REVIEW OF THE ELECTRICITY ACT 2003

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ABSTRACT

The Indian Electricity Sector has gone through a lot of metamorphosis. The three major acts concerning the electricity sector were the Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act, 1998. With the changing times many of the acts had become passé and thus had to be reviewed. The Electricity Act 2003, enacted by the Parliament of India, received the President's assent on 26th May 2003 and came in to force on June 10, 2003. The main aim of the Act was to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto. However even after many deliberations there are some major issues that were overlooked. They need to be addressed promptly so that the power sector can be truly the engine of growth for the Indian Economy. This paper will briefly try to point out the troublesome issues and will try to suggest remedial measures.

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1.0 Introduction:

Electricity is one of the key inputs for the overall socio-economic development of the country. The basic responsibility of the power supply industry is to provide adequate electricity at economic cost, while ensuring reliability and quality of the supply. Despite significant progress in capacity addition since Independence, the demand for electricity continues to outstrip the supply with the result that energy and peaking shortages continue to plague the economy. With the increasing pace of economic development facilitated by the reforms initiated by the Government, the demand for power in both rural and urban areas is likely to increase rapidly in the coming years. The major task of the power sector will, therefore, be to ensure that the anticipated demand is met adequately and in a reliable and cost-effective manner.

The power sector is currently witnessing a critical phase. State Electricity Boards (SEBs) are responsible for providing electricity to the people. Most of the SEBs are cash strapped. They are not even able to earn a minimum Rate of Return (RoR) of 3% on their net fixed assets in servicing after providing for depreciation and interest charges in accordance with Section 59 of the Electricity (Supply) Act, 1948. The power sector in the country has accumulated a huge deficit, dues to Central Power Generating Companies because of the deteriorating financial performance. The structure of the electricity industry in independent India was laid down by the Electricity (Supply) Act, 1948 that created the State Electricity Boards (SEBs). In their initial years, the SEBs performed yeomen service in carrying electric power everywhere, but over the years they have become unsustainable, thanks to their mismanagement and politicisation coupled with the economic and technological developments of the past decade. It is high time that the electricity industry is denationalised, and restructured on commercial principles. Even though, the legal framework was amended in 1998 to facilitate private investment in generation and transmission, respectively, it enabled private entities to sell or transmit power only through long-term contracts with state-owned entities. Such contract-driven privatisation through state-owned monopolies can have little chance of enduring success. Similarly, the setting up of regulatory commissions under the 1998 Act, though a welcome move, only had a limited impact on the state-owned monopolies. It should surprise no one that these piecemeal changes in the name of reform have not been able to arrest the deterioration of this industry.

To overcome these teething problems that the sector faces, The Electricity Act, 2003 (referred to as The Act from here on) was introduced in the Indian parliament after a lot of political debate. The Act came into force (except for section 121) on June 10, 2003 is stated to be the ‘distilled wisdom’ of a series of commissioned international

and national consultancy studies and seminars and conferences held at the all-India level during the last three years. It replaces the three existing legislations, namely, Indian Electricity Act, 1910, the Electricity (Supply) Act, 1948 and the Electricity Regulatory Commissions Act, 1998. The objectives of the Act are to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal. It is acclaimed to be the roadmap for the electricity industry, which will help hasten the pace of economic reforms in the country. When the Bill on this subject was under consideration of the standing committee of parliament, a number of issues deserved closer examination. Several of these remain unattended. The Act, which is a halfway house, raises a number of new issues, which are likely to pose serious problems in the coming years.

The new Act seeks to free up distribution, the main stumbling block in the development of India's power sector. The Act brings together laws on generation, transmission, distribution, trading and use of electricity, liberalising generation, transmission and distribution and providing for penal action for theft of power or default on payment for power consumed. Captive plants have far greater freedom under the Act. Consumers are allowed to form bulk-purchasing groups and buy power directly from generating companies, traders or distribution companies. Non-government organisations, local bodies and user organisations too can distribute power in non-urban areas, purchasing power from the supplier of their choice. Open access has been permitted in transmission. Additional, limited open access has been provided for in the case of distribution as well, although the extent of actual competition in distribution will depend on the quality of state level regulation. The Act also seeks to set up an appellate tribunal to hear complaints against the central and state level regulatory commissions and to exercise general supervision and control over these bodies.

The present paper will identify the major features of the act and will point out the major shortcomings of the Act. The first section is the introduction. The Second section deals with power generation scenario, which will look at the major development in the electricity sector over the years. The third section looks at the salient features of the act. The fourth section will look at the regulation aspect and point out some of its shortcomings in the act. The fifth section is divided in two parts wherein the first section i.e. 5.1 will look at the Open Access. The second section i.e. 5.2 will look at the implications of the act for the electricity sector. The last section is the conclusion, which will summarise the paper and put forward some issues that need to be addressed.

2.0 Power Generation Scenario:

The all India installed capacity of electric power generating stations under utilities was 107972.80 MW as on 31.3.2003 consisting of 26,910.23 MW hydro, 76,606.91 MW thermal and 2,720 MW nuclear and 1,735.66 MW wind. A capacity addition target of 4109.10 MW consisting of 607.00 MW of Hydro and 3502.10 MW of thermal was envisaged for the year 2002-03. As against the aforesaid capacity addition target, the capacity of 2979.40 MW consisting of 649.00 MW of hydro and 2330.40 MW of thermal has been achieved up to 31.3.2003.

