

Introducing Competition in the Indian Electricity: Is Micro-Privatisation a Possible Way?

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Abstract: *Competition in the market place is regarded as a key to improve the performance of public utilities. This idea has prompted privatisation of public utilities world over, with a focus on competition. Enactment of the Electricity Act 2003 has set the tone for debate over introducing competition in Indian electricity. The Act seeks to promote competition in the sector through delicensed generation, open access, and multiple distribution licenses. Under the current state of Indian electricity, where half of the population do not have access to the service, the cost is unaffordable for many even though the price is subsidised, the loss is too high, and governance of the sector has hardly improved, it will not be so easy to introduce competition as assumed by Indian policy makers. At present, the challenge for India is not to design and establish a competitive electricity market, rather to have such an electricity market which is affordable and accessible to all, at the same time competitive, distributes the costs and benefits evenly among the consumers and takes care of the small consumers keeping with the social objective. Drawing on Indian political economic conditions and considering the challenges of having a competitive electricity market in India, the paper suggests 'micro-privatisation' as a possible way for introducing competition and choice in retail electricity market. The model of micro-privatisation exhibits potential to solve major problems in the sector like accessibility, subsidy, mismanagement, theft, loss, and lack of transparency and accountability, while providing choice for the users. Further, the paper suggests that participation of the users in the model will increase credibility of the system through monitoring at the local level and ensure a 'short-route' of accountability between the users and the service provider through promoting local entrepreneurship. Thus it will contribute to overall governance of the sector.*

Key Words: Competition, Electricity, India, Micro-Privatisation, Users' Participation

Word Count: 8,816 Words

Introduction:

During the last decade of 20th century, many developed and developing countries started restructuring their electricity sectors to improve their performance. The restructuring programmes in most of these countries have included the separation of potentially competitive segments (generation, transmission and distribution), privatisation of the state-owned (public sector) enterprises, creation of ‘competitive’ wholesale and retail markets, and establishment of ‘independent’ regulatory mechanisms. Virtually many countries have decided to open up their electricity markets, at least to their big industrial consumers. In most of the countries electricity markets will be open to all users, including the household consumers. This is already the case in Finland, Germany, New Zealand, Norway, Sweden, England and Wales in United Kingdom, and several states of the United States and Australia. As a follower of the international currents, India has been strongly influenced by the international ‘standard model’ of electricity restructuring.

Restructuring in the electricity supply industry is driven by the idea of increasing competition and choice as the mechanism of coordination in the sector (Dubash and Singh 2005). Recently, of all the steps of restructuring, the idea of having a competitive electricity market has increasingly dominated the Indian debate over restructuring.¹ The debate over competition in Indian electricity is relatively new. During early 1990s, India started with liberalisation of investment in the sector, which marked the first phase of reforms in Indian electricity. By the mid 90s, it was realised that mere opening up of the generation segment to the private players is not sufficient to improve performance of the sector. In response, the second phase of reforms emphasised on separation of distribution from generation and transmission and privatisation of distribution (supply) business. However, there were hardly any private player willing to take over the loss-making business of electricity distribution and there was a little ‘political will’ in part of the state governments to go for privatisation of politically sensitive distribution segment. The result was that only two states, viz. Orissa and Delhi, have privatised electricity distribution, while others have completely boycotted the idea now.

¹ The larger debate over electricity reforms in India includes other aspects like distribution reforms, subsidy removal, management practices, rural electrification, regulatory practice and so on.

Then came the third phase of reforms in Indian electricity with the enactment of the Electricity Act, 2003, the preamble of which states that ‘promoting competition’ is a means for an efficient electricity sector. The Act has really started the debate over promoting competition in Indian electricity through its clear emphasis on the same and empowerment of the regulators to advise the governments on the matters of “promotion of competition, efficiency and economy in activities of the electricity industry” (GoI 2003). In recent years, both at the policy and academic arena, the debate is more focused on competition ignoring the other aspects and there is a kind of consensus that competitiveness is the short-cut to efficiency in the sector. Of course, some disagree with the emerging consensus.

The objective of the present paper is not to find out whether competitiveness is a short-cut to efficiency or not. Definitely, I agree, competition will enhance efficiency of the sector. Rather, the paper seeks to find out a suitable way to introduce competition in Indian electricity, which redistributes the costs and benefits evenly among the users and providers. Therefore, the paper will briefly assess the attempts in this regard. While there appears to be a demonstrated will to introduce competition, the approach and consequently attempts in introducing competition in Indian electricity has been limited from various aspects. At this point I would like to make it clear that the paper is more focused towards competition in retail electricity market. Although a condition for establishing a successful competitive retail electricity market is the existence of a competitive wholesale market, introducing competition in the retail segment would definitely improve the functioning and increase competitiveness within the wholesale market.

Drawing on Indian political economic conditions and considering the challenges of having a competitive electricity market in India, the paper suggests micro-privatisation² as a possible way for introducing competition and choice in retail electricity market. The model of micro-privatisation exhibits potential to solve major problems in the sector like accessibility, subsidy, mismanagement, theft, loss, and

² Micro-privatisation is a relatively less developed concept. As presented in the paper, it has two aspects: *firstly*, putting up a micro-entrepreneur at the point of delivery, which could be a franchisee, local body, or users’ cooperative; *secondly*, ensuring users’ participation in the process to plan, manage, and monitor the local service delivery mechanism. In the ideal case, micro-privatisation should take the form of independent users’ cooperatives, where users own and manage their local service delivery mechanism. So far, the model has mostly been implemented in rural areas, based on the assumption that rural areas have pre-existed spirit of cooperation.

lack of transparency and accountability, while providing choice for the users. Going further, the paper also suggests that participation of the users in the model will increase credibility of the system through monitoring at the local level and ensure a 'short-route' of accountability between the users and the service provider. Thus it will contribute to overall governance of the sector. Finally, the state regulators will play a critical role of managing the emerging competition.

