

Salient features of PXIL petition to Renewable Energy Certificates single sided reverse, Forward auction contract and continuous matching mechanism for REC trading.

Petition no: **11/MP/2024**

Subject: Petition under Section 66 of the Electricity Act, 2003 read with the Regulation 25 of the Central Electricity Regulatory Commission (Power Market) Regulations, 2021 for approval of Renewable Energy Certificates single sided reverse, forward auction contract and continuous matching mechanism for REC trading on PXIL's PRATYAY platform

1. The present Petition is being filed by Petitioner - Power Exchange India Limited under Section 66 of the Electricity Act, 2003, and invoking all other enabling powers of the Hon'ble Commission, seeking approval of the Hon'ble Central Electricity Regulatory Commission (hereinafter referred to as "Hon'ble Commission/CERC") for approval of Renewable Energy Certificates ("REC") single sided reverse auction contract, Renewable Energy Certificates single sided forward auction contract and continuous matching mechanism for REC trading operating under Regulation 5(4) of the Central Electricity Regulatory Commission (Power Market) Regulations, 2021 ("PMR 2021") on PXIL's PRATYAY Platform, in accordance with Regulation 25 PMR 2021.
2. Section 66 of the Electricity Act, 2003 enjoins this Hon'ble Commission to promote the development of a market in power in accordance with the National Electricity Policy referred in Section 3 of the Electricity Act, 2003. Regulation 25 (1) of PMR 2021 stipulates that the Hon'ble Commission may permit power exchanges to introduce new contracts as specified in Regulation 4(1) of the said Regulations. Regulation 25 (2) of the PMR 2021 stipulates the details which have to be submitted by an exchange seeking permission from the Hon'ble Commission to introduce such contracts. The Petitioner has provided a complete and detailed contract specifications along with this Petition. Hence, by way of the present Petition and in furtherance of Regulation 25 of the PMR 2021, the Petitioner beseeches this Hon'ble Commission to accord its approval to the Petitioner to operate

Reverse Auction Contract, Forward Auction Contract and Continuous matching Contracts in REC segment at its platform.

PXIL submission

1. That Since the introduction of REC contracts in March 2011, the purchase of RECs by obligated entities such as Discoms, open access consumers and captive power plants from different part of the country has enabled such entities to meet their RPO in the most efficient and competitive manner. The exchange platform has been a major player in accelerating renewable energy dispersion in the country's energy mix.
2. At this juncture, it is important to highlight that the Regulation 11(2) of REC Regulations 2022 provides for the bilateral trade of RECs through traders i.e. trading of RECs outside of the power exchange, and the same is allowed on any or all Days of a month.

'Regulation 11 Exchange and Redemption of Certificates

(2) The Certificate shall be exchanged through power exchange or through electricity traders in such periodicity as may be stipulated by the Central Agency in the Detailed Procedure.'

However, the existing two auction sessions, i.e. on 2nd Wednesday and last Wednesday of the month, for trading of RECs on a power exchange restricts the power exchange to only two sessions on specific days of the month. This denies a level playing field for the power exchanges vis-à-vis the trading licensees, who are dealing with the same products. Moreover, the trading licensee will have the flexibility of pricing and delivery, as per requirement of its customers. That the Petitioner seeks approval

from this Hon'ble Commission to introduce different types of contracts as part of the REC mechanism that would be operated on any day of the month based on market participants requirement.

3. It is submitted that presently, trading for REC is allowed under the uniform price discovery mechanism which is carried out through a double-sided closed bidding process. Under the uniform price auction, matching is carried out at the intersection of the aggregate buy and aggregate sell volume determined at all price points in the order book through an algorithmic process. All sale volume below and equal to matched price is sold and all buy volume above and equal to matched price is bought. Consequently, any sell volume above the matched price and any buy volume below the matched price remain uncleared. Considering the fact that trading in RECs is allowed only on a specific day under the prevailing procedure, the present mechanism suffers from certain shortcomings namely, (i) for the buyers and sellers of RECs, it is two opportunities to buy / sell RECs, and thus creates scope for speculation; and (ii) uncleared volumes (and consequently, the fund that they represent) remain locked in the inventory of the seller while the buyer is unable to access RECs, even if they want to.

4. The prevailing modalities for operation of the market unless relaxed and unless the Petitioner is able to develop products that address the requirement of its members more effectively, they will move to the trading licensees for disposing of their RECs. This will result in grave prejudice to the Petitioner as no restriction has been imposed on the trading licensees either in terms of the days for REC trading,

or in terms of negotiating different transaction structures with their clients. Unless the power exchanges are allowed some level of flexibility, there will be distortion in level playing field between power exchanges and trading licensees, as far as REC trading is concerned.

