



भारत सरकार
GOVERNMENT OF INDIA

ऊर्जा मंत्रालय
MINISTRY OF ENERGY

विद्युत विभाग
DEPARTMENT OF POWER

केन्द्रीय विद्युत प्राधिकरण
CENTRAL ELECTRICITY AUTHORITY

सार्वजनिक विद्युत आपूर्ति
PUBLIC ELECTRICITY SUPPLY

अखिल भारत सांख्यिकी
ALL INDIA STATISTICS

सामान्य पुनर्वलोकन
GENERAL REVIEW
1988-89

संकलन कर्ता
COMPILED BY

विद्युत आंकड़ा बैंक एवम् सूचना निर्देशालय
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प्राथमिकता

केन्द्रीय विद्युत प्राधिकरण द्वारा हर वर्ष सार्वजनिक विद्युत आपूर्ति--अखिल भारत सांख्यिकी सामान्य पुनर्वलोकन प्रकाशित किया जा रहा है। इस प्रकाशन में, देश में विद्युत आपूर्ति उद्योग की प्रगति एवं विकास की मुख्य-मुख्य बातों को सारांशिकृत रूप में प्रस्तुत किया गया है। इस अंक में भी गत वर्षों की पद्धति का अनुपालन किया गया है।

2. इस पुनर्वलोकन को दस खण्डों में विभाजित किया गया है तथा वर्ष 1988-89 के दौरान देश में प्रत्येक राज्य तथा संघ शासित क्षेत्र में विद्युत आपूर्ति उद्योग द्वारा की गई प्रगति के व्यापक रूप में ब्योरे प्रस्तुत किए गए हैं। विद्युत सम्बन्धी विविध प्रकार के आंकड़े जैसे प्रतिस्थापित उत्पादन क्षमता, पारेपण एवं वितरण, उत्पादन, उपभोक्ताओं की विभिन्न श्रेणियों द्वारा खपत, विद्युतीकृत गांवों, सिंचाई पम्प सैटों तथा प्रणाली हानि आदि को समाविष्ट किया गया है। ईंधन की खपत चरम मांग तथा विद्युत क्षेत्र में कार्यरत जन शक्ति जैसे प्रचालन सम्बन्धी आंकड़ों के ब्योरे भी इस पुनर्वलोकन में प्रस्तुत किए गए हैं।

3. सातवीं योजना (1985-86 से 1989-90) तक में विद्युत विकास के कार्यक्रम समेत 31 मार्च, 1990 तक विद्युत विकास का एक संक्षिप्त "दृश्य पटल" भी प्रस्तुत किया गया है। विशिष्टताएं जो कि गत वर्षों में सम्मिलित की गई थीं, इस वर्ष भी सम्मिलित की गई हैं, जिनमें वर्षवार/योजनावार प्रतिस्थापित क्षमता संवर्द्धन, उत्पादन, खपत प्रवृत्ति, ग्राम विद्युतीकरण, प्रति व्यक्ति खपत आदि को जहां पर आवश्यकता समझी गई अदतत करके "दृश्य पटल" (ओवर व्यू) की सारिणी (1) से (5) में प्रकाशित किया गया है।

4. वर्ष 1988-89 के दौरान विद्युत उद्योग द्वारा दर्शाई गई प्रगति की मुख्य-मुख्य बातें नीचे दी गई हैं:

- (1) 4,885.00 मेगावाट का उत्पादन क्षमता संवर्द्धन जिससे देश में कुल संचित प्रतिस्थापित क्षमता बढ़कर 66,563.86 मेगावाट (सार्वजनिक विद्युत व्यवसायी संस्थानों में 59,040.38 मेगावाट तथा गैर विद्युत व्यवसायी संस्थानों में 7,523.48 मेगावाट) हो गई है। पिछले वर्ष की तुलना में प्रतिशत वृद्धि सार्वजनिक विद्युत व्यवसायी संस्थानों में 9.02 तथा गैर विद्युत व्यवसायी संस्थानों के मामले में 18.58 थी। (ऊपर दिए गए गैर विद्युत व्यवसायी संस्थानों के लिए क्षमता के आंकड़ों में केवल उन्हीं उद्योगों के आंकड़ों को लिया गया है जिनके पास 1.00 मेगावाट तथा इससे अधिक विद्युत उत्पादन क्षमता है।)
- (2) गत वर्ष की तुलना में 1988-89 के दौरान विद्युत उत्पादन में 9.55% की वृद्धि हुई है। वाष्प विद्युत संयंत्रों द्वारा विद्युत उत्पादन में 6.23% की वृद्धि दर्शाई है, जबकि देश के जल-विद्युत संयंत्रों द्वारा उत्पादन में 21.97% की वृद्धि आई है।
- (3) वर्ष के दौरान विभिन्न उपभोक्ताओं को बेची गई विद्युत में गत वर्ष की 7.11% की वृद्धि की तुलना में 10.02% की वृद्धि हुई। औद्योगिक क्षेत्र द्वारा ऊर्जा की खपत 47.08% रही (पिछले वर्ष के दौरान 47.51 प्रतिशत की तुलना में), अन्य श्रेणियों की खपत की प्रवृत्ति में कोई महत्वपूर्ण परिवर्तन नहीं हुआ।
- (4) वर्ष के दौरान 5.21 मिलियन नए उपभोक्ताओं के संवर्द्धन से सभी श्रेणियों के उपभोक्ताओं की कुल संख्या बढ़कर 60.82 मिलियन हो गई है। वर्ष के अंत का कुल संयोजित भार 1,06,553 मेगावाट था। इस वर्ष के दौरान प्रति व्यक्ति विद्युत खपत, गत वर्ष की 203.02 कि० वा० घ० से बढ़कर 220.94 कि० वा० घ० हो गई।
- (5) ग्रामीण क्षेत्रों के विद्युतीकरण पर बल दिया जाना जारी रहा। वर्ष के अंत तक विद्युतीकृत गांवों की कुल संख्या 4,55,491 हो गई थी (देश के कुल गांवों का 78.7%) जबकि इसकी तुलना में गत वर्ष के अंत तक विद्युतीकृत गांवों की कुल संख्या 4,35,653 थी जो कि कुल गांवों का 75.2% थी।
- (6) संचारण एवं वितरण तार-जाल (नेटवर्क) का विस्तार 31-3-1989 की स्थिति के अनुसार संचारण एवं वितरण लाइनों की कुल लम्बाई गत वर्ष के अंत तक 37,92,107 सर्किट कि० मी० से बढ़कर 40,42,022 सर्किट कि० मी० हो गई जो कि 6.59% की वृद्धि दर्शाती है। संचारण एवं वितरण में विद्युत हानि की समग्र प्रतिशतता गत वर्ष के दौरान 22.48% की तुलना में 22.31% थी।

FOREWORD

Public Electricity Supply—All India Statistics—General Review is being published yearly by the C.E.A. This publication presents, in a summarised form, salient features of the progress and development of electricity supply industry in the country. The pattern followed is the same as in the previous issues of this publication.

2. This Review has been divided into 10 Sections presenting comprehensively the progress achieved by the electricity supply industry in each of the States and Union Territories in the country during the year 1988-89. A wide spectrum of electricity related data viz. installed generating capacity, transmission & distribution, generation, consumption of different categories of consumers, villages electrified, irrigation pumpsets energised and system losses, etc. have been incorporated. The details of operating data like consumption of fuel, peak demand and manpower engaged in the Power Sector are also presented in this Review.

3. A brief 'Overview' of power development upto 31st March, 1990 including the programme of power development in Seventh Plan (1985-86 to 1989-90) has also been provided. A feature introduced in previous few years and continued this year also brings out the yearwise/planwise growth of installed capacity, generation, consumption, pattern, rural electrification, per capita consumption, etc. duly updated, wherever required, in Tables (I) to (V) of the 'Overview'.

4. The important features marking the progress made by Power Sector during 1988-89 are as follows:—

- (i) Addition to generating capacity of 4,885.00 MW raising the cumulative installed capacity in the country to 66,563.86 MW (59,040.38 MW in Public Utilities and 7,523.48 MW in Non-Utilities). Percentage growth over the previous year was 9.02% in the case of Public Utilities and 18.58% in the case of Non Utilities. (In the capacity figure for Non-Utilities given above, only industries having capacity of the order of 1.00 MW and above have been taken into account).
- (ii) Increase in electricity generation during 1988-89 by 9.55% over that of previous year. Steam power plants registered an increase in generation of 6.23%, while generation from hydro plants increased by 21.97%.
- (iii) Increase of 10.02% in electricity sold to various consumers by Public Utilities during the year as compared to 7.11% during the previous year. The share of energy consumed by the Industrial Sector was 47.08% (as compared to 47.51% during the last year). Changes in the pattern of consumption of other categories were insignificant.
- (iv) Addition of 5.21 millions new consumers during the year, increasing the total number of consumers of all categories to 60.82 million. The total connected load at the end of the year was of the order of 1,06,553 MW. The per capita consumption of electricity during the year increased to 220.94 Kwh from 203.02 Kwh during the previous year.
- (v) Continued emphasis on electrification of rural areas. The total number of villages electrified at the end of the year were 4,55,491, representing 78.7% of the total villages in the country as compared to 4,35,653 villages electrified at the end of the previous year which represents 75.2% of total villages.
- (vi) Augmentation of the transmission & distribution network. The total length of T&D lines increased to 40,42,022 Ckt. Kms. as on 31-3-1989 from 37,92,107 Ckt. Kms. at the end of the previous year representing an increase of 6.59%. The overall percentage of electricity lost in T&D was 22.31% as compared to 22.48% during the previous year.

(v)

5. यह सामान्य पुनर्वलोकन, श्री एस० के० एन० नायर, सदस्य (आर्थिक एवम् वाणिज्य) के पूर्ण रूपेण मार्ग दर्शन के अंतर्गत, केन्द्रीय विद्युत प्राधिकरण के विद्युत दत्त बैंक एवम् सूचना निदेशालय में समेकित किया गया है। मुझे संबंधित अधिकारियों एवम् कर्मचारियों द्वारा इस पुनर्वलोकन के प्रकाशन हेतु किए गए अत्युत्तम कार्य के लिए प्रसन्नता है। विशेष रूप में मैं केन्द्रीय विद्युत प्राधिकरण के विद्युत दत्त बैंक एवम् सूचना निदेशालय के सर्वश्री कृष्ण कुमार भल्होत्रा, निदेशक, सुन्दर श्याम मैदीरत्ता, निमित्तवर प्रसाद सिंह, शशि कान्त शारदा, उप निदेशक, धर्म पाल राठी, राजेन्द्र नारायण गुप्ता, सहायक निदेशक, राजेन्द्र सिंह भाटिया, प्रदीप कुमार हॉम, अतिरिक्त सहायक निदेशक (वाणिज्य), अर्जुन कुमार, सांख्यिकी सहायक द्वारा किए गए विशेष प्रयत्नों का उल्लेख करना चाहूंगा।

6. हम राज्य विद्युत बोर्डों, विद्युत निगमों तथा अन्य विद्युत व्यवसायी संस्थानों तथा गैर विद्युत व्यवसायी संस्थानों के सहयोग और आधारभूत आंकड़े उपलब्ध करवाने के लिए अत्यधिक आभारी हैं। इनके विपुल समर्थन एवं अनुकूल प्रतिक्रिया के बिना इस प्रकाशन को निकालना संभव न हो पाता।

7. इस प्रकाशन में सम्मिलित सामग्री की यथार्थता सुनिश्चित करने के लिए सभी प्रयास किए गए हैं। इसके बावजूद, अगर कोई विसंगति आ गई हो, तो ऐसी विसंगतियों को केन्द्रीय विद्युत प्राधिकरण के ध्यान में लाया जाए ताकि तदनुसार उनका परिशोधन किया जा सके।

8. इन वार्षिक पुनर्वलोकनों के प्रकाशन में प्रायः बड़ा समय अन्तराल आता रहा है यद्यपि हमारे निरन्तर व अथक प्रयासों से, यह अन्तराल काफी सीमा तक कम हुआ है, फिर भी इस अन्तराल को पूर्णतया समाप्त करने और आर्थिक वर्ष के समाप्त होते ही इस प्रकाशन को प्रकाशित करने हेतु प्रयास जारी रखने की आवश्यकता है। इस उद्देश्य की पूर्ति हेतु, हम सभी विद्युत प्रदाय संस्थानों (चाहे वह सार्वजनिक क्षेत्र में हों अथवा निजी क्षेत्रों में) से पूर्ण सांख्यिकी ब्यौरे उचित समय पर हमें उपलब्ध कराने हेतु सहयोग की कामना करते हैं।

हस्ता०

(जे० के० भसीन),

अध्यक्ष,

केन्द्रीय विद्युत प्राधिकरण

नई दिल्ली

मई 1991

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5. The General Review has been compiled in the Power Data Bank & Information Directorate of the Central Electricity Authority under the overall guidance of Shri S.K.N. Nair, Member (Economic & Commercial). I have pleasure in noting the meticulous work done by the concerned officers and staff in bringing out this Review. Special mention may be made of the efforts put in by Shri K. K. Malhotra, Director; Shri S.S. Mendiratta, Shri N. P. Singh, Shri S. K. Sharda, Deputy Directors; Shri D. P. Rathee & Shri R.N. Gupta, Assistant Directors; Shri R.S. Bhatia & Shri P. K. Home, Extra-Assistant Directors (Commercial) and Shri Ashok Kumar, Statistical Assistant of Power Data Bank & Information Directorate of the C.E.A.

6. We are grateful to the State Electricity Boards, the Power Corporations and other Power Utilities and Non-Utilities for their cooperation in furnishing the basic data. This publication would not have been possible but for their unstinting support and favourable response.

7. All efforts have been made to ensure accuracy of the material included in this publication. In spite of this, if discrepancies have crept in, they may kindly be brought to the attention of the Central Electricity Authority for rectification.

8. There has generally been a big time lag in the publication of these yearly Reviews. Although, through our constant and vigorous efforts, this gap has now been considerably reduced, it should be the endeavour to eliminate all delays and bring out the publication as soon after the close of each financial year, as possible. For achieving this objective, we earnestly seek the co-operation of Electricity Supply Undertakings (both in Public and Private Sectors) in ensuring that complete statistical details are made available to us in good time.

New Delhi
May, 1991.

Sd/-
(J. K. BHASIN)
Chairman, C.E.A.

**Overview of
Power Development in the Country
(Utilities)**

POWER DEVELOPMENT IN THE COUNTRY (UTILITIES)

AN OVERVIEW

Power development in India commenced at the end of 19th Century with the commissioning of electricity supply in Darjeeling during 1897, followed by commissioning of hydel power station at Sivasamudram in Karnataka during 1902. In the pre-independence era, the power supply was mainly in the hands of Private Sector, that too restricted to the urban areas. After independence, the Government of India felt the need for restructuring electricity supply industry with a view to rationalise its growth all over the country. The Electricity (Supply) Act was enacted in 1948. With the formation of State Electricity Boards in various parts of the country in the early 50s, and with the advent of the Five year Plans, a significant step was taken in bringing about systematic growth of power supply industry all over the country. A number of multi-purpose projects came into being and with the setting up of thermal, hydro and nuclear power stations, power generation started increasing significantly. The Central participation in the expansion of power generation programme started with the creation of two generating corporations viz. National Thermal Power Corporation and National Hydro Power Corporation during the year 1975, which gave a fillip to the growth of the power sector in the country. The growth of the power sector in the country from 1950 to the end of 1989-90 (the last year of VIIIth Plan) has been displayed in the tables immediately after this write-up and is briefly discussed in the following paragraphs.

I. Installed Capacity

The installed capacity which was merely 1713 MW as on 31-12-1950 rose to 42,585 MW at the end of VIth Plan period, thermal constituting 27,030 MW i.e. 63.47%, hydel 14,460 MW i.e. 33.96% nuclear 1,095 MW i.e. 2.57% of the total installed capacity. The total installed capacity rose to 59040 MW & 63627 MW (Provisional) at the end of 1988-89 and 1989-90, the fourth and fifth (last) years of the VIIth Plan respectively. The target and achievement during the VIIth Plan are highlighted in Para VIII of this 'overview'. There has been substantial growth in Installed capacity during various five year plans ranging from 28% to as much as 94% over the previous plan period.

II. Gross Generation

The gross electricity generation which was 5,107 Gwh during the year ending on 31-12-1950 rose to 1,56,859 Gwh in 1984-85 (last year of VIth Plan period), thermal constituting 98,836 Gwh i.e. 63.01%, hydel 53,948 Gwh, i.e. 34.39% and nuclear 4075 Gwh i.e. 2.60% of the total generation. The total generation rose to 1,87,714 Gwh during 1986-87 i.e. to 2,02,093 Gwh during 1987-88 to 2,21,396 Gwh during 1988-89 and to 2,45,402 Gwh (Provisional) during 1989-90; the second, third, fourth and last year of VIIth Plan respectively. The target and achievement during the VIIth Plan are highlighted in Para VIII of this 'overview'. There has been substantial growth in generation during various five year plans ranging from 40.6% to as much as 97% over the previous plan.

III. Consumption

The consumption of 4,157 Gwh as on 31-12-1950 rose to 1,14,068 Gwh during 1984-85 i.e. at the end of VIth Plan, to 1,22,999 Gwh in 1985-86 to 1,35,952 Gwh in 1986-87; to 1,45,613 Gwh in 1987-88; to 1,60,196 Gwh in 1988-89 and to 1,74,818 Gwh (Provisional) in 1989-90 i.e. the 1st, 11nd, IIIrd, IVth and the last year of VIIth Plan. There has been substantial growth in the consumption during every plan, the percentage varying from 34.5% to as much as 94.6%. The industrial and agricultural categories constitute the major consumers of electricity. The percentage with respect to total consumption varied between 46.3% to 73.5% in the industrial category and from 3.6% to 25.0% in the agricultural sector.

IV. Rural Electrification

The number of villages electrified also rose from 3,061 representing 0.54% of total villages existing as on 31-3-1951 to as many as 3,70,332 at the end of the VIth Plan i.e. 64.3% of total villages. The cumulative number of villages electrified as on 31-3-1990 i.e. at the end of the last year of the VIIth Plan was 4,70,826 (provisional) indicating 81.3% of the total villages [Ref. Tab. (I) & (V)].

(x)

V. Transmission & Distribution Lines

The length of transmission and distribution lines rose from 29,271 Ckt. Kms. as on 31-12-1950 to 23,51,609 Ckt. Kms. as on 31-3-1980. This went up further to 40,42,022 Ckt. Kms. at the end of March, 1989. The percentage growth in transmission and distribution lines varied from 9.6% to 243.1%. (Ref. Tab. (I) & (V)).

VI. Per Capita Consumption

An important index of power development is in respect of per capita consumption which from merely 15.6 Kwh. during 1950 rose to 168.52 Kwh at the end of VIth Plan period i.e. during 1984-85. This went up further to 203.02 Kwh during 1987-88 to 220.94 kwh during 1988-89 and to 236.02 Kwh (Provisional) during 1989-90.

VII. Highlights of proposal during VIIth Five Year Plan (1985-90)

A capacity addition of 22,245.25 MW was envisaged in the VIIth Five Year Plan to increase the installed generating capacity in the country to 64,736.18 MW. This Plan has been formulated keeping in view the long term power demand for the period upto 1994-95 as well as the overall development perspective. The generation from utilities is estimated to be 2,80,400 Gwh in 1989-90 (the last year of the Plan) envisaging a compound annual growth of 12.2%. There is also a programme of electrifying 1.18 lakh villages during the VIIth Plan bringing the total number of villages under electrification to 4,88,332 which represents 84.28% of the total number of villages in the country. It is also proposed to energise 23.9 lakh pump sets during the VIIth Five Year Plan.

VIII. Achievement during the VIIth Plan (1985-90).

A capacity addition of 4,223 MW in generating capacity was achieved during the year 1985-86 as against the target of 4,459.5 MW. A capacity addition of 2,624.5 MW was achieved during the year 1986-87 against the target of 3,396.45 MW. A record addition of 4,929 MW was achieved during the year 1987-88 against the target of 4,916 MW. A capacity addition of 4,885.00 MW was achieved during the year 1988-89 against the target of 4,994.5 MW. A capacity addition of 4,687.7 MW was achieved during the year 1989-90 against the target of 4,892.4 MW.

The generation was 1,70,350 Gwh and exceeded marginally the target of 1,70,000 Gwh during the year 1985-86. The generation was 1,87,714 Gwh during 1986-87 against a programme of 1,90,000 Gwh. The generation was 2,02,093 Gwh during 1987-88 against a programme of 2,05,000 Gwh. The generation was 2,21,396 Gwh during 1988-89 against a programme of 2,26,500 Gwh. The generation was 2,45,402 Gwh (Provisional) during 1989-90 against a programme of 2,51,300 Gwh.

19,961 villages were electrified during 1985-86; 21,725 during 1986-87; 20,808 during 1987-88; 19,838 during 1988-89 and 15,335 during 1989-90 bringing the total number of villages electrified to 4,70,826 as on 31-3-1990 (as per 1981 census) representing 81.3% of total villages in the country. 4,43,412; 5,04,566; 5,69,250; 5,93,258 and 5,27,714 irrigation pump sets were energised during 1985-86; 1986-87; 1987-88; 1988-89 and 1989-90 respectively bringing the total to 83,46,763 as on 31-3-90 representing 69.56% of the total irrigation pump sets potential of 12 million.

TABLE NO. 1

Planwise Growth of Power sector in the country—Utilities

	on 31-12-50	Ist Plan ending 31-3-56 *	IInd Plan ending 31-3-61 **	IIIrd Plan ending 31-3-66	Three Annual Plans ending 31-3-69	IVth Plan ending 31-3-74	Vth Plan ending 31-3-79	Annual Plan ending 31-3-80	VIth Plan ending 31-3-85	31-3-90 (P)	VIIth Plan ending 31-3-90 @@(Pro- jected)
Installed Capacity (MW)	1713	2695 (57.3)	4653 (72.7)	9027 (94.0)	12957 (43.5)	16664 (28.6)	26682 (60.1)	28448 (6.6)	42585 (49.7)	63627 (49.4)	64736 (52.02)
Gross Generation(GWH)(A)	5107	8592 (68.2)	16937 (97.1)	32990 (94.8)	47434 (43.8)	66689 (40.6)	102523 (53.7)	104627 (2.1)	156859 (49.9)	245402 (56.4)	280400 (78.8)
Consumption (GWH)(A)	4157	7111 (71.1)	13841 (94.6)	26735 (93.2)	37352 (39.7)	50246 (34.5)	77293 (53.8)	78084 (1.0)	114068 (46.1)	174818 (53.3)	209730 (83.9)
No. of villages electrified	3061 (@)	7294 (138.3)	21754 (198.2)	45148 (107.6)	73739 (63.3)	156729 (112.5)	232770 (48.5)	249799 (7.3)	370332 (48.2)	470826 (27.1)	488332 (31.9)
Length of T&D Lines (Ckt. Kms)	29271 @	66421@ (126.9)	157887@ (137.7)	541704 (243.1)	836307 (54.4)	1546097 (84.9)	2145919 (38.8)	2351609 (9.6)	3211956 (36.6)	N.A. —	N.A. —
Per capita consumption (Utility + Non Utility) (KWH) (A)	15.55	26.40 (69.8)	37.90 (43.6)	61.30 (61.7)	77.88 (27.0)	97.48 (25.2)	130.94 (34.3)	130.49 —(0.3)	168.52 (29.1)	236.02 (40.1)	N.A. —

Note:— *Figures for the Ist Plan period are from 1-1-51 to 31-12-55 **Figures for the IInd Plan period are from 1-1-56 to 31-3-61. Figures in brackets are %age growth with reference to preceeding Plans.

@@Source:—VIIth Plan Document issued by the Planning Commission (Page—41 Vol. I)

@Does not include distribution lines as no information is available below 500 Volts lines.

(P)Provisional

(\$)Figures ending March, 1951.

(A) Figures for the year ending on the indicated dates.

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TABLE NO. II

*Installed Generating Capacity in the Country Primemoverwise
(Utilities only)*

Year	Total Installed Capacity(M.W.)			
	Total	Hydro	Thermal (in- cluding Diesel Gas, Steam)	Nuclear
1950	1712·52 (100·00)	559·29 (32·66)	1153·23 (67·34)	—
1951	1835·43 (100·00)	575·18 (31·34)	1260·25 (68·66)	—
1952	2061·76 (100·00)	715·18 (34·69)	1346·58 (65·31)	—
1953	2305·19 (100·00)	731·18 (31·72)	1574·01 (68·28)	—
1954	2494·00 (100·00)	793·35 (31·81)	1700·65 (68·19)	—
1955	2694·82 (100·00)	939·48 (34·86)	1755·34 (65·14)	—
1956	2886·14 (100·00)	1061·44 (36·78)	1824·70 (63·22)	—
1957-58	3223·11 (100·00)	1213·92 (37·66)	2009·19 (62·34)	—
1958-59	3511·59 (100·00)	1361·44 (38·78)	2149·84 (61·22)	—
1959-60	3873·17 (100·00)	1530·15 (39·51)	2343·02 (60·49)	—
1960-61	4653·05 (100·00)	1916·66 (41·19)	2736·39 (58·81)	—
1961-62	5218·82 (100·00)	2419·10 (46·35)	2799·72 (53·65)	—
1962-63	5801·19 (100·00)	2936·35 (50·62)	2864·84 (49·38)	—
1963-64	6576·94 (100·00)	3167·02 (48·16)	3403·92 (51·84)	—
1964-65	7396·67 (100·00)	3388·73 (45·81)	4007·94 (54·19)	—
1965-66	9027·02 (100·00)	4123·74 (45·68)	4903·28 (54·32)	—
1966-67	10092·17 (100·00)	4757·22 (47·14)	5334·95 (52·86)	—
1967-68	11888·16 (100·00)	5485·92 (46·17)	6396·24 (53·83)	—
1968-69	12957·27 (100·00)	5906·91 (45·59)	7050·36 (54·41)	—
1969-70	14102·45 (100·00)	6134·77 (43·50)	7547·68 (53·52)	420·00 (2·98)

(xiii)

1	2	3	4	5
1970-71	14708.95 (100.00)	6383.23 (43.40)	7905.72 (53.74)	420.00 2.86
1971-72	15254.37 (100.00)	6611.61 (43.34)	8222.76 (53.91)	420.00 (2.75)
1972-73	16281.71 (100.00)	6785.41 (41.68)	8876.30 (54.51)	620.00@ (3.81)
1973-74	16663.56 (100.00)	6965.30 (41.80)	9058.26 (54.36)	640.00 (3.84)
1974-75	18316.68 (100.00)	7529.24 (41.11)	10147.44 (55.40)	640.00 (3.49)
1975-76	20117.06 (100.00)	8463.60 (42.07)	11013.46 (54.75)	640.00 (3.18)
1976-77	21468.59 (100.00)	9024.90 (42.04)	11803.69 (54.98)	640.00 (2.98)
1977-78	23668.71 (100.00)	10020.22 (42.34)	13008.49 (54.96)	640.00 (2.70)
1978-79	26680.06 (100.00)	10833.07 (40.60)	15206.99 (57.00)	640.00 (2.40)
1979-80	28447.83 (100.00)	11383.97 (40.02)	16423.86 (57.73)	640.00 (2.25)
1980-81	30213.68 (100.00)	11791.22 (39.02)	17562.46 (58.13)	860.00 (2.85)
1981-82	32345.05 (100.00)	12172.81 (37.63)	19312.28 (59.71)	860.00 (2.66)
1982-83	35363.27 (100.00)	13055.86 (36.92)	21447.41 (60.65)	860.00 (2.43)
1983-84	39338.86 (100.00)	13855.56 (35.23)	24388.30 (61.99)	1095.00 (2.78)
1984-85	42584.72 (100.00)	14460.02 (33.90)	27029.70 (63.47)	1095.00 (2.57)
1985-86	46769.03 (100.00)	15471.60 (33.08)	29967.43 (64.08)	1330.00 (2.84)
1986-87	49265.86 (100.00)	16195.64 (32.87)	31740.22 (64.43)	1330.00 (2.70)
1987-88	54155.17 (100.00)	17265.33 (31.88)	35559.84 (65.66)	1330.00 (2.46)
1988-89	59040.38 (100.00)	17798.05 (30.15)	39677.33 (67.20)	1565.00 (2.65)
1989-90	63627.33 (100.00)	18307.63 (28.77)	43754.70 (68.77)	1565.00 (2.46)

Note: Figures in brackets indicate percentage to total installed capacity.

@Reporting difference of 20 MW capacity of RAPP

TABLE NO. III

*Gross Electricity Generation in the Country Primemoverwise
(Utilities only)*

Year	Total Gross Generation (GWH)			
	Total	Hydro	Thermal (including Diesel, Gas & Steam)	Nuclear
1950	5106.70 (100.00)	2519.77 (49.34)	2586.93 (50.66)	—
1951	5858.40 (100.00)	2859.70 (48.81)	2998.70 (51.19)	—
1952	1620.35 (100.00)	2799.13 (45.73)	3321.22 (54.27)	—
1953	6697.19 (100.00)	2913.86 (43.51)	3783.33 (56.49)	—
1954	7521.78 (700.00)	3236.52 (43.03)	4285.26 (56.97)	—
1955	8592.45 (700.00)	3742.24 (43.55)	4850.21 (56.45)	—
1956	9662.13 (100.00)	4294.87 (44.45)	5367.26 (55.55)	—
1957-58	11369.14 (100.00)	5072.24 (44.61)	6296.90 (55.39)	—
1958-59	12993.89 (100.00)	5848.10 (45.01)	7145.79 (54.99)	—
1959-60	15032.95 (100.00)	7027.42 (46.75)	8005.53 (53.25)	—
1960-61	16937.01 (100.00)	7836.58 (46.27)	9100.43 (53.73)	—
1961-62	19669.95 (100.00)	9814.38 (49.90)	9855.57 (50.10)	—
1962-63	22364.97 (100.00)	11804.54 (53.78)	10560.43 (47.22)	—
1963-64	26817.57 (100.00)	13956.70 (52.04)	12860.87 (47.96)	—
1964-65	29563.08 (100.00)	14798.85 (50.06)	14764.23 (49.94)	—
1965-66	32990.12 (100.00)	15224.97 (46.15)	17765.15 (53.85)	—
1966-67	36375.59 (100.00)	16734.10 (46.00)	19641.49 (54.00)	—
1967-68	41194.64 (100.00)	18658.06 (45.29)	22536.68 (54.71)	—
1968-69	47433.65 (100.00)	20722.67 (43.69)	26710.98 (56.31)	—
1969-70	51988.72 (100.00)	23046.05 (44.33)	27603.67 (53.10)	1339.00 (2.57)

(xv)

1	2	3	4	5
1970-71	55827·64 (100·00)	25248·24 (45·23)	28162·02 (50·44)	2417·38 (4·33)
1971-72	60925·63 (100·00)	28024·22 (46·00)	31712·09 (52·05)	1189·32 (1·95)
1972-73	64546·00 (100·00)	27195·95 (42·13)	36217·31 (56·11)	1132· (1·76)
1973-74	66689·03 (100·00)	28971·84 (43·45)	35320·83 (52·96)	2396·36 (3·59)
1974-75	70190·53 (100·00)	27875·18 (39·72)	40109·26 (57·14)	2206·09 (3·14)
1975-76	79230·92 (100·00)	33301·77 (42·03)	43302·64 (54·65)	2626·51 (3·32)
1976-77	88333·31 (100·00)	34836·13 (39·43)	50244·90 (56·89)	3252·28 (3·68)
1977-78	91369·03 (100·00)	38007·16 (41·60)	51089·70 (55·91)	2272·17 (2·49)
1978-79	102522·52 (100·00)	47158·86 (46·00)	52593·98 (51·30)	2769·68 (2·70)
1979-80	104627·26 (100·00)	45477·55 (43·47)	56273·12 (53·78)	2876·58 (2·75)
1980-81	110843·96 (100·00)	46541·76 (41·99)	61300·86 (55·30)	3001·34 (2·71)
1981-82	122101·43 (100·00)	49564·93 (40·60)	69515·61 (56·93)	3020·89 (2·47)
1982-83	130263·58 (100·00)	48373·38 (37·13)	79868·26 (61·32)	2021·94 (1·55)
1983-84	140177·36 (100·00)	49954·27 (35·64)	86677·03 (61·83)	3546·06 (2·53)
1984-85	156859·38 (100·00)	53948·25 (34·39)	98836·30 (63·01)	4074·83 (2·60)
1985-86	170350·13 (100·00)	51020·78 (29·95)	114347·47 (67·12)	4981·88 (2·93)
1986-87	187713·99 (100·00)	53840·86 (28·68)	128851·39 (68·65)	5021·74 (2·67)
1987-88	202092·70 (100·00)	47444·37 (23·48)	149613·61 (74·03)	5034·72 (2·49)
1988-89	221396·13 (100·00)	57867·89 (26·14)	157711·13 (71·23)	5817·11 (2·63)
1989-90*	245401·84 (100·00)	62054·14 (25·29)	178722·96 (72·83)	4624·74 (1·88)

Note:— Figures in brackets indicate percentage to total generation.

*Provisional.

(xvi)

TABLE NO. IV

Consumption Pattern in the Country in different Categories (Utilities only) (Gwh)

Year	Energy Sales						
	Total	Domestic	Commercial	Industrial	Traction	Agriculture	Others
1	2	3	4	5	6	7	8
1950	4156.66 (100.00)	524.59 (12.6)	308.75 (7.5)	2603.81 (62.6)	308.41 (7.4)	161.68 (3.9)	249.42 (6.0)
1951	4793.34 (100.00)	594.99 (12.4)	331.54 (6.9)	3054.67 (63.7)	329.60 (6.9)	203.04 (4.3)	279.50 (5.8)
1952	5005.68 (100.00)	628.88 (12.6)	336.63 (6.7)	3206.52 (64.0)	324.75 (6.5)	215.18 (4.3)	293.72 (5.9)
1953	5597.08 (100.00)	690.52 (12.3)	399.10 (7.1)	3613.22 (64.6)	358.32 (6.4)	214.12 (3.8)	321.80 (5.8)
1954	6252.50 (100.00)	759.16 (12.1)	446.15 (7.1)	4075.97 (65.2)	378.41 (6.1)	231.39 (3.7)	361.42 (5.8)
1955	7111.01 (100.00)	850.43 (12.0)	514.43 (7.2)	4698.30 (66.0)	403.31 (5.7)	254.79 (3.6)	389.75 (5.5)
1956-57	7959.34 (100.00)	934.11 (11.7)	545.84 (6.8)	5323.43 (66.9)	404.93 (5.1)	316.18 (4.0)	434.85 (5.5)
1957-58	9345.22 (100.00)	1093.63 (11.7)	609.81 (6.5)	6166.80 (66.0)	423.29 (4.5)	544.64 (6.0)	507.05 (5.4)
1958-59	10718.61 (100.00)	1238.03 (11.5)	682.81 (6.3)	7224.05 (67.5)	441.56 (4.1)	583.48 (5.5)	548.68 (5.1)
1959-60	12406.94 (100.00)	1378.54 (11.1)	766.17 (6.2)	8455.52 (68.2)	440.60 (3.6)	753.95 (6.1)	612.16 (4.8)
1960-61	13840.64 (100.00)	1492.29 (10.7)	847.74 (6.1)	9584.32 (69.4)	453.93 (3.3)	832.93 (6.0)	629.43 (4.5)
1961-62	16448.29 (100.00)	1698.08 (10.3)	934.09 (5.7)	11545.60 (70.2)	584.76 (3.6)	991.14 (6.0)	695.22 (4.2)
1962-63	18679.02 (100.00)	1917.85 (10.3)	1048.62 (5.6)	13109.81 (70.2)	723.84 (3.9)	1103.52 (5.9)	775.38 (4.1)
1963-64	21793.98 (100.00)	2062.41 (9.7)	1179.72 (5.5)	15841.84 (73.5)	755.58 (2.2)	1153.17 (5.4)	801.26 (3.7)
1964-65	24219.27 (100.00)	2246.21 (9.2)	1427.48 (5.9)	17378.58 (71.8)	898.33 (3.7)	1396.69 (5.8)	871.98 (3.6)
1965-66	26734.94 (100.00)	2355.15 (8.8)	1650.06 (6.2)	18875.87 (70.6)	1057.29 (4.0)	1891.84 (7.1)	904.73 (3.3)
1966-67	29127.64 (100.00)	2626.72 (9.0)	1819.62 (6.2)	20390.80 (70.0)	1180.22 (4.1)	2106.50 (7.2)	1003.78 (3.5)
1967-68	32686.87 (100.00)	2927.97 (8.9)	1750.19 (5.4)	22852.24 (69.9)	1301.66 (4.0)	2585.25 (7.9)	1269.56 (3.9)
1968-69	37352.35 (100.00)	3184.19 (8.5)	2125.74 (5.7)	25891.23 (69.9)	1246.58 (3.3)	3465.44 (9.3)	1439.07 (3.9)
1969-70	41061.70 (100.00)	3491.00 (8.6)	2333.33 (5.7)	28378.66 (69.1)	1448.32 (3.5)	3774.11 (9.2)	1636.28 (3.9)
1970-71	43724.16 (100.00)	3839.76 (8.8)	2572.66 (5.9)	29579.10 (67.6)	1364.57 (3.2)	4470.23 (10.2)	1897.84 (4.3)

(xvii)

1	2	3	4	5	6	7	8
1971-72	47063.20 (100.00)	4107.46 (8.7)	2952.78 (6.3)	31637.18 (67.2)	1632.69 (3.5)	5005.62 (10.6)	1737.47 (3.7)
1972-73	49088.06 (100.00)	4309.01 (8.8)	2782.19 (5.7)	32244.21 (65.7)	1830.57 (3.7)	5918.10 (12.0)	2003.98 (4.1)
1973-74	50246.38 (100.00)	4644.55 (9.2)	2987.52 (6.0)	32481.38 (64.6)	1530.76 (3.0)	6310.21 (12.6)	2291.96 (4.6)
1974-75	52631.64 (100.00)	5172.79 (9.8)	3081.57 (5.9)	32690.28 (62.1)	1531.17 (2.9)	7762.73 (14.7)	2393.10 (4.6)
1975-76	60245.81 (100.00)	5821.35 (9.66)	3506.76 (5.82)	37568.12 (62.36)	1855.32 (3.08)	8721.06 (14.48)	2773.20 (4.60)
1976-77	66608.57 (100.00)	6336.56 (9.51)	4141.92 (6.22)	41605.63 (62.47)	2167.72 (3.25)	9620.63 (14.44)	2763.11 (4.11)
1977-78	69255.03 (100.00)	6821.31 (9.85)	4427.59 (6.39)	42635.20 (61.57)	2296.81 (3.32)	10107.36 (14.59)	2966.76 (4.28)
1978-79	77292.82 (100.00)	7575.66 (9.80)	4330.58 (5.60)	47727.70 (61.75)	2185.58 (2.83)	12027.85 (15.56)	3445.45 (4.46)
1979-80	78083.62 (100.00)	8402.23 (10.76)	4656.58 (5.95)	45955.48 (58.86)	2301.15 (2.95)	13452.00 (17.23)	3316.18 (4.25)
1980-81	82367.18 (100.00)	9246.43 (11.23)	4681.84 (5.68)	48069.35 (58.36)	2265.91 (2.75)	14489.03 (17.59)	3614.62 (4.39)
1981-82	90245.33 (100.00)	10439.62 (11.57)	5194.41 (5.76)	53063.79 (58.80)	2504.72 (2.78)	15201.16 (16.84)	3041.63 (4.25)
1982-83	95588.57 (100.00)	12091.63 (12.65)	5846.25 (6.12)	52967.36 (55.41)	2632.60 (2.75)	17816.84 (18.64)	4233.89 (4.43)
1983-84	102344.49 (100.00)	13234.51 (12.93)	6560.95 (6.41)	57094.47 (55.79)	2709.86 (2.65)	18233.63 (17.81)	4511.07 (4.41)
1984-85	114067.94 (100.00)	15505.72 (13.59)	6937.39 (6.03)	63019.33 (55.25)	2879.75 (2.52)	20960.44 (18.38)	4765.31 (4.18)
1985-86	122999.34 (100.00)	17257.83 (14.08)	7290.10 (5.93)	66980.06 (54.46)	3182.14 (2.51)	23421.97 (19.04)	4967.24 (4.03)
1986-87	135952.08 (100.00)	19323.13 (14.21)	7772.07 (5.72)	70296.87 (51.71)	3229.41 (2.37)	29443.96 (21.60)	5886.64 (4.33)
1987-88	145612.82 (100.00)	22119.81 (15.19)	8840.81 (6.07)	69180.10 (47.51)	3616.32 (2.48)	35266.55 (24.22)	6589.23 (4.53)
1988-89	160196.43 (100.00)	24767.67 (15.46)	9915.17 (6.19)	75411.64 (47.08)	3772.26 (2.35)	38878.37 (24.27)	7451.32 (4.65)
1989-90*	174817.57 (100.00)	28173.93 (16.12)	10227.20 (5.85)	80878.10 (46.26)	4150.38 (2.37)	43643.01 (24.97)	7744.95 (4.43)

Note:— Figures in brackets indicate the percentage of the total sales.

*Provisional.

TABLE NO. V

Number of Villages Electrified, T & D Lines and Per Capita Consumption in the Country

Year	No. of villages electrified**	Transmission & Distribution lines(Ckt.Kms.)	Per capita consumption (Utility + Non-Utility)(KWH)
1950	N.A.	29271	15.6
1951	3061@	39064	17.8
1952	N.A.	43945	19.0
1953	N.A.	52504	20.9
1954	N.A.	58910	23.0
1955	N.A.	66421	25.7
1956	7294@	85427	26.4
1957-58	N.A.	101861	27.9
1958-59	N.A.	119936	30.7
1959-60	N.A.	132473	34.8
1960-61	21754	157887	37.9
1961-62	N.A.	169505	43.6
1962-63	N.A.	385739	48.5
1963-64	N.A.	413139	54.4
1964-65	N.A.	465680	57.5
1965-66	45148	541704	61.4
1966-67	54515	660859	66.2
1967-68	62540	717615	71.6
1968-69	73739	836301	77.9
1969-70	88831	976059	83.5
1970-71	104942	1117163	89.8
1971-72	122100	1304169	93.8
1972-73	139560	1418364	96.3
1973-74	156729	1546097	97.48
1974-75	173533	1621848	98.99
1975-76	185808	1718942	109.95
1976-77	202350	1850273	119.38
1977-78	216863	1999080	120.73
1978-79	232770	2145919	130.94
1979-80	249799	2351609	130.49
1980-81	272287	2522461	132.34
1981-82	296505	2693086	141.27
1982-83	323881	2865312	147.05
1983-84	347564	3002095	154.39
1984-85	370332	3211956	168.52
1985-86	390293	3371216	177.98
1986-87	414845	3572460	191.75
1987-88	435653	3792107	203.02
1988-89	455491	4042022	220.94
1989-90*	470826	N.A.	232.02

Note:—1. For the years 1950 to 1961-62 Distribution lines length is not included in the total as its data is not available.

2. **Figures have been revised for the year 1966-67 to 1976-77.

*Provisional

@Figures ending March.