The paper is organised as follows. Section I tries to answer some general questions like what is competition, why it is necessary in electricity and also examines the barriers and challenges of having a competitive electricity market with reference to Indian case. Section II focuses on the state of Indian electricity and discusses political economy of policy shifts in Indian electricity to locate the context of present debate. In the section, the paper will discuss the various steps taken to introduce competition in the sector. Section III suggests micro-privatisation as a possible way in the direction and discusses the Orissa experience to substantiate the argument. Finally, section IV provides a few concluding thoughts and emphasises the role of regulators to manage the emerging competition.

‘I’

Competition in Electricity

Before going into the debate on competition in electricity, we need to understand the meaning of competition, why it is important in electricity and what are the challenges of having a competitive electricity market. In the following few paragraphs, the paper will discuss these issues. Competition is not concerned with maximizing the number of firms; rather it is concerned with defending market competition in order to increase welfare, not defending competitors (Motta 2004). The basis of competition is the idea that monopolies are 'bad' and 'inefficient'. It is well accepted that a monopoly causes a static inefficiency and for given technologies, monopoly pricing results in a welfare loss. The condition is worse when the monopolies are run by government. This argument is often substantiated by citing the case of public enterprises providing infrastructure services. A recent World Bank report on public services in India argues that the "model of monopoly service provision has failed to deliver acceptable outcomes." It goes further to claim that "a government cannot run vast delivery systems by itself without provoking serious

problems, ranging from politicisation and bureaucratisation to an entrenched culture of corruption and high prices for poor quality goods” (World Bank 2006: 07).

Then does the solution lie in privatisation of public service provisions? Many people believe that privatisation is a solution to the government failures encapsulated in the notion of the ‘grabbing hand of government’.³ Drawing on public choice theory, this idea indicated that the key problem of public enterprises was government interference in their management and activities, which lead them to pursue political rather than economic goals. Privatisation was considered as a policy solution that would restrict the future influence of the state/government on privatised units (Cook 2002). However, international experiences suggest that mere ownership transfers do not help in improving efficiency of public service provisions. Rather the solution lies in having several firms (both public and private) providing same service and ensuring a healthy competition among the players. Competition in the market place is regarded as a key to improve the performance of the public utilities. This idea has prompted privatisation of public enterprises world over, with a focus on introducing competition. As most of the public utilities (like telecom, electricity, gas and water) have been natural monopolies in their respective service areas, competition rather than ownership transfer will help in improving their efficiency (Gouri, Jayashankar and Fadahunsi 1993). In the presence of an effective competitive atmosphere, the managers and employees are expected to gain the necessary motivation to innovate, to improve work methods and introduce desirable and sustainable changes, to experiment with new ideas or increase productivity generally. It ultimately leads to an enhanced commercial as well as work culture in the utilities. The monopoly status (along with government ownership⁴) of public utilities leads to the emergence of ‘politically created’ pressure groups whose presence distorts the economic pricing policies in favour of the group. This leads to poor quality of service often at an artificially created low price. For example, subsidised electricity tariff for agricultural consumers in India has not really helped the farmers with poor quality supply (World Bank 2001). On the other hand if the monopolies are privatised, the incumbent company would continue to increase price, at least for the first few years, in the

³ See Shleifer and Vishney (1999) for more details about grabbing hand view of government ownership.

⁴ Government ownership of monopolies is likely to be loss-making or too powerful, and likely to prolong the monopoly status, as always it is protected by the governments. Therefore, it is considered undesirable (Littlechild 2000).

absence of competition and regulation. The possible solution is regulation plus private ownership and competition which would lead to real price reductions (Littlechild 2000). Further in the absence of competition, the quality of service deteriorates and growth is stagnated. Public exploitation goes up as the consumers and clients are taken for granted. In this sense, it is well argued that inefficiency of the public utilities stems from their isolation from an effective competitive atmosphere.

It leads to think how competition is going to help in improving performance of public enterprises. There are two kind of argument in response to this question. While the first one focuses on efficiency enhancement, the second one deals with price reduction along with quality improvement. The supporters of competition in utility services argue that competition ensures operational as well as allocative efficiency in both the manufacturing and service sectors. The other group of proponents of competition claim that competition will reduce price of utility services while improving the quality. They very often refer to the classical economic argument that sees competition as a process of rivalry between players in the market who compete by changing prices in response to the market conditions, thereby eliminating excessive profits and unsatisfied demand.

The second argument in favour of competition in utility services is being criticized recently, particularly for its inapplicability in the electricity sector. In an introduction to a special issue of *Economic and Political Weekly* on global experience on electricity restructuring, Dubash and Singh (2005) have argued that “suitably designed, competition may be one element” in electricity restructuring “but it is not a short-cut to larger reforms.”⁵ Drawing on price record of some restructured electricity sectors, they claim that it is hard to establish a causal connection between the price trends and competition because of several intervening factors like increase in production, reduction in fuel price and regulatory mandate, etc. The papers in the issue, while supporting the argument, go further to claim that the benefits of restructuring and competition are unevenly distributed where the large consumers have gained, often at the cost of small consumers. Newbery and Pollitt (1997) doing a cost-benefit analysis of the UK experience found that privatisation and restructuring in United Kingdom’s electricity sector has substantial efficiency gains, but these gains have been unevenly distributed. Thomas (2002) argues that introduction of retail

⁵ For more details please see *Economic and Political Weekly*, 40(50), December 10, 2005.

competition for small consumers has been an economic disaster for them in UK, as it has opened the way for their exploitation that would never have been tolerated under the old system. On the other hand, Apt (2005) comparing the retail electricity price data over a period from 1990 to 2003 claim that competition has not lowered US industrial electricity tariff.

