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UNAFFORDABLE IS UNVIABLE:

The Brown out of the New Power Policy

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The program to 'reform' the power sector in India has gone hand in hand with the broader structural adjustment programme for the economy and the 'New Economic Policy' of Liberalisation, Privatisation and Globalisation(LPG). In the 1991 Power Policy, the Government of India announced a wide range of policy measures to 'liberalise' the power sector in order to facilitate private and in particular, foreign investment. Basic legislation like the Indian Electricity Act 1910 and the Electricity Supply Act 1948 was amended. Foreign investors were allowed upto 100 % ownership of power projects. Tax holidays, reduction in import duties, and a slew of notifications from time to time were given in response to the demands of the foreign investors. For example in the crucial matter of determination of electricity tariff to be paid to a generating company, amending notifications were issued first in 1992, twice in 1994, twice in 1995 and four times in 1997. Fundamental new legislation for restructuring and 'unbundling' was also enacted in several states in response to World Bank dictates for structural changes in the power sector.

Many of the tariff notification amendments were made specifically to accommodate the Dabhol Power Project of Enron. (1) In fact the purpose of the project was not just to put up an expensive power plant which would earn hefty profits. It had a larger mission described by Linda Powers, Enron's Vice President, Global Finance in her testimony before the Appropriations Subcommittee of the US Congress.(The $20 million educational expenses mentioned here has received wide publicity. The more important message however, largely missed by the media, is now becoming clear.) It is necessary to quote at length some excerpts from this testimony:

"*Thanks to certain changes in the developing countries which I will describe in a minute, a new way of achieving the same development goals has become possible. Private parties like our company and*

others, are now able to develop, construct, own and operate, private infrastructure projects in these countries. In the process of doing so, private parties are able to achieve the two things which U.S. foreign assistance efforts have long been trying (without much success) to achieve : (1) the projects are serving as action forcing events that are getting the host countries to finally implement the legal and policy changes long urged upon them....

Under this new approach, the private parties are bearing the costs, both for bringing the policy reform process to fruition, with the host country governments, and for the facilities to alleviate current problems....

This private sector driven approach I am describing applies not only in the energy sector, which is my company's area of activity, but also in other infrastructure sectors—toll roads and other transport facilities; water and sewage; telecom—and potentially in industrial sectors....

When a firm like Enron, Mission or AES goes into a foreign country to undertake a project, just what do we do ?... We make money by selling an important commodity—electricity—to the local people at a reasonable price.

If we are successful, the results are not only the addition of valuable assets to the country, but equally important, the creation of "commercial infrastructure". These projects must be put together and financed using standard private sector tools. This process, which for the first round of projects is invariably painful and time consuming, forces government officials of the country in question to deal with the reforms needed in these key areas :

1.Property rights , including the enforceability of contracts....

2.Market Pricing..... One of the biggest problems in these countries is that they have all had hugely subsidized infrastructure services... Projects like ours aren't financeable as long as you have artificially depressed prices. So they have to bring the prices in alignment with market pricing.

3. *Regulatory reform. One of the most important regulatory reforms—privatization—is by definition, the necessary starting point for any of these private infrastructure projects...*

4. *Sound lending...*

These are the kinds of important changes in laws,policies and practices that private sector led infrastructure projects are causing to finally be implemented. By working closely with private developers, engineers, financial advisors, lawyers and lenders throughout the several year process of project development and financing, host country authorities come to realise that the project can only go forward to fruition if these changes are made. Importantly, the project also provides these authorities with some "cover" against domestic criticism and resistance to these changes.

Let me give you a real world example to illustrate these points. Just yesterday Enron reached closing on a $920 million power plant project in Dabhol…This is the first privately developed independent power plant in India… Working through this process has given the Indian authorities a real and concrete understanding of the kinds of legal and policy changes needed in India, and has given the Indian banks a real and concrete understanding of sound project lending practices. Moreover, our company spent an enormous amount of its own money—approximately $20 million—on this education and project development process alone, not including any project costs…

Furthermore, the education provided by our project has had a greater impact than would further general technical assistance, and has finally achieved some key changes that have long been urged by development institutions such as the World Bank and AID. Just two of a number of examples:

- *The State of Maharashtra, where our project is located in India, is now revamping its electricity rate structure to end electricity price subsidies.*

- *Five leading Indian banks are playing a major role in the total financing package for our power plant project….*

The success of these private projects in achieving the third key—benefitting U.S. interests—should already be obvious from my description of the projects, and I will touch on it only briefly. One of the main(though not the only) benefits to U.S. interests lies in the economic value of these infrastructure projects. They are very large, usually ranging from about $ 200-700 million per project. They include correspondingly large amounts of capital equipment, and engineering and other high value-added services. Since much of these goods and services can be sourced in the U.S., these infrastructure projects are the most important area of growth in

export value to the U.S.. In fact, they are already catching up to aircraft in export importance, and should surpass aircraft during this decade."