SECTION I

Organisational Structure of Electricity Supply Industry in India

SECTION--I
ORGANISATIONAL STRUCTURE OF
ELECTRICITY SUPPLY INDUSTRY IN INDIA

During the year under review, there was no change in the number of State Electricity Boards, which remained 18. All the States except Goa, Sikkim, Manipur, Nagaland and Tripura have State Electricity Boards. During the year 1988-89, one undertaking was acquired by Gujarat Electricity Board. No new private licensee (Co-operative Society) was formed in any of the States. Thus there were in all 44 Private Licensees and 10 Municipal Licensees operating at the end of the Year 1988-89. Out of 44 Private Licensees, 35 were Co-operative Societies.

The various tables in this Section give a brief account of various Utilities in the Public as well as in the Private Sector, responsible for electricity generation/transmission/distribution in the country.

TABLE NO. 1

Names of State Electricity Boards Established under Section 5 of the Electricity (Supply) Act, 1948

Sl. No.	Name of the State	Name of the State Electricity Board	Date of Establishment
<i>Northern Region</i>			
1.	Haryana	Haryana State Electricity Board, Chandigarh	1-4-1967
2.	Himachal Pradesh	Himachal Pradesh S.E.B., Shimla	31-8-1971
3.	Jammu & Kashmir	Jammu & Kashmir S.E.B., Jammu/Srinagar	5-9-1972
4.	Punjab	Punjab S.E.B., Patiala	1-2-1959
5.	Rajasthan	Rajasthan S.E.B., Jaipur	1-7-1957
6.	Uttar Pradesh	Uttar Pradesh S.E.B., Lucknow.	1-4-1959
<i>Western Region</i>			
7.	Gujarat	Gujarat Electricity Board, Baroda	1-5-1960
8.	Madhya Pradesh	Madhya Pradesh E.B., Jabalpur	1-4-1957
9.	Maharashtra	Maharashtra S.E.B., Bombay	20-6-1960
<i>Southern Region</i>			
10.	Andhra Pradesh	Andhra Pradesh S.E.B., Hyderabad	1-4-1959
11.	Karnataka	Karnataka Electricity Board, Bangalore	30-9-1957
12.	Kerala	Kerala S.E.B., Trivandrum	31-3-1957
13.	Tamil Nadu	Tamil Nadu Electricity Board, Madras	1-7-1957
<i>Eastern Region</i>			
14.	Bihar	Bihar State Electricity Board, Patna	1-4-1958
15.	Orissa	Orissa S.E.B., Bhubaneswar	1-3-1961
16.	West Bengal	West Bengal S.E.B., Calcutta	1-5-1956
<i>North Eastern Region</i>			
17.	Assam	Assam S.E.B., Guwahati	1-6-1958
18.	Meghalaya	Meghalaya S.E.B., Shillong	21-1-1975

S.E.B.—State Electricity Board.

TABLE NO. 2

Names of Generating Companies, Power Corporations, Management Boards under Central or Joint State Partnership for meeting Regional Power Requirements and Electricity Departments of Governments of Various States/Union Territories

Sl. No.	Name	Location of H.Q.	Ownership
(A) Generating Undertakings:			
1.	National Thermal Power Corporation, N. Delhi (NTPC)	New Delhi	Central Govt.
2.	National Hydro Electric Power Corporation (NHPC)	New Delhi	Central Govt.
3.	North Eastern Electric Power Corporation Ltd., (NEEPCO)	Shillong	Central Govt.
4.	Nuclear Power Corporation	Bombay	Central Govt.
5.	Central Railways, Chola	Bombay	Central Govt.
6.	Neyveli Lignite Corporation	Neyveli	Central Govt.
7.	Damodar Valley Corporation	Calcutta	Central Govt.
8.	Karnataka Power Corporation	Bangalore	Karnataka Govt.
9.	Bhakra Beas Management Board	Chandigarh	Punjab, Haryana & Rajasthan
10.	Pench Hydrel Power Station	Totladoh	M. P. & Maharashtra
11.	Durgapur Projects Ltd.,	Durgapur	West Bengal Govt.
12.	Machkund Hydro Electric Project**	Vishakapatnam	Andhra Pradesh/ Orissa Govts.
13.	Tungabhadra Hydro Electric Scheme, Tungabhadra Board	Ballary Distt. Karnataka	Andhra Pradesh/ Karnataka Govts.
14.	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.,	Lucknow	U.P. State Govt.
15.	West Bengal Power Development Corporation	Calcutta	West Bengal Govt.
16.	Orissa Power Generation Corporation Ltd.	Bhubaneshwar	Orissa Govt.
17.	Rengali & Upper Kolab Hydro Electric Power Stations.	Bhubaneshwar	Orissa Govt.
(B) State Electricity Departments			
1.	Goa	Panji	State Govt.
2.	Manipur	Imphal	State Govt.
3.	Nagaland	Kohima	State Govt.
4.	Sikkim	Gangtok	State Govt.
5.	Tripura	Agartala	State Govt.
(C) Union Territories			
1.	Andaman & Nicobar Islands	Port Blair	} Electricity Departments of Union Territories.
2.	Arunachal Pradesh	Itanagar	
3.	Chandigarh	Chandigarh	
4.	Dadra & Nagar Haveli*	Silvasa	
5.	Daman & Diu*	Moti (Daman)	
6.	Lakshadweep	Cochin	
7.	Mizoram	Aizawal	
8.	Pondicherry*	Pondicherry	

**Operation of the Power House is under the control of the Superintending Engineer (Operation), Andhra Pradesh State Electricity Board, Vishakapatnam.

*Non-Generating Undertakings.

TABLE NO. 3

Distribution of Licensee Undertakings—As on 31-3-1989

Sl. No.	Region/State	No. of Companies/Co-operatives			Total
		Genera- ting & Distributing	Genera- ting Purchasing & Distributing	Purchasing & Distri- buting	
<i>(A) Northern Region</i>					
1.	Jammu & Kashmir	—	—	1	1
2.	Rajasthan	—	—	3	3
3.	Uttar Pradesh	—	—	1	1
Total Northern Region		—	—	5	5
<i>(B) Western Region</i>					
1.	Gujarat	—	2	—	2
2.	Madhya Pradesh	—	—	13	13
3.	Maharashtra	—	1	2	3
Total Western Region		—	3	15	18
<i>(C) Southern Region</i>					
1.	Andhra Pradesh	—	—	9	9
2.	Karnataka	—	—	1	1
3.	Kerala	—	—	1	1
4.	Tamil Nadu	—	—	3	3
Total Southern Region		—	—	14	14
<i>(D) Eastern Region</i>					
1.	Bihar	—	—	1	1
2.	Orissa	—	—	1	1
3.	West Bengal	—	4	1	5
Total Eastern Region		—	4	3	7
<i>(E) North Eastern Region</i>					
Total (All India)		—	7	37	44

TABLE NO. 4

Distribution of Municipal Undertakings—As on 31-3-1989.

Sl. No.	Region/State	Number of Municipalities			
		Genera- ting & Distributing	Genera- ting, Distributing and purchasing	Purchasing & Distributing	Total
<i>(A) Northern Region</i>					
1.	Punjab	—	—	1	1
2.	Delhi	—	1	1	2
Total Northern Region		—	1	2	3
<i>(B) Western Region</i>					
1.	Gujarat	—	—	—	—
2.	Maharashtra	—	—	1	1
Total Western Region		—	—	1	1
<i>(C) Southern Region</i>					
1.	Kerala	—	—	1	1
2.	Tamil Nadu	—	—	5	5
Total Southern Region		—	—	6	6
<i>(D) Eastern Region</i>		—	—	—	—
<i>(E) North Eastern Region</i>		—	—	—	—
Total (All India)		—	1	9	10

TABLE No. 5

Acquisition of Electricity Supply Undertakings during 1988-89

Sl. No.	Name of the Undertaking	Prior Ownership	Date of acquisition	By whom acquired.
1.	Baroda Municipal Corporation	Municipality	10-5-88	Gujarat Electricity Board

TABLE No. 6

New Electricity supply Undertaking Started Operating during the year 1988-89

Sl. No.	Name & Address of new Undertaking	State	Date of Issue of Licence
No new electricity supply undertaking started operating during the Year 1988-89.			

SECTION II

Generating Capacity (Utilities)

SECTION II

INSTALLED GENERATING CAPACITY

During the year under review installed generating capacity under Public Utilities in the country increased to 59,040.38 MW as on 31-3-1989 as compared to 54,155.17 MW as on 31st March, 1988 registering an increase of 9.02% over the previous year.

After taking into account a few retirements of old generating sets during the year, the net addition in generating capacity amounted to 4,885.21 MW.

Generating capacity of steam stations continued to form the largest portion of the Installed generating capacity followed by Hydro, Nuclear, Gas and Diesel generating stations. The relative percentage of generating capacity of steam, hydro, gas, nuclear and diesel generating stations were 64.27%, 30.15%, 2.68%, 2.65% and 0.25%.

There were 104 steam stations and 239 hydro stations having 357 and 737 Nos. of generating sets with total capacity of 37,942.48 MW and 17,798.05 MW respectively as on 31st March, 1989.

Besides power-stations of public utilities, generating capacity of captive plants of various selected industries registered an increase of 18.60% during the year 1988-89. Generating capacity of captive plants increased from 6,256.11 MW to 7,419.89 MW comprising 3.60 MW of hydro, 4,515.85 MW of steam, 319.11 MW of gas turbine and 2,581.33 MW of diesel generation.

In addition to the above, captive plants of 103.60 MW captive generating capacity were owned by the Railways. The total installed generating capacity in the country including those of captive plants of selected industries and Railways was 66,563.87 MW as on 31st March, 1989.

The various tables in this Section give the detailed salient features of the Installed generating capacity in the country as on 31st March, 1989.

TABLE NO. 7

*All-India Installed Generating Capacity**(Utilities and non-Utilities)**Prinemoverwise—As on 31st March, 1989*

Category	Year ending	Installed Generating Capacity (MW)					
		Total	Hydro	Steam	Diesel	Gas	Nuclear
<i>Utilities</i>	31-3-89	59040.38	17798.05	37942.48	153.35	1581.50	1565.00
	31-3-88	54155.17	17265.33	34236.63	144.71	1178.50	1330.00
	%increase	9.02	3.09	10.82	5.97	34.20	17.67
<i>Non-Utilities</i>							
I. Selected Industries*	31-3-89	7419.89	3.60	4515.85	2581.33	319.11	—
	31-3-88	6256.11	3.60	3732.23	2277.77	242.51	—
	%increase	18.60	—	21.00	13.33	31.59	—
II. Railways	31-3-89	103.60	—	18.96	84.64	—	—
	31-3-88	88.53	—	18.96	69.57	—	—
	%increase	17.02	—	—	21.66	—	—
Total Non-Utilities (I&II)	31-3-89	7523.49	3.60	4534.81	2665.97	319.11	—
	31-3-88	6344.64	3.60	3751.19	2347.34	242.51	—
	%increase	18.58	—	20.89	13.57	31.59	—
All-India Capacity (Utilities + Non-Utilities)	31-3-89	66563.87	17801.65	42477.29	2819.32	1900.61	1565.00
	31-3-88	60499.81	17268.93	37987.82	2492.05	1421.01	1330.00
	%increase	10.02	3.08	11.82	13.13	33.75	17.67

*Industries having captive plant capacity of 1.00 M. W. and above.

TABLE NO. 8

All-India Installed Generating Capacity (Utilities only)

Ownershipwise and Primemoverwise—as on 31-3-1989

Sl. No.	Type of Primemover and ownership	Installed Plant Capacity		
		Total (MW)	% of All India Total Capacity	%increase over previous year
I. HYDRO				
<i>Public Sector</i>				
(a)	State Electricity Boards	14245.86	24.13	3.84
(b)	Electricity Deptts./Govt. Undertakings/Corporations/Central Govt. Sector.	3276.19	5.55	0.20
(c)	Municipalities	—	—	—
	Total-Public Sector	17522.05	29.68	3.14
<i>Private Sector</i>				
(d)	Companies	276.00	0.47	—
	Total (Hydro)	17798.05	30.15	3.09
II. STEAM				
<i>Public Sector.</i>				
(a)	State Electricity Boards	22736.00	38.51	5.52
(b)	Electricity Deptts./Govt. Undertakings/Corporations/Central Govt. Sector	12978.50	21.98	21.98
(c)	Municipalities	304.10	0.52	28.53
	Sub-Total-Public Sector	36018.60	61.01	11.09
<i>Private Sector</i>				
(d)	Companies	1923.88	3.26	6.06
	Total (Steam)	37942.48	64.27	10.82
III. DIESEL				
<i>Public Sector</i>				
(a)	State Electricity Boards	78.75	0.13	1.98
(b)	Electricity Deptts./Govt. Undertakings/Corpns./Central Govt. Sector	73.16	0.12	10.76
(c)	Municipalities	—	—	—
	Sub-Total-Public Sector	151.91	0.25	6.03
<i>Private Sector</i>				
(d)	Companies	1.44	Neg.	—
	Total (Diesel)	153.35	0.25	5.97

TABLE No. 8—(Contd.)

Sl. No.	Type of Primemover and ownership	Installed Plant Capacity		
		Total (MW)	%of All India Total Capacity	%increase over previous year
IV. GAS TURBINE				
<i>Public Sector</i>				
(a)	State Electricity Boards	1013.50	1.72	2.53
(b)	Electricity Deptts./Govt. Undertakings/Corporations/ Central Sector	388.00	0.66	3780.00
(c)	Municipalities	180.00	0.30	—
	Total-Public Sector	1581.50	2.68	34.20
<i>Private Sector</i>				
(d)	Companies	—	—	—
	Total (Gas)	1581.50	2.68	34.20
V. NUCLEAR				
<i>Public Sector</i>				
(a)	State Electricity Boards	—	—	—
(b)	Electricity Deptts./Govt. Undertakings/Corporations/ Central Govt. Sector	1565.00	2.65	17.67
(c)	Municipalities	—	—	—
	Total Public Sector	1565.00	2.65	17.67
<i>Private Sector</i>				
(d)	Companies	—	—	—
	Total (Nuclear)	1565.00	2.65	17.67
VI. GRAND TOTAL (I+II+III+IV+V)				
<i>Public Sector</i>				
(a)	State Electricity Boards (18 Nos.)	38074.11	64.49	4.80
(b)	Electricity Deptts./ Govt. Undertakings/Corpns./ Central Govt. Sector.	18280.85	30.96	19.36
(c)	Municipalities (11 Nos.)	484.10	0.82	16.20
	Total Public Sector (59 Nos.)	56839.06	96.27	9.17
<i>Private Sector</i>				
(d)	Companies (44 Nos.)	2201.32	3.73	5.26
	Total (All India) (103 Nos.)	59040.38	100.00	9.02

Note:—Figures within brackets shows number of undertakings.
Neg.—Negligible

TABLE NO. 9
All-India Total Installed Generating Capacity (Utilities only)
Regionwise/Statewise—As on 31st March 1989

(In M.W.)

Region	State/U.Ts.	Total Capacity		
		31-3-88	31-3-89	% increase
<i>Northern Region</i>	Haryana	1569.32	1787.32	13.89
	Himachal Pradesh	153.57	273.57	78.14
	Jammu & Kashmir	209.54	234.54	11.93
	Punjab	2660.34	3048.14	14.58
	Rajasthan	1211.76	1466.76	21.04
	Uttar Pradesh	4886.79	5417.24	10.85
	Chandigarh	2.00	2.00	—
	Delhi	416.60	484.10	16.20
	Central Sector	4235.00	4758.00	12.35
	Sub-Total	15344.92	17471.67	13.86
<i>Western Region</i>	Gujarat	3862.93	3972.93	2.85
	Madhya Pradesh	3042.16	3087.16	1.48
	Maharashtra	7272.22	7482.22	2.89
	Goa	—	—	—
	D & N Haveli	—	—	—
	Daman & Diu	—	—	—
	Central Sector	2356.00	3276.00	39.05
	Sub-Total	16533.31	17818.31	7.77
<i>Southern Region</i>	Andhra Pradesh	3614.44	3614.44	—
	Karnataka	2529.80	2529.80	—
	Kerala	1476.50	1476.50	—
	Tamil Nadu	3300.05	3641.58	10.35
	Lakshadweep	4.05	4.87	20.25
	Pondicherry	—	—	—
	Central Sector	2300.00	3300.00	43.48
	Sub-Total	13224.84	14567.19	10.15
<i>Eastern Region</i>	Bihar	1549.43	1549.43	—
	Orissa	1394.42	1394.42	—
	West Bengal	2619.38	2619.38	—
	D.V.C.	1841.50	1931.50	4.89
	A & N Islands	15.76	15.19	(—)3.62
	Sikkim	17.79	21.29	19.67
	Central Sector	630.00	630.00	—
	Sub-Total	8068.28	8161.21	1.15
<i>North Eastern Region</i>	Assam	507.19	537.19	5.91
	Manipur	9.81	10.01	2.04
	Meghalaya	133.76	133.76	—
	Nagaland	5.37	6.12	13.97
	Tripura	32.15	32.15	—
	Arunachal Pradesh	20.43	22.04	7.88
	Mizoram	20.10	25.72	27.96
	Central Sector	255.01	255.01	—
	Sub-Total	983.82	1022.10	3.88
	Total (All India)	54155.17	59040.38	9.02

Note:—Installed capacity of jointly owned projects have been shown divided between partner States as per their theoretical shares.

TABLE NO. 10

Installed Generating Capacity (Utilities only)
Ownership-wise/Region-wise/State-wise—As on 31-3-89

(In M.W.)

Region	State/U.Ts.	Public Sector		
		State Electricity Boards		
		31-3-88	31-3-89	%increase
<i>Northern Region</i>	Haryana	1569.32	1787.32	13.89
	Himachal Pradesh	153.57	273.57	78.14
	Jammu & Kashmir	209.54	234.54	11.93
	Punjab	2660.34	3048.14	14.58
	Rajasthan	1211.76	1466.76	21.04
	Uttar Pradesh	4886.79	4997.24	2.26
	Chandigarh	—	—	—
	Delhi	—	—	—
	Central Sector	—	—	—
	Sub-Total	10691.32	11807.57	10.44
<i>Western Region</i>	Gujarat	3461.63	3461.63	—
	Madhya Pradesh	3042.16	3087.16	1.48
	Maharashtra	6158.72	6368.72	3.41
	Goa	—	—	—
	D & N Haveli	—	—	—
	Daman & Diu	—	—	—
	Central Sector	—	—	—
		Sub-Total	12662.51	12917.51
<i>Southern Region</i>	Andhra Pradesh	3476.51	3476.51	—
	Karnataka	206.20	206.20	—
	Kerala	1476.50	1476.50	—
	Tamil Nadu	3300.05	3641.58	10.35
	Lakshadweep	—	—	—
	Pondicherry	—	—	—
	Central Sector	—	—	—
	Sub-Total	8459.26	8800.79	4.04
<i>Eastern Region</i>	Bihar	1549.43	1549.43	—
	Orissa	1100.00	1100.00	—
	West Bengal	1227.86	1227.86	—
	D.V.C.	—	—	—
	A & N Islands	—	—	—
	Sikkim	—	—	—
	Central Sector	—	—	—
	Sub-Total	3877.29	3877.29	—
<i>North Eastern Region</i>	Assam	507.19	537.19	5.91
	Manipur	—	—	—
	Meghalaya	133.76	133.76	—
	Nagaland	—	—	—
	Tripura	—	—	—
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
	Central Sector	—	—	—
	Sub-Total	640.95	670.95	4.68
	Total (All-India)	36331.33	38074.11	4.80

TABLE No. 10 (Contd.)

State/U. Ts.	Public Sector		
	Electricity Deptts./Govt. Undertakings		
	31-3-88	31-3-89	%increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	420.00	—
Chandigarh	2.00	2.00	—
Delhi	—	—	—
Central Sector	4235.00	4758.00	12.35
Sub-Total	4237.00	5180.00	22.26
Gujarat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	2356.00	3276.00	39.05
Sub-Total	2356.00	3276.00	39.05
Andhra Pradesh	137.93	137.93	—
Karnataka	2323.60	2323.60	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	4.05	4.87	20.25
Pondicherry	—	—	—
Central Sector	2300.00	3300.00	43.48
Sub-Total	4765.58	5766.40	21.00
Bihar	—	—	—
Orissa	294.42	294.42	—
West Bengal	815.00	815.00	—
D.V.C.	1841.50	1931.50	4.89
A & N Islands	15.76	15.19	(—) 3.62
Sikkim	17.79	21.29	19.67
Central Sector	630.00	630.00	—
Sub-Total	3614.47	3707.40	2.57
Assam	—	—	—
Manipur	9.81	10.01	2.04
Meghalaya	—	—	—
Nagaland	5.37	6.12	13.97
Tripura	32.15	32.15	—
Arunachal Pradesh	20.43	22.04	7.88
Mizoram	20.10	25.72	27.96
Central Sector	255.01	255.01	—
Sub-Total	342.87	351.05	2.39
Total (All India)	15315.92	18280.85	19.36

TABLE NO. 10₂(Contd.)

State/U.Ts.	Public Sector		
	Municipalities		
	31-3-88	31-3-89	%increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	416·60	484·10	16·20
Central Sector	—	—	—
Sub Total	416·60	484·10	16·20
Gujarat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	—	—	—
D.V.C.	—	—	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Assam	—	—	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Total (All India)	416·60	484·10	16·20

TABLE No. 10 (Contd.)

State/U.Ts.	Private Sector		
	31-3-88	31-3-89	%increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Gujarat	401.30	511.30	27.41
Madhya Pradesh	—	—	—
Maharashtra	1113.50	1113.50	—
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
Sub-Total	1514.80	1624.80	7.26
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	576.52	576.52	—
D.V.C.	—	—	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
Sub-Total	576.52	576.52	—
Assam	—	—	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
Sub-Total	—	—	—
Total (All India)	2091.32	2201.32	5.26

TABLE NO. 11
Installed Generating Capacity (Utilities Only) Primemoverwise/
Regionwise/Statewise—as on 31st March, 1989 (In M.W.)

Region	State/U.Ts.	HYDRO		
		31-3-88	31-3-89	%increase
<i>Northern Region</i>	Harayana	867.90	875.90	0.92
	Himachal Pradesh	152.07	272.07	78.91
	Jammu & Kashmir	180.28	180.28	—
	Punjab	1590.34	1768.14	11.18
	Rajasthan	866.76	911.76	5.19
	Uttar Pradesh	1432.10	1432.55	0.03
	Chandigarh	—	—	—
	Delhi	—	—	—
	Central Sector	525.00	525.00	—
	SUB-TOTAL	5614.45	5965.70	6.26
<i>Western Region</i>	Gujarat	305.00	305.00	—
	Madhya Pradesh	344.66	389.66	13.06
	Maharashtra	1535.22	1535.22	—
	Goa	—	—	—
	D & N Haveli	—	—	—
	Daman & Diu	—	—	—
	Central Sector	—	—	—
		SUB-TOTAL	2184.88	2229.88
<i>Southern Region</i>	Andhra Pradesh	2421.94	2421.94	—
	Karnataka	2109.80	2109.80	—
	Kerala	1476.50	1476.50	—
	Tamil Nadu	1798.95	1928.95	7.23
	Lakshadweep	—	—	—
	Pondicherry	—	—	—
	Central Sector	—	—	—
		SUB-TOTAL	7807.19	7937.19
<i>Eastern Region</i>	Bihar	150.00	150.00	—
	Orissa	924.42	924.42	—
	West Bengal	46.91	46.91	—
	D.V.C.	104.00	104.00	—
	A & N Islands	—	—	—
	Sikkim	15.09	18.59	23.19
	Central Sector	—	—	—
	SUB-TOTAL	1240.42	1243.92	0.28
<i>North Eastern Region</i>	Assam	2.00	2.00	—
	Manipur	2.40	2.60	8.33
	Meghalaya	126.71	126.71	—
	Nagaland	1.75	2.50	42.86
	Tripura	16.01	16.01	—
	Arumachal Pradesh	13.51	14.16	4.81
	Mizoram	1.00	2.37	137.00
	Central Sector	255.01	255.01	—
		SUB-TOTAL	418.39	421.36
	TOTAL (ALL-INDIA)	17265.33	17798.05	3.09

TABLE No. 11 (Contd.)

(In M.W.)

State/U.ta.	STEAM		
	31-3-88	31-3-89	%increase
Harayana	697.50	907.50	30.11
Himachal Pradesh	—	—	—
Jammu & Kashmir	22.50	22.50	—
Punjab	1070.00	1280.00	19.63
Rajasthan	345.00	555.00	60.87
Uttar Pradesh	3448.50	3978.50	15.37
Chandigarh	—	—	—
Delhi	236.60	304.10	28.53
Central Sector	8270.00	3270.00	—
SUB-TOTAL	9090.10	10317.60	13.50
Gujarat	3499.50	3609.50	3.14
Madhya Pradesh	2697.50	2697.50	—
Maharashtra	5065.00	5275.00	4.15
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	1936.00	2856.00	47.52
SUB-TOTAL	13198.00	14438.00	9.40
Andhra Pradesh	1192.50	1192.50	—
Karnataka	420.00	420.00	—
Kerala	—	—	—
Tamil Nadu	1500.00	1710.00	14.00
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	1830.00	2830.00	54.64
SUB-TOTAL	4942.50	6152.50	24.48
Bihar	1393.50	1393.50	—
Orissa	470.00	470.00	—
West Bengal	2446.38	2446.38	—
D.V.C.	1737.50	1737.50	—
A & N Islands	1.65	—	(—)100.00
Sikkim	—	—	—
Central Sector	630.00	630.00	—
SUB-TOTAL	6679.03	6677.38	(—)0.02
Assam	320.00	352.00	9.32
Manipur	—	—	—
Meghalaya	5.00	5.00	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
SUB-TOTAL	327.00	357.00	9.17
TOTAL (ALL-INDIA)	34236.63	37942.48	10.82

TABLE NO. 11 (Contd.)

State/U.ts.	DIESEL & WIND		
	31-3-88	31-3-89	% increase
Haryana	3.92	3.92	—
Himachal Pradesh	1.50	1.50	—
Jammu & Kashmir	6.76	6.76	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	6.19	6.19	—
Chandigarh	2.00	2.00	—
Delhi	—	—	—
Central Sector	—	—	—
SUB-TOTAL	20.37	20.37	—
Gujarat	4.43**	4.43**	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	4.43	4.43	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	1.10*	2.63*	139.09
Lakshadweep	4.05	4.87	20.25
Pondicherry	—	—	—
Central Sector	—	—	—
SUB-TOTAL	5.15	7.50	45.63
Bihar	5.93	5.93	—
Orissa	—	—	—
West Bengal	26.09	26.09	—
D.V.C.	—	—	—
A & N Islands	14.11	15.19	7.65
Sikkim	2.70	2.70	—
Central Sector	—	—	—
SUB-TOTAL	48.83	49.91	2.21
Assam	20.69	20.69	—
Manipur	7.41	7.41	—
Meghalaya	2.05	2.05	—
Nagaland	3.62	3.62	—
Tripura	6.14	6.14	—
Arunachal Pradesh	6.92	7.88	13.87
Mizoram	19.10	23.25	22.25
Central Sector	—	—	—
SUB-TOTAL	65.93	71.14	7.90
TOTAL (ALL-INDIA)	144.71	153.35	5.97

*Wind mill generating capacity

**Includes 1.10 MW of wind mill generating capacity

TABLE No. 11 (contd.)

State/UTs.	GAS		
	31-3-88	31-3-89	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	25.00	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	180.00	180.00	—
Central Sector	—	288.00	—
SUB-TOTAL	180.00	493.00	173.89
Gujarat	54.00	54.00	—
Madhya Pradesh	—	—	—
Maharashtra	672.00	672.00	—
Goa	—	—	—
Dadar & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	726.00	726.00	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	100.00	100.00	—
D.V.C.	—	90.00	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
SUB-TOTAL	100.00	190.00	90.00
Assam	162.50	162.50	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	10.00	10.00	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
SUB-TOTAL	172.50	172.50	—
TOTAL (ALL-INDIA)	1178.50	1581.50	34.20

TABLE No. 11 (contd.)

State/U-Ts.	NUCLEAR		
	31-3-88	31-3-89	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	440·00	675·00	53·41
SUB-TOTAL	440·00	675·00	53·41
Gujarat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
Dadar & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	420·00	420·00	—
SUB-TOTAL	420·00	420·00	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	470·00	470·00	—
SUB-TOTAL	470·00	470·00	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	—	—	—
D.V.C.	—	—	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Assam	—	—	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
TOTAL (ALL INDIA)	1330·0	1565·00	17·67

TABLE NO. 12

Installed Generating Capacity of State Electricity Boards Primemoverwise
as on 31st March, 1989 (in M.W.)

(in MW)

Region	State/UTs.	HYDRO		
		31-3-88	31-3-89	% increase
<i>Nothern Region</i>	Haryana	867.90	875.90	0.92
	Himachal Pradesh	152.07	272.07	78.91
	Jammu & Kashmir	180.28	180.28	—
	Punjab	1590.34	1768.14	11.18
	Rajasthan	866.76	911.76	5.19
	Uttar Pradesh	1432.10	1432.55	0.03
	SUB-TOTAL	5089.45	5440.70	6.90
<i>Western Region</i>	Gujarat	305.00	305.00	—
	Madhya Pradesh	344.66	389.66	13.06
	Maharashtra	1259.22	1259.22	—
	SUQ-TOTAL	1908.88	1953.88	2.36
<i>Southern Region</i>	Andhra Pradesh	2284.01	2284.01	—
	Karnataka	206.20	206.20	—
	Kerala	1476.50	1476.50	—
	Tamil Nadu	1798.95	1928.95	7.23
	SUO-TOTAL	5765.66	5895.66	2.25
<i>Eastern Region</i>	Bihar	150.00	150.00	—
	Orissa	630.00	630.00	—
	West Bengal	46.91	46.91	—
	SUO-TOTAL	826.91	826.91	—
<i>North Eastern Region</i>	Assam	2.00	2.00	—
	Meghalaya	126.71	126.71	—
	SUO-TOTAL	128.71	128.71	—
TOTAL (ALL-INDIA).		13719.61	14245.86	3.84

TABLE NO. 12 (contd.)

(in MW)

State/U.Ts.	STEAM		
	31-3-88	31-3-89	% increase
Haryana	697.50	907.50	30.11
Himachal Pradesh	—	—	—
Jammu & Kashmir	22.50	22.50	—
Punjab	1070.00	1280.00	19.63
Rajasthan	345.00	555.00	60.87
Uttar Pradesh	3448.50	3558.50	3.19
SUB-TOTAL	5583.50	6323.50	13.25
Gujarat	3099.50	3099.50	—
Madhya Pradesh	2697.50	2697.50	—
Maharashtra	4227.50	4437.50	4.97
SUB-TOTAL	10024.50	10234.50	2.09
Andhra Pradesh	1192.50	1192.50	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	1500.00	1710.00	14.00
SUB-TOTAL	2692.50	2902.50	7.80
Bihar	1393.50	1393.50	—
Orissa	470.00	470.00	—
West Bengal	1055.00	1055.00	—
SUB-TOTAL	2918.50	2918.50	—
Assam	322.00	352.00	9.32
Meghalaya	5.00	5.00	—
SUB-TOTAL	327.00	357.00	9.17
TOTAL (ALL BOARDS)	21546.00	22736.00	5.52

TABLE No. 12 (contd.)

(in MW)

State/U.Ts.	DIESEL & WIND		
	31-3-88	31-4-89	% increase
Haryana	3.92	3.92	—
Himachal Pradesh	1.50	1.50	—
Jammu & Kashmir	6.76	6.76	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	6.19	6.19	—
SUB-TOTAL	18.37	18.37	—
Gujarat	3.13	3.13	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
SUB-TOTAL	3.13	3.13	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	1.10*	2.63*	139.09
SUB-TOTAL	1.10*	2.63*	139.09
Bihar	5.93	5.93	—
Orissa	—	—	—
West Bengal	25.95	25.95	—
SUB-TOTAL	31.88	31.88	—
Assam	20.69	20.69	—
Meghalaya	2.05	2.05	—
SUB-TOTAL	22.74	22.74	—
TOTAL (ALL-BOARDS)	77.22	78.75	1.98

*Wind Mill generating capacity

TABLE No. 12 (contd.)

(in MW)

State/U.Ts.	GAS		
	31-3-88	31-3-89	%increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	25.00	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
SUB-TOTAL	—	25.00	—
Gujarat	54.00	54.00	—
Madhya Pradesh	—	—	—
Maharashtra	672.00	672.00	—
SUB-TOTAL	726.00	726.00	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
SUB-TOTAL	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	100.00	100.00	—
SUB-TOTAL	100.00	100.00	—
Assam	162.50	162.50	—
Meghalaya	—	—	—
SUB-TOTAL	162.50	162.50	—
TOTAL (ALL BOARDS)	988.50	1013.50	2.53

TABLE No. 12 (contd.)

State/U. Ts.	TOTAL		
	31-3-88	31-2-89	% increase
Harayana	1569.32	1787.32	13.89
Himachal Pradesh	153.57	273.57	78.14
Jammu & Kashmir	209.54	234.54	11.93
Punjab	2660.34	3048.14	14.58
Rajasthan	1211.76	1466.76	21.04
Uttar Pradesh	4886.79	4997.24	2.26
SUB-TOTAL	10691.32	11807.57	10.44
Gujarat	3461.63	3461.63	—
Madya Pradesh	3042.16	3087.16	1.48
Maharashtra	6158.72	6368.72	3.41
SUB-TOTAL	12662.51	12917.51	2.01
Andhra Pradesh	3476.51	3476.51	—
Karnataka	206.20	206.20	—
Kerala	1476.50	1476.50	—
Tamil Nadu	3300.05	3641.58	10.35
SUB-TOTAL	8459.26	8800.79	4.04
Bihar	1549.43	1549.43	—
Orissa	1100.00	1100.00	—
West Bengal	1227.86	1227.86	—
SUB-TOTAL	3877.29	3877.29	—
Assam	507.19	537.19	5.91
Meghalaya	133.76	133.76	—
SUB-TOTAL	640.95	670.95	4.68
TOTAL (ALL BOARDS)	36331.33	38074.11	4.80

TABLE NO. 13

Installed Generating capacity of Electricity Departments/Govt. undertakings, Municipalities and Private Sector Primemoverwise/ Regionwise as on 31-3-1989.

(In MW)

Ownership	TOTAL			
	31-3-88	31-3-89	% increase	
I. Electricity Department/ Govt. Undertaking/ Corporation/				
Central Sector				
<i>Northern Region</i>	Uttar Pradesh	—	420 .00	—
	Chandigarh	2 .00	2 .00	—
	Central Sector	4235 .00	4758 .00	12 .35
<i>Western Region</i>	Central Sector	2356 .00	3276 .00	39 .05
<i>Southern Region</i>	Andhra Pradesh	137 .93	137 .93	—
	Karnataka	2323 .60	2323 .60	—
	Lakshadweep	4 .05	4 .87	20 .25
	Central Sector	2300 .00	3300 .00	43 .48
<i>Eastern Region</i>	Orissa	294 .42	294 .42	—
	West Bengal	815 .00	815 .00	—
	Sikkim	17 .79	21 .29	19 .67
	D.V.C.	1841 .50	1931 .50	4 .89
	A & N Islands	15 .76	15 .19	(—)3 .62
	Central Sector	630 .00	630 .00	—
<i>North Eastern Region</i>	Manipur	9 .81	10 .01	2 .04
	Nagaland	5 .37	6 .12	13 .97
	Tripura	32 .15	32 .15	—
	Arunachal Pradesh	20 .43	22 .04	7 .88
	Mizoram	20 .10	25 .72	27 .96
	Central Sector	255 .01	255 .01	—
	TOTAL(I)	15315 .92	18280 .85	19 .36
II. Municipalities				
<i>Northern Region</i>	Delhi	416 .60	484 .10	16 .20
	TOTAL(II)	416 .60	484 .10	16 .20
III. Private Licenses				
<i>Western Region</i>	Gujarat	401 .30	511 .30	27 .41
	Maharashtra	1113 .50	1113 .50	—
<i>Eastern Region</i>	West Bengal	576 .52	576 .52	—
	TOTAL(III)	2091 .32	2201 .32	5 .26

TABLE No. 13(contd.)

Ownership	HYDRO			
	31-3-88	31-3-89	% increase	
I. Electricity Department/ Govt. Undertaking/Corporation				
Central Sector				
<i>Northern Region</i>	Uttar Pradesh	—	—	
	Chandigarh	—	—	
	Central Sector	525.00	525.00	
<i>Western Region</i>	Central Sector	—	—	
<i>Southern Region</i>	Andhra Pradesh	137.93	137.93	
	Karnataka	1903.60	1903.60	
	Lakshdweep	—	—	
	Central Sector	—	—	
<i>Eastern Region.</i>	Orissa	294.42	294.42	
	West Bengal	—	—	
	Sikkim	15.09	18.59	23.19
	D.V.C.	104.00	104.00	—
	A & N Islands	—	—	—
	Central Sector	—	—	—
<i>North Eastern Region</i>	Manipur	2.40	2.60	8.33
	Nagaland	1.75	2.50	42.86
	Tripura	16.01	16.01	—
	Arunachal Pradesh	13.51	14.16	4.81
	Mizoram	1.00	2.37	137.00
	Central Sector	255.01	255.01	—
	TOTAL(I)	3269.72	3276.19	0.20
II. Municipalities				
<i>Northern Region</i>	Delhi	—	—	—
	TOTAL(II)	—	—	—
III. Private Licensees :				
<i>Western Region</i>	Gujarat	—	—	—
	Maharashtra	276.00	276.00	—
<i>Eastern Region</i>	West Bengal	—	—	—
	TOTAL(III)	276.00	276.00	—

TABLE NO. 13 (contd.)

Ownership	STEAM			
	31-3-88	31-3-89	% increase	
I. Electricity Department/Govt. Undertaking/Corporation/				
Central Sector				
<i>Northern Region</i>	Uttar Pradesh	—	420·00	—
	Chandigarh	—	—	—
	Central Sector	3270·00	3270·00	—
<i>Western Region</i>	Central Sector	1936·00	2856·00	47·52
<i>Southern Region</i>	Andhra Pradesh	—	—	—
	Karnataka	420·00	420·00	—
	Lakshadweep	—	—	—
	Central Sector	1830·00	2830·00	54·64
<i>Eastern Region</i>	Orissa	—	—	—
	West Bengal	815·00	815·00	—
	Sikkim	—	—	—
	D.V.C.	1737·50	1737·50	—
	A & N Islands	1·65	—	—
	Central Sector	630·00	630·00	—
<i>North Eastern Region</i>	Manipur	—	—	—
	Nagaland	—	—	—
	Tripura	—	—	—
	Arunchal Pradesh	—	—	—
	Mizoram	—	—	—
	Central Sector	—	—	—
	TOTAL (I)	10640·15	12978·50	21·98
II. Municipalities				
<i>Northern Region</i>	Delhi	236·60	304·10	28·53
	TOTAL (II)	236·60	304·10	28·53
III. Private Licensees :				
<i>Western Region</i>	Gujarat	400·00	510·00	27·50
	Maharashtra	837·50	837·50	—
<i>Eastern Region</i>	West Bengal	576·38	576·38	—
	TOTAL(III)	1813·88	1923·88	6·06

TABLE No. 13—(contd.)

Ownership	DIESEL & WIND		
	31-3-88	31-3-89	% increase
I. Electricity Department/Govt. Undertaking/Corporation/			
Central Sector			
<i>Northern Region</i>	Uttar Pradesh	—	—
	Chandigarh	2·00	2·00
	Central Sector	—	—
<i>Western Region</i>	Central Sector	—	—
<i>Southern Region</i>	Andhra Pradesh	—	—
	Karnataka	—	—
	Lakshdweep	4·05	4·87
	Central Sector	—	—
<i>Eastern Region</i>	Orissa	—	—
	West Bengal	—	—
	Sikkim	2·70	2·70
	D.V.C.	—	—
	A & N Islands	14·11	15·19
	Central Sector	—	—
<i>North Eastern Region</i>	Manipur	7·41	7·41
	Nagaland	3·62	3·62
	Tripura	6·14	6·14
	Arunachal Pradesh	6·92	7·88
	Mizoram	19·10	23·35
	Central Sector	—	—
	TOTAL(I)	66·05	73·16
II. Municipalities			
<i>Northern Region</i>	Delhi	—	—
	TOTAL(II)	—	—
III. Private Licensees :			
<i>Western Region</i>	Gujarat	1·30*	1·30
	Maharashtra	—	—
<i>Eastern Region.</i>	West Bengal	0·14	0·14
	TOTAL(III)	1·44	1·44

Note : *Includes 1·10 MW Wind Mill Capacity .

TABLE No. 13—(contd.)

Ownership	GAS		
	31-3-88	31-3-89	% increase
I. Electricity Department/Govt. Undertaking/Corporation/			
Central Sector			
<i>Northern Region</i>	Uttar Pradesh	—	—
	Chandigarh	—	—
	Central Sector	288.00	—
<i>Western Region</i>	Central Sector	—	—
<i>Southern Region</i>	Andhra Pradesh	—	—
	Karnataka	—	—
	Lakshadweep	—	—
	Central Sector	—	—
<i>Eastern Region.</i>	Orissa	—	—
	West Bengal	—	—
	Sikkim	—	—
	D.V.C.	90.00	—
	A & N Islands	—	—
	Central Sector	—	—
<i>North Eastern Region</i>	Manipur	—	—
	Nagaland	—	—
	Tripura	10.00	10.00
	Arunachal Pradesh	—	—
	Mizoram	—	—
	Central Sector	—	—
	TOTAL	10.00	388.00
3780.00			
II. Municipalities			
<i>Northern Region</i>	Delhi	180.00	180.00
	Total (II)	180.00	180.00
III. Private Sector :			
<i>Western Region</i>	Gujarat	—	—
	Maharashtra	—	—
<i>Eastern Region</i>	West Bengal	—	—
	Total (III)	—	—

TABLE NO. 13 (contd.)

