Comments on the Draft Electricity Bill 2001

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Abstract

These comments on the Draft Bill 2001, had been widely circulated in September 2001. Discussions on the Bill have again revived in the media and elsewhere, as the reform of the power sector has made little headway, and there is much concern that something needs to be done. Little progress or changes have been made in the Bill, so that most of the comments made then remain valid.

Essentially the Bill is maimed because it is not clear enough, does not lay a path for reform and for the evolution of the sector, and in no way reduces the policy and regulatory uncertainties. While it attempts to bring about open access, that objective would not be realised since cross subsidies are to be loaded on to the transmission charge thereby killing whatever little prospect there is the Bill for a market in power. There is no specification at all of the mode of transmission pricing and the crucial role of transmission pricing is not recognised in the Bill. The Bill does not recognise that cross-subsidies via differential prices would continue to keep open the 'price-arbitrage' opportunity (the root of corruption and the source of all ills in the system), so that no real change would be possible. The Bill gives legal status to far too many 'authorities' and bodies, some of them quite unnecessary and vestiges of the past. The coordination problems between these are likely to take the system (if ever what is envisaged materialises) far from the optimal. The special opportunity in inter-regional trade in power cannot be realised unless the law limits the barriers to interregional trade. Most importantly the Bill virtually rules out incentive regulation of the modern varieties such as price cap regulation. Through the sub-clauses it brings in cost plus regulation. Cost plus regulation has been particularly problematic in India, and can be expected to bring inefficiencies and cost padding if not regulatory capture.

Comments on the Draft Electricity Bill 2001

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These comments refer to particular sections and subsections as given in the references. The comments follow the references. The references are in italics. Since there are many versions of the Draft Bill that differ slightly the reference numbers may not match the sections correctly. The references here refer to the version that was prior to the one put out on the Web by the Government in September 2001.

Preamble
Preamble should not say "development of the electricity industry as the industry.." as the primary objective; or even consolidation of laws. Ideally, the preamble should have started with the consumer interest; ie said "of ensuring that electricity industry develops in such a manner as to serve the consumer interest". The rest of the preamble could then follow. The point in a preamble is not to mention the processes or the modes for achieving a certain goal, but the goal itself. Given that any law however well crafted would not be complete and would have inconsistencies and contradictions it is important that the goal in simply and unambiguously stated in the preamble. Similarly, that the Bill aims to serve the consumer interest via a pluralistic industry structure and ownership, where therefore open access to the network is crucial could be stated right at the beginning.

Ref Part 1: Preliminary (short title, extent and comment) "provided that etc"..

This leaves very many different sequences of commencement of the provisions. There are certain constraints on the sequences. Thus one cannot have a market in transmission unless the transmission charges are reasonable. If the charges are not so constrained, despite open access, the market or even its rudiments may not materialise.

Part 1: Preliminary (Definition, 2)
There is no commitment to notify within a reasonable of time. One of the major problems with Indian law making is the gap between passage of a bill and its notification. Can a default date say a year from the date of passage be the date after which the bill is deemed as having been notified be inserted into the Bill itself?
There are far too many bodies that are being envisaged. Even if there was clarity in their roles (not there in the Bill as I will bring out later), these many agencies would most certainly lead to confusion, high interface cost for the players (cos), and increase the probability of regulatory capture. Thus the organisations are:
Authority (CEA)
Tribunal
SERC
CERC
State Govt
Central Govt
Board (at least till the reform is over)
CTU
STU
Courts
Local Authority
Regional Power Authority
Selection Committee
Central Advisory Committee
State Advisory Committee

Also communication/coordination reguirements between these organisations increases more than factorially so that confusion is almost certainly likely.
Many of the above organisations /authorities are not required at all. The Advisory Committees can go, the Regional Power Authority is pointless, and the CEA's role can be more clearly specificied so as to avoid overlap with other institutions. Equally importantly, the joint responsibility between the CEA and the Regulator on many matters could lead to responsibility shirking.