Legal and policy changes to facilitate privatization, and what Ms. Powers calls 'market pricing' is what the new power policy is all about. One decade down the line this policy is not only in deep crisis, it is in shambles, a fiasco ,wherever it has been implemented, beginning with Maharashtra, home of the Dabhol Power Project.

The term "financial closure" of power projects is set to acquire a completely different meaning in Maharashtra- shutdown of power plants due to payment problems. These are the hard implications of recently disclosed facts . In December 1999, the Maharashtra State Electricity Board had submitted a proposal for tariff revision before the newly constituted Maharashtra Electricity Regulatory Commission(MERC). Several organisations appearing before the MERC including the Maharashtra State Committee of the Centre of Indian Trade Unions pointed out inconsistencies and challenged the data provided, which led to the MERC directing the MSEB to make a fresh proposal based on realistic figures. MSEB submitted its revised proposal in March 2000. The new data provided has shocking implications.

Consider the following figures for power purchase. In the current financial year MSEB will purchase 16.435 billion units of energy at a cost of Rs 3798 crores. Out of this 4.2 billion units purchased from the Dabhol Power Company will cost Rs 1998 crores. The balance 12.235 billion units from all other sources will cost Rs 1800 crores.

The cost of DPC power at generation is an astounding Rs 4.76 per unit which works out to a cost of supply of Rs 6.53 per unit after factoring in 27 % T&D losses. The same amount of energy from alternate sources would not cost more than Rs 750 crores. There is a remarkable perspective on the excess payment of around Rs 1250 crores per annum.

The MSEB proposal discloses that capacity payments to DPC are around Rs 85 crores per month. Variable energy cost is around Rs 2.79 per unit. Experts have submitted to the MERC that even if MSEB pays over Rs 1000 crores capacity charges per year to DPC as per the power purchase agreement to keep the plant shut while drawing power from alternate sources, it will still save money.

It is clear that the entry into commercial service of Phase I of the DPC has presented MSEB with an insurmountable problem. In

1996-97 the average cost of supply for MSEB was Rs 2.03per unit. In 1997-98 it went up to Rs 2.14 per unit. For 1998-99 it was 2.26 which was expected to increase to Rs 2.50 in 1999-2000. With DPC coming onstream in May 1999, the average cost of supply for 1999-2000 shot to Rs 2.90 per unit.

In 1998, the Rajadhyaksha Committee Report on MSEB had anticipated a crunch : "The next question which needs urgent attention pertains to the rationalisation of the entire tariff structure. This has assumed a new urgency in view of the several IPPs already approved by the state government and those which are under consideration of the government. The available data in terms of such sanctioned projects show that the share of the purchased power in the total power supply by MSEB is expected to go up each year. This will have significant implications for the pooled cost of generation of MSEB.

Based on certain assumptions the cost of MSEB's pooled power is estimated to go up from about Rs. 1.90 per unit in 1995-96 to Rs. 2.86 PU (best scenario) and Rs. 3.72 PU (worst scenario) in 2001-2002. The MSEB, at the instance of the state government, has followed the policy of loading a major portion of the increase in tariff primarily on HT industry, commercial users, bulk supplies, inter state sales and railway traction supply. For various reasons, such steep increases in the rates to these consumers will neither be sustainable nor feasible in the future."

That time of reckoning is already upon Maharashtra. New capacity additions in generation were predicated on the assumption of a healthy growth rate for industry which could shoulder the burden of increased costs. That assumption has collapsed. In reality there has been a drop in high tension industrial consumption for the second year in succession. So who will pay the increased bill ?

The MERC can approve higher tariffs for different classes of consumers. But it cannot ensure that they will be realised. Studies have shown that there are many classes of consumers who default not because they won't pay, but because they cannot.The following scenario is not unlikely : Further tariff increases may not result in the expected revenue increase. They may only expand the nonperforming sector for MSEB. MSEB then has the option of cutting off supplies to defaulting consumers, which would result in further contraction of aggregate demand, in the face of increasing supplies of high cost power. This will so sharply accelarate the increase in the average cost of supply that the Rajadhyaksha Committee 'worst case' scenario may in fact turn out an

underestimate.