Ownership	NUCLEAR		
	31-3-88	31-3-89	% increase
I. Electricity Department/ Government Undertaking/ Corp./Central Sector.			
<i>Northern Region</i>			
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Central Sector	440.00	675.00	53.41
<i>Western Region</i>			
Central Sector	420.00	420.00	—
<i>Southern Region</i>			
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Lakshadweep	—	—	—
Central Sector	470.00	470.00	—
<i>Eastern Region</i>			
Orrisa	—	—	—
West Bengal	—	—	—
Sikkim	—	—	—
D. V. C.	—	—	—
A & N-Islands	—	—	—
Central Sector	—	—	—
<i>North-Eastern Region</i>			
Manipur	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Total (I)	1330.00	1565.00	17.67
II. Municipalities			
<i>Northern Region</i>			
Delhi	—	—	—
Total (II)	—	—	—
II. Private Licensees			
<i>Western Region</i>			
Gujarat	—	—	—
Maharashtra	—	—	—
<i>Eastern Region</i>			
West Bengal	—	—	—
Total (III)	—	—	—

TABLE NO. 14
Addition in Generating Capacity (Utilities only)
During the year 1988-89

Sl. No.	Installed at	State/UT/ Ownership	Date of addition	No. of sets	Capacity of each Set (MW)	Total capacity added (MW)
A. HYDRO						
1.	Western Yamuna Canal (Unit-5)	Haryana S.E.B.	27-3-89	1	8.00	8.00
2.	Sanjay Bhabha (Unit 1, 2 & 3)	Himachal Pradesh S.E.B.	15-3-89 21-3-89 31-3-89	3	40.00	120.00
3.	Mukerian Power House-II (Unit-4, 5, & 6)	Punjab S.E.B.	5-5-88 3-6-88 28-2-89	3	15.00	45.00
4.	Mukerian Power House-III (Unit-7, 8 & 9)	Punjab S.E.B.	28-2-89 24-2-89 11-3-89	3	19.50	58.50
5.	Mukerian Power House -IV (Unit-10, 11 & 12)	Punjab S.E.B.	2-3-89 8-3-89 25-3-89	3	19.50	58.50
6.	Thubi (Unit-1)	Punjab S.E.B.	22-2-89	1	0.40	0.40
7.	Rohit (Unit-1)	Punjab S.E.B.	5-3-89*	1	0.40	0.40
8.	U. B. D. C. II (Unit-1)	Punjab S.E.B.	28-3-89*	1	15.00	15.00
9.	Mahi Bajaj St-II (Unit-1)	Rajasthan S.E.B.	15-2-89	1	45.00	45.00
10.	Tharali (Unit-1)	Uttar Pradesh S.E.B.	April 88	1	0.40	0.40
11.	Badri Nath Extn. (Unit-1)	Uttar Pradesh S.E.B.	July, 88	1	0.03	0.03
12.	Gangotri (Unit-1, 2, 3 & 4)	Uttar Pradesh S.E.B.	July, 88	4	0.005	0.02
13.	Bagri (Unit-2)	Madhya Pradesh E.B.	29-11-88	1	45.00	45.00
14.	Kadamparai (Unit-3)	Tamilnadu E.B.	26-9-88	1	100.00	100.00
15.	Lower Mettur Power House-IV (Unit-1 & 2)	Tamilnadu E.B.	29-3-89* 28-12-88	2	15.00	30.00
16.	Rognitchu Unit 1, 2, 4,5 & 3)	Sikkim Govt. Deptt.	5-12-88 15-2-89	5	0.50	2.50
17.	Ranibi (Unit-1 & 2)	Sikkim Govt. Deptt.	27-3-89	2	0.50	1.00
18.	Depoani (Unit-3)	Arunachal Pradesh Govt. Deptt.	April, 88	1	0.25	0.25
19.	Egoichi (Unit-1, 2, 3 & 4)	Arunachal Pradesh Govt. Deptt.	April, 88	4	0.10	0.40
20.	Lok Chao (Unit-1)	Manipur Govt. Deptt.	Nov. 88	1	0.20	0.20
21.	Turirang (Unit-1, 2 & 3)	Mizoram Govt. Deptt.	April, 88 13-3-89	3	0.10	0.30
22.	Khawiva (Unit-1, 2 & 3)	Mizoram Govt. Deptt.	Sept. 88 Oct. 88 23-3-89	3	0.35	1.05
23.	Dikhu (Unit-2)	Nagaland Govt. Deptt.	April, 88	1	0.75	0.75
Total (Hydro)				47 Units		532.70

TABLE No. 14 (contd.)

Sl. No.	Installed at...	State/UT/ Ownership	Date of Addition	No. of Sets	Capacity of each set (MW)	Total capacity (M.W.)
B. STEAM, GAS & NUCLEAR						
1.	Panipat (Unit-5)	Haryana S.E.B.	28-3-89	1	210.00	210.00
2.	Pampore (Unit-1)	J & K S.E.B.	31-3-89	1	25.00	25.00**
3.	Kota (Unit-3)	Rajasthan S.E.B.	25.9.88	1	210.00	210.00
4.	Anta (Unit-1 & 2)	Rajasthan N. T. P. C. Central Sector	20.1.89 6-3-89	2	88.00	176.00**
5.	Unchahar (Unit-1 & 2)	Uttar Pradesh U. P. Rajya Vidyut Utpadan Nigam Ltd.,	21-11-88 22-3-89	2	210.00	420.00
6.	Tanda (Unit-2)	Uttar Pradesh S.E.B.	11-3-89	1	110.00	110.00
7.	Auraya (Unit-1)	Uttar Pradesh N.T.P.C. Central Sector	29-3-89	1	112.00	112.00**
8.	Narora (Unit-1)	Uttar Pradesh N.P.C.I. Central Sector	12-3-89	1	235.00	235.00
9.	Rajghat (Unit-1)	Delhi D.E.S.U.	10-3-89	1	67.50	67.50
10.	Roper St. II (Unit-4)	Punjab S.E.B.	29-1-89	1	210.00	210.00
11.	Sabarmati (Unit-3)	Gujarat Ahmedabad Elec. Co.	28-9-88	1	110.00	110.00
12.	Vindhyachal S.T.P.S. (Unit-2&3)	M.P. N.T.P.C. Central Sector	23-7-88 3-2-89	2	210.00	420.00
13.	Korba S.T.P.S. (Unit-6)	M.P. N.T.P.C. Central Sector	26-2-89	1	500.00	500.00
14.	Khaperkheda (Unit-1)	Maharashtra S.E.B.	26-3-89	1	210.00	210.00
15.	Ramagundam S.T.P.S. (Unit-4 & 5)	Andhra Pradesh N.T.P.C. Central Sector	26-6-88 26-3-89	2	500.00	1000.00
16.	Mettur (Unit-3)	Tamil Nadu E.B.	22-3-89	1	210.00	210.00
17.	Maithon G.T. (Unit-1, 2&3)	West Bengal D.V.C.	8-3-89 13-3-89 20-3-89	3	30.00	90.00**
18.	Chanderpur Extn. (Unit-2)	Assam S.E.B.	18-1-91	1	30.00	30.00
19.	Dieselset at different places.	Mizoram Govt. Deptt.		1	6.80	6.80
Total Thermal & Nuclear				25 units		4352.30
(Total (Hydel+Thermal+Nuclear))				72 units		4885.00

*Unit Rolled

SEB—State Electricity Board.

**Gas Turbine.

Note :—Excludes capacity addition in small Hydel/Thermal and Diesel Power Stations.

TABLE No. 15
Addition/Deletion of Plant Capacity Primemoverwise/Regionwise/Statewise
During the Year 1988-89.

Region	Name of state/UTs.	Hydro	Steam	Diesel
<i>Northern Region</i>	Haryana	8.00	210.00	—
	Himachal Pradesh	120.00	—	—
	Jammu & Kashmir	—	—	—
	Punjab	177.80	210.00	—
	Rajasthan	45.00	210.00	—
	Uttar Pradesh	0.45	530.00	—
	Chandigarh	—	—	—
	Delhi	—	67.50	—
Central Sector	—	—	—	
	SUB-TOTAL	315.25	1227.50	—
<i>Western Region</i>	Gujarat	—	110.00	—
	Madhya Pradesh	45.00	—	—
	Maharashtra	—	210.00	—
	Goa	—	—	—
	Daman & Diu	—	—	—
	Dadra & Nagar Haveli	—	—	—
	Central Sector	—	920.00	—
	SUB-TOTAL	45.00	1240.00	—
<i>Southern Region</i>	Andhra Pradesh	—	—	—
	Karnataka	—	—	—
	Kerala	—	—	—
	Tamil Nadu	130.00	210.00	1.53(A)
	Pondicherry	—	—	—
	Lakshadweep	—	—	0.82(B)
Central Sector	—	1000.00	—	
	SUB-TOTAL	130.00	1210.00	2.35
<i>Eastern Region.</i>	Bihar	—	—	—
	Orissa	—	—	—
	West Bengal	—	—	—
	D.V.C.	—	—	—
	A & N Islands	—	(—)1.65(C)	1.08(D)
	Sikkim50	—	—
	Central Sector	—	—	—
	SUB-TOTAL	3.50	(—)1.65	1.08
<i>North Eastern Region</i>	Assam	—	30.00	—
	Manipur	0.20	—	—
	Meghalaya	—	—	—
	Nagaland	0.75	—	—
	Tripura	—	—	—
	Arunachal Pradesh	0.65	—	0.96(E)
	Mizoram	1.37(F)	—	4.25(G)
Central Sector	—	—	—	
	SUB-TOTAL	2.97	30.00	5.21
	TOTAL (ALL-INDIA)	532.72	3705.85	8.64

TABLE NO. 15 (contd.)

Name of States/UTs.	Gas	Nuclear	Total			
Haryana	—	—	218.00			
Himachal Pradesh	—	—	120.00			
Jammu & Kashmir	25.00	—	25.00			
Punjab	—	—	387.80			
Rajasthan	—	—	255.00			
Uttar Pradesh	—	—	530.45			
Chandigarh	—	—	—			
Delhi	—	—	67.50			
Central Sector	288.00	235.00	523.00			
SUB-TOTAL	313.00	235.00	2126.75			
Gujarat	—	—	110.00			
Madhya Pradesh	—	—	45.00			
Maharashtra	—	—	210.00			
Goa	—	—	—			
Daman & Diu	—	—	—			
Dadra & Nagar Haveli	—	—	—			
Central Sector	—	—	920.00			
SUB-TOTAL	—	—	1285.00			
Andhra Pradesh	—	—	—			
Karnataka	—	—	—			
Kerala	—	—	—			
Tamil Nadu	—	—	341.53			
Pondicherry	—	—	—			
Lakshdweep	—	—	0.82			
Central Sector	—	—	1000.00			
SUB-TOTAL	—	—	1342.35			
Bihar	—	—	—			
Orissa	—	—	—			
West Bengal	—	—	—			
D.V.C.	90.00	—	90.00			
A & N Islands	—	—	(—) 0.57			
Sikkim	—	—	3.50			
Central Sector	—	—	—			
SUB TOTAL	90.00	—	92.93			
Assam	—	—	30.00			
Manipur	—	—	0.20			
Meghalaya	—	—	—			
Nagaland	—	—	0.75			
Tripura	—	—	—			
Arunachal Pradesh	—	—	1.61			
Mizoram	—	—	5.62			
Central Sector	—	—	—			
SUB-TOTAL	—	—	38.18			
TOTAL (ALL-INDIA)	403.00	235.00	4885.21			
	Total	Hydro	Steam	Diesel	Gas	Nuclear
Gross addition	4889.41	532.72	3707.50	11.19	403.00	235.00
Deletion/ Retirement	4.20	—	1.65	2.55	—	—
Reporting Difference/Updating	—	—	—	—	—	—
Net Additions	4885.21	532.72	3705.85	8.64	403.00	235.00

TABLE No 15 (contd.)

NOTE :—

- (A) Addition of 1.53 MW Wind Mill Generating Capacity.
- (B) Addition of 0.82 MW in different Diesel Power Houses.
- (C) Deletion of three units of 0.55 MW each at Chathaur Power Stations.
- (D) Addition of 1.08 MW in different Diesel Power Houses.
- (E) Addition of 0.96 MW in different Diesel Power Houses.
- (F) Addition of one unit of 0.02 MW at Tuila Power House, three units of 0.10 MW each at Turivang and three units of 0.35 MW each at Khawiya Power House.
- (G) Addition of 6.80 MW and deletion of 2.55 MW at different Diesel Power Houses.

TABLE No. 16

Classification of Generating Undertakings—Capacitywise as on 31-3-89

Range of Installed capacity(MW)	No. of undertakings	Aggregate installed capacity of the group(MW)	% to total installed capacity	Energy generated by the group(GWH)	% to total generation
Upto 1·00	3	0·35	Neg.	0·06	Neg.
Over 1·00 and upto 2·00.	2	3·10	Neg.	1·56	Neg.
Over 2·00 and upto 5·00	1	4·87	0·01	7·27	Neg.
Over 5·00 and upto 10·00	2	14·50	0·03	27·88	0·01
Over 10·00 and upto 15·00	1	10·01	0·02	2·06	Neg.
Over 15·00 and upto 25·00	4	76·52	0·13	195·00	0·09
Over 25·00 and upto 50·00	2	57·87	0·10	120·17	0·06
Over 50·00 and upto 100·00	3	268·00	0·45	776·09	0·35
Over 100·00 and upto 500·00	21	5974·92	10·12	17341·99	7·83
Over 500·00 and upto 1000·00	8	4807·19	8·14	20104·36	9·08
Over 1000·00 and upto 2000·00	9	13252·87	22·45	44386·23	20·05
Over 2000·00 and upto 3000·00	3	6489·20	10·99	28803·11	13·01
Above 3000·00	7	28080·98	47·56	109630·35	49·52
TOTAL	66	59040·38	100·00	221396·13	100·00

Neg.—Negligible.

TABLE NO. 17

Classification of Power Stations—Capacity wise as on 31-3-1989

Range of Installed Capacity		No. of generating stations	Installed capacity group total (MW)	Percentage of total capacity
<i>Hydro Stations</i>				
Upto	100 KW	16	0.78	Neg.
Over	100 KW upto 1.00 MW	54	26.10	0.15
Over	1.00 MW upto 2.00 MW	20	31.57	0.18
Over	2.00 MW upto 5.00 MW	13	48.00	0.27
Over	5.00 MW upto 10.00 MW	9	80.30	0.45
Over	10.00 MW upto 15.00 MW	6	80.20	0.45
Over	15.00 MW upto 25.00 MW	12	246.05	1.38
Over	25.00 MW upto 50.00 MW	32	1165.85	6.55
Over	50.00 MW upto 100.00 MW	34	2493.45	14.01
Over	100.00 MW upto 500.00 MW	35	7584.75	42.62
Over	500.00 MW upto 1000.00 MW	8	6041.00	33.94
Over	1000.00 MW upto 2000.00 MW	—	—	—
Over	2000.00 MW	—	—	—
TOTAL		239	17798.05	100.00
<i>Steam Station</i>				
Upto	100 KW	—	—	—
Over	100 KW upto 1.00 MW	—	—	—
Over	1.00 MW upto 2.00 MW	—	—	—
Over	2.00 MW upto 5.00 MW	1	5.00	0.01
Over	5.00 MW upto 10.00 MW	2	18.38	0.05
Over	10.00 MW upto 15.00 MW	5	70.00	0.18
Over	15.00 MW upto 25.00 MW	5	101.00	0.27
Over	25.00 MW upto 50.00 MW	6	191.60	0.51
Over	50.00 MW upto 100.00 MW	12	912.50	2.40
Over	100.00 MW upto 500.00 MW	47	14340.00	37.79
Over	500.00 MW upto 1000.00 MW	22	15264.00	40.23
Over	1000.00 MW upto 2000.00 MW	2	2860.00	7.54
Over	2000.00 MW	2	4180.00	11.02
TOTAL		104	37942.48	100.00

TABLE NO. 17 (contd.)

Range of Installed Station Capacity		Energy generated by the Group (GWH)	Generation % of total	KWH/KW@
<i>Hydro Station</i>				
Upto	100 KW	1.53	Neg.	1962
Over	100 KW upto 1.00 MW	26.38	0.04	1011
Over	1.00 MW upto 2.00 MW	38.55	0.07	1211
Over	2.00 MW upto 5.00 MW	83.66	0.14	1743
Over	5.00 MW upto 10.00 MW	172.59	0.30	2149
Over	10.00 MW upto 15.00 MW	142.92	0.25	1782
Over	15.00 MW upto 25.00 MW	867.04	1.50	3524
Over	25.00 MW upto 50.00 MW	3709.61	6.41	3182
Over	50.00 MW upto 100.00 MW	8726.94	15.08	3500
Over	100.00 MW upto 500.00 MW	22311.06	38.56	2942
Over	500.00 MW upto 1000.00 MW	21787.61	37.65	3607
Over	1000.00 MW upto 2000.00 MW	—	—	—
Over	2000.00 MW	—	—	—
TOTAL		57867.89	100.00	3251
<i>Steam Station</i>				
Upto	100 KW	—	—	—
Over	100 KW upto 1.00 MW	—	—	—
Over	1.00 MW upto 2.00 MW	—	—	—
Over	2.00 MW upto 5.00 MW	—	—	—
Over	5.00 MW upto 10.00 MW	49.78	0.03	2708
Over	10.00 MW upto 15.00 ME	38.45	0.03	549
Over	15.00 MW upto 25.00 MW	88.07	0.06	872
Over	25.00 MW upto 50.00 MW	557.23	0.36	2908
Over	50.00 MW upto 100.00 MW	2346.49	1.51	2571
Over	100.00 MW upto 500.00 MW	52706.60	34.03	3676
Over	500.00 MW upto 1000.00 MW	67438.29	43.54	4418
Over	1000.00 MW upto 2000.00 MW	11482.54	7.41	4015
Over	2000.00 MW	20187.80	13.03	4830
TOTAL		154895.25	100.00	4082

@The figures given under this table indicate the generation in Kwh during the year per KW of installed capacity at the end of year.

Neg. Negligible.

TABLE No. 18

Classification of Generating Sets—Primemoverwise/capacitywise as on 31-3-1989

Range of Installed capacity of sets (MW)	HYDRO			STEAM		
	No. of sets	Installed capacity (MW)	% to total	No. of sets	Installed capacity (MW)	% to total
Upto 100 KW	86	6.01	0.03	—	—	—
Over 100 KW and upto 1.00 MW	168	66.14	0.37	—	—	—
Over 1.00 MW and upto 2.00 MW	20	31.30	0.18	7	10.88	0.03
Over 2.00 MW and upto 5.00 MW	47	182.50	1.03	22	84.00	0.22
Over 5.00 MW and upto 10.00 MW	72	589.70	3.31	14	111.25	0.29
Over 10.00 MW and upto 20.00 MW	100	1505.15	8.46	25	384.75	1.01
Over 20.00 MW and upto 30.00 MW	50	1285.25	7.22	30	892.00	2.35
Over 30.00 MW and upto 50.00 MW	77	3168.00	17.80	28	1350.60	3.56
Over 50.00 MW and upto 100.00 MW	75	5607.00	31.50	69	4819.00	12.70
Over 100.00 MW and upto 200.00 MW	42	5357.00	30.10	79	10250.00	27.07
Above 200.00 MW	—	—	—	83	20040.00	52.82
TOTAL	737	17798.05	100.00	357	37942.48	100.00

TABLE No. 18 (contd.)

Range of Installed capacity of sets	GAS			NUCLEAR		
	No. of sets	Installed capacity (MW)	% to Total	No. of sets	Installed capacity (MW)	% to Total
Upto 1.00	—	—	—	—	—	—
Over 1.00 and upto 5.00	9	31.00	1.96	—	—	—
Over 5.00 and upto 10.00	—	—	—	—	—	—
Over 10.00 and upto 20.00	10	172.50	10.91	—	—	—
Over 20.00 and upto 30.00	15	418.00	26.43	—	—	—
Over 30.00 and upto 50.00	—	—	—	—	—	—
Over 50.00 and upto 100.00	6	416.00	26.30	—	—	—
Over 100.00 and upto 200.00	5	544.00	34.40	—	—	—
Above 200.00	—	—	—	7	1565.00	100.00
TOTAL	45	1581.50	100.00	7	1565.00	100.00

NOTE:—Set-wise classification of Diesel Power Houses not given due to non-availability of setwise details in certain cases. However, they account for 153.35MW total installed capacity, including 3.73 MW windmill capacity.

Neg. = Negligible.

SECTION III

Generation (Utilities)

*SECTION—III***GENERATION (UTILITIES)**

The All India gross electricity generation by the Public Utilities was 2,21,396.13 GWH during the year 1988-89 as compared to 2,02,092.79 GWH during 1987-88 thereby registering an increase of 9.55%.

Electricity generation from steam generating stations continued to form the major proportion of total electricity production the relative percentage of generation from Steam, Hydro, Nuclear, Gas and Diesel power stations were 69.96%, 26.14%, 2.63%, 1.24% and 0.03% respectively during the year 1988-89.

There were 104 steam stations and 239 hydro stations existing in the country as on 31st March, 1989 generating 1,54,895.25 GWH and 57,867.89 GWH respectively. Bhakra Beas Management Board Complex the biggest of all the systems registered the maximum electricity generation of 11,760.50 GWH during the year.

Besides electricity generation by the Public Utilities, during the year under review captive plants of selected industries produced 19,880.94 GWH comprising 16,314.23 GWH from steam, 16.45 GWH from hydro, 2,686.13 GWH from diesel and 864.13 GWH from Gas turbine plants respectively. Apart from the above, electricity generation from captive plants of Railways was 30.51 GWH which comprised 13.09 GWH from steam and 17.42 GWH from diesel plants.

To sum up, total electricity production in the country including those from captive plants during year 1988-89 was 2,41,307.58 GWH as compared to 2,18,983.24 GWH during the year 1987-88 recording an increase of 10.19%.

The tables in this Section depict the salient features of electricity generation in various sectors and by different types of primemovers, etc.

TABLE NO. 19

*Gross Energy Generation in the Country (Utilities and Non-Utilities)**Primemover wise during the year 1988-89 (CWH)*

Category	Year	Total	Hydro	Steam	Diesel	Gas	Nuclear
<i>Utilities</i>	1987-88	202092.70	47444.37	145813.62	69.45	3730.54	5034.72
	1988-89	221396.13	57867.89	154895.25	76.29	2739.59	5817.11
	% increase	9.55	21.97	6.23	9.85	(-)-26.56	15.54
<i>Non-Utilities</i>							
I. Selected Industries*	1987-88	16855.44	18.09	13737.16	2595.97	504.22	—
	1988-89	19880.94	16.45	16314.23	2686.13	864.13	—
	% increase	17.95	(-)-9.07	18.76	3.47	71.38	—
II. Railways	1987-88	35.10	—	13.70	21.40	—	—
	1988-89	30.51	—	13.09	17.42	—	—
	% increase	(-)-13.08	—	(-)-4.45	(-)-18.60	—	—
Total	1987-88	16890.54	18.09	13750.86	2617.37	504.22	—
Non-Utilities (I&II)	1988-89	19911.45	16.45	16327.32	2703.55	864.13	—
% increase	17.88	(-)-9.07	18.74	3.29	71.38	—	
All India Gross Generation (Utilities+Non-Utilities)	1987-88	218983.24	47462.46	159564.48	2686.82	4234.76	5034.72
1988-89	241307.58	57884.34	171222.57	2779.84	3603.72	5817.11	
% increase	10.19	21.96	7.31	3.46	(-)-14.90	15.54	

*Industries with Captive Plant capacity of 1.00 MW and above.

TABLE No. 20

All-India Electricity Generation (Utilities Only) Ownershipwise and Primemoverwise during 1988-89

Sl. No.	Type of Primemover and ownership	Generation (Gross) (GWH)	% to All India Total	% increase in generation over the previous year
I. HYDRO				
<i>Public Sector</i>				
	(a) State Electricity Boards	44015.07	19.88	14.68
	(b) Electy. Deptts./Govt. Undertakings/Corporations/ Central Sector	12545.31	5.67	50.91
	(c) Municipalities	—	—	—
	SUB-TOTAL	56560.38	25.55	21.13
<i>Private Sector</i>				
	(d) Companies	1307.51	0.59	74.33
	TOTAL (HYDRO)	57867.89	26.14	21.97
II. STEAM				
<i>Public Sector</i>				
	(a) State Electricity Boards	93681.83	42.31	0.93
	(b) Electy. Deptts./Govt. Undertakings/Corporations/ Central Sector	50879.27	22.98	21.47
	(c) Municipalities	879.28	0.40	(—)3.53
	(d) SUB-TOTAL	145440.38	65.69	7.25
<i>Private Sector</i>				
	(d) Companies	9454.87	4.27	(—)7.29
	TOTAL (STEAM)	154895.25	69.96	6.23
III. DIESEL				
<i>Public Sector</i>				
	(a) State Electricity Boards	4.33	Neg	249.19
	(b) Electy. Deptts./Govt. Undertakings/Corporations/ Central Sector	70.34	0.03	6.08
	(c) Municipalities	—	—	—
	SUB-TOTAL	74.67	0.03	10.54
<i>Private Sector</i>				
	(d) Companies	1.62	Neg.	(—)14.74
	TOTAL (Diesel)	76.29	0.03	9.85

TABLE NO. 20 (concl'd.)

Sl. No.	Type of Primemover and ownership	Generation (Gross) (GWH)	% to all India Total	%increase in Generation over previous year
IV. GAS TURBINE—PUBLIC SECTOR				
(a)	State Electricity Boards	2430.05	1.10	(—)24.78
(b)	Electricity Deptts./Govt. Undertakings/Corporations/Central Sector	101.01	0.05	90.58
(c)	Municipalities	208.53	0.09	(—)53.36
	SUB-TOTAL	2739.59	1.24	(—)26.56
<i>Private Sector</i>				
(d)	Companies	—	—	—
	TOTAL (GAS)	2739.59	1.24	(—)26.56
V. NUCLEAR—PUBLIC SECTOR				
(a)	State Electricity Boards	—	—	—
(b)	Electricity Deptt./ Govt. Undertakings/Corporations/ Central Sector	5817.11	2.63	15.54
(c)	Municipalities	—	—	—
	SUB-TOTAL	5817.11	2.63	15.54
<i>Private Sector</i>				
(d)	Companies	—	—	—
	TOTAL (NUCLEAR)	5817.11	2.63	15.54
VI. GRAND TOTAL (I to V)				
<i>Public Sector</i>				
(a)	State Electricity Boards (18 Nos.)	140131.28	63.29	4.24
(b)	Electricity Deptt./Govt. Undertakings/Corporations/Central Sector (30 Nos.)	69413.04	31.36	25.40
(c)	Municipalities (10 Nos)	1087.81	0.49	(—)19.93
	SUB-TOTAL (58 Nos.)	210632.13	95.14	10.20
<i>Private Sector</i>				
(d)	Companies (44 Nos.)	10764.00	4.86	(—)1.71
	TOTAL(ALL-INDIA) (102 Nos.)	221396.13	100.00	9.55

NOTE:—Figures within the brackets show number of undertakings.

Neg.—Negligible.

TABLE No. 21

All India Gross Energy Generation (Utilities only)
Regionwise/Statewise during 1988-89

(IN GWH)

Region	State/U.Ts.	Energy Generation		
		1988-89	1987-88	% increase
<i>Northern Region</i>	Haryana	6313.56	6026.29	4.77
	Himachal Pradesh	698.85	517.83	34.96
	Jammu & Kashmir	884.00	1021.00	(-)13.42
	Punjab	12130.61	12207.79	(-)0.63
	Rajasthan	5264.85	5154.80	2.13
	Uttar Pradesh	18870.51	16581.46	13.80
	Chandigarh	—	Neg.	—
	Delhi	1087.81	1358.54	(-)19.93
	Central Sector	21424.45	17126.46	25.10
	SUB-TOTAL	66674.64	59994.17	11.14
<i>Western Region</i>	Gujarat	17785.71	17159.52	3.65
	Madhya Pradesh	12344.98	12648.50	(-)2.40
	Maharashtra	31936.15	32171.91	(-)0.73
	Goa	—	—	—
	D. & N. Haveli	—	—	—
	Daman & Diu	—	—	—
	Central Sector	10766.23	6490.26	65.88
	SUB-TOTAL	72833.07	68470.19	6.37
<i>Southern Region</i>	Andhra Pradesh	14175.18	13869.16	2.21
	Karnataka	9260.54	7571.19	22.31
	Kerala	4547.99	4093.09	11.11
	Tamil Nadu	11224.50	9345.85	20.10
	Lakshadweep	7.27	6.49	12.02
	Pondicherry	—	—	—
	Central Sector	14997.54	12570.93	19.30
	SUB-TOTAL	54213.02	47456.71	14.24
<i>Eastern Region</i>	Bihar	4539.72	4083.21	11.18
	Orissa	4367.51	3813.76	14.52
	West Bengal	8428.84	8998.45	(-)6.33
	D.V.C.	5994.92	5778.77	3.74
	A & N Islands	32.70	29.53	10.73
	Sikkim	30.25	33.20	(-)8.89
	Central Sector	1765.57	1221.66	44.52
	SUB-TOTAL	25159.51	23958.58	5.01
<i>North Eastern Region</i>	Assam	1086.56	1162.21	(-)6.51
	Manipur	2.06	2.06	—
	Meghalaya	422.89	462.56	(-)8.58
	Nagaland	0.33	0.86	(-)61.63
	Tripura	98.73	100.00	(-)2.01
	Arunachal Pradesh	43.98	42.02	4.66
	Mizoram	21.44	21.13	1.47
	Central Sector	839.90	421.46	99.28
	SUB-TOTAL	2515.89	2213.05	13.68
	TOTAL (ALL-INDIA)	221396.13	202092.70	9.55

Note :—Generation of jointly owned projects have been shown divided between the partner states as per their theoretical shares.

Neg.—Negligible.

TABLE NO. 22

All India Gross Energy Generation (Utilities only) Ownershipwise—
Regionwise/Statewise during 1988-89

Region	State/U.Ts.	Public Sector		
		State Electricity Board		
		1988-89	1987-88	% increase
Northern Region	Haryana	6313.56	6026.29	4.77
	Himachal Pradesh	698.85	517.83	34.96
	Jammu & Kashmir	884.00	1021.00	(—) 13.42
	Punjab	12130.61	12207.79	0.63
	Rajasthan	5264.85	5154.80	2.13
	Uttar Pradesh	18870.51	16581.46	13.80
	Chandigarh	—	—	—
	Delhi	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	44162.38	41509.17	5.29
Western Region	Gujarat	15741.03	15126.07	4.07
	Madhya Pradesh	12344.98	12648.50	(—) 2.40
	Maharashtra	25724.41	25661.91	0.24
	Goa	—	—	—
	D & N Haveli	—	—	—
	Daman & Diu	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	53810.42	53436.48	0.70
Southern Region	Andhra Pradesh	13594.31	13352.82	1.81
	Karnataka	605.60	436.64	38.70
	Kerala	4547.99	4093.09	11.11
	Tamil Nadu	11224.50	9345.85	20.10
	Lakshadweep	—	—	—
	Pondicherry	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	29972.40	27228.40	10.08
Eastern Region	Bihar	4539.72	4083.21	11.18
	Orissa	2766.00	2964.18	(—) 6.69
	West Bengal	3370.91	3583.03	(—) 5.89
	D.V.C.	—	—	—
	A & N Islands	—	—	—
	Sikkim	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	10676.63	10630.42	0.43
North Eastern Region	Assam	1086.56	1162.21	(—) 6.51
	Manipur	—	—	—
	Meghalaya	422.89	462.56	(—) 8.58
	Nagaland	—	—	—
	Tripura	—	—	—
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	1509.45	1624.77	(—)7.10
	TOTAL (ALL-INDIA)	140131.28	134429.24	4.24

TABLE No. 22 (contd.)

State/U. Ts.	Public Sector		
	Elec. Deptt./Govt. Undertakings/Corporations/ Central Sector		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	Neg.	—
Delhi	—	—	—
Central Sector	21424.45	17126.46	25.10
SUB-TOTAL	21424.45	17126.46	25.10
Gujarat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	10766.23	6490.26	65.88
SUB-TOTAL	10766.23	6490.26	65.88
Andhra Pradesh	580.87	516.34	12.50
Karnataka	8654.94	7134.55	21.31
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshdweep	7.27	6.49	12.02
Pondicherry	—	—	—
Central Sector	14997.54	12570.93	19.30
SUB-TOTAL	24240.62	20228.31	19.84
Bihar	—	—	—
Orissa	1601.51	849.58	88.51
West Bengal	2550.35	3007.39	(—)15.20
D.V.C.	5994.92	5778.77	3.74
A & N Islands	32.70	29.53	10.73
Sikkim	30.25	33.20	(—)8.89
Central Sector	1765.57	1221.66	44.52
SUB-TOTAL	11975.30	10920.13	9.66
Assam	—	—	—
Manipur	2.06	2.06	—
Meghalaya	—	—	—
Nagaland	0.33	0.86	(—)61.63
Tripura	98.73	100.75	(—)2.01
Arunchal Pradesh	43.98	42.02	4.66
Mizoram	21.44	21.13	1.47
Central Sector	839.90	421.46	99.28
SUB-TOTAL	1006.44	588.28	71.08
TOTAL (ALL INDIA)	69413.04	55353.44	25.40

TABLE NO. 22 (contd).

State/U.Ts.	Public Sector		
	Municipalities		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	1087·81	1358·54	(—)19·93
SUB-TOTAL	1087·81	1358·54	(—)19·93
Gujarat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Pondicherry	—	—	—
Lakshadweep	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	—	—	—
D.V.C.	—	—	—
A & N Islands	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Assam	—	—	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
SUB-TOTAL	—	—	—
TOTAL(ALL INDIA)	1087·81	1358·54	(—) 19·93

TABLE NO. 22 (contd).

State/U. Ts.	Private Sector		
	Companies		
	1988-89	1987-88	% increase
Harayana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Gujrat	2044.68	2033.45	0.55
Madhya Pradesh	—	—	—
Maharashtra	6211.74	6510.00	(—)4.58
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	8256.42	8543.45	(—)3.36
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	2507.58	2408.03	4.13
D.V.C.	—	—	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
SUB-TOTAL	2507.58	2408.03	4.13
Assam	—	—	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
SUB-TOTAL	—	—	—
TOTAL (ALL NDIAI)	10764.00	10951.48	(—)1.71

NOTE:—Generation of jointly owned projects have been shown divided between the partner states as per theoretical shares.

TABLE No. 23
Gross Energy Generation (Utilities Only)
Prime moverwise/ Statewise/Regionwise during 1988-89.

(GWH)

Region	State/U.Ts. *	Hydro		
		1988-89	1987-88	% increase
<i>Northern Region</i>	Haryana	3835.13	3472.30	10.45
	Himachal Pradesh	698.85	517.83	34.96
	Jammu & Kashmir	884.00	1021.00	(-)-13.42
	Punjab	7327.16	6806.25	7.65
	Rajasthan	3244.24	3064.41	5.87
	Uttar Pradesh	4726.31	4697.36	0.62
	Chandigarh	—	—	—
	Delhi	—	—	—
	Central Sector	2852.27	1284.38	122.08
	SUB-TOTAL	23568.06	20863.53	12.96
<i>Western Region</i>	Gujarat	970.57	357.14	171.76
	Madhya Pradesh	886.03	699.18	26.72
	Maharashtra	5681.88	4007.72	41.77
	Goa	—	—	—
	D & N Haveli	—	—	—
	Dama & Diu	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	7538.48	5064.04	48.86
<i>Southern Region</i>	Andhra Pradesh	6911.81	5883.81	17.47
	Karnataka	6823.06	5193.29	31.38
	Kerala	4547.99	4093.09	11.11
	Tamil Nadu	3352.70	2184.00	53.51
	Lakshadweep	—	—	—
	Pondicherry	—	—	—
	Central Sector	—	—	—
	SUB-TOTAL	21635.56	17354.19	24.67
<i>Eastern Region</i>	Bihar	202.77	226.18	(-)-10.35
	Orissa	3095.51	2473.03	25.17
	West Bengal	110.93	93.88	18.16
	D.V.C.	324.83	368.05	(-)-11.74
	A & N Island	—	—	—
	Sikkim	29.94	32.65	(-)-8.30
	Central Sector	—	—	—
	SUB-TOTAL	3763.98	3193.79	17.85
<i>North Eastern Region</i>	Assam	0.59	0.76	(-)-22.37
	Manipur	0.65	0.48	35.42
	Meghalaya	422.89	462.56	(-)-8.58
	Nagaland	0.22	0.71	(-)-69.01
	Tripura	58.68	45.55	28.83
	Arunachal Pradesh	36.64	36.48	0.44
	Mizoram	2.24	0.82	173.17
	Central Sector	839.90	421.46	99.28
	SUB-TOTAL	1361.81	968.82	40.56
TOTAL (ALL INDIA)		57867.89	47444.37	21.97

NOTE :—Generation of jointly owned projects have been shown divided between the partner states as per their theoretical shares.

TABLE NO. 23 (contd.)

State/U.Ts.	Steam		
	1988-89	1987-88	% increase
Haryana	2478.43	2553.99	(—)2.96
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	4803.45	5401.54	(—) 11.07
Rajasthan	2020.61	2090.39	(—) 3.33
Uttar Pradesh	14144.20	11884.10	19.02
Chandigarh	—	—	—
Delhi	879.28	911.48	(—)3.53
Central Sector	16639.91	14447.98	15.17
SUB-TOTAL	40965.88	37289.48	9.86
Gujarat	16812.45	16799.62	0.08
Madhya Pradesh	11458.95	11949.32	(—)4.10
Maharashtra	24331.39	25602.49	(—)4.96
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	8866.23	4885.65	81.47
SUB-TOTAL	61469.02	59237.08	3.77
Andhra Pradesh	7263.37	7985.35	(—)9.04
Karnataka	2437.48	2377.90	2.51
Kerala	—	—	—
Tamil Nadu	7867.80	7160.85	9.87
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	12949.64	10534.92	22.92
SUB-TOTAL	30518.29	28059.02	8.76
Bihar	4336.95	3857.03	12.44
Orissa	1272.00	1340.73	(—)5.13
West Bengal	6254.13	8876.20	(—)7.01
D.V.C.	5670.09	5410.72	4.79
A & N Islands	—	0.04	—
Sikkim	—	—	—
Central Sector	1765.57	1221.66	44.52
SUB-TOTAL	21298.74	20706.38	2.86
Assam	643.32	521.66	23.32
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunchal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
SUB-TOTAL	643.32	521.66	23.32
TOTAL (ALL INDIA)	154895.25	145813.62	6.23

TABLE NO. 23 (contd.)

State/U.Ts.	Diesel		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Gujarat	1.62	1.90*	(—)14.74
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
D & N Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	1.62	1.90	(—) 14.74
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	4.00@	1.00@	300.00
Lakshadweep	7.27	6.49	12.02
Pondicherry	—	—	—
Central Sector	—	—	—
SUB-TOTAL	11.27	7.49	50.47
Bihar	—	—	—
Orissa	—	—	—
West Bengal	0.33	0.24	37.50
D.V.C.	—	—	—
A & N Islands	32.70	29.49	10.89
Sikkim	0.31	0.55	(—) 43.64
Central Sector	—	—	—
SUB-TOTAL	33.34	30.28	10.11
Assam	—	—	—
Manipur	1.41	1.58	(—) 10.76
Meghalaya	—	—	—
Nagaland	0.11	0.15	(—) 26.67
Tripura	2.00	2.20	(—) 9.09
Arunchal Pradesh	7.34	5.54	32.49
Mizoram	19.20	20.31	(—)5.47
Central Sector	—	—	—
SUB-TOTAL	30.06	29.78	0.94
TOTAL (ALL INDIA)	76.29	69.45	9.85

*—includes 1.56 Gwh from Wind mill.

@—Wind mill generation.

TABLE NO. 23 (contd.)

State/U.Ts.	Gas		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	208.53	447.06	(—)53.36
Central Sector	62.96	—	—
SUB TOTAL	271.49	447.06	(—) 39.27
Gujrat	1.07	0.86	24.42
Madhya Pradesh	—	—	—
Maharashtra	1922.88	2561.70	(—)24.94
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	1923.95	2562.56	(—)24.92
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pandicherry	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	63.45	28.13	125.56
D. V. C.	—	—	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
SUB-TOTAL	63.45	28.13	125.56
Assam	442.65	639.79	(—) 30.81
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	38.05	53.00	(—) 28.21
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
SUB-TOTAL	480.70	692.79	(—)30.61
TOTAL (ALL INDIA)	2739.59	3730.54	(—) 26.56

TABLE NO. 23 (contd).

State/U.Ts.	Nuclear		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	1869.21	1394.10	34.08
SUB-TOTAL	1869.21	1394.10	34.08
Gujrat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	1900.00	1604.61	18.41
SUB-TOTAL	1900.00	1604.61	18.41
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
Lakshadweep	—	—	—
Pandicherry	—	—	—
Central Sector	2047.90	2036.01	0.58
SUB-TOTAL	2047.90	2036.01	0.58
Bihar	—	—	—
Orissa	—	—	—
West Bengal	—	—	—
D. V. C.	—	—	—
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Assam	—	—	—
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
TOTAL (ALL INDIA)	5817.11	5034.72	15.54

TABLE NO. 24

*Gross energy generation by State Electricity Boards
Primemoverwise during 1988-89*

GWH

Region	Name of the Board	Total		
		1988-89	1987-88	% increase
<i>Northern Region</i>	Haryana	6313.56	6026.29	4.77
	Himachal Pradesh	698.85	517.83	34.96
	Jammu & Kashmir	884.00	1021.00	(-)-13.4
	Punjab	12130.61	12207.79	(-)-0.63
	Rajasthan	5264.85	5154.80	2.13
	Uttar Pradesh	18870.51	16581.46	13.80
	SUB-TOTAL	44162.38	41509.17	6.39
<i>Western Region</i>	Gujarat	15741.03	15126.07	4.07
	Madhya Pradesh	12344.98	12648.50	(-)-2.40
	Maharashtra	25724.41	25661.91	0.24
	SUB-TOTAL	53810.42	53436.48	0.70
<i>Southern Region</i>	Andhra Pradesh	13594.31	13352.82	1.81
	Karnataka	605.60	436.64	38.70
	Kerala	4547.99	4093.09	11.11
	Tamil Nadu	11224.50	9345.85	20.10
	SUB-TOTAL	29972.40	27228.40	10.08
<i>Eastern Region</i>	Bihar	4539.72	4083.21	11.18
	Orrisa	2766.00	2964.18	(-)-6.69
	West Bengal	3370.91	3583.03	(-)-5.92
	SUB-TOTAL	10676.63	10630.42	0.43
<i>North Eastern Region</i>	Assam	1086.56	1162.21	(-)-6.51
	Meghalaya	422.89	462.56	(-)-8.58
	SUB-TOTAL	1509.45	1624.77	(-)-7.10
	TOTAL (ALL BOARD)	140131.28	134429.24	4.24

TABLE NO. 24 (contd.)

Name of the Board	Hydro		
	1988-89	1987-88	% increase
Haryana	3835.13	3472.30	10.45
Himachal Pradesh	698.85	517.83	34.96
Jammu & Kashmir	884.00	1021.00	(-) 13.42
Punjab	7327.16	6806.25	7.65
Rajasthan	3244.24	3064.41	5.87
Uttar Pradesh	4726.31	4697.36	0.62
SUB-TOTAL	20715.69	19579.15	5.80
Gujarat	970.57	357.14	171.76
Madhya Pradesh	886.03	699.18	26.72
Maharashtra	4374.37	3257.72	34.28
SUB-TOTAL	6230.97	4314.04	44.43
Andhra Pradesh	6330.94	5367.47	17.95
Karnataka	605.60	436.64	38.70
Kerala	4547.99	4093.09	11.11
Tamil Nadu	3352.70	2184.00	53.51
SUB-TOTAL	14837.23	12081.20	22.81
Bihar	202.77	226.18	(-) 10.35
Orissa	1494.00	1623.45	(-) 7.97
West Bengal	110.93	93.88	18.16
SUB-TOTAL	1807.70	1943.51	(-) 6.99
Assam	0.59	0.76	(-) 22.37
Meghalaya	422.89	462.56	(-) 8.58
SUB-TOTAL	423.48	463.32	(-) 8.60
TOTAL (ALL BOARDS)	44015.07	38381.22	14.68

TABLE NO. 24 (contd.)

