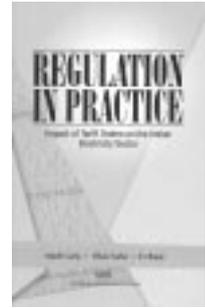


## Book review

# Regulation in practice: impact of tariff orders on the Indian electricity sector

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Independent regulation of the power sector in India started in 1995 in Orissa. Since then, the scope of independent regulation has expanded, and now it covers the entire country. In 1998, a central legislation – the Electricity Regulatory Commission Act – provided the Central Electricity Regulatory Commission the power to deal with the inter-state generation and transmission issues. The same law had enabling provisions for the SERCs (state electricity regulatory commissions), but there was no compulsion for every state to have a regulator. In 2003, the EA 03 (Electricity Act 2003) came into being, which made having independent regulator mandatory for all states.

A large number of orders have since been issued by the regulators, both at the centre and in the states. The interesting question is to what extent have the regulators been able to reform the sector and perform the role that was expected from them. This broad question has many components and for convenience sake, they are divided into two – the procedures/processes followed by the regulator and the substantive content/impact of the orders. The book *Regulation in practice: impact of tariff orders on the Indian electricity sector* by A Garg, V Gaba, and J L Bajaj addresses precisely these issues.

The analysis in the book is based on the study in nine states (Andhra Pradesh, Assam, Delhi, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Uttarakhand, and West Bengal) and covers the orders issued during 2003/04, 2004/05, and 2005/06.

Given the enormous data, coupled with in-depth analysis and discussion in the book, it is clearly a compulsory reading for anyone interested in understanding what impact the regulatory reforms, which started in the 1990s, have had on the power sector in India.

The book also has a useful summary of the studies undertaken so far to assess the functioning of the SERCs as well a detailed description of MYT (multi-year tariff) regulation issued by them. It also has details on the various components of revenue requirement and provides an assessment of the impact of trading and open access regulation on competition in the sector. The book is, however, confined to 'main line' activities of the commissions. The growing body of orders on promotion of renewables is one component that has not been given sufficient coverage. The book gives the current status of the Renewable Portfolio Standard Regulation mandated under Section 86 of the EA 03 in the states. However, apart from this, the authors should have discussed other aspects on promoting renewables through regulations for wheeling and banking arrangements for captive uses and tariff policy for investors selling to the grid. Similarly, the impact of the orders of the Central Regulatory Commission on the performance of the electricity utilities in the states has also not been covered. Hopefully, this will be done in a future volume.

The opening chapter describes the legal framework in regulation of the power sector and the changes that have taken place, culminating in 2003. It also gives a brief overview of the demand–supply situation in the country and concludes that the primary reasons for the failure to bridge the gap is the lack of bankability of generation projects, which in turn is attributed to the lack of substantive improved efficiency. Thus, before moving to the other segments, the book clearly seems to indicate that reforms have failed to produce the one desired objective – improvement in the efficiency of the power sector.

The next chapter deals with the issues of effectiveness of regulatory process. The major parameters identified and analysed are (1) status of regulations to be issued under EA 03, (2) timely information of tariff orders, (3) availability of information in public domain, (4) status of compliance of tariff orders issued by the SERCs, (5) studies undertaken by the utilities, and (6) staffing of the SERCs.

Data collected from different states are then analysed. The major achievement of the regulatory commissions has been

greater transparency, openness, and better awareness of the issues. Apart from what has been mentioned by the authors, these processes have also led to improvement in the quality of data. This also has an impact on improved achievement since the effectiveness of solutions lies also in the better understanding of the problems, as reflected in the data.

The authors rightly highlight the fact that staffing is a key issue that has not been resolved yet. This issue is not specific to electricity and applies to other regulatory bodies in India also. Linked to the staffing problem is the broader issue of autonomy, especially financial autonomy. This is a problem that cuts across sectors and has not yet been satisfactorily resolved in India.

The data of consumption shows some interesting trends as well as wide variety. Thus, interestingly, the load factor in industries in Kerala was lower than that of domestic usage in Orissa. Delhi, which has private sector distribution companies in place, has the highest connected load per consumer at 3.14 kW—there is a clear and consistent increase in the trend over the period 2003/04–2005/06. As expected, domestic consumption has the highest share in terms of sale while industry ranks the highest in terms of contribution to revenue.

