

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 11/RC/2019

**Coram:
Shri P.K. Pujari, Chairperson
Dr. M.K. Iyer, Member
Shri I.S. Jha, Member**

Date of Order: 14th of January 2020

In the matter of

Introduction of New Bid (Order) types at Indian Energy Exchange.

And

In the matter of

Indian Energy Exchange Limited
Fourth Floor, TDI Centre,
Plot No. 7, Jasola,
New Delhi-110 025

... **Petitioner**

Parties present:

Shri Jogendra Behera, IEX
Shri Gaurav Maheshwari, IEX

ORDER

The Petitioner, Indian Energy Exchange Limited (hereinafter referred to as "IEX") has filed this petition seeking approval for introduction of New Bid (order) types in its Day Ahead Market. The Petitioner has made the following prayers:

- a) Allow IEX to introduce the new bid (order) types.
- b) Amend/ modify Business Rules of IEX as approved by the Hon'ble Commission from time to time.

- c) Pass such further order or orders as may be considered necessary in the facts and circumstances of the case.

Background:

2. The Petitioner had initially submitted the proposal for introduction of new bid (order) types in its Day Ahead Market on 17.07.2018 vide Petition No. 218/RC/2018. The matter was heard on 11.10.2018. It was observed that the Petitioner had not obtained feedback from the stakeholders on the proposed new bid (order) types and not submitted adequate analysis on the possible impact of such bids on price discovery or market behavior. Accordingly, the Commission while disposing off the Petition vide Order dated 16.10.2018 directed the Petitioner to give wide publicity to the proposed new bid (order) types by uploading the same in its website for inviting comments from all stakeholders and general public. The Commission further directed the Petitioner to approach with a fresh petition with detailed study incorporating the comments received from the stakeholders.

3. In pursuance of the Commission's directions vide Order dated 16.10.2018, the Petitioner hosted the proposed new bid (order) types on its website vide notice dated 24.10.2018 inviting comments from all stakeholders and general public. In response, the Petitioner received comments from the following stakeholders:

- (1) Tata Power Trading Ltd.;
- (2) GMR Energy Trading Ltd.;
- (3) Sembcorp;
- (4) PTC India Ltd.;
- (5) JITPL; and
- (6) Statkraft.

The Petitioner has filed the present Petition No. 11/RC/2018 on 26.12.2018 along with the reply to the comments received from the aforesaid stakeholders.

Submission of the Petitioner:

4. The Petitioner has proposed to introduce seven new bid (order) types for the Day Ahead Market briefly described in the Table below:

| S.No | New Bid Types | Brief Description | Key Benefits to Market Participants |
|------|--------------------------------------|--|---|
| 1 | Minimum Quantity Block Bid | Provision to specify minimum quantity for a Block Bid | Help reduce cases of paradoxical rejection of bids for sellers and buyers in DAM. |
| 2 | Profile Block Bid | Provision to specify different quantity across different time block of a Block Bid | Bring flexibility for various generators to model their bidding pattern and help Discoms for their demand side management. |
| 3 | Minimum Income Condition (MIC) Bid | Bid to be selected only if the condition of minimum revenue is achieved | Provide flexibility for participants to plan for their minimum revenue realization and would help recovering costs such as start-up cost in addition to variable cost. |
| 4 | MIC Bid with Schedule Stop Condition | If MIC Bid is not selected, then few initial bids shall be selected for gradual shut down of the plant | Prevent an abrupt plant shut down in case MIC order is not accepted. |
| 5 | Load Gradient Bid | Provision to specify the ramping rates – maximum variation between two consecutive time blocks | Increase flexibility in the day-ahead market and help the plants to manage technical criteria of ramping. |
| 6 | Flexi Bid | Provision to specify the quantity & price for a bid without defining the time period – system will allocate the time based on welfare maximization | With this bid type, plants like Pump storage based hydro plants, battery storage etc. can optimise their revenue and this also add flexibility to the supply bids in meeting the peaking demand |
| 7 | Enhanced Linked Bid | Parent-Child Bid combined trade value would be considered for allocation with this enhancement. | Optimize the bid selection for both buyers and sellers |

5. The Petitioner has submitted that the need for introduction of new bid (order) types stems from the fact that the Exchange Market in India has considerably matured. The number of participants in the exchange market has increased significantly over the years. The power market scenario viz. the number of

generators, types of generators, load pattern, peaking load pattern, increase in the renewable generation capacity etc. has also significantly changed. Moreover, the participants have on several occasions requested for introduction of such tools and services including new bid (order) types to cater to their changing needs.