Name of the board	Steam		
	1988-89	1987-88	% increase
Haryana	2478.43	2553.99	(—) 2.96
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	4803.45	5401.54	(—) 11.07
Rajasthan	2020.61	2090.39	(—) 3.33
Uttar Pradesh	14144.20	11884.10	19.02
SUB-TOTAL	23446.69	21930.02	6.92
Gujarat	14769.39	14768.07	0.01
Madhya Pradesh	11458.95	11949.32	(—) 4.10
Maharashtra	19427.16	19842.49	(—) 2.09
SUB-TOTAL	45655.50	46559.88	(—) 1.94
Andhra Pradesh	7263.37	7985.35	(—) 9.04
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	7867.80	7160.85	9.87
SUB-TOTAL	15131.17	15146.20	(—) 0.10
Bihar	4336.95	3857.03	12.44
Orissa	1272.00	1340.73	(—) 5.13
West Bengal	3196.20	3460.78	(—) 7.65
SUB-TOTAL	8805.15	8658.54	1.69
Assam	643.32	521.66	23.32
Meghalaya	—	—	—
SUB-TOTAL	643.32	521.66	23.32
TOTAL (ALL BOARDS)	93681.83	92816.30	0.93

TABLE NO. 24 (contd.)

Name of the Board	Diesel		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
SUB-TOTAL	—	—	—
Gujarat	—	—	—
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
SUB-TOTAL	—	—	—
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	4.00	1.00@	300.00
SUB-TOTAL	4.00	1.00	300.00
Bihar	—	—	—
Orissa	—	—	—
West Bengal	0.33	0.24	37.50
SUB-TOTAL	0.33	0.24	37.50
Assam	—	—	—
Meghalaya	—	—	—
SUB-TOTAL	—	—	—
TOTAL (ALL-BOARDS)	4.33	1.24	249.19

@ Wind Mill Generation.

TABLE No. 24 (contd.)

Name of the Board	GAS		
	1988-89	1987-88	% increase
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
SUB-TOTAL	—	—	—
Gujarat	1.07	0.86	24.42
Madhya Pradesh	—	—	—
Maharashtra	1922.88	2561.56	(—) 24.94
SUB-TOTAL	1923.95	2562.56	(—) 24.92
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	—	—
SUB-TOTAL	—	—	—
Bihar	—	—	—
Orissa	—	—	—
West Bengal	63.45	28.13	125.56
SUB-TOTAL	63.45	28.13	125.56
Assam	442.65	639.79	(—) 30.81
Meghalaya	—	—	—
SUB-TOTAL	442.65	639.79	(—)30.81
TOTAL (ALL-BOARDS)	2430.05	3230.48	(—)24.78

Note:—There is no nuclear power station under any Electricity Board.

TABLE NO. 25

Gross Energy Generation by Electricity Departments, Government Undertakings, Central Sector, Municipalities and Private Sector-Prinemoverwise/Regionwise during 1988-89

(GWH)

Region	Ownership	Total		
		1988-89	1987-88	% increase
I. Electricity Deptts./Govt. Undertakings/Corpn./Central Sector.				
<i>Northern Region</i>	Uttar Pradesh	—	—	—
	Chandigarh	—	—	—
	Central Sector	21424.45	17126.46	25.10
<i>Western Region</i>	Central Sector	10766.23	6490.26	65.88
<i>Southern Region</i>	Andhra Pradesh	580.87	516.34	12.50
	Karnataka	8654.94	7134.55	21.31
	Lakshadweep.	7.27	6.49	12.02
	Central Sector	14997.54	12570.93	19.30
<i>Eastern Region.</i>	Bihar	—	—	—
	Orissa	1601.51	849.58	88.51
	West Bengal	2550.35	3007.39	(—) 15.20
	D.V.C.	5994.92	5778.77	3.74
	A. & N. Islands	32.70	29.53	10.73
	Sikkim	30.25	33.20	(—) 8.89
	Central Sector	1765.57	1221.66	44.52
<i>North Eastern Region</i>	Manipur	2.06	2.06	—
	Nagaland	0.33	0.86	(—) 61.63
	Tripura	98.73	100.75	(—) 2.01
	Arunachal Pradesh.	43.98	42.02	4.66
	Mizoram	21.44	21.13	1.47
	Central Sector	839.90	421.46	99.28
	TOTAL(I)	69413.04	55353.44	25.40
II. Municipalities				
<i>Northern Region</i>	Delhi	1087.81	1358.54	(—) 19.93
	TOTAL (II)	1087.81	1358.54	(—) 19.9
III. Private Licensees				
<i>Western Region</i>	Gujarat.	2044.68	2033.45	0.55
	Maharashtra	6211.74	6510.00	(—) 4.58
<i>Eastern Region</i>	West Bengal	2507.58	2408.03	4.13
	TOTAL(III)	10764.00	10951.48	(—) 1.71

TABLE NO. 25 (contd.)

Region	Ownership	Hydra		
		1988-89	1987-88	% increase
I. Electricity Deptts./Govt. Undertakings/Corporation/				
Central Sector				
<i>Northern Region</i>	Uttar Pradesh	—	—	—
	Chandigarh	—	—	—
	Central Sector	2852.37	1284.38	122.08
<i>Western Region</i>	Central Sector	—	—	—
<i>Southern Region</i>	Andhra Pradesh	580.87	516.34	12.50
	Karnataka	6217.46	4756.65	30.71
	Lakshadweep	—	—	—
	Central Sector	—	—	—
<i>Eastern Region</i>	Bihar	—	—	—
	Orissa	1601.51	849.58	88.51
	West Bengal	—	—	—
	D.V.C.	324.83	368.05	(—)1.74
	A & N Islands	—	—	—
	Sikkim	29.94	32.65	(—)8.30
	Central Sector	—	—	—
<i>North Eastern Region</i>	Manipur	0.65	0.48	35.42
	Nagaland	0.22	0.71	(—) 69.01
	Tripura	58.68	45.55	28.83
	Arunachal Pradesh	36.64	36.48	0.44
	Mizoram	2.24	0.82	173.17
	Central Sector	839.90	421.46	(—) 99.28
	TOTAL (I)	12545.31	8313.15	50.91
II. Municipalities				
<i>Northern Region</i>	Delhi	—	—	—
	TOTAL (II)	—	—	—
III. Private Licensees				
<i>Western Region</i>	Gujarat	—	—	—
	Maharashtra	1307.51	750.00	74.33
<i>Eastern Region</i>	West Bengal	—	—	—
	TOTAL (III)	1307.51	750.00	74.33

TABLE NO. 25 (contd.)

Region	Ownership	Steam		
		1988-89	1987-88	% increase
I. Electricity Deptts./Govt. Undertakings/Corporation/Central Sector				
<i>Northern Region</i>	Uttar Pradesh	—	—	—
	Chandigarh	—	—	—
	Central Sector	16639·91	14447·98	15·17
<i>Western Region</i>	Central Sector	8866·23	4835·65	83·35
<i>Southern Region</i>	Andhra Pradesh	—	—	—
	Karnataka	2437·48	2377·90	2·51
	Lakshadweep	—	—	—
	Central Sector	12949·64	10534·92	22·92
<i>Eastern Region</i>	Bihar	—	—	—
	Orissa	—	—	—
	West Bengal	2550·35	3007·39	(—)15·20
	D.V.C.	5670·09	5410·72	4·79
	A & N Islands	—	0·04	—
	Sikkim	—	—	—
	Central Sector	1765·57	1221·66	44·52
<i>North Eastern Region</i>	Manipur	—	—	—
	Nagaland	—	—	—
	Tripura	—	—	—
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
	Central Sector	—	—	—
	TOTAL (I)	50879·27	41886·26	21·47
II. Municipalities				
<i>Northern Region</i>	Delhi	879·28	911·48	(—) 3·53
	TOTAL (II)	879·28	911·48	(—) 3·53
III. Private Sector				
<i>Western Region</i>	Gujarat	2043·06	2031·55	0·57
	Maharashtra	4904·23	5760·00	(—) 14·86
<i>Eastern Region</i>	West Bengal	2507·58	2408·03	4·13
	TOTAL (III)	9454·87	10199·58	(—) 7·29

TABLE NO. 25 (contd.)

Region	Ownership	Diesel		
		1988-89	1987-88	% increase
I. Electricity Deptts./Govt. Undertakings/Corporation/Central				
Sector :				
<i>Northern Region</i>	Uttar Pradesh	—	—	—
	Chandigarh	—	Neg.	—
	Central Sector	—	—	—
<i>Western Region</i>	Central Sector	—	—	—
<i>Southern Region</i>	Andhra Pradesh	—	—	—
	Karnataka	—	—	—
	Lakshadweep	7.27	6.49	12.02
	Central Sector	—	—	—
<i>Eastern Region</i>	Bihar	—	—	—
	Orissa	—	—	—
	West Bengal	—	—	—
	D.V.C.	—	—	—
	A & N Islands	32.70	29.49	10.89
	Sikkim	0.31	0.55	(—) 43.64
	Central Sector	—	—	—
<i>North Eastern Region</i>	Manipur	1.41	1.58	(—) 10.76
	Nagaland	0.11	0.15	(—) 26.67
	Tripura	2.00	2.20	(—) 9.09
	Arunachal Pradesh.	7.34	5.54	32.49
	Mizoram	19.20	20.31	(—) 5.47
	Central Sector	—	—	—
TOTAL (I)		70.34	66.31	6.08
II. Municipalities				
<i>Northern Region</i>	Delhi	—	—	—
TOTAL (II)		—	—	—
III. Private Sector				
<i>Western Region</i>	Gujarat	1.62**	1.90*	(—) 14.74
	Maharashtra	—	—	—
<i>Eastern Region.</i>	West Bengal	—	—	—
TOTAL (III)		1.62	1.90*	(—) 14.74

*Includes 1.83 GWH from Wind Mill.

**Includes 1.56 GWH from Wind Mill.

TABLE NO. 25 (contd.)

Region	Ownership	Gas		
		1988-89	1987-88	% increase
I. Electricity Deptts./Govt. Undertakings/Corporation/				
Central Sector :				
<i>Northern Region</i>	Uttar Pradesh	—	—	—
	Chandigarh	—	—	—
	Central Sector	62.96	—	—
<i>Western Region</i>	Central Sector	—	—	—
<i>Eastern Region</i>	Bihar	—	—	—
	Orissa	—	—	—
	West Bengal	—	—	—
	Sikkim	—	—	—
	D.V.C.	—	—	—
	A & N Islands	—	—	—
	<i>Southern Region</i>	Andhra Pradesh	—	—
Karnataka	—	—	—	
Kerala	—	—	—	
Tamil Nadu	—	—	—	
Lakshadweep	—	—	—	
Central Sector	—	—	—	
<i>North Eastern Region</i>	Manipur	—	—	—
	Nagaland	—	—	—
	Tripura	38.05	53.00	(—) 28.21
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
	Central Sector	—	—	—
TOTAL (I)		101.01	53.00	90.58
II. Municipalities				
<i>Northern Region</i>	Delhi	208.53	447.06	(—) 53.36
TOTAL (II)		208.53	447.06	(—) 53.36
III. Private Licensees				
<i>Western Region</i>	Gujarat	—	—	—
	Maharashtra	—	—	—
<i>Eastern Region</i>	West Bengal	—	—	—
TOTAL (III)		—	—	—

TABLE No. 25 (contd.)

Region	Ownership	Nuclear		
		1988-89	1987-88	% increase
I. Electricity Deptts./ Govt. Undertakings/Corporation/				
Central Sector :				
<i>Northern Region</i>	Uttar Pradesh	—	—	—
	Chandigarh	—	—	—
	Central Sector	1869·21	1394·10	34·08
<i>Western Region</i>	Central Sector	1900·00	1604·61	18·41
<i>Southern Region</i>	Andhra Pradesh	—	—	—
	Karnataka	—	—	—
	Lakshadweep	—	—	—
	Central Sector	2047·90	2036·01	0·58
<i>Eastern Region</i>	Bihar	—	—	—
	Orissa	—	—	—
	West Bengal	—	—	—
	D.V.C.	—	—	—
	A & N Islands	—	—	—
	Sikkim	—	—	—
	Central Sector	—	—	—
<i>North Eastern Region</i>	Manipur	—	—	—
	Nagaland	—	—	—
	Tripura	—	—	—
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
	Central Sector	—	—	—
	TOTAL (I)	5817·11	5034·72	15·54
II. Municipalities				
<i>Northern Region</i>	Delhi	—	—	—
	TOTAL (II)	—	—	—
III. Private Sector				
<i>Western Region</i>	Gujarat	—	—	—
	Maharashtra	—	—	—
<i>Eastern Region</i>	West Bengal	—	—	—
	TOTAL (III)	—	—	—

TABLE No. 26

Classification of Generating Undertakings Generationwise-1988-89

Range of Generation	No. of undertakings	Total energy generated(GWH)	% of total	Installed capacity of the group (MW)	% of total
Under 1.00	9	0.39	Neg.	871.47	1.48
Over 1.00 Upto 10.00	3	10.89	Neg.	15.98	0.03
Over 10.00 Upto 25.00	1	21.44	0.01	25.72	0.04
Over 25.00 upto 50.00	4	134.48	0.06	66.90	0.11
Over 50.00 upto 100.00	4	323.99	0.15	726.15	1.23
Over 100.00 upto 250.00	2	402.91	0.18	122.00	0.21
Over 250.00 upto 500.00	3	1058.02	0.48	338.76	0.57
Over 500.00 upto 1000.00	8	5651.69	2.55	1664.06	2.82
Over 1000.00 upto 5000.00	18	46197.25	20.87	12740.08	21.58
Over 5000.00 upto 10000.00	7	45479.72	20.54	12338.28	20.90
Over 10000.00	8	122115.35	55.16	30130.98	51.03
TOTAL	67	221396.13	100.00	59040.38	100.00

Neg. Negligible

SECTION IV

Captive Plants

SECTION -IV

CAPTIVE PLANTS

Industrial Sector is the largest consumer of energy. Besides taking power from Utilities, a number of industries representing primary producers of infrastructure material such as Aluminium, Cement, Fertilizers, Iron & Steel and Paper etc. have their own captive plants either to supplement the electricity purchased from the Utilities or for emergency use in case of power cut or for producing energy as a by-product of their industrial process.

With the ever increasing number of industrial units having captive plants, (the number of industries having captive plants of capacity more than 100KW or contract demand of more than 500 KVA rose from 828 in 1950 to 3648 during 1985-86), it was found not feasible to cover the data of all the industrial units. It was, therefore, decided to cover only the selected industrial units viz. the units having their own captive plants with a total installed capacity of 1000KW and above from the year 1986-87. Accordingly, the data for captive plants of 1.00 MW and above only are being highlighted in the Section.

While during the year 1987-88, as per data available, there were 1167 selected industrial units, as per the above criteria, with a total installed capacity of 62,56,111KW and these generated 16,856.41 GWH of electricity, during 1988-89, the number of units increased to 1234, having a total installed capacity of 74,19,887 KW, which generated 19,880.94 GWH of electricity.

93.81% of total captive generation was contributed by the industries of nine categories producing primary infrastructure material and generating above 600 GWH individually. Their details are given below:—

S.No.	Name of Industry	Energy Generation (GWH)
1.	Aluminium (P)	6235
2.	Cement (P)	1095
3.	Chemicals	1350
4.	Fertilizers	1935
5.	Iron & Steel (P)	3035
6.	Mineral Oil & Petroleum	1370
7.	Paper	1030
8.	Sugar	1195
9.	Textile	1405
	Total	18650

Apart from industrial units, Railways have also got captive generating sets, which are mainly used as a standby for emergency purposes. Total capacity of captive Plants of Railways during the year 1988-89 was 1,03,595 KW and they generated 30.51 GWH of electricity.

Various tables in this Section depict the primeoverwise salient features of captive plants in the country.

TABLE NO. 27

Installed Generating capacity of Industries having captive Plants of capacity 1 MW & Above Primemoverwise/
Regionwise/Statewise as on 31-3-1989

Region/state/U.Ts.	No. of Industries	Installed capacity (KW)				
		steam	Diesel	Hydro	Gas	Total
<i>Northern Region</i>						
Haryana	64	75390	150834	—	—	226224
Himachal Pradesh	2	—	9900	—	—	9900
Jammu & Kashmir	—	—	—	—	—	—
Punjab	43	56200	69373	—	—	125573
Rajasthan	68	108960	291804	—	20000	420764
Uttar Pradesh	161	609914	183275	—	18000	811189
Chandigarh	—	—	—	—	—	—
Delhi	8	48500	8474	—	—	56974
SUB-TOTAL	346	898964	713660	—	38000	1650624
<i>Western Region</i>						
Gujarat	93	337719	189503	—	74800	602022
Madhya Pradesh	46	559997	103781	—	27500	691278
Maharashtra	86	233073	341947	—	50522	625542
Goa, Daman & Diu*	3	7500	7156	—	—	14656
D & N Haveli	—	—	—	—	—	—
SUB-TOTAL	328	1138289	642387	—	152822	1933498
<i>Southern Region</i>						
Andhra Pradesh	60	167465	65491	—	—	232956
Karnataka	86	175351	252512	3600	—	431463
Kerala	14	63080	7714	—	—	70794
Tamil Nadu	203	131690	394825	—	7140	533655
Pondicherry	3	5000	1754	—	—	6754
Lakshadweep	—	—	—	—	—	—
SUB-TOTAL	366	542586	722296	3600	7140	1275622
<i>Eastern Region</i>						
Bihar	43	675038	75320	—	—	750358
Orissa	24	898737	40500	—	30000	969237
West Bengal	115	267236	304128	—	21150	592514
A & N Islands	—	—	—	—	—	—
Sikkim	—	—	—	—	—	—
SUB-TOTAL	182	1841011	419948	—	51150	2312109
<i>North Eastern Region</i>						
Assam	11	93500	83034	—	70000	246534
Manipur	—	—	—	—	—	—
Meghalaya	—	—	—	—	—	—
Nagaland	1	1500	—	—	—	1500
Tripura	—	—	—	—	—	—
Arunachal Pradesh	—	—	—	—	—	—
Mizoram	—	—	—	—	—	—
SUB-TOTAL	12	95000	83034	—	70000	248034
TOTAL ALL INDIA	1234	4515850	2581325	3600	319112	7419887

*Data for Goa, Daman & Diu is not available separately.

TABLE NO. 28

Gross Electricity Generated by Industries having captive Plants of capacity 1 MW & Above Primemoverwise/Regionwise/
Statewise during 1988-89

Region/State/U.Ts.	No. of Industries	Gross Electricity Generated (GWH)				
		Steam	Diesel	Hydro	Gas	Total
<i>Northern Region</i>						
Haryana	64	212.55	209.64	—	—	422.19
Himachal Pradesh	2	—	0.07	—	—	0.07
Jammu & Kashmir	—	—	—	—	—	—
Punjab	43	74.36	28.25	—	—	102.61
Rajasthan	68	421.90	360.59	—	—	782.49
Uttar Pradesh	161	3220.72	87.92	—	—	3308.64
Chandigarh	—	—	—	—	—	—
Delhi	8	151.80	1.42	—	—	153.22
SUB-TOTAL	346	4081.33	687.89	—	—	4769.22
<i>Western Region</i>						
Gujarat	93	1240.55	90.02	—	253.98	1584.55
Madhya Pradesh	46	2528.36	98.75	—	94.92	2722.03
Maharashtra	186	677.98	155.84	—	175.29	1009.11
Goa, Daman & Diu*	3	50.64	0.77	—	—	51.41
D & N Haveli	—	—	—	—	—	—
SUB-TOTAL	328	4497.53	345.38	—	524.19	5367.10
<i>Southern Region</i> *						
Andhra Pradesh	60	426.67	73.52	—	—	500.19
Karnataka	86	463.53	471.55	16.45	—	951.53
Kerala	14	153.79	12.50	—	—	166.29
Tamil Nadu	203	419.39	733.75	—	17.87	1171.01
Pondicherry	3	7.45	0.66	—	—	8.11
Lakshadweep	—	—	—	—	—	—
SUB-TOTAL	366	1470.83	1291.98	16.45	17.87	2797.13
<i>Eastern Region</i>						
Bihar	43	2007.16	48.89	—	—	2056.05
Orissa	24	3548.84	43.57	—	15.47	3607.88
West Bengal	115	459.88	198.51	—	—	658.39
A & N Islands	—	—	—	—	—	—
Sikkim	—	—	—	—	—	—
SUB-TOTAL	182	6015.88	290.97	—	15.47	6322.22
<i>North Eastern Region</i>						
Assam	11	246.25	69.91	—	306.60	622.76
Manipur	—	—	—	—	—	—
Meghalaya	—	—	—	—	—	—
Nagaland	1	2.41	—	—	—	2.41
Tripura	—	—	—	—	—	—
Arunachal Pradesh	—	—	—	—	—	—
Mizoram	—	—	—	—	—	—
SUB-TOTAL	12	248.66	69.91	—	306.60	625.17
TOTAL ALL INDIA	1234	16314.23	2686.13	16.45	864.13	19880.94

*Data for Goa, Daman & Diu is not available separately.

TABLE NO. 29

Gross Generation Auxiliary Consumption, Net Energy Generation & Energy Sold to Utilities by Industries having Captive Plants of capacity 1 MW & Above Regionwise/Statewise during 1988-89

(IN GWH)

Region/State/U.Ts.	No. of Industries	Energy generated (Gross)	Auxiliary consumption	Energy generated (Net) (Col. 3-4)	Energy sold to Utilities	Energy used in the industries out of self generation
1	2	3	4	5	6	7 (col. 5-6)
<i>Northern Region</i>						
Haryana	64	422.19	38.03	384.16	—	384.16
Himachal Pradesh	2	0.07	Neg.	0.07	—	0.07
Jammu & Kashmir	—	—	—	—	—	—
Punjab	43	102.61	21.47	81.14	—	81.14
Rajasthan	68	782.49	66.32	716.17	—	716.17
Uttar Pradesh	161	3308.64	329.03	2979.61	—	2979.61
Chandigarh	—	—	—	—	—	—
Delhi	8	153.22	21.91	131.31	—	131.31
SUB-TOTAL	346	4769.22	476.76	4292.46	—	4292.46
<i>Western Region</i>						
Gujarat	93	1584.55	164.45	1420.10	35.51	1384.59
Madhya Pradesh	46	2722.03	320.14	2401.89	—	2401.89
Maharashtra	186	1009.11	52.37	956.74	30.98	925.76
Goa, Daman & Diu*	3	51.41	0.50	50.91	—	50.91
D & N Haveli	—	—	—	—	—	—
SUB-TOTAL	328	5367.10	537.46	4829.64	66.49	4763.15
<i>Southern Region</i>						
Andhra Pradesh	60	500.19	59.50	440.69	—	440.69
Karnataka	86	951.53	53.00	898.53	—	898.53
Kerala	14	166.29	14.18	152.11	—	152.11
Tamil Nadu	203	1171.01	80.05	1090.96	27.00	1063.96
Pondicherry	3	8.11	0.33	7.78	—	7.78
Lakshadweep	—	—	—	—	—	—
SUB-TOTAL	366	2797.13	207.06	2590.07	27.00	2563.07
<i>Eastern Region</i>						
Bihar	43	2056.05	385.37	1670.68	—	1670.68
Orissa	24	3607.88	499.93	3107.95	899.47	2208.48
West Bengal	115	658.39	104.80	553.59	0.01	553.58
A & N Islands	—	—	—	—	—	—
Sikkim	—	—	—	—	—	—
SUB-TOTAL	182	6322.32	990.10	5332.22	899.48	4432.74
<i>North Eastern Region</i>						
Assam	11	622.76	66.42	556.34	0.70	555.64
Manipur	—	—	—	—	—	—
Meghalaya	—	—	—	—	—	—
Nagaland	1	2.41	0.24	2.17	—	2.17
Tripura	—	—	—	—	—	—
Arunachal Pradesh	—	—	—	—	—	—
Mizoram	—	—	—	—	—	—
SUB-TOTAL	12	625.17	66.66	558.51	0.70	557.81
TOTAL ALL INDIA	1234	19880.94	2278.04	17602.90	993.67	16609.23

This does not include 1.94 GWH of energy purchased by Andaman & Nicobar Islands Electricity Department.

*Data for Goa, Daman & Diu is not available separately.

TABLE NO. 30

Classification of captive Plants of Industries capacitywise during 1988-89

Sl. No.	Range of Installed capacity (MW)	No. of generating industries	Installed capacity of the group		Gross Energy Generation by group	
			Aggregate (MW)	% of total capacity	Aggregate (GWH)	% of total generation
1	2	3	4	5	6	7
1.	Over 1.00 MW & upto 10.00 MW	1136	3106.61	41.87	3975.87	20.00
2.	Over 10.00 MW & Upto 20.00 MW	51	726.36	9.79	1819.89	9.15
3.	Over 20.00 MW & Upto 30.00 MW	15	389.05	5.24	1479.66	7.44
4.	Over 30.00 MW & Upto 40.00 MW	12	419.84	5.66	1333.78	6.71
5.	Over 40.00 MW & Upto 50.00 MW	7	310.03	4.18	1122.61	5.65
6.	Over 50.00 MW & Upto 100.00 MW	6	457.00	6.16	1127.32	5.67
7.	Over 100.00 MW	7	2011.00	27.10	9021.81	45.38
TOTAL		1234	7419.89	100.00	19880.94	100.00

TABLE No. 31

Installed Plant capacity and Electricity Generation by the Railways Regionwise/Statewise during the year 1988-89

Region	Name of the State/UTs.	Installed Plant capacity (KW)		
		Steam	Diesel	Total
Northern Region	Haryana	—	2800	2800
	Himachal Pradesh	—	—	—
	Jammu & Kashmir	—	300	300
	Punjab	—	2410	2410
	Rajasthan	2000	7150	9150
	Uttar Pradesh	4500	18650	23150
	Delhi	—	1435	1435
SUB-TOTAL		6500	32745	39245
Western Region	Gujarat	2500	2260	4760
	Madhya Pradesh	—	4330	4330
	Maharashtra	—	2700	2700
SUB-TOTAL		2500	9290	11790
Southern Region	Andhra Pradesh	—	3800	3800
	Karnataka	—	3190	3190
	Kerala	—	500	500
	Tamil Nadu	—	6710	6710
SUB-TOTAL		—	14200	14200
Eastern Region.	Bihar	2800	10500	13300
	West Bengal	7160	9600	16760
SUB-TOTAL		9960	20100	30060
North Eastern Region	Assam	—	6850	6850
	Nagaland	—	1350	1350
	Tripura	—	100	100
SUB-TOTAL		—	8300	8300
TOTAL ALL INDIA		18960	84635	103595

TABLE NO. 31 (contd.)

Region	Name of the State/ U.Ts.	Max. Demand (KVA)	Electricity Generation in (GWH)			Energy used in Aux. in (GWH)
			Steam	Diesel	Total	
Northern Region	Haryana	2680	—	0.68	0.68	0.01
	Himachal Pradesh	—	—	—	—	—
	Jammu & Kashmir	200	—	Neg.	Neg.	—
	Punjab	2150	—	0.20	0.20	—
	Rajasthan	7250	1.50	1.25	2.75	0.16
	Uttar Pradesh	16770	—	1.72	1.72	0.03
	Delhi	1000	—	0.05	0.05	—
	SUB-TOTAL	30050	1.50	3.90	5.40	0.20
Western Region	Gujarat	3350	4.40	0.02	4.42	0.38
	Madhya Pradesh	2800	—	0.60	0.60	0.02
	Maharashtra	2050	—	0.21	0.21	—
	SUB-TOTAL	8200	4.40	0.83	5.23	0.40
Southern Region	Andhra Pradesh	3150	—	Neg.	Neg.	—
	Karnataka	2600	—	0.09	0.09	—
	Kerala	200	—	0.14	0.14	0.01
	Tamil Nadu	4400	—	0.40	0.40	0.01
		SUB-TOTAL	10350	—	0.63	0.63
Eastern Region	Bihar	12480	0.08	6.90	6.98	0.68
	West Bengal	12690	7.11	3.60	10.71	0.72
		SUB-TOTAL	25170	7.19	10.50	17.69
North Eastern Region	Assam	5600	—	1.25	1.25	0.06
	Nagaland	880	—	0.31	0.31	—
	Tripura	—	—	—	—	—
	SUB-TOTAL	6480	—	1.56	1.56	0.06
	TOTAL ALL INDIA	80250	13.09	17.42	30.51	2.08

TABLE No. 32

Zonewise Installed Plant capacity and Electricity Generation by the Railways during the year 1988-89

Sl. No.	Name of Railways	Installed capacity (KW)			Maximum Demand (KVA)	Electricity Generated (GWH)			Energy used in Auxiliaries (GWH)
		Steam	Diesel	Total		Steam	Diesel	Total	
1.	Central Railways	—	10200	10200	6800	—	0.49	0.49	0.03
2.	Eastern Railways	2800	7140	9940	9000	0.08	3.13	3.21	0.16
3.	Northern Railways	2500	21100	23600	18500	—	2.08	2.08	0.11
4.	North-Eastern Region	2000	15150	17150	14250	—	4.30	4.30	0.25
5.	North-East Frontier Railways	—	10035	10035	6600	—	3.11	3.11	0.15
6.	Southern Railways	—	6750	6750	5650	—	0.54	0.54	0.03
7.	South Central Railways	—	3700	3700	3150	—	0.38	0.38	0.03
8.	South Eastern Railways	7160	3510	10670	8250	6.21	1.39	7.60	0.61
9.	Western Railways	4500	7050	11550	8050	6.80	2.00	8.80	0.71
	TOTAL	18960	84635	103595	80250	13.09	17.42	30.51	2.08

SECTION V

Electric Power Supply & System Losses

SECTION-V

ELECTRIC POWER SUPPLY AND SYSTEM LOSSES

During the year 1988-89, gross electricity generation was 2,21,396.13 GWH, out of which 17,363.20 GWH representing 7.84% of gross generation was consumed in power station auxiliaries. Thus net generation available at the bus-bar was 2,04,032.93 GWH. Electricity purchased by Public Utilities from captive plants was 995.61 GWH and electricity imported from Nepal & Bhutan was 1,297.15 GWH. Thus the total electricity available for supply during the year was 2,06,325.69 GWH as compared to 1,87,873.47 GWH during the year 1987-88.

Electricity sold to various classes of consumers during the year 1988-89 was 1,60,196.43 GWH and electricity exported outside the country i.e. to Nepal and Bhutan was 97.10 GWH. The electricity lost in transformation, transmission and distribution system and electricity unaccounted worked out to 46,032.16 GWH representing 22.31% to the total available electricity. Amongst all the regions percentage system losses were maximum in North Eastern Region i.e. 27.61%. This was followed by Northern Region with 26.25%, Eastern Region with 22.53%, Southern Region with 19.86% and Western Region with 19.42% losses.

The various tables in this Section represent the Regionwise, Statewise and Boardwise, Transmission & Distribution losses, transfer of electricity between different systems, electricity consumed in power auxiliaries.

TABLE No.33

Electricity Generated Purchased, Sold and Energy Losses (All India Utilities) during 1988-89

Sl. No.	Energy (GWH)	Percentage of Item 1
1. Energy generated (Gross) (Utilities)	221396.13	100.00
2. Energy used in power station auxiliaries	17363.20	7.84
3. Energy generated (Net) i.e.(1)—(2)	204032.93	92.16
		Percentage of Item 6
4. Energy purchased from Non-Utilities	995.61	0.48
5. Energy imported from other countries(Nepal & Bhutan)	1297.15	0.63
6. Energy available for supply i.e.(3)+(4)+(5)	206325.69	100.00
7. Energy sold to ultimate consumers	160196.43	77.64
8. Energy sold to other countries (Nepal & Bhutan)	97.10	0.05
9. Total energy sold i.e. (7)+(8)	160293.53	77.69
10. Energy lost in transformation, transmission & distribution and unaccounted for i.e. (6)—(9)	46032.16	22.31

TABLE No. 34

Energy lost in Transmission and distribution system regionwise during 1988-89

	(GWH)				
	Northern Region	Western Region	Southern Region	Eastern Region	North Eastern Region
I. ENERGY GENERATED NET	61875.43	66359.29	50907.97	22471.22	2419.02
II. ENERGY PURCHASED					
(a) from non-utilities	—	66.49	27.00	901.42	0.70
(b) from other regions	309.53	501.38	1354.93	418.56	—
(c) from other countries	—	—	—	1297.15	—
SUB-TOTAL II	309.53	567.87	1381.93	2617.13	0.70
III. TOTAL ENERGY AVAILABLE (I+II)	62184.96	66927.16	52289.90	25088.35	2419.72
IV. ENERGY SALES					
(a) to ultimate consumers	45423.02	52110.97	41536.52	19375.34	1750.53
(b) to other region	398.67	1820.65	365.08	—	—
(c) to other countries	36.00	—	—	60.05	1.05
SUB-TOTAL IV	45857.69	53931.62	41901.60	19435.39	1751.63
V. Energy lost in transmission & Distribution & unaccounted for	16327.27	12995.54	10388.30	5652.56	668.09
VI. Percentage energy loss (V/III)	26.25	19.42	19.86	22.53	27.61

NOTE :—(1) Net generation of jointly owned projects have been shown divided between the partner states as per their theoretical shares.

(2) In the case of projects, jointly owned by States different regions, excess/less drawal of energy than theoretical share have been treated as inter-regional purchase/sales respectively.

(3) For Details of All In'ja losses please see Table No. 35.

TABLE No. 35

Energy generation (net) inter system transfer of power utilisation of energy and system losses region-wise/State-wise during 1988-89

(GWH)					
Region	State/U.Ts.	Net Generation in own power houses (other than jointly owned project and Central Govt. Projects)	Energy received from		
			Jointly owned & Central Govt. Projects (except B.B.M.B. and D.V.C.)	Self generating industries	From other States including B.B.M.B. & D.V.C. including from Outside the country
1	2	3	4	5	6
<i>Northern Region</i>	Haryana . . .	2078.78	1977.74	—	3057.33
	Himachal Pradesh.	696.35	187.04	—	425.60
	Jammu & Kashmir	881.17	1079.61	—	144.30
	Punjab . . .	6099.63	2036.00	—	5385.35
	Rajasthan . . .	1332.00	5028.15	—	2874.93
	Uttar Pradesh . .	17311.80	4806.66	—	12.35
	Chandigarh . . .	—	161.06	—	308.15
	Delhi	577.97	5798.01	—	535.48
B.B.M.B.	11521.16	—	—	—	
<i>Western Region</i>	Gujarat	15900.83	2656.58	35.51	383.90
	Madhya Pradesh .	9391.62	5747.25	—	96.61
	Maharashtra . . .	29423.30	3200.22	30.98	547.75
	Goa	—	408.38	—	140.68
	Daman & Diu . . .	—	—	—	43.27
	D & N Haveli . . .	—	—	—	104.43
<i>Southern Region</i>	Andhra Pradesh . .	12848.43	2882.80	—	567.25
	Karnataka	9005.70	2186.41	—	825.69
	Kerala	4521.54	1469.39	—	—
	Tamil Nadu	10488.60	6855.40	27.00	11.00
	Pondicherry	—	343.60	—	107.44
	Lakshadweep . . .	7.14	—	—	—
<i>Eastern Region.</i>	Bihar	3920.34	672.96	—	4957.29
	Orissa	4031.66	273.81	899.47	650.27
	West Bengal	7578.15	644.07	0.01	2803.85
	D.V.C.	5182.35	625.92	—	859.03
	Sikkim	26.11	4.99	—	5.11
	A & N Islands . . .	31.82	—	1.94	—
<i>North Eastern Region</i>	Assam	1001.60	562.39	0.70	244.27
	Manipur	1.69	191.26	—	—
	Meghalaya	420.87	5.60	—	—
	Nagaland	0.30	69.23	—	44.43
	Tripura	97.76	1.44	—	51.00
	Arunchal Pradesh	41.16	—	—	15.94
	Mizoram	20.72	5.00	—	20.50

TABLE No. 35 (contd.)

State/UTs	Energy available in the States (3+4+5+6)	Energy sent out to/Sold to		Total (8+9)
	7	Other States including out side the country	Ultimate consumers within the state	10
Haryana	7113.85	359.30	4860.82	5220.12
Himachal Pradesh	1308.99	206.27	818.99	1025.26
Jammu & Kashmir	2105.08	—	1217.70	1217.70
Punjab	13520.98	546.80	10601.70	11148.50
Rajasthan	9235.08	30.42	6875.92	6906.34
Uttar Pradesh	22130.81	302.95	15753.51	16056.46
Chandigarh	469.21	2.05	365.54	367.59
Delhi	6911.46	—	4928.84	4928.84
B.B.M.B.	11521.16	11118.54	—	11118.54
Gujarat	18976.82	580.90	14596.87	15177.77
Madhya Pradesh	15235.48	1104.11	10721.23	11825.34
Maharashtra	33202.25	1319.79	26262.71	27582.50
Goa	549.06	—	408.47	408.47
Daman & Diu	43.27	—	34.02	34.02
D & N Haveli	104.43	—	87.67	87.67
Andhra Pradesh	16298.48	51.20	12989.58	13040.78
Karnataka	12017.80	34.34	9414.20	9448.54
Kerala	5990.93	22.19	4438.81	4461.00
Tamil Nadu	17382.00	114.84	14326.99	14441.83
Pondicherry	451.04	—	360.74	360.74
Lakshadweep	7.14	—	6.20	6.20
Bihar	9550.59	587.93	7171.76	7759.69
Orissa	5855.21	47.51	4188.07	4235.58
West Bengal	11026.08	837.62	7959.00	8796.62
D.V.C.	6667.30	6557.08	—	6557.08
Sikkim	36.21	0.49	27.98	28.47
A & N Islands	33.76	—	28.53	28.53
Assam	1808.96	130.03	1227.00	1357.03
Manipur	192.95	—	124.05	124.05
Meghalaya	426.47	231.40	154.70	386.10
Nagaland	113.96	11.15	69.76	80.91
Tripura	150.20	4.61	99.67	104.28
Arunchal Pradesh	57.10	—	42.89	42.89
Mizoram	46.22	—	32.51	32.51

TABLE No. 35 (contd.)

Name of State/U.Ts.	Transformation, Transmission, Distribution losses and Energy unaccounted for	
	Quantum (7-10)	% of column 7
Haryana	1893.73	26.62
Himachal Pradesh	283.73	21.68
Jammu & Kashmir	887.38	42.15
Punjab	2372.48	17.55
Rajasthan	2328.74	25.22
Uttar Pradesh	6074.35	27.45
Chandigarh	101.62	21.66
Delhi	1982.62	28.69
B.B.M.B.	402.62	3.49
<i>Northern Region</i>	16327.27	26.25
Gujarat	3799.05	20.02
Madhya Pradesh	3410.14	22.38
Maharashtra	5619.75	17.57
Goa	140.59	25.61
Daman & Diu	9.25	21.38
D & N Haveli	16.76	16.05
<i>Western Region</i>	12995.54	19.42
Andhra Pradesh	3257.70	19.99
Karnataka	2569.26	21.38
Kerala	1529.93	25.54
Tamil Nadu	2940.17	16.92
Pondicherry	90.30	20.02
Lakshadweep	0.94	13.16
<i>Southern Region</i>	10388.30	19.86
Bihar	1790.90	18.75
Orissa	1619.63	27.66
West Bengal	2229.46	20.22
D.V.C.	110.22	1.65
Sikkim	7.74	21.38
A & N Islands	5.23	15.49
<i>Eastern Region</i>	5652.96	22.53
Assam	451.93	24.98
Manipur	68.90	35.71
Meghalaya	40.37	9.46
Nagaland	33.05	29.00
Tripura	45.92	30.57
Arunachal Pradesh	14.21	24.89
Mizoram	13.71	29.66
<i>North Eastern Region</i>	668.09	27.61
All India	46032.16	22.31

NOTE:—For details of All India and Regionwise losses refer tables 33 and 34 respectively.

TABLE NO. 36

*Energy Generation (Net) Intersystem transfer of energy Utilisation and losses by State Electricity Board
D.V.C., B.B.M.B. & D.E.S.U. during 1988-89*

(GWH)

Name of the Region/Board/Undertaking	Net Generation in own Power House (other than jointly owned Central Govt. Projects)	Energy received from	
		Utilities with- in State/Jointly owned Central Govt. Projects except DVC & BBMB	Other Boards, Electric Under- takings (includ- ing DVC & BBMB/ other countries)
1	2	3	4
<i>Northern Region</i>			
Haryana	2078.78	1977.74	3057.33
Himachal Pradesh	696.35	163.27	425.60
Jammu & Kashmir	881.17	1079.61	144.30
Punjab	6099.63	2036.00	4532.51
Rajasthan	1332.00	4931.16	2874.93
Uttar Pradesh	17311.80	4786.66	12.35
B.B.M.B.	11521.16	—	—
D.E.S.U.	577.97	5785.53	535.48
<i>Western Region</i>			
Gujarat	14052.22	2656.58	383.90
Madhya Pradesh	9391.62	5706.25	96.61
Maharashtra	23521.86	5562.80	547.75
<i>Southern Region</i>			
Andhra Pradesh	12848.43	2828.88	567.25
Karnataka	602.30	10588.66	825.69
Kerala	4521.54	1469.39	—
Tamil Nadu	10488.60	6176.72	11.00
<i>Eastern Region</i>			
Bihar	3920.34	672.96	2618.19
Orissa	2614.00	1669.59	650.27
West Bengal	3039.42	2694.24	1272.95
D.V.C.	5182.35	625.92	859.03
<i>North Eastern Region</i>			
Assam	1001.60	562.39	244.27
Meghalaya	420.87	—	—

ABBREVIATIONS : B.B.M.B.—Bhakra Beas Management Board.

D.E.S.U.—Delhi Electric Supply Undertaking.

TABLE NO.36—(contd.)

Name of Board/Undertaking	Energy received from self generating industries	Energy Available for supply (including sales outside the state) (2+3+4+5)	Energy sold to	
			Licensees within the state	Other Boards/ Undertakings/ DVC/Other countries
	5	6	7	8
Haryana	—	7113·85	—	359·30
Himachal Pradesh	—	1285·22	—	206·27
Jammu & Kashmir	—	2105·08	34·37	—
Punjab	—	12668·14	257·50	546·80
Rajasthan	—	9138·09	48·77	30·42
Uttar Pradesh	—	22110·81	67·83	302·95
B.B.M.B.	—	11521·16	—	11118·54
D.E.S.U.	—	6898·98	641·53	—
Gujarat	35·51	17128·21	1317·42	580·90
Madhya Pradesh	—	15194·48	217·41	1104·11
Maharashtra	30·98	29663·39	5021·83	1319·79
Andhra Pradesh	—	16244·56	282·66	51·20
Karnataka	—	12016·65	47·08	34·34
Kerala	—	5990·93	70·00	22·19
Tamil Nadu	27·00	16703·32	352·00	114·84
Bihar	—	7211·49	34·77	565·54
Orissa	899·47	5833·33	16·49	47·51
West Bengal	0·01	7006·62	1754·59	591·77
D.V.C.	—	6667·30	—	6557·08
Assam	0·70	1808·96	—	130·00
Meghalaya	—	420·87	—	231·40

TABLE No.36—(contd.)

