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Promoting Competition through Open Access in the Power Sector

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One of the key objectives of Indian electricity reforms is to promote healthy competition in the power market in the country. Unbarred open access to the transmission and distribution network is recognised as a key driver of competition in wholesale as well as retail markets. The Central Electricity Regulatory Commission (CERC) has passed the required regulations and taken a few steps to promote competition in the market. However, state level reforms have not addressed the issue of fair access to the common carrier adequately. Consequently, significant unutilised captive capacity remains to tide over the problems of restricted access when it could have been injected into the grid. Mumbai, where household consumers were allowed to switch over to new licensees, is an exception in this regard and therefore a case study worth emulating. This briefing paper comes out with concrete policy recommendations to replicate the success of Mumbai through reforms in other parts of the country.

Introduction

Competition implies presence of rivalry among suppliers of a commodity or service in an industry. This rivalry may be observed through different strategic actions taken by firms competing in a market to attract consumers.

One of the key objectives of electricity reforms initiated in 1991 is to promote fair competition in the electricity sector. Steps have been taken to convert the traditionally monopolistic system into a competitive and market oriented industry. The Electricity Act 2003 (Act 2003) was a major step in this regard and superseded all concerned previous Acts such as Indian Electricity Act 1910, Electricity Supply Act 1948 and Electricity Regulatory Commission Act 1998.

A brief review of the benefits of competition in the retail segment of the electricity sector would be in order. Once competition is ensured in the retail business, distribution companies or retail agents can compete with each other to attract the ultimate users of service. This would motivate cost cutting through increase in efficiency and innovation which would in turn lead to expansion of output as well as reduction in price; improvement in the quality of service; as well as wider options in choosing

suppliers. All these benefits would result in an increase in consumer welfare.

This briefing paper highlights the progress and key challenges in promoting open access. It throws light on the key policy and regulatory issues in regard to open access including those at the state level, provides an update on the status of open access at the state level and progress in enforcing it. The paper also focuses on key barriers to open access and the channels through which such barriers impact open access and summarises and makes policy recommendations for facilitation of open access.

Policy and Regulatory Reforms

As envisaged in the Electricity Act 2003 (hereafter referred as the Act) as well as National Electricity Policy (NEP), unbarred open access is a key requirement for facilitating competition in wholesale as well as retail electricity markets. Section 42 authorises respective regulatory commissions to specify various norms and charges, including cross subsidy surcharges, for availing of open access. Generation companies may sell energy to any potential buyer in the country and vice versa. Once

open access is facilitated, the market would be able to function with minimal degree of regulation. This will be beneficial in the long run for both producers and consumers.

However, despite some key initiatives such as enforcement of open access regulations and constitution of power exchanges on part of the CERC, the status of open access across various states is poor and thus effective competition is lacking. In fact, open access regulations are grossly violated in many states such as Karnataka, Tamil Nadu, Chhattisgarh and Orissa with distribution companies/state governments barring private utilities and captive plants from wheeling energy to other states. Poor open access has not only adversely affected market competition and resulting benefits thereof but also discouraged potential investors.

Constraints on open access take various forms. In almost every state, captive power plant owners and independent power producers are offered very low tariffs by domestic distribution companies. At the same time, if a private generating unit is interested in selling energy out of the state, the incumbent transmission utilities do not provide the needed access to the transmission system. Consequently, a huge chunk of capacity remains unutilised in many states such as Tamil Nadu, Karnataka and Rajasthan.

Parallel licensing, another important driver of competition in the distribution sector, has not taken off. The Act mandates regulatory bodies to issue parallel licenses in the distribution segments to facilitate competition in retail markets. Till date, Mumbai is the only supply area where parallel licenses have been issued: two companies – Reliance and Tata – are competing with each other (Box 1). The other areas are characterised by monopoly status of utilities.

In most of the states, there is no progress on further reforms in distribution segments. On the other hand, because of capacity shortages and increasing demand at the consumer end, tariff for short-term traded power has shown an increasing trend. The peak price is reported to be two-three times the normal rate of power purchase. High electricity purchase prices have put additional burden on electricity consumers.

The CERC and Planning Commission of India have also raised serious concerns over the poor status of competition in the sector. It has been observed that because of certain regulatory impediments, fair competition in the interest of end users has not been promoted. Moreover, the lack of opportunity for a private producer to sell power to states other than that of operation implies that a level playing field for all producers does not exist.

Given this situation, Planning Commission has proposed that at least 10 percent of the total available power should be sold through open access. Further, it has also suggested that CERC and state ERCs remove all the impediments adversely affecting competition in the sector. As required by the Electricity Act 2003 as well as National Electricity Policy (2005), some steps have been taken to ensure unbarred open access at the state level. The progress in enforcing open access regulations at the state level is discussed in Section 3.

