POLICY FRAMEWORK FOR POWER

By

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I. POLICY FRAMEWORK

A. Competitive Generation

The Electricity Act (and related acts and rules) should be changed to allow for a competitive electricity generation system, in which entry into power generation is free i.e. investment is de-licensed.[1] Nuclear power should be de-reserved and opened to foreign investors, and safeguards limited to these plants.[2] Even after the enabling legislation is enacted, the actual move to competitive generation would be gradual.

The move from the MOU to a competitive bidding system should continue. Unlike in communist or capitalist dictatorships, MOU type deals are unlikely to work in India because of vigilant opposition parties, free press, active public interest groups and independent judiciary. Periodic democratic changes of government magnify the risks involved in MOU type systems, and thus raise costs.

India has, however, the potential for creating one of the more competitive generating industries in the World. This could be achieved within the next 5 years if all State Electricity Boards hive of their generation operations into companies, and sell 26% to 75% equity to entrepreneurs and the public. Large states could create two or more companies, while smaller ones could amalgamate into a single entity. Once created, these companies will have to be freed to compete against each other and to operate in any state.

B. Regulated Monopoly Transmission

The backbone transmission network is technologically still a natural monopoly and will consequently have to remain a regulated monopoly for the

[1] As in industry, enviornmental and other clearences will still have to be obtained.
[2] Note that this is more in the nature of a signal, as foreign investors will not be allowed by their own governments to set up a nuclear plant in India without "safeguards" against proliferation.

time being. This does not mean a single transmission company for the whole country, but a monopoly provider for each segment. This sector would also include short distance transmission lines; From a generating station to a user (e.g. an aluminium plant) or distributor in a nearby city, and to and from the back-bone transmission network.[3] The regulator must ensure inter-connectivity (between different transmission companies) and access to transmission services (wheeling) at reasonable rates to all generators and distributors of electricity. The regulator must also ensure that conditions of access are fair and non-discriminatory.

C. Benchmark Competition in Distribution

In the area of distribution, we need, in the words of Mao Tse Tung, to "let a hundred flowers bloom." The policy framework must allow and encourage different forms of ownership and organisation such as co-operatives, private companies, public companies and joint ventures. The frame work would make it possible for a city to have a single organisation to distribute to the whole city or have several networks run by different organisations. One organisation could also operate in only one or in several cities and regions.

All these organisations, including the existing State Electricity Boards, should be required by law, to provide and publish performance indicators that can be used to benchmark performance. These would include the unit cost of distribution (cost of electricity received minus cost of electricity supplied) and quality indicators [such as period of outage, average voltage and its variance]. This will require metering of supply at different points such as the distribution station and sub-stations. This is particularly so for State Electricity Boards which currently combine transmission and distribution. The availability of such information will make it possible for the users and regulators to apply

[3] Requiring these to be controlled by a load despatch center would kill such investment.

countervailing pressure against the vested interests encouraging power theft and inefficiency.

II. INDEPENDENT REGULATORS

For a non-tradable service such as power, characterised by substantial elements of natural monopoly, fair and forceful regulation is not a luxury or fad but a necessity. This is particularly so in our country, where `public utilities' have deteriorated to such an extent that some of them have become `rogue organisations' (without much exaggeration).[4] The low prices charged to certain categories of consumers is critically affecting the health of State electricity boards today. The underlying problem is the predominance of the personal interests of those who control, direct or run these organisations over consumer interest. Current & potential users (consumers) are consequently treated with contempt. An independent **Tariff authority** may be sufficient to get the private investment rolling. An independent **Regulatory authority** is essential to discipline the `public utilities' and put the consumer (user) at the centre of the system where he belongs.[5]

The root of the deterioration of systems and procedures for electricity supply in India is the bundling of three distinct functions into a single system. These functions are:

A. **Policy**

It is the prerogative of the government to make policy. This it can do through the concerned department, associated organisations like the Planning Commission or subsidiary organisations such as the Central Electricity Authority. This includes the issue of licensing of generation plants (MOU or

[4] Employees of these organisations feel free to use the might of the organisation, to harass the honest consumer and encourage (not just abet) and collude in the theft of power, for personal gain.
[5] The supply of power to some at close to zero cost and to others at Rs. 14 per unit is one of the many arbitrary actions needing correction.

competitive bidding). Licensing and associated planning, where they exist, should remain the responsibility of the government and its associated and subsidiary organisations.