The year wise generation in the electricity sector is as follows:

Table 2.1

Generation (Billion Units)	**1991-92**	**1992-93**	**1993-94**	**1994-95**	**1995-96**	**1996-97**
	287	301	324	351	380	394
	1997-98	**1998-99**	**1999-00**	**2000-01**	**2001-02**	**2002-03**
	420	448	480	499.45	515.27	531.43

Source: Ministry of Power, Government of India

The year wise capacity addition is as follows:

Table 2.2 *(Figures in MW)*

Year	**Centre**	**State**	**Private**	**Total**
1994-95	1464.5	3134	-	4598.5
1995-96	987	806.55	330	2123.55
1996-97	823.5	548.5	252.4	1624.5
1997-98	333	1676	1217.5	3226.5
1998-99	991.6	1675.4	1575	4242
1999-00	1615.4	2329.1	588	4532.5
2000-01	659	2525.77	864.2	3848.97
2001-02	905	1393.95	816.3	3115.25
2002-03	1210	1114.1	655.3	2979.4

Source: Ministry of Power, Government of India

3.0 Electricity Act 2003:

Electricity is a concurrent subject at Entry 38 in List III of the Seventh Schedule of the Constitution of India The growth of the economy, calls for a matching rate of growth in infrastructure facilities. The growth rate of demand for power in developing countries is generally higher than that of Gross Domestic Product (GDP). In India, the elasticity ratio was 3.06 in the first Plan and peaked at 5.11 during third plan and come down to 1.65 in the Eighties. For the Nineties, a ratio of around 1.5 is projected. Therefore, in order to support a rate of growth of GDP of around 7 percent per annum, the rate of growth of power supply needs to be over 10 percent annually. Power Sector, hitherto, had been funded mainly through budgetary support and external borrowings.

At the outset, it must be mentioned that the whole scheme of the Act gives an impression that the subject of electricity, instead of being in the Concurrent List, is in the Central List. *There is far too much centralisation and standardisation. Policies on all matters, namely, the national electricity policy and plan, and even the national policy on stand- alone systems for rural areas and non-conventional systems, and the national policy on electrification and local distribution in rural areas are to be formulated by the central government.*

National policy on any subject must be rooted in realities. Importance of this is amply borne out by the provisions of the Act which envisages, among other things, functional disaggregation of generation, transmission and distribution with a view to creating independent profit centres and accountability; competition, economy and efficiency to be promoted in the best interests of the consumer and the national economy; creation of transmission highways that would enable viable public and private investments in the electricity industry; trading in electricity; choice to the consumers, especially large consumers, to take power from the cheapest and most reliable source; rational tariff fixation based on cost of supply; transparent subsidies; steep reduction in transmission and distribution (T and D) losses and substantial reduction in theft of power; and privatisation of the sector.

The Act strikes a balance, which takes into account the complex ground realities of the power sector in India with its intractable problems. Some of the salient features of the Act are:

1. The Central Government to prepare a National Electricity Policy in consultation with State Governments. (Section 3)

2. Thrust to complete the rural electrification and provide for management of rural distribution by Panchayats, Cooperative Societies, non-Government organisations, franchisees etc. (Sections 4, 5 & 6)

3. Provision for licence free generation and distribution in the rural areas. (Section 14)

4. Generation being delicensed and captive generation being freely permitted. Hydro projects however, would need clearance from the Central Electricity Authority. (Sections 7, 8 & 9)

5. Transmission Utility at the Central as well as State level, to be a Government company – with responsibility for planned and coordinated development of transmission network. (Sections 38 & 39)

6. Provision for private licensees in transmission and entry in distribution through an independent network, (Section 14)

7. Open access in transmission from the outset. (Sections 38-40)

8. Open access in distribution to be introduced in phases with surcharge for current level of cross subsidy to be gradually phased out along with cross subsidies and obligation to supply. SERCs to frame regulations within one year regarding phasing of open access. (Section 42)

9. Distribution licensees would be free to undertake generation and generating companies would be free to take up distribution businesses. (Sections 7, 12)

10. The State Electricity Regulatory Commission is a mandatory requirement. (Section 82)

11. Provision for payment of subsidy through budget. (Section 65)

12. Trading, a distinct activity is being recognised with the safeguard of the Regulatory Commissions being authorised to fix ceilings on trading margins, if necessary. (Sections 12, 79 & 86)

13. Provision for reorganisation or continuance of SEBs. (Sections 131 & 172)

14. Metering of all electricity supplied made mandatory. (Section 55)

15. Appellate Tribunal to hear appeals against the decision of the CERC and SERCs. (Section 111)

16. Provisions relating to theft of electricity made more stringent. (Section 135-150)

17. Provisions safeguarding consumer interests. (Sections 57-59, 166) Ombudsman scheme (Section 42) for consumers' grievance redressal.

These are indeed far-reaching reforms and will lead to an electricity sector quite different from that we have known during the past 50 years. ***For the first time, the electricity sector is being recast to severely downplay the social objectives that had***

been built into the sector. Instead, what is being attempted is a sector that will function on "commercial lines", that is, generate enough profits to fund its own expansion. The state's role will be limited to regulating the sector and providing explicit subsidies to any group of consumers that it considers economically vulnerable and requiring such subsidies.

