities and states.

On this point Professor H. W. Peck of Syracuse, one of the co-authors of *Electrical Utilities*, made certain important findings. He computed the average tax for the New York companies and the Ontario municipal plants. The taxes paid by each were:

| | |
|--------------------------|-----------------------|
| New York companies | .09250 cents per kwh. |
| Ontario system | .00723 cents per kwh. |

The New York companies paid less than 1 mill per kwh. in taxes, but this was larger than the sum paid in taxes by the Ontario system.

However, the Ontario system plants collected in their rates certain amounts which more than offset these taxes, and gave certain public services at a lower rate than the private companies. They gave cheaper municipal lighting rates, and added to the public credit in the form of an increase in equity in the hydro-generating and transmission system by large charges for retirement, and also added to the public credit through charges for retiring the local debts on the local distribution plants. According to Professor Peck, "From these various sources, in terms of kilowatt hours, the Ontario municipalities collected .268 cents, or almost three times as much as was realized on this side of the border from the net payment in the form of taxes contributed by companies."⁹

This should dispose of the private utility propaganda to the effect that rates in the United States are higher than in Ontario because of the taxes collected by the private companies here. The New York State private companies paid .0925 cents in taxes, and the Ontario plants contributed in various ways almost three times as much, .268 cents per kwh. In spite of this contribution which was almost three times as large as taxes on this side of the

border, they charge rates so much lower than most of the rates charged by the inter-connected private super-power systems in New York State that the difference in source of generation does not begin to explain the difference.

The Ontario Hydro-Electric Commission represents the principle of a public power district applied to a whole large state. It represents social planning under unified direction like nothing we have as yet had on this side of the border. It represents the determination not to turn over natural resources to private profit. It represents stimulation of a rising standard of living in city homes and farms by rates low enough to encourage use of modern conveniences. It represents the intelligent use of government and municipal credit to bring down the cost of living to the citizens. It represents an intelligent social care for the interest of future consumers by regularly retiring large parts of the debt and lowering the capital charges which will have to be paid by future consumers.

In this chapter and the preceding one evidence has been presented which seems to indicate that the engineers and managers have been able to give their services to the public in varying degrees; first and best in a public super-power system; second, in municipal plants; third, in private companies under the pressure of the example of low rates in near-by municipal plants; fourth, in a state with a strong regulatory commission but no important municipal plants to furnish any incentive to rate reduction.

Hidden here is the essence of the conflict between those who would continue to police the utilities and improve the regulatory laws, and those who think that as long as private interests own the control of the utilities there is no hope that the public will gain the greatest possible benefit from the work and ability of the engineers.

The cities have been held back when they should have been free to expand. The management of public busi-

ness has been held back at times by the use of forms which were adequate for an earlier day and are no longer appropriate. New types of management for public business are coming into use which promise the advance of the social good through a combination of the best features of private initiative and of social control. As the cities league together it would be to their advantage to incorporate these newer forms of management into their plans.

NOTES

¹ *Giant Power Survey*, Commonwealth of Pennsylvania, 1926.

² Bird and Ryan, *Public Ownership on Trial*, pp. 126-128.

³ *Congressional Record*, May 9, 1930.

⁴ The figures for 1927 and 1928 include 51 cities in the United States and 25 Ontario cities.

⁵ *Congressional Record*, May 9, 1930.

⁶ *Electrical Utilities*, Mosher and Associates, p. 245.

⁷ *Idem*, pp. 246-7.

⁸ *Idem*, p. 259. Table XVII.

⁹ *American Economic Review*, 19 Sup. 197, p. 200, February, 1930.

CHAPTER EIGHT

GOVERNMENT CORPORATIONS AND FINANCING

1. *The Present Problem*

WE have seen several things which should be kept in mind in thinking about the problem presented to the nation by the growth of the power industry under its present managers. The industry represents the spear-head of the drive toward industrial feudalism. It is a growing force not only in national, state and local political life but in the educational field as well. It has grown beyond the cities and is now growing beyond the states. It has effectively resisted such federal control as has been attempted and is now openly challenging it. Its engineers have reduced the cost of generation and transmission, but only a small proportion of these savings has been passed on to the public. Municipal plants appear to furnish cheaper service than private plants of the same size. The key to efficiency is interconnected systems. Public interconnected systems, such as the one in Ontario, render much cheaper service than private interconnected systems in the United States, although the latter are now much larger than the Ontario system. The possible savings to the public through government ownership may be well over a million dollars a day in the 1930's and much more as the industry grows in size.

The problem, from its financial side, is one of seeing to it that a public business is run in the most economical way, that the benefits of scientific progress are made available to all in order that the country's standard of living be raised. From the social side it is important not only to raise the standard of living but to prevent the growth

of an independent dominating organism inside of society.

This problem we share with other countries. We have it in a more extreme form because the others have not allowed the industry to slip so far away from the public interest. Most of them have kept a much closer rein on it from the very beginning. Nevertheless there are many similarities. In Europe the boundaries between nations offer even greater obstacles than our boundaries between states. Yet really efficient use of the engineers' contributions to the industry means transcending and crossing such borders. At the world power conference in Berlin in 1930, a German engineer, Oskar Oliven, proposed a super-power system for all Europe, tying in with a great system of high power transmission lines all the main sources of power, the waterpower of the Scandinavian countries, the coal and lignite fields of Central Germany, the waterpower of the Alps, back to the waterpower of the Rhone Valley in Southern France, North to the cheap coal of France, Belgium and England. A third North-South line would run from the German and Polish coal fields in Upper Silesia through Czechoslovakia, over Vienna to Yugoslavia and the Dalmatian coast waterpowers. Still another line would begin at Rostov on the Don, North of the Black Sea, cross Southern Ukrania and the Dnieper waterpower, go to Rumania, using the oilfields there, touch the now undeveloped waterpower of the Austrian Alps and connect in at Vienna. As in the interconnected systems in the United States the plan takes advantage of the time differences East and West to spread the peak loads. The objection which will probably defer this plan is that few European governments will be willing to take the risk of developing a plan which will leave them dependent in time of war, an objection not encountered in the United States nor in the British Isles nor in such large countries as the Argentine, which is considering a five mile dam across the mouth of the

Gulf of San José in Patagonia and a 600 mile transmission line to Buenos Aires, bringing power to the capital at a quarter of a cent a kilowatt hour, cheaper even than Niagara Falls power.¹

We do, however, share with the other countries the same three choices: that of leaving or putting the planning and development in the hands of private companies, or exercising some degree of governmental supervision over the planning, as in the British Isles, or establishing part governmental and part private ownership as in Germany or full ownership by the Government, represented at its best in Ontario.

2. Government Planning—Mixed Ownership

In Great Britain the problem has been that of securing cheap power, of eliminating the inefficient plants. In 1926 there were in England, Scotland and Wales some 659 enterprises; about 60 per cent, 390, were public and about 40 per cent, 269, were privately developed. The first effort to eliminate the less efficient plants began in 1919, immediately after the war. Provisions for voluntary grouping were adopted. They were in effect seven years, until 1926, and had not brought about the desired results. In 1926 the Conservative Government, under Mr. Baldwin, passed the Electricity Supply Act. Its definite object is to cut down the number of power plants to an efficient fifty or sixty in 1940 and to provide for an interconnected superpower system that will serve the whole country adequately.

The law under which the power industry there has been developing for some years is an interesting mixture of governmental control and ownership and somewhat unregulated private industry. The whole problem of subordinating private interests to the general public interest was involved at once. The Weir Committee, which planned the present law, used the words: "We fully real-

ize the apparent drastic nature of our proposal, but we are convinced that in operation it will not involve any hardship to existing interests. We propose not a change of ownership, but the partial subordination of vested interests in generation to that of a new authority for the benefit of all, and this only under the proper safeguards and in a manner which will preserve the value of the incentive of private enterprise." ²

In order to secure the cheapest possible generation and transmission costs a Central Electricity Board, which is a government corporation consisting of eight directors, has been set up and been given power to plan a unified system for the country and to put those plans into effect. The procedure is that a special board of engineers (the Electricity Commissioners) submits to the Board a plan for unifying each zone in the country, zoning it into industrial areas that are naturally grouped together. The Board, as a second step, can build or buy main transmission lines connecting the various sections of each zone, and the several zones. It can do this on its own account, following the plans of the engineers. For this purpose it has a revolving fund of about \$163,000,000 which it raises by sales of its own securities. The third power of the Board is to select out of the existing generating plants the most efficient in each zone, which are to sell to the Board all the electricity they produce. The Board then resells this purchased current (at cost plus sufficient advance to pay its own running expenses) to the distributing systems, except in those cases where a private distributing agency is producing it more cheaply than the Board can furnish it. The procedure here is to designate certain stations, called "designated" or "authorized" stations, to furnish the bulk of the power for each zone. This does not, however, confiscate the property of the less efficient stations. These non-authorized stations are sold power for a period of seven years at a cost less than that at

which they can produce. In other words, they get their power more cheaply than they could manufacture it themselves. Their generating plants are thus closed down, with the expectation that the investment in them which has not already been depreciated, will by then be written off. This concentrates the production for the whole country in a few efficient plants.

With this accomplished the Board can proceed to order the expansion of the selected generating stations. In case the owners refuse to obey the orders to expand, the Board can order that station sold to the local "joint electricity authority." This is also a governmental corporation, of a voluntary character, which may be set up in each zone, or even in small parts of each zone, comprising representatives of the local power interests, private and municipal, large consumers and local political subdivisions. In case this local joint authority is non-existent or does not care to buy the plant, the Board can offer it for sale to one of the authorized private stations in the vicinity. In such sales the price fixed is prudent investment less depreciation. In case neither the joint electricity authority nor a private company desires to purchase the recalcitrant station, the Board may buy the station itself and expand it.

Somewhat the same restrictions are on the Board in regard to managing the station. It must offer the operation of the station first to the joint electricity authority and then to a near-by authorized station, and only in case of refusal on their part to undertake the operation, can it operate the station itself. To date neither of these problems has arisen. The Board can, but only under the same restrictions, build entirely new generating stations in case they become necessary.

In this set-up of government planning and authority and mixed ownership there are several things of interest. The first is that the Central Electricity Board is much more like a private board of directors of a corporation

than a governmental bureau. The eight directors are chosen from electrical manufacturers, electrical enterprises, both public and private, labor, commerce and banking. They are appointed by the Minister of Transport, but are responsible only to the courts, exactly like a private board of directors. The members of this board are required to divest themselves of any securities in the power industry. The form of a private corporation is used to transact a governmental business.

The second thing of interest is that the Board is not supposed to go into the job of operating the plants. It fulfills instead the function of a controlling middleman, buying power as cheaply as it can and selling it practically at cost, and at a uniform rate, to the distributing agencies. It can own transmission lines and charge enough for the service of wholesaling over those lines to pay interest on its securities and to retire them. Only in case the private companies refuse to coöperate in selling or in expanding can the Board, after offering them for sale to other stations, go into the business of owning and operating stations.

In case any of the smaller plants which are not selected to furnish power to the Board refuse to buy power from the Board and claim that they can actually, over the seven year period, manufacture power more cheaply than the Board can sell it to them, they are then allowed a further year of life in which to prove their contention. If the contention is proved during that year of life they are allowed to continue operation, if not, they are closed down and are free to purchase power from the Board.

In these determinations of manufacturing cost there is necessarily a great deal of accounting. In 1926 a considerable change was made in the matter of purchase price. Before that year it had been "then value," roughly corresponding to our "cost of reproduction new." In 1926, however, it was set by Parliament as prudent invest-

ment less depreciation. In figuring the generation cost plus the profit to be allowed to each selected station the profit allowed was between five and six and a half per cent. But it is interesting to note that, as the law states it, "In calculating for the purposes of this section the cost of production of electricity generated by the authorized undertakers, no account shall be taken of capital charges in respect to capital expended on the generating station."³ The important consideration is that of generation costs. If these run higher than the cost at which the Board can sell the power to the station, that station must then buy its power from the Board.

Plans for five zones have been put into operation, and a sixth has been prepared. They now cover Central Scotland, Central England, Mid-east England, Southeast England, Northwest England and Northwest Wales, and the latest plan prepared is for Northeast England. When it has been adopted about 98 per cent of the population of the island will be covered. The average resale price to distributing companies is expected to be around 7 or 8 mills per kilowatt hour.

