

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 7/RC/2014**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson**

**Shri A.K.Singhal, Member**

**Shri A. S. Bakshi, Member**

**Date of Order: 8.6.2015**

**In the matter of**

Permission to introduce flexible block bids in the Day Ahead Market Contract in Power Exchange India Limited.

**And**

**In the matter of**

Power Exchange India Limited

**...Petitioner**

**Parties Present:**

Shri Chandrashekhar A. Bhat, PXIL

Shri Gaurav Maheshwari, IEX

Shri S.S.Barpanda, POSOCO

**ORDER**

The petitioner, Power Exchange India Limited has filed this petition seeking permission to introduce Flexible block Bids and Flexible normal Order in the Day Ahead Spot Contract under clauses 2.2.1 and 2.2.2 and 2.3 of the Business Rules approved by the Commission. The petitioner has made the following prayers:

“(a)To allow the petitioner to start/introduce/launch Flexible Block Order and Flexible Normal order in the Day Ahead Market;

(b) To approve the revised Business Rules; and

(c) Pass any other order as may be deem fit and proper in this regard.”



2. In the present petition, the petitioner has proposed to introduce three different types of flexible orders with the following configurations:

- (a) Flexible block order with Constant Volume across all time slots.
- (b) Flexible block order with Variable Volume across all the time slots :
- (c) Flexible Normal order with transaction amount criteria specified by a participant.

3. The petitioner has submitted that flexible block order provides the necessary flexibility to the market participants and will only increase volumes and social welfare as the present block bid criteria of 'All or None' leads to non-fulfillment of participants expectation if counterpart sell/buy is not available for any time slot.

4. The staff of the Commission vide letter dated 30.1.2014 requested the petitioner to submit the following information, namely:

- (a) Mathematical formulation of new Order proposed to be introduced.
- (b) How the proposed formulation ensures social welfare maximization and its new effects on the price discovery by taking different scenarios.
- (c) Demonstration of the trading software with the new Order and its result.

5. In response, the petitioner vide letter dated 12.2.2014 submitted that the features of the algorithm were being validated by Chennai Mathematical Institute (CMI) which will conclude this exercise by 28.2.2014. Accordingly, the petitioner requested to grant permission to furnish the required information regarding the test results by 10.3.2014 which was granted.

6. The petitioner vide letter dated 7.3.2014 further submitted that the validation exercise is yet to be concluded for Flexible block order with constant volume and requested for time to furnish the required information regarding the test results by 31.3.2014.

7. The petitioner vide its affidavit dated 28.3.2014 further submitted that it had completed the validation exercise for Flexible block order with constant volume and submitted the clarification called for by the staff of the Commission vide letter dated 30.1.2014. The petitioner also informed that it had not completed system testing of Flexible block order with variable volume and Flexible normal order with transaction amount criteria specified by a participant. Accordingly, the petitioner requested for extension of time upto 30.6.2014 for the submissions of test results on the system testing of Flexible block order with variable volume and Flexible normal order with transaction amount criteria specified by the participant.

8. On 15.4.2014, the petitioner gave a demo on three types of flexible orders to the staff of the Commission. Based on the discussions, the petitioner vide its affidavit dated 16.5.2014 submitted revised Business Rules incorporating new flexible block bid feature along with mathematical formulation of all the three features. In the revised prayer, the petitioner renamed the third order type as Flexible time block order. The petitioner also informed that it is in process of concluding the detailed analysis for last two flexible bid configurations and requested for time upto 31.7.2014 for furnishing test results.

9. Subsequently, the petitioner vide its letter dated 21.7.2014 informed that it is in the process of migrating to a new IT based trading system 'P-NEST', which is in UAT stage and the testing of Flexible block order with variable volume and Flexible time block order is to take place in this new system and requested for the additional time till 31.10.2014 for making the final submissions of the test results. The petitioner vide letter dated 31.10.2014 submitted that since the UAT stage for new trading system has not been completed, it may be allowed time to submit information regarding new features by 31.12.2014. The petitioner also requested that the first feature, i.e. 'Flexi Block Bids with constant volume' may be approved by the Commission as the test results for Flexi Block Bids with constant volume had already been submitted by it.