Name of the Board/Undertaking	Energy sold to ultimate consumers	Total sold (7+8+9)	Transformation, Transmission & Distribution losses and energy unaccounted for	% of Column
				6
	9	10	11	12
Haryana	4860·82	5220·12	1893·73	26·62
Himachal Pradesh	795·22	1001·49	283·73	22·08
Jammu & Kashmir	1197·95	1232·32	872·76	41·46
Punjab	9542·86	10347·16	2320·98	18·32
Rajasthan	6743·17	6822·36	2315·73	25·34
Uttar Pradesh	15680·41	16051·19	6059·62	27·41
B.B.M.B.	—	11118·54	402·62	3·49
D.E.S.U.	4321·61	4963·14	1935·84	28·06
Gujarat	11870·60	13768·92	3359·29	19·61
Madhya Pradesh	10523·30	11844·82	3353·62	22·07
Maharashtra	18644·25	24985·87	4677·52	15·77
Andhra Pradesh	12767·82	13101·68	3142·88	19·35
Karnataka	9377·15	9458·57	2558·08	21·29
Kerala	4387·00	4479·19	1511·74	25·23
Tamil Nadu	13287·00	13753·84	2949·48	17·66
Bihar	4883·26	5483·57	1727·92	23·96
Orissa	4163·95	4227·95	1605·38	27·52
West Bengal	3032·91	5379·27	1627·35	23·23
D.V.C.	—	6557·08	110·22	1·65
Assam	1227·00	1357·03	451·93	24·98
Meghalaya	149·06	380·46	40·41	9·60

TABLE NO. 37

Statement showing pilferage/misuse of energy as reported by State Electricity Boards during
1988-89

Name of the Region	Name of the Electricity Board	No. of cases where inspections were carried out	No. of cases where theft or misuse was detected	Estimated quantity of energy considered as pilferage or misuse (GWH)
<i>Northern Region</i>	Haryana	81204	3789	6.44
	Himachal Pradesh	N.A.	N.A.	N.A.
	Jammu & Kashmir	N.A.	N.A.	N.A.
	Punjab	1176097	16839	129.90
	Rajasthan	24700	8161	32.79
	Uttar Pradesh	46522	33968	N.A.
<i>Western Region</i>	Gujarat	N.A.	N.A.	N.A.
	Madhya Pradesh	Nil	Nil	Nil
	Maharashtra	10952	6163	21.68
<i>Southern Region</i>	Andhra Pradesh	15477	9173	18.49
	Karnataka	17169	2086	N.A.
	Kerala	N.A.	N.A.	N.A.
	Tamil Nadu	N.A.	N.A.	N.A.
<i>Eastern Region</i>	Bihar	N.A.	N.A.	N.A.
	Orissa	N.A.	N.A.	N.A.
	West Bengal	1564	1564	0.10
<i>North Eastern Region</i>	Assam	N.A.	N.A.	N.A.
	Meghalaya	83	29	0.19

NOTE : N.A.—Data not available.

TABLE NO. 38

Gross Generation, Net Energy Generation and auxiliary Consumption (Utilities only) Primemoverwise/Regionwise/Statewise during 1988-89

Region	Name of the State/ U.Ts.	Total			
		Gross Generation (GWH)	Net Generation (GWH)	Auxiliary consumption	
				Total (GWH)	% age Gross Generation
<i>Northern Region</i>	Haryana	6313.56	5929.78	383.78	6.08
	Himachal Pradesh.	698.85	696.35	2.50	0.36
	Jammu & Kashmir	884.00	881.17	2.83	0.32
	Punjab	12130.61	11570.59	560.02	4.62
	Rajasthan	5264.85	4963.69	301.16	5.72
	Uttar Pradesh	18870.51	17311.80	1558.71	8.26
	Chandigarh	—	—	—	—
	Delhi	1087.81	985.44	102.37	9.41
	Central Sector	21424.45	19536.61	1887.84	8.81
		SUB-TOTAL	66674.64	61875.43	4799.21
<i>Western Region</i>	Gujarat	17785.71	15900.83	1884.88	10.60
	Madhya Pradesh	12344.98	11115.14	1229.84	9.96
	Maharashtra	31936.15	29595.91	2430.24	7.61
	Goa	—	—	—	—
	D & N Haveli	—	—	—	—
	Daman & Diu	—	—	—	—
	Central Sector	10766.23	9837.41	928.82	8.63
	SUB-TOTAL	72833.07	66359.29	6437.78	8.89
<i>Southern Region</i>	Andhra Pradesh	14175.18	13427.38	747.80	5.27
	Karnataka	9260.54	9045.18	215.36	2.32
	Kerala	4547.99	4521.54	26.45	0.58
	Tamil Nadu	11224.50	10488.60	735.90	6.56
	Lakshadweep	7.27	7.14	0.13	1.79
	Pondicherry	—	—	—	—
	Central Sector	14997.54	13418.13	1579.41	10.53
	SUB-TOTAL	54213.02	50907.97	3305.05	6.10
<i>Eastern Region.</i>	Bihar	4539.72	3920.34	619.38	13.64
	Orissa	4367.51	4212.10	155.41	3.56
	West Bengal.	8428.84	7578.15	850.69	10.09
	D.V.C.	5994.92	5182.35	812.57	13.55
	A & N Islands	32.70	31.82	0.88	2.69
	Sikkim	30.25	26.11	4.14	13.68
	Central Sector	1765.57	1520.35	245.22	13.89
		SUB-TOTAL	25159.51	22471.22	2688.29
<i>North Eastern Region</i>	Assam	1086.56	1001.60	84.96	7.82
	Manipur	2.06	1.69	0.37	17.96
	Meghalaya	422.89	420.87	2.02	0.48
	Nagaland	0.33	0.30	0.03	3.03
	Tripura	98.73	97.76	0.97	0.98
	Arunchal Pradesh	43.98	41.16	2.82	6.41
	Mizoram	21.44	20.72	0.72	3.36
	Central Sector	839.90	834.92	4.98	0.59
		SUB-TOTAL	2515.89	2419.02	96.87
	TOTAL(ALL-INDIA)	221396.13	204032.93	17363.20	7.84

TABLE No. 38 (contd.)

Region	State/U.Ts.	Hydro			
		Gross Generation (GWH)	Net Generation (GWH)	Auxiliary Consumption	
				Total (GWH)	% age Gross Generation
<i>Northern Region</i>	Haryana	3835.13	3764.94	70.19	1.83
	Himachal Pradesh	698.85	696.35	2.50	0.36
	Jammu & Kashmir	884.00	881.17	2.83	0.32
	Punjab	7327.16	7218.41	108.75	1.48
	Rajasthan	3244.24	3163.69	80.55	2.48
	Uttar Pradesh	4726.31	4713.49	12.82	0.27
	Chandigarh	—	—	—	—
	Delhi	—	—	—	—
	Central Sector	2852.37	2794.27	58.10	2.04
	SUB-TOTAL	23568.06	23232.32	335.74	1.42
<i>Western Region</i>	Gujarat	970.57	963.52	7.05	0.73
	Madhya Pradesh	886.03	877.12	8.91	1.00
	Maharashtra	5681.88	5560.88	121.00	2.13
	Goa	—	—	—	—
	D & N Haveli	—	—	—	—
	Daman & Dju	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	7538.48	7401.52	136.96	1.82
<i>Southern Region</i>	Andhra Pradesh	6911.81	6842.89	68.92	1.00
	Karnataka	6823.06	6806.06	17.00	0.25
	Kerala	4547.99	4521.54	26.45	0.58
	Tamil Nadu	3352.70	3339.00	13.70	0.41
	Lakshadweep	—	—	—	—
	Pondicherry	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	21635.56	21509.49	126.07	0.58
<i>Eastern Region</i>	Bihar	202.77	201.79	0.98	0.48
	Orissa	3095.51	3080.30	15.21	0.49
	West Bengal	110.93	110.09	0.84	0.76
	D.V.C.	324.83	315.04	9.79	3.01
	A & N Islands	—	—	—	—
	Sikkim	29.94	25.86	4.08	13.63
	Central Sector	—	—	—	—
	SUB-TOTAL	3763.98	3733.08	30.90	0.82
<i>North Eastern Region</i>	Assam	0.59	0.58	0.01	1.69
	Manipur	0.65	0.46	0.19	29.23
	Meghalaya	422.89	420.87	2.02	0.48
	Nagaland	0.22	0.21	0.01	4.54
	Tripura	58.68	58.24	0.44	0.75
	Arunachal Pradesh	36.64	34.72	1.92	5.24
	Mizoram	2.24	2.23	0.01	0.45
	Central Sector	839.90	834.92	4.98	0.59
	SUB-TOTAL	1361.81	1352.23	9.58	0.70
TOTAL (ALL INDIA)	57867.89	57228.64	639.25	1.10	

TABLE NO. 38 (contd.)

Region	State/U.Ts.	Steam			
		Gross	Net	Auxiliary Consumption	
		Generation (GWH)	Generation (GWH)	Total (GWH)	% age Gross Generation
<i>Northern Region</i>	Haryana	2478.43	2164.84	313.59	12.65
	Himachal Pradesh	—	—	—	—
	Jammu & Kashmir	—	—	—	—
	Punjab	4803.45	4352.18	451.27	9.39
	Rajasthan	2020.61	1800.00	220.61	10.92
	Uttar Pradesh	14144.20	12598.31	1545.89	10.93
	Chandigarh	—	—	—	—
	Delhi	879.28	778.99	100.29	11.40
	Central Sector	16639.91	15065.16	1574.75	9.46
	SUB-TOTAL	40965.88	36759.48	4206.40	10.27
<i>Western Region</i>	Gujarat	16812.45	14934.72	1877.73	11.17
	Madhya Praadesh	11485.95	10238.02	1220.93	10.65
	Maharashtra	24331.39	22035.74	2295.65	9.43
	Goa	—	—	—	—
	D & N Haveli	—	—	—	—
	Daman & Diu	—	—	—	—
	Central Sector	8866.23	8115.41	750.82	8.47
	SUB-TOTAL	61469.02	55323.89	6145.13	10.00
<i>Southern Region</i>	Andhra Pradesh	7263.37	6584.49	678.88	9.35
	Karnataka	2437.48	2239.12	198.36	8.14
	Kerala	—	—	—	—
	Tamil Nadu	7867.80	7145.60	722.20	9.18
	Lakshadweep	—	—	—	—
	Pondicherry	—	—	—	—
	Central Sector	12949.64	11600.55	1349.09	10.42
	SUB-TOTAL	30518.29	27569.76	2948.53	9.66
<i>Eastern Region.</i>	Bihar	4336.95	3718.55	618.40	14.26
	Orissa	1272.00	1131.80	140.20	11.02
	West Bengal.	8254.13	7405.36	848.77	10.28
	D.V.C.	5670.09	4867.31	802.78	14.16
	A & N Islands	—	—	—	—
	Sikkim	—	—	—	—
	Central Sector	1765.57	1520.35	245.22	13.89
	SUB-TOTAL	21298.74	18643.37	2655.37	12.47
<i>North Eastern Region</i>	Assam	643.32	578.40	64.92	10.09
	Manipur	—	—	—	—
	Meghalaya	—	—	—	—
	Nagaland	—	—	—	—
	Tripura	—	—	—	—
	Arunchal Pradesh	—	—	—	—
	Mizoram	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	643.32	578.40	64.92	10.09
	TOTAL(ALL-INDIA)	154895.25	138874.90	16020.35	10.34

TABLE NO. 38 (contd.)

Region	State/U.Ts.	Diesel & Wind		
		Gross Generation (GWH)	Net Generation (GWH)	Auxiliary Consumption Total (GWH) % age gross Generation
<i>Northern Region</i>	Haryana . . .	—	—	—
	Himachal Pradesh . . .	—	—	—
	Jammu & Kashmir . . .	—	—	—
	Punjab . . .	—	—	—
	Rajasthan . . .	—	—	—
	Uttar Pradesh . . .	—	—	—
	Chandigarh . . .	—	—	—
	Delhi . . .	—	—	—
Central Sector . . .	—	—	—	
	SUB-TOTAL	—	—	—
<i>Western Region</i>	Gujarat . . .	1.62**	1.59**	0.03** 1.85
	Madhya Pradesh . . .	—	—	—
	Maharashtra . . .	—	—	—
	Goa . . .	—	—	—
	D & N Haveli . . .	—	—	—
	Daman & Diu . . .	—	—	—
	Central Sector . . .	—	—	—
	SUB-TOTAL	1.62**	1.59**	0.03** 1.85
<i>Southern Region</i>	Andhra Pradesh . . .	—	—	—
	Karnataka . . .	—	—	—
	Kerala . . .	—	—	—
	Tamil Nadu . . .	4.00*	4.00*	—
	Lakshadweep . . .	7.27	7.14	0.13 1.79
	Pondicherry . . .	—	—	—
	Central Sector . . .	—	—	—
	SUB-TOTAL	11.27	11.14	0.13 1.15
<i>Eastern Region.</i>	Bihar . . .	—	—	—
	Orissa . . .	—	—	—
	West Bengal . . .	0.33	0.21	0.12 36.36
	D.V.C. . . .	—	—	—
	A & N Islands . . .	32.70	31.82	0.88 2.69
	Sikkim . . .	0.31	0.25	0.06 19.35
	Central Sector . . .	—	—	—
	SUB-TOTAL	33.34	32.28	1.06 3.18
<i>North Eastern Region</i>	Assam . . .	—	—	—
	Manipur . . .	1.41	1.23	0.18 12.76
	Meghalaya . . .	—	—	—
	Nagaland . . .	0.11	0.09	0.02 18.18
	Tripura . . .	2.00	1.85	0.15 7.50
	Arunchal Pradesh . . .	7.34	6.44	0.90 12.26
	Mizoram . . .	19.20	18.49	0.71 3.70
	Central Sector . . .	—	—	—
	SUB-TOTAL	30.06	28.10	1.96 6.52
	TOTAL (ALL INDIA)	76.29	73.11	3.18 4.17

**Includes wind mill generation of 1.56 M.Kwh & auxiliary consumption of 0.03 M.Kwh.

*Wind mill generation.

TABLE NO. 38 (Contd.)

Region	Name of the State/U.Ts.	Gas			
		Gross Generation (GWH)	Net generation (GWH)	Auxiliary Consumption	
				Total (GWH)	%age gross generation
<i>Northern Region</i>	Haryana	—	—	—	—
	Himachal Pradesh	—	—	—	—
	Jammu & Kashmir	—	—	—	—
	Punjab	—	—	—	—
	Rajasthan	—	—	—	—
	Uttar Pradesh	—	—	—	—
	Chandigarh	—	—	—	—
	Delhi	208.53	206.45	2.08	1.00
	Central Sector	62.96	62.77	0.19	0.30
	SUB-TOTAL	271.49	269.22	2.27	0.84
<i>Western Section</i>	Gujarat	1.07	1.00	0.07	6.54
	Madhya Pradesh	—	—	—	—
	Maharashtra	1922.88	1909.29	13.59	0.71
	Goa	—	—	—	—
	D & N Havell	—	—	—	—
	Daman & Diu	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	1923.95	1910.29	13.66	0.71
<i>Southern Region</i>	Andhra Pradesh	—	—	—	—
	Karnataka	—	—	—	—
	Kerala	—	—	—	—
	Tamil Nadu	—	—	—	—
	Lakshadweep	—	—	—	—
	Pondicherry	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	—	—	—	—
<i>Eastern Region</i>	Bihar	—	—	—	—
	Orissa	—	—	—	—
	West Bengal	63.45	62.49	0.96	1.51
	D.V.C.	—	—	—	—
	A & N Islands	—	—	—	—
	Sikkim	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	63.45	62.49	0.96	1.51
<i>North Eastern Region</i>	Assam	442.65	422.62	20.03	4.52
	Manipur	—	—	—	—
	Meghalaya	—	—	—	—
	Nagaland	—	—	—	—
	Tripura	38.05	37.67	0.38	1.00
	Arunachal Pradesh	—	—	—	—
	Mizoram	—	—	—	—
	Central Sector	—	—	—	—
		SUB-TOTAL	480.70	460.29	20.41
	TOTAL (ALL INDIA)	2739.59	2702.29	37.30	1.36

TABLE NO. 38 (Contd.)

Region	Name of State/U.Ts.	Nuclear			
		Gross generation (GWH)	Net generation (GWH)	Auxiliary Consumption Total (GWH)	%age gross generation
<i>Northern Region</i>	Haryana	—	—	—	—
	Himachal Pradesh	—	—	—	—
	Jammu & Kashmir	—	—	—	—
	Punjab	—	—	—	—
	Rajasthan	—	—	—	—
	Uttar Pradesh	—	—	—	—
	Chandigarh	—	—	—	—
	Delhi	—	—	—	—
	Central Sector	1869·21	1614·41	254·80	13·63
SUB-TOTAL	1869·21	1613·41	254·80	13·63	
<i>Western Region</i>	Gujarat	—	—	—	—
	Madhya Pradesh	—	—	—	—
	Maharashtra	—	—	—	—
	Goa	—	—	—	—
	D & N Haveli	—	—	—	—
	Daman & Diu	—	—	—	—
	Central Sector	1900·00	1722·00	178·00	9·37
	SUB-TOTAL	1900·00	1722·00	178·00	9·37
<i>Southern Region</i>	Andhra Pradesh	—	—	—	—
	Karnataka	—	—	—	—
	Kerala	—	—	—	—
	Tamil Nadu	—	—	—	—
	Lakshadweep	—	—	—	—
	Pondicherry	—	—	—	—
	Central Sector	2047·90	1817·58	230·32	11·25
SUB-TOTAL	2047·90	1817·58	230·32	11·25	
<i>Eastern Region</i>	Bihar	—	—	—	—
	Orissa	—	—	—	—
	West Bengal	—	—	—	—
	D.V.C	—	—	—	—
	A & N Islands	—	—	—	—
	Sikkir	—	—	—	—
	Central Sector	—	—	—	—
	SUB-TOTAL	—	—	—	—
<i>North Eastern Region</i>	Assam	—	—	—	—
	Manipur	—	—	—	—
	Meghalaya	—	—	—	—
	Nagaland	—	—	—	—
	Tripura	—	—	—	—
	Arunachal Pradesh	—	—	—	—
	Mizoram	—	—	—	—
	Central Sector	—	—	—	—
SUB-TOTAL	—	—	—	—	
	TOTAL (ALL INDIA)	5817·11	5153·99	663·12	11·40

TABLE No. 39

Share of Participating States in Jointly owned Power Stations during 1988-89

Name of Power Station	Name of participating States	Share of participating States		Total Capacity (MW)
		%age	I.C. (MW)	
<i>Bhakra Beas Management Board</i>				
Bhakra Nangal Complex (Hydro)*	Haryana . . .	84.78 × 40%	459.34	1354.50
	Punjab . . .	84.78 × 60%	689.00	
	Rajasthan . . .	15.22	206.16	
Dehar (Hydro)	Haryana . . .	32	316.80	990.00
	Punjab . . .	48	475.20	
	Rajasthan . . .	20	198.00	
Pong (Hydro)	Haryana . . .	16.6	59.76	360.00
	Punjab . . .	24.9	89.64	
	Rajasthan . . .	58.5	210.60	
Indraprastha Extn. (Steam)	Delhi . . .	66.67	125.00	187.50
	Haryana . . .	33.33	62.50	
<i>Chambal Projects</i>				
Gandhi Sagar (Hydro)	Madhya Pradesh . . .	50	57.50	115.00
	Rajasthan . . .	50	57.50	
Jawahar Sagar (Hydro)	Madhya Pradesh . . .	50	49.50	99.00
	Rajasthan . . .	50	49.50	
Rana Pratap Sagar (Hydro)	Madhya Pradesh . . .	50	86.00	172.00
	Rajasthan . . .	50	86.00	
Satpura (Steam)	Madhya Pradesh . . .	60	187.50	312.50
	Rajasthan . . .	40	125.50	
Machkund (Hydro)	Andhra Pradesh . . .	70	80.33	114.75
	Orissa . . .	30	34.42	
Tungabhadra Dam & Hampi (Hydro)	Andhra Pradesh . . .	80	57.60	72.00
	Karnataka . . .	20	14.40	
Pench (Hydro)	Madhya Pradesh . . .	66.67	106.66	160.00
	Maharashtra . . .	33.33	53.34	

NOTE:—*It comprise of capacity of Ganguwal 77.25 MW, Kotla 77.25MW, Bhakra left Bank 540MW and Bhakra Right Bank 660MW

I.C.—Installed Capacity

TABLE NO 39 —(Contd)

Name of the power station	Energy generated (GWH)		Energy offtake by State** (GWH)	
	Gross	Net		
<i>B.B.M.B.</i>				
Bhakra Nangal Complex (Hydro)	7314.54	7208.02	Haryana	3045.67
			Punjab	4337.54
Dehar (Hydro)	3237.82	3161.96	Rajasthan	2287.31
			Jammu & Kashmir	144.30
Pong (Hydro)	1208.14	1151.18	Irri. Wing	31.84
			N.F.F.	821.00
			Chandigarh	206.68
			Himachal Pradesh (Old & New including BSL)	244.20
			B.B.M.B. system losses	402.62
Indraprastha Extension (Steam) Unit 2,3&4)	678.42	611.17	Delhi	414.25
			Haryana	196.92
<i>Chambal Projects:</i>				
Gandhi Sagar (Hydro)	381.20	380.30		
Jawahar Sagar (Hydro)	339.32	331.72	Madhya Pradesh	1723.59
Rana Pratap Sagar (Hydro)	435.80	427.52	Rajasthan	1063.49
Satpura (Steam)	1834.00	1647.54		
Machkund (Hydro)	603.37	601.48	Andhra Pradesh	327.67(A)
			Orissa	273.81
Tungabhadra Dam & Hampi (Hydro)	198.14	197.39	Andhra Pradesh	159.77 (B)
			Karnataka	37.62
Pench	248.48	247.84	Madhya Pradesh	187.10
			Maharashtra	60.74

NOTE:—**Including losses Excluding B B M B system.

B.B.M-B.—Means Bhakra Beas Management Board.

N.F.F.—Nangal Fertilizer Factory.

(A)—Includes colony consumption of 4.89 GWH.

(B)—Includes colony consumption of 4.50 GWH.

TABLE No. 40

Installed Capacity, Energy Generated, Energy sent out by Central Govt. Projects, DVC & State Govt. Projects during 1988-89

Name of Power Station	Installed Capacity (M.W.)	Energy generated (GWH)		Off-take by States including losses	
		Gross	Net		
Badarpur Thermal Power Station	720.00	4080.68	3504.10	Delhi	3504.10 (A)
Baira Siul (Hydro)	180.00	704.07	701.43	Delhi	74.54
				H.P.	98.31 (B)
				Haryana	210.08
				Punjab	318.50
Singrauli (STPS)***	205.00	12485.00	11492.00	VSTPP(M.P.)	92.00
				J. & K.	54.00
				H.S.E.B.	1203.00
				R.S.E.B.	2306.00
				D.E.S.U.	1599.00
				U.P.	4779.00 (C)
				H.P.	81.00
				Chandigarh	154.00
				Punjab S.E.B.	1179.00
				M.P.E.B.	2.00
				B.S.E.B.	122.00
				D.V.C.	17.00
Rihand S.T.P.S.	500.00	74.23	69.06	H.P.S.E.B.	5.69
				Punjab S.E.B.	5.06
				R.S.E.B.	17.56
				H.S.E.B.	12.38
				J & K S.E.B.	0.95
				U.P.	17.91
				Chandigarh	4.70
				D.E.S.U.	4.81
Anta (Gas)	176.00	62.96	62.77	H.S.E.B.	20.51
				H.P.E.B.	2.04
				J&K S.E.B.	0.99
				P.S.E.B.)	0.05
				R.S.E.B.	26.69
				U.P.S.E.B.	9.75
				D.E.S.U.	0.38
				Chandigarh	2.36
Auraiya (Steam)	112.00	—	—	—	—
Narora (Nuclear)	235.00	—	—	—	—
Salal (Hydro)	345.00	2148.30	2092.84	D.E.S.U.	200.93
				P.S.E.B.	533.39
				J&K	1023.67
				H.S.E.B.	334.85
Unchahar (U.P.R.V.N.)	420.00	—	—	—	—
Rajasthan Atomic Power Project (Nuclear)	440.00	1869.21	1614.41	Rajasthan	1614.41 (D)

TABLE No. 40—(contd.)

Name of Power Station	Installed capacity (M.W.)	Energy Generated (GWH)		Off-take by states including losses	
		Gross	Net		
Tarapur Atomic Power Station (Nuclear)	420.00	1900.00	1722.00	Gujarat Maharashtra	861.00 861.00
Kalyan Steam Power Station (Chola Central Railway)	96.00	—	—	Maharashtra	—
Korba S.T.P.S.	2130.00	7702.80	7098.55	Gujarat Maharashtra Madhya Pradesh Goa	1016.33 2224.02 3655.41 (E) 202.79
Vindychal S.T.P.S.***	630.00	1163.43	1016.86	G.E.B. M.P.E.B. M.S.E.B. S.S.T.P.S.	779.25 179.15 54.46 96.00
Damodar Valley Corporation@	1931.50	5994.92	5182.35	Bihar West Bengal Orissa	4125.56* 2303.40* 128.1 2
Neyveli Lignite Corporation@	600.00	3906.04	3478.83	Tamil Nadu	3478.83(AA)
Neyveli 2nd Mine Cut (steam)	630.00	3667.06	3311.09	Pondicherry K.E.B. K.S.F.B. T.Nadu	343.60 646.08 705.75 1615.66 (G)
Durgapur Projects Ltd. (Steam)	395.00	735.30	633.21	Bihar Orissa W.Bengal D.V.C.	65.43 55.55 467.12 (J) 45.11
Kolaghat (Steam) (W.B.P.D.C.L.)	420.00	1815.05	1617.76	W.B.S.E.B.	1617.76
Rengali (Orissa Govt.) (Hydro)	100.00	577.95	576.37	Orissa	576.37 (I)
Upper Kolab (Hydro) (Orissa Govt.)	160.00	842.55	841.29	Orissa SEB.	841.29
Ramagundam STPS	1600.00	5376.54	4810.63	Andhra Pradesh K.E.B. T.N.E.B. K.S.E.B. Goa	2121.36 (F) 1178.71 793.33 511.64 205.59
Kalpakkam (Nuclear)	470.00	2047.90	1817.58	Tamil Nadu A.P.S.E.B. K.E.B. K.S.F.B.	967.58 (H) 274.00 324.00 252.00

TABLE No. 40—(concl'd.)

Name of Power Station	Installed Capacity (MW)	Energy Generated(GWH)		Off-take by States including losses	
		Gross	Net		
Farakka S.T.P.S.	630.00	1765.57	1520.35	Sikkim	4.99
				W. Bengal	426.31 (K)
				B.S.E.B.	550.96
				O.S.E.B.	224.08
				D.V.C.	314.01
Kopili(Hydro)	150.00	465.34	462.38	Mizoram	5.00
				Assam	437.77
				Manipur	30.43
				Meghalaya	5.60 (L)
				Tripura	1.44
Loktak (Hydro)	105.00	374.56	372.54	Assam	124.62
				Manipur	160.83
				Nagaland	69.23
				NEEPCO	17.86
Hoz Basti (Hydro) (NEEPCO)	0.01	—	—	—	—

- NOTE:—**
- @D.V.C. is owned by three partners viz. Central Govt., Bihar Govt. and West Bengal Government.
 - @Net Generation does not tally with the total energy sent out by D.V.C. since it includes energy purchased by D.V.C.
 - * Includes 2266.90 GWH direct sales by D.V.C. to ultimate consumers in Bihar area.
 - ** Includes 571.78 GWH direct sales by D.V.C. to ultimate consumers in West Bengal area.
 - (AA) Includes energy consumed by Neyveli Lignite Corporation within works of 501.75 GWH.
 - (A) Includes 12.48 GWH energy used for colony.
 - (B) Includes colony consumption of 23.77 GWH.
 - (C) Includes construction and colony consumption of 20.00 GWH.
 - (D) Includes H.W.P. consumption of 96.25 GWH.
 - (E) Includes 38.00 GWH of colony consumption and energy used in BCPP of 3.00 GWH.
 - (F) Includes colony consumption of 19.46 GWH.
 - (G) Includes energy consumed by Neyveli 2nd Mine Cut within works of 140.35 GWH.
 - (H) Includes own consumption of 36.58 GWH.
 - (I) Includes colony consumption of 9.74 GWH.
 - (J) Includes sales to direct consumers of 235.05 GWH.
 - (K) Includes colony & construction consumption of 6.32 GWH.
 - (L) Colony consumption of 5.60 GWH.
 - *** Energy off-take by States from Singrauli STPS and Vindhychal STPS may not tally with the net generation as these power stations purchased energy from outside.

TABLE NO. 41

Statement showing Interstate Transfer of Power Regionwise/Statewise during 1988-89

Name of the Supplier	Name of the Purchaser	Energy Transferred(GWH)
<i>Northern Region</i>		
Haryana S.E.B.	Rajasthan S.E.B.	36.74
Haryana S.E.B.	D.E.S.U.	279.82
Haryana S.E.B.	Chandigarh	42.74
Himachal Pradesh S.E.B.	Punjab S.E.B.	193.92
Himachal Pradesh S.E.B.	Uttar Pradesh S.E.B.	12.35
Punjab S.E.B.	Himachal Pradesh S.E.B.	162.40
Punjab S.E.B.	Chandigarh	58.73
Punjab S.E.B.	D.E.S.U.	80.32
Punjab S.E.B.	Rajasthan S.E.B.	245.35
Uttar Pradesh S.E.B.	Himachal Pradesh S.E.B.	19.00
Uttar Pradesh S.E.B.	Haryana S.E.B.	10.66
Uttar Pradesh S.E.B.	D.E.S.U.	175.34
Chandigarh	H.S.E.B.	1.00
Chandigarh	Punjab S.E.B.	1.05
<i>Western Region</i>		
Gujarat Electy. Board	Maharashtra S.E.B.	433.20
Gujarat Electy. Board	Dadra & Nagar Haveli	104.43
Gujarat Electy. Board	Daman & Diu	43.27
Madhya Pradesh E.B.	Maharashtra S.E.B.	82.19
Maharashtra S.E.B.	Madhya Pradesh E.B.	0.48
Maharashtra S.E.B.	Goa	140.68
Maharashtra S.E.B.	Gujarat Electy. Board	383.90
<i>Eastern Region</i>		
Bihar S.E.B.	West Bengal S.E.B.	2.09
Bihar S.E.B.	Orissa S.E.B.	187.96
Bihar S.E.B.	Damodar Valley Corpn.	341.62
Orissa S.E.B.	Bihar S.E.B.	9.05
Orissa S.E.B.	Damodar Valley Corpn.	38.46
West Bengal S.E.B.	Damodar Valley Corpn.	659.37
West Bengal S.E.B.	Bihar S.E.B.	174.46
Damodar Valley Corpn.	Bihar S.E.B.	1851.89
Damodar Valley Corpn.	West Bengal S.E.B.	774.55
Damodar Valley Corpn.	Durgapur Projects Ltd.	19.55
Damodar Valley Corpn.	Dishergarh E.S.Co./ Seebpur E.S.Co./CESC.	900.74
Damodar Valley Corpn.	F.C.I. (Bihar)	6.77
Damodar Valley Corpn.	Orissa S.E.B.	128.12
Sikkim	West Bengal S.E.B.	0.49
Damodar Valley Corpn.	N.T.P.C.	36.78

TABLE No. 41—(contd.)

Name of the Supplier	Name of the Purchaser	Energy Transferred (GWH)
<i>Southern Region</i>		
Andhra Pradesh S.E.B.	Karnataka E.B.	4.03
Andhra Pradesh S.E.B.	Pondicherry	13.41
Kerala S.E.B.	Tamil Nadu E.B.	10.00
Kerala S.E.B.	Pondicherry	12.03
Kerala S.E.B.	Karnataka E.B.	0.16
Tamil Nadu E.B.	Pondicherry	82.00
Tamil Nadu E.B.	Karnataka E.B.	26.77
Tamil Nadu E.B.	Andhra Pradesh S.E.B.	6.07
Karnataka E.B.	A.P.S.E.B.	2.84
Karnataka E.B.	Tamil Nadu E.B.	1.00
<i>North-Eastern Region</i>		
Assam S.E.B.	Mizoram	17.61
Assam S.E.B.	Nagaland	44.43
Assam S.E.B.	Arunachal Pradesh	15.94
Assam S.E.B.	Tripura	51.00
Tripura	Assam S.E.B.	1.72
Meghalaya S.E.B.	Assam S.E.B.	231.40
Nagaland	Assam S.E.B.	11.15
Tripura	Mizoram	2.89
INTER-REGIONAL TRANSFERS OF POWER		
<i>Northern Region</i>		
Uttar Pradesh S.E.B.	Madhya Pradesh E.B.	31.95
Rajasthan S.E.B.	Madhya Pradesh E.B.	30.42
<i>Northern Region</i>		
Uttar Pradesh S.E.B.	Bihar S.E.B.	30.00
<i>Western Region</i>		
Maharashtra S.E.B.	Karnataka E.B.	794.73
Madhya Pradesh E.B.	Andhra Pradesh S.E.B.	560.20
<i>Western Region</i>		
Madhya Pradesh E.B.	Rajasthan S.E.B.	305.53
<i>Western Region</i>		
Madhya Pradesh E.B.	Orissa S.E.B.	156.19
<i>Southern Region</i>		
Andhra Pradesh S.E.B.	Madhya Pradesh E.B.	38.76
Karnataka E.B.	Maharashtra S.E.B.	32.36
<i>Southern Region</i>		
Andhra Pradesh S.E.B.	Orissa S.E.B.	93.37
OUTSIDE THE COUNTRY		
Uttar Pradesh S.E.B.	Nepal	36.00
Bihar S.E.B.	Nepal	55.12
West Bengal S.E.B.	Bhutan	3.79
Assam S.E.B.	Bhutan	1.05
Nepal & Gandak Proj.	Bihar S.E.B.	13.28
Bihar S.E.B.	Bhutan	1.14
Bhutan	Bihar S.E.B.	604.94
Bhutan	West Bengal S.E.B.	495.82
Bhutan	Sikkim	5.11
Bhutan	Orissa S.E.B.	178.00

NOTE:—(1) D.V.C. is being treated as a separate entity for the purpose of this table.

(2) Energy sent out to various States from jointly owned projects have been shown in Table No. 39,

SECTION VI

Operating Data (Utilities)

SECTION—VI

OPERATING DATA (UTILITIES)

The coal consumption by various steam stations in the country during the year 1988-89 was 99.02 million metric tonnes as compared to 90.56 million metric tonnes during the previous year indicating an increase of 9.34%. The consumption of fuels viz. lignite, natural gas, furnace oil & diesel oil increased by 9.07%, 32.98%, 2.30% & 40.76% respectively, whereas consumption of LSHS/HHS & refinery gas decreased by 6.65% & 22.57% respectively. Total fuel consumption for steam power station (i.e. coal equivalent assuming average calorific value as 5000 k. Cal./Kg.) increased by 4.33% in 1988-89 as against 6.23% increase in steam generation. The average heat rate for all the power stations improved to 2849 K. Cal./Kwh in 1988-89 as compared to 2901 K. Cal./Kwh in previous year.

Out of 104 steam power stations, 32 power stations having aggregate installed capacity of 3450.38 MW representing 9.09% of total installed capacity of steam stations reported an overall thermal efficiency below 20%. This group of stations produced 5309.75 GWH i.e. 3.42% of total steam generation.

Seventeen power stations with an aggregate installed capacity of 4703.10 MW reported an overall thermal efficiency ranging between 20% to 25% and generated 18,431.63 GWH i.e. 11.90% of total steam generation. 25 power stations with aggregate capacity of 10,484.50 MW had an overall thermal efficiency in the range of 25 to 30% and produced 41,968.82 GWH representing 27.10% of total steam generation. 30 Power stations with aggregate capacity of 19,304.50 MW reported an overall thermal efficiency above 30% and generated 89,185.05 GWH which represents 57.58% of total steam generation during 1988-89. Thus nearly 85% of total steam generation was from the steam plants having an overall thermal efficiency of above 25% in 1988-89.

This Section depicts the statewise and regionwise picture of fuel consumption by various types of plants. Two tables, one showing the manpower engaged in various State Electricity Boards and the other indicating the simultaneous Peak Demand in various regions are also given in this Section.

TABLE NO. 42

Consumption of Fossil Fuels for Electricity Generation from Thermal Stations (By kind of Fuels) Regionwise/Statewise during 1988-89

Region	State/U.Ts.	Steam Stations		
		Coal (MT)	Lignite (MT)	Furnace Oil (KL)
<i>Northern Region</i>	Haryana	1734046	—	48131
	Himachal Pradesh	—	—	—
	Jammu & Kashmir	—	—	—
	Punjab	3307747	—	46800
	Rajasthan	883650	—	22877
	Uttar Pradesh	10856168	—	86555
	Chandigarh	—	—	—
	Delhi	748399	—	35020
	Central Sector	10536677	—	56333
Sub-Total	28066687	—	295716	
<i>Western Region</i>	Gujarat	8854709	—	743035
	Madhya Pradesh	9570141	—	146961
	Maharashtra	14381228	—	114292
	Goa	—	—	—
	D & N Haveli	—	—	—
	Daman & Diu	—	—	—
	Central Sector	6025323	—	53562
Sub-Total	38831401	—	1057850	
<i>Southern Region</i>	Andhra Pradesh	5701486	—	11126
	Karnataka	1619927	—	5025
	Kerala	—	—	—
	Tamil Nadu	5595747	—	25568
	Pondicherry	—	—	—
	Central Sector	3206623	9271278	29985
SUB-TOTAL	16123783	9271278	71704	
<i>Eastern Region</i>	Bihar	3682589	—	—
	Orissa	1099565	—	10500
	West Bengal	5332443	—	87178
	D.V.C.	3966201	—	96094
	A&N Islands	—	—	—
	Sikkim	—	—	—
Central Sector	1670296	—	52704	
SUB-TOTAL	15751094	—	246476	
<i>North Eastern Region</i>	Assam	249884	—	37625
	Manipur	—	—	—
	Meghalaya	—	—	—
	Nagaland	—	—	—
	Tripura	—	—	—
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
SUB-TOTAL	249884	—	37625	
TOTAL (ALL INDIA)	99022849	9271278	1709371	

NOTE:—MT—Metric Tonne.

KL—Kilo Litre

TABLE No. 42—(contd.)

State/U. Ts.	Steam Stations		
	Light Diesel Oil/HSD(KL)	LSHS/HHS* (KL)	Natural Gas (Million Cu. Mts.)
Haryana	7005	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	3067	—	—
Rajasthan	5415	—	—
Uttar Pradesh	50673	1236(A)	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	11043	—	—
SUB-TOTAL	77203	1236	—
Gujarat	9836	89149	103.36
Madhya Pradesh	27886	3818	—
Maharashtra	31246+350**	542389	530000 (B)(MT)
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	1236	—	—
SUB-TOTAL	70204+350**	635356	103.36+530000
Andhra Pradesh	3929+453**	—	—
Karnataka	427	—	—
Kerala	—	—	—
Tamil Nadu	3275	10527	—
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	2029	10711	—
SUB-TOTAL	9660+453**	21238	—
Bihar	118288	32502	—
Orissa	4257	—	—
West Bengal	10308	—	—
D.V.C.	—	—	—
A&N Islands	—	—	—
Sikkim	—	—	—
Central Sector	—	—	—
SUB-TOTAL	132853	32502	—
Assam	1930	30536	40.067
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
SUB-TOTAL	1930	30536	40.067
TOTAL (ALL INDIA)	291850+803**	720868	143.427+ 530000(B)(MT)

LSHS—Low Sulphur Heavy Stock,
B—Refinery gas
(A)—HPS—Heavy Petroleum Stock.

HHS—Hot Heavy Stock
**Superior Kerosene oil

TABLE No. 42—(Contd.)

State/U.Ts.	Steams Stations		
	Heat Input (K. Cal. × 10 ⁹)	Gross Generation (GWH)	Average heat input (K.ca.../KWH)
Haryana	8388.53	2244.78	3737
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	13373.94	4803.45	2784
Rajasthan	3183.06	1287.01	2473
Uttar Pradesh	40157.30	14144.20	2839
Chandigarh	—	—	—
Delhi	3765.47	1105.40	3406
Central Sector	42807.79	16639.91	2573
SUB-TOTAL	111676.09	40224.75	2776
Gujarat	48184.08	16812.45	2866
Madhya Pradesh	34532.91	12192.25	2832
Maharashtra	69579.07	24331.39	2860
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	21847.43	8866.23	2464
SUB-TOTAL	174143.49	62202.62	2800
Andhra Pradesh	21714.65	7263.37	2990
Karnataka	5753.44	2437.48	2360
Kerala	—	—	—
Tamil Nadu	22290.64	7867.80	2833
Lakshadweep	—	—	—
Pondicherry	—	—	—
Central Sector	35514.92	12949.64	2743
SUB-TOTAL	85273.65	30518.29	2794
Bihar	16701.62	4336.95	3851
Orissa	4686.63	1272.00	3684
West Bengal	21547.86	8254.13	2611
D.V.C.	19548.28	5670.09	3448
A & N Islands	—	—	—
Sikkim	—	—	—
Central Sector	5314.97	1765.57	3010
SUB-TOTAL	67799.36	21298.74	3183
Assam	2389.01	643.32	3714
Manipur	—	—	—
Meghalaya	—	—	—
Nagaland	—	—	—
Tripura	—	—	—
Arunachal Pradesh	—	—	—
Mizoram	—	—	—
SUB-TOTAL	2389.01	643.32	3714
TOTAL (ALL INDIA)	441281.60	154887.72	2849

TABLE NO. 42—(Contd.)

State/U. Ts.	Gas Stations	
	Natural Gas (Million Cu.Mts.)	Generation (GWH)
Haryana	—	—
Himachal Pradesh	—	—
Jammu & Kashmir	—	—
Punjab	—	—
Rajasthan	—	—
Uttar Pradesh	—	—
Chandigarh	—	—
Delhi	73983(oil)***	208.73
Central Sector]	18.74	62.96
SUB-TOTAL	18.74+73983(oil)***	271.49
Gujarat	8.44(oil)	1.07
Madhya Pradesh	—	—
Maharashtra	623.60+517(E)	1922.88
Goa	—	—
Dadra & Nagar Haveli	—	—
Daman & Diu	—	—
Central Sector	—	—
SUB-TOTAL	632.04+517(oil)	1923.95
Andhra Pradesh	—	—
Karnataka	—	—
Kerala	—	—
Tamil Nadu	—	—
Lakshadweep	—	—
Pondicherry	—	—
Central Sector	—	—
SUB-TOTAL	—	—
Bihar	—	—
Orissa	—	—
West Bengal	28671(oil)	63.45
D.V.C.	—	—
A & N Islands	—	—
Sikkim	—	—
SUB-TOTAL	28671(oil)	63.45
Assam	252.09	442.65
Manipur	—	—
Meghalaya	—	—
Nagaland	—	—
Tripura	26.24	38.05
Arunachal Pradesh	—	—
Mizoram	—	—
SUB-TOTAL	278.33	480.70
TOTAL (ALL INDIA)	929.11(Gas)+103171(Oil)(D)	2739.59

Oil—Oil in Kilo litres.

***HSD/Naphtha (Estimated)

(D)—Includes HSD/Naphtha.

(E)—Estimated.

TABLE No. 42—(Contd.)

