

Comments and Suggestions on the CERC Staff Discussion Paper on Re- designing real time electricity markets in India

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The move towards institutionalizing real time markets in India is the need of the hour and efforts in this direction by CERC are welcome. The need for such market operations is substantial with the rising quantum of sustained surplus capacity in some states and at same time coinciding with the growing need to meet shortages in others states or season or time of the day. With the increasing share of variable renewable energy in the system and rising uncertainty in demand due to sales migration, real time markets will be imperative to ensure grid reliability and optimal resource utilisation.

The CERC staff paper on re-designing real time markets in India observes that:

- Deviation and Settlement Mechanism (DSM) though designed as a final expedient or recourse to correct imbalances is being utilised for real time market operations.
- The newly introduced ancillary markets mechanism is being depended upon to cater to real time market needs rather than being utilised as a centralized mechanism to provide contingency services for short periods.
- Intra-day market instruments are being offered by the power exchanges to enable purchase and sale of power but are seldom utilised for the purpose of real time balancing.

One of the major reasons identified by the paper for non-utilisation of real time markets is the absence of gate closure. Thus, DISCOMs can revise their schedules and retain the right to recall till the time of actual delivery of the power. This makes it difficult for generators with capacity contracted by DISCOMs to participate in real time markets. The staff paper identifies ways and means to introduce gate closure and kick start real time markets. Our comments and suggestions with respect to the proposals outlined in the staff paper are as given below:

1 Introduction of gate closure is imperative

The proposal to introduce gate closure in the Indian power system is important to ensure broadening and deepening of markets and to reduce the dependence on DSM and ancillary services. Introducing gate closure will encourage better scheduling and forecasting practices by DISCOMs and generators and thus increase the accountability of these entities as well. Some ideas to operationalise gate closure are discussed below:

1.1 Gate closure should be part of the grid code

The mechanism of gate closure should be part of the regulatory mandate in order to ensure compliance and operationalisation. In order to ensure that all market participants comply with gate closure, the concept needs to be introduced via the amendment of the Indian Electricity Grid Code. Further, SERCs can also be encouraged to introduce gate closure in the State Grid Codes as well.

1.2 Duration for gate closure

The staff paper has proposes to introduce gate closure 1.5 hours before delivery of power. PEG submits that such a short time may not be sufficient to ensure real time market settlement and also conduct market splitting, especially if the volume of transactions in the real time markets increases. Therefore, it is suggested that gate closure should take place 3 hours before delivery of power. This would be similar to the practice currently followed by market participants in intra-day and day ahead contingency markets of the power exchanges. Further, the time between discovery of market clearing price and final schedules being sent to the appropriate LDC in day-ahead markets is

also 3 hours. Depending on participation in the market and increasing capacity to facilitate such settlements, the gate closure time can be revised, if needed.

2 Concerns with operationalisation with respect to DISCOMs

Real time markets will grow in India only with the participation of DISCOMs. However, currently DISCOMs which need to improve their scheduling practices and be more agile in planning would not want to give up their right to recall, especially with growing uncertainty in demand and the increase in renewable energy procurement. Further, PPAs protect the buyer's right to recall and thus there is a need to ensure DISCOMs participate willingly even with the regulatory mandate. Comments and suggestions to ensure this are outlined below:

2.1 No Objection Certificates (NOCs) from DISCOMs for gate closure required

Power Purchase Agreements safeguard the DISCOMs right to recall and for significant proportion of the contracted capacity, gate closure, which will / should also allow generators to sell unrequisioned capacity in the market, can be implemented only with the approval of the DISCOMs. Thus, in order for the contracted capacity of the generator having a PPA with the DISCOMs to participate in real time markets, it is necessary to obtain NOCs from the concerned DISCOMs. The NOCs will be provided only if DISCOMs are urged to participate in real time markets via various measures. Participation in the market itself can be conditional on the DISCOMs providing NOCs for its contracted capacity for the year, to enable gate closure 3 hours before the delivery of power.

2.2 Disincentivise the use of DSM and Ancillary services as an alternative to real-time markets

Participation in real time markets will only take place when DISCOMs reduce their dependence on DSM and ancillary services. Therefore the introduction of gate closure and real-time market instruments should be preceded by a phase-wise tightening of the frequency band, reduction in volume limits and increase in deviation charges. CERC has already taken commendable steps in this direction but such efforts will have to continue to reduce the dependence of DISCOMs on this mechanism. Further, increased specification for triggering events and increasing the price of ancillary services could also disincentivise DISCOMs from using the mechanism instead of real-time markets. We are sure that CERC is already planning to take steps in this direction.

2.3 Need for regulatory oversight on DISCOM-DISCOM banking of power

DISCOMs, particularly in the Northern Grid regularly practice inter-DISCOM banking in order to meet their demand efficiently. Currently, only the volumes of power banked on an annual basis is tracked in a consistent systematic manner by some SERCs. If implemented properly, banking of power can contribute to efficient distribution of power and enable addressing demand supply mismatch faced by DISCOMs. However, the mechanism needs to be regulated and guidelines to institutionalise and track practices by various states needs to be developed. This is especially true if DISCOMs choose to utilise this mechanism to meet real time settlement requirements in the future.

3 Eligibility criteria for participation in real time markets

There needs to be clarity on which entities can participate in real time markets to ensure the health and stability of this market. DISCOMs and generators of conventional power can be considered as eligible participants. However, renewable energy generators should also be allowed as long as the generator is subject to and complying with Forecasting and Scheduling Regulations which have already been introduced in some ERCs. Depending on their visibility at the LDC, open access and captive consumers, should also be allowed to participate in this market. Going forward, storage options and demand response can also participate in real time markets to contribute to stability in the system and the mechanisms being developed should account for such possibilities.