

The conclusions of the book, when they come, are rather brief; but none the less it should provide an interesting and thought provoking read for energy policy analysts wanting to know more about transport, or vice versa. Even those who already know about both are likely to find something to their advantage here.

On balance the book provides a useful framework for a field of analysis which has to date been underrepresented in the literature, and it is a promising start from a young author. Perhaps inevitably the policy analysis and conclusions presented do not take us far enough or into sufficient detail; but there is enough here to stimulate further work on a number of issues.

I trust that the author and others will pursue these possibilities, and I await the sequel with interest.

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Planning for Demand-side Management in the Electricity Sector

Jyoti K Parikh, B Sudhakara Reddy and Rangan Banerjee
Tata McGraw-Hill, New Delhi, India
1994, 279 pp

Demand-side management (DSM) or consumer load management, as it might more clearly be called, is now gaining momentum throughout the world. Together with least cost planning (LCP) there is a growing body of literature, methodology, case studies and implementation appraisals which can be culled to provide a framework for any utility, electricity supply company, industrial and commercial complex and even individual residential consumer to assess the likely savings from careful consideration of the many options now available to reduce electricity bills. Naturally, any DSM must ultimately provide a payback or other saving incentive to be worthwhile, mainly to the individual, but also to the supply utility and the national economy. Normally the individual or company is the most likely beneficiary of DSM but if at the same time the utility and the country benefit too, then it must surely be a 'good thing'.

This book is really a case study on DSM by the Indira Gandhi Institute of Development Research, Bombay, for the state of Maharashtra where a number of high tension (HT) industries (industrial companies with supplies taken at 11 kV and above) accounting for 17% of electricity consumption in India, were surveyed in 1992–93 to determine the potential for energy (kWh) and demand (kW) savings which would be less expensive than installing new plant in the supply utility over the next 20 years. As a good example of DSM and LCP methodologies it is to be recommended, but as a guide to possible savings in other consumer sectors and countries, the results and recommendations should be treated with caution. This is not because the findings are wrong but because the survey shows yet again how difficult it is to transfer implementation strategies from one sector to another, particularly if they are for another country with a different lifestyle, GDP, growth rate etc.

Having said that, many lessons could be learnt from delving into this book. In particular the choice of 12 DSM programmes ranges from compact fluorescent lamps (CFLs) through variable speed drives and good housekeeping measures to power factor improvement and time of day tariffs. Out of a possible 6218 HT industrial consumers, 62 were selected to represent the range of industries in the state, including textile, paper, cement, pharmaceuticals and non-ferrous metals among others. All in the sample were individually interviewed and an extensive questionnaire was answered; the results were collated and verified to give as valid an indication as possible of where useful DSM investment could be made.

From the recommendations, it is worth noting that electric motors for fans, pumps, compressors, machine tools etc account for 60–70% of consumption, so replacement by more efficient motors and/or variable speed drives was an obvious option. However, when considered on a least cost basis, the 'winners' were implementation of a time of day tariff, more power factor correction, and improvements to electric arc furnaces and scrap preparation procedures. Good housekeeping such as reduction of process losses, steam leaks etc was thought to need investment in training, monitoring and personnel and thus it came much further

down the list. In terms of energy saved, however, good housekeeping came second and cogeneration third out of ten saving measures, the latter provided by far the most saving in kilowatt hours compared to others.

What is gained from this book? Out of the eight chapters, the most useful was that on the methodology of the study, in which the technique of analysis are outlined, the evaluation of the various programmes given and the preparation for the survey recounted. The possible savings and implications of each programme are explained in another chapter and the savings estimated over the period 1994 to 2012 are tabulated and commented upon. As the survey included aspects of awareness by the HT industries of the benefits of DSM (some were very ignorant) and also the barriers to implementation or even sheer inertia, this section provides a useful guide for others. Finally, among the recommendations, the thought that in India investment in DSM would require a discount rate of 25% for the customer compared to (only) 14% for a government agency highlights again the problems in translating the results of this 20 year survey where demand is growing by 7% per annum, to developed countries with only 1–2% growth.

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Generation in the 1990s: Electricity Capacity and New Power Projects

P Gray, M Aveline, M Brough and L Mason
Oxford Energy Research Associates,
1994, 151 pp, £14.95

If the preprivatization UK electricity supply industry was good at anything, it was producing large volumes of data about its power stations. While at the strategic level, such as nuclear costs, there could be some quibbles about the comprehensiveness of the coverage, Electricity Council Handbooks and CEGB Statistical Yearbooks generally left few analysts short on detailed information. However, in the post-privatization era, things have changed. There are now many companies involved in the