However, there is less challenge to the efficiency based argument for introducing competition in electricity. On the other hand, it is also agreed that electricity restructuring (the ‘standard model’ based on competition and choice⁶) is far more challenging than it was imagined. Based on US experience, Lave, Apt and Blumsack (2004) argue that although creation of a ‘free’ market for electricity may be a relatively straightforward task, designing a ‘competitive’ market that meets the expected standards (and remedies the problems seen in restructured markets) is much more difficult. Although the problems can be overcome, the costs of doing so might make competition unattractive. The same argument applies to the Indian electricity market. Owing to the following factors, it may not be an easy task, as assumed by the Indian policy makers, to introduce competition (the way it has been debated and designed) in Indian electricity.

Firstly, the context under which competition and choice was introduced in electricity sectors of developed countries was quite different from India. The objective of restructuring and competition in developed countries was to squeeze greater efficiency out of essentially well-functioning electricity sectors. While developed countries, at the time of restructuring, had well functioning electricity systems providing reliable power to all on a financially viable basis (Dubash 2001), India is faced with capacity shortfall, low level of access, mismanagement, financial crisis, weak market institutions and many more problems. Subsidy to politically favoured consumers and cross-subsidisation from the industrial consumers is a distinct feature of Indian electricity market that may obstruct real competition, if the present pricing structure is to be maintained.

Secondly, as most part of the country had been served by the erstwhile SEBs, there are a very few private players in the sector. On the other hand, owing to the absence of a well-established electricity market, foreign players may not be interested

⁶ See Hunt and Suttleworth (1996) for a detailed discussion on the ‘standard model’.

in investing in Indian electricity. After more than 15 years, the generation segment is not able to attract too many private (domestic as well as foreign) investments. Absence of adequate number of players might result in concentration of market power with a few players, that won't allow the real competition.

Thirdly, proper management of a competitive market as well as to facilitate a healthy competition, there is a need for strong market institutions. Although 'independent' regulatory institutions have been established both at the state level as well as at the centre, their independence and efficiency is still doubted. As most of the regulators are drawn from bureaucracy, they have been sympathetic and indebted towards the government, while they need to be independent of the government. Absence of financial autonomy is a strong factor contributing to their indebtedness (Swain 2006).

Fourthly, the fact that competition policies are designed (by the government) and implemented (by the regulators, mostly drawn from government services) by the people, who have been pursued anticompetitive policies previously won't help (CRC 2005). The extension of responsibility of regulators, by the Electricity Act 2003, to promote and maintain competition poses doubts about its implementation. As Kahn (1998) argues it may be dangerous for two reasons. Firstly, as "regulators tend to be hostile to competition", it will be difficult to have effective competition under a regulated regime and vice versa. Secondly, confronted with political pressure the regulators might produce less efficient (than the existing ones) competitors.

Finally, absence of proper infrastructure facilities will be a major constrain for introducing competition. Establishing competitive retail markets (that is considered to be the final step towards a complete electricity market) will require more extensive network. And it will be expensive to expand the existing transmission network owing to the geographic factor. Absence and cost of other infrastructures like real-time meters might make competition an unattractive project.

'II'

The State of Indian Electricity

After almost 60 years of independence and state led development, India has not achieved universal electrification. Although the total installed capacity has increased from 1,362 MW in 1947 to 1,28,182.47 MW in 2007 and the number of

electrified villages grew from 1500 (0.25 %) in 1947 to 4,71,360 (79.4 %), there are huge disparities among the states as well as across districts within many states. While five states⁷ claim to have achieved 100 percent electrification, most of the unelectrified villages are located in the populous northern and central states. Despite repeated efforts, out of around 192 million households around 85 million do not have access to electricity, 78 million in rural India, while the remaining 7 million are urban households. In percentage terms, 56.6 percent of rural households and 12 percent of urban households do not have access to electricity (Bhattacharyya 2006). The problem is growing worse as new connections fail to keep pace with population growth. India houses the largest number of people in any country in the world without electricity.⁸ Most of the unelectrified households are poor and located in rural India, who are deprived of many social and economic benefits due to lack of access to electricity service. Finally, those who have access to the service are not satisfied with the poor quality.

The challenge for India is not to design and establish a competitive electricity market, rather to have such an electricity market which is affordable and accessible to all, at the same time competitive, distributes the costs and benefits evenly among the consumers and takes care of the small consumers keeping with the social objective. India needs to develop such a market structure in the electricity sector which provides certain amount of choice to the consumers, extends the service to everyone, and does so in a financially viable way. That will require not only more players in the sector but also strengthening of the market institutions- the existing regulatory commissions. To carry forward the discussion in that direction, in this section, the discussion will be focused on the political economy of policy shift in Indian electricity to contextualise the present debate.

Political Economy of Policy Shifts in Indian Electricity:

During past six decades, Indian electricity sector has passed through four phases of major policy shifts. The first, following independence in 1947, established public-sector led electrification, which emphasised on two major objectives, viz. to power industrialisation in India (economic objective) and to provide electricity to all

⁷ The five states which claim to have achieved 100 percent village electrification are Delhi, Goa, Haryana, Punjab, and Kerala.

⁸ According to 2001 census, an average household in India houses 5.3 persons. Accordingly, the size of population without access to electricity is more than 450 million.

as a right, at affordable rates, and to the level required for ensuring adequate livelihoods (social objective). The second, beginning in the late 1960s and early 1970s, mostly at the state level, established an era of subsidisation and rural electrification, which ignored the economic objective by over concentrating on the social objective. The third, beginning in the early 1990s, laid the ground work for an increasing private presence in the sector and is being criticised for ignoring the social objective of extending the service to everyone. And the fourth begins in 2003 with the enactment of the Electricity Act 2003, which is more directed towards introducing a competitive market structure in the sector while giving importance to the other aspects of the sector including rural electrification (Swain 2006).