Perhaps the most important part of the scheme from the consumers' point of view is the way in which the final price is regulated. The Minister of Transport has the power, as Professor Hormell points out, to revise the maximum and standard prices charged by a power company where the company takes its supply from the Central Electricity Board. He is directed to take into account the reductions in the price effected by the operations of the Board.⁴ This is, at best, a cumbersome procedure, even in England which is a much smaller country than the United States. But in addition there is a provision for a sliding scale of dividends and charges imposed on distributing companies taking their supply from the Board. Such a sliding scale was adopted for the companies operating in London, in 1925. A great many of the distrib-

uting companies are, however, municipal systems, many of the largest industrial cities being so served. While their lighting rates seem to be considerably below those of private distributing companies they have operated on somewhat the same principle as the German municipal and government power systems, of collecting rates high enough to allow them to make a considerable contribution to the running expenses of the cities in which they were operating. Under the 1926 act the municipal power authorities are narrowly limited in the amount they may turn over to the cities. It provides that the major share of the surplus shall go toward reducing rates and paying off capital loans.

In view of the acquiescence of the engineers in the system now operating in the United States, which was referred to in a previous chapter, it is noteworthy to find that the engineers of Great Britain took a leading part in establishing this system of governmental planning and wholesaling. Professor Hormell states: "The act was sponsored in the main by three groups or classes of interests: first, by the technical engineers under such able leaders as Sir John Snell. Their interest was in the scientific development of the industry as a whole, and they were generally free from local, parochial and individual interests which dominated many municipalities, private distributing companies and power companies." ⁶ The second group were the industrialists who understood the need for cheaper production costs if England hoped to retain or regain her position in the manufacturing world. The third group were governmental leaders acting under the same pressure.

3. *Part or Full Government Participation*

While in Britain there are private plants and public plants operating side by side, in Germany there has been a significant form of combination between the two. There

are not only national, state and municipal plants, which furnish about 44 per cent of the total production of the country, and private plants which furnish a little less than a quarter of the production, there are also plants under mixed ownership, furnishing about a third of the national production.⁶

In Germany it has long been considered good city business for the municipalities to own their own utilities, water, gas and electricity. The technical development of high-power transmission found a whole series of very large communities with their own plants. Private companies had some generating stations and quite a few distributing systems. The German municipal plants were used quite frankly as revenue collecting agencies. The aim was stable and prosperous utilities, and earnings were not cut to the minimum for the advantage of the consumers. In some cases German cities before the war received as much as two-thirds of their income from their utilities. The states became interested in the development because they were afraid that the interests of the surrounding communities would be neglected, that the cities would charge the rural areas higher rates than necessary.

In view of the opposition of the private power companies in this country to government construction of large power developments on the St. Lawrence, at Muscle Shoals, Boulder Dam and other places, it is interesting to note that in Germany the private interests tried to persuade the Government to build large plants, but desired to keep the distribution systems in their own hands.⁷ In a large measure this has been the plan followed. Thus the Elektrowerke, one of the largest of all producing companies, whose stock is owned entirely by the national government, sells current at wholesale only. The smaller private, mixed and municipal enterprises are connected with the state and national network and receive all or

part of their power from the larger plants. The private companies have about held their pre-war share of the distribution business.

The government corporation, exemplified in this country after the war by the Port Authority of New York and New Jersey, has long been a form of transacting governmental business in Germany. These corporations cannot only proceed as our own do, by condemning and buying whole properties, they can buy stock in private companies and secure control in that manner. Thus the State of Prussia owns three large central power stations, and also large blocks of securities in other electric power plants, including the Rheinisch-Westfälische Elektrizitätswerk A. G., formerly owned by Stinnes and now owned in bulk by the cities of the Ruhr district. At the same time the Federal Government, the Reich, has a holding company called Viag, which not only controls the big Elektrowerke but some forty other enterprises including potash, aluminum and coal. Even the cities resort to governmental corporations which issue stock and bonds on their own credit. One of the largest of these is in the third city in the world, Berlin. The city owns all of the stock of the Berlin City Electric Company, which sells 90 per cent of all the current used there.

As in England and in this country prior to the formal separation of the General Electric and the Electric Bond and Share, the manufacturers of electrical machinery in Germany have a large financial interest in the producing power companies. In Britain it is the Thomson Houston Company, the controlling shares of which are held by the International General Electric of New York. In Germany it is the German General Electric (A.E.G.) and Siemens-Schukert.

The mixed interest utilities are now an old established development. They began with gas companies in 1857 and with power companies in 1892. They received sup-

port from the private electrical interests, often that of the manufacturers of equipment. They are stock companies in which, with one possible exception, the majority of the shares are held by the participating municipal interests and the minority by private interests. Money is also raised for development by the sale of bonds to the public. These companies work along the lines of private enterprise. This is one explanation of their popularity, a combination of social interest with private initiative. Other reasons have been advanced. One is that general socialization after the war was not undertaken because of fear that the revenues would have to go to reparations, and the mixed company avoided that danger to some extent. Another reason given is that during the inflation period it was easier for private business than for public business to obtain credit. Still a further reason given is that municipal electric enterprises were handicapped by social legislation in regard to hours and wages, which the mixed interest companies avoided.⁸ In general politics have been kept out of the management of both the mixed and the pure and simple municipal and state enterprises. Reasonably high salaries, permanent tenure of office and professional reputation have, it is agreed, placed public operation on a plane as high as that of private enterprise at its best.

A proposal for mixed government and private ownership for the electric power industry in the United States was made in 1930 by Mr. Donald R. Richberg of Chicago, General Counsel for the National Conference on Valuation of Railroads. He presented his plan, which bears some similarity to the German one, to the New York State Commission on Revision of the Public Service Commissions Laws. After pointing out that public utility service was essentially a public business and that all persons or corporations who undertake it are to be regarded as public agents engaged in transacting public business and per-

forming a function of the state, he mentioned the conflicting obligation resting on managers of such businesses who, as private employees, are obligated to make as much as possible for their employers and, on the other hand, as public agents are obligated not to make any more money than is "reasonable" out of handling public business. Acting under these conflicting obligations the managers of the various public utilities of the country collect over ten billion dollars a year in revenue, about one-seventh of the national income. After summarizing the present state of regulation he states: "Private property interests in public utility properties are entitled to protection; and private capital may play a useful part in providing and operating public services. But private power to operate a public business so as to produce as much private profit as possible, is a force hostile to the public welfare and destructive of self-government. It should never have been created; it should not be increased; it ought to be gradually and systematically destroyed."⁹

His plan involves a distinction between ownership and control by private capital. There is a difference between a private property right in money and tangible property which is used in public business and a private property right in the public business itself. "The good potential in the former right," he concludes, "has blinded many to the evil inherent in the latter. If, for example, a group of investors buy the bonds of a city water works, it is evident that they have no property right in the business of furnishing water, although they may be given a lien upon the physical properties, and various other rights to insure payment of interest and eventual repayment of the money loaned. But these investors will have no interest in controlling the business so as to produce extortionate profits on the investment—nor in inflating the so-called 'value' of the physical properties, or of intangible business, so as to disguise excessive profits on the investment

as a 'reasonable return' on 'present value of the property.' Even if these investors were permitted to select a part of the directors of the enterprise, to give additional protection to their private property interests, there would be no incentive created in such directors to exploit public needs in order to produce profits which their employers could not reap."

His plan involves seven steps. 1. All public service corporations authorized to do business in a state should be organized under laws providing that the proprietary capital (which may be a nominal sum) shall be furnished by the state. 2. The appropriate regulatory commission should be authorized to name a minority (possibly one-third) of the directors, who might well be chosen from nominees offered by economic organizations of users of service, such as manufacturers' associations, chambers of commerce, small consumers' leagues. 3. The majority of the directors should be chosen by cumulative voting of those contributing capital for a fixed compensation (bonds, debentures and notes). In cases of default there would be provision for either a reorganization under the same law or, in case of necessary abandonment of the franchise and properties, there would be fixed priorities in the satisfaction of obligations, exactly as at present. If a combination of public and private investment were required, or any public guaranty of obligations, the public control of the management would be increased correspondingly. Increased security to private investors would thus be complemented by decreased private control.

As a fourth step in the arrangement, in order to induce existing private utilities to reorganize under the proposed law, Mr. Richberg suggests (a) that no authority to extend an existing public service and no further public grants of any character should be yielded thereafter except to a corporation organized under the new law and voluntarily submitting to its requirements; (b) that no direct

competition would be authorized by one public stock company with another; but (c) that public stock companies could be authorized to compete with private utilities or to supplement or extend the service furnished by them; or (d) that public stock corporations could be authorized to condemn the physical property of existing private utilities; or (e) in the event of persistent opposition by unreconstructed and essential public utilities a constitutional amendment could make the operation of a public utility service by a private utility unlawful after a fixed date. "The effect of such an amendment upon private property rights would be less harmful than the effect of the prohibition amendment; its enforcement would be attended with much less difficulty; and the community benefit would be at least equally certain."

After arranging (5) that every public service enterprise should be required to transact all of its authorized public business through the one corporation and not to engage in any other business, Mr. Richberg tackles the problem of the relation between these new public-private companies and the regulatory commissions. 6. All the directors and managing officials of a public stock corporation would be designated as public agents; but the majority directors, who would be selected by private investors, and the managing officials of the corporation, would be subject only to the general regulations or specific orders issued by the regulatory commission. Such regulations and orders would be reviewable by the courts if statutory or constitutional requirements were involved. The minority (public) directors would be special agents of the regulatory commission, and removable for acts or omissions in violation of the law. Finally, (7) all expenses of regulation should be apportioned and accounted for as operating expenses. "Thus consumers would pay for their own protection, which would be an improvement on the present

practice of compelling them to pay for their own exploitation."

This plan is essentially different from the form of ownership and operation used by the mixed ownership utilities in Germany. There the private owners have a minority voice on the board. Under Mr. Richberg's plan they would have a majority, probably two-thirds. The German system gives the minority (private) stockholders a proportionate share of the profits, and the plants are run for a profit. Here, as Mr. Richberg sees it, the government is not and should not be in the business of running utilities for a profit, that is, to secure sums enabling it to collect less in taxes. The private (majority) stockholders would collect fixed returns due to them as bondholders do in private business today. They would have majority representation on the boards of directors but no incentive to pile up profits. The changing over of the shares of common stock into fixed return obligations would give the present owners of such shares a certain position on the new boards. A private utility which is owned 20 per cent by common stockholders, 20 per cent by preferred stockholders and 60 per cent by bondholders would have, according to this plan, two-thirds of the directors of the new public stock company, divided very much along the same lines as ownership is at present. Of the directorate of the new board the public would have 33 per cent of the directors, the old bondholders about 40 per cent and the preferred and common holders together about 26 per cent.

It should be noted that the various ways in which it is proposed to have the present owners yield their controlling rights in return for fixed rights on money invested, mentioned in the fourth step of this arrangement, are very similar to the ways by which both the Massachusetts Department of Public Utilities and the Giant Power Survey in Pennsylvania proposed to bring pressure to bear on the utilities operating in that state to accept contracts

with the commonwealths for fixing the return on a basis of actual cost of investment.

4. *Considerations of Administration*

One of the contentions of the privately owned utilities which is severely and constantly pressed into service is that public ownership of utilities involves inefficient service by political appointees. This is a very serious matter to many people who have watched the utilities in action and have developed no admiration or respect for their political activities, but who have at the same time watched the elected governmental officials in the cities and states in action, and have no greater admiration for what they see there.

The government owned corporations have come along, in part, in answer to that objection. A fairly typical statement is that by Richard S. Childs, President of the National Municipal League and of the City Club of New York: "The government-owned corporation form of administrative organization has become increasingly important in view of the business functions that are being thrust upon the government, of which the Inland Waterways Corporation is an example. Inefficiency in operation has been the curse of governmental enterprises. If the government-owned corporation is a form of organization that will help to solve this problem, it is of primary importance, and possibly has a strong bearing on the future of municipal administration."¹⁰

It is interesting to note that there has been no campaign similar to the one of the privately owned utilities in this country against municipal ownership and operation in Britain or Germany on the ground that it was inefficient. In both of those countries the opportunities for engineers and managers to enter public service and to receive salaries in proportion to the value of their services has been greater than here.

