

Comments on

“Draft Central Electricity Regulatory Commission (Power Market) Regulations, 2020”

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Emerging Challenges and Opportunities for the Indian Power Market

Growing Share of Renewables – Grid flexibility

Need to Deepen and Broaden the Market

Enhanced role of Demand Response and Storage Services

Digital World of Electricity

Emergence of Decentralised Market

Reliable and Secure Grid Operation

Objectives of Power Exchange - Price Discovery

PMR 2010

A Power Exchange shall function with the following objectives:-

- (i) Ensure **fair, neutral, efficient and robust** price discovery
- (ii) Provide extensive and quick price dissemination
- (iii) **Design standardised contracts and work towards increasing liquidity in such**

DPMR 2020

Objectives of Power Exchange

The Power Exchanges shall be established and operated with the following objectives:

- (1) To design electricity contracts and facilitate transactions of such contracts;
- (2) To facilitate extensive, quick and efficient price discovery and dissemination.

Market Coupling (2 (af) & 37)

- The country has adopted ‘market coupling’ through the SCED mechanism thereby bringing significant cost efficiencies for the sector. Internationally, such market coupling have been adopted for integrating a number of hitherto uncoupled markets.
- The process of market coupling can bring economic efficiency gains for the market as a whole particularly for market products with low liquidity.
- European electricity market provides a live example of a market coupling that links a number of control/market areas thus reducing price differentials. In 2010, European countries adopted Price Coupling of Regions (PCR) that evolved into Multi Regional Coupling (MRC). European market now includes 22 European countries.

‘Coupling Across Market Areas’ Vs ‘Market Platform Coupling’

SCED is an example of coupling across market areas. This has improved optimisation of cost of power procurement by utilities leading to cost savings. A Power Exchange itself presents an example of coupling across ‘market areas’.

The two leading stock exchanges of the country the BSE and the NSE, which have continuous market trading remain decoupled as significant liquidity and competition has thinned possibility of arbitrage across these markets. Similarly, multiple commodity exchanges/market continue to flourish, some in the regional and some in the national context.

‘Coupling Across Market Areas’ Vs ‘Market Platform Coupling’ (Contd.)

In the context of power exchanges, the principles of ‘for delivery’ should negate the opportunity for arbitrage even if there are differences in prices discovered across power exchange for the same time block and market area.

The difference in discovered prices across the PXs provides for economic gains from coupling.

These differences may arise on account of differences in bids, market participation and liquidity, as well as adoption of different price discovery algorithms.

Three Propositions for Market Coupling

- (i) Adopt market coupling for market products with low liquidity. For example, the TAM.
- (ii) Provide for a uniform algorithm across power exchanges, as adopted in the European context.
- (iii) Increasing the depth of the market. This would increase liquidity and competition across power exchanges. MBED may provide much larger volumes and would blur the need for coupling across market platforms.

Impact of Market Coupling

Given the significantly skewed market volume across the two exchanges, there would be distributional impact for the market participants as well as the power exchanges. Overall efficiency gains and its distributional impact, if any, may help in evaluating overall impact for the sector.

How will this influence further investment in PXs?

Would it stifle innovation in introducing new contracts for need of uniformity across contracts?

Market Coupling – Some aspects

Designation of Market Coupling Operator (38) – What is the criterion for selection of Market Coupling Operator.

Finalising algorithm for Coupling Operator?

Who would take the settlement risk across power exchanges?

‘Coupling’ across Solar and Non-solar RECs

An opportunity for ‘coupling of market products’ in the REC market remains untapped for a long time.

Given the significant decline in solar PV prices, the difference between underlying value of solar and non-solar RECs has narrowed down significantly, providing an opportunity to merge the two market products.

This would significantly enhance the liquidity and competition in the REC market and enhance social welfare.

Development of Capacity Market

Lack of investment signal for capacity addition is one of the shortcomings of increasing reliance on short-term energy market. Development of **Capacity Market** can help address this gap in market design. Enabling provision for the same need to be detailed.

Market Design for Ancillary Services

Who: Market for Ancillary services needs to be managed by a system operator.

Enhance Participation: The current design of ancillary services has limited participation and does not foresee participation by broader set of system constituents including provider of storage services as well as aggregators for demand response schemes.

Co-optimisation for Ancillary Services: A research undertaken at Energy Analytics Lab (EAL) demonstrated benefits of such co-optimisation in the Indian context.

Roadmap for Power Market Derivatives

Derivatives market has direct implications for price discovery as well as liquidity in the market. Further, it can also be ‘used’ to influence market outcome.

As the power market matures, there may be a case for introducing derivatives for legitimate market participants with direct exposure to the buy/sell positions. A discussion paper on the same may be floated by the Commission for furthering this aspect of market development.

