

Energy Consumption and GHG Emissions in India: Analysis in Input-Output Framework

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The paper identifies the sources of changes in energy consumption and GHG emissions in India using Input-Output Structural Decomposition Analysis (SDA) during the period 1993-1994 to 2003-2004. The result shows that changes in final demand structure and volume of changes in final demand are the key factors responsible for changes in energy requirements and GHG emissions respectively. It further develops few simulation exercises to estimate the energy requirements and GHG emissions during the Twelfth Plan. The implications of these scenarios provide a better insight for the derivation of future policy towards reduction in energy consumption resulting in climate change impact.

Introduction

Indian economic growth has accelerated under the full-scale introduction of economic liberalization policies that began in the early 1990s and it continues to show an impressive performance in recent years. India has been one of the world's fastest-growing economies over the past five years, with an average annual growth rate of roughly 7.5 per cent. The Planning Commission believes that the country needs to sustain this growth rate over the next 25 years, if it is to eradicate poverty and meet its human development goals (*EIU report 2012*).

Together with its impressive growth, India has become a significant producer and consumer of energy resources (GOI 2008). To uplift the economy and to accelerate the growth and sustained supply of energy, the Government of India initiated new strategies for the energy sector in tune with the economic reforms in the early nineties (GOI 1992).

India currently ranks as the world's seventh largest energy producer, accounting for about 2.49 per cent of the world's total annual energy production (GOI 2008). The production of energy in peta joules by primary sources derives

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