The first phase marked a shift to a public sector led development in the sector from an infant market, which was mostly dominated by small private players, recognising its inability to power the development and to electrify a vast country like India. The Electricity (Supply) Act 1948 had set the base for nationalisation of the electricity sector and established public institutions to carry forward the task of electrification. Although the Act set the base for public control of Indian electricity, it did not argue for complete state control over the sector. This is something that was advocated in the Industrial Policy Resolution 1956.⁹

The Act was drafted on the broad lines of the Electricity (Supply) Act 1922 in force in the United Kingdom. The model of nationalised electricity sector came from the centralised investment allocation and five-year plans of the Soviet Union, the United Kingdom's nationalised electricity system, and the massive public works of United States' Tennessee Valley Authority. During the discussion over the Electricity (Supply) Bill, in the Constituent Assembly, two important issues were raised and discussed which has particular relevance to the current debate- viz. nationalisation of the sector and autonomy of proposed SEBs. While some members supported the nationalisation move citing the case of UK, some others opposed it on various grounds. The opponents of nationalisation favoured a healthy competition among the private players and the state to electrify and capture the market in a 'virgin field'. Advocating a competitive model between the public and private utilities, Constituent Assembly member M A Ayyangar said "let the three horses run side by side, private

⁹ The resolution states that "all industries of basic and strategic importance, or in the nature of public utility services, should be in the public sector" and "all new units in these, save where their establishment in the private sector has already been approved, will set up only by the state" (GoI 1956).

enterprise, work through corporation, and the state enterprise. Let us wait and see which one will prove ultimately beneficial to the public, let there be a kind of healthy cooperation and competition” (GoI 1948: 43-44). The legislation that was passed fell short of full nationalisation and represented a compromise between the public and private operators. The legislation mandated that existing private licensees were to be honoured and allowed the state governments to decide about license extensions when they expired. While most of the states were quite aggressive in nationalising the sector fully, few others continued to extend the license period of private operators for decades, including into the current period (Kale 2004).

On other hand, the debate over autonomy of the SEBs raised the issue of political interference in the proposed boards. The basic objective of establishing autonomous Boards instead of Electricity Departments attached to the Ministry of Energy, was to free the Boards from the vagaries of ministerial change. In defence of autonomous boards, K Santhanam argued that “ministries may change, and changing ministries may have changing policies; but the day to day administration of industrial undertakings should be continuous and should not be disturbed by political considerations. It is on that sound principle that nationalisation in this country should proceed and unless that principle is adopted in this country all task of nationalisation will be moonshine. Industries will be started by one ministry and as soon as the ministry is changed it will be scrapped by another ministry” (GoI 1948: 50). Although there was some opposition to the autonomous boards, the legislation mandated that all the states would eventually create autonomous corporations, but allowed states sufficient time- initially for two years from the passage of the Act, but with explicit promise of further extension if required. It shows that the debate over the Act anticipated the contemporary debates about political interference and failure of public service utilities. At that point of time, there was a doubt over state’s capability to run utility service provisions as well as a concern to depoliticise it.

Successive amendments to the Electricity (Supply) Act eroded SEB autonomy by gradually diminishing the boards’ freedom to set tariffs and by imposing greater political oversight in personnel decision. The period of 1970s and 1980s is marked for decreasing autonomy of SEBs and increasing scope of political interference in their functioning. Over the period, the SEBs were being used for political considerations by

governments and politicians.¹⁰ During 1980s, the boards plunged into financial crisis and their performance declined owing to several factors like political interference, corruption, subsidy, mismanagement, etc. In the beginning of 1990s, a board consensus emerged that the Indian power sector was in 'dire straits', and a major policy changes are required to change its management. At the moment, the international current was in favour of restructuring and privatisation as many developed countries had started restructuring.

In response to a severe crisis in the sector, the Central Government announced in 1991 that it would open up the generation segment for private investment. This change altered the existing policies in favour of public sector led development in the sector. Reforms in electricity sector began in October 1991, when the Power Ministry of the Government of India began to publish a series of notifications seeking to encourage the entry of private generating companies into the electricity sector, some of which were later enacted in parliament to become the Electricity Laws (Amendment) Act, 1991. This Act amending the Indian Electricity Act, 1910 and the Electricity (Supply) Act, 1948 makes provision for: allowing private sector to set up local, gas or liquid fuel-based thermal projects, hydel projects and wind or solar projects of any size; allowing foreign investors up to 100 percent ownership of power projects subject to government approval; setting new price structure; new power projects are eligible for a five-year tax holiday; and duties on the import of equipment for power projects have been reduced considerably. To attract private investors, IPPs were provided with massive incentives.

However, within a few years of its implementation, the IPP policy turned out to be a nightmare. For all the enthusiasms with which it was launched, the IPP programme significantly under-performed. By the mid-1990s, it was realised that private presence in generation would not solve the problems in Indian electricity. In response to the failure of IPP policy, the second phase of reform began with a focus on restructuring and privatisation of the loss making distribution business. At this stage, these reforms, implemented at the state level, were clearly drawn from the World Bank policies on private participation in electricity sector, which was rewritten

¹⁰ For a better understanding of the political interference in the sector, it can be divided into two parts: firstly, interference through 'policy directions' from governments that was legally allowed by the Section 78A of the Electricity (Supply) Act; secondly, through executive instructions, which works through an informal nexus between the politicians and the employees of the boards (Ruet 2005).

in 1993. Initially the Bank was successful to propagate the model of reform through its global reach and cheap capital. In 1993, the World Bank launched its policies in India, in a conference at Jaipur jointly convened by the Government of India and the Bank, where most of the state power ministers were invited. In response to these ideas, various states started experimenting reforms after the mid-1990s. While most of the states have unbundled the sector, only two have privatized the distribution business. Another important measure taken during the period was establishment of Central electricity Regulatory Commission and State Electricity Regulatory Commissions. While the major objective of establishing the regulatory commissions was to depoliticise the sector by transferring the tariff setting power to the ‘independent’ regulators, it is still doubted whether the regulators are really independent or not. The relationship between the regulators and the government/politicians is considered to be cosy, as most of the regulators are drawn from among retired or nearly-retired bureaucrats, who usually have pre-existing relationship with the government. The states had established regulatory commissions within a few years, while restructuring and privatisation had proceeded very slowly, keeping the sector far from the expected result.