Ref to Preliminary/ Definitions, 2/(6) above dealing with appropriate government
The centre state jurisdiction is not based on any logic but on what exists in the existing laws (which is contradictory), and on ownership. Just by being central government owned need not make an entity come under the central govt and the central regulator. Similarly non-central owned but having multiple state serving stations or stations in several stations (the very purpose of open access and interstate power movements) are problematic in the current state of things and in this Bill. Ideally, the Central (regulatory agency, and government) should be delineated not in terms of ownership or location but in term so function, such as interconnect, interstate import export, constraints on transfer prices, on cross subsidies, constraint on the regulatory mode etc. All others should be the state governments' /SERCs' purview. The earlier amendments which allowed NTPC etc was itself faulty and inconsistent. Thus the CERC should not have tried to regulate the NTPC, but should have merely laid down the grid rules, interconnect rules, and constraints on SERCs that would not have allowed them (the SERCs) to rule/ work in such a way that interstate supply of power is at a disadvantage to intra-state supplies. Actually the grid geometry and voltages should have been a logical starting point in the demarcation of roles. The Central Regulator should have been concerned with access and connect fees on connecting to the 400KV lines +DC lines and transmission charges in general.

Ref: Ref to Preliminary/Definitions, 2/(9) "Captive Generation Plant"
There is an ambiguity in the definition of captive generation. An ex-ante definition is today possible because of past policies that defined captive in a certain way. As captive is allowed open access these definitions become ultra vires. Indeed, an ex-post definition of captive to distinguish the same from generating units is hardly possible. The only difference then is the amount of electricity sold versus that used within certain premises. That can vary enormously and should so vary in a regime of time of use prices (TOU) and open access. So, an average would have to be used. If that level so specified is breached then the plant could be considered as 'generating plant'. Then what?
Ideally there is no need for the definition of such captive generation plants. The open access to the grid can be defined in terms of minimum connected load/ supply for companies whether distributing, mixed cos, or pure generators.

Ref: Preliminary/Definitions, 2/Conservation Item (15):
This is an improper view of conservation. Methods or processes that save energy by imposing large capital and labour costs are not energy conservation. Correct, and meaningful conservation is that which is also cost effective. (Purely as an aside unlike what is commonly believed, private Indian industry is far more energy intensive than Chinese or South East Asian when the correct, structurally adjusted comparisons are made).

Ref: Preliminary/Definitions, 2/Conservation Item (16)
Do we not need to go beyond consumers to those who are presently excluded - or the outsiders? Mention in the Bill of those who do not have access to electricity and the need for them to be covered to ensure 'life-line' supplies is necessary. (A sentence to this effect may be necessary even in the preamble). This will lead to the distinction between access subsidisation and use subsidisation. In access subsidisation, the social benefits and "gains in terms of justice", are enormous when those who are currently excluded are brought in.

Ref. Preliminary/Definitions, 2/ Item 32 /33 etc.

There is the possibility of differences. The standards should be imposed by the regulator and here the CERC, if there is to be a national grid. State commission and authority (ideally only the authority) has only an advisory role. Different codes have different implications for tradability and grid management and the effectiveness of open access.

Ref: Preliminary/Definitions, 2/Item (45):
National Electricity Plan:
There is no basis for a plan in a decentralised model of the electricity system. In what way is the "Plan" going to effect the decisions of the regulator and authority. What is the sanctity? If the Demand projections go awry why should the consumer bear the high cost of such mistakes of the planner? The EPS (13, 14 etc) have become a joke. The Government (CEA on behalf of the Govt) may still plan but purely for analytical reasons and for attempting to direct the sector through subsidies and taxes in the direction it intends. The government should instead of trying to incorporate "Planning" in the Bill (with the intent to possibly constrain others who are charged with the responsibility of ensuring the consumer interest -the regulator) encourage competent bodies and persons (including the CEA) to come out with detailed forecasts, optimal capacity addition trajectories, costs of alternate fuels, long term projections, general equilibrium analysis of alternative policy scenarios, cost projections models, etc like the EIA of the DOE of the US GOVT, which have an informative role.

Ref: Preliminary/Definitions, 2/Item (56):
Regional Power Committees ? This is entirely adhoc. Why should government have this power when it anyway has emergency powers? Throwing another layer or body does not ensure regional coordination. Today the basis for regional coordination is strong and the RLDCs are good enough with better rules. All regional coordination should be through the RLDCs, and the committees they may create. Since the interstate is in any case the Centre's domain it can, through right powering the CERC and laying out in clear terms the grid rules, access, power trade policy and rules, ensure social optimality in the functioning of the RLDCs/ CTU.

1 of 1956: Ref. Part II/National Electricity Policies/National Electricity Policy: Item 3(1)
If the government has to retain this power over tariff, then what sanctity is there to the tariff determined by the regulator/s? The regulatory risk would continue to remain high and if investments do come in that situation, then regulatory capture is inevitable.