The problem of securing able and efficient managers for public utilities is partly a matter of salary, and the governmental units are apt to be penny-wise at this point. But it is also a matter of prestige. Where the power companies, for example, are able to impress a section of the country with the idea that it is bolshevistic to save money for the people when that saving involves municipal ownership, then there is less likelihood that engineers brought up in that atmosphere or affected by it will care to enter municipal service, even if the salary limits were no obstacle. On the other hand where the power company propaganda has made no such headway, and it seems to the business men of the community an intelligent service for the community to save money by municipal ownership, there is good reason to expect better engineers to accept public service. The larger municipal plants on the West Coast have, in this way, secured the services of such engineers as J. D. Ross in Seattle, E. F. Scattergood and William Mulholland in Los Angeles and Kenneth Harlan in Tacoma, as well as the devoted public service of such non-engineers as Dr. John Haines. The Reclamation Service has, under Dr. Elwood Mead, a number of engineers whose capabilities are widely recognized. The Army Engineers, where they are not shifted around every few years, have done able work. General Ashburn does not have to apologize for being chairman of the Inland Waterways Corporation. Across the border the Ontario Hydro-Electric Commission has had the services of non-engineers like Sir Adam Beck. The Canadian National Railways have acquired Sir Henry Thornton to manage the largest railway system on the North American continent. Securing efficient management is largely a matter of equality in salary, freedom from political control, opportunity for advancement, and prestige. Not the least of these is prestige.

To the extent that the administration of governmental

functions can be carried on through government owned corporations which are free to meet the private companies on salaries, free from political control and which are performing functions on a scale large enough to attract the most able men, it is reasonable to conclude that they will be carried on efficiently.

Other considerations are at once involved here. They have been discussed by Commissioner Joseph B. Eastman, who was appointed to the Interstate Commerce Commission from New England by President Wilson and reappointed by President Hoover. In 1927 the Committee on Public Ownership and Operation of the National Association of Railway and Utility Commissioners had reported adversely to government ownership. In a dissenting opinion Commissioner Eastman made several significant comments and proposed an administrative plan. He said, among other things:

"The question is peculiarly one in which prejudice is likely to play a part, prejudice which may be and usually is unconscious. Aside from religion, there is perhaps nothing that so excites prejudice as the fear of being separated from the opportunity for profit. Under public ownership of railroads and other public utilities the field for profit on the part of bankers would unquestionably be curtailed very materially. The officers of the private companies fear that they would be displaced or their salaries reduced. Certain of the directors may fear the loss of the lucrative opportunities which grow out of advance knowledge of coming corporation events. . . . Even we ourselves, as a part of the present system of private operation under public regulation may possibly fear interference with our jobs. All these are sources of prejudice conscious or unconscious, against which those who wish to think soundly must be on their guard.

"The substantial advantages of public ownership, as I see them, are low cost of capital; opportunity gradually

to reduce or eliminate the capital charge without hardship on the public in the process; and above everything else, freedom from the valuation nightmare. Under the valuation doctrine the capital charge in the case of privately owned utilities can apparently never be reduced or eliminated by any sinking fund or other similar provision; it is a perpetual millstone around the public neck; and it may double in weight without any change in the underlying property if the reproduction cost theory is finally sustained. In addition the country must support a small army of valuation experts.

"It may be argued that under public ownership the Government will in some instances be too timid about investing in new enterprises and in other instances too venturesome. The answer is that experience has shown that private capital is subject to the same criticism. We have been forced to rely upon public regulation to protect ourselves against these very dangers. I refer to the powers so frequently vested in public commissions to grant or withhold certificates of exigency and to require new construction. If Government can be trusted to police private capital in this respect, can not it be trusted to police itself? . . . Reliance (on regulation) in the last analysis is upon men without prospect of large money rewards who are picked by the same purely political processes that are so horrendous when public operation is suggested." ¹¹

In order to attain the public good in the most efficient manner Commissioner Eastman made a series of suggestions. Public operation of a utility should (1) not be carried on by a bureau or department and should (2) not be conducted by civil service employees. It should be carried on rather (3) by a business corporation, the stock of which is owned by the government, but which is self-supporting. (4) The board of directors should be chosen by the government as controlling stockholder, whether that

governmental unit be nation, state or city. (5) Minority stockholders should come from non-political groups having a direct interest in honest and efficient management, such as employees, chambers of commerce and the like.

This form of administrative procedure would be, in his opinion, far more desirable than private operation under regulation. In 1931 Commissioner Eastman amplified his views somewhat for the *St. Louis Post-Dispatch*. After expressing at length his conviction that the best characteristics of private initiative and public service could be combined in public corporations, he said:

"A thought which I believe to be sound is that the more important the utility is from the community point of view, the more likelihood there is that it can be safely entrusted to direct public control, particularly if a plan such as I have suggested is followed. A small, obscure operation is much more apt to fall a prey to mismanagement than one which is in the direct path of the limelight and plays a vital part in community life and prosperity. It would be difficult for a Government long to survive a corrupt and inefficient management of such a utility.

"Let me say also, and in conclusion, that if such a public undertaking can be protected, as I believe it can be, from continual petty and political interference, and its management given a degree of autonomy somewhat comparable to that existing in private undertakings, I am confident that no difficulty will be experienced in obtaining the services of men of the highest ability and character. Canada had no difficulty in obtaining the services of Sir Henry Thornton, one of the outstanding railroad men of England and, prior to that time, one of the outstanding railroad men of the United States.

"The present chairman of the board of public trustees of the Boston Elevated Railway is Henry I. Harriman, who has twice been president of the Boston Chamber of Commerce and has a distinguished record in the public

utility field. He is now serving the Commonwealth of Massachusetts as loyally as he formerly served private interests. At the present time few, if any, of the great executives of the country own or even control the properties which they manage. They all serve somebody and, if given a fair chance, I believe that many of them would actually prefer to serve their country or their State or their city to serving purely private interests and profit."

5. *Government Owned Corporations in America*

For reasons of efficiency and freedom of action, such as those advanced by Commissioner Eastman, proposals for government development of waterpower have, in recent years, been partly along the lines of government owned corporations. For Muscle Shoals Congress approved the proposal of Senator Norris of Nebraska for a "Muscle Shoals Corporation of the United States." Its direction is put into the hands of three directors, each paid \$5,000 a year. These directors are to choose a chief executive officer and two assistant managers, one trained in the production of fixed nitrogen and one in the production and distribution of electricity. The combined salaries of these three are put at \$50,000 a year. The Corporation is empowered to distribute surplus energy equitably among the states within transmission distance, to construct transmission lines if necessary and build the Cove Creek Dam which will really make Muscle Shoals a great power development. In New York State former Governor Smith and Governor Roosevelt have been planning for a similar corporation to develop the St. Lawrence power when its development is shown to be advantageous. They have based their proposals for a "St. Lawrence Power Authority" on the success of the Port of New York Authority. Relying on the success of the same institution, Representative Davenport of New York proposed a Colorado River Water Power Authority for the development

of Boulder Dam. This was not adopted, and that power is being developed under the direction of the Secretary of the Interior instead.

During the war this form of government action in the economic field was widely depended upon, and many such government owned corporations resulted. They were for the most part officered by men who had, before the war, become experts in the field of activity involved in each case, and left private positions to undertake the government work. The end of the war brought most of these war time corporations to an end. The abnormal times during which they were at work and the conflict between their long term planning and the abruptness of their closing make it difficult to appraise the success of their activities.

There remain, however, several peace time government corporations on the North American continent which are operating successfully. The Port of New York Authority is the outstanding illustration in the East. Its task is to bring some order into a port which borders on two states, a task impossible for either of the states to undertake alone. Intricate problems of freight traffic from many railroads and shiplines and passenger traffic crossing the port in various angles were to be solved. The two states of New Jersey and New York by compact created a Port District and an administrative authority, a body corporate and politic, with power and authority to purchase, construct, lease and operate any terminal or transportation facility within the Port District. Three commissioners are appointed by each state, and the board thus constituted employs engineers and raises money. It has raised, in three issues, \$46,000,000 in bonds, paying 4.77, 4.24 and 4.01 per cent. Practically all the commissioners are bankers, and were able to advise on the proper time for these issues. Several bridges have been built, including the George Washington Memorial bridge with the longest

suspension span in the world. The problem of inland freight terminals still remains unsettled. One was started in 1931.

This Port Authority is more limited in some ways than others are. The Port of Albany can tax for benefits. The Port of Montreal Commissioners own the entire waterfront and are free from taxation. Toronto and New Orleans give their Port Authorities the entire control of the port district. Unlike the authorities of London and Liverpool the Port of New York Authority is less a supervising agency than an agency for coordinating the activities of all the municipalities involved in the welfare of the port. It is limited by the provision that no property of either state or of any municipality shall be taken without its consent, nor can it pledge the credit of either state, and either of the two Governors can veto its plans. This has never been done. As a revenue producing utility it is not hampered by the limitations placed on the cities' power to bond themselves. It has been able to secure the services of very able engineers and counsel. The saving on three bridges on Staten Island was placed by the Port Authority's counsel, Mr. Julius Henry Cohen, at \$17,500,000 over what it would have cost private builders to construct the bridges and to retire the investment.

The outstanding illustration of government owned corporations in the Middle West is probably the Inland Waterways Corporation. The service of creating water transportation facilities on the Mississippi and Warrior Rivers was undertaken first during the war to supplement railroad traffic and to reduce rates on shipments in that part of the country. This did not meet with a great deal of cooperation from the railroads. At the end of the Railroad Administration in 1920, the service was continued by the government through the Inland and Coastwise Waterways Service, which lost nearly a million dollars a year during its existence from 1920 to 1924.

It operated under the direction of the Secretary of War, but the law establishing the service laid down several contradictory principles. It provided that the service should be carried on by means of Congressional appropriations, but that the facilities should be operated as if they were privately owned. Yet this could not be done because the organization had none of the powers of a private transportation agency and its very existence depended upon appropriations from Congress. Major General Ashburn, who has been head of the government corporation which succeeded this service at the end of 1924, commented: "Some of the inherent difficulties of governmental operation were rather nebulous at first, but it soon became plainly evident that if there were any chance at all for success the personnel must be kept clear of political appointments, that the operations must be conducted along sane and conservative business principles, that the project should be considered as a national one, not local, and that the public should be educated out of the belief that the prime object of rejuvenating water-borne traffic was preferential treatment for river-bank communities or bitter competition with the railroads."¹²

With these objections in mind he suggested to Congress in 1923 that it was necessary to allow the Secretary of War to do the things that he would ordinarily do as the head of a great private transportation agency, that it was also necessary to provide him with sufficient capital to overcome the conditions which militated against the success of the governmental demonstration, that it was necessary to have a permanent executive head for the service and a continuing business policy. Since water transportation could not come back through private initiative, since the causes for its collapse still existed, and since the Government had invested a good deal of money in the waterways and had the right to find out if it had not been remiss in turning those expenditures to prac-

tical account, he suggested the Inland Waterways Corporation.

This was set up in 1924. In order to secure money for necessary expenditures the Government appropriated \$5,000,000 to buy the stock of the corporation, the property at the time being valued at \$9,763,858. An advisory board of directors was created, but without executive authority. This remained with the Secretary of War, and his functions could be delegated to the Chairman of the Board, who is Major General Ashburn of the Army Engineers. The corporation was given all the powers inherent in a private corporate entity chartered by a state, and was made liable before the courts. It was given power to acquire, hold and dispose of property, to issue notes and borrow money up to 25 per cent of the assets and to conduct the business of a common carrier. Later the corporate stock allowed was raised to \$15,000,000, the assets being \$19,746,350. At the end of 1929 it had over two million dollars in cash and six million in unissued stock. During the four years from 1925 to 1928 the net average annual income was \$126,937, as opposed to a previous deficit of nearly a million a year.

In addition to maintaining the normal saving over rail hauls, amounting to 20 per cent, the corporation has applied this saving to combined rail-river hauls. It was found necessary to take over a railroad which the Southern Railway was giving up as unprofitable, the only connection between the Warrior River and the interior of Alabama. The Southern threw the line into the hands of a receiver and asked for its abandonment. This the Court did not allow but ordered the road sold for \$500,000. A subsidiary corporation of the Inland Waterways Corporation bought the line, put \$383,000 into its rehabilitation and has been operating it at a profit of over 6 per cent.

General Ashburn who has been through the two forms of organization, departmental and corporate, said, "Unless

the Inland Waterways Corporation had been organized as it was with the power to act lodged absolutely in a single hand, with the responsibility for such action in the same hand, clothed with specific powers, and in addition, such powers as may be necessary or incidental to fulfill the purposes of its creation, it could not have become an efficient corporation." 18

While this is a story of a government owned corporation doing what a departmental service, handicapped in many ways, could not do, the story of the Canadian National Railways is that of a government owned corporation doing what competing private companies could not do. When Sir Henry Thornton was offered the management in 1922 of what is now the largest system on the North American Continent it consisted of eight different railroads. Only one of them, the Intercolonial, had been state owned. Another was the Grand Trunk, with 4,775 miles, which had given up the ghost as a private company in 1919. In addition the Grand Trunk Pacific, built with government assistance, had gone into receivership in the same year. Two units were constituted out of these eight, the Canadian National and the Grand Trunk. In the five units of the Canadian National Railways all the debts piled up under previous private ownership were taken over. Sir Henry puts it, "Not one single error of financing or vision has ever been wiped out. When the government took over those roads it took their debts also. Beyond one technical receivership by which the government took over the Grand Trunk Pacific, the transfer was simply a turning over of assets and liabilities from private to public ownership. In all cases the debt of securities remained intact; there had been no stepping down of stock and bond valuations to permit lower interest charges. Every handicap of bad financial judgment, overexpansion, building into nonpaying territory, excessive cost of con-

struction and the hundred and one other burdens which throw a business into bankruptcy remained."