Apart from the removal of social objectives, the other premise of the Act is to convert electricity into a commodity that can be traded freely. According to the proponents of the Act, will introduce competition in generation and lead to reduction in prices of electricity. This coupled with improvement in "efficiencies" that will presumably follow privatisation of the state-run electricity sector, will see reduction in electricity rates in the long run.

In addition to the above provisions some of the major provisions pertaining to protection of consumer interests in the Act are: section 57(2) which makes a licensee liable to pay compensation, for non-compliance with the standards of performance, to the person affected as may be determined by the regulatory commission; section 64(3) which refers to the procedure for making tariff order after considering all suggestions and objections received from the public; section 23, which, inter-alia, refers to issue of directions to licensees for promoting competition; section 60 regarding avoidance of market domination; and section 61 regarding the factors which are to be kept in view in tariff determination. Sub-section (c) thereof refers to encouragement of competition, efficiency, economical use of resources, good performance and optimum investments. Section 42(6) provides for appointment of an Ombudsman by the state commission. ***However, provisions of sections 173 and 174 show that the competition law passed by parliament will not be applicable to the power industry. This is indeed unfortunate.*** This law should be of considerable importance in protecting consumer interests, particularly with the entry of large industrial houses in this sector. Though, consumer participation is recognised as an important element in overseeing public utilities, the Act does not have much to say in so far as the participation of NGOs, consumer groups and civil society is concerned. This is in spite of the actions taken in this regard so far by some of the commissions. Section 127(6) lays down that the rate of interest on delayed payments will be "16 per cent per annum compounded every six months". Considering the softening of interest rates in the country and their likely downward trend, the rate as above seems unreasonably high. It will also be better if the rate of interest is fixed under the Rules, rather than in the Act, so that it will be easier to change it when necessary.

The Act professes that its basic premise is that SEBs should not be continued in their present form. The transitional provision in section 172 (a) states that a SEB constituted under the repealed laws shall be deemed to be the state transmission utility and a licensee under the provisions of the Act for a period of one year from the appointed date or such earlier date as the state government may notify and function accordingly. However, importantly, its proviso states that the state government may, by notification, authorise the SEB to continue to function as the state transmission utility or a licensee for such further period beyond the said period of one year as may

be mutually decided by the central government and the state government. The same position emerges from section 131 dealing with vesting of property of SEB in state government. It, inter alia, states that, "with effect from the date on which a transfer scheme, prepared by the state government to give effect to the objects and purposes of this Act, is published or such further date as may be stipulated by the state government …" This shows that no final date has been set for the abolition of SEBs and this decision has been left to the state governments. Looking at the likely compulsions of centre-state relations in the medium term, it is unlikely that the centre will ever be able to turn down proposals for the continuance of SEBs as the licensees under the Act. In such a scenario, though the SEBs will cease to exist, separate and several government companies formed for generation, transmission and distribution will take up their place. *This insistence of the Act on unbundling at any cost is difficult to understand; as it is unlikely, that private sector will have the capacity to take over the whole electricity business from SEBs even during the next two decades.* As the recent experience of most reforming states has shown, creation of government companies alone does not lead to any noticeable improvement in their performance and, in fact, leads to increase in the tariff for the consumer by adding to overhead costs at each stage.

The state electricity boards have a low equity base. While they are expected to generate enough surpluses to carry the existing cross-subsidies, they pay huge interest amounts to the state governments due to their large debt burdens. It is necessary to implement the Rajyadaksha Committee's recommendation and provide them with an equity base of at least 30 per cent by converting past loans suitably into equity. The other aspect of the electricity sector that needs to be addressed is provision of enough resources for renovation and modernisation (R and M). It is time the government stops its journey towards a mythical market-driven power sector and focuses on the real needs of the people for secure and affordable power. In addition, The Act is unfortunately based on a wrong understanding of the power sector that has failed not only in India but also elsewhere. It seeks to bring in unbundling, competition and private power including IPP power. IPP projects have been found not only prohibitively expensive in Maharashtra but in several countries – Pakistan, Indonesia, Hungary – amongst others.

In its anxiety to meet multiple and often conflicting objectives and to be unduly futuristic, the act provides that there can be more than one distribution licensee for a given area and such a licence cannot be denied if an applicant fulfils the prescribed conditions, on the ground that there already exists a licensee in the same area for the same purpose (section 14). This is likely to be viewed as an unduly high business risk by new entrants in distribution business and may become a major disincentive. Considering the fact that the response of the private sector to take up distribution business has been lukewarm, a number of incentives such as Multi Year Tariffs (MYT) setting and adoption of distribution margin strategy are being proposed to enthuse the private sector. On this background, to permit more than one distribution licensee for an area can be hardly justified at this stage of reforms. Such a step may certainly be necessary in the long run to promote competition but it can wait for some

time as otherwise it will further slow down the pace of privatisation in the country. It needs to be noted in this context that Tatas and BSES, who are distributing power in Mumbai for decades, are still not prepared to face competition from each other and are pursuing their claims in the courts. Another question, which needs consideration, is whether we, as a country, can afford to provide for so much capital redundancy in an industry which is so capital intensive.