10. The matter was heard on 20.11.2014. The petitioner was directed to upload on its website the proposal regarding introduction of Flexible block order for inviting comments/suggestions from stakeholders and submit the same to the Commission by 31.1.2015. The petitioner was further directed to serve copy of the petition to POSOCO and IEX for their comments.

11. POSOCO vide its affidavit dated 8.1.2015 has suggested that strengthening of monitoring mechanisms may be considered while introducing the new product/bid formats in the market.

12. IEX in its response dated 24.12.2014 has suggested the following:

- (a) Principle of social welfare maximization and unbiased price discovery should be ensured ;

(b) While incorporating any new feature in the system, thorough testing should be conducted to ensure robustness;

(c) The petitioner had provided test cases considering maximum 2-3 buyers/sellers which are far from real life situation. Therefore, test cases should be run considering significant number of participants;

(d) Test cases are provided only for unconstrained scenario. It would be appropriate to test the system under constrained/unconstrained scenarios having at least 12 bid areas for a robust system to handle any exigencies.

(e) Test cases should be developed for simultaneous multiple type of orders and cases with same type of orders by multiple participants.

13. The petitioner vide affidavit dated 29.12.2014 informed that the UAT (User Acceptance Testing) stage for new trading system is yet to be completed. Therefore, it may be allowed to submit information regarding new features by 30.4.2015. The petitioner has further submitted that the following stakeholders have welcomed the new feature being introduced by PXIL:

- (a) Grace India Limited
- (b) Tripura State Electricity Corporation Limited
- (c) GMR Energy Private Limited
- (d) Global Energy Private Limited
- (e) Vedprakash Power Pvt. Ltd.
- (f) Vandana Vidyut Limited

14. In response to IEX comments, the petitioner has stated as under:

(a) Detailed mathematical formulation had already been submitted explaining the way matching algorithm takes care of social welfare maximization while deriving solutions and it fully complies with Regulation 11(A) (i) of the Central Electricity Regulatory Commission (Power Market) Regulations, 2010.

(b) Thorough testing has been conducted for the first feature i.e. 'Flexible block bid with Constant Volume' and testing of other two features is in progress. While running the matching, the matching algorithm takes into consideration all the applied constraints on the flows, orders with its types. Therefore, with twelve (12) bid zones which are handled by matching algorithm even for current bid processing with application of additional constraints in case of final matching, will be considered by solution even after introduction of new bid features. Further test cases have been prepared considering the multiple buyer/seller scenarios with multiple combinations of Normal order, block order and proposed flexible block order. The result of this testing had been satisfactory and no deviations were observed in the functionality of the proposed features.

15. Subsequently, the petitioner vide letter dated 9.4.2015 informed that the UAT stage for new trading system is yet to be completed and requested to grant permission to submit information regarding new features by 30.6.2015. The petitioner has further submitted that Manikaran Power Limited and GRIDCO Limited vide their letters dated 9.2.2015 and 13.3.2015 respectively have supported the new features.



16. We have considered the submissions of the petitioner, IEX and POSOCO. The present petition has been filed for introduction of three types of Flexible block bids. However, the petitioner has submitted the test results only for Flexible block bid with constant volume. The petitioner is yet to complete and submit test results for Flexible block order with variable volume and Flexible time block order. The present petition was filed on 8.1.2014 and the petitioner has been repeatedly seeking extension of time for making the necessary submissions for all three types of flexible block orders on P-NEST system. Since all three flexible block orders are inter-related, submission of test results of all three block orders is necessary to enable the Commission to take a holistic view. The petitioner is further required to make changes in its Business Rules. As the petitioner has not completed the UAT and has not submitted the test results for all three types block orders together, the Commission considers it appropriate to dispose of the petition with liberty to the petitioner to approach the Commission for appropriate relief after completion of all necessary submissions in accordance with law.

17. With the above, the petition is disposed of.

Sd/-

**(A. S. Bakshi)**  
Member

sd/-

**(A.K. Singhal)**  
Member

sd/-

**(Gireesh B. Pradhan)**  
Chairperson