Progress at State Level

Apart from the regulations for inter-state transactions issued by CERC, about 21 State Electricity Regulatory Commissions (SERCs) have formally enforced open access regulations in order to facilitate intra-state trading of power as of May 2009. These regulations mainly require transmission as well as distribution companies to

Box 1: Mumbai Experience of Open Access in Distribution

As a result of sincere efforts on the part of the regulator, consumers/CSOs and some of the distribution companies in Mumbai's suburbs, open access in the distribution sector is feasible now in Mumbai. Even, small consumer households can now switch electricity suppliers if they are not satisfied with the existing quality of service or tariff.

The most important milestone in this success story is the landmark judgment passed by the Supreme Court of India in June 2008 paving the way for *Tata Power* to supply power to retail consumers being served by *Reliance Infrastructure* under the provisions of the Electricity Act 2003. Further, the court observed that such supply could be provided through the distribution infrastructure installed and operated by *Reliance Infrastructure*.

For a long time, Reliance consumers have been demanding access to supply from Tata Power, given the lower tariffs of the latter relative to the former – for example, Rs 1.30 versus Rs 1.72 per unit for the first 100 Kwh of consumption by a household in a month. Consequently, thousands of consumers have moved to Tata Power to enjoy the lower tariffs. Moreover, as a result of competition, service delivery has improved significantly.

allow open access by generating companies as well as consumers with a connected load in excess of a megawatt (MW). The status of open access in different states is presented in Table 1.

As it is shown in Table 1, there is adequate progress in formally enforcing regulations on open access. Out of the select 23 states where electricity regulatory commissions are fully functional, 21 states have formally enforced the open access regulation. Similarly, there is adequate progress in specifying surcharges and wheeling charges. Responding to the mandate to ensure open access for large consumers, 19 states have notified that consumers with connected load in excess of 1 MW may apply for open access.

Another positive development is the separation of transmission utility from the bulk supply business. Bulk supply business is power purchase from major sources such as electricity generating companies. Earlier, contrary to provisions of the Act, state transmission utilities (STUs) were also functioning as bulk supply licensees. To ensure independence of the common carrier business, STUs are prohibited from engaging in bulk supply business. As of now, on paper, distribution companies as well as consumers are allowed to use transmission facilities by paying wheeling charges to STUs.

Table 1: Status of Open Access Regulations

State	Notification of Open Access Regulations	Determination of Surcharges	Open Access for big Consumers*	Determination of Wheeling Charges	Determination of Transmission Charges
1 Andhra Pradesh	Yes	Yes	Yes	Yes	Yes
2 Assam	Yes	Yes	Yes	Yes	Yes
3 Bihar	Yes	Yes	Yes	Yes	Yes
4 Chhattisgarh	Yes	Yes	Yes	Yes	Yes
5 Delhi	Yes	No	Yes	Yes	Yes
6 Gujarat	Yes	Yes	Yes	Yes	Yes
7 Haryana	Yes	No	Yes	Yes	Yes
8 Himachal Pradesh	Yes	Yes	Yes	Yes	Yes
9 Jammu & Kashmir	Yes	Yes	No	Yes	Yes
10 Jharkhand	Yes	Yes	Yes	Yes	Yes
11 Karnataka	Yes	Yes	Yes	Yes	Yes
12 Kerala	Yes	Yes	Yes	Yes	Yes
13 Madhya Pradesh	Yes	Yes	Yes	Yes	Yes
14 Maharashtra	Yes	Yes	Yes	Yes	Yes
15 Meghalaya	No	No	No	No	No
16 Orissa	Yes	Yes	Yes	Yes	Yes
17 Punjab	Yes	Yes	Yes	Yes	Yes
18 Rajasthan	Yes	Yes	Yes	Yes	Yes
19 Tamil Nadu	Yes	Yes	NA	Yes	Yes
20 Tripura	No	No	No	No	No
21 Uttar Pradesh	Yes	Yes	Yes	Yes	Yes
22 Uttarakhand	Yes	Case to case basis	Yes	Yes	Yes
23 West Bengal	Yes	Yes	Yes	Yes	Yes
Status (Number of 'Yes)	21	18	19	21	21

Source: Reproduced from the *Report of task force on open access* (May 2009)

* Consumer having connected load 1 MW or above

State	Peak Demand	Availability	Shortage	%age Deficit
Bihar	1842	1333	509	28
Gujarat	11841	8960	2881	24
Haryana	5511	4791	720	13
Jammu & Kashmir	2120	1380	740	35
Madhya Pradesh	7564	6810	754	10
Maharashtra	18049	13766	4283	24
Punjab	8690	7309	1,381	16
Uttar Pradesh	10587	8248	2339	22

Sources: CEA Monthly Review of Power Sector

However, in actual practice, open access is almost absent due to various hurdles such as poor response from distribution companies to enforced regulations, shortage of energy, and transmission capacity shortages.