Before reforms were introduced, the objectives that the power sector served were:

- Expand the electricity sector at least cost and provide power at affordable rates to the people,
- Expand rural electrification and provide power cheaply for agriculture, thus safeguarding the food security of the nation,
- Provide power to industry at globally competitive rates;
- Help economically disadvantaged sections and backward areas gain access to power;
- To build self-reliance in the design, construction and commissioning of power plants and systems, and also in the manufacture of plants and equipment for the power sector

All these objectives are valid today and indeed must form the bedrock of any policy for the power sector. It is in the light of these objectives that we have to examine the success or failure of the current policy for the sector.

4.0 Regulatory Commissions:

The first Central commission was created in 1998 and other state commissions have come later. The central commission regulates electricity tariffs and transmission up to the boundaries of any of the states. Public opinion has to recognise its value. It will do so when it sees results in terms of improved quality, availability and, in due course, reduced tariffs. Ultimately the independence of regulators can only be guaranteed by strong public opinion. While legislation will help, it is important that the financial and human resources for regulatory commissions are kept out of the scope of government approval. Every regulatory commission has come out or is coming out with their approach papers on tariffs. Clearly, these approach papers will enunciate alternatives. These could be different from existing practice. The floating of these alternatives might cause some uncertainty. That kind of uncertainty is due to the transition to independent regulation, and is hence unavoidable. It will get resolved as soon as the commissions announce the principles and the terms and conditions on which they will regulate tariffs. This process takes time, given the need for transparency. This involves the submission of petitions, adequate opportunity for all interested parties to study and respond to those petitions, and adequate opportunity to the petitioners to

file rejoinders to the responses. The process also demands that the information used in the final order was available to all parties during the hearing. If these are legalistic proceedings, they are unavoidable, given the nature of the process, which is subject to appeal. The regulatory commissions are trying to be as flexible as possible while ensuring that the required legal process is followed. CERC has two types of jurisdiction; one is regulatory and the other is adjudicatory.

Among all the reforms in the power sector, perhaps the most crucial is of rationalisation of the tariff structure. The best instrument for the purpose is establishing independent and autonomous ERC in every state. It is necessary to underline that if ERCs fail to come up to the expectations, it will be a big setback to power sector reforms. Unfortunately, the experience of ERCs so far is a mixed one.

First, in the selection of the chairman and members of the ERC, the net has not been cast-wide enough. A predominant number of chairmen and members are drawn from power engineers and the judiciary and bureaucracy. The power sector requires a multi-disciplinary approach and persons having expertise in a number of other areas need to find a place on ERCs. A step in this direction will enrich the ERCs and help them address the tasks on hand much more capably.

Second, at present, there are no arrangements for organising training and refresher courses for the chairmen and members of the ERCs. Looking at the complexity of the problems in the sector, it is necessary that such arrangements be made to keep the ERCs abreast of the national and international best practices and latest developments in the field.

Third, there have been inordinate delays in making either the first appointments or filling up the vacancies arising in the ERCs, whether of the chairmen, members or the staff. Thus, for example, the post of chairman, CERC, has been lying vacant for months together after the former chairman retired. The same was the case in respect of secretary, CERC. This needs to be avoided scrupulously.

Fourth, the original intention of giving a status of high court judges to the chairman and members of ERC seems to have been given up, perhaps in the interest of economy. However, this is clearly a short sighted approach.

Fifth, there have been inordinate delays in the issue of tariff orders by some of the ERCs. For example, the Maharashtra ERC has taken nearly a year, from the time the original proposal was made by MSEB, to give its decision. Such delays further aggravate the already precarious financial position of SEBs. Hopefully, the Act would overcome this problem.

Sixth, not all ERCs have been given all the powers as envisaged in the Act. In several cases, their jurisdiction is confined to fixation of tariffs. This is short sighted and the ERCs need to be given the wider powers to approve investments in the sector.

Seventh, the state governments must learn to respect the orders of the ERC and not override them by agreeing to give subsidies to certain categories of consumers from the state budget. Thus, for example, the government of Maharashtra agreed to give subsidy of Rs 750 crore to the MSEB in the year 2000-01 for supplying power to agriculture and powerlooms at a concessional rate, as compared to the tariffs for these categories fixed by MERC. The same is likely to be the case in respect of the tariff order issued by MERC in December 2001. The experience in Andhra Pradesh was no different. Such actions frustrate the basic objective of rationalisation of tariffs by setting up the ERCs.

Eighth, ERCs must be made financially self-supporting by levy of a small cess on power distributed in the state. The ERCs must have powers to appoint their own staff, undertake studies and hire consultants as and when necessary.

Ninth, all ERCs must appoint advocates to represent the interests of consumers in matters coming up before them for a decision.

Tenth, conscious steps need to be taken for building of civil society institutions, consumer organisations and non-government organisations (NGOs) to enable them to plead the interests of consumers more effectively.

Eleventh, it has been seen that in some cases the state governments have been prevailing on SEBs not to make proposals to the ERC for revision of tariffs. In certain other cases, such as in Maharashtra, the state government has formally opposed the proposals of MSEB for revision of tariff under the pretext that the increase in tariffs will lead to law and order problems in the state. Such actions go to show that the state governments are trying to undercut the ERCs. Such tendencies must be avoided scrupulously, as this will further delay the rationalisation of tariffs and making the SEBs, or for that matter, their successor organisations financially viable and self-sustaining.