These imperatives must have weighed on the MERC. In a recent order,(April2000) it has given a number of significant directions - strict merit order purchase, including non-purchase from DPC during off peak hours; 6.5 % increase in average tariff, far less than the 20% demanded by MSEB, strict audit accounting, reduction in bulk tariff for HT consumers, along with a controversial tariff hike for lowest class of urban consumers.

Unless there is an immediate reduction in T&D losses, which is unlikely,the MERC tariff order will have predictable consequences: payments default by MSEB. With only Rs 630 crores out of the Rs 2000 crore deficit in 1999-2000 taken care of that problem is already in its lap. Payment default by MSEB to its suppliers may not immediately lead to shutting off supplies, but with the free power option rapidly shrinking all around, that prospect is not distant.

Clauses in the DPC-MSEB PPA ensure that DPC gets paid first, come what may. The Enron-DPC project already has something like 26 escrow covers to take care of its dues. When supplies shrink to match revenue possibilities, the absurd outcome is that the addition of each unit of Enron power will lead to the subtraction of three units of cheaper power which cannot be paid for. The DPC project would not add to but in fact decrease the de facto aggregate electric energy available to Maharashtra.

This is the problem with only Phase I of the DPC project which is one third of the planned capacity. Phase II will take the payment burden to a likely Rs. 7000 crores a year. However, Maharashtra will face the payments fiasco well before Phase II comes onstream. A fundamental reconsideration of high cost power projects has become unavoidable. Damage limitation is the only real option open to Maharashtra today - choosing which power plants it will run and which plants it will have to turn off on financial considerations.

An unsustainable payments crisis has also been the outcome of the Orissa experiment(2). The Orissa experiment is important because it has been universally projected as the advance guard of the electricity ‘reforms’ process, which is to be implemented in other states. All the steps of the restructuring paradigm have been dutifully implemented in Orissa : the enactment of the Orissa Electricity Reform Act, 1995, the ‘unbundling’ of the Orissa State Electricity Board into separate entities for generation, transmission and distribution, the corporatisation, commercialisation and privatisation of the distribution entities and the creation of a

statutory authority, namely the Orissa Electricity Regulatory Authority to oversee the operations and set transmission and distribution tariffs.

A high level committee under the Chairmanship of Pradeep Baijal constituted by the Ministry of Power to formulate a rescue package has arrived at the following conclusions regarding the multiple payments defaults which characterise the crisis:

The salient features of the crisis are the following:

a. *The payables of Gridco (transmission entity) are expected to be Rs 1160 crores at the end of FY 00. Included in this is a cash deficitt amounting to Rs 860.67 crores which has been projected for FY 99 and FY 00.*

b. *This reflects the weakest link in the generation-transmission-distribution chain in the state and could derail the reform process since the payment inability of Gridco would determine the commercial viability of the privatised distribution companies as well as the part privatised generation companies.*

c. *The financial position of Gridco has impacted on the Central Public Sector Undertakings dealing with the state.*

The estimated outstanding liabilities of Gridco and the receivables as of March 31, 2000 are indicated below :

***Gridco owes** :*

a. *Rs 1160.4 crores on account of the power purchased by it from the Central and other state generating stations*

b. *The financial institutions, public and World Bank an amount of Rs 2714.5 crores by way of loans.*

***Gridco is owed** :*

a. *An amount of Rs 1003.1 crores from the government departments,PSUs and distribution companies.*

The situation is aggravated since the state government has strained

its ability to alleviate the financial problems of Gridco. Hence it has sought the Centre's financial intervention in this matter.

The Committee is of the view that the viability of the reform process is crucial not only from the point of view of the Orissa state's power sector but also the overall reform climate in the country. The absence of a demonstration effect from the first reform experiment in Orissa can severely impede future reforms in other states. Hence all measures must be taken to ensure that the transition period during the Orissa reforms is trouble free....

....This is because although the reform process in the states are conducted on a bilateral basis with the multilateral institutions, a financial crisis arising out of such an exercise cannot be ignored by the Centre. The spinoff effects of the reform process cannot be in a retrograde direction, else the current World Bank funded reform prescriptions in the states of Andhra Pradesh, Uttar Pradesh, Rajasthan, Haryana and Karnataka would be severely stifled.

The Baijal Committee report also analyses why the "meltdown" in Orissa has occurred :

It acknowledges that T&D losses have been much higher than presumed. The expected increase in industrial consumption has not occurred, on the contrary there has been a "depressed demand" from industry due to prolonged industrial recession and "steady flight to captive generation". The privatised distribution companies have been unable to collect and unable to pay. The result : a growing gap between the realisation per unit of energy supplied and the average cost of supply.