States/U. Ts.	Diesel Stations		
	Diesel Oil (K. Lits.)	Generation (GWH)	Average Oil consumed Lts./Kwh
Haryana	—	—	—
Himachal Pradesh	—	—	—
Jammu & Kashmir	—	—	—
Punjab	—	—	—
Rajasthan	—	—	—
Uttar Pradesh	—	—	—
Chandigarh	—	—	—
Delhi	—	—	—
Central Sector	—	—	—
SUB-TOTAL	—	—	—
Gujarat	40	0·06+1·56(W)	0·67
Madhya Pradesh	—	—	—
Maharashtra	—	—	—
Goa	—	—	—
Dadra & Nagar Haveli	—	—	—
Daman & Diu	—	—	—
Central Sector	—	—	—
SUB-TOTAL	40	0·06+1·56(W)	0·67
Andhra Pradesh	—	—	—
Karnataka	—	—	—
Kerala	—	—	—
Tamil Nadu	—	4·00(W)	—
Lakshadweep	2737	7·27	0·38
Pondicherry	—	—	—
Central Sector	—	—	—
SUB-TOTAL	2737	7·27+4·00(W)	0·38
Bihar	—	—	—
Orissa	—	—	—
West Bengal	176	0·33	0·53
D.V.C.	—	—	—
A & N Islands	11980	32·70	0·37
Sikkim	120	0·31	0·39
Central Sector	—	—	—
SUB-TOTAL	12276	33·34	0·37
Assam	—	—	—
Manipur	517(E)	1·41	0·45
Meghalaya	—	—	—
Nagaland	52	0·11	0·47
Tripura	700	2·00	0·35
Arunachal Pradesh	1653	7·34	0·23
Mizoram	6472(E)	19·20	0·34
Central Sector	—	—	—
SUB-TOTAL	9394	30·06	0·31
TOTAL (ALL INDIA)	24447·00	70·73+5·56(W)	0·35

(E)—Estimated

(W)—Windmill generation.

TABLE No. 43
Classification of Steam Stations Efficiencywise during 1988-89

Overall Thermal efficiency	No. of generating stations	Aggregated installed capacity(MW)	Energy generated by the group (GWH)	%to total generation
Upto 10%	12	946.50	17.82	0.01
Above 10% & upto 15%	8	751.38	378.22	0.24
Above 15% & upto 20%	12	1752.50	4913.71	3.17
Above 20% & upto 25%	17	4703.10	18431.63	11.90
Above 25% & upto 30%	25	10484.50	41968.82	27.10
Above 30%	30	19304.50	89185.05	57.58
Total	104	37942.48	154895.25	100.00

TABLE No. 44
Salient Operating Data for Steam Power Stations (Utilities only) during 1988-89

Item	1987-88	1988-89	%increase
(i) No. of Stations	103	104	0.97
(ii) Aggregate installed capacity (M.W.)	34236.63	37942.48	10.82
(iii) Total energy generated (Gross) (GWH)	145813.62	154895.25	6.23
(iv) Installed Capacity of plants (above 50MW)	33864.00	37646.50	11.17
(v) Energy generated from plants (above 50MW)	145237.16	154461.42	6.35
(vi) KWH/KW installed from plants (above 50MW)	4289.00	4103.00	—
(vii) Fuel Used (All Stations)			
(a) (i) Coal (Tonnes)	90561663.00	99022849.00	9.34
(ii) Average calorific value K.Cal/Kg.	4424.00	3850.00	—
(b) (i) Lignite (Tonnes)	8500689.00	9271278.00	9.07
(ii) Average calorific value K.Cal/Kg.	2385.00	2370.00	—
(c) (i) Furnace Oil (K. Ltrs)	1670949.00	1709371.00	2.30
(ii) Average calorific value K.Cal/Kg	10305	10210	—
(d) (i) Diesel Oil/Kerosene Oil(K. Ltrs)	207913.00	292653.00	40.76
(ii) Average calorific value (K.Cal/Ltr.)	10400.00	10295.00	—
(e) (i) Natural Gas (Million Cu. Metres)	107.86	143.43	32.98
(ii) Average Calorific Value (Kcal/Mill. Cu. Metres.)	9500	9500	—
(f) (i) Refinery Gas (M.T.)	684501	530000	(—)22.57
(ii) Average Calorific Value (Kcal/Kg)	10345	12325	—
(g) (i) LSHS & HHS (K.L.)	772201.00	720868.00	(—) 6.25
(ii) Average calorific value (K.Cal/Ltr.)	10605.00	10503.00	—
(h) Overall thermal efficiency for plants above 50MW(Average)	29.66	28.78	—
(i) Total fuel consumption (Coal equivalent assuming calorific value as 5000 K.Cal/Kg.) in Tonnes. (All Stations)	84595254.00	88256320.00	4.33

TABLE No. 45
Actual Simultaneous Peak Demand Region wise during 1988-89

Region	Month in which demand was maximum	Actual Peak Demand(MW)
Northern	February, 1989	9541
Western	February, 1989	10933
Eastern	March, 1989	3816
Southern	December, 1988	8932
North Eastern	January, 1989	505.60
All India Aggregate Peak, Demand		33727.60*

*This is non-concident aggregate of simultaneous Peak Deman of various regions in the country.

@ Figures of Peak Demand are of actual simultaneous Peak Demand on the system irrespective of Power restrictions.

Source—Annual Reports of Regional Electricity Boards.

TABLE No. 46

Manpower Engaged in State Electricity Boards, DVC & DESU as on 31-3-89 as Reported by State Electricity Boards

Name of Electricity Board/Undertaking	REGULAR			
	Managerial and higher executive	Technical and Scientific Officers	Technical Supervisory staff	Technicians and operating Staff
1	2	3	4	5
<i>Northern Region</i>				
Haryana	N.A.	N.A.	N.A.	N.A.
Himachal Pradesh	N.A.	N.A.	N.A.	N.A.
Punjab	19	2404	6627	37176
Rajasthan	N.A.	1460@	N.A.	40544
Uttar Pradesh	91	4676	7028	61402
D.E.S.U.	N.A.	N.A.	N.A.	N.A.
<i>Western Region</i>				
Gujarat	18	2159	2306	22977
Madhya Pradesh	41	3778	5137	59248
Maharashtra	N.A.	N.A.	N.A.	N.A.
<i>Southern Region</i>				
Andhra Pradesh	19	1571	4037	35412
Karnataka	N.A.	N.A.	N.A.	N.A.
Kerala	13	8576	8631	5113
Tamil Nadu	24	7344	1480	58194
<i>Eastern Region</i>				
Bihar	N.A.	N.A.	N.A.	N.A.
Orissa(R)	9	1695	—	—
West Bengal	N.A.	2022	N.A.	N.A.
D.V.C.	N.A.	N.A.	N.A.	N.A.
<i>North Eastern Region</i>				
Assam	N.A.	1003	1553	5255

NOTE: Data in respect of State Electricity Boards of J & K and Meghalaya are not available.

@Includes Managerial & higher executives and Technical Supervisory staff.

Data in respect of Haryana, Himachal Pradesh & Maharashtra State Electricity Boards are taken from Annual Administration Report.

N.A.—Information not available.

R.—Repeat.

TABLE NO. 46 (Contd.)

Name of Electricity Board/Undertaking	REGULAR		NON-REGULAR	
	Non-Technical	Total Regular (2 to 6)	Technical Trainees and apprentices	Work charged staff
1	6	7	8	9
<i>Northern Region</i>				
Haryana	N.A.	39343	N.A.	N.A.
Himachal Pradesh	N.A.	28060	N.A.	N.A.
Punjab	24656	70882	—	—
Rajasthan	14546	56550	—	2539
Uttar Pradesh	38048	111243	—	—
D.E.S.U.	N.A.	26010	N.A.	N.A.
<i>Western Region</i>				
Gujarat	13763	41223	—	—
Madhya Pradesh	26888	95092	390	N.A.
Maharashtra	N.A.	106106	N.A.	N.A.
<i>Southern Region</i>				
Andhra Pradesh	14941	55980	1142	5820
Karnataka	N.A.	N.A.	N.A.	N.A.
Kerala	8777	31110	110	N.A.
Tamil Nadu	27567	94609	N.A.	N.A.
<i>Eastern Region</i>				
Bihar	N.A.	42439	—	—
Orissa(R)	31430(A)	33134	923	571
West Bengal	11608	13630	—	27604
D.V.C.	N.A.	N.A.	N.A.	N.A.
<i>North Eastern Region</i>				
Assam	14535	22346	N.A.	N.A.

(A)—Includes Technical Supervisory Staff and technicians and operating staff.

TABLE No. 46 (Concd.)

Name of Electricity Board/Undertaking	Casual	Total Non-Regular (8+9+10)	Total Regular & Non-Regular (7+11)
1	10	11	12
<i>Northern Region</i>			
Haryana	N.A.	N.A.	39343
Himachal Pradesh	N.A.	N.A.	28060
Punjab	—	—	70882
Rajasthan	—	2539	59089
Uttar Pradesh	—	—	111243
D.E.S.U.	N.A.	N.A.	26010*
<i>Western Region</i>			
Gujarat	—	—	41223
Madhya Pradesh	N.A.	390	95482
Maharashtra	N.A.	N.A.	106106
<i>Southern Region</i>			
Andhra Pradesh	520	7482	63462
Karnataka	N.A.	N.A.	46395
Kerala	N.A.	110	31220
Tamil Nadu	N.A.	N.A.	94609
<i>Eastern Region</i>			
Bihar	N.A.	N.A.	42439
Orissa(R)	8390	9884	43018
West Bengal	N.A.	27604	41234
D.V.C.	N.A.	N.A.	18391
<i>North Eastern Region</i>			
Assam	N.A.	N.A.	22346

*Figures pertain to regular employees only.

SECTION VII

Transmission & Distribution

SECTION-VII

TRANSMISSION AND DISTRIBUTION

I. Transmission and Distribution Lines

An extensive network of Transmission and Distribution lines has been developed over the years for evacuating power produced in the various generating stations and distributing the same to the consumers. Depending upon the quantum of power and the distance involved, lines of appropriate voltages are laid. The nominal Extra High Voltage lines in vogue are 400 KV, 230/220 KV, 110 KV and 66 KV. 400 KV E.H.V. lines have been introduced so far by the S.E.Bs of U.P., W.B., M.P., Maharashtra and Gujarat as also by B.B.M.B. (Punjab) and Central Sector only.

The standard voltages of operation on the distribution side are 33 KV, 22 KV, 400/230 volts besides 6.6 KV, 3.3 KV and 2.2 KV. The low voltage system has 3 phase 4 wires giving 400/420 volts. between 2 phases and 220/240 volts between phase and neutral. This has been universally adopted in the country.

The table below depicts the length of lines operating at various voltages as on 31-3-1989 with comparative increase over previous year:—

Voltages	Length of Lines (Ckt. Kms.)		
	31-3-88	31-3-89	% increase
400 KV	9423	10005	6.18
230/220 KV	52206	55125	5.59
132/110/90 KV	81860	85289	4.19
78/66 KV	33072	33641	1.72
33/22 KV	200277	207013	3.36
15/11 KV	1151534	1221896	6.11
6.6/3.3/2.2 KV	4629	4025	(-13.05)
Distribution lines upto 500 volts.	2259106	2425028	7.34
TOTAL	3792107	4042022	6.59

The State of Maharashtra has the largest T&D network of 4,58,422 Ckt. Kms. in the country. Apart from Maharashtra, States of Punjab, Haryana, Rajasthan, Uttar Pradesh, Gujarat, Madhya Pradesh, Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Bihar and West Bengal have more than 1 lakh Ckt. Kms. of T&D lines.

II. Transformers

The total number of step up transformers installed at various generating stations and sub-stations in the country as on 31st March, 1989 were 1,326 having aggregate capacity of 66,538.50 MVA. The number and capacity of step down and distribution transformers as on the same date were 16,301 and 10,14,741 numbers with aggregate capacity of 1,85,146.40 MVA and 78,234.16 MVA respectively.

TABLE No. 47

Length of Transmission and Distribution Lines Regionwise/Statewise as on 31st March, 1989

Region	State/U Ts	Total	Ckt Kms		
			400 KV (O.H.)	230 KV (O.H.)	220 KV (O.H.)
<i>Northern Region</i>	Haryana	141920	—	—	555
	Himachal Pradesh	51686	—	—	192
	Jammu & Kashmir(R)	42210	—	—	280
	Punjab	197542	270	—	4536
	Rajasthan	241770	—	—	3306
	Uttar Pradesh	397941	3200	—	5359
	Chandigarh(R)	1238	—	—	—
	Delhi	24709	—	—	281
	SUB-TOTAL	1099016	3470	—	14509
<i>Western Region</i>	Gujarat	252830	716	—	5076
	Madhya Pradesh	442011	1717	—	5869
	Maharashtra	458422	2599	2	6030
	Goa, Daman & Diu	7663	—	—	24
	D & N Haveli(R)	929	—	—	—
	SUB-TOTAL	1161855	5032	2	16999
<i>Southern Region</i>	Andhra Pradesh	407898	628	—	5167
	Karnataka	353605	—	—	5184
	Kerala(R)	109631	—	—	887
	Tamil Nadu	424371	354	4633	—
	Lakshadweep	174	—	—	—
	Pondicherry	7467	—	63	—
	SUB-TOTAL	1303146	982	4696	11238
<i>Eastern Region</i>	Bihar	168088	—	—	1434
	Orissa	95914	—	—	2158
	West Bengal	127453	521	—	2838
	D.V.C.	4421	—	—	719
	A & N Islands	1980	—	—	—
	Sikkim(R)	631	—	—	—
	SUB-TOTAL	398487	521	—	7149
<i>North Eastern Region</i>	Assam(R)	39928	—	—	322
	Manipur(R)	5454	—	—	—
	Meghalaya	10176	—	—	210
	Nagaland(R)	9022	—	—	—
	Tripura	7048	—	—	—
	Arunachal Pradesh(R)	5172	—	—	—
	Mizoram(R)	2718	—	—	—
	SUB-TOTAL	79518	—	—	532
	TOTAL (ALL INDIA)	4042022	10005	4698	50427

TABLE No. 47 (contd)

(Ckt Kms)

State/U.Ts.	132 KV	110/90 KV	78/66 KV	33 KV	(U,G.)
	(O.H.)	(O.H.)	(O.H.)	(O.H.)	
Haryana	1858	—	1382	3881	—
Himachal Pradesh	208	—	271	1555	—
Jammu & Kashmir(R)	659	—	—	1693	—
Punjab	2791	—	3285	1535	—
Rajasthan	6658	—	303	16496	—
Uttar Pradesh	9550	—	3024	22628	—
Chandigarh(R)	—	—	—	34	—
Delhi	—	—	311	410	417
SUB-TOTAL	21724	—	8576	48232	417
Gujarat	4031	—	8418	2334	—
Madhya Pradesh	9941	—	362	26352	—
Maharashtra	5877	3242	3208	14061	—
Goa, Daman & Diu	—	142	—	711	—
D & N Haveli(R)	—	—	16	—	—
SUB-TOTAL	19849	3384	12004	43458	—
Andhra Pradesh	7635	—	1783(A)	18200	—
Karnataka	—	4841	3917	4436	—
Kerala(R)	—	2152	2527	—	—
Tamil Nadu	—	9114	2949	3261	323
Lakshadweep	—	—	—	—	—
Pondicherry	—	44	10	—	—
SUB-TOTAL	7635	16151	11186	25897	323
Bihar	4267	—	—	10970	—
Orissa	3723	—	136	8953	10
West Bengal	2935	—	790	4866	688
D.V.C.	2893	—	—	794	—
A & N Islands	—	—	—	146	—
Sikkim(R)	—	—	40	—	—
SUB-TOTAL	13818	—	966	25729	698
Assam(R)	1435	—	497	3776	—
Manipur(R)	248	—	—	304	—
Meghalaya	822	—	—	993	—
Nagaland(R)	73	—	25	1165	—
Tripura	150	—	285	443	—
Arunachal Pradesh (R)	—	—	—	2223	—
Mizoram (R)	—	—	102	400	—
SUB-TOTAL	2728	—	909	9304	—
TOTAL (ALL INDIA)	65754	19535	33641	152620	1438

(A) In certain class of voltage, figures have gone down as compared to previous year due to revision/deletion or wrongly reported data by State Electricity Board/Electricity Department.

(R) Data of 1987-88 repeated due to non-availability of information.

TABLE NO 47 (Contd)

(Ckt. Kms)

State/U.Ts.	22/20 KV		15/11 KV		6.6 KV	
	(OH)	(UG)	(OH)	(UG)	(OH)	(UG)
Haryana	—	—	45693	—	—	—
Himachal Pradesh	3264	—	9167	—	—	—
Jammu & Kashmir(R)	—	—	11538	—	—	—
Punjab	—	—	60731	—	70	52
Rajasthan	—	—	91308	—	56	—
Uttar Pradesh	—	—	166001	@	@	@
Chandigarh(R)	—	—	451	@@	—	—
Delhi	—	—	2274	4228	—	—
SUB-TOTAL	3264	—	387163	4228	126	52
Gujarat	9026(A)	—	88618	1483	—	—
Madhya Pradesh	—	—	147282	—	—	—
Maharashtra	14543	796	113030	1590	55	1169
Goa Daman & Diu	—	—	2074	—	—	—
D & N' Haveli(R)	—	—	297	—	—	—
SUB-TOTAL	23569	796	351301	3073	55	1169
Andhra Pradesh	—	—	115725	22	—	—
Karnataka	—	—	93810	—	—	—
Kerala(R)	—	—	18132	—	—	—
Tamil Nadu	24173	37	55607	1004	15	—
Lakshadweep	—	—	—	—	—	—
Pondicherry	1056	—	337	11	—	—
SUB-TOTAL	25229	37	283611	1037	15	—
Bihar	—	—	67803	—	—	—
Orissa	—	—	40600	192	—	—
West Bengal	—	60	48229	693	10(A)	2272(A)
DVC	—	—	15	—	—	—
A&N Islands	—	—	576	—	—	—
Sikkim(R)	—	—	226	25	—	—
SUB-TOTAL	—	60	157489	910	10	2272
Assam(R)	—	—	16365	—	—	—
Manipur(R)	—	—	2812	—	—	—
Meghalaya	—	—	5543	—	—	—
Nagaland(R)	—	—	4369	—	—	—
Tripura	—	—	2899	—	—	—
Arunachal Pradesh(R)	—	—	(B)	—	—	—
Mizoram(R)	—	—	1096	—	—	—
SUB-TOTAL	—	—	33084	—	—	—
TOTAL (ALL INDIA)	52062	893	1212648	9248	206	3493

@@—Including in OH Category

@—Including in 15/11 KV O.H. Category

(B)—Included in 33 KV line

TABLE NO.47 (Contd.)

(Ckt. Kms)

State/U. Ts.	3·3/2·2 KV		Distribution lines upto 500 Volts
	(O.H.)	(U.G.)	
Haryana	—	—	88551
Himachal Pradesh	(S)	56	36973
Jammu & Kashmir(R)	—	—	28040
Punjab	—	—	124272
Rajasthan	21	—	123622
Uttar Pradesh	@	@	188179
Chandigarh(R)	—	—	753
Delhi	—	—	16788
SUB-TOTAL	21	56	607178
Gujarat	11	106	133011(D)
Madhya Pradesh	49	—	250439
Maharashtra	—	—	292220(E)
Goa	—	—	4712
Daman & Diu	—	—	616
D & N Haveli (R)	—	—	—
SUB-TOTAL	60	106	680998
Andhra Pradesh	—	—	258738
Karnataka	—	—	241417(F)
Kerala(R)	—	—	85933
Tamil Nadu	—	—	322901
Lakshadweep	9	8	157
Pondicherry	—	—	5946
SUB-TOTAL	9	8	915092
Bihar	—	—	83614
Orissa	—	—	40142
West Bengal	26(A)	22(A)	63503
D.V.C.	—	—	—
A.&N. Islands	—	—	1258
Sikkim(R)	18	—	282
SUB-TOTAL	44	22	188799
Assam(R)	—	—	17533
Manipur(R)	—	—	2090
Meghalaya	—	—	2608
Nagaland(R)	—	—	3390
Tripura	—	—	3271
Arunachal Pradesh(R)	—	—	2949
Mizoram(R)	—	—	1120
SUB-TOTAL	—	—	32961
TOTAL (ALL INDIA)	134	192	2425028

(D) Includes 6·6 KV & 33/2·2 KV lines of GEB and Ahmedabad Co.

(E) Includes all the length of lines below 11 KV of Maharashtra State Electricity Board.

(S) Including in U.G. Category.

(F) Includes all the length of lines below 11 KV of Karnataka Electricity Board.

TABLE No. 48

Length of Transmission and Distribution Lines in State Electricity Boards—As on 31st March, 1989.

Region	State/U.Ts.	Total	(Ckt. Kms.)		
			400 KV (O.H.)	230KV (O.H.)	220 KV (O.H.)
<i>Northern Region</i>	Haryana	141920	—	—	555
	Himachal Pradesh	51494	—	—	—
	Jammu & Kashmir (R)	41774	—	—	224
	Punjab	193675	—	—	1646
	Rajasthan	240188	—	—	3306
	Uttar Pradesh	393940	1877	—	5359
	SUB-TOTAL	1062991	1877	—	11090
<i>Western Region</i>	Gujarat	245666	716	—	5076
	Madhya Pradesh	425891	834	—	5869
	Maharashtra	439875	2599	—	6030
	SUB-TOTAL	1111432	4149	—	16975
<i>Southern Region</i>	Andhra Pradesh	390188	—	—	5167
	Karnataka	350842	—	—	5184
	Kerala (R)	109092	—	—	887
	Tamil Nadu	416059	—	4280	—
	SUB-TOTAL	1266181	—	4280	11238
<i>Eastern Region</i>	Bihar	166801	—	—	1434
	Orissa	95077	—	—	2158
	West Bengal	114592	134	—	1402
	SUB-TOTAL	376470	134	—	4994
<i>ern Region</i>	Assam(R)	39928	—	—	322
	Meghalaya	9644	—	—	—
	SUB-TOTAL	49572	—	—	322
	TOTAL (ALL INDIA)	3866646	6160	4280	44619

(R)—Data of 1987-88 repeated due to non-availability of information.

TABLE No. 48—(Contd.)

State/U.Ts.	(Ckt. Kms.)				
	132 KV	110/90 KV	78/66 KV	33 KV	
	(O.H.)	(O.H.)	(O.H.)	(O.H.)	(U.G.)
Haryana	1858	—	1382	3881	—
Himachal Pradesh	208	—	271	1555	—
Jammu & Kashmir (R)	659	(B)	—	1693	—
Punjab	2773	—	3140	1535	—
Rajasthan	6658	—	303	16496	—
Uttar Pradesh	9550	—	3024	22628	—
SUB-TOTAL	21706	—	8120	47788	—
Gujarat	3966	—	8292	2334	—
Madhya Pradesh	9941	—	362	26352	—
Maharashtra	5877	1783	3208	14061	—
SUB-TOTAL	19784	1783	11862	42747	—
Andhra Pradesh	7635	—	1570(A)	18110	—
Karnataka	—	4841	3917	4436	—
Kerala(R)	—	2152	2527	—	—
Tamil Nadu	—	9114	2949	3261	323
SUB-TOTAL	7635	16107	10963	25807	323
Bihar	4267	—	—	10970	—
Orissa	3723	—	136	8951	10
West Bengal	2845	—	790	4866	30
SUB-TOTAL	10835	—	926	24787	40
Assam(R)	1435	—	497	3776	—
Meghalaya	507	—	—	993	—
SUB-TOTAL	1942	—	497	4769	—
TOTAL (ALL INDIA)	61902	17890	32368	145898	363

(A) In certain class of voltage figures have gone down as compared to previous year due to revision/deletion or wrongly reported data by State Electricity Boards.

(B) Included in 33 KV line.

TABLE No. 48—(Contd.)

State/U.Ts.	(Ckt. Kms.)					
	22 KV		15/11 KV		6.6 KV	
	(O.H.)	(U.G.)	(O.H.)	(U.G.)	(O.H.)	(U.G.)
Haryana	—	—	45693	—	—	—
Himachal Pradesh	3264	—	9167	—	—	—
Jammu & Kashmir(R)	—	—	11428	—	—	—
Punjab	—	—	60609	—	—	—
Rajasthan	—	—	90884	—	56	—
Uttar Pradesh	—	—	164612@	—	—	—
SUB-TOTAL	3264	—	382393	—	56	—
Gujarat	9026(A)	—	88206	—	—	—
Madhya Pradesh	—	—	141916	—	—	—
Maharashtra	14363	138	111539	453	—	—
SUB-TOTAL	23389	138	341661	453	—	—
Andhra Pradesh	—	—	110960	—	—	—
Karnataka	—	—	93148@	—	—	—
Kerala(R)	—	—	17956	—	—	—
Tamil Nadu	24068	37	54417	966	15	—
SUB-TOTAL	24068	37	276481	966	15	—
Bihar	—	—	67395	—	—	—
Orissa	—	—	40270	192	—	—
West Bengal	—	—	47450@	621	—	—
SUB-TOTAL	—	—	155115	813	—	—
Assam(R)	—	—	16365	—	—	—
Meghalaya	—	—	5541	—	—	—
SUB-TOTAL	—	—	21906	—	—	—
TOTAL (ALL INDIA)	50721	175	1177556	2232	71	—

TABLE NO. 48—(Contd.)

Name of State/U.Ts.	3·3/2·2 KV		Distribution lines
	(O.H.)	(U.G.)	upto 500 Volts
Haryana	—	—	88551
Himachal Pradesh	(§)	56	36973
Jammu & Kashmir(R)	—	—	27770
Punjab	—	—	123972
Rajasthan	21	—	122464
Uttar Pradesh	—	—	186890
SUB-TOTAL	21	56	586620
Gujarat	—	—	128050@
Madhya Pradesh	49	—	240568
Maharashtra	—	—	279824@
SUB-TOTAL	49	—	648442
Andhra Pradesh	—	—	246746
Karnataka	—	—	239316
Kerala(R)	—	—	85570
Tamil Nadu	—	—	316629
SUB-TOTAL	—	—	888261
Bihar	—	—	82735
Orissa	—	—	39637
West Bengal	—	—	56454
SUB-TOTAL	—	—	178826
Assam(R)	—	—	17533
Meghalaya]	—	—	2603
SUB-TOTAL	—	—	20136
TOTAL (ALL INDIA)	70	56	2322285

NOTE:—(⊙) Includes lines length of 3·3 & 6·6 KV also since break-up of this is not available.

(§) Included in U.G. category.

In certain cases, 1988-89 figures may not be consistent with the last year figures because of estimation of data due to improper reporting or revision of data by Electricity Boards.

TABLE No. 49
Number of Transformers and Their Aggregate Capacity
 (Utilities only)
Regionwise/Statewise as on 31st March, 1989

Region	State/U.Ts.	Step up		Step Down	
		Number	Aggregate Capacity (KVA)	Number	Aggregate Capacity (KVA)
<i>Northern Region</i>	Haryana	13	84500	640	787672
	Himachal Pradesh	58	559750	187	709500
	Jammu & Kashmir	61	466000	132(R)	953000(R)
	Punjab	74	5074010	688	13957970
	Rajasthan	22	1261625	1584	7962250
	Uttar Pradesh	91	11052120	2616	24879630
	Chandigarh(R)	2	1500	12	93000
	Delhi	17	1435000	224	5592000
	SUB-TOTAL	338	20695005	6083	62024070
<i>Western Region</i>	Gujarat	45	4720500	873	15465000
	Madhya Pradesh	39	4784000	1821	15451245
	Maharashtra	135	9846446	1566	34574442
	Goa	—	—	41	477450
	Daman & Diu }				
	D. & N. Haveli(R)	—	—	3	15000
	SUB-TOTAL	219	19350946	4304	65983137
<i>Southern Region</i>	Andhra Pradesh	125	5721680	1881	14863410
	Karnataka	70	3004000	713	7669550
	Kerala(R)	37	1579975	281	4255400
	Tamil Nadu	150	6795132	1013	11645200
	Pondicherry	—	—	17	312900
	Lakshadweep	7	1740	—	—
		SUB-TOTAL	389	17102527	3905
<i>Eastern Region</i>	Bihar	38	1466800	875	5094650
	Orissa	33	1455250	471	2753910
	West Bengal	105	3416329	588	6265868
	D.V.C.	21	2111000	66	3122200
	A. & N. Islands	24(R)	10918(R)	—	—
	Sikkim (R)	11	17950	9	25500
		SUB-TOTAL	232	8478247	2009
<i>North Eastern Region</i>	Assam	46(E)	509207(E)	177(R)	589063(R)
	Manipur(R)	22	128650	23	84350
	Meghalaya	15	216100	54	166750
	Nagaland(R)	7	3600	50	87500
	Tripura	8(R)	34140(R)	43	131710
	Arunachal Pradesh(R)	26	11325	2	1130
	Mizoram(R)	24	8750	11	20100
		SUB-TOTAL	148	911772	360
	TOTAL (ALL INDIA)	1326	66538497	16301	185146398

TABLE NO. 49—(Contd.)

State/U. Ts.	Distribution	
	Number	Aggregate Capacity(KVA)
Haryana	58670	4160586
Himachal Pradesh	5504	404750
Jammu & Kashmir(R)	6012	661277
Punjab	79455	5699542
Rajasthan	60973	3956416
Uttar Pradesh	159139(R)	8510514(R)
Chandigarh	626	168064
Delhi	4581	2971120
SUB-TOTAL	374960	26532269
Gujarat	89370	7329985
Madhya Pradesh	104520	6079506
Maharashtra	111818	10219688
Goa, Daman & Diu	1638	137643
D. & N. Haveli(R)	153	12036
SUB-TOTAL	307499	23778858
Andhra Pradesh	76739	5995759
Karnataka	65405	4446950
Kerala(R)	14767	1526872
Tamil Nadu	80306	8360123
Pondicherry	1508	228610
Lakshadweep	22	1564
SUB-TOTAL	238747	20559878
Bihar	42934	2688469
Orissa	18045	1277015
West Bengal	23221	2459253
D.V.C.	114	71500
A. & N. Islands	228	22793
Sikkim (R)	130	11500
SUB-TOTAL	84672	6533530
Assam(R)	3695	469111
Manipur(R)	694	60138
Meghalaya	1416	105070
Nagaland	1021	55882
Tripura	1408	81773
Arunachal Pradesh(R)	367	31670
Mizoram(R)	262	25976
SUB-TOTAL	8863	829620
TOTAL(ALL INDIA)	1014741	78234155

NOTE: In certain cases figures have gone down as compared to previous year due to revision of figures/deletion/failure of transformers or installation of higher capacity transformers by Board/Electricity Department.

(R) Data repeated due to non-availability of information.

(E) Estimated.

TABLE NO. 50

Number of Transformers and their Aggregate Capacity in State Electricity Boards as on 31st March, 1989

Region	Electricity Boards	Step-up		Step-Down	
		Number	Aggregate Capacity (KVA)	Number	Aggregate Capacity (KVA)
<i>Northern Region</i>	Haryana . . .	13	845000	640	7876720
	Himachal Pradesh . . .	49	334750	180	700000
	Jammu & Kashmir . . .	58	341000	132(R)	953000(R)
	Punjab . . .	26	1562010	607	9578970
	Rajasthan . . .	19	711625	1578	7886250
	Uttar Pradesh . . .	80	5631000	2594 (R)	24237630(R)
	SUB-TOTAL . . .	245	9425385	5731	51232570
<i>Western Region</i>	Gujarat . . .	29	3874000	806(E)	14400000
	Madhya Pradesh . . .	33(E)	3354000(E)	1816	15249745
	Maharashtra . . .	93(E)	7317000(E)	1346(E)	29972642
	SUB-TOTAL . . .	155	14545000	3968	59622387
<i>Southern Region</i>	Andhra Pradesh . . .	87	4152500	1837(R)	13244910
	Karnataka . . .	44	312500	705	7399550
	Kerala(R) . . .	37	1579975	281	4255400
	Tamil Nadu . . .	133	4290132	967(R)	10959000(R)
	SUB-TOTAL . . .	301	10335107	3790	35858860
<i>Eastern Region</i>	Bihar . . .	38	1466800	875	5094650
	Orissa(R) . . .	29	1125250	466	2728910
	West Bengal . . .	72	1267379	436(R)	3291518(R)
	SUB-TOTAL . . .	139	3859429	5567	11115078
<i>North Eastern Region</i>	Assam . . .	46(E)	509207(E)	177(R)	589063(R)
	Meghalaya . . .	13	159100	52	154250
	SUB-TOTAL . . .	59	668307	229	743313
	TOTAL(ALL INDIA) . . .	899	38833228	19285	158572208

NOTE:—In certain cases figures has gone down as compared to previous year due to revision/deletion/failure or installation of higher capacity transformers by Board/Electricity Department.

(R) Data repeated due to non-availability of information.

TABLE No. 50—(Contd.)

State/U.Ts.	Distribution	
	Number	Aggregate Capacity(KVA)
Haryana	58670	4160586
Himachal Pradesh	5500	400000
Jammu & Kashmir(R)	5911	654000
Punjab	79223	5609962
Rajasthan	60655	3935850
Uttar Pradesh(R)	157660	8454985
SUB-TOTAL	367619	23215383
Gujarat	86795	6570661
Madhya Pradesh	101185	5901484
Maharashtra	107084(E)	8031288
SUB-TOTAL	295064	20503433
Andhra Pradesh	73683	5702859
Karnataka	64847	4382297
Kerala(R)	14602	1504420
Tamil Nadu	78741	8138391
SUB-TOTAL	231873	19727967
Bihar	42592	2657572
Orissa(R)	18035	1268415
West Bengal(R)	20481	1176007
SUB-TOTAL	81108	5101994
Assam(R)	3695	469111
Meghalaya	1409	103010
SUB-TOTAL	5104	572121
TOTAL(ALL INDIA)	980768	68548777

NOTE:—(1) In certain cases, numbers and capacity of step-up transformers in respect of generating sets added during the year have not been reported. As such, number and capacity of step-up transformers for these units have been estimated.

(2) In certain cases, number and aggregate capacity of transformers have gone down as compared to last year due to estimation of data, because of improper reporting or revision of data by State Electricity Boards at later stages.

(E) Estimated.

SECTION VIII

Utilisation

SECTION—VIII

UTILISATION

1. Energy Consumption

Electricity consumption by various categories of consumers served by utilities during the year under review was 160196.43 Gwh registering an increase of 10.02% over the previous year.

As in the preceding year, the major portion of electricity viz. 1,47,330.88 Gwh representing 91.97% of the total energy consumption was distributed by the Public Sector and remaining 8.03% was distributed by the Private Sector. Out of 91.97% of energy distributed by the Public Sector, 83.11% was supplied by the 18 State Electricity Boards and balance 8.86% was supplied by the Municipalities and Electricity Departments of the States and Union Territories. Out of 8.03% of energy distributed by the Whole Private Sector (including Co-operative Societies), the three major private licensees viz. Tata Electric Companies, Calcutta Electric Supply Corporation and Ahmedabad Electricity Supply Company distributed 1.59%, 2.25% and 1.22% of total energy to its consumers respectively. The details of energy sold by various agencies during 1988-89 are tabulated below:—

Sl. No.	Agency	Energy sold to ultimate consumers.		
		Quantum (GWH)	%to total consumption	%increase over 1987-88
1.	State Electricity Boards	133133.73	83.11	11.13
2.	Electricity Departments of the States & Union Territories	6815.12	4.25	6.98
3.	Municipalities (including DESU)	7382.03	4.61	5.81
4.	Private Licensees (including Co-operatives)	12865.55	8.03	3.18
	TOTAL	160196.43	100.00	10.02

As regards the energy consumed by various classes of consumers, the industrial category of consumers, as usual consumed highest energy i.e. 47.08% of total energy sold by Public Utilities as compared to 47.51% during 1987-88. The energy sales to industrial consumers registered an increase of 9.01% over the previous year.

Agricultural consumers remained the second largest category amongst the consumers of electricity consuming 24.27% of total energy sales as compared to 24.22% during the previous year. Percentage increase in consumption of energy by this Sector was 10.24% over the previous year.

II. Per Capita Consumption

The per capita consumption of electricity in the country was 220.94 Kwh during 1988-89, as compared to 203.02 Kwh during 1987-88. Western Region had the maximum per capita consumption of 325.19 Kwh followed by Southern, Northern, Eastern and North Eastern Regions with figures of 232.73, 218.30, 135.16 and 72.25 Kwh respectively.

Amongst the States, Punjab with per capita consumption of 555.54 Kwh was at the top followed by Gujarat, Maharashtra and Haryana having per capita consumption of 405.21, 373.94 and 334.12 Kwh respectively. However, Union Territory of Delhi had the highest per capita consumption of electricity of 599.55 Kwh in the country during the year followed by Chandigarh 545.58 Kwh.

III. Electrical Accidents.

To the extent the information was made available, during the year 1988-89, total number of electrical accidents reported was 5590 which comprised of 1930 fatal, 1990 non-fatal accidents to human and 1427 fatal and 243 non-fatal accidents to animals. Corresponding figures for the year 1987-88 were 1568 fatal, 1587 non-fatal accidents to human and 1298 fatal and three non-fatal accidents to animals.

The various tables in the Section depict the energy consumed by different categories of consumers in various States/Electricity Boards, etc.; per capita consumption of electricity and electrical accidents.

TABLE No. 51

All India Energy Sales (Utilities only) during 1988-89

Category	Energy sold during 1987-88 (GWH)	%to total sales in 1987-88	Energy sold during 1988-89 (GWH)	%to total sales in 1988-89	%increased in sale over previous year 1987-88
Domestic	22119.81	15.19	24767.67	15.46	11.97
Commercial	8840.81	6.07	9915.17	6.19	12.15
Industrial Power	69180.10	47.51	75411.64	47.08	9.01
Public Lighting	1345.29	0.92	1455.74	0.91	8.21
Railways/Tramways	3616.32	2.48	3772.26	2.35	4.31
Agriculture	35266.55	24.22	38878.37	24.27	10.24
Public Water Works & Sewerage pumping	2945.44	2.03	3252.79	2.03	10.43
Miscellaneous	2298.50	1.58	2742.79	1.71	19.33
TOTAL	145612.82	100.00	160196.43	100.00	10.02

TABLE No. 52

Energy Sales to Ultimate Consumers (Utilities only) Ownershipwise-Regionwise/Statewise during the Year 1988-89

Region	State/U.Ts.	Total Energy sold(GWH)	Public Sector	
			State Electricity Boards	
			(GWH)	%to total
<i>Northern Region</i>	Haryana	4860.82	4860.82	100.00
	Himachal Pradesh	818.99	795.22	97.10
	Jammu & Kashmir	1217.70	1197.95	98.38
	Punjab	10601.70	9542.86	90.01
	Rajasthan	6875.92	6743.17	98.07
	Uttar Pradesh	15753.51	15680.41	99.54
	Chandigarh	365.54	—	—
	Delhi	4928.84	—	—
	SUB-TOTAL	45423.02	38820.43	85.46
<i>Western Region</i>	Gujarat	14596.87	11870.60	81.32
	Madhya Pradesh	10721.23	10523.30	98.15
	Maharashtra	26262.71	18644.25	70.99
	Goa	408.47	—	—
	Daman & Diu	34.02	—	—
	D & N Haveli	87.67	—	—
		SUB-TOTAL	52110.97	41038.15
<i>Southern Region</i>	Andhra Pradesh	12989.58	12767.82	98.29
	Karnataka	9414.20	9377.15	99.61
	Kerala	4438.81	4387.00	98.83
	Tamil Nadu	14326.99	13287.00	92.74
	Pondicherry	360.74	—	—
	Lakshadweep	6.20	—	—
		SUB-TOTAL	41536.52	39818.97
<i>Western Region</i>	Bihar	7171.76	4883.26	68.09
	Orissa	4188.07	4163.95	99.42
	West Bengal	7959.00	3032.91	38.11
	A & N Islands	28.53	—	—
	Sikkim	27.98	—	—
		SUB-TOTAL	19375.34	12080.12
<i>North Eastern Region</i>	Assam	1227.00	1227.00	100.00
	Manipur	124.05	—	—
	Meghalaya	154.70	149.06	96.35
	Nagaland	69.76	—	—
	Tripura	99.67	—	—
	Arunachal Pradesh	42.89	—	—
	Mizoram	32.51	—	—
		SUB-TOTAL	1750.58	1376.06
	TOTAL (ALL INDIA)	160196.43	133133.73	83.11

TABLE No. 52—(Contd.)

State/U.Ts.	Public Sectors			
	Municipalities		Govt. Deptts./Govt. Undertakings/Corporations	
	GWH	% age to total	(GWH)	% age to total
Haryana	—	—	—	—
Himachal Pradesh	—	—	23.77	2.90
Jammu & Kashmir	—	—	—	—
Punjab	206.00	1.94	852.84	8.05
Rajasthan	—	—	96.25	1.40
Uttar Pradesh	—	—	20.00	0.13
Chandigarh	—	—	365.54	100.00
Delhi	4831.31	98.02	97.53	1.98
	SUB-TOTAL		5037.31	11.09
			1455.93	3.21
Gujarat	35.50	0.24	—	—
Madhya Pradesh	—	—	58.00	0.54
Maharashtra	2001.77	7.62	175.74	0.67
Goa	—	—	408.47	100.00
Daman & Diu	—	—	34.02	100.00
Dadra & Nagar Haveli	—	—	87.67	100.00
	SUB-TOTAL		2037.27	3.91
			763.90	1.47
Andhra Pradesh	—	—	28.85	0.22
Karnataka	—	—	—	—
Kerala	28.30	0.64	—	—
Tamil Nadu	279.15	1.95	678.68	4.74
Pondicherry	—	—	360.74	100.00
Lakshadweep	—	—	6.20	100.00
	SUB-TOTAL		307.45	0.74
			1074.47	2.59
Bihar	—	—	2266.90	31.61
Orissa	—	—	9.74	0.23
West Bengal	—	—	813.15	10.21
A & N Islands	—	—	28.53	100.00
Sikkim	—	—	27.98	100.00
	SUB-TOTAL		3146.30	16.24
Assam	—	—	—	—
Manipur	—	—	124.05	100.00
Meghalaya	—	—	5.64	3.65
Nagaland	—	—	69.76	100.00
Tripura	—	—	99.67	100.00
Arunachal Pradesh	—	—	42.89	100.00
Mizoram	—	—	32.51	100.00
	SUB-TOTAL		374.52	21.39
	TOTAL (ALL INDIA)		7382.03	4.61
			6815.12	4.25

TABLE NO. 52—(Contd.)

