

Kind Attention: Shri Sanoj Kumar Jha

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Secretary, Central Electricity Regulatory Commission

Dear Sir,

CERC had brought out the discussion paper - "Market Based Economic Dispatch of Electricity: Re-designing of Day-Ahead Market (DAM) in India" - and had sought comments and opinions from various stakeholders.

We at IRADe would humbly like to submit our comments and suggestions on the discussion paper, which have been attached below for your reference. We hope that they contribute to meaningful deliberation on the same.

Thanking you,

Yours faithfully,

Rohit Pathania

Program Coordinator

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Section	IRADe Views
<p><i>2.8 To summarise, the key challenges of the existing mechanism of self-scheduling are as under:-</i></p> <p><i>i. Self-scheduling restricts visibility of low cost generation available with other discoms or generators;</i></p> <p><i>iii. Given that the discoms are not obligated to reveal the variable cost of the generation that they are scheduling, true system marginal cost is not known;</i></p>	<p>i) In the present system, in case of the generation scheduled by RLDCs, which constitute about 60-70% of the total generation, the generation which is not scheduled is clearly visible in the form of Unquestioned Surplus and the ways about scheduling of this are well defined. At the same time, in case of the low cost generation available with the Discoms, there are well laid procedures/avenues, by virtue of which the home state can easily dispose of that power under short term market.</p> <p>iii) While the break up of the cost between capacity charge and energy charge is invariably known in case of the iSGS stations, the similar break up of costs is not available for state owned generation stations. Many of these plants were designed long back. Segregation of costs for such power stations may be difficult; the paper has not touched upon this aspect.</p>
<p><i>4.13 Here, the buyer shall receive an amount equivalent to the difference between the MCP and contract price times the quantum of contracted capacity scheduled from each of its contracted generators. If the MCP is less than the contract price, then it will mean that the discom contracted generator has not been dispatched and in that case there will not be any need for BCS. This would essentially act as a hedging mechanism for the buyer to ensure that they are covered against the risk of spot price volatility and their cost of procurement does not increase. The buyers would still continue to pay the fixed costs for the contracted capacity based on declared availability and regardless of whether the generator gets dispatched. This would ensure that the generators get paid for the capacity as per the existing contract.</i></p>	<p>If the Market Clearing Price is more than the contract price, the discom will get cost refund under the proposed system. However, there is a possibility that the power which comes to the Discom would be from outside its control area. In such a case, there will be transmission charges, which can potentially raise the cost of power. Currently, discoms pay charges for receipt of power bought under day ahead market from the exchange. In the paper, this aspect has also not been discussed.</p>

<p><i>5.14 Generators having bilateral contracts would recover their fixed charges bilaterally “outside” the market as per the existing practice. Therefore, it is envisaged that these generators would offer the quantum (in MW) at their variable costs (or regulated variable charges). The generators will normally offer at such prices to maximize their probability of getting dispatched and yet remain profitable.</i></p>	<p>While the generator would be under pressure to offer the competitive price so as to get selected under the bid, the paper is silent on power stations with legacy contracts, not getting scheduled. Many of these power stations may have variable costs that make them uncompetitive if the DAM bidding occurs.</p> <p>Variable cost of generation for any power station changes with the cost of coal, which in turn varies due to the changing calorific value with each batch of coal. In the present tariff determination process, the calculation of a weighted average variable cost is done on a monthly basis at the end of the month. However, as per the proposed system, the decision that whether the plant would be in the selected bid or not would purely be made on the basis of variable cost. The paper is however silent on whether there will be any post facto adjustment on the variable cost.</p>
<p><i>5.26 ...it is clarified that so long as the provision of right to recall prior to the gate closure in real time exists, the generators tied up in long-term contract – in the event of their having sold the unrequisioned surplus in the day ahead or any other time horizon – will have to buy back from the real-time market to meet their contractual obligation, if the discoms exercise the right to recall.</i></p> <p><i>7.1 The proposed MBED mechanism along with BCS mechanism ensures optimum utilisation of cheaper generation and benefits of additional generation would be shared between generators and discoms equally in the ratio of 50: 50.</i></p>	<p>As stated under Section 7.1, when the discom is already getting benefit by way of 50% share, due to sale of URS, in the event of callback putting the complete burden on the generator makes the mechanism inequitable.</p>
<p><i>7.2 Given that the MBED and BCS guarantee and safeguard discoms’ original commitment of variable cost, the arrangement will also not conflict with the existing coal linkage policy which puts a restriction on the sale of power from the linkage coal based generating stations, to the short-term market. It is based on this philosophy that the Tariff Policy also allows sale of un-requisitioned surplus from the long term contract based generators in the short term market.</i></p>	<p>It is understood however that recent notification from government of India has resolved the issue of coal linkage for generation stations for short term market purposes as well.</p>