With this handicap, the income from 22,000 miles of road was only \$2,000,000 in 1922. Under Thornton the roads were unified, brought up to date and became solvent in 1926. Rates have been lowered and wages increased. The economic development of the country has been substantially advanced.

Thornton tells the story: "There never has been any politics. But that wasn't the fault of a great many persons. Premier King kept his promise. And during the period between elections when the Conservative Party was in control no one labored harder in the real interest of the property than Sir Henry Drayton, who carried on governmental administration during the election period. Within a year a bulwark had arisen to back him—the opinion of the people of Canada. Today there is as much chance of politics getting into the Canadian National Railways as there is of an elephant walking a tight rope. Both have yet to be done. Last year, for instance, the railways which I am fortunate enough to administer bought \$99,000,000 worth of supplies. Not one cent of those purchases was dictated politically nor any that preceded them."¹⁴

Another form of successful governmental administration of a utility is represented by the Hydro-Electric Power Commission of Ontario. Its low rates and its proximity to private plants in the United States have made it the target of attacks by the privately owned utilities in this country, as already observed in Chapter Seven.

This Commission has considerable powers. It is the agency of the provincial government of Ontario, which appoints it, and to which it accounts. At the same time it is a trustee for the associated municipalities on whose behalf it generates and transmits power. It is an independent agency to the extent that it can take title to prop-

erties and vest the title in itself and make contracts. It owns and controls the generation plants and the transmission lines. It differs from the Port of New York Authority, however, in that the Province raises capital on account of the Commission. The Commission does not raise its own capital.

The second party to this arrangement is made up of the associated cities and towns. They are the direct owners of the distributing systems within their borders. They also share jointly in the equity in the properties vested in the Commission. They are financially accountable to the Commission. The Province is the constitutional source of the powers both of the Commission and of the cities and acts as guarantor of the Commission's undertakings. It also grants one form of subsidy and only one to help power expansion in rural areas. Ninety-four rural power districts have been created and have received provincial grants-in-aid of \$1,616,557, which is a small amount compared to the entire investment by the Commission and the municipalities in the system.¹⁸

The Commission began as a distributor of power. Only after seven years of life, in 1917, did it purchase generating plants and become a producing and distributing system. In 1927 the capital investment was \$286,164,745, of which the distributing systems of the municipalities accounted for \$81,792,678. A large part of the municipal development has been made from surplus revenues, as the municipal debentures outstanding amount to only \$42,891,361. "The figures from year to year show the steady progress made so that the total debt may be amortized and future consumers will profit by the elimination of debt charges. At that time the people will own their own distribution systems free of encumbrance."¹⁶

Many American cities have been able to conduct their public utility business without setting up such corpora-

tions. They have been able to draw efficient men and devoted and in many cases voluntary aid from some of their most prominent citizens. There is no intention here of drawing a detailed comparison between the types of administration. At the same time it can be noted that where more than one city is to be served, where the project involves the coöperation of various governmental units or is in the interest of larger sections of the country, the corporate form of governmental administration has its decided advantages.

NOTES

¹ *New York Times*, June 29, 1930.

² Quoted by Professor Orren C. Hormell in "Electricity in Great Britain," Supplement, *National Municipal Review*, June, 1928.

³ Electricity Supply Act, 1926, Section 14, Great Britain.

⁴ *National Municipal Review*, *supra*.

⁵ *Idem*.

⁶ Compare "Aufbau und Entwicklungsmöglichkeiten der Europäischen Elektrizitätswirtschaft," published by the bank of Schwarz, Goldsmidt, Berlin, Germany, 1929. Note that Dr. Oscar Mulert, President of the German Union of Towns, quoted in *Public Management*, July, 1930, gives the figures as 22 per cent of the electric power plants municipally owned, 25 per cent state owned, 30 per cent under joint administration, and 23 per cent private.

⁷ Schmoller, *Jahrbuch fuer Gesetzgebung*, 1917, Clemens Heiss, p. 196.

⁸ Report of the Commission on Revision of the Public Service Commissions Laws, New York State, 1930, Appendix.

⁹ Donald R. Richberg, *Critical Issues in Public Utility Regulation*, 1930, p. 9. Obtainable from the author at 333 N. Michigan Ave., Chicago.

¹⁰ Quoted by Maj. Gen. T. Q. Ashburn, Chairman of the Board, Inland Waterways Corporation, speech before the City Club of New York, February 17, 1930.

¹¹ Proceedings of the Annual Convention of Railway and Utility Commissioners, 1927, report of the Committee on Public Ownership and Operation.

¹² Maj. Gen. Ashburn, *supra*.

¹³ *Idem*.

¹⁴ Sir Henry W. Thornton, "A Railroad is Never Finished," *Saturday Evening Post*, July 6, 1929.

GOVERNMENT CORPORATIONS AND FINANCING 279

¹⁵ Professor Harold S. Patton, *Journal of Land and Public Utility, Economics*, May and August, 1927.

¹⁶ Mosher and Associates, *Electrical Utilities*, Harpers, 1930, pp. 224-5.

CHAPTER NINE

A PROGRAM OF PEACE WITH POWER

THIS account started out to be something more than the story of the power fight. It started out to be the story of the rise in our country of a group which has been outstandingly active in converting those with whom it came into contact into adherents of the new industrial feudalism. That conversion has not been brought about on a particularly high level of religious expression. The converts are largely captives.

Other factors and forces were also operating at the same time to create this new era in which the bulk of working and professional men have neither security nor independence. The power group worked with, to a certain extent headed, and certainly symbolized the whole process. Its leaders probably did no worse by the country than any other group of men would have done, given the same set of ideals and the same nakedness of the country to aggressive action. If we had made the automobile men responsible for building the many excellent highways which the country now possesses, and had made them come to the states and federal government for licenses to build the roads before they could market their automobiles, we would probably have had another group acting in very much the same way. There would have been the same attempts to capitalize the growth of the communities, the same fights about toll rates, the same political influence, the same process of educating the public in press, school and club about the advantages of private ownership of the highways, the same creation of a power in the nation

which had too much at stake in speculative values to stand any opposition without retaliating.

The story of the rise of the power group has, in the telling, been lost occasionally in the description of the methods by which they achieved their exploits. Their own ideals have colored the story. The very weight of the hundreds of millions of dollars which they were busy taking, without any valid social excuse, has tended to outweigh the description of the exercise of financial and political pressure used in the process. Yet behind each exploit whether it was in a city, state or national arena, there was enough real force to secure either silence or the defeat of the opposition. There was power piled up over many years, grouped and waiting, promoted and elected.

The story is not at an end.

The cynicism which has led some of the leaders of the power group to regard this country as their oyster may some day be repudiated by the people. And if that repudiation comes, if the people finally decide that a million dollars a day is too high a price to pay for the doubtful pleasure of being chucked under the chin and told that they are fine, rugged individuals, it will probably come as a protest against their cynicism and arrogance rather than as a protest against a perfectly legal robbery. If the power people had been frank and honest about what they were doing, if they had come right out and said, "We're out to get what we can. You've farmed out a public business to us and you can take the results," the whole set-up might have been passed by as just another racket, an expensive one, but nothing more. They were not content to let it go at that. Their predecessors had flown the black flag from the masthead for all the world to see, and some of them were as genial a mess of pirates as ever scuttled an administration. But that was not good enough for this crowd. They had to claim that they were

the best people in the world, the greatest servants of the country, the missing link between poverty and riches, the fighters against the enemies of the people, the almost divinely appointed flag-bearers of the red-white-and-blue.

We are a simple and kindly people, and like our fun, yet there are certain limits which our good taste imposes on this sort of a show. After a while a certain feeling of nausea sets in. It is not unlike that provoked in years gone by through the antics exhibited in musical revues. For a while it was the custom of some producers, when the show was otherwise a failure, to dress the chorus girls up in red-white-and-blue and send them out on the stage kicking and saluting the flag to the blare of martial music. After it had gone on a while people began to see that, after all, here was nothing but a lot of chorus girls drumming up business, and the colors of the flag were not those that ought to be used for that purpose. The flag was something to live for or die for, but not to make money out of.

Here was the act of arrogance, of impudence. They paraded patriotism as if it were their very own, something they had bought and paid for like the council of a small town with a power plant to dispose of. They were the rightful possessors of patriotism and would communicate it straight from its source to the children in the schools, to the newspapers in towns and cities, to the women, to the farmers, to the whole nation from President down. All who disagreed with them, who thought their claim that they were performing a public business as cheaply as it could be done was a fraud, were labeled radicals and traitors. While this was going on the power men were pocketing close to a million dollars a day more than the public business should have cost. People are beginning to see that part of the show, and mercenary patriotism brings with it nausea in the end.

Most people have a feeling about the country which

is not mercenary. Most people are decent people, and want to get on and want their neighbors to get on, too. Most people believe in clean government and would like to know how to get it. Most people believe in economical and efficient government. Most people would like to see the standard of living raised, their own and everybody else's. Most people would probably, if the issue were presented to them, prefer to have the country struggle toward these ideals than surrender to the cynical and pessimistic principle that the public good can be attained only if, and when, and to the extent it happens to coincide with private profit.

In the midst of a movement which seems to be delimiting the amount and quality of economic freedom in this country, it is important for those who have an unmercenary feeling to look behind the slogans shouted and banners carried by the leaders of the power group and their allies. Behind all that tumult and shouting a situation is being created which has little in common with economic freedom. In some ways the worst result is that the men who might be most influential in directing scientific advance into channels where it will help rather than confuse our economic organization, the engineers and managers, are left with as little independence and opportunity to use their professional attainments for the social good as the simplest ditch digger. In the growing and increasingly tight alliance of banking groups controlling the bulk of the industry, and in the financial set-up of holding companies, so tenuous and thin that a few cuts in rates might drop some of their more speculative stocks fifty points, the engineers and managers can do little for the public, and little for themselves. They can not even express their opposition to the anti-social policy of the companies, for there is no other place for them to seek work.

There should be a place where the engineers can make

their contributions to society without having them checked, vetoed or appropriated by the speculative interests represented by the controllers of the power industry. Just as in the great days of this country men who did not choose to spend their lives in the mills and factories of the East could go West and find land which they could build up, they should now be free to step out of a tightening feudal industrialism into a free area. This free area might well be an important public business such as the power industry. As the Ontario Hydro-Electric system has proved to the world, it is an area where engineers and managers, when left unhampered by speculative financial controls, can contribute in large measures to the social growth, standards of living, and general welfare of the community.

The country can well use engineers and managers who are free to consider the power industry in relation to the nation's development. At present, in spite of the unifying tendency of the banking controls, the industry is not planned or developed for service to the whole nation. Power maps of such great industrial states as Pennsylvania still look like patchwork quilts of different colored interests. What we have had is competitive planning with its unnecessary expense. The engineers of the General Electric are even now working on a tube they call the thyatron which promises, according to them, to make possible the shipment of high voltage currents for distances far greater than those now in use, that converts direct current into alternating current and inverts alternating into direct without difficulty and with very little expense. Sooner or later we may expect to see the Maine and St. Lawrence waterpowers in the Northeast hooked up with the coal fields of Pennsylvania and West Virginia, and the waterpowers of the Southern states with the natural gas of Texas and Oklahoma, into one great grid system. It is not too late to call in engineers who will

plan these developments with an eye to the good of the whole country rather than to that of Mr. Morgan's various tributary companies. That means government engineers. It is not too late to prevent the capitalization of the benefits of such developments at the expense of the community. That means ownership by agencies of the governments involved.

There is no question that the governments, city, state or national, should admit that engineering ability and professional standards devoted to public service are worthy of a price at least as large as that paid by private companies. A whole new scale of values should be adopted by the governments when it comes to the employment of engineers and managers. Where governmental authorities with the powers of private companies have been created, these standards of values have begun to be realized. The engineers receive a salary that involves little or no sacrifice on their part in making their professional contribution where it should be made—to society.