B. **Regulation**

Broadly speaking the central function of the regulator is to regulate the "Conditions of Supply." This has three elements; Tariff or price, quality of supply (power cuts, voltage & its fluctuation) and Access (to the natural monopoly network). For the healthy development of the Power sector in India it is essential to have a Regulatory Body (or bodies) with the power, independence and authority to enforce fair and rational "conditions of supply." Tariff setting has to protect the interest of both current and potential consumers. The regulatory body must therefore encourage investment. For this reason, all actions and disputes following the issue of an investment license (within a well-specified licensing policy), come within the purview of the regulatory authority. Government should make clear that it will not interfere at this stage, if the policy framework is to have sufficient **credibility** with potential investors.[6]

C. **Production and Supply**

The functions of production and supply need to be separated from the policy making and regulatory functions. This is essential no matter what the relative role of public and private sectors in the future. The producer or supplier must function within a system of rules and regulations designed to promote the long-term interests of all users (consumers). Within this framework they must have freedom to function as commercial organisations.

[6] This assertion is based on the last six years history of our attempt to attract private power producers, where reviews and re-considerations by each successor government has undermined the credibility of government.

III. STATE ELECTRICITY BOARDS

There is an urgent need to reform the State Electricity Boards. This reform has many dimensions, and it is useful to define the range of possibilities. The diversity of economic and political conditions under which State Electricity Boards operate, makes it unlikely that any single solution will be adopted by all.

A. **Bifurcation or Trifurcation**

Given the existing monopoly of the State Electricity Boards in both Production and Supply, there is a strong case for separating Production from Supply by making them the responsibility of different organisations. This will make it easier to introduce effective competition into generation. It may also be desirable to go one step farther by separating transmission from distribution, as this will help in attracting independent distribution companies into the system.

B. **Corporatisation**

Our experience with Public Sector Companies and Nationalised Banks shows that Corporatisation can help in changing the orientation and performance of publicly owned units. A professional board, consisting of a mix of internal and external directors, is also helpful in orienting these units towards efficient and profitable operation. The attitude and objectives of the minister and the secretary of the concerned department are also critical in the transition period.

In some States, it may be easiest to hive off the generation part into a separate corporation, while leaving the State Electricity Board in charge of distribution. In other States it may be easier to convert the entire Electricity Board into a single company, while leaving open the issue of Bifurcation or trifurcation to a later date. The bolder ones may like to follow in the footsteps of Orissa by forming three separate companies for generation, transmission and distribution.

C. **Co-operatives**

Another possibility that needs to be seriously considered is, to hive off parts of the distribution system into consumer co-operatives. Thus we should encourage the formation of professionally managed farmer's electricity distribution co-operatives in rural areas. An alternative would be, to hive off all three functions of the State Electricity Board, over defined rural areas, into Power co-operatives. The generating capacity transferred would be equal to the current supply of electricity to the concerned region. Further growth and development of power in the region would primarily be the responsibility of the co-operative. Similarly co-operative could be formed for distribution of electricity to slum areas, with metered supply by the State Electricity Board to the co-operative.

D. **Leasing**

There are several generating plants, whose performance is abysmal. We must encourage the State Electricity Boards to lease out such plants to the private sector for a defined period. The period should be long enough to encourage investment in **renovation and maintenance**. One arrangement for such leasing could be as follows:

The current supply of electricity by each such generating station and its cost would be estimated. The lessee would be required to supply this amount of power at the calculated cost (along with the existing formula for adjustment in fuel charges). The lessee would be free to sell any additional power he generates to anyone, at rates to be negotiated directly by him.[7]

Similar experimentation is needed on the distribution side with selected distribution areas to be leased out, benchmarked on current supply to and revenues from, the area. The additional revenues generated by the lessee will be

[7] This is an application of the dual pricing system first used in Aluminium and other sectors.

shared between it and the State Electricity Board, in a proportion to be determined through an auction.

E. **Sale**

Generating stations could also be transferred to co-operatives and private operators on a Buy Operate Transfer basis. As in the case of the lease, a certain amount of power would have to be given to the State Electricity Board at the current cost. The hiving of a rural region from the State Electricity Board, as a co-operative, could also require sale of the assets to the co-operative.