<p><i>7.3 Further, the existing long term contracts covered under Section 62 of the Electricity Act, 2003 provide reference to CERC regulations for scheduling, dispatch and recovery of cost for such generators. Hence, the amendments in the CERC regulations would automatically get inroads into such contracts.</i></p>	<p>Under the jurisprudence system, whether the new regulations can override existing contracts. Law is not applied retrospectively, and changes in existing contracts are possible only if there is mutual agreement between the buyers and sellers. Such an arrangement, in the absence of the mutual agreement, may attract legal issues.</p>
<p><i>7.4 Currently, the long/medium-term contracts include both capacity and energy obligations as discussed in the paper. Going forward, there can be capacity markets to achieve long-term security of supply to meet the present and future demand and also facilitate investments into capacity additions. Secondly, as we look ahead at high levels of RE in the grid, the objective of the buyer must go well beyond just procuring capacity for existence but procuring capacity with specific attributes which can deliver as needed. Therefore, the price of a MW of an inflexible coal plant should not be the same as the price of highly flexible gas plant. Future contracts must focus on capability of the power plant to deliver when needed. High RE penetration will bring situations where certain capacities may need to ramp up or down in a matter of minutes or even seconds. Therefore, capability contracts must be explored going ahead. These contracts are to ensure that capacity with specific characteristics and attributes is available to the buyer as needed. A portfolio can have various such capability contracts to ensure that all levels of deviations and emergencies are covered.</i></p>	<p>Backing down in real time requires significant amount of flexibility of power generators. Costs of generation vary based on generation flexibility, and so the nature of contracts with various power stations will have to vary. While the paper rightly recognizes the upcoming scenario with greater renewable energy shares, it is a topic for a separate discussion paper.</p>
<p><i>7.5 It is believed that the proposed MBED framework – where the existing legacy contracts are proposed to be brought to the market only on their variable costs – will help develop the desired level of capacity market in future. The discoms will re-align their strategy about the capacity contracting in future - depending on whether and to what extent they have to bear the fixed cost of those generators (legacy contracts) which don't get cleared in the DAM (because of high variable cost) ; or whether they have to face high price in the energy only market in the absence of</i></p>	<p>There are several existing contracts which may prove to be expensive. The states that have flexibility will not buy any such contracts, as the states may not be interested to continue with these. What shall happen with these contracts is not discussed in the paper.</p> <p>Also, power stations have to operate at a technical minimum to keep generation viable. The cutoff for total demand may cause power stations to not be able to run plants at that level.</p>

<p><i>hedging through capacity contracting. As a corollary, the generators will also take a considered call on the extent to which they need to hedge their revenue through capacity contract and the proportion for which they would play purely in the energy only market. Such intrinsic demand and supply is expected to yield a robust framework for ideal capacity market in future.</i></p>	
<p><i>Resource adequacy (RA) is commonly defined as the ability of a utility to meet the consumer load at all times. Utilities or discoms have to demonstrate periodically that they have sufficient reliable capacity resources to be able to meet the forecasted peak demand and have a reserve over and above that. RA is highly dependent on the type of the contracting framework or market that is present. It is important to dwell on the fact that capacity additions must be coupled with the capability of the capacity to deliver as needed by the system operator.</i></p>	<p>State enforcement agencies will have to undertake necessary measures to ensure resource adequacy in the MBED system. Specific mention in this regard in the policy paper can be made.</p> <p>With the implementation of the new mechanism, discoms will have to call for capacity market bids. This will have financial implications for them, which could add to the existing financial challenges they face.</p>
<p><i>7.12 CERC Regulations allow for multiple power exchanges to ensure competition in Day-Ahead and intra-day markets. Structurally, the same can continue, however for better system efficiency, one option is to combine the bids and offers of both the exchanges. This would help not only in discovery of the same area clearing prices (instead of multiple ACPs due to multiple power exchanges) but also in achieving higher social welfare as compared to the sum of maximum social welfare in multiple power exchanges.</i></p>	<p>The paper has touched upon several important topics, one of them being the coupling of exchanges for deriving maximum benefit of power cost. However, these topics can be discussed separately, and the focus can be solely on the principles of DAM.</p>
<p>GENERAL COMMENTS</p>	<p>The paper seems to be encouraging capacity based contracts, given its emphasis on contracted power. However, merchant power plants also have a role to play – they have not been touched upon by the author.</p> <p>There are several load centre based stations which are critical to manage the system due to the constraints present in the transmission system. Some level of generation is usually kept local. Going simply by the variable cost, several such power stations may face the risk of will not get scheduled. Optimization of power system operations may therefore be affected.</p>