Twelfth, the provision in the ERC Act as also that contained in the Act empowering the states and the centre to give directives in matters of public policy to the ERCs is totally misconceived and needs to be done away with if the ERCs are to be made independent watchdogs of the larger interests of the power sector. It is high time we give up the notion that it is only the government, which knows what is in the best public interest.

Thirteenth, the expert group, in its report on restructuring of SEBs (July 2001), has observed that, “the nature and extent of independence and discretion granted to the ERCs in India does not seem to confirm to the legislative framework in countries such as the UK and the US. This is also a cause for the regulatory uncertainty prevailing in India”.

According to the amendment to the Electricity Act 1948, in the year 1998, and subsequently in the act the onus lies upon the Central/State governments to set up

ERCs. Independent regulation has become part of the language of economic reform in the 1990s. This is so especially for the infrastructure and other sectors in which government is the owner. Sectors, which already have such regulators, are telecommunications and electricity. Others under consideration are for petroleum, gas and coal, railways, roads, fertilisers, and information and broadcasting. These regulatory commissions are different from commissions appointed in the past like the Tariff Commission, Forward Markets Commission, Disinvestments Commission, etc. These were advisory in nature. Other statutory bodies like the Company Law Board, BIFR, Debt Recovery Tribunal and Income Tax Appellate Tribunal are quasi-judicial in nature and have the authority to enforce their decisions. Even among the areas of infrastructure that have been mentioned, one like telecommunications affects only a small proportion of the population, while others have an impact on almost everybody. The sensitivity of their work is therefore variable; depending on the populations, they impact upon. Regulatory bodies for electricity and roads require state level commissions as well since the subjects are concurrent in nature and powers exist with both the centre and states.

The Act lays down that SERCs are to be guided, inter alia, by the principles and methodologies specified by the central commission for determination of the tariff applicable to generating companies and transmission licensees (section 61(a)). There is to be an unduly large central electricity authority (CEA) consisting of not more than 14 members of which eight are to be full time members (section 70(3)). Its independence is, however, highly doubtful as the members shall hold office during the pleasure of the central government (section 70(6)). The critical importance of independence of CEA became clear during the approval process of the highly controversial Enron power project. The three-member selection committee to select members of SERCs is to include the chairperson of the CEA or the chairperson of the CERC (section 85 (1)(c)). The chairperson of the appellate tribunal is to exercise general power of superintendence and control over the appropriate commission (section 121). Mercifully, this section has not been notified and given effect to so far. The chairperson of the central commission is to be the chairperson of the forum of regulators (section 166 (3)).

The continuance of SEB as the state transmission utility or a licensee for a further period beyond one year has to be mutually decided by the central government and the state government (section 172). A great deal can be said in favour of selective approach to unbundling rather than this being advocated as a mantra, as the Act seems to do. The experience, world over, is not uniform in this regard. In USA itself, reportedly there are about 200 vertically integrated privately owned power utilities. There are also countries in which vertically integrated PSUs are functioning successfully. Further, the Act itself says that distribution licensees would be free to undertake generation and generating companies would be free to take up distribution business. As a result, Reliance, for example, have already announced their plans to integrate their operations from gas fields to common consumer of electricity. Tatas too have announced plans to expand their generation capacity as also to take up new distribution responsibilities. How can there be separate dispensations for the private

sector and SEBs? This is nothing but denying a level playing field to SEBs to an unusual extent. At this critical stage of reforms, it would be counter-productive to create a public perception that the sector is to be left at the mercy of the private sector. However, this is precisely what is going to happen with the recent advocacy by the World Bank of 'regulation by contract' to promote larger private sector investment in electricity distribution. In brief, the discussion paper of the World Bank asserts that the key lesson of the last 10 years is that ***regulatory independence, by itself, creates neither regulatory commitment nor balanced decision-making.*** Regulatory independence must be combined with a clearly specified regulatory contract that must be negotiated by political authorities. Such a regulatory contract would substantially limit the regulator's discretion. The idea is to limit the discretion of the regulator in areas that are known to deter investment. The key component of the regulatory contract is a performance-based, multi-year tariff-setting system. It is argued that the concept of independence does not logically require that a regulatory commission design the tariff system that it implements.

The approval of a contract at the political level is more prone to risks of it being disowned, cancelled or abrogated than if a statutory authority such as CERC/SERC has approved a contract in an open and transparent manner with a 'speaking order'. The Act provides for arbitration (section 158). Appeal over the decisions of the CERC/SERC lies to the national appellate tribunal presided over by a judge of the Supreme Court. There is also a further appeal provided to the Supreme Court. By any international and other well-recognised standards, these are enough safeguards against any regulatory excesses. The words 'regulatory risk' connote a contradiction in terms. In fact, there is more risk of arbitrary and unpredictable decisions on contractual matters at the political level than by statutory bodies such as regulatory commissions. Why should private investors not be prepared to face such so-called risks when they are assured of fair and open hearing and judicial process? All matters involving pricing of power, decisions inevitably get politicised and lead to controversies. ***Acceptance of such decisions becomes less painful and simpler if the consumer representatives have an opportunity to look at all relevant data and place their point of view before the regulator.*** They must also be convinced that strict standards will be laid down for monitoring the performance of the utility and that its inefficiencies will not be passed on to them automatically by way of increase in tariff. This is all the more important in a situation such as in India where the existing tariffs for certain politically sensitive groups are low and will need to be stepped up in practically each of the years in the near future. The concept of automatic pass-through of certain costs such as power purchases can be open to serious question. This will be particularly true in the case of vertically integrated utilities or where there are cross-holdings in relevant companies.