Ref: Part II/National Electricity Policy/Obligation to supply electricity to rural areas: Item (6)
"shall endeavor" is no commitment given the tendency of the state to say many things and do many other (different) things. Thus, despite fifty years of public electricity development, there are a large number of people (>30%) who are not covered by electricity. Many of these are being denied (ie. They can afford electricity but do not have effective access) electricity.
So specification of time limit say by 2005 /2007 is necessary IN THE LAW, so that the courts can pick up if the state fails (as is most likely). This is especially important as the state licenses the production and sale of electricity. Alternatively it must not insist on a complete licensing of electricity in India, but must make a special provision under which entirely unregulated electricity (subject only to safety and criminal laws) be made possible. Only this will allow electricity to reach those who are being currently denied : slum dwellers, the poor, and many in areas with massive state failure.

Ref: Part III/Generation of Electricity/Generation Copanies and Requirement for Setting up of Generating Stations: Item (7b):
In the printed version it is for information; In the text version I picked up from your office there is no phrase "for information". "for information" is better and makes a crucial difference. The point here is that the "information provision overload" on the players need to be reduced. Unfortunately, this Bill will guarantee that the costs of information (not necessarily put to use) gathering and filing would be high. It is necessary to mention that while the information should go to all these agencies, a single format (that incorporates the concern of all the

agencies) would have to be used. It will also bring about consistency between the data bases of the various agencies. Today what SEBs report to the CEA is very different from what they do in their annual statements!
"Provided that … coordinate with the Authority..". Why the Authority when the responsibility is with the CERC/SERCs This would impose a large burden on not only the players but also on the regulator. Of course for statistical and analytical pursposes CEA should have relevant data.

Ref: Part III/Generation of Electricity/Hydro Electricity Generation/Item 8
This special right of the CEA on behalf of the government on hydro projects is I suppose intended to bring in the 'eminent domain' of the state and 'the problem of riparian rights of states'. The purpose or the intentions of public purpose from this special right in the law need to be mentioned. This is more important than it seems. Thus despite the Power and the Water Ministries having their expert bureaus close to each other, the use of water remains at best sectorally optimal, not optimal across electricity use and agricultural use. There are unimaginable allocative efficiencies here.

Ref: Part III/Generation of Electricity/Captive Generation/ 9(1):
Recall earlier comment about the definition of captive generator being problematic. Also it would make sense to provide open access to all connecting load (and drawl) above a certain size (5 MW).

Ref: Part IV/Licensing/Conditions of License/16(1)/
Here the Appellate process can be brought in.

Ref: Part IV/Licensing/17(i) Distribution Licensers not to do certain things
With this important role of licensing, Commissions would have to have far greater skills and sectoral and economic understanding of the problem, and far greater resources. Most importantly they need the flexibility to pay differentially, to procure scare skills, and would most certainly have to bust the salary ceilings proposed to be enshrined in the law!

Ref: Part IV/Licensing/Amendment of License/18
This is desirable but creates major risk. There ought to be a paragraph or a 'preamble' to say what the expected direction of change is. The amount of "hedging" in this Bill is large and needs to be reduced considerably. A policy paper outlining the direction of change which would be 'superior' to the law in the sense that the government would bring in amendments as and when desired to achieve the purpose, or 'state of the sector' as in the policy paper would be vital. That would also allow examination of the law and discussion on the same in parliament and elsewhere more meaningful.

General comment: The commissions are being given a quasi judicial role (besides an expert authority role), so right structuring the commission and right manning the same are most crucial. Similarly, the processes to be undergone for appeal, and for public appeal needs to be specified in the law.

Ref: Part IV/Licensing/Sale of Utilities of Licensee/20(1)
The whole business of licensing can be separated from the costs/ performance etc by making licensing only a technical condition, not a performance condition. With incentive regulation (RPI-X type) this separation is possible. The task of both licensing and tariff award with a view to have the lowest cost for the consumer would prove an 'impossible' task for the regulator. Even with all the skills and resources, the rule orientation (necessary) in regulatory offices and the government would heighten the probability of regulatory capture.

We would suggest that the mode of licensing, and the mode of regulation should be laid down in this Bill. Only this would reduce the regulatory risk. As I will point out later, without saying it in so many words, this Bill in effect pushed all regulators into detailed cost plus type of

regulation, and I am convinced that this would make a fertiliser or oil refining industry out of the electricity sector.