The authors have brought out the status of rural electrification and have raised the important question of how the National Electricity Policy objective of 100% access to electricity for all households by 2012 is going to be achieved. Quite clearly, the impact of achieving this target entirely by extension of grid has an enormous implication for increased technical and commercial losses as well as the required tariff increase to compensate for the higher cost of supply. Apart from what has been indicated in the book, it also needs to be recognized that achievement of 100% electrification does not necessarily mean extension of the grid to all households. There are already several locations in India where cost-effective off-grid solutions have been found. Extension of grid will cost the country heavily in terms of not only initial capital investment but also continued inefficiency on account of high distribution cost as well as maintenance cost. Further, since off-grid solutions can use renewable resources, this would also help in terms of minimizing damage to the environment and avoiding the fuel supply cost risk. Again, given the highly unreliable nature of grid supply, off-grid solutions using renewable energy have already shown that they can also provide a more reliable source of power. The point that needs to be

emphasized is that policy objectives without corresponding assessment of alternatives and cost implications can have disastrous implications for implementation of the policy in a mechanical fashion, ignoring fundamental principles of economics and cost minimization.

By far, the most important issue is the impact of regulation on efficiency in terms of billing every unit sold and collecting every unit billed. The progress here has been uneven, with only Andhra Pradesh and Delhi showing substantial improvement and West Bengal also performing well. This is despite the incentives in the APDRP (Accelerated Power Development and Reforms Programme) scheme. The importance of this issue cannot be over-stated. Not only is it important to show improvements but there is also a need for systems to be in place to ensure that these improvements are sustained. This would require different approaches where privatization/franchise models are sought to be introduced and a different approach where a traditional public sector style of management remains. One of the great merits of regulation has been the enormous amount of data that has come into the public domain and the consequent improvement in the estimates of distribution losses, both technical and commercial. Despite widespread recognition of the enormity of the problem, regulation has not had the desired impact on loss reduction. The data provided in this book is a neat summary of the trends so far and provides the logical starting point for a more detailed and full-fledged study on this important issue. The role to be played by the governments, especially in the public sector managed entities, is still very important. However, as rightly pointed out by the authors, the role of the governments and the regulators in tackling this issue needs to be clearly demarcated.

There is an interesting discussion on the use of regulatory asset as a means to defer a tariff increase. This is not the function of this regulatory instrument. It needs to be used sparingly where there is a temporary spike in costs, which cannot be passed on in full to the consumers. However, where the revenue gap is persistent, creation of a regulatory asset will only defer the problem, and unless the fundamental imbalances are not corrected, it would only serve to exaggerate the problem in future years. The Appellate Tribunal for Electricity has already found that if there was a revenue gap and no other alternative, it was essential to increase the tariff. It remains to be seen if this ruling would help in curbing inappropriate creation of regulatory assets.

One of the major expectations from the regulatory commission was that, being out of government, it would be able to take a professional approach on the issue of subsidy and bring in some degree of tariff rebalancing. In practice, this has not happened and the level of cross-subsidy continues to remain high. Over and above this, the state governments have been providing subsidy to the utilities – as high as 22% of revenues in Madhya Pradesh in 2003/04. With such a high level of subsidy, distortions in consumption patterns will remain. It will also become difficult to attract the private sector and put the utilities on a path of financial independence.

This book also has a large number of details on the various components of revenue requirements including return on capital. There is also an assessment of the impact of competition through trading and open access regulation. It also has a number of discussions on the MYT and how this should be implemented in India. The experience in Uttar Pradesh and Maharashtra has also been discussed.

It would appear that the basic issue facing the sector is the inability of the regulatory commissions to overcome the populist pressure on them. So much so that some commissions have even failed to provide a return to the utilities. As rightly brought out by the authors, this would adversely affect the long-term viability of the distribution entities. At the same time, by its very nature, the public sector is not as responsive to regulations, incentives, and disincentives as the private sector. The movement towards privatization of distribution has been virtually nonexistent since the privatization of the distribution companies in Delhi. If the present public sector dominated institutional framework is to remain, then innovative incentive mechanisms need to be developed to overcome or at least minimize the current barriers to reform. Failure to do so would mean that the customers all across the country will continue to face uncertain power supplies with fluctuating quality and continuously rising prices. Where prices are not allowed to increase, the burden of the inefficiency will be passed on to the tax payers in financial terms and also to the consumers in terms of infrequent and poor quality of supply.

The authors have brought out a number of important policy issues that need clarification like the respective roles of the government and the commissions in fixing loss reduction targets and the role of the commissions in settling consumer grievances.

The authors have also emphasized the role of regulatory impact assessment in ensuring better regulatory governance. Apart from the perceptive views of the authors what marks this book apart is the enormous data and analyses presented in it. This is what makes this book of enormous value and assistance to students and practitioners alike as they grapple with the issues facing the power sector.