MYT setting should be an important objective but it cannot be put into practice immediately. The present database in SEBs is so weak and unreliable that any projections based on it are bound to be way off the mark. This is brought out in the reports of SERCs year after year. With the present state of highly unreliable data, such MYT-setting may give rise to and incentivise manipulation of data and creative

accounting by utilities. Currently the consumer representatives are ill equipped to go into the complex facets of MYT-setting. As far as one can see, the approach suggested by the World Bank does not envisage consumer bodies participating in this exercise at all. Even if they were to be given such a right, it is doubtful how far they will be able to do justice to it. It will therefore be necessary to strengthen the NGOs by training their personnel, enabling them to have their own panel of independent experts etc. before MYT-setting is taken up seriously.

Much is being made of the risks, which have to be faced by the private sector in taking up power distribution business. Private utilities cannot be permitted to blame others if they fail to do their homework before taking investment decisions. It is for them to take steps to satisfy themselves about the validity and authenticity of the data put out by government in the tender notices. They must also make a realistic assessment of their own capabilities in setting and achieving targets such as for reduction in aggregate technical and commercial losses, testing of meters, energy audit, recovery of arrears, etc. Assured rate of return on capital, coverage of foreign exchange and other risks by the state government and government transmission utility, and providing for distribution margin as a first charge on revenue make a mockery of the very justification underlying privatisation. The whole purpose of privatisation is to bring in the risk capital, management expertise and business acumen. The regulatory contract approach seems to be based on the assumption that private sector lacks these attributes. If this is to be so, it can hardly be trusted to create conditions for and confidence among investors for infusion of fresh capital in the business, thereby defeating yet another objective of privatisation One other justification for privatisation is to reduce the burden of subsidies on the state exchequer in an open and transparent manner. This purpose too is likely to be frustrated by the regulatory contract approach as risks which are to be borne by the state government will not explicitly come up for public scrutiny, either initially or during the transition period. It may also not be clear as to how long such subsidisation by the state government may have to be continued, as there will be a tendency on the part of utilities to pressurise the state government to continue the regime of sharing of risks. This is all the more so since such decisions are to be made by political authorities. Finally, a question may be asked whether such a regulatory contract can be entered into under the provisions of the new Act as it would water down the authority of the SERC substantially and may even make it superfluous.

Why have independent regulators become necessary for these sectors? Competitive forces are never perfect and regulators become necessary to ensure that there is no exploitation of weak parties and of customers. The restrictive trade practices parts of the MRTP Act were intended to prevent this. They worked, but to a limited extent. The infrastructure sector is technically complex and requires specialised expertise from those who regulate them. All these sectors are dominated by government-owned enterprises, and this may continue to be so for many years. The government has been executor and judge until now. A regulator who is independent of the government is essential if private investment is to be encouraged in these areas while safeguarding the consumer interest. Vast investments are needed if these sectors are to expand and

become efficient. The regulator does not create policy. That is the job of the government. In doing its work, it has to ensure that all interests are heard and that its decision is the fairest that it can come to with the information available to it. The regulator must have powers to enforce its decisions, and so it becomes a quasi-judicial authority. Information that it has used in decision-making must be available to anybody who is interested. The regulator has to take decisions that have so far been taken by government, usually in the areas of regulating tariffs and issuing licences.

5.0 Specific Critique & Implication:

5.1 Open Access

The Act, envisages "open access" of distribution networks in order to facilitate direct sale of power by generators to the final consumers. Although the Act does not specify any particular category of consumers who could be served through open access, it is a foregone conclusion that high-tension consumers alone can avail of this facility. It would simply not be feasible for the utility to keep track of hundreds or thousands of small-quantity transactions between the generators and small consumers. The emergence of aggregators may alleviate the problem to some extent, but considering the experience in California and elsewhere, it is doubtful whether small consumers will switch to alternate suppliers - especially so in India where low-tension consumers pay lower tariffs than what the Independent Power Producers (IPPs) might be willing to charge. Therefore, it would be reasonable to assume that only bulk (industrial) consumers will benefit from open access. Hence, what we are talking about is limited markets - that is, markets limited to the industrial consumers, which is indefensible from the point of view of equity.

That brings you to the familiar, yet plausible, conclusion that allowing limited markets (only to high-tension bulk consumers) would wean away industrial consumers who now bear the brunt of cross-subsidies. However, this will happen only if the surcharge plus wheeling charge is lower than the cross-subsidy currently factored into industrial tariffs. As the Act does not specify that the surcharge cover the full extent of the cross subsidy element in the tariff, it is not unlikely that the regulator will peg it at a somewhat lower level - just enough to allow an incentive to the industrial consumer to switch to direct supply from IPPs. If the regulator does not do that and fixes the surcharge at a level where the cost of direct purchase is the same as or more than that of the incumbent utility's industrial tariffs, the scheme will remain a non-starter. Therefore, any attempt to introduce third-party sale - in however small a measure - is likely to wean away bulk consumers from the utility, thereby impacting on its revenues.