F. **Accounts & Audit**

State Electricity Boards should be required by law to maintain accounts and have them audited by independent auditors (whether they are converted into companies or not). Public interest would be even better served if annual cost and social audit are also made compulsory. This will bring pressure to check theft, collusion, corruption and inefficiency even before regulatory authorities are set up. These audits would be an invaluable source of information for tariff setting and preservation of consumer interests, once regulatory authorities are set up.

IV. FUEL DE-CONTROL

There are reasons to believe that the control on fuel supply to power projects has resulted in rent seeking and delay in entry of private power producers. To solve this problem for good, all fuels of potential use by the power sector should be de-controlled. This means that import of Naphtha must be on OGL with an appropriate tariff to protect domestic producers. Any remaining controls on import of gas (LNG, CNG, etc) should also be removed. At the very least, a start must be made by putting imports of all these on SIL. Tariff setting must keep in view the necessity of dismantling of the

Administered Price Mechanism, and the objective of bringing tariffs to Asian levels by the turn of the century.

Remaining impediments to competition within and private entry into the coal sector must also be dealt with urgently. This requires a review and reform of policies, procedures and rules for exploration, leasing and exploitation of coal reserves, with the active participation of potential investors.

V. ELECTRICITY CONSERVATION

A. **Energy Labelling**

Power consumption labelling must be made compulsory.[8] Purchasers can then judge the efficiency and running costs of electrical machinery, equipment and consumer goods that they purchase. This will also create awareness among the producers of power equipment about the energy efficiency of their products. Such energy labelling would also be required on all imported electrical equipment before it is sold in India. Labelling will ultimately create competitive pressure for improvement in energy efficiency of equipment and appliances.

VI. **POSTSCRIPT**

Over four years have passed since the above paper was written and the pace of reforms is not adequate to give us any confidence that the power problem will be licked within the next 5 years. The time may therefore have come to ***consider*** even more radical reforms. That is a complete de-control and de-licensing of power generation and distribution. That is any individual, co-operative or company could generate and/or distribute power without getting any investment licence or prior clearance. It would therefore be free to compete with the State Electricity Board, just as the latter would be free to compete

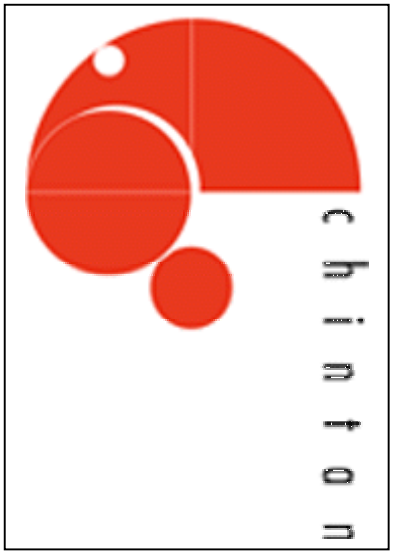
(operate) in any other State. As with any other producer the power producer or distributor would be subject to the environment, health and safety laws of the country.

The regulatory authority would set upper limits on the electricity rates that can be charged at the retail level and leave (at least for the next 5 years till there is a visible improvement in supply) everything else to competition. Regulatory permits could, however, still be required for distribution and transmission systems above a certain size. These limits could initially be set quite high to encourage a Small-Scale Power sector and gradually reduced over the next 5 years or so.

Essential to the success of this policy would be a complete de-control and de-licensing of all potential fuels (e.g. coal, LNG) for the power industry. Even though this is already in process and is to be completed in the next few years, it would be helpful if the process is speeded up.

Given the horrendous state of T&D losses in India, with the figure reaching 50% in the capital city of India, it is no exaggeration to call these "Theft & Dacoity" losses. The Mafia like operation of those within these electricity distribution outfits who are responsible for such losses has to be experienced to be believed. Each State must set up a Special Task Force (STF) a la Veerapan to root out this "Dacoity." This root and branch operation can start with the metropolitan cities and move on to the large towns.

[8] One technical problem peculiar to India, is that energy efficiency at a fixed steady voltage (220V) may be different from energy efficiency at the low and fluctuating voltage so common today.



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