State/U Ts	Private Sector Company	
	GWH	%age to total
Haryana	—	—
Himachal Pradesh	—	—
Jammu & Kashmir	19.75	1.62
Punjab	—	—
Rajasthan	36.50	0.53
Uttar Pradesh	53.10	0.33
Chandigarh	—	—
Delhi	—	—
SUB-TOTAL	109.35	0.24
Gujarat	2690.77	18.44
Madhya Pradesh	139.93	1.31
Maharashtra	5440.95	20.72
Goa	—	—
Daman & Diu	—	—
Dadra & Nagar Haveli	—	—
SUB-TOTAL	8271.65	15.87
Andhra Pradesh	192.91	1.49
Karnataka	37.05	0.39
Kerala	23.51	0.53
Tamil Nadu	82.16	0.57
Pondicherry	—	—
Lakshadweep	—	—
SUB-TOTAL	335.63	0.81
Bihar	21.60	0.30
Orissa	14.38	0.35
West Bengal	4112.94	51.68
A & N Islands	—	—
Sikkim	—	—
SUB-TOTAL	4148.92	21.41
Assam	—	—
Manipur	—	—
Meghalaya	—	—
Nagaland	—	—
Tripura	—	—
Arunachal Pradesh	—	—
Mizoram	—	—
SUB-TOTAL	—	—
TOTAL (ALL INDIA)	12865.55	8.03

TABLE No. 53

Energy Sales to Ultimate Consumers (Utilities only) Categorywise-Regionwise/Statewise during the year 1988-89
(GWH)

Region	State/U.Ts.	Total Energy sold	Domestic	Commercial
<i>Northern Region</i>	Haryana	4860.82	832.83	143.31
	Himachal Pradesh	818.99	174.53	65.04
	Jammu & Kashmir	1217.70	287.19	206.87
	Punjab	10601.70	1222.84	271.64
	Rajasthan	6875.92	760.27	380.64
	Uttar Pradesh	15753.51	2122.13	1248.49
	Chandigarh	365.54	119.56	48.10
	Delhi	4928.84	1828.30	1063.53
	SUB-TOTAL	45423.02	7347.65	3427.62
<i>Western Region</i>	Gujarat	14596.87	1519.12	548.15
	Madhya Pradesh	10721.23	1898.71	409.01
	Maharashtra	26262.71	4149.56	1843.72
	Goa	408.47	99.14	30.20
	Daman & Diu	34.02	5.64	2.16
	Dadra & Nagar Haveli	87.67	2.53	1.31
		SUB-TOTAL	52110.97	7674.70
<i>Southern Region</i>	Andhra Pradesh	12989.58	1816.50	420.00
	Karnataka	9414.20	1526.59	198.64
	Kerala	4438.81	1269.37	458.47
	Tamil Nadu	14326.99	2236.69	1137.67
	Pondicherry	360.74	41.29	15.12
	Lakshadweep	6.20	4.00	1.39
		SUB-TOTAL	41536.52	6894.44
<i>Eastern Region</i>	Bihar(\$)	7171.76	381.78	182.71
	Orissa	4188.07	503.42	108.76
	West Bengal(\$)	7959.00	1615.89	953.65
	A & N Islands	28.53	11.82	10.54
	Sikkim	27.98	13.53	5.41
		SUB-TOTAL	19375.34	2526.44
<i>North Eastern Region</i>	Assam	1227.00	150.00	100.00
	Manipur	124.05	52.43	7.78
	Meghalaya	154.70	33.96	26.83
	Nagaland	69.76	20.15	6.45
	Tripura	99.67	30.30	13.65
	Arunachal Pradesh	42.89	14.06	4.33
	Mizoram	32.51	23.54	1.60
		SUB-TOTAL	1750.58	324.44
TOTAL(ALL INDIA)		160196.43	24767.67	9915.17

TE: (\$)—Includes DVC's sales to ultimate consumers in Bihar and West Bengal Areas.

TABLE No. 53—(Contd.)

State/U.Ts.	(GWH)			
	Industrial Power (Low & Medium Voltage)	Industrial Power (High Voltage)	Public Lighting	Traction
Haryana	405.70	1129.60	18.63	—
Himachal Pradesh	476.93	(A)	3.46	—
Jammu & Kashmir	305.08	(A)	32.06	—
Punjab	1025.56	3438.01(B)	25.00	—
Rajasthan	706.61	2266.29	46.65	13.5
Uttar Pradesh	2055.91	3252.52	140.74	568.31
Chandigarh	57.52	112.77	15.27	—
Delhi	1063.03	580.04	11.60	—
SUB-TOTAL	6096.34	10779.23	293.41	581.89
Gujarat	1738.55	5745.07	102.44	215.67
Madhya Pradesh	566.42	5847.52	90.08	310.12
Maharashtra	1844.01	10923.90	251.51	852.58
Goa	26.45	201.05	8.13	—
Daman & Diu	6.20	18.29	0.58	—
Dadra & Nagar Haveli	7.08	75.66	0.32	—
SUB-TOTAL	4188.71	22811.49	453.06	1378.37
Andhra Pradesh	803.40	4891.04	123.61	264.68
Karnataka	694.99	3976.51	144.19	—
Kerala	291.77	1889.00	84.61	—
Tamil Nadu	1470.24	4812.09	208.42	263.00
Pondicherry	21.74	204.56	6.57	—
Lakshadweep	0.31	—	0.50	—
SUB-TOTAL	3282.45	15773.20	567.90	527.68
Bihar	254.73	4269.36	18.93	549.09
Orissa	206.87	2755.81	19.89	193.39
West Bengal	501.36	3559.18	67.02	541.84
A & N Islands	4.56	—	1.14	—
Sikkim	6.14	—	2.90	—
SUB-TOTAL	973.66	10584.35	109.88	1284.32
Assam	400.00(D)	400.00	9.00	—
Manipur	12.55	9.56	5.58	—
Meghalaya	36.51	13.64	2.98	—
Nagaland	1.95	21.36	1.70	—
Tripura	21.03	—	2.59	—
Arunachal Pradesh	1.94	2.72	6.14	—
Mizoram	0.95	—	3.50	—
SUB-TOTAL	474.93	447.28	31.49	—
TOTAL (ALL INDIA)	15016.09	60395.55	1455.74	3772.26

NOTE:—(A)—Included in industrial (Low and Medium Voltage).

(B)—Includes 821.00 Gwh sales to Nangal Fertilizers by BBMB.

(D)—Includes 195.00 Gwh sold to tea gardens.

(E)—Included in Public water works and sewage pumping.

TABLE NO. 53—(Contd.)

State/U.Ts.	Agriculture	Public Water Works and Sewage Pumping	Miscellaneous
Haryana	2157.85	60.12	112.78
Himachal Pradesh	23.35	(A)	75.68
Jammu & Kashmir	158.57	128.25	99.68
Punjab	4220.43	10.00(C)	388.22
Rajasthan	2159.43	332.45	210.00
Uttar Pradesh	6041.94	323.47	—
Chandigarh	1.86	(A)	10.46
Delhi	(E)	297.29	85.05
SUB-TOTAL	14763.43	1151.58	981.87
Gujarat	4414.97	252.53	60.37
Madhya Pradesh	1303.64	275.33	20.40
Maharashtra	5286.36	717.67	393.40
Goa	9.23	31.16	3.11
Daman & Diu	0.74	0.41	—
D & N Haveli	0.36	0.41	—
SUB-TOTAL	11015.30	1277.51	477.28
Andhra Pradesh	4629.58	(A)	40.77
Karnataka	2871.83	1.44(F)	0.01
Kerala	186.20	116.00	143.39
Tamil Nadu	3574.07	225.06	399.75
Pondicherry	61.36	8.13	1.97
Lakshadweep	—	—	—
SUB-TOTAL	11323.04	350.63	585.89
Bihar	1372.85	125.40	16.91
Orissa	113.30	73.27	213.36
West Bengal	257.25	227.45	235.36
A & N Islands	—	0.19	0.28
Sikkim	—	—	—
SUB-TOTAL	1743.40	426.31	465.91
Assam	13.00	16.00	139.00
Manipur	2.16	2.92	31.07
Meghalaya	1.40	10.44	28.94
Nagaland	—	0.75	17.40
Tripura	16.64	13.55	1.91
Arunachal Pradesh	—	1.21	12.49
Mizoram	—	1.89	1.03
SUB-TOTAL	33.20	46.76	231.84
TOTAL (ALL INDIA)	38878.37	3252.79	2742.79

NOTE:—(C) It does not include energy supplied by PSEB to public water works consumers which has been included in Agricultural category.

Miscellaneous:—Includes supply to non traction, non-industrial, M.E.S., Irrigation Board, Projects under constructions and free colony consumption etc.

(F) It does not include energy supplied by Karnataka Electricity Board to Public Water Works consumers which has been included under Industrial Low & Medium category.

TABLE No. 54

Energy Sales by States Electricity Boards Categorywise/Regionwise during 1988-89

(GWH)

Region	Electricity Boards	Total sold to ultimate consumers	Domestic	Commercial
<i>Northern Region</i>	Haryana	4860.82	832.83	143.31
	Himachal Pradesh	795.22	170.19	65.04
	Jammu & Kashmir	1197.95	284.48	206.23
	Punjab	9542.86	1142.84	238.64
	Rajasthan(P)	6743.17	755.27	377.64
	Uttar Pradesh(T)	15680.41	2097.13	1248.49
	SUB-TOTAL	38820.43	5282.74	2279.35
<i>Western Region</i>	Gujarat	11870.60	1046.66	272.67
	Madhya Pradesh	10523.30	1828.56	403.02
	Maharashtra	18644.25	2261.52	614.39
	SUB-TOTAL	41038.15	5136.74	1290.08
<i>Southern Region</i>	Andhra Pradesh	12767.82	1752.15	415.33
	Karnataka	9377.15	1520.58	197.86
	Kerala	4387.00	1254.00	446.00
	Tamil Nadu	13287.00	2094.00	1054.00
	SUB-TOTAL	39818.97	6620.73	2113.19
<i>Eastern Region</i>	Bihar (A)	4883.26	378.78	181.66
	Orissa	4163.95	488.37	107.99
	West Bengal(A)	3032.91	492.85	337.01
	SUB-TOTAL	12080.12	1360.00	626.66
<i>North Eastern Region</i>	Assam	1227.00	150.00	100.00
	Meghalaya	149.06	28.32	26.83
	SUB-TOTAL	1376.06	178.32	126.83
	TOTAL (ALL INDIA)	133133.73	18578.53	6436.11

(A) —Excludes DVC's sales to ultimate consumers in Bihar and West Bengal.

(P)—Provisional as reported by State Electricity Board,

(T)—Tentative as reported by State Electricity Board.

TABLE NO. 54—(Contd.)

Electricity Board	Industrial Low & Medium Voltage	Industrial (High Voltage)	Public Lighting
Haryana	405.70	1129.60	18.63
Himachal Pradesh	476.93	(B)	3.46
Jammu & Kashmir	301.98	(B)	32.01
Punjab	976.56	2589.01	21.00
Rajasthan	701.61	2170.04	44.15
Uttar Pradesh	2027.91	3252.52	140.64
SUB-TOTAL	4890.69	9141.17	259.89
Gujarat	1051.31	4669.62	69.13
Madhya Pradesh	547.31	5847.40	88.07
Maharashtra	1164.12	7912.80	180.43
SUB-TOTAL	2762.74	18429.82	337.63
Andhra Pradesh	787.30	4891.04	120.15
Karnataka	692.19	3974.66	143.27
Kerala	288.00	1889.00	82.00
Tamil Nadu	1420.00	4115.00	199.00
SUB-TOTAL	3187.49	14869.70	544.42
Bihar	250.23	2221.65	18.83
Orissa	205.74	2749.28	19.81
West Bengal	176.04	1191.22	18.57
SUB-TOTAL	632.01	6162.15	57.21
Assam	400.00(C)	400.00	9.00
Meghalaya	36.51	13.64	2.98
SUB-TOTAL	436.51	413.64	11.98
TOTAL (ALL INDIA)	11909.44	49016.48	1211.13

NOTE —(B) Included in Industrial (Low & Medium) Voltage.

(C) Includes 195.00 GWH sales to tea gradens.

TABLE NO. 54 (Contd.)

Electricity Boards	Traction	Agriculture	Public Water Works	Miscellaneous
Haryana	—	2157.85	60.12	112.78
Himachal Pradesh	—	23.35	(B)	56.25
Jammu & Kashmir	—	157.00	121.25	95.00
Punjab	—	4220.43	(D)	354.38
Rajasthan	13.58	2139.43	331.45	210.00
Uttar Pradesh	568.31	6021.94	323.47	—
SUB-TOTAL	581.89	14720.00	836.29	828.41
Gujarat	215.67	4402.14	143.40	—
Madhya Pradesh	310.12	1228.31	270.51	—
Maharashtra	305.93	5129.00	682.67	393.39
SUB-TOTAL	831.72	10759.45	1096.58	393.39
Andhra Pradesh	264.68	4496.83	(E)	40.34
Karnataka	—	2848.59	(B)	—
Kerala	—	186.00	116.00	126.00
Tamil Nadu	263.00	3526.00	221.00	395.00
SUB-TOTAL	527.68	11057.42	337.00	561.34
Bihar	344.86	1361.85	125.40	—
Orissa	193.39	112.81	73.20	213.36
West Bengal	391.25	256.38	37.25	132.34
SUB-TOTAL	929.50	1731.04	235.85	345.70
Assam	—	13.00	16.00	139.00
Meghalaya	—	1.40	10.44	28.94
SUB-TOTAL	—	14.40	26.44	167.94
TOTAL (ALL INDIA)	2870.79	38282.31	2532.16	2296.78

NOTE: (D) Included in agriculture category.

(E) Included in Industrial HV category.

Miscellaneous: Includes supply to non-traction, non-industrial MES, Irrigation Boards, Projects under construction, free colony consumption etc.

TABLE No. 55

Energy Sales by Private Licensees Categorywise-Regionwise/Statewise during 1988-89

(GWH)

Region	State/UTs	Total sold to ultimate consumers		
			Domestic	Commercial
<i>Northern Region</i>	Jammu & Kashmir	19.75	2.71	0.64
	Rajasthan	36.50	5.00	3.00
	Uttar Pradesh	53.10	5.00	(A)
	SUB-TOTAL	109.35	12.71	3.64
<i>Western Region</i>	Gujarat	2690.77	462.46	274.98
	Madhya Pradesh	139.93	30.15	5.99
	Maharashtra	5440.95	1127.46	408.78
	SUB-TOTAL	8271.65	1620.07	689.75
<i>Southern Region</i>	Andhra Pradesh	192.91	35.50	4.67
	Karnataka	37.05	6.01	0.78
	Kerala	23.51	4.57	0.67
	Tamil Nadu	82.16	16.29	4.07
SUB-TOTAL	335.63	62.37	10.19	
<i>Eastern Region</i>	Bihar	21.60	3.00	1.00
	Orissa	14.38	5.31	0.77
	West Bengal	4112.94	1081.81	614.18
	SUB-TOTAL	4148.92	1090.12	615.95
TOTAL (ALL INDIA)		12865.55	2785.27	1319.53

(A)—Included in Domestic category.

TABLE NO. 55 (Contd.)

State/UTs	Industrial Power (low & Medium Voltage)	Industrial Power (High Voltage)	Public Lighting	Traction
Jammu & Kashmir	3.10	—	0.05	—
Rajasthan	5.00	—	2.50	—
Uttar Pradesh	28.00	(B)	0.10	—
SUB-TOTAL	36.10	—	2.65	—
Gujarat	682.24	1067.45	25.31	—
Madhya Pradesh	19.11	0.12	2.01	—
Maharashtra	492.49	2827.64	43.88	370.91
SUB-TOTAL	1193.84	3895.21	71.20	370.91
Andhra Pradesh	16.10	—	3.46	—
Karnataka	2.80	1.85	0.92	—
Kerala	0.77	—	0.11	—
Tamil Nadu	6.61	4.34	2.42	—
SUB-TOTAL	26.28	6.19	6.91	—
Bihar	4.50	2.00	0.10	—
Orissa	1.13	6.53	0.08	—
West Bengal	322.62	1718.47	48.00	46.00
SUB-TOTAL	328.25	1727.00	48.18	46.00
TOTAL (ALL INDIA)	1584.47	5628.40	128.94	416.91

(B)—Included in Industrial LV & MV Category.

TABLE NO. 55 (Contd.)

State/UTs.	Agricultural	Public Water Works and Sewage Pumping.	Miscellaneous
Jammu & Kashmir	1.57	7.00	4.68
Rajasthan	20.00	1.00	—
Uttar Pradesh	20.00	—	—
SUB-TOTAL	41.57	8.00	4.68
Gujarat	11.83	106.13	60.37
Madhya Pradesh	75.33	4.82	2.40
Maharashtra	157.36	12.42	0.01
SUB-TOTAL	244.52	123.37	62.78
Andhra Pradesh	132.75	—	0.43
Karnataka	23.24	1.44	0.01
Kerala	—	—	17.39
Tamil Nadu	46.55	0.75	1.13
SUB-TOTAL	202.54	2.19	18.96
Bihar	11.00	—	—
Orissa	0.49	0.07	—
West Bengal	0.87	178.31	102.68
SUB-TOTAL	12.36	178.38	102.68
TOTAL (ALL INDIA)	500.99	311.94	189.10

TABLE NO. 56

Energy Sales to Ultimate Consumers by Electricity Departments, Central Sector, Corporations/Government Undertakings and Municipalities—Categorywise/Regionwise/Statewise during 1988-89 (GWH)

Region	State/U.Ts.	Total Energy sold	Domestic	Commercial
I. Municipalities				
<i>Northern Region</i>	Punjab	206.00	80.00	33.00
	D.E.S.U.	4321.61	1688.52	918.23
	N.D.M.C.	509.70	127.30	145.30
<i>Western Region</i>	Gujarat	35.50	10.00	0.50
	Maharashtra	2001.77	760.58	820.55
<i>Southern Region</i>	Kerala	28.30	10.80	11.80
	Tamil Nadu	279.15	126.40	79.60
SUB TOTAL (I)		7382.03	2803.60	2008.98
II. Govt. Deptts/Central Sector Undertakings/ Corporation				
<i>Northern Region</i>	Delhi (M.E.S.)	85.05	—	—
	Punjab (B.B.M.B.)	852.84	—	—
	H.P. (Bairasiul)	23.77	4.34	—
	Rajasthan (R.A.P.P.)	96.25	—	—
	Chandigarh	365.54	119.56	48.10
	Central Sector (Badarpur T.P.S.+ Singrauli S.T.P.S.)	32.48	32.48	—
	<i>Western Region</i>	Maharashtra (Chola)	175.74	—
	Goa	408.47	99.14	30.20
	Daman & Diu	34.02	5.64	2.16
	Dadra & Nagar Haveli	87.67	2.53	1.31
	Central Sector	58.00	40.00	—
<i>Southern Region</i>	Andhra Pradesh (T.B. Dam & Hampi & Machkund)	9.39	9.39	—
	Pondicherry	360.74	41.29	15.12
	Lakshadweep	6.20	4.00	1.39
	Central Sector (Neyveli M.A.P.P.+R.S.T.P.S.)	698.14	19.46	—
	<i>Eastern Region</i>	D.V.C. (in Bihar)	2266.90	—
	D.V.C. (in West Bengal)	571.78	—	0.09
	Sikkim	27.98	13.53	5.41
	West Bengal (D.P.L.)	235.05	34.91	2.37
	A & N Islands	28.53	11.82	10.54
	Orissa (Rengali)	9.74	9.74	—
	Farakka (West Bengal)	6.32	6.32	—
<i>North Eastern Region</i>	Manipur	124.03	52.43	7.78
	Nagaland	69.76	20.15	6.45
	Tripura	99.67	30.30	13.65
	Arunachal Pradesh	42.89	14.06	4.33
	Mizoram	32.51	23.54	1.60
	Central Sector (NEEPCO)	5.64	5.64	—
SUB-TOTAL (II)		6815.12	600.27	15.055
TOTAL (I+II)		14197.15	3403.87	2159.53

TABLE No. 56 (Contd.)

State/U.Ts.	Industrial Power (Low & Medium Voltage)	Industrial Power (High Voltage)	Public Lighting.	Traction
I. Municipalities				
Punjab	49.00	28.00	4.00	—
D.E.S.U.	837.53	580.04	(A)	—
N.D.M.C.	225.50	—	11.60	—
Gujarat	5.00	8.00	8.00	—
Maharashtra	187.40	183.46	27.20	—
Kerala	3.00	—	2.50	—
Tamil Nadu	43.63	14.07	7.00	—
SUB-TOTAL (I)	1351.06	813.57	60.30	—
II. Govt. Deptts/Undertakings				
Delhi (M.E.S.)	—	—	—	—
Punjab (B.B.M.B.)	—	821.00	—	—
H.P. (Bairasiul)	—	—	—	—
Rajasthan (RAPP)	—	96.25	—	—
Chandigarh	57.52	112.77	15.27	—
Central Sector (Badarpur T.P.S.+ Singrauli S.T.P.S.)	—	—	—	—
Maharashtra (Chola)	—	—	—	175.74
Goa	26.45	201.05	8.13	—
Daman & Diu	6.20	18.29	0.58	—
Dadra & Nagar Haveli	7.08	75.66	0.32	—
Central Sector	—	—	—	—
Andhra Pradesh (T.B. Dam & Hampi & Machkund)	—	—	—	—
Pondicherry	21.74	204.56	6.57	—
Lakshadweep	0.31	—	0.50	—
Central Sector (Neyveli+M.A.P.P.+ R.S.T.P.S.)	—	678.68	—	—
D.V.C. (in Bihar)	—	2045.71	—	204.23
D.V.C. (in West Bengal)	—	467.10	—	104.59
Sikkim	6.14	—	2.90	—
West Bengal (DPL)	2.70	182.39	0.45	—
A & N Islands	4.56	—	1.14	—
Orissa (Rengali)	—	—	—	—
West Bengal (Farakka)	—	—	—	—
Manipur	12.55	9.56	5.58	—
Nagaland	1.95	21.36	1.70	—
Tripura	21.03	—	2.59	—
Arunachal Pradesh	1.94	2.72	6.14	—
Mizoram	0.95	—	3.50	—
Central Sector (NEEPCO)	—	—	—	—
SUB-TOTAL (II)	171.12	4937.10	55.37	484.56
TOTAL (I+II)	1522.18	5750.67	115.67	484.56

TABLE No. 56 (Contd.)

State/U.Ts.	Agricultural	Public Water Works and Sewage pumping	Miscellaneous
I. Municipalities			
Punjab	(A)	10.00	2.00
D.E.S.U.	(A)	297.29	—
N.D.M.C.	—	—	—
Gujarat	1.00	3.00	—
Maharashtra	—	22.58	—
Kerala	0.20	—	—
Tamil Nadu	1.52	3.31	3.62
SUB-TOTAL I	2.72	336.18	5.62
II. Govt. Deptt./Undertakings			
Delhi (M.E.S.)	—	—	85.05
Punjab (B.B.M.B.)	—	—	31.84
H.P. (Bairasiul)	—	—	19.43
Rajasthan (RAPP)	—	—	—
Chandigarh	1.86	(B)	10.46
Central Sector (Badarpur T.P.S. + Singrauli STPS)	—	—	—
Maharashtra (Chola)	—	—	—
Goa	9.23	31.16	3.11
Daman & Diu	0.74	0.41	—
D & N Haveli	0.36	0.41	—
Central Sector	—	—	18.00
Andhra Pradesh (T.B. Dam & Hampi + Machkund)	—	—	—
Pondicherry	61.36	8.13	1.97
Lakshadweep	—	—	—
Central Sector (Neyveli + M.A.P.P. + R.S.T.P.)	—	—	—
D.V.C. (in Bihar)	—	—	16.91
D.V.C. (in West Bengal)	—	—	—
Sikkim	—	—	—
West Bengal (D.P.L.)	—	11.89	0.34
A & N Islands	—	0.19	0.28
Orissa (Rengali)	—	—	—
West Bengal (Farakka)	—	—	—
Manipur	2.16	2.92	31.07
Nagaland	—	0.75	17.40
Tripura	16.64	13.55	1.91
Arunachal Pradesh	—	1.21	12.49
Mizoram	—	1.89	1.03
Central Sector (NEEPCO)	—	—	—
SUB-TOTAL (II)	92.35	72.51	251.29
TOTAL (I+II)	95.07	408.69	256.91

(A) Included in Public Water Works

(B) Included in Industrial LV & MV Category.

TABLE NO. 57

Pattern of Energy Sales (Categorywise) Regionwise/Statewise during 1988-89

Region	State/U.Ts.	Total sales (GWH)	Percentage to total sales	
			Domestic	Commercial
<i>Northern Region</i>	Haryana	4860.82	17.83	2.95
	Himachal Pradesh	818.99	21.31	7.94
	Jammu & Kashmir	1217.70	23.59	16.99
	Punjab	10601.70	11.54	2.56
	Rajasthan	6875.92	11.06	5.54
	Uttar Pradesh	15753.51	13.47	7.93
	Chandigarh	365.54	32.71	13.16
	Delhi	4928.84	37.09	21.58
	SUB-TOTAL	45423.02	16.18	7.55
<i>Western Region</i>	Gujarat	14596.87	10.41	3.75
	Madhya Pradesh	10721.23	17.71	3.82
	Maharashtra	26262.71	15.80	7.02
	Goa	408.47	24.27	7.39
	Daman & Diu	34.02	16.58	6.35
	D & N Haveli	87.67	2.89	1.50
		SUB-TOTAL	52110.97	14.73
<i>Southern Region</i>	Andhra Pradesh	12989.58	13.99	3.23
	Karnataka	9414.20	16.22	2.11
	Kerala	4438.81	28.60	10.33
	Tamil Nadu	14326.99	15.61	7.94
	Pondicherry	360.74	11.45	4.19
	Lakshadweep	6.20	64.52	22.42
		SUB-TOTAL	41536.52	16.60
<i>Eastern Region</i>	Bihar	7171.76	5.32	2.55
	Orissa	4188.07	12.02	2.60
	West Bengal	7959.00	20.30	11.98
	A & N. Islands	28.53	41.43	36.94
	Sikkim	27.98	48.36	19.34
		SUB-TOTAL	19375.34	13.04
<i>North Eastern Region</i>	Assam	1227.00	12.23	8.15
	Manipur	124.05	42.26	6.27
	Meghalaya	154.70	21.95	17.34
	Nagaland	69.76	28.88	9.25
	Tripura	99.67	30.40	13.70
	Arunachal Pradesh	42.89	32.78	10.10
	Mizoram	32.51	72.41	4.92
		SUB-TOTAL	1750.58	18.53
	TOTAL (ALL INDIA)	160196.43	15.46	6.19

For foot notes see Table No. 53

TABLE No. 57 (Contd.)

State/UTs	Percentage to total sales		
	Industrial Power	Public lighting	Traction
Haryana	31.59	0.38	—
Himachal Pradesh	58.24	0.42	—
Jammu & Kashmir	25.05	2.63	—
Punjab	42.10	0.24	—
Rajasthan	43.24	0.68	0.20
Uttar Pradesh	33.70	0.89	3.61
Chandigarh	46.58	4.18	—
Delhi	33.34	0.23	—
SUB-TOTAL	37.15	0.65	1.28
Gujarat	51.27	0.70	1.48
Madhya Pradesh	59.82	0.84	2.89
Maharashtra	48.61	0.96	3.25
Goa	55.70	1.99	—
Daman & Diu	71.99	1.71	—
D. & N. Haveli	94.37	0.36	—
SUB-TOTAL	51.81	0.87	2.65
Andhra Pradesh	43.84	0.95	2.04
Karnataka	49.62	1.53	—
Kerala	49.13	1.91	—
Tamil Nadu	43.85	1.45	1.84
Pondicherry	62.73	1.82	—
Lakshadweep	5.00	8.06	—
SUB-TOTAL	45.87	1.37	1.27
Bihar	63.08	0.26	7.66
Orissa	70.74	0.47	4.62
West Bengal	51.02	0.84	6.81
A & N Islands	15.98	4.00	—
Sikkim	21.94	10.36	—
SUB-TOTAL	59.65	0.57	6.63
Assam	65.20	0.73	—
Manipur	17.83	4.50	—
Meghalaya	32.42	1.93	—
Nagaland	33.42	2.44	—
Tripura	21.10	2.60	—
Arunachal Pradesh	10.86	14.32	—
Mizoram	2.92	10.77	—
SUB-TOTAL	52.68	1.80	—
TOTAL (ALL INDIA)	47.08	0.91	2.35

TABLE NO. 57 (Contd.)

State/U.Ts.	Percentage to total sales		
	Agriculture	Public Water Works	Miscellaneous
Haryana	44.39	1.24	2.32
Himachal Pradesh	2.85	—	9.24
Jammu & Kashmir	13.02	10.53	8.19
Punjab	39.81	0.09	3.66
Rajasthan	31.40	4.83	3.05
Uttar Pradesh	38.35	2.05	—
Chandigarh	0.51	—	2.86
Delhi	—	6.03	1.73
SUB-TOTAL	32.50	2.53	2.16
Gujarat	30.25	1.73	0.41
Madhya Pradesh	12.16	2.57	0.19
Maharashtra	20.13	2.73	1.50
Goa	2.26	7.63	0.76
Daman & Diu	2.17	1.20	—
Dadra & Nagar Haveli	0.41	0.47	—
SUB-TOTAL	21.14	2.45	0.91
Andhra Pradesh	35.64	—	0.31
Karnataka	30.51	0.01(A)	Neg.
Kerala	4.19	2.61	3.23
Tamil Nadu	24.95	1.57	2.79
Pondicherry	17.01	2.25	0.55
Lakshadweep	—	—	—
SUB-TOTAL	27.26	0.85	1.41
Bihar	19.14	1.75	0.24
Orissa	2.71	1.75	5.09
West Bengal	3.23	2.86	2.96
A- & N. Islands	—	0.67	0.98
Sikkim	—	—	—
SUB-TOTAL	9.00	2.20	2.40
Assam	1.06	1.30	11.33
Manipur	1.74	2.35	25.05
Meghalaya	0.90	6.75	18.71
Nagaland	—	1.07	24.94
Tripura	16.69	13.59	1.92
Arunachal Pradesh	—	2.82	29.12
Mizoram	—	5.81	3.17
SUB-TOTAL	1.90	2.67	13.24
TOTAL (ALL INDIA)	24.27	2.03	1.71

Neg. Negligible

(A) It does not include energy consumption by consumers of Karnataka Electricity Board,

TABLE No. 58
Annual Per Capita Consumption of Electricity (Utilities+Non-Utilities)
Categorywise/Regionwise/Statewise during 1988-89

Region	State/U.Ts.	Population* (Million)	Utilities	
			Domestic	Commercial
<i>Northern Region</i>	Haryana	15.70	53.05	9.13
	Himachal Pradesh	4.91	35.55	13.25
	Jammu & Kashmir	7.08	40.56	29.22
	Punjab	19.23	63.59	14.13
	Rajasthan	14.92	18.14	9.08
	Uttar Pradesh	129.81	16.35	9.62
	Chandigarh	0.67	178.45	71.79
	Delhi	8.44	216.62	126.01
	SUB-TOTAL	227.76	32.26	15.05
<i>Western Region</i>	Gujarat	39.45	38.51	13.89
	Madhya Pradesh	61.33	30.96	6.67
	Maharashtra	72.71	57.07	25.36
	Goa Daman & Diu	1.30	80.60	24.89
	D. & N. Haveli	0.126	20.08	10.40
	SUB-TOTAL	174.91	43.88	16.21
<i>Southern Region</i>	Andhra Pradesh	61.64	29.47	6.81
	Karnataka	43.44	36.14	4.57
	Kerala	29.04	43.71	15.79
	Tamil Nadu	54.62	40.95	20.83
	Pondicherry	0.71	58.15	21.30
	Lakshadweep	0.04	100.00	34.75
	SUB-TOTAL	189.49	36.38	11.78
<i>Eastern Region</i>	Bihar	82.18	4.65	2.22
	Orrisa	30.19	16.68	3.60
	West Bengal	63.21	25.56	15.09
	A. & N. Islands	0.27	43.78	39.04
	Sikkim	0.41	33.00	13.20
	SUB-TOTAL	176.26	14.33	7.15
<i>North Eastern Region</i>	Assam	23.68	6.33	4.22
	Manipur	1.71	30.66	4.55
	Meghalaya	1.64	20.71	16.36
	Nagaland	1.04	19.38	6.20
	Tripura	2.46	12.32	5.55
	Arunachal Pradesh	0.78	18.03	5.55
	Mizoram	0.66	35.67	2.42
	SUB-TOTAL	31.97	10.15	5.02
TOTAL (ALL INDIA)		800.39	30.94	12.39

*Figures of population as on 1st Oct., 1988 (Mid-Financial year) are based on mid-year estimates 1981 census.

NOTE:—Population of Goa and Daman & Diu being not available separately, their combined per capita consumption has been worked out.

TABLE No. 58 (Contd.)

State/U.Ts.	Utilities		
	Industrial water works, traction & Miscellaneous	Public Lighting	Agriculture
Haryana	108.80	1.19	137.44
Himachal Pradesh	112.54	0.70	4.76
Jammu & Kashmir	75.28	4.53	22.40
Punjab	252.82	1.30	219.47
Rajasthan	84.18	1.11	51.51
Uttar Pradesh	47.77	1.08	46.54
Chandigarh	269.77	22.79	2.78
Delhi	239.99	1.37	(A)
SUB-TOTAL	86.01	1.29	64.82
Gujarat	203.10	2.60	111.91
Madhya Pradesh	114.45	1.47	21.26
Maharashtra	202.61	3.46	72.70
Goa, Daman & Diu	220.52	6.70	7.67
D. & N. Haveli	659.91	2.54	2.86
SUB-TOTAL	172.27	2.59	62.98
Andhra Pradesh	97.33	2.01	75.11
Karnataka	107.58	3.32	66.11
Kerala	84.03	2.91	6.41
Tamil Nadu	131.26	3.82	65.44
Pondicherry	332.96	9.25	86.42
Lakshadweep	7.75	12.50	—
SUB-TOTAL	108.28	3.00	59.76
Bihar	63.46	0.23	16.71
Orissa	114.03	0.66	3.75
West Bengal	80.13	1.06	4.07
A. & N. Islands	18.63	4.22	—
Sikkim	14.97	7.07	—
SUB-TOTAL	77.93	0.62	9.89
Assam	40.34	0.38	0.55
Manipur	32.81	3.26	1.26
Meghalaya	54.59	1.82	0.85
Nagaland	39.87	1.63	—
Tripura	14.84	1.05	6.76
Arunachal Pradesh	23.54	7.87	—
Mizoram	5.87	5.30	—
SUB-TOTAL	37.57	0.98	1.04
TOTAL (ALL INDIA)	106.43	1.82	48.57

(A) Included in Industrial Public Works & Miscellaneous.

TABLE No. 58 (Contd.)

(In KWH)

State/U.Ts.	Total Utilities	KWH from self generation of non-utilities	Total (Utilities + Non-Utilities)
Haryana	309.61	24.51	334.12
Himachal Pradesh	166.80	0.01	166.81
Jammu & Kashmir	171.99	Neg.	171.99
Punjab	551.31	4.23	555.54
Rajasthan	164.02	17.15	181.17
Uttar Pradesh	121.36	22.97	144.33
Chandigarh	545.58	—	545.58
Delhi	583.99	15.56	599.55
SUB-TOTAL	199.43	18.87	218.30
Gujarat	370.01	35.20	405.21
Madhya Pradesh	174.81	39.17	213.98
Maharashtra	361.20	12.74	373.94
Goa, Daman & Diu	340.38	39.16	379.54
D. & N. Haveli	695.79	—	695.79
SUB-TOTAL	297.93	27.26	325.19
Andhra Pradesh	210.73	7.15	217.88
Karnataka	216.72	20.69	237.41
Kerala	152.85	5.24	158.09
Tamil Nadu	262.30	19.49	281.79
Pondicherry	508.08	10.96	519.04
Lakshadweep	155.00	—	155.00
SUB-TOTAL	219.20	13.53	232.73
Bihar	87.27	20.41	107.68
Orissa	138.72	73.15	211.87
West Bengal	125.91	8.92	134.83
A. & N. Islands	105.67	—	105.67
Sikkim	68.24	—	68.24
SUB-TOTAL	109.92	25.24	135.16
Assam	51.82	23.51	75.33
Manipur	72.54	—	72.54
Meghalaya	94.33	—	94.33
Nagaland	67.08	2.38	69.46
Tripura	40.52	—	40.52
Arunachal Pradesh	54.99	—	54.99
Mizoram	49.26	—	49.26
SUB-TOTAL	254.76	17.49	272.25
TOTAL (ALL INDIA)	200.15	20.79	220.94

TABLE No. 59
Energy Consumption per Square Kilometer and per thousand population (Utilities only)
Regionwise/Statewise during 1988-89

Region	State/U.Ts.	Population (Million) @	Area in 1000 sq. KM (\$)	Total energy sold (GWH)
<i>Northern Region</i>	Haryana	15.70	44.22	4860.82
	Himachal Pradesh	4.91	55.67	818.99
	Jammu & Kashmir	7.08	222.24	1217.70
	Punjab	19.23	50.36	10601.70
	Rajasthan	41.92	342.21	6875.92
	Uttar Pradesh	129.81	294.41	15753.51
	Chandigarh	0.67	0.11	365.54
	Delhi	8.44	1.48	4928.84
	SUB-TOTAL	227.76	1010.70	45423.02
<i>Western Region</i>	Gujarat	39.45	195.98	14596.87
	Madhya Pradesh	61.33	442.84	10721.23
	Maharashtra	72.71	307.76	26262.71
	Goa, Daman & Diu	1.30	3.81	442.49
	D. & N. Haveli	0.126	0.49	87.67
	SUB-TOTAL	174.91	950.88	52110.97
<i>Southern Region</i>	Andhra Pradesh	61.64	276.81	12989.58
	Karnataka	43.44	191.77	9414.20
	Kerala	29.04	38.86	4438.81
	Tamil Nadu	54.62	130.07	14326.99
	Pondicherry	0.71	0.48	360.74
	Lakshadweep	0.04	0.03	6.20
	SUB-TOTAL	189.49	638.02	41536.52
<i>Eastern Region</i>	Bihar	82.18	173.88	7171.76(A)
	Orissa	30.19	155.78	4188.07
	West Bengal	63.21	87.86	7959.00(A)
	A. & N. Islands	0.27	8.29	28.53
	Sikkim	0.41	7.30	27.98
	SUB-TOTAL	176.26	433.11	19375.34
<i>North Eastern Region</i>	Assam	23.68	78.52	1227.00
	Manipur	1.71	22.36	124.05
	Meghalaya	1.64	22.49	154.70
	Nagaland	1.04	16.53	69.76
	Tripura	2.46	10.48	99.67
	Arunachal Pradesh	0.78	83.58	42.89
	Mizoram	0.66	21.09	32.51
	SUB-TOTAL	31.97	255.05	1750.58
TOTAL (ALL INDIA)		800.39*	3287.78*	160196.43

NOTE :—\$ —Source for area figures is statistical abstract India published by Central Statistical Organisation.

A—Includes consumption by ultimate consumers of D.V.C. in Valley area of Bihar and West Bengal respectively.

*—Total may not tally due to rounding off.

@—Source:—Office of the Registrar General of India.

TABLE No. 59 —(contd.)

State/U.Ts.	Energy consumed per thousand of population (Kwh)	Energy consumed per square Kilo- meter (Kwh)
Haryana	309606	109923
Himachal Pradesh	166800	14712
Jammu & Kashmir	171991	5479
Punjab	551310	210518
Rajasthan	164025	20093
Uttar Pradesh	121358	53509
Chandigarh	545582	3323091
Delhi	583986	3330297
SUB-TOTAL	199434	44942
Gujarat	370009	74481
Madhya Pradesh	174812	24210
Maharashtra	361198	85335
Goa Daman & Diu	340377	116139
D. & N. Haveji	695794	178918
SUB-TOTAL	297930	54803
Andhra Pradesh	210733	46926
Karnataka	216717	49091
Kerala	152852	114226
Tamil Nadu	262303	110148
Pondicherry	508084	751542
Lakshadweep	155000	206667
SUB-TOTAL	219202	65102
Bihar	87269	41245
Orissa	138724	26884
West Bengal	125914	90587
A. & N. Islands	105667	3441
Sikkim	68244	3833
SUB-TOTAL	109925	44735
Assam	51816	15627
Manipur	72544	5548
Meghalaya	94329	6879
Nagaland	67077	4220
Tripura	40516	9510
Arunachal Pradesh	54987	513
Mizoram	49258	1541
SUB-TOTAL	54757	6864
TOTAL (ALL INDIA)	200148	48725

TABLE No. 60

Electrical Accidents During 1988-1989

State/U.Ts./Central Undertakings	Total		Power Houses & Sub Stations			
	Fatal	Non-Fatal	Electric Supply Undertaking		Industrial Undertaking	
			Fatal	Non-Fatal	Fatal	Non-Fatal
Andhra Pradesh	Data not available					
Assam	Data not available					
Bihar	20	15	—Details not available			
Goa	9+22*	21	—	—	—	—
Gujarat	208+310*	285	5+7*	10	9	2
Haryana	66+355*	103*	—	—	—	—
Himachal Pradesh	21+13*	82+1*	—	—	—	—
Jammu & Kashmir	Data not available					
Karnataka	Data not available					
Kerala	135+40*	130+2*	—	4+2*	—	—
Madhya Pradesh	374+352*	345	5+2*	14	—	—
Maharashtra	—Data not available					
Manipur	3+15*	4	2*	—	—	—
Meghalaya	5+24*	7	—	—	—	—
Nagaland	—Data not available					
Orissa	59	29	—Detail not available			
Punjab	297+207*	103	1	2	—	—
Rajasthan	64+10*	97	10	8	—	—
Sikkim	NIL					
Tamil Nadu	254+47*	98	3	4	—	—
Tripura	6+18*	6+2*	—	—	—	—
Uttar Pradesh	237	490+135*	3	6	39	23
West Bengal	—Data not available					
Mines	30	12	—	1	—	2
Central Govt. Installations (D)	58+7*	106	7+1*	11	—	1
Railways	36	105	—	1	—	1
UNION TERRITORY						
A & N Islands	3+6*	9	—	—	—	—
Arunachal Pradesh	—Data not available					
Chandigarh	—	2	—	—	—	—
D & N Haveli	4	2	—	—	—	—
Delhi	36+1*	38	1	17	—	—
Daman & Diu	2	3	—	—	—	—
Lakshadweep	1	—	—	—	—	—
Mizoram	2	1	1	—	—	—
Pondicherry	—Data not available					
Total (All India) (C)	1930+1427*	1990+243*	36+12*	78+2*	48	29

(C)—Categorywise total may not tally with aggregate total as details of accidents of some States/U.Ts. are not available.

(D)—Includes 21 fatal accident and 75 Non-fatal accidents in the Department of Telecommunication.

*—Accidents involving animals.

TABLE No. 60 (Contd.)

State/U.Ts./Central/Undertakings	Transmission Lines			
	Electricity Supply Undertaking		Industrial Undertaking	
	Fatal	Non-Fatal	Fatal	Non-Fatal
Andhra Pradesh	—Data not available—			
Assam	—Data not available—			
Bihar	—Details not available—			
Goa	—	—	—	—
Gujarat	19+29*	73	—	9
Haryana	—	—	—	—
Himachal Pradesh	—	—	—	—
Jammu & Kashmir	—Data not available—			
Karnataka	—Data not available—			
Kerala	9+2*	5	—	—
Madhya Pradesh	57+54*	86	—	—
Maharashtra	—Data not available—			
Manipur	2+1*	2	—	—
Meghalaya	5+24*	6	—	—
Nagaland	—Data not available—			
Orissa	—Details not available—			
Punjab	46+10*	70	—	—
Rajasthan	22+6*	13	—	—
Sikkim	—	—	—	—
Tamil Nadu	—	—	—	—
Tripura	3	3	—	—
Uttar Pradesh	—	—	14	20+25*
West Bengal	—Data not available—			
Mines	—	—	6	1
Central Govt. Installations	22	75	—	—
Railways	—	—	—	—
UNION TERRITORIES				
A & N Islands	—	—	—	—
Arunachal Pradesh	—Data not available—			
Chandigarh	—	—	—	—
D & N Haveli	—	—	—	—
Delhi	5	5	—	—
Daman & Diu	—	—	—	—
Lakshadweep	—	—	—	—
Mizoram	—	1	—	—
Pondicherry	—Data not available—			
TOTAL (ALL INDIA)	190+126*	339	20	39+25*

*—Accidents involving animals.