Then there is the tricky problem of deciding the quantum of losses to be assigned to such transactions. Will they be the average of technical and commercial losses obtaining in the particular utility allowing open access? If the loss level is high, it might not be profitable for the third parties to pay surcharge, wheeling charge, and also for power lost in open access. Therefore, it may have to be pegged at a level which gives an incentive for such transactions to take place - in which case, the

remaining losses will have to be borne by the existing utility which is already reeling under the impact of revenue losses.

The argument that has been advanced in defence of third-party sale is that it will force the utility to stem its commercial losses, rationalise tariffs and gradually align tariffs with cost of supply. This is an unrealistic proposition since it assumes an ability to effect either a dramatic loss reduction or a steep increase in the tariffs of the subsidised categories, or both. The shock treatment sought to be administered through open access is more likely to kill the patient than effect any dramatic cure.

All that the cornered utility can now do is to raise steeply the tariffs charged to its remaining industrial consumers - which in turn could force more and more of them out of the utility's custom straight into the hands of waiting IPPs, triggering a price spiral which would hasten the demise of the utility. The one salutary provision in the Act is in Section 61 (a), which stipulates that the principles and methodologies specified by the Central Electricity Regulatory Commission for determination of tariff applicable to generating companies, and transmission licensees will guide the State commissions.

5.2 Implications of the Act for the electricity sector:

Once it is accepted that the state governments may not find it possible or be in a hurry to privatise the SEBs wholly, it is imperative to examine as to what implications the Act will have on the finances of the state governments. If the states show unwillingness or are unable to privatise distribution, the paying customers of SEBs, namely, industrial, commercial as also domestic consumers whose consumption is more than, say, 300 units a month and therefore are in the highest slab of tariff for the domestic consumers are likely to desert the SEBs. The ministry of railways has already announced plans to take supply of electricity directly from the central PSUs. This process is expected to complete in the next five years. It is necessary to note in this context that the Act defines captive generating plant as one “set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such co-operative society or association”. This definition is wide and covers a number of situations as compared to the restrictive definition of captive generation adopted in the past. As a result, any consumer can become a shareholder of a co-operative society or a company floated for power generation and distribution. Obviously, consumer groups which are presently being heavily subsidised will not be interested in getting power supply from such new ventures and will continue to be the responsibility of the SEBs functioning as new distribution licensees.

It is important to note that, under the Act, when a consumer is accorded an open access to avail supply from a source other than the distribution licensee of his area, he is liable to pay a transmission charge as also a surcharge. The surcharge is to be levied until the cross-subsidies are not eliminated and is to be used for meeting the

requirement of current level of cross-subsidy. The Act also lays down that such surcharge and cross-subsidies are to be progressively reduced and eliminated as prescribed by the relevant commission. Most importantly, the Act places down that such surcharge will not be levied when open access is provided to a person who has established a captive generating plant for carrying electricity to the destination for his own use. These provisions raise a number of pertinent issues. Significantly, the Act ***does not lay down any definite timeframe either for provision of open access or for abolition of cross-subsidisation and leaves these decisions to the SERCs.*** As seen earlier, the level of cross-subsidisation has come down steeply over the years due to the decline in the sales to industry and increased sales to domestic and agricultural consumers. The act should have laid down a time limit of say five years within which open access is to be provided or cross-subsidies and the surcharge based thereon is to be abolished. Second, the surcharge is to be based only on current level of cross-subsidy and therefore cannot take note of or compensate for change in future consumer mix and demand elasticities, or backing down of generating sets and costs thereof etc. Third, the surcharge apparently applies to an existing consumer of a distribution licensee and shall not apply to new consumers in the area of a licensee who prefer to take supply directly from a source outside the area. Fourth, since the surcharge is not to apply for captive generation, there will be greater impetus to setting up captive generation. Power from such a source may be cheaper than from the SEB as it does not have to bear the burden of cross-subsidy but it may not be the most cost-effective option. Over a period of time, this will lead to the country being saddled with high cost generation, thereby adversely affecting its international competitiveness.

The central government has, through this Act, half-heartedly and by back door tried to do what it could not do openly due to the opposition of the states to undertaking time-bound reforms in the sector. In the process, it has failed to take the country into confidence about the likely consequences of this so-called forward-looking strategy. The state governments too do not seem to have grasped the enormity of the problems they are likely to face. The Tenth Five-Year Plan has accepted the objectives of extending electricity to all villages by 2007 and all households by 2012. The financial implications of this too do not seem to have been taken into account while enacting the new law. It is clear that with the mass exodus of paying customers from the fold of SEBs as distribution licensees, the burden on the state budget would become unsustainable. The new regulatory contract regime being propounded by the World Bank's will, add to this burden. This is likely to lead to demands by the state governments that the central government must come forward to share this burden.