This is one of the first essentials of any national program for power and peace with power. There should be one free area in the closed ranks of industrial feudalism where men can serve society. They should be paid enough so that they will have no regrets at casting their lot with the interest of the community.

The second essential in any such planning is that the groups carrying on the industry have all the freedom of private corporations. Once their purpose and function is decided upon they should be organized as government corporations, such as the proposed Muscle Shoals Corporation of the United States, to carry on the public business with freedom from civil service requirements and other checks which have been put on other governmental services. They should withstand the strict financial scrutiny of their plans which is applied private corporations when they enter the market to secure money for their purposes. The

Port of New York Authority has done this very successfully, in addition to showing sufficient engineering initiative to build the longest span bridge in the world.

The third essential requirement is that sufficient opportunity be given the ablest engineers in the country to use their ability for the social welfare. Those engineers who have taken charge of some of the larger municipal plants have shown that they could pass on the benefits of the industry in greater measure than engineers hampered by private banking controls. Those who have undertaken a public superpower system have found that they could contribute far more than single and isolated municipal plants. In this country we have a growing movement for public power districts, linking together cities and towns that are close to one another, securing the advantages of interconnection, of service by the most efficient plants in the district. Those men in Washington, Oregon, Nebraska, California, Wisconsin, New York and Pennsylvania who have been urging these districts, with growing success, are on the right track. Where they have established such districts there has been a tremendous effort on the part of the power companies to destroy them and to nullify the law. Yet those districts promise to do what was done across the border in Ontario on a small scale at first, establish a yardstick which the people will hold up against these much vaunted private companies and will find them falling far short of their claims. Such districts are of importance enough to call for the efforts of very able engineers. They should be organized as power authorities, combining the advantages of private initiative and social planning.

The case for government ownership of the power industry does not rest on these considerations solely, important as they are to the engineers and to the rest of the community. It rests on the essential premise that a governmental business should be performed at cost, and no

more. Leaving aside for a moment the record that wherever a governmental business, whether that of running a navy or a forest or oil reserve has been turned over to privateersmen there has been corruption, influence and political manipulation by those interested in getting rich, there remains the fact that the government can furnish this power service much more cheaply than the private companies are doing it. In a previous chapter figures have been given which show the basis for the claim that if the government owned the industry today it could not only pay all the exorbitant holding company fees, maintain all the expensive standby stations that have been developed as a result of competitive planning, all the banking fees and other perquisites taken, a good part of the inflation that has been pumped into the industry, but it could do all these things, and still save the consumers of light and power throughout the country a million dollars a day. If the industry grows rapidly that possible saving will, within thirty years, be about two million dollars a day.

In view of possible savings of this size it was essential for the power companies to capture patriotism and parade it as their own. Presidents and Governors have been hailed as great patriots for reducing the taxes levied on the people to carry on the army and navy and other governmental services. A move to reduce the taxes levied by the private power companies in the form of high electric rates might also have been considered patriotic had not the power companies got there first and raised the flag over the show.

The case for government ownership and development by power authorities rests largely on the ineffectiveness of regulation, present or proposed. Only where government developments of some size and importance, like those in Washington, California and Massachusetts are setting up their small yardsticks, is regulation relatively effective,

and rates relatively low. New York State, with all its waterpowers, with all its large industrial cities, with all its expensive state commission has only one yardstick of any importance at present, and, away from that city its average rates are higher than those in the rest of the nation. To improve regulation is a long fight, a never ending fight against companies which can levy funds on the very public which is fighting them. Every step forward can be held up by years of litigation. This means time, time in which the utilities can hire the brightest brains in the country to defeat and delay the efforts to combat their claims, to find ways around and through the defense lines built by the public, time also in which they can establish new claims, and keep the claim stakes hammered down. Their record in regard to federal water-power legislation is in point.

Of course the utilities are strong supporters—the very strongest—of regulation. They have profited by it in a way which private business in a competitive field is rarely able to profit. It is nonsense to pretend that they have been restricted by regulation. It has been our great gift to them.

Is there any use in trying to improve the regulatory system? For some years the present writer has thought so, and spent some time advocating people's counsels, contract controls and the like. Various state bodies have advocated similar improvements in the regulatory system. Most of them have so far met with defeat. Years of time and effort could be spent in trying to improve the regulatory system. Years of time and effort could be spent alone in calling attention to every new move on the part of the power companies to establish claims on the income of the consumers present and future. When it is all done what is the result? What is the result with the railroads? A group that is still fighting regulation at every turn, still urging the repeal of such measures as the recapture of

excess earnings, still fighting valuations, still organizing holding companies which fight plans for unification that do not seem to offer greatest profits, still using influence concerning the regulation of busses and other competitors. It hardly seems worthwhile to go through the same procedure with the power companies, at such cost in millions of dollars, in effort and time, to achieve the same results.

It should also be remembered that the power companies have an organized force which is stronger and more effective than that used by the railroads in the days when regulation of them was put into effect. The persuasive evidence of this power is in their ability to hold up for eight years the Government's use of its own waterpower and steampower plant at Muscle Shoals. They made the mistake of thinking that the Government was sufficiently subservient to give them a plant whose capitalized profits, after all operating expenses and rentals had been paid, would range between \$143,000,000 and \$249,000,000. But nevertheless they were able to hold up for all those eight years the plan for Government operation of its own development, which would not have presented them with any such gift. This is power in the nation.

Public spirited men of constructive ability will do well to question the value of any effort they may give to an improvement of the regulatory system. They will not only meet defeat after defeat, but if they win they will have won little that is of real benefit to the community. They will have left the industrial feudalism of the country united. They will have left it in the hands of the private companies to charge over a million dollars a day more than necessary for the performance of a public service. They will have left the private power industry free to carry on its constant attempts to secure new governmental privileges and use them for its own good. They will find themselves aided to only a limited extent by many state public service commissioners. They will find these

men have built a protective wall around their jobs, a wall of thinking that separates them from their supposed duty to be on guard for the interests of the public and turns them into umpires, invests them with the mantle of judges. They will find that some of these commissioners like to consider themselves as umpires because then it is easier for them to go into service with the private companies. They will find these men, as well as some of the sharpest financiers on the Street, hiding behind the clothes of the engineers, and claiming credit because the engineers serve. They will find a whole machine of power operating to make business heroes of the one-time public servants who have demonstrated nothing more than their ability to yield to great temptations successfully.

In the end we are probably going to draw a line through all the mercenary and preposterous patriotism of the power companies, through all their efforts to educate the children and the farmers and the women and the nation, through all their claims about the advantages of holding companies, through all their claims about the way regulation protects the public—we are going to draw a line and write the word "fraud," and close the accounts.

The date at which we are going to do this does not, I fear, depend upon the valuation of such intangibles as the idealism of the country, and the desire of men to have it free. It depends very simply—and the power companies know this—on the length of time during which the power companies can hold up popular and legal decisions on power districts and on the development by states or by the nation of the remaining waterpower resources. A large municipal plant in Los Angeles convinced the business men of San Francisco that it was to the advantage of their city to have cheap power. The municipal plants in Seattle and Tacoma have been having the same influence on the business men in other cities of the Northwest. The small league of Ontario municipali-

ties gave such an illustration of superiority, purchasing all its power at first, that all the main cities in Ontario joined it within a decade. This is what may be expected from power districts in this country.

It is toward delaying and hampering the creation of these power districts and the government development of waterpowers that the power companies may be expected to spend their energies and influence during the present decade, that of the 1930's. It is here that the real power fight will center.

APPENDIX

CONCENTRATION OF CONTROL (END OF 1931)

MORGAN-BONBRIGHT-NATIONAL CITY INFLUENCE

A. United Group

| <i>Total Capacity Kilowatts In- stalled (1930)</i> | | <i>Total Kilowatt Hours Gener- ated (1930) (000 omitted)</i> |
|--|---|--|
| | 1. United Gas Improvement | |
| 998,465 | Philadelphia Electric..... | 3,058,481 |
| 556,450 | Public Service of New Jersey.... | 1,839,259 |
| 166,695 | Connecticut Electric Service system | 432,771 |
| 22,500 | Delaware Power and Light Co.... | 12,388 |
| 34,000 | Erie County Electric Co..... | |
| 401,050 | 2. Columbia Gas and Electric..... | 1,158,895 |
| 1,569,991 | 3. Niagara Hudson Power Corp..... | 5,762,366 |
| 41,100 | Central Hudson Gas and Electric.. | 68,194 |
| | 4. Commonwealth and Southern | |
| 795,914 | Alabama Power Co..... | 1,468,440 |
| 374,515 | Consumers Power Co..... | 954,625 |
| 407,252 | Georgia Power Co..... | 1,060,275 |
| 216,998 | Tennessee Electric Power Co..... | 541,465 |
| 314,425 | Ohio Edison Co..... | 792,640 |
| 39,000 ¹ | Southern Indiana Gas and Electric | 66,586 |
| 38,658 | South Carolina Power Co..... | 115,804 |
| 29,410 | Mississippi Power Co..... | 22,339 |
| none | Pennsylvania Power Co..... | none ² |
| 88,800 ¹ | { Illinois Electric Power Co. } | |
| | { Illinois Power Co. } | 261,297 |
| | { Central Illinois Light Co. } | |
| | B. Consolidated Gas Interests | |
| 2,057,700 | 1. New York Edison system..... | 4,983,500 |
| 10,550 | Westchester Lighting Co..... | none |
| | C. Electric Bond and Share Interests | |
| | 1. American Power and Light system | |
| 294,300 | Montana Power Co..... | 1,285,539 |
| 200,634 ¹ | Washington Water Power Co.... | 571,917 |
| 104,279 ¹ | Texas Electric Service Co..... | 563,835 |

| <i>Total Capacity Kilowatts In- stalled (1930)</i> | | <i>Total Kilowatt Hours Gener- ated (1930) (000 omitted)</i> |
|--|--|--|
| 65,678 | Texas Power and Light Co..... | 262,059 |
| 106,211 | Minnesota Power and Light Co.... | 455,238 |
| 52,100 | Northwestern Electric Co..... | 247,820 |
| 71,400 | Kansas Gas and Electric Co..... | 271,328 |
| 98,266 | Nebraska Power Co..... | 320,411 |
| 34,142 | Pacific Power and Light Co..... | 137,341 |
| 139,840 | Florida Power and Light Co..... | 206,674 |
| 15,500 | Central Arizona Light and Power Co. | |
| 1,750 | Superior Water, Light and Power Co. (Wis.)..... | |
| | 2. American Gas and Electric system | |
| 393,695 | Ohio Power Co..... | 1,335,162 |
| 367,840 | Appalachian Electric Power Co.... | 1,429,306 |
| 115,504 | Indiana and Michigan Electric Co... | 448,359 |
| 123,500 | Scranton Electric Co..... | 278,024 |
| 111,000 | Atlantic City Electric Co..... | 199,551 |
| 40,950 | Indiana General Service Co..... | 121,356 |
| 9,360 | Wheeling Electric Co..... | 9,749 |
| 2,600 | Southern Ohio Public Service..... | 114 |
| | 3. Electric Power and Light system | |
| 243,079 ¹ | Utah Power and Light Co..... | 487,936 |
| 90,032 | Louisiana Power and Light Co.... | 521,427 |
| 71,500 | Idaho Power Co..... | 454,075 |
| 112,700 | New Orleans Public Service, Inc... | 350,484 |
| 51,455 | Arkansas Power and Light Co..... | 54,883 |
| 82,500 | Dallas Power and Light Co..... | 213,549 |
| 20,085 | Mississippi Power and Light Co.... | 11,157 |
| | 4. Lehigh Power Securities Corporation | |
| 359,869 | Pennsylvania Power and Light Co.. | 1,217,133 |
| | 5. National Power and Light System | |
| 132,956 | Houston Lighting and Power Co... | 539,861 |
| 253,050 | Carolina Power and Light Co..... | 417,729 |
| 11,700 | Birmingham Electric Co..... | none |
| 54,000 | Memphis Power and Light Co..... | 194,354 |
| 6,555 | Tennessee Public Service Co..... | 334 |