Prevention of Circular Trading (2 (k))

Define and Differentiate Circular Trading

Legitimate needs for taking buy to sell or sell to buy position across different market segments may arise due to availability of more reliable information about generation/demand near to the time of delivery. For eg. decrease/increase in demand or generation from RE may necessitate the need to offload a buy/sell contract, entered into in the DAM, in the RTM. However, circular trading that aims to enhance the market volume with no intension of taking the delivery should be checked.

The regulation should further elaborate on circular trading (primarily meant for squaring off the positions) and differentiate with the rebalancing of portfolio (for delivery services)

Role of derivatives in ‘squaring off’ the positions also needs to be ascertained, provided for and regulated.

Trading Licensees and OTC Market

Role of Trading licensees vis a vis OTC needs to be clarified in the context of definitions *ao*.

“Over the Counter (OTC) Market” is a market where OTC Contracts are transacted between the sellers and the buyers directly or through a Trading Licensee;

Clause 7 may be modified as

“Price discovery: The price and other terms of contract in the OTC Market shall be determined either through mutual agreement between the buyer and the seller, **directly or through licensed traders**, or through competitive bidding process or as determined by the Appropriate Commission.”

OTC Market – More Clarity

- 1. Role of DEEP ?**
- 2. Contracts transacted in the OTC Market (7.1):** The regulations identify role of the SERCs (‘Appropriate Commission’) to regulate the OTC market, seemingly for intrastate transactions. A clarity on the same needs to be provided.
- 3. Objectives of the OTC Platform (42.2):** This should include: “to ensure transparency, efficient participation and price discovery.”
- 4. Detailed information regarding availability of various contracts available and those executed on OTC platform should be made available in the public domain.**
5. Regulatory purview over the OTC market needs to be enhanced.

Additional Issues

Regional Participation on Indian Power Exchanges - An enabling provision may provide for creating of market areas beyond the Indian power system thereby enhancing participation across the South Asian region

PMR should nudge PXs to

Reduce Size of Block Bids

Provide for negative prices (a possibility amidst growing share of renewables)

Strengthen Market Surveillance

Market Surveillance by Power Exchange (32.5): The quarterly surveillance report submitted by Market Surveillance Committee should be made publically available along with market monitoring report of CERC. This enhanced transparency would also ensure that any aberrations are quickly identified and addressed.

Market Manipulation: It should include the case of secures or attempts to secure, by any member of the Power Exchange or client, relatively lower buy price while curtailing supply to other beneficiaries entitled to receive the same power. It should include disseminating any information not only through the media but by any means.

Market Surveillance by CERC: There is a need to strengthen market surveillance by CERC and a report on the same should be published on a monthly/quarterly basis.

Ease of Data Availability – Data API

PMR 2010 – “Provide extensive and quick price dissemination”

DPMR 2020 – “To facilitate extensive, quick and efficient price discovery and dissemination.”

Statutory information submitted by market participants should be easily accessible. Need to address non-submission of information.

Power Exchanges as well as the LDCs should share data API to assist further analysis of the market outcome, thus promoting competition in the market and also enable research.

ENTSO-E Transparency Platform - ENTSO-E Transparency Platform provides free, continuous access to pan-European electricity market data across six main categories: Load, Generation, Transmission, Balancing, Outages and Congestion Management.

Others

1. **Continuous Transactions (2 (q))**: In certain instances, collective transactions implies all the transactions and excluding Continuous Transactions may result in some confusion.
2. **"Insider" (2 (q))** should include person who has acquired unpublished price sensitive information through **unfair/unethical** means in addition to those through criminal activity.
3. **Real-time Contract (2 (at))**: A closed ended definition of real time contract in terms of time blocks should be provide.
4. **"Unpublished price sensitive information" (2 (bf))**: This should also include information relating to contracts **to be transacted** or those that were **supposed to be transacted** on the Power Exchange that are not generally available. Also different information such as **quantum** should be included with price of the contract.

Others (Contd.)

Management of Power Exchange (20): The qualification of one of the three full- time professionals is mentioned as “*Degree in Computer Science/Computer Application/Information Technology with...*”, which should be made generic as different institutes provide different degree in the field of computer science and IT.

Trading margin and service charge (24): “*Provided that the service charge shall not include any charges.....*” Should be replaced by “Provided that the **trading margin and service charge** shall not include any charges....”.

Procedure for market oversight (50.2 (b)): “*Involvement of Market Participants in any of the.....*” should be written as “Involvement of Market Participant(s) in any of the.....”.

Functions of the Market Coupling Operator: “*(1) The Market Coupling Operator, withfor implementing Market Coupling including.....*” should be replaced with “.....Market Coupling **for the identified contract types**”.

THANK YOU



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