In response to the hesitant reforms at the state level, the Central Government passed the Electricity Act 2003 in May 2003, after a push and pull for two years among the policy makers on what to retain from the draft bill and what to change. However, the passing of the 2003 Act really started the debate over competition in Indian electricity. The Act replaced all the existing legislation in the sector and prepared a ground for fundamental restructuring of the sector on the basis of international ‘standard model’. The Act has mandatory provisions for corporatisation of SEBs through restructuring and open access to the transmission and distribution networks, which has been drawn from the standard model of restructuring. It seeks to promote a competitive electricity market in India through these provisions.

The Electricity Act 2003: Provisions for Competition

The 2003 Act intends to promote competition in the sector through delicensing generation, multiple distribution licenses, and open access. Under the new Act (Section 7), captive generators along with all other generators are exempted from licence. The definition of captive generation has been extended to include cooperatives and users’ associations. It is expected that investment in generation will

be increased by delicensing the entry of players. It should be noted that the liberal policy towards independent power producers, in the past decade, could hardly generate interest of private players in the sector. After more than one and half decade since introduction of IPPs, private generation is limited to only 12 percent of the total generation.

The Act also provides for multiple distribution licences in a single distribution area. The Act (Section 14) allows the appropriate Commission to grant a licence to two or more persons for distribution within same area, through their own distribution network. But multiple distribution license option is considered to be economically unviable owing to the cost of duplication of distribution lines (Sinha 2005). So the other option left is open access that requires the transmission licensees to provide non-discriminatory open access to their transmission network by any licensee, generating company or a captive generating plant.

A later amendment to the Act, making a change in the Section 42 (2) requires that the state regulators shall provide open access within five years (from 27.01.2004) to all consumers who require a supply of electricity with a maximum demand of 1MW. At the same time the Act also requires that the cross-subsidy charge is to be 'progressively reduced and eliminated' in a manner determined by the state commissions. But it will be difficult to provide open access to the larger consumers and eliminate cross-subsidy surcharges, particularly when the distribution companies are not financially stable. The Act does not provide substantial guidance to the state commissions in regards of achieving both these tasks. The critics argue that open access is hardly the beginning for a restructured sector organised around competition and choice. Rather it is a political strategy to side-step the political challenges to reform SEBs while increasing the pressure for internal reforms, as an efficiency enhancing economic strategy (Dubash and Singh 2005).

Open access facility will also be extended to retail consumers as and when it is introduced in distribution. The Act requires that open access will be introduced in distribution in phases which will enable the consumers to obtain their supply of electricity from a generating company or any other licensee, other than the distribution licensee for that area. The distribution licensee operating in the area will be paid a wheeling charge, a surcharge to meet the current level of cross-subsidy and a surcharge to meet the fixed costs. In case of an open access consumer, the regulator

is authorised to determine the wheeling charges and surcharge, not the tariff. The surcharge is not payable by a captive generation plant. By this provision of surcharge, the Act seeks to protect the revenue of existing licensee by way of cross-subsidy.

Implementation of the first phase of open access may lead the distribution companies into further financial crisis by withdrawing the large consumers from them. Singh (2005) provides two reasons for revenue loss when large consumers opt out of the distribution companies. Firstly, it will result in loss of cross-subsidy revenue that has been provided by the HT consumers to fund the subsidies to LT consumers; secondly, it will result in a change in consumer mix as the power that will be freed up will be supplied to the low paying LT consumers. Although the Act provides for cross-subsidy surcharge to the distribution companies, the magnitude of the surcharge will create political tensions. The methods provided for calculating the surcharge has been unsatisfactory so far. If the surcharge will be low enough to make open access economically viable, the revenue loss to the distribution companies will be enormous and if it will be too high, open access would not be implemented at all (Singh 2005).

From the discussion above, it could be concluded that multiple distribution licensee policy and open access will not be helpful to create the standard model competitive electricity market in India. It will repeat the global trend of uneven distribution of benefits in favour of the larger consumers or might be worse than that. The benefit that will come to the large consumers will be at the cost of small consumers. While the large consumers may benefit from open access, it will really hard for the domestic consumers to gain benefits of open access. The Act has not been able to provide a framework to distribute the costs and benefits evenly among the consumers. Whatever may the consequences, it is clear that the small consumers are not going to benefit from the proposed model of competitive electricity market. And this might have serious political consequences.

‘III’

Micro-Privatisation: A Solution for India

Along with provisions for open access and multiple distribution licenses, the Electricity Act (in Section 5) recommends that “the Central Government shall also formulate a national policy, in consultation with the State Governments and the State Commissions, for rural electrification.....and management of local distribution in

rural areas through Panchayat Institutions, users' associations, co-operative societies, non-governmental organisations or franchisees" (GoI 2003). In response the National Electricity Policy has mandated that "Necessary institutional framework would need to be put in place not only to ensure creation of rural electrification infrastructure but also to operate and maintain supply system for securing reliable power supply to consumers. Responsibility of operation & maintenance and cost recovery could be discharged by utilities through appropriate arrangements with Panchayats, local authorities, NGOs and other franchisees etc" (GoI 2005). Although this provision has significant implications for solving the problems in Indian electricity, both the Electricity Act and National Electricity Policy documents have made a passing reference to it. Both the documents are silent about how to manage local distribution in rural areas through Panchayat Institutions, users' associations, co-operative societies, NGOs or franchisees and what would be the role of regulatory commissions in the process.