CHASE, HARRIS, FORBES INFLUENCE

| | | |
|---------|-------------------------------------|-----------|
| | I. Standard Gas and Electric | |
| 444,000 | Duquesne Light Co..... | 1,478,947 |
| 400,270 | Northern States Power Co..... | 969,058 |
| 103,908 | California, Oregon Power Co..... | 452,367 |
| 186,098 | Oklahoma Gas and Electric Co..... | 589,099 |
| 192,340 | Louisville Gas and Electric Co..... | 326,274 |

| <i>Total Capacity Kilowatts In- stalled (1930)</i> | | <i>Total Kilowatt Hours Gener- ated (1930) (000 omitted)</i> |
|--|---|--|
| 74,000 ¹ | San Diego Consolidated Gas & Electric Co..... | 176,288 |
| 69,370 | Wisconsin Public Service Corp..... | 199,906 |
| 37,615 ¹ | Mountain States Power Co..... | 32,587 |
| 18,742 ¹ | Wisconsin Valley Electric Co..... | 58,891 |
| 24,988 | Southern Colorado Power Co..... | |
| | 2. Utilities Power and Light | |
| 57,581 | Interstate Power Company system. | 104,674 |
| 103,200 | Indianapolis Power and Light Co... | 311,504 |
| 22,500 | Laclede Power and Light..... | not stated |
| 119,251 | Others | not stated |
| | 3. International Paper and Power | |
| 700,052 | New England Power Association system | 1,312,570 |
| | 4. Associated Gas and Electric Interests | |
| 248,198 | Pennsylvania-New Jersey system... | 685,773 |
| 128,945 | Rochester Gas and Electric Corp... | 360,387 |
| 58,386 | Pennsylvania Electric Co..... | 241,809 |
| 115,000 | New Bedford Gas and Edison Light Co. | 195,293 |
| 102,705 | Broad River Power Co..... | 163,946 |
| 47,500 | Staten Island Edison Corp..... | 141,086 |
| 39,500 | Erie Lighting Co..... | 123,839 |
| 78,346 | New York State Gas and Electric Co. | 226,176 |
| 28,800 | Clarion River Power Co..... | 48,071 |
| 7,969 | American Utilities..... | not stated |
| 15,500 | Cambridge Electric Light Co..... | not stated |
| 1,090 | Cape and Vineyard Electric Co.... | not stated |
| | 5. Central Public Service System | |
| 157,480 | Portland General Electric Co..... | 584,278 |
| 106,587 | Others | not stated |

INSULL INTERESTS

| | | |
|----------------------|---|-----------|
| 215,000 ¹ | Super Power Company of Illinois. | 671,902 |
| 58,194 ¹ | Florida Power Corp. and subsidia- ries | 101,898 |
| 164,050 ¹ | Jersey Central Power and Light Co. | 118,217 |
| 58,497 | Virginia Public Service Co..... | 180,060 |
| 1,090,500 | Commonwealth Edison Co..... | 3,246,092 |
| 314,850 | Public Service of Northern Illinois | 641,201 |
| 200,000 | Chicago District Electric Generat- ing Co..... | 1,039,422 |
| 142,145 ¹ | Central Illinois Public Service Co.. | 228,338 |

| <i>Total Capacity Kilowatts In- stalled (1930)</i> | | <i>Total Kilowatt Hours Gener- ated (1930) (000 omitted)</i> |
|---|---|--|
| 92,285 | Central Indiana Power Co..... | 319,834 |
| 102,415 | Northern Indiana Public Service Co. | 59,359 |
| 53,987 | Interstate Public Service Co..... | 132,629 |
| 63,289 | Wisconsin Power and Light Co.... | 186,694 |
| 122,660 ¹ | Central Maine Power Co..... | 264,489 |
| 79,320 | Public Service of Oklahoma..... | 234,094 |
| 52,922 | West Texas Utilities Co..... | 224,201 |
| 79,062 | Kentucky Utilities Co..... | 218,579 |
| 78,502 | Central Power and Light Co..... | 249,316 |
| 46,363 | Southwestern Gas and Electric Co.. | 125,029 |
| 60,812 | Cumberland County Power and Light Co..... | 136,936 |
| 80,770 | Penn Central Light and Power Co.. | 240,630 |
| 60,484 | Public Service Co. of New Hamp- shire | 139,201 |
| 48,650 | Terre Haute, Indianapolis and East- ern Traction Co..... | 77,096 |
| 151,835 | Half control of North American Light and Power Co. | 274,262 |
| NORTH AMERICAN LIGHT AND POWER SYSTEM (HALF CONTROL BY INSULL, HALF BY NORTH AMERICAN) | | |
| 86,500 | Illinois Power and Light Corpora- tion | 107,350 |
| 92,740 | Des Moines Electric Light Co..... | 183,658 |
| 75,450 | Kansas Power and Light Co..... | 134,285 |
| 48,980 | United Power and Light Co. (Kan- sas) | 123,232 |
| NORTH AMERICAN INTERESTS | | |
| 598,420 | Missouri, Illinois, Iowa group..... | 1,954,395 |
| 547,000 | Cleveland Electric Illuminating Co. | 1,369,179 |
| 448,524 | Wisconsin and Michigan group.... | 1,115,943 |
| 178,000 | Potomac Electric Power Co..... | 488,533 |
| 151,835 | North American Power and Light (Half) | 274,262 |
| 846,160 | DETROIT EDISON Co. | 2,382,535 |
| 1,122,639 | PACIFIC GAS AND ELECTRIC INTER- ESTS | 3,669,319 |
| 939,640 | SOUTHERN CALIFORNIA EDISON Co. | 3,150,235 |

STONE AND WEBSTER INTERESTS

| <i>Total Capacity Kilowatts In- stalled (1930)</i> | | <i>Total Kilowatt Hours Gener- ated (1930) (000 omitted)</i> |
|--|--|--|
| 262,735 | Puget Sound Power and Light Co.. | 855,255 |
| 161,610 | Virginia Electric and Power Co.... | 459,871 |
| 73,000 | Montaup Electric Co..... | 374,034 |
| 81,123 | Gulf States Utilities Co..... | 236,596 |
| 35,250 | Blackstone Valley Gas and Electric Co. | 13,223 |
| 37,315 | Tampa Electric Co..... | 167,816 |
| 60,113 | El Paso Electric Co..... | 72,958 |
| 10,100 | Sierra Pacific Electric Co..... | not stated |
| 19,000 | Edison Electric Company of Brock- ton | not stated |
| 9,830 | Galveston-Houston Electric Co.... | not stated |
| 37,315 | Tampa Electric Co..... | not stated |
| 781,045 | DUKE POWER COMPANY | 1,582,832 |

UNITED LIGHT AND POWER (CONTINENTAL SHARES)

| | | |
|---------|--|------------|
| 238,043 | Kansas City Power and Light..... | 647,940 |
| 132,500 | Columbus Railway, Power and Light | 294,445 |
| 100,000 | San Antonio Public Service..... | 211,441 |
| 78,200 | Moline-Rock Island Manufacturing Co. | 116,344 |
| 40,411 | Iowa-Nebraska Light and Power... | not stated |
| 20,600 | Southern Ohio Electric Co..... | not stated |
| 88,684 | Others | |

CITIES SERVICE (DOHERTY)

| | | |
|---------|----------------------------------|--------------|
| 130,100 | Ohio Public Service Co..... | 377,599 |
| 167,000 | Toledo Edison Co..... | 369,434 |
| 124,500 | Public Service of Colorado..... | 327,386 |
| 82,400 | Empire District Electric Co..... | 223,795 |
| 73,000 | Others | |
| 98,238 | Federal Light and Traction..... | 100,000 Est. |

AMERICAN WATERWORKS AND ELECTRIC

| | | |
|---------|--------------------------------|-----------|
| 514,414 | West Penn Electric Co..... | 1,839,259 |
| 500 | Keyser Light and Power Co..... | |

THE POWER FIGHT

ALDRED GROUP

| <i>Total Capacity Kilowatts In- stalled (1930)</i> | | <i>Total Kilowatt Hours Gener- ated (1930) (000 omitted)</i> |
|--|---|--|
| 257,600 | Consolidated Gas, Elec. Light and Power | 669,637 |
| 131,000 | Pennsylvania Water and Power.... | 520,598 |
| 375,910 | EDISON ELECTRIC ILLUMINATING (BOSTON)..... | 989,754 |
| 148,700 | LOS ANGELES GAS AND ELECTRIC CORP. | 388,282 |
| 140,000 | HARTFORD ELECTRIC LIGHT COMPANY | 356,250 |
| 161,335 | WESTERN MASSACHUSETTS COM- PANIES | 312,000 |
| 80,430 | NEVADA-CALIFORNIA ELECTRIC CORP. | 203,581 |
| 44,776 | UNITED ILLUMINATING COMPANY... | 283,362 |
| 79,055 | AMERICAN ELECTRIC POWER COM- PANY | 171,097 |
| GOVERNMENT PLANTS | | |
| 184,000 | Muscle Shoals..... | 306,119 |
| 127,500 | City of Seattle..... | 380,749 |
| 98,625 | City of Tacoma..... | 216,290 |
| 96,605 | City of Los Angeles..... | 269,531 |
| 83,000 | City and County of San Francisco.. | 493,888 |
| 80,000 | City of Detroit..... | 193,244 |
| 70,050 | Salt River Valley Water Users' As- sociation | 201,123 |
| 50,000 | City of Cleveland..... | 189,781 |
| <hr/> | | |
| 789,730 | | |

¹ Moody's *Manual of Public Utilities*, 1931.

² Purchases all its power, 232,425,592 kilowatt hours.

INDEX

- Act of 1920 (railroad), 101
 Administration, 265
 Agriculture, Dept. of, 148
 Air Nitrates Corp., 188
 Alabama Power Co., 155, 166,
 218
Aladdin, Ernest Greenwood, 39
 All-American Canal, 178, 211
 Allied Group, 297
 American Academy of Political
 and Social Science, 131
 American Cyanamid Co., 188-
 194
American Economic Review,
 249
 American Farm Bureau Fed-
 eration, 193
 American Gas and Electric Co.,
 6, 60, 94, 104, 107, 119
 American Gas Association, 44
American Municipalities, 146,
note
 American Power and Light Co.,
 91, 94, 154
 American Telephone and Tele-
 graph Co., 16, 84
 American Waterworks and
 Electric, 3, 6, 297
 Anderson, Harry B., 31
 Anderson, Paul Y., 180, 213
note
*Annals of the American Acad-
 emy of Political and Social
 Science*, notes on, 146, 229
 Appalachian Electric Power
 Co., 91, 94, 120, 158, 167
 Argentina, 251
 Arkansas Electric Power and
 Light, 91, 92
 Arrowrock Dam, 210
 Ashburn, Gen. T. Q., 266, 273,
 274, 278 *note*
 Associated Gas and Elec. Co.,
 3, 6, 31, 157
 Associated Press, 18, 40
 Associated Telephone Co., of
 Indiana, 99
 Atlantic City Electric, 91, 95
 "Aufbau und Entwicklungs-
 moeglichkeiten der Euro-
 paesischen Elektrizitaets-
 wirtschaft," 278 *note*
 Austria, 251
 Aylesworth, M. H., 30, 35

 Baker, Newton D., 131
 Baldwin, Stanley, 252
 Ballard, R. H., 34
 Ballinger, Richard A., 167
Banner, Nashville, 31
 Bauer, Dr. John, 199
 Beck, Sir Adam, 46, 266
 Belgium, 251
 Bemis, Dr. E. W., 88
 Bent, Silas, 46 *note*
 Berlin City Electric Co., 259
 Bethlehem Steel Corp., 114
 Bird, F. L., 130, 142, 161, 174
note, 220
 Blaine, H. M., 42
 Bonbright, James C., 58, 81, 260
 Bonbright and Co., 2, 35, 167
 Bond referendums, 128
 Bone, Homer T., 218
 Boney, S. E., 18, 41
 Bonner, F. E., 159, 160, 175
note
 Boulder Dam, 19, 26, 30, 176-
 184, 198, 209, 212, 258
 Brady, Anthony, 25
 Brandeis, Justice, 100
 Brennan, George, 25
 British General Electricity, plan
 of 1926, 231
 Brooklyn Edison Co., 93
 Brooklyn-Manhattan Transit
 Co., 66
 Brown, Thorne, 30
 Bryan-Thompson newspapers,
 21

- Buffalo General Electric, 123
 Buffalo, Niagara and Eastern,
 91
 Bureau of Power and Light,
 Los Angeles, 223
 Burgess, R. R., 135
 Butler, Justice, 88
 Butler and Mitchell, 167

