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Policy Developments for Private Investment in the Indian Power Sector

The economic crisis faced by India in 1990–91 provided an opportunity for unshackling the economy by de-licensing a number of sectors. This led to the opening up of the infrastructure sectors including power and telecommunication to enhanced private participation. Sectoral policies as well as those governing foreign investment were liberalised. Sector-specific developments were aimed at improving the policy climate for private investment. The power sector has witnessed various phases of policy developments. The earliest phase, which began in the early 1990s, was aimed to improve the policy climate for private investment. Later on, the emphasis was placed on regulatory reforms leading to the establishment of independent regulatory commissions. The enactment of the Electricity Act 2003 led to a deepening up the reform process through the introduction of a competitive regime in the Indian power sector. These policy and regulatory developments are further discussed below in terms of specific policy milestones.

5.1 Private Power Policy

In 1991, the government of India amended the Electricity Supply (Act) 1948 to allow the entry of private investors in power generation and distribution. A tariff notification issued in 1992, provided for a two-part tariff structure covering fixed and variable costs. It provided for a 16% rate of return on equity at 68.5% PLF for thermal plants and (coal / lignite/ gas) at 90% availability for hydro power plants. The achievement of higher efficiency levels translated into higher rate of return for investors.

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- Author: Anoop Singh
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5.2 Mega Power Policy

In 1995, the government strengthened its policy for private investment in generation projects over 1000 MW and which would supply electricity to more than one state, terming them as Mega power projects. The policy was intended to introduce a competitive bidding for awarding the projects. CEA, POWERGRID and NTPC were to provide catalytic support to private investors by identifying potential sites, arranging the transmission of power and for preparing feasibility report respectively. The policy did not propose any fiscal concessions. Some of these shortcomings were addressed in the revised policy of 1998 (Revised Mega Power Policy). Nineteen projects, 14 in the public sector and 5 in the private sector, were declared to be mega power projects. To alleviate risks to private investors on account of payment security, the Power Trading Corporation (PTC) was setup to purchase power from the identified projects and to sell it to identified SEBs. This included the adoption of a new package of security mechanism consisting of Letter of Credit and recourse to state government's share of Central Plan Allocations. Establishment of Regulatory Commissions and privatisation of distribution in cities with a population exceeding one million were included as pre-conditions in the policy. Import of capital equipment for such projects was exempted from customs duty. The projects were also granted income tax holiday for 10 years and, which could be claimed in any block of 10 years within the first 15 years. The policy was further liberalised by according mega project status to all inter-state thermal projects of 1000 MW and above, and to all inter-state hydro projects of 1000 MW and above. These projects were now able to secure duty free import of capital goods.

Due to concerns over transparency associated with MOU-based projects, the government issued norms for tariff-based bidding for thermal power projects in 1997. Further, this role was handed over to respective regulatory commissions. These norms were to serve as guidelines, and the regulatory

commissions were to issue terms and conditions for tariff and retain purview over the PPAs for sale of power to the respective state utilities.

5.3 Policy Reforms for Investment in Transmission

In addition to generation, the sector also requires substantial investment in the transmission network. In order to meet the projected requirement for additional power generation capacity of 100,000 MW by 2012, the Ministry of Power estimates that the investment requirement for the inter-state transmission network will be Rs. 710 billion. A significant proportion of this (Rs.500 billion) is expected to be undertaken by the Power Grid Corporation of India Ltd. (POWERGRID), the Central Transmission Utility (CTU). The remainder (Rs.210 billion) is expected to come from by private investors.

As a means to encourage private investment in transmission networks, the Electricity Laws (Amendment) Act 1998 was enacted. This facilitated the infusion of private sector investment in transmission through grant of transmission licenses. Guidelines for private sector participation in the transmission sector were introduced in January 2000. These guidelines envisage two routes for private sector participation: Joint Venture (JV) route, wherein the CTU/STU owns at least 26% equity and the balance is contributed by the Joint Venture Partner (JVP) and the Independent Private Transmission Company (IPTC) Route, wherein 100% of the equity is owned by the private entity. A joint venture for the construction of a 1200-km transmission line to transmit power from Bhutan to the Northern grid has been successfully launched by PGCIL with the Tata Group.

5.4 Regulatory Reforms

An appropriate policy framework for private participation in the power sector is a necessary but not a sufficient condition for to improve the climate

for private investment in the sector. Major hurdles faced by the private investors included frustrations in receiving administrative approvals[7] , payment risks with financially weak SEBs/distribution utilities, lack of sovereign guarantees,[8] political stability and the partially liberalised fuel markets, especially for the coal sector.