Probably realising the importance of local management of distribution resources and problems with the restructuring model under 2003 Act and its implications for household consumers, the Ministry of Power has introduced a new scheme for rural electricity infrastructure and household electrification in 2005 called *Rajiv Gandhi Grameen Vidyutikaran Yojana* (RGGVY). Although the scheme has been focused on rural electrification, it has larger implications for the small consumers both at rural and urban areas. The scheme seeks, within five years, to electrify all villages and habitations, provide access to electricity to all households and give electricity connections to below poverty line families free of charge (MoP 2005). The scheme has been tied with the larger project of 'Bharat Nirman' which seeks to build infrastructure facilities in rural India.

The significance of the scheme lies in the fact that it carries forward the social objective, set by the constitution makers of India, of making the service accessible to everyone. The scheme stresses that revenue sustainability of the programme, that has been ignored in earlier programmes of rural electrification, will be ensured through establishment of franchises, who could be NGOs, users' associations, cooperatives or individual entrepreneurs with association of Panchayati Raj Institutions. RGGVY makes it mandatory to have franchisees in all newly electrified (under the scheme) areas and the franchisee model can also be extended to other areas including urban

areas. The provision for having franchises is made keeping with the Section 5 of the Electricity. However, neither the 2003 Act nor the RGGVY clearly mention how it is going to be implemented. And both of them are silent about the role of state regulatory commissions in the franchisee model. During last two years, Rural Electrification Corporation along with Ministry of Power has initiated debates over the issue with help from several consultants. So far no standard model has been emerged. Various models have been put forth and it is open to the state utilities which one they choose. The prospective franchisees are provided with the choice to be treated as a separate licensee or to be linked to the distribution company of the area.¹¹

Drawing on the experience of developing and underdeveloped countries, (DFID 2002) Claims that attempts for providing electricity to all (particularly to poor) have failed due to “lack of participatory planning to deliver what was appropriate to meet local demand, lack of understanding of the local context and situation,.....and lack of local capacity to install, operate and maintain systems” (p. 21). This problem could be overcome through involving the users in planning and maintenance, and promoting local entrepreneurs in the electricity market. Although RGGVY seeks to promote local entrepreneurs through the franchisee model, it has neglected users’ involvement. The franchisee model proposed under RGGVY could be more effective with an emphasis on users’ involvement in the process. Users’ participation could be ensured through establishment of local user committees. These committees will be responsible for monitoring of local service providers as well as planning for local distribution resources. The model, which combines users’ involvement and local entrepreneurship for service provision, is known as ‘micro-privatisation’.

In the next few paragraphs, the paper will argue that micro-privatisation will be helpful to establish a competitive retail electricity market in India, while taking care of the small consumers, distributing the benefits evenly among all consumers and to a certain extent it will solve some of the critical problems in Indian electricity. At this time it is necessary to remind that the main basis of the argument for competition and choice has been to transfer the power to the consumers. This objective could be

¹¹ The Electricity Act 2003 treats franchisee as an agent of the distribution company and defines as “a person authorised by a distribution licensee to distribute electricity on its behalf in a particular area within his area of supply” (GoI 2003). However, the RGGVY allows for franchisees as separate licensees as well as agents of distribution companies.

better achieved in the micro-privatisation of distribution along with consumer participation.

Then the question arises what are the key features of the model and how it is going to address the issues? How to ensure consumer participation? Before going into these questions we need to look into the experience of Orissa in micro-privatisation and consumer participation, which was introduced much before the RGGVY. Under this model, a village is considered as a functional unit. An independent and voluntary users' group called 'Village Vidyut Sangh' (VBS) is created to help in billing, revenue collection, efficient use of electricity, and checking pilferages. A local franchisee is put between the users and distribution companies to maintain the local distribution network. Although the model received good response from the beneficiaries, it lost its momentum in few years of its implementation. However, the model is still existing in some parts of Orissa and producing a mixed result.

The first stage of the model was creation of village committees. VBS is a loose arrangement of few authorised consumers in a particular village, in some cases more than one village, which includes 8 to 15 members depending upon the total number of consumers. The members as well as the president and secretary of the VBS are chosen by the consumers. Usually the members and the office bearers are selected randomly or on the basis of social respect commanded by them in the village. The local lines man is the ex-officio member of the VBS to represent the distribution company. The members select a person to be designated as 'Village Contact person' (VCP) to do the job of meter reading and bill distribution. A limited honorarium is paid to the person by the distribution company. The VBSs are formally recognised through a letter from the distribution company, usually from the sub-division office. The prime responsibilities, along with other responsibilities, of the committees were to ensure proper revenue collection, ensure efficient energy consumption, and prohibit theft in the respective villages.

In the second step of the process, micro-entrepreneurs or franchisees were appointed as an agent of the distribution company for ensuring quality of power and to handle the complains at local level. These franchisees performed their duties on the basis of inputs received from the VBSs. While the franchisees had their own supervisors, the VCPs operated as a link between the franchisee and the VBSs. In return of their efforts, they were paid some incentive by the distribution companies.

This model has some remarkable achievements in terms of increased revenue collection, improved metering and reduction in theft. This ultimately had some direct impact on quality improvement in terms of reliable power supply, stability in voltage and reduced cases of transformer burnings. Thousands of village committees are existing in Orissa and some of them are put under franchisees. Studies suggest that the system is working well when both the steps of micro-privatisation are implemented and producing a positive result (Dash 2006). However, in most of the cases the village committees complain about lack of cooperation from the distribution companies and lack of resources to perform the committee functions. On the face of such restrictions, the model has resulted in improved metering and revenue collection; reduction in unethical use of electricity (use of cooking heaters) and thus improvement in voltage; dramatic reduction in unauthorised usage of electricity; and significant increase in legal connections. Wherever the distributions transformers are metered, the input energy supplied has reduced significantly (Gokak Committee 2003).