 Cabot, Philip, 103, 109
 Caldwell, William A., 201
 California Railroad Commis-
 sion, 66, 67, 88, 96
 Cambridge Electric Co., 67
 Canada, part in St. Lawrence
 project, 202
 Canadian National Railways,
 266, 275
 Carlisle, F. L., 61, 92, 93
 Carolina Power and Light Co.,
 155
 Census, Bureau of, 226
 Central Electricity Board, 253,
 254
 Central Maine Power Co., 25
 Central Public Service, 3, 6
 Chase National Bank, 3
 Chase National-Harris-Forbes
 interests, 6, 7, 294
 Chase Securities Organization,
 3
 Chattahoochee River, 157
 Chelan Electric Co., 154
 Chemistry and Soils Bureau,
 202
 Chicago Elevated, 66
 Chicago Telephone Co., 85,
 104
 Childs, Richard S., 265
Chronicle, Augusta, 20
 Circuit Court, Racine, Wis.,
 135
 Cities Service system, 3, 6, 297
 City Club of New York, 90,
 93, 265, 278 *note*
 City leagues, 230
 City public service functions,
 127
 Clapp, Paul S., 30
 Clarion River Power Co., 157

 Clark, Maurice, 36
 Cliff Electrical Distributing
 Co., 152
 Cohen, Julius Henry, 272
 Colorado River compact, 179
 Colorado River Water Power
 Authority, 270
 Columbia Electric and Power
 Co., 156
 Columbia Gas and Electric, 7,
 108, 157
Columbia Law Review, 125,
 note
 Columbia River, 211
 Commerce, Department of, 30
 Commission on Revision of the
 Public Service Commissions
 Law, New York State, 124
 note, 210, 260
 Committee on Coal and Power,
 162
 Committee on Public Owner-
 ship and Operation of the
 National Association of
 Railway and Utility Com-
 missioners, 267
 Commonwealth Power, 9
*Community Life and Civic
 Problems*, Howard Cope-
 land Hill, 40
 Competition inequalities, 139
Congressional Record, *notes on*
 125, 147, 174, 214, 226, 249
 Conowingo, Md., 149, 154
 Consolidated Gas of New York,
 5, 25, 60, 91, 93, 105, 118,
 132, 207, 293
 Continental Shares, 297
 Control, 1
 Cooke, Morris L., 206, 230
 Coolidge, Calvin, 159, 194, 203
 Coolidge Dam, 210
 Cope, Willard, 20, 36
 Corey, Chester, 35
 Corinth Electric Light and
 Power Co., 120
 Cosgrove, Delos M., 206
 Cost valuations, 63
 Couzens, James, 137, 159, 166
 Couzens Bill, 168

- Cove Creek Dam, 186, 191, 195,
198, 208, 270
- Crabtree, H. W., 38
- Critical Issues in Public Utility
Regulation, Richberg, 278
note*
- Crocker, E. R., 214 *note*
- Cumberland and Alleghany Gas
Co., 108
- Cumberland River Power Co.,
96
- Cumberland Telephone Co., 80
- Czechoslovakia, 251
- Daily Eagle, Brooklyn, 21*
- Daily News, Chicago, 21*
- Davenport, Frederick M., 183,
270
- Dawson, Colonel, 18
- Dayton Power and Light, 123
- Defense, government, 148
- Democratic party, 25, 195
- Depreciation funds, 79
- Des Moines Gas Co., 75, 88
- Dillon, Read and Co., 60
- District Court, Nebraska, 232
- District Court, United States,
135
- Donovan, William J., 68
- Draper, Claude L., 166
- Drayton, Sir Henry, 276
- Drexel interests, 2
- Duke Power Co., 6, 7
- Duke waterpower interests, 114
- Duquesne Light of Pittsburgh,
123
- Eastman, Joseph B., 77, 267,
270
- Eck, William, 43
- Economic freedom trends, 280
- Editor and Publisher, 18, 24*
- Education, public, 36
- Electrical Utilities, Mosher and
Associates, 242, 243, 247,
279 note*
- Electrical World, 4, 9, 40, 124
note, 147 note, 151, 226, 240*
- Electric Bond and Share inter-
ests, 2, 5, 16, 28, 87, 154,
159, 259, 293
- Electric Bond and Share of
Utah, 91, 94
- Electricity Commissioners, 253
- "Electricity in Great Britain,"
Orren C. Hormell, 278 *note*
- Electricity Supply Act, 252, 278
- Electric power engineers, 110
- Electric power industry, 47, 65,
89
- Elektrowerke, 258
- Elephant Butte Dam, 210
- Elk Hill oil reserve, 181
- England, 252-257
- Equitable Gas Co., Pittsburgh,
86
- Ernst, Morris L., 93
- Europe, 251
- Evans, Harold, 221
- Evening News, Albany, 21*
- Evening News, Portland, 24*
- Evening Post, Worcester, 23*
- Evening Telegram, New York,
214 note*
- Expansion limitations, 138
- Fall, Albert B., 181
- Farmers Loan and Trust Co.
of New York, 136
- Federal Power Commission, 81,
87, 96, 148, 151, 163, 169,
178
- Federal Power Commission Re-
port, 174 note*
- Federal Power Corp., 195
- Federal Trade Commission, 6,
9, 16, 26, 37, 61, 90, 94,
103, 119, 123, 155, 159
- Federal Waterpower Act, 148,
158, 181
- Federal Waterpower Policy,
Paul Webbink, 174 note*
- Fidelity Trust Co., 24
- Final Report of the House Com-
mittee on Investigation of
the Public Service Com-
mission and Public Utilities
Companies under Resolu-*

- tion No. 10*, State of Pennsylvania, 126 *note*
 Financing, 9, 250, 286
 Finney, Edward C., 181
 Finney, Ruth, 213 *note*
 Fischer, Alfred, 19
 Fiske, Haley, 19
 Flathead River, Mont., 160
 Ford, Henry, 185, 192
 Forestry Service, 148
 Fort Dodge Gas and Electric Co., 31
Fortune, 8
 Foshay Co., W. B., 97, 132, 224
 France, 251
 Freestone, Fred J., 206
 Freyer, George H., 31
 Fugger banking house, 43

 Galveston Electric Co., 88
 Gannett, Frank, 21, 22
 Garsaud, Marcel, 166
 Garvin, John A., 94
 General Construction, Division of Light and Heat of Cleveland, 223
 General Electric Co., 2, 6, 16, 284
 General Federation of Women's Clubs, 32
 George Washington Memorial Bridge, 271, 286
 Georgia Power Co., 139, 167
 Georgia Public Service Commission, 62, 140
 Georgia Railway and Power Co., 17
 German General Electric, 259
 Germany, 251, 257-259
 "Giant Power" proposal, 230
Giant Power Survey, 206, 249 *note*, 264
 Ginn Publishing Co., 40
 Goddard, Edwin C., 75
 "Going-value" claims, 86
 Good, James W., 166
 Gordon, Mr., 24
 Government, corporations owned, 250, 270
 planning, 252
 Government, plants, 208
 Grand Coulee Lake plan, 212
 Grand Trunk Pacific Railroad, 275
 Graustein, Archibald R., 21
 Gray, Chester H., 194, 195
 Grayson, Mr., 43
 Great Britain (*see* England)
 Great Northern Power Co., 94
 Great Western Power, 66
 Greenwood, Ernest, 39
 Gruening, Dr. Ernest, 24
Guiding Principles of Public Utility Regulation, A. C. Spurr, 42

 Haines, Dr. John, 266
 Hardy, C. O., 102, 124 *note*
 Harlan, Kenneth, 266
 Harper Brothers, 39
 Harriman, Henry I., 269
 Harris, William J., 26
 Harrison, Carter, 131, 133
 Harris Trust and Savings Bank, 35
Harvard Business Review, 126 *note*
Harvard Law Review, 124 *note*
 Hayden, Carl, 178
 Head, Walter W., 28
 Healy, Judge, 19
Herald, Boston, 20, 22
Herald-Journal, Spartanburg, 20, 22
Herald Tribune, New York, 23
High Power Propaganda, Rauschenbush, 16
 Hockenbeamer, A. F., 33
 Hofer service, 18
 Holding companies, 12
 Hoover, Herbert, 166, 181, 194, 203, 211, 267
 Hormell, Orren C., 257, 278 *note*
 House Committee on Investigation of the Public Service Commission, 221
 House Military Affairs Committee, 196
 Howell, Robert, 140

- Husselman, Roy, 223
 Huston, Claudius H., 167, 193
 Hydraulic Power Co., 152
 Hydro-Electric Commission, 240, 242
 Hydro-Electric Power Commission of Ontario, 276
- Illinois Bell Telephone Co., 85
 Illinois Municipal League, 144
 Illinois Power and Light Co., 225
 Illinois Public Service Commission, 95
Il Progresso, 21
 Indeterminate permit, 135
 Indiana and Michigan Electric Co., 91, 95, 99
 Indiana Public Service Commission, 98, 109
 Indianapolis Bell Telephone Co., 67
 Indianapolis Citizens' gas, 67
 Indianapolis Water Co., 88
 Indianapolis Waterworks, 67
 Inland and Coastwise Waterways Service, 272
 Inland Waterways Corp., 265, 272, 274
 Institute of Economics, 102
 Insull, Samuel, 6, 7, 16, 23, 40, 43, 96, 132, 217, 295
 Insull, Martin, 44
 Interborough Rapid Transit Co., New York, 66
 Intercolonial Railroad, 275
 Interest groups, 2, 293-298
 International Joint Commission, 203
 International Paper Co., 20
 International Paper and Power Co., 3, 6, 20
 Interstate Commerce Commission, 64, 66, 77, 81, 113, 170, 267
 Interstate Fuel and Light Co., 107
 Interstate Power Co., 141
 Investment amounts, estimated, 51
 Investment Bankers' Ass'n., 31
Investment Trusts Gone Wrong!, John T. Flynn, 11
- Jackson, Carl D., 40
Jahrbuch fuer Gesetzgebung, Schmoller, 278 note
 James, W. Frank, 196
 Johnson, Hiram, 182
 Johnson, Tom L., 131
 Johnson, Walter H., 27
 Joint Congressional Committee, 187
 Joint Utility Committee, 26, 30, 235
Journal, Chicago, 21
Journal, Kennebec, 25
Journal-News, Ithaca, 21
Journal of Land and Public Utility Economics, notes on 126, 279
- Kanneberg, Adolph, 215
 Kentucky Public Service Commission, 108
 Kentucky-Tennessee Light and Power Co., 31
 King, Judson, 147 note
 King, William V., 18, 87, 158, 159, 166
 King, W. L. Mackenzie, 276
 Knapp, A. Blair, 208
 Kneier, Charles M., 146 note
Knickerbocker Press, Albany, 21
 Knight, Dr. Henry G., 202
 Knoxville Power and Light, 123
 Koiner, C. W., 220
- Laclede Gas and Electric Co., 107
 Laclede Gas Light Co., 107
 Langley and Co., W. C., 11
 Lavarre, newspaper owner, 22
 League of Ontario Municipalities, 234
 League of Texas Municipalities, 225
 League of Women Voters, 31

- Leighton, M. O., 160
 Lenroot, Irvine L., 30
 Long Island Capital Corp., 12
 Long Island Lighting Co., 12
 Los Angeles Gas and Electric,
 123
 Louisiana Electric Power and
 Light, 91, 92
 Lucas, R. H., 28
 Ludvall, Mr., 94
- McCardle case, 88
 McClellan, Mayor, 133
 McCloud, Mr., 29
 McGregor, Rob Roy, 29
 McKelvie, Governor, 29
 McLeod, Governor, 18
 McNinch, Frank, 166
 Madden-Wright Bill, 194
 Maine Public Service Commis-
 sion, 95
 Maltbie, Dr. Milo R., 108
 Manager interests, 103, 110
Manual of Municipals, Poor,
 146 *note*
Manual of Public Utilities,
 Moody, 4, 298 *note*
Manual of Public Utilities,
 Poor, 126 *note*
 Marston, Glenn, 107
 Maryland Public Service Com-
 mission, 95
 Massachusetts Department of
 Public Utilities, 67, 230, 264
 Massachusetts Public Service
 Commission, 96
 Mavor, James, 39
 Mayors, Conference of, 145
 Mead, Dr. Elwood, 211, 213
note, 266
 Meeman, Edward J., 195
 Mellon Aluminum interests, 114
 Mellon-Koppers interests, 3
 Merriam, Charles E., 134
 Merrill, O. C., 160, 189, 200
 Metropolitan Life Insurance
 Co., 19, 114
 Metropolitan Water District,
 Calif., 180, 182
 Middle West, 272
 Middle West Utilities Co., 96
 Miller, Kenneth A., 94
 Milwaukee Electric Railway
 and Light, 123
 Minnesota Home Rule League,
 133
 Minnesota Power and Light
 Co., 154
 Minnesota Utilities Co., 154
 Mississippi Electric Power and
 Light, 91, 92
 Mississippi River, 272
 Missouri General Utilities, 141
 Missouri Public Service Com-
 mission, 141
 Mitchell, S. Z., 159
 Mitchell, William D., 159, 167
 Mitchell Dam, 155
 Mitten Management, 60, 108
 Mohawk-Hudson Holding Com-
 pany, 61, 91, 92
 Mohawk Valley Power, 93
 Montana Power Co., 87, 132,
 160
Moody's Manual, 4, 298 note
 Morgan & Co., J. P., 2
 Morgan - Bonbright - National
 City group, 4, 6, 10, 293
 Mosher, William E., 242
 Mulholland, William, 266
 Municipal debt limits, 128
 Murray-Flood report, 39
 Muscle Shoals, 19, 31, 36, 155,
 166, 177, 184-202, 258, 270,
 289, 298
 Muscle Shoals Bill, 235
 Muscle Shoals Corp. of the U.
 S., 195, 197, 270, 285
- Nation, The, 24, notes on 174,*
 213
 National Advisory Committee,
 203
 National Association of Rail-
 way and Utility Commis-
 sioners, 88, 98, 215, 217, 267
 National Broadcasting Co., 15
 National City Bank, 3, 60
 National Conference on Valua-
 tion of Railroads, 260