The government realised that in order to attract much-needed private investment into the power sector, the separation of the distribution segment of the power sector should be carried out to improve its performance. Led by similar developments in a number of countries around the world a process of reform was introduced in the state of Orissa. It became the first state to unbundle the electricity board into five corporatised entities—one each for generation and transmission, and one each for the three distribution zones in the state. An independent regulatory commission (Orissa Electricity Regulatory Commission) was also set up to oversee the functioning of the transmission and distribution companies. Orissa later privatised its power companies. Subsequently, Haryana and Andhra Pradesh also followed the twin strategy of unbundling and regulatory reform. In 1998, the Central Electricity Regulatory Commission (CERC) was set up under the Electricity Regulatory Commissions Act, 1998. The main functions of the commission include regulating the tariffs of generating companies owned or controlled by the Central Government or those serving more than one state, as well as inter-state transmission and tariffs of transmission utilities.

At the state level, the State Electricity Regulatory Commissions (SERCs) introduced a transparent procedure for tariff filing, its review, and the adoption of an order under which the utilities would fix transmission and distribution tariffs for various consumer categories. The process of tariff determination has become more transparent and participatory due to public announcement of tariff filings by the utilities. This process includes organisation of public hearings and invitation for

public comments thus bringing credibility to the process. In order to alleviate consumer concerns regarding quality improvement and better response by the utilities to their complaints, the SERCs have not only undertaken steps toward the formulation of complaint handling procedure by the utilities but also a system for themselves so that consumers can bring their concerns before the commission. Twenty-four states have set up regulatory commissions, and 18 of these regulatory commissions (the SERCs) have issued tariff orders. The smaller states in the North East have established a Joint Electricity Regulatory Commission. Thirteen states have unbundled and corporatised their previously integrated SEBs. Orissa and Delhi have privatised distribution. The bitter public experience and its political concerns have led other state governments to take a more cautious approach toward privatisation. The independence of regulatory institutions remains undermined by indirect control over the appointment of the members of the regulatory institutions and by delaying financial independence to such institutions. The regulatory environment has nevertheless reduced uncertainties associated with ad hoc behaviour by the electricity utilities under political influence. The concerns regarding regulatory uncertainty and lack of incentives in the rate of return regulation have been addressed through adoption of a multi-year tariff (MYT) framework by the CERC. The Electricity Act of 2003 prescribed adoption of MYT principles by all regulatory institutions. Some of the SERCs have initiated a consultation process for introducing the same. However, its effective implementation would be influenced by availability of reliable historical data which is crucial to designing appropriate incentives.

5.5 Distribution Reforms and Privatisation

Most of the ills of the Indian power sector find their origin in the distribution segment. The distribution segment has lagged both in terms of operational efficiency as well as financial performance. The slow pace of investment generation as well as distribution segment can be attributed to the severe cash flow

problem associated with the under-recovery of costs and poor collection efficiency. Poor operational efficiency further aggravates the situation. The Kohli Committee on financing of power sector emphasised the need for improving the financial viability of state utilities and for reforming the power sector in states. Without these crucial steps, it was felt that the desired investments in the power sector may not be forthcoming (GOI, 2002a).

Recognising the need to accelerate reforms in the distribution sector the central government introduced the Accelerated Power Development Programme (APDP) in 2000–01 to restore the commercial viability of the distribution segment. To encourage reforms in the distribution sector, it was rechristened the Accelerated Power Development and Reforms Programme (APDRP) during 2002–03. Additional emphasis was placed on milestones for reforming the ailing distribution segment in the states. The main objectives of the programme include improving the financial viability of state utilities, reducing of aggregate technical and commercial (AT & C) losses, improving customer satisfaction, and increasing the reliability and quality of the power supply. The scheme also encourages the establishment of SERCs, metering of 11 kV feeders and of all consumers, and energy audits at the 11 kV level. A number of state utilities gained from the APDRP scheme by reducing cash losses and securing equivalent grants from the central government. The reform linked investment component also motivated restructuring and initiation of regulatory reforms in various states.