However, the proposed model of micro-privatisation, slightly different from the Orissa model, seeks to promote micro-entrepreneurs at local level and establish independent users' committees to monitor the local providers, check loss and pilferage, and plan for local delivery mechanism. At the initial stage, franchisees would be put as micro-entrepreneurs. But gradually, the model will seek to develop the capacity of users to take over the business through establishing users' cooperatives. The franchisee should be promoted as separate licensees, not as an agent of the distribution company. The local distribution network should be contracted out to the franchisees, not sold off to them. The contracting out provision will ensure accountability of the franchisees, as they will have the threat of being kicked out if they under-perform. Contracting out provision will also introduce *ex-ante* competition- competition for the market through competitive tendering (Domberger and Jensen 1997). The state will own these distribution networks and invest for development of it. But later, when the users became capable to manage and own these networks, it could be transferred to them.

Benefits of Micro-Privatisation:

The main criticisms against state provision of public goods have been the absence of choice for users and inefficiency in delivery. The proposed model is expected to provide choice to the users at least at the community or local level, if not

at individual level. Participation of users in planning is expected to generate a collective preference for the service at the local level, reducing differences among individual users. On the other hand, participatory monitoring by the users will push the providers to improve quality and also contribute to efficiency in various ways. Drawing on Hirschman's (1972) argument, the users will be more likely to participate (or use 'voice' option) as they do not have alternative providers (or 'exit' option) in the current setting. Drawing on the Orissa experience, it could be argued that the micro-privatisation model could work in positive direction and would be helpful to establish a competitive retail market while extending the service to everyone. While doing so, in several ways, it will also enhance governance of the sector. This model is not only applicable to the rural areas, but also it can produce similar results in urban areas. The model is expected to enhance the performance of the sector in the following ways:

Firstly, using the open access facility, while it is implemented, the franchisees can purchase power directly from the generators, providing the benefits of open access to small consumers. For that purpose, the franchisees should be treated as separate licensees, not as an agent of the distribution companies. This will stimulate competition in generation as the franchisees will be smaller than the existing distribution companies and financially more viable, thus reliable consumers for the generators. By purchasing directly from the generators they will be able to provide electricity at a relatively low price.

Secondly, as the franchisees along with the committees will be able to monitor at the local level, theft will be reduced. At the same time proper metering could be done. As theft constitutes a major part of the losses, reduction in theft will increase the revenue by saving electricity. Another impact of theft reduction will be reduced load on distribution transformers, which will minimize the cases of transfer burning. That will contribute to the reduction in fixed cost of distribution. Monitoring at the local level will also contribute to increased bill collection. Ultimately all these will result in increased revenue for the franchisee, making the system financially viable.

Thirdly, as the franchisees will be issued short-term contracts, there will be a fear of being thrown out if they do not perform well. The consumers (the committees) will monitor the performance of the franchisees and based on their recommendation further extension of the contract will be considered. This will provide a choice for the

consumers to decide whom they want as their service provider. When they will not be satisfied with the existing provider, they can change their provider. As the franchises will be small units covering a few hundreds of consumers, it is expected that there will be takers for them, unlike the present distribution companies. Although this will not provide individual choice to the consumers, but it will definitely provide collective choice.

Fourthly, as discussed earlier by making distribution a remunerative business it will stimulate the service providers to extend the service to unelectrified areas and capture more consumers. This will meet social objective of extending the services to everyone. And as the price is expected to go down, the poor can also access to the service.

Fifthly, this model also allows the consumers to own the franchisees through cooperatives. When the committees or user associations are strong enough, they can join together to take over the business of distribution in their respective areas.

Sixthly, even though this model does not provide for a real competition where multiple service providers operate in one area, it provides a possibility for benchmarking competition. The service providers will compete among each other to perform well in order to capture the unelectrified areas and extend the contract.

Seventhly, as it is accepted that the 'long-route' of accountability does not work in infrastructure service delivery system, there is a need to establish 'short-route' of accountability between the consumer and service provider. This model will be able to ensure the 'short-route' of accountability by establishing local service providers and monitoring them by local people. Unlike the earlier system, this model will also ensure transparency in the mechanisms.

Eighthly, the objective to devolve the power to the consumers will be realised through this model, as the consumers, through the committees, will be able to decide on their local problems. They will have a control over the service provider.

Ninthly, by reducing thefts and losses the model is expected to save power, which will partially help the country to come out of the present electricity crisis. On the other hand, by making the distribution business financially viable it will stimulate investments in generation to meet the growing demand. This model will also require

less investment in transmission network compared to other models. And it will reduce problems like mismanagement and corruption associated with large systems.

Finally, the model is expected to reduce the problems associated with the standard model of competition and choice. Choice in provision of goods and services works best when users are well informed about the alternatives. Further, competition and choice are frequently associated with stratified public services, where higher-income and better-informed users get access to better public service (Besley and Ghatak 2003). These issues are quite important for electric service delivery in India as it may exacerbate the existing inequalities in access to the service. However, the proposed model is expected to reduce these costs significantly through involvement of users in the process. Users' participation is expected to solve the problem of poor information, while provision of single provider at local level will ensure equal quality of service for all in the region or community.

‘IV’

Conclusion

To summarise, the model of micro-privatisation and community participation is expected to provide the benefits of a competitive retail market while reducing the costs of doing so and also promotes a competitive wholesale market. This model will not only benefit the small consumers, but also help the large industrial consumers to enjoy the benefits of open access and might remove the burdens of cross-subsidy from them. As the revenue of suppliers will be increased, the cross-subsidy amount or surcharge can be reduced and eventually eliminated. Thus the model removes the major barrier to implement open access. The model does not require a complete shift from the existing policies; rather it builds on the key provision of the Electricity Act- open access. Finally, the model, unlike international experiences, distributes the benefits of restructuring evenly among the consumers.

No system is free from flaws. Having said about the merits of micro-privatisation and consumer participation, now the paper will look into the problems with the model. Firstly, the model may not be completely free from political interferences as the local politicians might intervene in the process. Secondly, local elites may capture the committees as well as the franchisees and turn out it into ‘electricity *zamindaars*’. Thirdly, while there will be experienced and more takers for

urban areas, the less profit-making rural areas might be left out or taken over by inexperienced players.