There is no Enron in Orissa burdening the state with compulsory purchase of exorbitant power at over Rs 6.50 average cost of supply per unit. But privatisation with its attendant financial jugglery of "upvaluation of assets", high debts and consequent interest burdens,'adequate' return on equity, allowable depreciation etc. have nevertheless led to a quadrupling of the power purchase bill for Gridco. This too has contributed to the crisis, though this is not identified as a cause by the Baijal committee.

Essentially similar conclusions have been arrived at in respect of power reforms in Karnataka. The government of Karnataka set up a high level committee under the Chairmanship of Deepak Parekh, Chairman of the Infrastructure Development Corporation to make an assessment of the escrow potential of the state.The terms of reference included :

I To scrutinise the escrow capacity of the Karnataka Electricity Board(now reconstituted as the Karnataka Power Transmission Corporation Ltd.) as assessed in various studies, and advise the government on the existing and likely escrow capacity;

II In relation to the various Power Purchase agreements and approvals given to power projects by IPPs in the State, to advise government on the principles to be adopted in allocating the available escrow capacity.

The Parekh committee submitted its report in February 2000. Its conclusions, while remarkable, are not surprising in the light of existing realities:

In the opinion of the Committee, the central problem of the power sector in Karnataka is the inadequacy of cash flows from the sale of power. This inadequacy of cash flows stems from two reasons, viz, technical and non-technical losses within the system and imbalances and inadequacies in the tariff structure.

The calculation of escrow capacity presented before the Committee is based on assumptions that losses will reduce drastically, tariffs will increase significantly every year, agricultural consumers will pay substantially more than they do today, and the Government will pay large subsidies Going by past experience, the Committee considers such assumptions unrealistc. But hard decisions will now have to be taken (emphasis in original) The Committee notes that the GoK has embarked on a power sector reform programme, whose impact will take time to be felt. The assumption that existing revenue sources can support new capacity, while future growth in revenue will meet existing commitments, is not supportable, in the light of the decline in grid demand from Industrial HT users and the growth in demand from Irrigation and the lack of any effective action to reverse this trend. Even if tariffs are rebalanced, and this now depends largely on the State Electricity Regulatory Commission, the reduction in Industrial HT prices required to attract them back to the grid would require a concomitantly larger increase in irrigation tariffs or alternatively increased support from GoK, which does not appear to be forthcoming. Substantial revenue increases are thus not foreseen in the medium term without increases in irrigation tariffs and reduction in T&D losses. The consideration of the financial situation of KPTCL, its operational efficiency, the possibility of tariff rebalancing and the state of GoK finances has led the Committee to the assessment that as long as the present situation continues, it is close to impossible to structure any kind of payment security mechanism for IPPs . The fiscal position of the GoK makes it unlikely

that financial commitments by KPTCL to purchase energy from IPPs or other sources, if they are entered into, can be honoured. In the present situation, there is, in sum, no escrow capacity in Karnataka for the purchase of new power.

The Committee has been advised that the erstwhile Karnataka Electricity Board has executed bilateral escrow agreements with the three projects which total 351 MW. The Committee has noted that these agreements are not tripartite agreements and do not have the signature of an identified Escrow Agent. In light of the determination that there is no escrowable capacity at this stage, the Committee is of the opinion that GoK should not proceed any further with regard to the escrow agreements with these projects.

The Karnataka report makes a number of observations which have wider implications :

In theory, the sale of extra energy pumped into the system by the new project is supposed to generate the revenue to allow such segregation without reduction in expenditure on some other item. In practice, as is seen from the experience in Karnataka in the recent past (when 1068 MU was pumped into the system but only 169 MU could be metered and billed), the sale of the extra energy does not usually generate sufficient revenue to pay for itself. In such cases, the establishment of an escrow account would necessarily imply a reduction in expenditure on another account.

The current practice is to identify specific revenue collection centres and arrange for the collections from these centres to be deposited into a separate account in an identified bank i.e. the Escrow Agent. An escrow therefore transfers the primary claim on revenue stream from the Distribution Company to the IPP. In the context of privatisation of distribution zones, most of the privatised regions can be expected to have cash losses in the initial years. The negative effect of an escrow on the already low cash flow stream that would be received by the prospective buyer makes it difficult to privatise a region that has been escrowed. Escrowing of specific zones thereby hinders the process of distribution privatisation.