Ref. Part V/Transmission of Electricity/Inter-State Transmission/National Low Despatch Centre/ Item 26 (1):
Why should the NLDC necessarily be a government company? Ideally the transmission co should not be majority owned because of limitations on managerial freedom, that arise out of government companies being 'state' in the eyes of the courts. Yet it should not be privately owned. Debarring the company form is unwise. You need the accounting discipline of the company form. Right structuring would mean bringing in the consumer interest directly - bodies of mfg industries, farmers groups, shop owners' associations etc on the board, as also professionals unfettered by the limits with regard to pay and decision making powers of managers of a government company.

The CTU/ STU's objective cannot be profit maximisation. Neither can it be profit maximisation subject to certain constraints. An independent objective such as reduction in "variation of computable nodal prices" could be the long term objective of the transmission company.

Ref: Part V/Transmission of Electricity/Inter-State Transmission/Function of Regional Low Despatch Centre/28
The statements use here need to be elaborated in such a manner as to result in near TOU prices for bulk power. This could be laid out by the commission but there is nothing in this Bill other than the general appeal to economy and efficiency under which the Commissions can introduce TOU prices. Indeed the gains of decentralised model over an uncoordinated multiplayer model or even the regulated monopoly, emerge largely from TOU prices for bulk power.

Ref: Part V/Transmission of Electricity/Inter-State Transmission/Functions of SLDC/32
Intra and inter state transmission cannot be so easily distinguished. Though contracts can be. The reality is power flow which is arrived at through load flow solutions, which would typically have nothing to do with all possible contracts or even desired contracts. It is necessary to specify a model for the working (selection and rejection of contracts) based on load flow /minimisation of total benefit (consumer +producer surplus) / nodal pricing etc that is uniform for both intra and inter state and inter regional transmission. Different pricing and systems of transmission would unnecessarily create barriers to trade across regions /states. Externalities of contracts can be very large given transmission constraints. At the same time that model or process for rejecting contracts ought to be communicated easily and transparently to participants. The Bill should have made this clear, or indicate how the Commission would do the same. The problem of transmission is complex enough to not allow the cost plus models of regulation so far used, to be applied, in generation and trade.

Ref: Ref: Part V/Transmission of Electricity/Intra-State Transmission/Changes for Intervening/36(i)
This cannot be 'mutually agreed' in all situations. At a fee that covers the transmission entity's cost of the intervening facility, availability to others must be ensured.

Ref: Part V/Transmission of Electricity/Inter-State Transmission/CTU audits function/ Item (c)/38(2)
Item (c) Should have precedence over the other items. (The objective of transmission in not necessarily to reduce transmission cost to the minimum, but overall cost of delivered power to the minimum, which may mean that while the transmission cost is a little over what is the minimum the competition between generators could be considerably increased to result in lower overall (wholesale) power prices.

Not only should generators and distributors be barred from holding / working transmission assets and companies, but transmission entities should be debarred from having an interest in any other business like generation and distribution.

In the printed version, there is a section called "Other Business of the Transmission Licensee". Therein there is 41(1) "A Transmission Licensee may with prior approval of the appropriate commission engage in any business for optimum utlitisation of assets". The word any needs to be replaced by "other than generation, distribution and activities related to the same (other than transmission). It is necessary to specifically exclude interest (directly or indirectly) in businesses: fuel supply, generation, distribution, power trade, services related to these. The Section 41(4) would not be feasible under cost plus regulation which is what the Bill would lead to (without explicitly so stating).

Not just trading, but transmission should not be allowed into either generation or distribution.

Ref: Part VI/Supply of Electricity/Provisions with respect to distribution licenses/Duties of Distribution Licensee.43 (2)

It is very unwise to build cross subsidy on distribution charge. As argued before the 'least worst' way to build cross subsidy would be on total cost or final sale price. In any case distribution costs are notoriously difficult to vouch for and with cross subsidisation there would be an 'invitation for fraud'.

This way to recover the cross subsidisation would be disastrous for the market even in the intervening period. With multiple players (even ignoring for the moment the issue of the agency problem (Morris, 1999)), the only way cross subsidisation can be fair to all players is to charge uniform prices including duties (or taxes) to all consumers, and then, to redistribute the part of the duties plus the subsidy + subvention from the government as rebate (subsidy) to the subsidised consumers. The Orissa model inter alia failed because this was not done.

The other way is to impose a duty on all generators ad valorem which is collected and given to distribution companies to subsidise certain customers.

But even these above ignore the massive agency problem or "the invitation to fraud" that it creates in distribution companies.

If on transmission even a small part of the cross subsidy is loaded, then the market for power vanishes. It is akin to a turnover tax that is the surest way of killing markets. Power trade would not be possible then except in a very limited way perhaps.