- National Education Association, 37
- National Electric Light Assn., 15, 26, 32, 39, 102, 106, 144, 160, 241, 243
- National Municipal League, 129, notes on 147 and 214, 265
- National Power and Light Co., 155
- National Sand and Gravel Association, 242
- Navy League, 201
- Nebraska Information Bureau, 140
- Nebraska Power Co., 28, 123, 145, 226
- Nebraska State Railway Commission, 30, 140
- Newcomb, Josiah T., 167
- New Jersey Public Service Commission, 95
- New Jersey Public Service Information Bureau, 43
- New Orleans Public Service Commission, 167
- New Republic*, notes on 125, 147
- New River, W. Va., 158, 168
- News Chattanooga*, 214 note
- News Bee*, Toledo, 131
- Newspapers, 14
- News Sentinel*, Knoxville, 195, 196
- New York Edison Co., 101, 106, 112, 118
- New York Rapid Transit Corp., 58
- New York State, 209
- New York State Commission on the Revision of the Public Service Commission Law, 59, 120
- New York State Public Committee on Power, 93
- New York State Public Service Commission, 11, 60, 68, 81, 93, 106, 108, 120, 152
- New York State Tax Commission, 106
- New York State Waterpower Commission, 204
- New York Telephone Co., 66, 69, 75, 81, 83
- New York Transit Commission, 73
- Niagara Falls Chamber of Commerce, 241
- Niagara Falls Hydraulic and Mfg. Co., 152
- Niagara Falls Power Co., 87, 151
- Niagara-Hudson Power Corp., 92, 167, 207
- Niagara in Politics*, James Mavor, 39
- Nichols, Joseph F., 225
- Norris, George W., 28, 30, 145, 167, 184, 195, 196, 217, 235, 239, 270
- Norris Bill, 167, 198
- North American Light and Power System, 6, 296
- Northeastern Power Corp., 92
- Nye Committee on Campaign Expenditures, 28
- O'Brien, Robert Lincoln, 22
- O'Fallon case, 101
- Ohio Edison Co., 123
- Ohio Federation of Women's Clubs, 32
- Ohio Power Co., 91, 95, 119
- Ohio Public Service Commission, 95
- Oliver, Oskar, 251
- Onken, W. H., Jr., 40
- Ontario Hydro-Electric Commission, 234, 248, 266, 284
- Ontario municipal plant, 19
- Ontario system, 197, 203, 213, 250
- Owens, James F., 33
- Ownership, private, 265
- Oxley, George F., 19, 30
- Pacific Gas and Electric Co., 6, 7, 33, 66, 67, 160
- Parker, John C., 125 note
- Patagonia, 252
- Pathfinder Dam, 210
- Patton, Harold S., 279 note

- Peabody Coal Co., 7
 Pearson, Drew, 174 *note*
 Peck, H. W., 247
 Pend Oreille-Spokane plan, 212
 Pennsylvania Power Co., 122
 Pennsylvania Public Service
 Commission, 95, 96, 121
 People's Motor Coach Co., 98
 Philadelphia Co., 33
 Philadelphia Electric Co., 96,
 164
 Philadelphia Transit Co., 60
 Phillips, E. L., 12
 Pierce, Alfred L., 221
 Pigeon River, 155
 Pigeon River Power Co., 156
 Pinchot, Amos, 166, 174 *note*
 Pinchot, Gifford, 145, 168, 230
Plain Dealer, Cleveland, 21
 Plattsburg Gas and Electric
 Co., 73
 Poland, 251
Political Ownership, 144
 Politics, influence, 130
 non-partisan, 25
 Port of Albany, 272
 Port of Montreal Commission-
 ers, 272
 Port of New York Authority,
 206, 259, 270, 271, 277, 286
Post-Dispatch, St. Louis, 269
 Potomac Edison Co., 123
Power Control, Raushenbush
 and Laidler, 108, *notes on*
 126 and 213
 "President Hoover's Record,"
 Amos Pinchot, 174 *note*
Press Herald, Portland, 25
 Privateers, 47
 Professional feeling, 113, 282
Public Ledger, Philadelphia,
 126
Public Management, H. M.
 Renner, 226 *note*
 Public ownership, 47, 115, 215
Public Ownership on Trial,
 Bird and Ryan, 130, 142
Public Utilities, Dean Ray-
 mond, 41
Public Utilities Fortnightly, 66
 Public Utility Consolidated
 Corp., 97
 Railroad Administration, 272
 "Railroad is Never Finished,
 A," Sir Henry Thornton,
 278 *note*
 Railroads, 64, 274
 Rate Research Committee of
 the National Electric Light
 Association, 243
 Raymond, Dean, 41
*Recent Growth of the Electric
 Light and Power Industry*,
 C. O. Hardy, 124 *note*
 Reclamation, Bureau of, 177
 Reclamation Service, 210, 266
Record, Columbia, 20, 22
 Reece, B. Carroll, 197
 Reid, Ogden Mills, 23
 Reis, Alvin, 220
 Renner, H. M., 224
*Report on Concentration of
 Control in the Electric
 Power Industry*, 45 *note*
*Report on Consolidated Gas
 Company of New York*,
 City Club of New York,
 125 *note*
 Republican National Commit-
 tee, 28
 Republican party, 24
 Retirement method of account-
 ing, 81
 Revokable permit law of 1925,
 136
 Rheinisch-Westfälische Elektri-
 zitaetswerk, A. G., 259
 Richardson, Major, 35, 43
 Richberg, Donald R., 113, 260,
 278
 Robertson, A. W., 33
 Rochester Empire, 91
 Rochester Gas and Electric, 123
 Rocky Mountain Power Co.,
 161
 Roosevelt, Franklin D., 68, 106,
 138, 204, 206, 210, 230, 270

- Roosevelt, Theodore, 25, 181
 Roosevelt Dam, 210
 Ross, J. D., 219, 266
 Rumania, 251
 Russell, Charles A., 96, 157, 159, 166
 Russia, 251
 Ryan, industrialist, 162
 Ryan, writer, 130, 142, 220
- St. Joseph (Mo.) Gas Co., 40
 St. Lawrence Commission, 203
 St. Lawrence Power Authority, 270
 St. Lawrence Power Development Commission, 199, 205
 St. Lawrence River project, 202-210, 258
 Salmon River, 209
 Salt River Water Users' Ass'n., 210
 Saluda River, S. C., 155
 Scandinavia, 251
 Scandrett, Richard B., 159
 Scattergood, E. F., 220, 266
 Scranton Electric, 91, 95, 119
 Scranton Spring Brook, 67
 Scripps-Howard newspapers, 195
 Security loading, 89
 Senate Committee on Interstate Commerce, 30, 151
Sentinel, Waterville, 25
 Seymour, Victor, 28
Shame of the Cities, Lincoln Steffens, 131
 Sheridan, J. B., 16, 36, 41
 Sherman, Mrs. John D., 32
 Shoshone Dam, 210
 Siemens-Schukert, 359
 Singleton, F. T., 98
 Skagit River, 211
 Sloan, Matthew, 106
 Smith, Alfred E., 270
 Smith, George Otis, 166
 Smith, Frank, 25, 27, 29
 Snell, Sir John, 257
Social Control of Business, Maurice Clark, 36
 Soule, George, 125 *note*
- South America, 251
 Southern California Edison, 3, 6, 39, 129, 180, 181, 182
 Southern Pacific, 66
 Southern Railway, 274
 Southwest Bell Telephone Co., 67
 Spalding, Colonel, 186
 Spaulding, Willis J., 221
 Special Committee on Generation and Distribution of Electric Power of the National Association of Railway and Utility Commissioners, 215
 Standard Gas and Electric, 6, 9, 33
 Standard Power and Light, 3
 State regulation, 118, 133, 288
 Stebbins, W. M., 28
 Steffens, Lincoln, 131
 Stewart, E. A., 42
 Stewart, R. M., 18
 Stimson, Henry L., 167
 Stone, Commissioner, 66
 Stone and Webster, 6, 7, 157, 297
Sun, Baltimore, 174 *note*
 Supreme Court, Illinois, 135
 Supreme Court, Oklahoma, 136
 Supreme Court, Nebraska, 141, 146
 Supreme Court, United States, 67, 74, 80, 88, 104, 113, 171, 184
 Supreme Court, Wisconsin, 136
 Supreme Court of Appeals, West Virginia, 80
 Swing, Phil, 182
 Syracuse, University of, researches, 242
- Taft, William H., 167
 Teapot Dome oil reserve, 181
 Telephone companies, 82
 Tennessee Eastern Electric Co., 86
 Tennessee River Improvement Ass'n., 193

- Text books, 39
 Thatcher, Thomas D., 167
 Thomas, J. S., 42
 Thomson Houston Co., 259
 Thornton, Sir Henry, 266, 269,
 275, 278 *note*
 Thyatron tube, 284
 Ticonderoga Electric Light and
 Power, 95
 Tieton Dam, 210
Times, New York, 3, 23, 66,
notes on 124, 126, 175, 213,
 214, 278
Traveler, Boston, 20
- Umatilla Rapids Ass'n., 212
 Union Carbide Co., 193, 194
 United Corp., 2, 5, 35, 185, 293
 United Fuel Gas Co., 108
 United Gas Improvement, 16,
 145
 United Light and Power, 6, 297
United States Daily, *notes on*
 175 and 214
 United States Electric Power, 3
 United Traction Co., New
 York, 73
 Utah Power and Light, 94
 Utah Securities Corp., 94
 Utilities Operating Co., 107
 Utilities Power and Light, 6
 Utility Investigation Committee
 of the House of Represent-
 atives in Pennsylvania, 121
- Vail, Theodore, 84
 Van Loon, Hendrik Willem,
 110
 Viag, 259
- Wade, Judge, 135
 Walbridge and Co., H. D., 158
 Walsh, Frank, 206
 Walsh, Thomas J., 26, 90
 Walsh Resolution, 167
 Waite, Raymond F., 177
 Waltersdorf, Maurice C., 62
 War Department, 199
 Warrior River, 272
 Washington State Board of
 County Commissioners, 232
 Washington Water Power Co.,
 154
 Water and Power Act, 39
*Water Power in New York
 State*, A. Blair Knapp, 208,
 214
 Weeks, John W., 274
 Weir Committee, 252
 Welland Canal, 204
 West, development of the, 210-
 213
 Western States Utilities Co.,
 141
 West Virginia Public Service
 Commission, 108
 Wharton School of Finance, 43
 Wheeler, Walter H., 161
 Wilbur, Ray Lyman, 160, 177,
 179, 181, 211, 271
 Williamson, Ralph D., 166
 Wilson Dam, 186, 190, 195, 197,
 208
 Wilson, Woodrow, 267
 Winder, C. A., 224
 Winthrop, Mr., 167
 Winton development, 154
 Wisconsin Fuel and Light Co.,
 107
 Wisconsin Public Service Com-
 mission, 107
 Wisconsin Railroad Commis-
 sion, 215
 Wisconsin Utility Association,
 40
 Witbeck, Mr., 105
 Woodruff, George W., 181
 Worcester Electric, 66
World, New York, *notes on* 125
 and 213
 Worthington, J. W., 193
 Wyman, Mr., 24
 Wyoming Public Service Com-
 mission, 166
- Yale Law Journal*, 124 *note*
 Young, Walker R., 177
 Yugoslavia, 251
- Zimmerman, John E., 145

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