What has happened in Orissa is pertinent in this context. An IPP, AES, has become principal shareholder in CESCO, a distribution company, with an escrow account for power supplied by the OPGC generating company, in which AES has controlling share. This kind of rebundling of unbundled entities is now seen as permissible and acceptable, provided the entities are privately owned. Unbundling of vertically integrated SEBs , in the name of encouraging competition

and preventing vested interest, is evidently a temporary phenomenon, a transition measure. There are no proposals to unbundle the privately owned, vertically integrated Tata Electric Company and the BSES. This is also relevant in the context of Enron and the privatisation of distribution in Maharashtra.

The payments crises in Maharashtra, Orissa and Karnataka, though different in details have much in common. The situation in Madhya Pradesh, Delhi or Haryana has also the same or similar script. Each tells a story of failure of power markets in the specific circumstances of each state.

At the commencement of the New Power Policy it was assumed that since electricity was such an essential commodity, power markets could never fail. No matter what the price, consumers would buy. Catchwords replaced rationality. The prevailing wisdom was "No power is more expensive than no power". Anybody who suggested otherwise was described as an ideologue, and ignored in the supreme confidence that there was money to be made and the only real question was who would get what share. In any case the pond was so big and deep that everybody's thirst could be satisfied provided that nobody was allowed to rock the boat. Many of the initial players are now left high and dry by the ensuing payments fiasco. But 'reform' is far from being abandoned . The Central Government and World Bank are desperately putting in place new financial packages to rescue the privatised interests which involve subsidies far bigger than the SEBs ever required. Comprehensive legislative change is being planned with the Electricity Bill 2000 on the cards for enactment (3).

There are some inescapable conclusions which can be drawn from the power market failure which is characteristic of the unaffordable electricity paradigm of the reformers :

1. The reformers' perception of 'reasonable' market pricing is not only unreasonable in the Indian context, it is unviable and unsustainable.

2. Electricity is not an elite consumption good (ECG), nor is it politically feasible to convert it into an ECG after 40 years of preliberalisation policies which succeeded in reaching electricity to a substantial proportion of the common people. Therefore there will always be powerful public pressure for affordable electricity and a power policy for delivering the same.

3. Affordable electricity requires a number of simultaneous conditions : least cost generation, along with a compatible fuel policy, least cost merit order despatch, strict audit accounting at all levels to eliminate waste and theft, demand side management of electricity consumption, carefully worked out subsidies, particularly for some categories of agriculture consumers, through cross-subsidization or otherwise. Tariff issues must be addressed , worked out and public consensus built on this understanding. This is a political exercise.

4. The current power policy is fatally flawed and will soon collapse due to unresolvable payments crisis. Alternate power policy will soon be seen as necessary. This should become part of the alternate left and democratic political /economic agenda for the nation.

5. Though the current power policy is failing it is far from being abandoned. The immediate task is to contain and prevent irreversible long term damage to the nation's electricity infrastructure. Long term PPAs, Fuel Import Policy, the proposed new electricity legislation are some immediate issues.

6. The trade union movement, particularly the electricity workers unions and technical officers associations will have to play a leading role in the alternate power policy. They have high stakes in the outcome. The technical, organisational and managerial capabilities are also available with the concerned organisations. The trade union movement will have to gear up and orient itself to addressing the various problems thrown up by this agenda.It will have to be proactive and take initiative on issues pertaining to viability, cost efficiency, effective auditing and control of theft and corruption.

The new Economic Policy of the nineties has failed in many ways. It failed to reduce poverty , to generate employment or to raise the living standards of the common citizens. This kind of failure however did not threaten the continuance of certain aspects of the policy like import intensive consumerism. The failure of the second phase of the NEP- import intensive infrastructure development is of a different kind. Not only is it more comprehensive , it has become visible. The alarm bells are ringing in officialdom.Even its supporters are forced to realise that the new power policy is unviable and unsustainable. Because electricity is an essential commodity, unaffordable is unviable.

The next question that arises is : Is affordable viable ? Though a full discussion of this question is beyond the scope of this article, the preceding analysis indicates that such an alternate power policy is both necessary and possible. The working out and implementation of this affordable and viable power policy will be critical for the future of this country. It is an important and urgent task before the left and democratic forces in the country today.

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Notes

1. In a writ petition filed by P.P.Sanzgiri, President of the Maharashtra State Committee of Centre of Indian Trade Unions and Abhay Mehta, energy analyst in the Mumbai High Copurt against the Enron project, several secret documents were filed which detail exactly how the tariff notifications were amended to suit Enron's requirements. These documents are excerpted in Abhay Mehta's recent book "Power Play".(Orient Longman,2000)

2. A detailed discussion is contained in Frontline, March 17, 2000 "Power Reforms in Trouble", Sudha Mahalingam.

3. See for instance "Electricity Bill 2000" ,National Working Group on Power Sector (April 2000)