Although the RGGVY is still silent about the roles of state regulators in the process, the regulators have to perform some important functions. Firstly, the regulators will be responsible for providing licenses to the franchisees on the recommendation of the consumer committees. The franchisees will be selected on the basis of competitive bidding. Initially, lack of experience of new entrants may create some problem for selection, which will be waived off gradually. However, the commissions will promote local entrepreneurs on the basis of recommendation from the local government institutions. Secondly, the regulators must perform their primary function of tariff setting. Although the franchisees will be allowed to have their own tariffs, they will be subject to a maximum tariff determined by the regulator. Unlike the present system, the franchisees should be allowed to have differential tariffs, as it will allow benchmarking competition possible. Thirdly, the regulators will be responsible to protect the system from political interference. They need to communicate with the committees regularly and get inputs from them. Finally, the regulatory commissions will make provisions to train newly formed franchisees and users committees.

References:

- Apt, J. (2005): 'Competition has not Lowered US Industrial Electricity Prices', *The Electricity Journal*, 18(2).
- Besley, T. and M. Ghatak (2003): 'Incentives, Choice, and Accountability in the Provision of Public Services', *Oxford Review of Economic Policy*, 19(2): 235-249.
- Bhattacharyya, S. C. (2006): 'Universal Electrification: Will the New Electrification Programme Succeed in India?', *OPEC Review*, 30(2): 105-123.
- Cook, P. (2002): 'Competition and its Regulation: Key Issues', *Annals of Public and Cooperative Economics*, 73(4).
- CRC (2005): 'Designing Competition Policy', *CRC Policy Brief*, 7.
- Dash, B. C. (2006): 'Governance of Power Sector: Orissa's Experiments with Village Electricity Committees', *Economic and Political Weekly* (January 10).
- DFID (2002): *Energy for Poor: Underpinning the Millenium Development Goals*. UK: Department for International Development.
- Domberger, S. and P. Jensen (1997): 'Contracting Out by the Public Sector: Theory, Evidence, Prospects', *Oxford Review of Economic Policy*, 13(4): 67-78.
- Dubash, N. K., Ed. (2001): *Power Politics: Equity and Environment in Electricity Reform*, Washington DC: World Resources Institute.
- Dubash, N. K. and D. Singh (2005): 'Of Rocks and Hard Places: A Critical Overview of Recent Global Experience with Electricity Restructuring', *Economic and Political Weekly*, 40(50).
- GoI (1948): *Constituent Assembly of India (Legislative) Debates, Part II*, Delhi: Government of India.
- GoI (1956): *Industrial Policy Resolution*, Delhi: Government of India.
- GoI (2003): *The Electricity Act 2003*, Delhi: Government of India.
- GoI (2005): *National Electricity Policy*, Delhi: Ministry of Power, Government of India.
- Gokak Committee (2003): *Report of the Gokak Committee on Distributed Generation*, Submitted to Ministry of Power, Government of India.
- Gouri, G., R. Jayashankar and O. Fadahunsi, Eds. (1993): *Efficiency Through Competition in Public Utilities: Policies for Restructuring*, Ljubljana: International Centre for Public Enterprises in Developing Countries.
- Hirschman, A. O. (1972): *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations, and States*, Cambridge: Harvard University Press.
- Hunt, S. and G. Suttleworth (1996): *Competition and Choice in Electricity*, New York: John Wiley and Sons.

- Kahn, A. E. (1998): 'Electricity Deregulation: Defining and Ensuring Fair Competition', *The Electricity Journal*, 11(3).
- Kale, S. S. (2004): 'Current Reforms: The Politics of Policy Change in India's Electricity Sector', *Pacific Affairs*, 77(3): 467-491.
- Lave, L. B., J. Apt and S. Blumsack (2004): 'Rethinking Electricity Deregulation', *The Electricity Journal*, 17(October): 11-26.
- Littlechild, S. C. (2000): *Privatisation, Competition and Regulation*, London: The Institute of Economic Affairs.
- MoP (2005): *Rajiv Gandhi Grameen Vidyutikaran Yojana*, Delhi: Ministry of Power, Government of India.
- Motta, M. (2004): *Competition Policy: Theory and Practice*, Cambridge: Cambridge University Press.
- Newbery, D. M. and M. G. Pollitt (1997): 'The Restructuring and Privatisation of the UK Electricity Supply- Was it Worth it?', *Public Policy for the Private Sector*, 124, World Bank.
- Ruet, J. (2005): *Privatising Power Cuts? Ownership and Reform of State Electricity Boards in India*, New Delhi: Academic Foundation in Association with Centre de Sciences Humaines.
- Shleifer, A. and R. W. Vishney (1999): *The Grabbing Hand: Government Pathologies and Their Cures*, Cambridge: Harvard University Press.
- Singh, D. (2005): 'Open Access in Electricity Distribution: Accessing the Financial Impact on Utilities', *Economic and Political Weekly* (September 10).
- Sinha, S. (2005): 'Introducing Competition in the Power Sector: Open Access and Cross Subsidies', *Economic and Political Weekly*, 40(7): 631-637.
- Swain, A. K. (2006): *Political Economy of Public Policy Making in the Indian Electricity Sector: A Study of Orissa and Andhra Pradesh*, M.Phil Dissertation, New Delhi: Centre for Political Studies, Jawaharlal Nehru University.
- Thomas, S. (2002): 'Why Retail Electricity Competition is Bad for Small Consumers: British Experience', paper presented at an international conference on Restoring *Just and Reasonable Electricity Rates*, Washington DC, 28-29 September.
- World Bank (2001): *India: Power Supply to Agriculture*, South Asia: Energy Sector Unit, South Asia Regional Office, World Bank.
- World Bank (2006): *Reforming Public Services in India: Drawing Lessons from Success*, New Delhi: Sage Publications.