Barriers to Open Access

As described above, though adequate progress has been made in regard to formal enforcement of open access regulations, the status of open access is very poor. It has been observed by the *Task Force on Open Access* that in many states, not even a single consumer has availed this facility because of discriminatory behaviour on part of incumbent utilities. Some major barriers to open access are discussed here.

Reluctance of state governments

Most of the states in the country are facing acute power shortages. Because of the failure to meet targets for capacity addition during the last two five year plan periods, the gap between demand and supply of power has widened. The demand supply scenario in select states is given in the Table 2.

Given this acute shortage, various state governments including Karnataka, Tamil Nadu and Chhattisgarh are not allowing private players, especially captive power plants, to export energy to other states. On the other hand, a few utilities, such as those in Orissa, source power from captive plants at low rates and sell it at attractive prices to other states. Some state governments such as Karnataka have banned outside sale of power by domestic power producers by invoking Section 11(1) which states that “*generating company shall in extraordinary circumstances operate and maintain any generating station in accordance with the directions of that Government*”. This is not justified as power shortages prevailing throughout the year cannot be regarded as ‘extraordinary circumstances’.

All these tendencies have led to poor incidence of open access. CERC and Ministry of Power (MoP) need to take concrete regulatory steps to eliminate such state induced barriers to open access.

Inadequate transmission capacity

The transmission capacity available with Central transmission utility (CTU) as well as STUs is not adequate for meeting the increasing demand for open access, especially for interstate power transactions. However, in regard to most of the cases of denial of open access, capacity shortage was not appreciated an acceptable reason. For instance, Forum of Regulators (FoRs) has not accepted this as a genuine reason for denial of requests by existing consumers for open access. It has argued that that consumers already connected with the state grid should be able to purchase power from any supplier who is able to inject energy into the state grid.

Lack of competitive neutrality

The Electricity Act 2003 as well as National Electricity Policy (2005) sought to facilitate independent functioning of transmission utilities and load dispatch centres to ensure competitive neutrality in the power business. A transmission utility is not allowed to hold any stake in the trading business and vice versa. However, these entities are not independent at the state level as these are controlled by the same government management and have to follow the directions provided to them.

Conclusions and Recommendations

The Electricity Act 2003 as well as National Electricity Policy has tried to promote competition in the power sector by facilitating open access in wholesale as well as retail markets. Provisions in the Act requiring regulatory bodies and utilities to ensure fair and non-discriminatory open access to all players in the market are adequate. In the same vein, CERC as well as respective SERCs have issued regulations to facilitate interstate and intrastate

open access respectively and have specified norms and surcharges as well as wheeling charges to be paid to distribution companies for availing of open access.

Despite the progress in notifying the required regulations and guidelines, the status of open access is not satisfactory almost universally across states. The volume of energy transferred through open access is almost negligible. Further, it been observed that discriminatory actions taken by some state distribution companies/SEBs have adversely affected open access. These are against the spirit of the law and policy.

Such lack of open access has adverse impacts: restrictions on consumer choice making consumers prone to exploitation by incumbent distribution companies enjoying monopoly power in the respective areas; excess capacity in captive plants because of inadequate competition for purchase of power and hence low prices; lack of incentive for investment in the generation business etc. At the same time, a few distribution companies are exploiting the mentioned shortages and charging very high prices for short term sale across states.

Open access in the distribution sector in Mumbai is a good example of consumers being provided a choice in selecting suppliers. Other ERCs should also try to replicate the model. The model can be easily replicated in territories where energy availability is reasonably good and the transmission and distribution network is adequate. The same distribution network can be used by two or more companies to serve the consumers in a specific area.

Given the above discussion relating to the need for open access and its poor facilitation at present, the following recommendations are drawn from the analysis:

- i) **Review of the existing regulations:** Regulatory bodies should review the existing regulations to identify various hurdles to unbarred open access at the state level by involving all stakeholders i. e. consumers, government, utilities, academia etc. Accordingly, required regulatory amendments should be made.
- ii) **More independence to STUs and load dispatch centres:** To ensure competitive neutrality, more autonomy should be provided to these entities. Some STUs are still involved in bulk supply business in violation of Electricity Act 2003. The clauses requiring ‘independence’ should be followed in letter as well as spirit.
- iii) **Rationalisation of open access tariff:** As also pointed out by the *Task Force on Open Access*, wheeling charges and cross subsidy surcharges should be fixed as per guidelines in the Electricity Tariff Policy 2006. The charges fixed should be low enough to not have a significant adverse impact on the demand for open access.
- iv) **Adequate transmission Capacity:** Urgent steps should be taken to increase the transmission capacity and upgrade IT tools to facilitate utilisation of available capacity and source power from other states. It will promote new investment in the sector.
- v) **Capacity building of various stakeholders:** Ministry of Power as well as CERC should initiate discussions through conferences/seminars to remove misconceptions about open access. It is necessary to increase awareness among state governments about the long term benefits to the industry as well as consumers from open access.

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