The Bill could have laid out a scheme and a time frame for right subsidisation and limiting cross subsidies instead of leaving them open. Besides the agency problem, the price and regulatory risk would continue to be very high.

Ref: Part VI/Supply of Electricity/Provisions with respect to distribution licenses/Poer to recover charges/46

This section virtually rules out RPI-X, rPI-x-r, or any incentive regulation altogether without so saying. Why is this being done? Had the Bill explicitly specified a relevant price index based regulation the regulatory risk would have fallen considerably. More importantly the task of regulation would have been feasible and the probability of regulatory capture minimal.

The least the Bill could have done is to have allowed the choice to the regulator.

Ref: Part VI/Supply of Electricity/Provisions with respect to distribution licenses/Other Businesse of Distribution/52

Except transmission. This is necessary so that perverse incentives to mismanage transmission is not there.

This is not fair to the other business, and entirely unnecessary if incentive regulation is used.

Ref: Part VI/Supply of Electricity/Provisions with respect to distribution licenses/Centre restrictions on Electricity Trades 54

Explicit provision to lead to free pricing so that traders can exploit arbitrage opportunity needs to be specified.

Ref: Part VI/Supply of Electricity/Provisions with respect to supply/Use of meters, etc./Growth 56(1)(2)
Why two years?
" by the Authority:"
Better to leave the type of meters etc to Distribution Entities, subject to accuracy certification of model/make by Authority and checks by regulator. Stiff fines for inaccurate meters (overspeeded) by Distribution entities, imposed by the regulator would be advisable.

(2)…. Electricity, the Authority may direct…
Authority should have little to do except the technical veracity. The type of meters, or even the need for them should be driven by the Transmission company, grid rules, and the Commission for regulatory countercheck. The need for open access with TOU prices would necessarily impose certain minimum features for such meters.
This whole discussion presumes that theft is a problem external to the SEBs. This is entirely false. No 'theft' is possible without the active connivance and involvement of the SEB staff and officers. Ignores that the underlying basis of the problem is the price (and duty) arbitrage opportunity in electricity sales.

Ref: Part VI/Supply of Electricity/Consumer Potection, Standards of Pefformance of Distribution Licensees/58(1) and (2)
There is a need to prescribe the basis for such standards.

Ninety days is too long a period.

Ref: Part VI/Supply of Electricity/Consumer Potection, Standards of Pefformance /Different Standards of Performance by Licensee/59

Ref: Part VI/Supply of Electricity/Consumer Potection/Standards of Pefformance of Distribution Licensees/Information with respect to levels of performance/60
Not only such information but a case by case gathering is necessary. Also there is a need to pre-specify standard modes of measurement of electricity quality.
Instead of once a year etc, it is necessary to state that the form of the information provided to the public/ publication needs to be sufficient in detail and meaningful in presentation so as to promote the consumer interest, and involve the consumer in utility performance and regulation. Indeed, being a regulated industry, it is almost axiomatic that all data (except such items as are deemed to be private for commercial operation) would be available to the consumer. In cost plus regulation practically all data would have to be available to the public. In incentive regulation the cost data can be legitimately kept private till the regulatory term /period is over.

Ref: Part VI/Supply of Electricity/Consumer Potection/Standards of Pefformance of Distribution Licensees/Market Domination/61

Part VII/Tariff/Tariff Regulation/62
Why should 62(a) be as such? In that case if the CERC can so influence the SERCs why not impose incentive regulation to greatly reduce regulatory risk and cost?

"lowest sustainable price of electricity" needs to be explicitly mentioned.

This is contrary to the cost plus principle being expounded elsewhere. Can the state regulator use this clause to override possible inappropriate regulatory approaches of the Central Commission.

(g) and (h) NRE, and subsidies are clearly aspects of government policy and should not be loaded onto the Commissions.
As mentioned before can be dealt with by differential duties in a 'least worst' manner.

Part VII/Tariff/Determination of Tariff/62

To what purpose? Even cost plus could be better by being standard cost plus or industry average. Cost blow up like in the fertiliser industry is almost certain, when the cost plus is on individual plant.
This clearly rules out RPI-X type regulation. The US type mess pre-deregulation is likely. Tariffs would go up dramatically all round.
Unwarranted supervision and monitoring problem. Can any Commission ever have this information, truly? Possible only if the Commission has access to the billing data, and can conduct independent verification.

'do'/Procedures for Tariff Rules/64(2) and (3); 64 (2) and (3)
This again rules out RPI-X type of regulation.

120 days is not sufficient for full scrutiny. Gaming is most likely.

-End of Paper-

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