6. The Petitioner has submitted that it has conducted detailed research and development before proposing the new bid (order) types. It has studied the different bids existing in international exchanges. Further, it has made presentations on the proposed new bid (order) types before CERC and NLDC on 19.2.2018 and 14.3.2018 respectively and incorporated the suggestions given during the discussion in this present Petition.

7. The Petitioner has also submitted that the members of the exchange in Day Ahead Market are able to submit either Single Bid or Block Bids each having their own shortcomings. The Single Bid does not cater to the complex constraints of generators and demand pattern of the buyer. Further, in case of partial selection of Single Bid, it becomes difficult for the sellers to meet their technical minimum or the buyers to fulfill their power requirement. Similarly, the rigid feature of a Block Bid doesn't allow the change in quantum of power across time blocks which stands as a major disadvantage for renewable generators, thermal generators with partial LTAs etc. Also, the issue of paradoxical rejection in case of block bids stands as a major concern. The Petitioner has also highlighted that the Committee constituted for reviewing the Block Bids has recommended examining new types of flexible bids to cater to the specific requirements of different types of participants.

Hearing on 7.5.2019 and 26.11.2019 :

8. The matter was heard on 7.5.2019. It was observed that the Petitioner had not submitted any detailed analysis of the proposed new bid (order) types as directed vide Order dated 16.10.2018. Accordingly, the Commission vide RoP directed the Petitioner to submit the detailed analysis on affidavit on or before 24.5.2019. The Commission also directed the Staff of the Commission to upload the Petition on the CERC website for seeking comments/suggestions from POSOCO, Trading Licensees and other stakeholders on or before 24.5.2019.

9. In pursuance of the Commission's directions vide RoP dated 7.5.2019, the Petition was hosted on the Commission's website seeking comments/suggestions from the stakeholders. In response comments were received from the following stakeholders:

- (1) CESC Ltd.
- (2) EMA Solutions Pvt. Ltd.
- (3) FICCI
- (4) GUVNL
- (5) POSOCO
- (6) Prayas Energy Group
- (7) PTC India Ltd.
- (8) Tata Power Trading Company Ltd.

The comments/suggestions received from these stakeholders were shared with the Petitioner vide CERC letter dated 5.7.2019 directing the Petitioner to submit point-wise reply. The Petitioner submitted its point-wise reply to the comments/suggestions on affidavit dated 16.8.2019. The Petitioner has also submitted the detailed analysis on the impact of new bid (order) types on the price discovery in the Day Ahead Market. The matter was again heard on 26.11.2019 and order reserved.

Comments from Stakeholders:

10. The proposal to introduce new bid (order) types was hosted on the Petitioner's website on 24.10.2018 and on the Commission's website on 15.5.2019 for stakeholder's consultation. The important issues raised by different stakeholders along with the Petitioner's reply is provided below:

- (1) **Impact of new bid (order) types on price discovery:** Some of the stakeholders viz. Prayas Energy Group, POSOCO etc. have expressed concern regarding the possible impact of proposed new bid order types on the price discovery in Day Ahead Market segment. The stakeholders have

highlighted that the inclusion of proposed new bid types may increase the computational difficulties for the existing bid matching software and influence the price discovery.

The Petitioner has submitted that these new bid types are proposed to provide flexibility to the bidders by incorporating certain additional features in the existing bid types and as such there is no change in the approach to the price discovery mechanism followed in the Day Ahead Segment. In fact, some of these proposed bid types can also be emulated using the combination of existing bids, for instance, the functionality of a minimum quantity bid can be achieved by using the existing mother child bid etc. which further support the stand that the proposed new bid order type is not going to impact the price discovery.