6.0 Conclusion:

It will be important to ensure that the Act sub serves its objectives and does not lead to more problems than it claims to solve. This will call for continuous reassessment of its underlying strategies in the light of implementation experience. After the unprecedented power blackout on both sides of US-Canada border in August 2003, Governor of New Mexico and former US Energy Secretary is reported to have said

that his country was a major superpower with a third world electrical grid. The California experience of power sector reforms too brings out that there are no ready-made answers and 'one size fits all' approach is not the best strategy for a road map for reforms.

The argument of disengaging the state from the electricity sector is that this will reduce the state's burden, as it will not have to foot the bill for the losses of the State Electricity Boards (SEBs). What is left unsaid is that the subsidies that the state will need to provide may be much larger than the current losses. The Act leaves the question of ownership, particularly of the transmission company, deliberately vague. If the state government owns the transmission company, as it was in Orissa after reforms were introduced there, then the losses of the transmission company will have to be added to the subsidies that the state will have to provide. If all these are added together, a back-of-the-envelope computation will show that the outflow of the state governments is *actually likely* to increase after the reforms are implemented. This is a sleight-of-hand exercise – to call what are subsidies now as losses and call them subsidies later – claiming a reduction in losses.

The other premise of the Act is that electricity can be supplied to rural areas through NGOs, panchayats, cooperatives and other institutions. Though there is no doubt that such innovative distribution schemes are urgently required for the rural areas, this leaves aside the question of who is to take electricity up to the distribution point near a village from where the local community structures can take over. The major cost is in providing the high-tension line and the substation. Purely from a commercial standpoint, this activity is unlikely to be profitable and was the raison d'etre originally of setting up of SEBs. Once the existing structure is dismantled as is being proposed in the Act, there has to be an alternative mechanism in place for satisfying the needs of rural electrification. It is not an accident that even in the US, rural electrification was completed in the 1930s only after president Franklin D Roosevelt, under his New Deal, created the Tennessee Valley Authority and Rural Electricity Administration explicitly for this purpose. For millions of people, the greatest achievement of the New Deal was the electricity coops that brought electricity to vast areas that private utilities had refused to service. Important as the above issues are with regard to the social and political implications of power sector reforms, they can be decoupled from another set of issues. These are related to the unbundling of the vertically integrated monopolies that have been the norm in the electricity sector all over the world until the mid-1980s. The reforms – in Chile under Augusts Pinochet and in United Kingdom under Margaret Thatcher – were to separate generation, transmission and distribution and spin them off as independent companies. The premise was that it would lead to competition amongst generators and bring down the price of electricity. It was with this end in view that California introduced large-scale changes in 1996 and dismembered its vertically integrated power utilities. Major reforms are under way in the world with the UK and now the California reforms as the model. However, the recent crisis of the electricity sector in California and the lack of success of the reforms in the UK underline that these reforms are being undertaken with little evidence to show that there is a realistic basis for believing that

the consumer, particularly the small consumer, benefits in any way from such competition. Even worse, if these reforms fail, as they did in California, the small consumer endures the most of the failure.

The Act (proviso to section 14) states that "where a person intends to generate and distribute electricity in a rural area to be notified by the state government, such person shall not require any licence for such generation and distribution of electricity, but shall comply with the measures which may be specified by the CEA under section 53". Perhaps this is based on the presumption that dispersed generation from non-conventional and mini hydel sets would be cheaper. With such cost structure of even non-conventional and dispersed generation, it is evident that agricultural tariff will have to be subsidised for several years to come. In this light, to permit setting up of generation and distribution projects in the rural areas without any scrutiny of their costs will foreclose the options of the state government in so far as taking over of subsidy burden is concerned.

A reference may be made in this context to the concept of cost to serve as opposed to cost of supply. Ideally, tariff for every consumer group should be based on the cost to serve the concerned group. In working out the cost to serve, several factors such as the cost of generation, transmission and distribution, clustered vs. dispersed supply, voltage at which supply is made, and whether supply is given only in off-peak hours or at all hours, will have to be taken into account. Ideally, a set-off in tariff should also be provided for unreliable and low quality supply based on frequency and duration of power failures and interruptions, and low and fluctuating voltages. On this basis, cost to serve for agricultural consumers should be much lower than estimated at present. Laying down uniform guidelines in this regard under the Act and its Rules would have been advisable.

The Act is weak and wanting in so far as regulatory mechanism is concerned. As brought out earlier, whatever may be the experience in other countries, in India, the success of power sector reforms hinges critically on the success of regulatory mechanism. Towards this end, the Act needs to be amended as brought out hereafter. The Act should provide for a clear and unambiguous bar against reappointment of any member or chairperson on the same or any other commission. This should also hold good for the chairperson and members of the national appellate tribunal. Section 113(b) (i) states that a person who "is, or has been, or is qualified to be, a judge of a high court" could be eligible for appointment on the appellate tribunal. Looking to the fact that this is a national level tribunal and is to decide appeals over the decisions of SERCs/CERC, it will be best to delete the words "is qualified to be" from this sub-section. The experience brings out that, to be effective, SERCs need to be given much larger financial autonomy and independence by levy of a cess on power consumption in the state. No less important is the accountability of the regulator to state legislature/parliament. Towards this end, it will be useful if the standing committee of parliament and the relevant committee of the state legislature review the working of the regulators. Independent regulators are a phenomenon of recent origin in India.

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