The privatisation plan for distribution zones in Delhi specified a five-year tariff profile, agreeable to the regulator (Delhi Electricity Regulatory Commission). This helped in mitigation of regulatory risk by ensuring tariff certainty and performance milestones for a five-year window. Even so, the privatisation scheme was made possible by a substantial subsidy of USD720 million budgeted by the state government over the five year period. This would not be easy to replicate in other states. The Planning Commission estimated that if the privatisation of distribution in

other states is carried out in line with the Delhi model, it would translate into a viability gap financing of Rs. 1000 billion (GOI, 2005b). In the privatized distribution zone of Orissa and Delhi, T&D losses remain above 45% and 40% respectively. Given the not-so-successful experience to date, the Planning Commission has suggested alternatives such as last mile privatisation involving metering, meter reading, billing and collection (GOI, 2005b).

5.6 The Electricity Act 2003: The Emerging Competition and Private Investment

The single buyer model, which envisages the sale of power from IPPs to financially weak state utilities/SEBs, has proven to be a hurdle to further development. After a number of drafts and amendments in the Lok Sabha and the Rajya Sabha, the Electricity Act 2003[9] came into effect from 10 June 2003. It replaces the three existing laws governing the power sector, namely, the Indian Electricity Act, 1910; the Electricity (Supply) Act, 1948; and the Electricity Regulatory Commissions Act, 1998. Apart from consolidating the laws relating to generation, transmission, distribution and use of electricity, the Act includes the following main provisions:

• De-licensing of thermal generation and removal of restrains for captive generation;
• Open access to transmission;
• Provision for license free generation and distribution in rural areas and provision for management of rural distribution by Panchayats, Cooperative Societies, non-Government organisations, franchisees, etc.
• Provision for the payment of subsidies through budget;
• Setting up of an Appellate Tribunal to hear appeals against the decisions of the CERC and SERCs;
• Mandatory metering of all electricity supplies;
• Recognition of trading as a distinct activity with ceilings on trading margins to be fixed by the Regulatory Commissions;
• Phased introduction of open access in distribution

and provision for surcharge until the current level of cross subsidy is gradually phased out; and
• Regulatory commission to be guided by multi-year tariff principles.

The Act has enabled competition in the bulk power market through the de-licensing of thermal generation, open access to transmission and recognition of trading activity. Phased competition in the retail electricity supply will now be guided by the open access regulations for the distribution network issued by the respective SERCs. Impending competition in the distribution segment further highlights the need for improving efficiency in this segment of the power sector. This re-emphasises the acceleration of distribution reforms in the sector.

The Act also embodies policy and regulatory support for encouraging private investment in the power sector.

• Tariffs should encourage optimal investment (Sec. 61 (c))
• The central and the state commissions should advise the central and the state governments respectively on the promotion of investment in the electricity industry (Sec. 79 (2) (a) (iii) and Sec. 86 (2) (ii)).

An amendment [10] to the Act stipulates open access to all customers requiring maximum power above 1 MW by 27th January 2009. This opens up the market for direct sales by IPPs, bypassing the distribution licensees. As the applicable crosssubsidy surcharge is to be progressively reduced and eliminated by the SERCs, the market for electricity will open up greater avenues for prospective IPPs. New capacities to be created over the next few years would be best placed to utilise this opportunity to their advantage.

Subsequent to the enactment of the Act, the National Electricity Policy (NEP) and the National Tariff Policy (NTP) were formulated by the Ministry of Power. The National Electricity Policy (NEP) has reemphasised the role of private investment in

generation, transmission and distribution. The National Tariff Policy specifies financial norms associated with the determination of reasonable tariffs to ensure financial viability and attract investment.

Increased competition and direct access[11] to consumers through open access is set to improve the investment climate. Competition is expected to bring efficiency to the market and provide incentives for cost reduction. Direct sales to customers will eliminate payment risk associated with the single-buyer model, where IPPs were only allowed to sell to the SEBs only. In order to protect the incumbent utilities from skimming of creamy layer of industrial and commercial customers by traders and IPPs, the Act provides for a cross-subsidy surcharge and an additional surcharge. The former allows for the recovery of a part of the cross-subsidy which was being provided by the customer leaving the incumbent utility. The later is to recover costs associated with stranded assets that were used to supply electricity to the consumer. Setting higher level surcharge would obviate the essence of competition. The National Tariff Policy, issued in 2006, has formalised tariffs in such a way as to restrict them to lower levels, thereby enhancing competition and facilitating direct sales to consumers.

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1. **Motilal sharma**
   (posted 28 April 2007 / 05:53:13 AM)

   The paper presents a useful analysis of the power sector in India. Comparision with power sector development and policies in similar economies further strenthens usefulness of the study.The recommendations made could be effectively used by India and other developing economies in designing appropriate policies in the development of power sector.

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