TABLE No. 60 (Contd.)

State/U.Ts./Central Undertakings	DISTRIBUTION LINES			
	Electricity Supply Undertakings		Industrial Undertaking	
	Fatal	Non-Fatal	Fatal	Non-Fatal
Andhra Pradesh	—Data not available—			
Assam	—Data not available—			
Bihar	—Details not available—			
Goa	8+22*	21	1	—
Gujarat	149+241*	166	26+33*	25
Haryana	66+355*	103*	—	—
Himachal Pradesh	21+13*	82+1*	—	—
Jammu & Kashmir	—Data not available—			
Karnataka	—Data not available—			
Kerala	120+38*	119	6	2
Madhya Pradesh	163+278*	219	149+18*	26
Maharashtra	—Data not available—			
Manipur	1+12*	2	—	—
Meghalaya	—	1	—	—
Nagaland	—Data not available—			
Orissa	—Details not available—			
Punjab	250+197*	31	—	—
Rajasthan	30+4*	70	2	6
Sikkim	—	—	—	—
Tamil Nadu	173+47*	90	78	4
Tripura	3+18*	3+2*	—	—
Uttar Pradesh	8	13	173	428+110*
West Bengal	—Data not available—			
Mines	—	—	24	8
Central Govt. Installations	15+6*	12	14	7
Railways	32	98	4	5
UNION TERRITORIES				
A & N Islands	3+6*	9	—	—
Arunachal Pradesh	—Data not available—			
Chandigarh	—	2	—	—
D & N Haveli	4	2	—	—
Delhi	6+1*	14	24	2
Daman & Diu	2	3	—	—
Lakshadweep	1	—	—	—
Mizoram	1	—	—	—
Pondicherry	—Data not available—			
TOTAL (ALL INDIA)	1056+1238*	957+106*	501+51*	513+110*

*Accidents involving animals.

SECTION IX

Consumer & Connected Load

CONSUMERS AND CONNECTED LOAD

During the year under review 5.21 million additional electricity connections were given to different categories of consumers bringing the total number of consumers to 60.82 millions as on 31st March, 1989 recording an increase of 9.37% over the previous year. The corresponding connected load of all categories of consumers rose to 1,06,552.74 MW as compared to 98,932.36 MW as on 31-3-1988 registering an increase of 7.70% over the previous year.

Domestic category continued to have the maximum number of consumers benefited from electricity followed by agricultural and commercial categories. However, the industrial consumers had the maximum connected load of 39,017 MW followed by agricultural and domestic sectors having connected load of 28,466 MW and 26,942 MW respectively.

Tables in this Section show the details of consumers and connected load of different categories in various States/ Union Territories.

TABLE No. 61

Classification of Consumers and Connected Load (Utilities) Regionwise/Statewise as on 31-3-1989

Region	State/U.Ts.	TOTAL		DOMESTIC	
		Connected load (KW)	Consumers	Connected load (KW)	Consumers
<i>Northern Region</i>	Haryana	3981947	2170139	791310	1554073
	Himachal Pradesh	1004249	862817	532570	763010
	Jammu & Kashmir (R)	455872	504012	138377	423056
	Punjab	6275175	3602700	1633676	2551218
	Rajasthan	4540220	2397861	863923	1621750
	Uttar Pradesh	8440796	3474807	1874937	2477416
	Chandigarh (R)	353820	112902	184411	96574
	Delhi	2641391	1599525	993000	1293805
	SUB-TOTAL	27693470	14724763	7012204	10780902
<i>Western Region</i>	Gujarat	10196801	5532300	2405068	4213557
	Madhya Pradesh	6997850	4647001	1239377	3312158
	Maharashtra	18375461	9117025	4703701	6363352
	D. & N. Haveli (R)	9628	1144	379	975
	Goa, Daman & Diu*	540519	258595	247546	191450
	SUB-TOTAL	36120259	19556065	8596071	14081492
<i>Southern Region</i>	Andhra Pradesh	8714604	5810526	1840932	4120435
	Karnataka	7380456	4737885	2314346	3394935
	Kerala	3759644	2974681	1628783	2253938
	Tamil Nadu	11620495	7879445	2837276	5316289
	Lakshadweep	8414	10912	5551	9127
	Pondicherry	230889	106638	73868	95385
	SUB-TOTAL	31714502	21520087	8700756	15190109
<i>Eastern Region</i>	Bihar	2316894	1298002	373309	712308
	Orissa (R)	2074409	847294	480062	634318
	West Bengal	4306352	2193277	1356214	1545832
	D.V.C.	520030	45	—	—
	A & N Islands (R)	17729	28423	10611	21222
	Sikkim (R)	12122	13193	9595	10395
	SUB-TOTAL	9247536	4380234	2229791	2924075
<i>North Eastern Region</i>	Assam	839022	316465	237427	229950
	Manipur (R)	78925	55132	51810	51810
	Meghalaya	88271	67999	30566	56513
	Nagaland (R)	74870	70373	38328	57599
	Tripura	68058	82211	25213	62549
	Arunachal Pradesh	13890	25070	4000	21950
	Mizoram (R)	16934	26399	15625	25341
	SUB-TOTAL	1179970	643649	402969	505712
	TOTAL (ALL INDIA)	105955737	60824798	26941791	43482290

(R) —Data repeated due to non-availability of information.

*—Data for Goa, and Daman & Diu not available separately.

TABLE No. 61 (Contd.)

State/U.Ts.	COMMERCIAL		INDUSTRIAL (L.V. & M.V.)	
	Connected load (KW)	Consumers	Connected load (KW)	Consumers
Haryana	151357	224984	670018	60568
Himachal Pradesh	130835	80795	271418	15200
Jammu & Kashmir	44387	61330	150262	11179
Punjab	407343	407905	1115650	97891
Rajasthan	307785	372577	859304	82635
Uttar Pradesh	569967	320677	1959456	159095
Chandigarh	81266	13194	31216	2144
Delhi	554000	231836	774141	71074
SUB-TOTAL	2246940	1713298	5831465	499786
Gujarat	613377	651260	2182235	224820
Madhya Pradesh	412441	477329	1259328	83998
Maharashtra	1273000	1045015	2603885	243779
D. & N. Haveli	102	37	932	45
Goa, Daman & Diu*	40211	28003	65139	5464
SUB-TOTAL	2339131	2201644	6111519	558106
Andhra Pradesh	324300	476633	1036464	99111
Karnataka	169688	475762	1136428(B)	198619(B)
Kerala	378835	471198	602975	58575
Tamil Nadu	676000	948140	1568108	262263
Lakshadweep	1618	1636	1068	114
Pondicherry	(D)	(D)	40923	2508
SUB-TOTAL	1550441	2373369	4385966	621190
Bihar	150566	255576	578017	79273
Orissa	124596	146502	358612	28752
West Bengal	596260	488504	616000	97264
D.V.C.	30	5	—	—
A & N Islands	3943	6571	1265	273
Sikkim	300	2631	1785	88
SUB-TOTAL	875695	899789	1555679	205650
Assam	88988	74095	470370(A)	7785(A)
Manipur	4340	2170	6930	924
Meghalaya	12700	10244	20420	730
Nagaland	5126	10784	10145	957
Tripura	12950	15035	15218	3415
Arunachal Pradesh	3441	1565	581	51
Mizoram	370	844	60	7
SUB-TOTAL	127915	114737	523724	13869
TOTAL (ALL INDIA)	7140122	7302837	18408353	1898601

(A)—Includes Tea Gardens

(B)—Includes commercial Heating of Karnataka Electy. Board.

(D)—Included in domestic category.

TABLE No. 61 (Contd.)

State/U.Ts.	INDUSTRIAL H.V.		PUBLIC LIGHTING	
	Connected load(KW)	Consumers	Connected load(KW)	Consumers
Haryana	775058	1521	7390	5822
Himachal Pradesh	(C)	(C)	1415	290
Jammu & Kashmir	2091	69	3222	54
Punjab	1126335	1715	8865	791
Rajasthan	869992	580	16622	5454
Uttar Pradesh	1072898	916	30841	19722
Chandigarh	38372	121	2702	254
Delhi	217000	342	32250	718
SUB-TOTAL	4101746	5264	103307	33105
Gujarat	1847413	2406	79460	16778
Madhya Pradesh	1713306	1329	38897	21422
Maharashtra	4102850	5807	79355	36738
D & N Haveli	8100	44	10	8
Goa, Daman & Diu*	115257	273	33231	28225
SUB-TOTAL	7786926	9859	230953	103171
Andhra Pradesh	1855792	3087	54342	42785
Karnataka	1388645	1923	33357	14653
Kerala	621936	663	28072	6123
Tamil Nadu	2218285	2754	53886	56415
Lakshadweep	—	—	177	35
Pondicherry	69724	114	2364	31
SUB-TOTAL	6154382	8541	172198	120042
Bihar	519494	1259	13006	6148
Orissa	721923	398	15571	4332
West Bengal	888056	2663	18798	1259
D.V.C.	425000	30	—	—
A & N Islands	—	—	1808	225
Sikkim	125	2	67	40
SUB-TOTAL	2554598	4352	49250	12004
Assam	—	(C)	1700	861
Manipur	5000	10	695	139
Meghalaya	—	—	475	218
Nagaland	5000	1	5022	923
Tripura	(C)	(C)	360	216
Arunachal Pradesh	873	16	1076	26
Mizoram	—	—	546	182
SUB-TOTAL	10873	27	9874	2565
TOTAL (ALL INDIA)	20608525	28043	565582	270887

(C)—Included in industrial low and medium voltage.

TABLE No. 61 (Contd.)

State/U.Ts.	TRACTION		AGRICULTURE	
	Connected load (KW)	Consumers	Connected load (KW)	Consumers
Haryana	—	—	1488563	320439
Himachal Pradesh	—	—	41616	3451
Jammu & Kashmir	—	—	32933	867
Punjab	—	—	1846718	542946
Rajasthan	24250	5	1384052	301315
Uttar Pradesh	168550	7	2649830	493960
Chandigarh	—	—	2157	392
Delhi	—	—	(C)	(C)
SUB-TOTAL	192800	12	7445869	1663370
Gujarat	75600	9	2782697	410252
Madhya Pradesh	209000	25	2021559	734579
Maharashtra	64535	19	4891349	1394585
D. & N. Haveli	—	—	74	21
Goa, Daman & Diu	—	—	21095	3918
SUB-TOTAL	349135	53	9716774	2543355
Andhra Pradesh	226804	17	3299234	1012316
Karnataka	—	—	2236851	641695
Kerala	—	—	448702	183230
Tamil Nadu	73229	12	4053752	1252017
Lakshadweep	—	—	—	—
Pondicherry	—	—	44010	8600
SUB-TOTAL	300033	29	10082549	3097858
Bihar	82000	9	600157	243411
Orissa	80998	10	197636	31585
West Bengal	124550	15	377591	55358
D.V.C.	90000	7	—	—
A & N Islands	—	—	40	8
Sikkim	—	—	—	—
SUB-TOTAL	377548	41	1175424	330362
Assam	—	—	31848	2836
Manipur	—	—	5000	10
Meghalaya	—	—	870	71
Nagaland	—	—	—	—
Tripura	—	—	7721	823
Arunachal Pradesh	—	—	—	—
Mizoram	—	—	—	—
SUB-TOTAL	—	—	45439	3740
TOTAL (ALL INDIA)	1219516	135	28466055	7638685

TABLE No. 61 (Contd.)

State/U.Ts.	PUBLIC WATER WORKS		MISCELLANEOUS	
	Connected load (KW)	Consumers	Connected load (KW)	Consumers
Haryana	40663	2464	57588	268
Himachal Pradesh	(C)	(C)	26395	71
Jammu & Kashmir	23438	698	61162	6759
Punjab	(F)	(F)	136588	234
Rajasthan	123017	10217	91275	3328
Uttar Pradesh	103433	2998	10884	16
Chandigarh	6007	214	7689	9
Delhi	71000	1750	—	—
SUB-TOTAL	367558	18341	391581	10685
Gujarat	189774	12853	21177	365
Madhya Pradesh	98838	8467	5104	7694
Maharashtra	423724	27440	233062	290
D & N Haveli	31	14	—	—
Goa, Daman & Diu	6982	122	11058	1140
SUB-TOTAL	719349	48896	270401	9489
Andhra Pradesh	(G)	(G)	76736	56142
Karnataka	101141	10298	—	—
Kerala	50341	954	—	—
Tamil Nadu	133102	24658	6857	16897
Lakshadweep	—	—	—	—
Pondicherry	—	—	—	—
SUB-TOTAL	284584	35910	83593	73039
Bihar	345	18	—	—
Orissa	31663	961	63348	436
West Bengal	71256	904	257627	1478
D.V.C.	—	—	5000	3
A & N Islands	—	—	62	124
Sikkim	—	—	250	37
SUB-TOTAL	103264	1883	326287	2078
Assam	8182	432	507	506
Manipur	1750	35	3400	34
Meghalaya	6870	96	16370	127
Nagaland	778	20	10471	89
Tripura	2596	148	4000	25
Arunachal Pradesh	45	6	3874	1456
Mizoram	90	5	243	20
SUB-TOTAL	20311	742	38865	2257
TOTAL (ALL INDIA)	1495066	105772	1110727	97548

NOTE:—In certain cases figures for the year 1988-89 may not be consistent with the previous years figures because of improper reporting or revision of last year data by Electricity Board/Licensees.

(G) Included in Industrial High Voltage.

(F) Consumers and Connected load of Punjab S.E.B. are included in agricultural category.

TABLE NO. 62

Average Electricity Consumption per Consumer Regionwise/Statewise/Categorywise During 1988-89

(in thousand Kwh)

Region	State/U.Ts.	Total Average all Categories	Domestic	Commercial
<i>Northern Region</i>	Haryana	2.24	0.54	0.64
	Himachal Pradesh	0.95	0.23	0.80
	Jammu & Kashmir	2.42	0.68	3.37
	Punjab	2.94	0.48	0.67
	Rajasthan	2.87	0.47	1.02
	Uttar Pradesh	4.53	0.86	3.89
	Chandigarh	3.24	1.24	3.65
	Delhi	3.08	1.41	4.59
	<i>Northern Region</i>	3.08	0.68	2.00
<i>Western Region</i>	Gujarat	2.64	0.36	0.84
	Madhya Pradesh	2.31	0.57	0.86
	Maharashtra	2.88	0.65	1.76
	Goa, Daman & Diu	1.71	0.55	1.16
	Dadra & Nagar Haveli	76.63	2.59	35.40
		<i>Western Region</i>	2.66	0.55
<i>Southern Region</i>	Andhra Pradesh	2.23	0.44	0.88
	Karnataka	1.99	0.45	0.42
	Kerala	1.49	0.56	0.94
	Tamil Nadu	1.81	0.42	1.29
	Pondicherry	3.38	0.43	—
	Lakshadweep	0.57	0.44	0.85
		<i>Southern Region</i>	1.93	0.45
<i>Eastern Region</i>	Bihar	5.52	0.54	0.71
	Orissa	4.94	0.79	0.74
	West Bengal	3.63	1.05	1.95
	A & N Islands	1.00	0.56	1.60
	Sikkim	2.12	1.30	2.05
		<i>Eastern Region</i>	4.42	0.86
<i>North Eastern Region</i>	Assam	3.88	0.65	1.35
	Manipur	2.25	1.01	3.58
	Meghalaya	2.27	0.60	2.62
	Nagaland	0.99	0.35	0.60
	Tripura	1.21	0.48	0.91
	Arunachal Pradesh	1.71	0.64	2.77
	Mizoram	1.23	0.93	1.89
		<i>North Eastern Region</i>	2.74	0.64
	TOTAL (ALL INDIA)	2.63	0.57	1.36

For notes: Please see Table No. 53 and 61.

TABLE No. 62 (Contd.)

(in thousand KWH)

State/U.Ts.	Industrial L.V. & M.V.	Industrial H.V.	Public Lighting
Haryana	6.70	742.67	3.20
Himachal Pradesh	31.38	—	11.93
Jammu & Kashmir	27.29	—	593.70
Punjab	10.48	2004.67	31.60
Rajasthan	8.55	3907.40	8.55
Uttar Pradesh	12.92	3550.79	7.14
Chandigarh	26.82	931.98	60.12
Delhi	14.96	1696.23	16.15
<i>Northern Region</i>	12.20	2047.73	8.86
Gujarat	7.73	2387.81	6.10
Madhya Pradesh	6.74	4399.94	4.20
Maharashtra	7.56	1881.16	6.85
Goa, Daman & Diu	5.97	803.44	0.31
Dadra & Nagar Haveli	157.33	1719.54	40.00
<i>Western Region</i>	7.50	2313.77	4.39
Andhra Pradesh	8.11	1584.40	2.89
Karnataka	3.50	2067.87	9.84
Kerala	4.98	2849.17	13.82
Tamil Nadu	5.61	1747.31	3.69
Pondicherry	8.67	1794.38	211.93
Lakshadweep	2.72	—	14.28
<i>Southern Region</i>	5.28	1846.76	4.73
Bihar	3.21	3391.07	3.08
Orissa	7.19	6924.14	4.59
West Bengal	5.15	1336.53	53.23
A & N Islands	16.70	—	5.07
Sikkim	69.77	—	72.50
<i>Eastern Region</i>	4.73	2432.66	9.15
Assam	51.38	—	10.45
Manipur	13.58	956.00	40.14
Meghalaya	50.01	—	13.67
Nagaland	2.04	21360.00	1.84
Tripura	6.16	—	11.99
Arunachal Pradesh	38.04	170.00	236.15
Mizoram	1.36	—	19.23
<i>North Eastern Region</i>	34.24	16565.92	12.28
TOTAL (ALL INDIA)	7.91	2153.68	5.37

For notes: Please see Table Nos. 53 & 61.

TABLE NO. 62 (Contd.)

(in thousand Kwh)

State/U.Ts.	Traction	Agricultural	Public Water Works
Haryana	—	6.73	24.4
Himachal Pradesh	—	6.77	—
Jammu & Kashmir	—	182.89	183.74
Punjab	—	7.77	—
Rajasthan	2716.00	7.17	32.54
Uttar Pradesh	81187.14	12.23	107.89
Chandigarh	—	4.74	—
Delhi	—	—	169.88
<i>Northern Region</i>	48490.83	8.87	62.79
Gujarat	23963.33	10.76	19.65
Madhya Pradesh	12404.80	1.77	32.52
Maharashtra	44872.63	3.79	26.15
Goa, Daman & Diu	—	2.52	258.77
Dadra & Nagar Haveli	—	17.14	29.28
<i>Western Region</i>	26006.98	4.33	26.13
Andhra Pradesh	15569.41	4.57	—
Karnataka	—	4.47	—
Kerala	—	1.02	121.59
Tamil Nadu	21916.66	2.85	9.13
Pondicherry	—	7.13	—
Lakshadweep	—	—	—
<i>Southern Region</i>	18195.86	3.65	9.76
Bihar	61010.00	5.64	6966.67
Orissa	19339.00	3.59	76.24
West Bengal	36122.66	4.65	251.60
A & N Islands	—	—	—
Sikkim	—	—	—
<i>Eastern Region</i>	31324.88	5.28	226.40
Assam	—	4.58	37.04
Manipur	—	216.00	83.43
Meghalaya	—	19.72	108.75
Nagaland	—	—	3.75
Tripura	—	20.22	90.93
Arunachal Pradesh	—	—	201.67
Mizoram	—	—	37.80
<i>North Eastern Region</i>	—	8.88	63.02
TOTAL (ALL INDIA)	27942.67	5.09	30.75

For notes: Please see Table Nos. 53 & 61.

TABLE NO. 63

Average connected Load per consumer Regionwise/Statewise/Categorywise as on 31st March, 1989

Region	State/U.Ts.	(In KW)		
		Total Average All Categories	Domestic	Commercial
<i>Northern Region</i>	Haryana	1.83	0.51	0.67
	Himachal Pradesh	1.16	0.70	1.62
	Jammu & Kashmir	0.90	0.33	0.72
	Punjab	1.74	0.64	1.00
	Rajasthan	1.89	0.53	0.83
	Uttar Pradesh	2.43	0.76	1.78
	Chandigarh	3.13	1.91	6.16
	Delhi	1.65	0.77	2.39
	<i>Northern Region</i>	1.89	0.65	1.31
<i>Western Region</i>	Gujarat	1.84	0.57	0.94
	Madhya Pradesh	1.51	0.37	0.86
	Maharashtra	2.01	0.74	1.22
	Goa, Daman & Diu	8.42	1.29	1.44
	D & N Haveli	2.09	0.39	2.76
		<i>Western Region</i>	1.85	0.61
<i>Southern Region</i>	Andhra Pradesh	1.50	0.45	0.68
	Karnataka	1.56	0.68	0.36
	Kerala	1.26	0.72	0.80
	Tamil Nadu	1.47	0.53	0.71
	Lakshadweep	0.77	0.61	0.99
	Pondicherry	2.17	0.77	—
		<i>Southern Region</i>	1.50	0.57
<i>Eastern Region</i>	Bihar	1.78	0.52	0.59
	Orissa	2.45	0.76	0.85
	West Bengal	1.96	0.88	1.22
	D.V.C.	11556.22	—	6.00
	A & N Islands	0.62	0.50	0.60
	Sikkim	0.92	0.92	0.11
		<i>Eastern Region</i>	2.11	0.76
<i>North Eastern Region</i>	Assam	2.65	1.03	1.20
	Manipur	1.43	1.00	2.00
	Meghalaya	1.30	0.54	1.24
	Nagaland	1.06	0.67	0.48
	Tripura	0.83	0.40	0.86
	Arunachal Pradesh	0.55	0.18	2.20
	Mizoram	0.64	0.62	0.44
		<i>North Eastern Region</i>	1.83	0.80
	TOTAL (ALL INDIA)	1.75	0.62	0.98

NOTE:—For notes see Table No. 61.

TABLE NO. 63 (Contd.)

State/U.Ts.	Industrial LV & MW	Industrial HV	Public Lighting
Haryana	11.06	509.57	1.27
Himachal Pradesh	17.86	—	4.88
Jammu & Kashmir	13.44	30.30	59.67
Punjab	11.40	657.75	11.21
Rajasthan	10.40	1499.99	3.05
Uttar Pradesh	12.32	1171.29	1.56
Chandigarh	14.56	317.12	10.64
Delhi	10.89	634.50	44.92
<i>Northern Region</i>	11.67	779.21	3.12
Gujarat	9.71	763.83	4.73
Madhya Pradesh	14.99	1289.17	1.81
Maharashtra	10.68	706.53	2.16
Goa, Daman & Diu	11.92	422.19	1.18
D & N Haveli	20.71	184.09	1.25
<i>Western Region</i>	10.95	789.83	2.24
Andhra Pradesh	10.46	601.16	1.72
Karnataka	5.72	722.12	2.28
Kerala	10.29	938.06	4.58
Tamil Nadu	5.98	805.48	0.95
Lakshadweep	9.37	—	5.06
Pondicherry	16.32	611.61	76.26
<i>Southern Region</i>	7.06	720.57	1.43
Bihar	7.29	412.62	2.11
Orissa	12.47	1813.88	3.59
West Bengal	6.33	333.48	14.93
D.V.C.	—	14166.67	—
A & N Islands	4.63	—	8.04
Sikkim	20.28	62.50	1.67
<i>Eastern Region</i>	7.56	586.99	4.10
Assam	60.42	—	1.97
Manipur	7.50	500.00	5.00
Meghalaya	27.97	—	2.18
Nagaland	10.60	5000.00	5.44
Tripura	4.46	—	1.66
Arunachal Pradesh	11.39	54.56	41.38
Mizoram	8.57	—	3.00
<i>North Eastern Region</i>	37.76	402.77	3.85
TOTAL (ALL INDIA)	9.69	734.89	2.09

For notes see Table No. 61.

TABLE NO. 63 (Contd.)

State/U.Ts.	Traction	Agricultural	Public Water Works
Haryana	—	4.65	16.50
Himachal Pradesh	—	12.06	—
Jammu & Kashmir	—	37.99	33.58
Punjab	—	3.40	—
Rajasthan	4850.00	4.59	12.04
Uttar Pradesh	24078.57	5.36	34.50
Chandigarh	—	5.50	28.07
Delhi	—	—	40.57
<i>Northern Region</i>	16066.67	4.48	20.04
Gujarat	8400.00	6.78	14.76
Madhya Pradesh	8360.00	2.75	11.67
Maharashtra	3396.58	3.51	15.44
Goa, Daman & Diu	—	5.34	57.23
D & N Haveli	—	3.52	2.21
<i>Western Region</i>	6587.45	3.82	14.71
Andhra Pradesh	13341.41	3.26	—
Karnataka	—	3.49	9.82
Kerala	—	2.45	52.77
Tamil Nadu	6102.42	3.24	5.40
Lakshadweep	—	—	—
Pondicherry	—	5.12	—
<i>Southern Region</i>	10345.47	3.25	7.92
Bihar	9111.11	2.46	19.17
Orissa	8099.80	6.27	32.95
West Bengal	8303.33	6.82	78.82
D.V.C.	12857.14	—	—
A & N Islands	—	5.00	—
Sikkim	—	—	—
<i>Eastern Region</i>	9208.49	3.56	54.84
Assam	—	11.23	18.94
Manipur	—	500.00	50.00
Meghalaya	—	12.25	71.56
Nagaland	—	—	38.90
Tripura	—	9.38	17.54
Arunachal Pradesh	—	—	7.50
Mizoram	—	—	18.00
<i>North Eastern Region</i>	—	12.15	27.37
TOTAL (ALL INDIA)	9033.45	3.73	14.13

For notes see Table No. 61

SECTION X

Urban & Rural Electrification

SECTION—X

URBAN & RURAL ELECTRIFICATION

High priority continued to be attached to the implementation of rural electrification works. The revised programme included among other measures, maximisation of power generation, electrification of all villages as speedily as possible and increase in irrigation potential through energisation of pumpsets. Rural electrification programme is being implemented by the States and Union Territories in their respective areas under the State Plans supplemented by the REC (Rural Electrification Corporation) financing and loans from Financial Institutions. During the year 1988-89; 19,838 villages were electrified bringing the total number of villages electrified to 4,55,491 as on 31st March, 1989 which represents 78.7 per cent of the total registered villages in the country. The States of Punjab, Haryana, Goa and Kerala and Union Territories of Chandigarh, Delhi, Pondicherry, Daman & Diu, Lakshadweep and Dadra & Nagar Haveli have already achieved 100% electrification of villages in their territories. Other States/U.Ts which are likely to achieve 100% rural electrification in the near future are Tamil Nadu (99.9%), Himachal Pradesh (99.7%), Gujarat (98.8%), Andhra Pradesh (98.7%), Karnataka (98.0%) and Maharashtra (99.4%).

On the regional basis, the Southern Region tops with 98.7% of villages electrified followed by Western Region (87.7%), Northern Region (76.3%), North Eastern Region (79.1%) and Eastern Region (64.4%). The rural population on all India basis enjoying the benefits of village electrification was 79.6% as on 31st March, 1989. All the 4,029 towns in the country stand already electrified.

The energisation of pumpsets also progressed satisfactorily. The total number of energised pump sets/tubewells in the country was 78,19,049 as on 31st March, 1989. Maharashtra have maximum number of energised pump sets (13,88,503) followed by Tamil Nadu (12,35,941).

The salient features of Rural Electrification are covered in various tables of this Section.

TABLE No. 64

Towns electrified in various population groups Regionwise/Statewise-As on 31st March, 1989

Region	State/U.Ts.	Total number of towns (1971 Census)	POPULATION GROUPS (1971 Census)		
			Below 5000	5000 to 9999	10000 to 19999
<i>Northern Region</i>	Haryana	65	5	20	15
	Himachal Pradesh	36	23	6	5
	Jammu & Kashmir	45	20	17	3
	Punjab	108	11	30	33
	Rajasthan	157	4	41	67
	Uttar Pradesh	325	17	94	100
	Chandigarh	2	—	—	—
	Delhi	3	—	—	—
	SUB-TOTAL	741	80	208	224
<i>Western Region</i>	Gujarat	216	5	71	73
	Madhya Pradesh	250	12	96	74
	Maharashtra	289	14	70	98
	Goa, Daman & Diu	13	4	4	1
	D & N Haveli	—	—	—	—
	SUB-TOTAL	768	35	241	246
<i>Southern Region</i>	Andhra Pradesh	224	8	45	79
	Karnataka	245	26	51	105
	Kerala	88	2	9	25
	Tamil Nadu	439	101	97	118
	Lakshadweep	—	—	—	—
	Pondicherry	6	—	2	—
	SUB-TOTAL	1002	137	204	327
<i>Eastern Region</i>	Bihar	202	12	47	72
	Orissa	81	2	30	23
	West Bengal	223	10	59	59
	A & N Islands	1	—	—	—
	Sikkim	7	6	—	1
	SUB-TOTAL	514	30	136	155
<i>North Eastern Region</i>	Assam	72	8	23	26
	Manipur	8	3	4	—
	Meghalaya	6	1	1	3
	Nagaland	3	—	—	2
	Tripura	6	—	1	4
	Arunachal Pradesh	4	3	1	—
	Mizoram	2	—	1	—
	SUB-TOTAL	101	15	31	35
	TOTAL (ALL INDIA)	3126	297	820	987

TABLE No. 64 (Contd.)

State/U.Ts.	POPULATION GROUPS (1971 CENSUS)				No. of towns electrified as per 1981 census
	20000 to 49999	50000 to 99999	Over one lakh	Total number electrified	
Haryana	14	9	2	65	81
Himachal Pradesh	1	1	—	36	47
Jammu & Kashmir	3	—	2	45	58
Punjab	22	8	4	108	134
Rajasthan	31	7	7	157	201
Uttar Pradesh	71	21	22	325	704
Chandigarh	—	—	1	2	4
Delhi	—	1	2	3	30
SUB-TOTAL	142	47	40	741	1259
Gujarat	42	18	7	216	255
Madhya Pradesh	43	14	11	250	327
Maharashtra	65	25	17	289	307
Dadra & Nagar Haveli	—	—	—	—	1
Goa, Daman & Diu	3	1	—	13	17
SUB-TOTAL	153	58	35	768	907
Andhra Pradesh	61	18	13	224	252
Karnataka	42	11	10	245	281
Kerala	40	7	5	88	106
Tamil Nadu	79	27	17	439	434
Lakshadweep	—	—	—	—	3
Pondicherry	3	1	—	6	6
SUB-TOTAL	225	64	45	1002	1082
Bihar	51	11	9	202	220
Orissa	20	2	4	81	108
West Bengal	49	31	15	223	291
A & N Islands	1	—	—	1	1
Sikkim	—	—	—	7	8
SUB-TOTAL	121	44	28	514	628
Assam	9	5	1	72	80
Manipur	—	—	1	8	32
Meghalaya	—	1	—	6	12
Nagaland	1	—	—	3	7
Tripura	—	—	1	6	10
Arunachal Pradesh	—	—	—	4	6
Mizoram	1	—	—	2	6
SUB-TOTAL	11	6	3	101	153
TOTAL (ALL INDIA)	652	219	151	3126	4029

Note —Details in various population groups as per 1981 Census is not available.

TABLE No. 65

Villages electrified in various population groups (1981 census) and rural population benefited by Electricity Regionwise/ Statewise-as on 31st March, 1989

Region	State/U.Ts.	Total No. of villages	Villages electrified in various population groups		
			Below 500	500-999	1000-1999
<i>Northern Region</i>	Haryana	6745	1499	1776	1883
	Himachal Pradesh	16807	15062	1241	363
	Jammu & Kashmir (+)	6477	3558	1545	746
	Punjab	12342	4434	3712	2819
	Rajasthan	34968	10364	6752	4755
	Uttar Pradesh (+)	112566	36212	21682	14021
	Chandigarh	24	6	6	5
	Delhi	214	18	36	73
	SUB-TOTAL	190143	71153	36750	24665
<i>Western Region</i>	Gujarat	18114	4636	4956	5108
	Madhya Pradesh	71352	34181	14521	5876
	Maharashtra (+)	39354	13571	12300	8940
	Goa	386	111	54	95
	Daman & Diu	26	9	2	7
	D & N Haveli	70	14	16	27
		SUB-TOTAL	129302	52522	31849
<i>Southern Region</i>	Andhra Pradesh (+)	27379	8539	5207	6460
	Karnataka	27028	10809	7321	5219
	Kerala	1219	5	2	13
	Tamil Nadu	15831	2524	3168	4565
	Lakshadweep	7	1	—	1
	Pondicherry	291	126	83	52
		SUB-TOTAL	71755	22004	15781
<i>Eastean Region</i>	Bihar (+)	67546	20887	10958	7420
	Orissa (+)	46553	17088	7812	3432
	West Bengal(+)	38024	8378	7120	5318
	A & N Islands	491	375	54	23
	Sikkim	440	154	116	56
		SUB-TOTAL	153054	46882	26060
<i>North Eastern Eegion</i>	Assam (+)	21995*	10445	5700	2700
	Manipur (+)	2035	567	234	170
	Meghalaya (+)	4902	1647	232	51
	Nagaland	1112	666	239	143
	Tripura (+)	856(4727)*	1700	466	220
	Arunachal Pradesh (+)	3257	976	133	54
	Mizoram	721	151	83	43
		SUB-TOTAL	34878	16152	7087
	TOTAL (ALL INDIA)	579132	208713	117527	80658

*As per 1971 Census.

(+) Population groupwise breakup estimated.

TABLE No. 65 (Contd.)

State/U.Ts.	Villages electrified in various population groups			
	2000 4999	5000 9999	10000 & above	Total electrified as on 31-3-1989
Haryana	1346	221	20	6745
Himachal Pradesh	92	3	—	16761(++)
Jammu & Kashmir	216	9	—	6074
Punjab	1256	120	1	12342
Rajasthan	2174	307	21	24373
Uttar Pradesh	5901	658	52	78526
Chandigarh	7	—	—	24
Delhi	72	15	—	214
SUB-TOTAL	11064	1333	94	145059
Gujarat	2725	418	49	17892
Madhya Pradesh	1285	87	6	55956
Maharashtra	3600	579	116	39106
Goa	85	31	1	377(++)
Daman & Diu	5	3	—	26
Dadra & Nagar Haveli	7	3	—	67(++)
SUB-TOTAL	7707	1121	172	113424
Andhra Pradesh	5609	1058	163	27036
Karnataka	2709	393	32	26483
Kerala	72	222	905	1219
Tamil Nadu	4374	1000	182	15813
Lakshadweep	4	1	—	7
Pondicherry	24	6	—	291
SUB-TOTAL	12792	2680	1282	70849
Bihar	3697	648	136	43746
Orissa	830	22	2	29186
West Bengal	3330	630	82	24858
A & N Islands	8	—	—	460
Sikkim (+)	7	—	—	333
SUB-TOTAL	7872	1300	220	98583
Assam	675	24	1	19545*
Manipur	78	8	—	1057
Meghalaya	7	—	—	1937
Nagaland	41	7	1	1097
Tripura	65	3	—	2454*
Arunachal Pradesh	14	2	—	1179
Mizoram	30	—	—	307
SUB-TOTAL	910	44	2	27576
TOTAL (ALL INDIA)	40345	6478	1770	455491

Note: (*)—As per 1971 census.

(+)—population groupwise break-up estimated.

(++)—balance village non-feasible.

TABLE NO. 65 (Contd.)

State/U.Ts.	%age electrified	Villages electrified during 1988-89	Total Rural population (lakhs) 1981 Census	Rural population covered (lakhs) 1981 Census	%age population covered 1981 Census
Haryana	100.0	@	100.95	100.95	100.0
Himachal Pradesh	99.7	(-17)	39.55	39.55	100.0
Jammu & Kashmir	93.8	64	47.27	25.89(a)*	54.8
Punjab	100.0	@	121.41	121.41	100.0
Rajasthan	69.7	1357	270.51	230.20**	85.1
Uttar Pradesh	69.8	2777	909.63	766.55	84.3
Chandigarh	100.0	@	0.29	0.29	100.0
Delhi	100.0	@	4.52	4.52	100.0
SUB-TOTAL	76.3	4181	1494.13	1289.36	86.3
Gujarat	98.8	25	234.84	234.84	100.0
Madhya Pradesh	78.4	4404	415.92	276.16(*)	66.4
Maharashtra	99.4	1236	407.91	407.91	100.0
Goa	100.0	@	6.85	6.85	100.0
Daman & Diu	100.0	@	0.50	0.50	100.0
Dadra & Nagar Haveli	100.0	@	0.97	0.97	100.0
SUB-TOTAL	87.7	5665	1066.99	927.23	86.9
Andhra Pradesh	98.7	1270	410.62	334.15(c)	81.4
Karnataka	98.0	313	264.06	264.06	100.00
Kerala	100.0	@	206.82	206.82	100.00
Tamil Nadu	99.9	4	324.56	287.34(*)	100.00
Lakshadweep	100.0	@	0.22	0.22	100.00
Pondicherry	100.0	@	2.88	2.88	100.00
SUB-TOTAL	98.7	1587	1209.16	1095.47	90.6
Bihar	64.8	2708	611.96	224.90(b)	36.8
Orissa	62.7	1371	232.60	159.91(i)*	68.8
West Bengal	65.4	1772	401.34	328.77	81.9
A & N Islands	93.7	64	1.39	1.31(g)	94.2
Sikkim	75.7	35	2.65	2.03(i)	76.6
SUB-TOTAL	64.4	5950	1249.94	716.92	57.3
Assam	88.9*	1648	178.50**	120.83(l)	67.7
Manipur	51.9	170	10.46	7.10(i)*	67.9
Meghalaya	39.5	315	10.94	4.47(e)	40.9
Nagaland	98.7	25	6.55	6.09(h)	93.0
Tripura	51.9*	125	18.28	11.61(*)	63.5
Arunachal Pradesh	36.2	117	5.90	2.00(d)	33.9
Mizoram	42.6	55	3.72	1.79(f)	48.1
SUB-TOTAL	79.1	2455	234.35	153.89	65.7
TOTAL (ALL INDIA)	78.7	19838	5254.57	4182.87	79.6

Note:—*As per 1971 census @Cent per cent villages electrified.

**provisional

(—) Minus sign against the figure shows the decrease on account of change in total number of inhabited villages in 1981 census.

(a) As on 31-12-79

(f) As on 31-3-87

(b) As on 30-4-80

(g) As on 31-12-87

(c) As on 31-3-83

(h) As on 30-11-87

(d) As on 31-3-85

(i) As on 31-3-88

(e) As on 31-3-86

TABLE No. 66

Irrigation pumpsets/tubewells energised-regionwise/statewise as on 31st March, 1989

Region	State/U. Ts.	No. of Pumpsets energised	Agricultural consumption	
			Quantum (GWH)	% to total in the State
<i>Northern Region</i>	Haryana	332176	2157.85	44.39
	Himachal Pradesh	3106	23.35	2.85
	Jammu & Kashmir	1876	158.57	13.02
	Punjab	535501	4220.43	39.81
	Rajasthan	326202	2159.43	31.40
	Uttar Pradesh	616814	6041.94	38.35
	Chandigarh	618	1.86	0.51
	Delhi	19537	(E)	—
	SUB-TOTAL	1835830	14763.43	32.50
<i>Western Region</i>	Gujarat	408289	4414.97	30.25
	Madhya Pradesh	711436	1303.64	12.16
	Maharashtra	1388503	5286.36	20.13
	Goa, Daman & Diu	4142	9.97	2.25
	D & N Haveli	405	0.36	0.41
		SUB-TOTAL	2512775	11015.30
<i>Southern Region</i>	Andhra Pradesh	1044057	4629.58	35.64
	Karnataka	632116	2871.83	30.51
	Kerala	191281	186.20	4.19
	Tamil Nadu	1235941	3574.07	24.95
	Pondicherry	9278	61.36	17.01
	Lakshadweep	—	—	—
		SUB-TOTAL	3112673	11323.04
<i>Eastern Region</i>	Bihar	241247	1372.85	19.14
	Orissa	42409	113.30	2.71
	West Bengal	69401	257.25	3.23
	A & N Islands	1	—	—
	Sikkim	—	—	—
		SUB-TOTAL	353058	1743.40
<i>North Eastern Region</i>	Assam	3333	13.00	1.06
	Manipur	45	2.16	1.74
	Meghalaya	65	1.40	0.90
	Nagaland	22	—	—
	Tripura	1248	16.64	16.69
	Arunachal Pradesh	—	—	—
	Mizoram	—	—	—
		SUB-TOTAL	4713	33.20
	TOTAL (ALL INDIA)	7819049	38878.37	24.27

E—Included in Public Water Works and Sewage Pumping.

TABLE No. 66 (Contd.)

State/U.Ts.	Agricultural connected load (KW)	Average capacity per pump- set (KW)	Average Consump- tion per pumpset (KWH)	Consump- tion per unit of connecte load (KWH/ KW)
Haryana	1488563	4.48	6496	1450
Himachal Pradesh	41616	13.40	7518	561
Jammu & Kashmir	32933(R)	17.55	84526	4815
Punjab	1846718	3.45	7881	2285
Rajasthan	1384052	4.24	6620	1560
Uttar Pradesh	2649830	4.30	9795	2280
Chandigarh	2157(R)	3.49	3010	862
Delhi	(C)	—	—	—
SUB-TOTAL	7445869	4.06	8042	1983
Gujarat	2782697	6.82	10813	1587
Madhya Pradesh	2021559	2.84	1832	645
Maharashtra	4891349	3.52	3807	1081
Goa, Daman & Diu	21095	5.09	2407	473
D & N Haveli	74(R)	0.18	889	4865
SUB-TOTAL	9716774	3.87	4384	1134
Andhra Pradesh	3299234	3.16	4434	1403
Karnataka	2236851	3.54	4543	1284
Kerala	448702	2.35	973	415
Tamil Nadu	4053752	3.28	2892	882
Pondicherry	44010	4.74	6613	1394
Lakshadweep	—	—	—	—
SUB-TOTAL	10082549	3.24	3638	1123
Bihar	600157	2.49	5691	2287
Orissa	197636	4.66	2672	573
West Bengal	377591	5.44	3707	681
A & N Islands	40	40.00	—	—
Sikkim	—	—	—	—
SUB-TOTAL	1175424	3.33	4938	1483
Assam	31848	9.56	3900	408
Manipur	5000(R)	111.11	48000	432
Meghalaya	870	13.38	21538	1609
Nagaland	—	—	—	—
Tripura	7721	6.19	13333	2155
Arunachal Pradesh	—	—	—	—
Mizoram	—	—	—	—
SUB-TOTAL	45439	9.64	7044	731
TOTAL (ALL INDIA)	28466055	3.64	4972	1366

R—Repeated.

(C)—Included in Industrial Low & Medium Voltage.

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