

Brief on Integrated Day Ahead Market

Background

Ministry of Power, Government of India, (MoP) vide letter ref. no 23/16/2020-R&R dated 24th March 2021 issued a paper proposing '**Development of Integrated Day Ahead Market (DAM) in Power Exchange with separate price formation for RE Power and Conventional Power**'.

The MoP paper informs that with the aim to have multiple options for market participants in Renewable energy, which will be competing against each other, it has been decided to introduce Integrated Day Ahead Market in Power Exchange with separate price formation for RE power and Conventional power.

As per the details provided in the paper, the proposed Integrated DAM would allow the buyer to get RPO credit by directly buying green power from the exchange alongwith integration of RE and Conventional energy into the grid. Furthermore, as some market participants aspire to buy renewable power rather than RECs, there is need to identify the transactions which are purely between suppliers and buyers of renewable power.

The objectives identified for introduction of Integrated DAM are:

- a. Separate Price formation for RE Power and Conventional Power
- b. Retain competitive characteristics of Multiple Power exchanges
- c. Promote capacity addition in Renewable Energy

The Benefits as stated in MoP paper being:

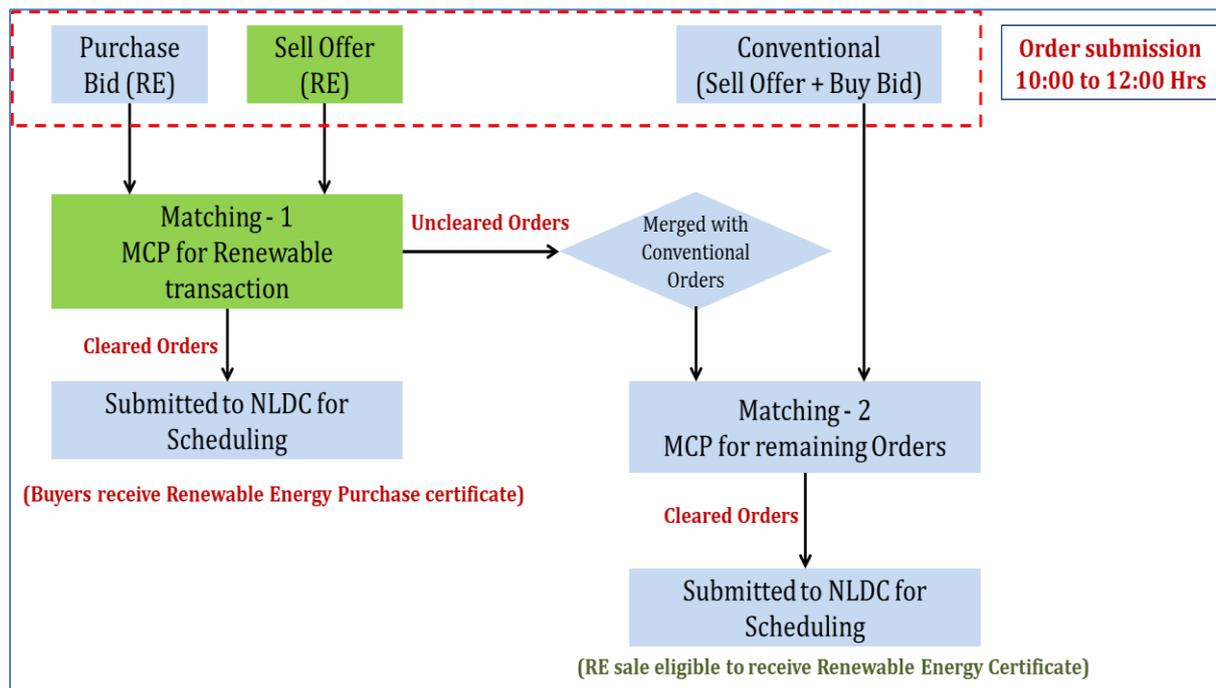
- a. Investment signal for RE sector
- b. Provide prompt payment to RE generators
- c. Option to meet RPO requirement throughout the year
- d. Avoid providing instructions for curtailment of RE power
- e. Mitigate Price risk of Discom in purchase power under long term PPA
- f. Unlock untapped RE potential