The Petitioner has also submitted that it has conducted an extensive analysis on the proposed new bid types wherein these bid types were tested in the actual live scenario and the results obtained in terms of Market Clearing Price, Volume and Social Welfare are observed to be satisfactory. Further, the Petitioner has submitted that it will conduct periodic review to monitor the impact of the proposed bid types on the functioning of the market and will constantly endeavor to improve the bid types.

(2) **Additional features in the proposed bid types:** Many stakeholders viz. CESC Limited, TATA Power Trading Co. Ltd., GUVNL, PTC etc. have requested for incorporating additional features in the proposed new bid order types and different combination thereof viz. in addition to Minimum Quantity Bid Type, Schedule Stop condition may be provided with the all other Bid Types etc.

The Petitioner has welcomed the suggestions of the stakeholders and submitted that these suggestions shall be considered in the next development phase based on the experience gained after the implementation of proposed new bid order types.

(3) Introduction of proposed Bid Type in a phased manner: Many stakeholders viz. POSOCO, EMA Solutions, PRAYAS Energy Group etc. are of the view that the proposed bid order types should be introduced gradually in a phased manner. This will give market participants enough time to learn about these bids and evolve appropriate bidding strategies which will lead to optimal system outcomes.

The Petitioner has agreed to the stakeholders' suggestion and proposed to initially introduce two new bid order types namely 'Minimum Quantity Bid' and 'Profile Block Bid' and based on the market participant's feedback, will introduce other bid types in a gradual phase-wise manner.

Analysis and Decision:

11. The Petitioner has proposed to introduce 7 types of new bid (order) types in its Day Ahead Market. The Petitioner has submitted that these proposed new bid (order) types will provide customization and flexibility to the users, enhance liquidity in the spot market, reduce paradoxical rejections and cater to the changing requirements of market participants. In pursuance to the directions of the Commission, the Petitioner has carried out the stakeholders' consultations and submitted its point-wise reply to the comments/suggestions given by the stakeholders. The Petitioner has also submitted the detailed analysis of the possible impact of these proposed new bid (order) types on the market.

12. We have considered the submissions of the Petitioner, analysis of the proposed new bid (order) types submitted by the Petitioner, and the stakeholders' comments/suggestions. It is observed that the stakeholders have largely welcomed the proposal to introduce new bid types although they have raised concerns regarding the computational and pricing difficulties. The stakeholders including POSOCO have also proposed to introduce the new bid order types in a phased manner. It is also observed that the Petitioner has tested the proposed new bid (order) types using past actual live data scenario and the results obtained in terms of Market Clearing Price, Volume and Social Welfare are reported to be satisfactory. The Petitioner had initially proposed to introduce seven type of new bids in the

Petition. However, after stakeholder consultations, the Petitioner has proposed to start with introduction of only two types of new bids, namely, Minimum Quantity Bid and Profile Block Bid and subsequently based on the market participants' feedback, introduce other bid types in a gradual phase-wise manner for which approval of the Commission will be sought separately.

13. Considering the above, we are of the view that the new bids types proposed by the Petitioner shall provide flexibility to the participants for placing their buy/sell bids at the Exchange. However, it is to be noted that the possibilities of impact of such bids on price discovery or market behavior cannot be ruled out. Therefore, we accord approval for introduction of two types of new bids, namely, Minimum Quantity Bid and Profile Block Bid in Day Ahead Market of IEX and direct the Petitioner to submit quarterly report on the detailed analysis of the impact of these new bid types on the market behavior and price discovery for a period of six months from the date of introduction of such bid types in Day Ahead Market.

14. The Petitioner is further directed to amend its Bye laws, Rules and Business Rules by incorporating the two types of new bids, namely, Minimum Quantity Bid and Profile Block Bid in Day Ahead Market, publish the same on the website of the power exchange and submit the same to the Commission within 30 days from the date of issue of this order.

15. Petition No. 11/RC/2019 is disposed of in terms of the above.

Sd/-
(I.S. Jha)
Member

Sd/-
(Dr. M.K. Iyer)
Member

Sd/-
(P.K. Pujari)
Chairperson