The market structure proposed for operating Integrated DAM is:

- Orders for RE and Conventional power to be placed during the same auction session
- Matching of Order for transactions in RE in first matching
- Power exchange to submit 1st application to NLDC for scheduling RE power

- Buyer to receive RPO credit for RE energy procured in the RE session
- Uncleared Order for sale of RE to be included in combined matching of both RE and Conventional power
- Power exchange to submit second application to NLDC for scheduling combined power
- RE Sellers cleared in second matching eligible to receive RECs
- Market participants provided choice place Orders on any Power exchange

Figure-1: Snapshot of Integrated DAM



Observations of PXIL

- 1) The MoP Order proposes POSOCO as Market Coupling Operator (MCO). During the time it takes POSOCO to develop the Market Coupling algorithm. PXIL proposes implementation of Market coupling in Integrated DAM as under:
 - a. Market Coupling can be done by nominating the two Exchanges as Coordinator for Renewable portion and Conventional portion respectively. One Exchange can operate as Coordinator for Renewable portion and the other Exchange can operate as Coordinator for conventional portion.
 - b. Rotation of Coordinator on a periodic basis i.e. Monthly/Quarterly basis, after completion of the identified period the Power exchange would interchange their role as designated Coordinator for the next period

- c. The Nodal Power exchange for each portion could receive “masked” buy bids and sell offers from other Power exchange. The names of the Buyers and the Sellers would be masked, the obligation would then be notified by the individual Power exchange for respective portion. The Exchanges can be directed to devise a common communication protocol and formats for the same.
- 2) The introduction of Market Coupling in Integrated DAM is a necessity as it provides benefit to participants as:
- a. Help avoid multiple prices being discovered by the two Power exchanges (and prospectively three (3) Power exchanges) for Renewable and Conventional power. Multiple prices for the same commodity, for the same delivery period, in the same geography leads to significant confusion among market participants and causes uncertainty regarding commercial impact leading to computation of gains / losses. This in turn fosters an unintended monopoly thereby adversely affecting market participants in the long term.
 - b. Provide for real choice to participants in using power exchanges by focusing on service levels and efficiency standards
 - c. Promote higher standards of service with the Exchanges cooperating and competing to enhance the standards of service in the market
 - d. Ensure equally effective level of regulatory supervision on both the markets
 - e. Promotion of efficiency by integrating liquidity and optimizing the portfolio for the entire market completely
 - f. Minimal changes for the market participants as they will continue to bid at either of the Exchanges
 - g. Ensures operational security of the new market structure till the time POSOCO is ready with its algorithm
- 3) Other submission
- a) Option to be provided to participants to modify their Orders after declaration of results of first matching but prior to initiation of second matching. This option should be for a short duration of 10-15 minutes
 - b) Alternately instead of combined auction, serial auction can be proposed
 - c) Preference to purchase Solar / Non Solar type of Renewable energy in first clearing, else Buyers may inadvertently purchase any one type of RE beyond the prescribed RPO norm and fall short in meeting prescribed RPO norm in another type of RE

Market participants to review and express their views regarding requirement of below mentioned features in Integrated Day Ahead Market

The stakeholders are requested to submit their comments / observations on all aspects of the Petition and also views, if any, on the points mentioned below

1. Requirement of Market Coupling

The Integrated DAM should be introduced with Market Coupling, the coupling would ensure single Price discovered during matching of Renewable power and Conventional power and would help participants to exercise choice for participation on any Power exchange. In its absence there would be prices for renewable and conventional on multiple exchanges leading to a plethora of prices for the same commodity, for the same delivery period and same geography.

2. Opportunity to review Orders prior to start of matching in Conventional segment

Participants should be allowed time to revise /modify / delete their bids after Price discovery in Renewable segment and prior to matching of Orders in Conventional segment

3. Choice of Renewable energy i.e. Solar and/or Non Solar

Buyers should be allowed to choose the type of Renewable energy i.e. Solar and /or Non Solar that they intend to purchase in Renewable segment