5. It is submitted that with the increasing levels of RPO fixed for Discoms and obligated entities, there will be an increasing demand for RECs, and it will be necessary to facilitate more frequent trading sessions for REC to avoid last minute clamour for RECs towards the end of the financial year, which can result in price disruption. The holding of more frequent trading sessions will allow buyers to plan their procurement and allocate their funds in a more planned and structured manner. On the other hand, sellers will be in a position to offload their RECs more frequently. This will prevent any sudden spike in REC prices. Further, in addition to having more regular trading sessions, Petitioner will be in a position to better serve the client / member requirements if they are allowed to carry out exclusive trading sessions for their clients through *Any Day Single Sided Auction* as discussed in detail below.
6. That in order to develop and offer the following new contracts in RECs, the Petitioner proposes as follows:
 - a. **Reverse Auction Contract:** Discoms and obligated entities, who would want to buy RECs can have exclusive one-sided auction sessions initiated by the buyer for purchase of RECs, wherein multiple sellers would submit offers for sale of RECs up to the quantum requisitioned by buyer. The buyer would specify its requirement in terms of quantum (nos.) of REC to be purchased. Sellers will submit their offers providing quantum (nos.) and Price in

Rs. / Certificate against the requisition made by Buyer in the auction window. The auction process shall be undertaken as two (2) stage process i.e. the Initial Price Offer (IPO) stage and Reverse Auction. The Reverse Auction will secure the most competitive prices for the buyer. With increased RPO requirements for Discoms and open access industrial and other consumers, the Reverse Auction would facilitate rationalization of REC prices for such buyers. That apart, it will be more conducive for buying Discoms as it will be easier for them to justify reverse auction for procurement of RECs than quoting arbitrary price under the Uniform Price Mechanism while submitting their bids in an auction session. The Contract Specification of Reverse Auction with details and example along with the NLDC procedure for redemption for redemption of certificate by reverse auction.

Procedure for Redemption of Certificates Reverse Auction

- **STEP 1:** The Power Exchange will register itself with the Central Agency on REC web portal. Already registered Power exchange shall deem to be registered.

- **STEP 2:** The Eligible Entity shall place for dealing of renewable energy certificates, on any Power Exchange authorized to deal in renewable energy certificates as per REC Regulations & amendment thereof. The total quantity of Certificates placed for dealing on the Power Exchange(s) by the eligible entity shall be less than or equal to the total quantity of valid Certificates held by the eligible entity as per the records of the Central Agency.

- **Step 3:** After getting Buyer requisition for Reverse auction. Power Exchanges(s) will issue circular on their sites for detail information to sellers.

- **Step 4:** During IPO stage exchange received bids from seller side for reverse auction. After completion of IPO stage Exchange will send verification of the

quantity of valid RECs available with concerned entity to Central agency.

- **Step 5:** The Central Agency shall send a report to Power Exchange(s) confirming the availability of the valid RECs with the eligible entity. In case the maximum bid volume placed for dealing in the Power Exchange(s) exceeds the quantity of valid RECs held by the eligible entity as per the records of the Central Agency then, exchange will not allow that seller to participate in further auction process. In case the bid volume placed for dealing in the power exchange lower the quantity of valid RECs held by eligible entity as per the records of the central agency then, exchange will consider only offered quantity by seller.

- **Step 6:** Before start of the auction session Central agency will provide report to Exchange confirming the valid RECs with the Seller. Accordingly, exchange will consider bids and qualify the Seller to participate in the auction session. Same seller should be not allowed to sell RECs to other exchange or Trader in the same time period to avoid mismatch situation for Registry.

- **Step 7:** After completion of auction session bids accordingly sent to Buyer for acceptance. Once buyer provides their acceptance or rejection accordingly exchange will share information with central agency.

- **Step 8:** The Power Exchange(s) will submit monthly trading report, regarding the exchange of REC(s) to the Commission with a copy to the Central Agency before 15th of next month

b. **Forward Auction Contract:** One of the other means to facilitate better reach for RECs is the Forward Auction system. The auction would be initiated by seller for sale of RECs, wherein multiple buyers would submit bids for purchase of RECs up to the quantum requisitioned by seller. Introduction of forward auction in RECs will

enable seller to sell their RECs in exclusive auction session on pre-specified days by creating a forward auction event on 'PRATYAY' system. The forward auction contract would be an additional avenue in 'PRATYAY' system for sale of RECs, in addition to the proposed Reverse Auction Contracts and the existing Uniform Price Auctions. The Forward Auction in RECs will provide the necessary impetus for the growth of RE projects. It will provide Discoms in renewable rich states to procure more of renewable energy over and above the RPO levels, as they will be able to recover part of the cost through transaction of RECs at the best realizable prices.

- c. One of the major concerns for Discoms to buy renewable energy is the lock-in of the higher capital cost paid under long term PPAs for Renewable energy projects that they have to continue to bear even as lower cost RE projects get set up on later dates. As a result, Discoms in renewable source rich states are reluctant to either continue with the older PPAs or promote or procure more of renewable energy. The forward auction process will allow such Discoms to unlock the best values for the RECs issued to them with reference to RE power procured in excess of their RPOs. This will provide them the economic incentive to procure more renewable energy, even beyond the RPO targets. The power sector is seeing increased interest from various utilities and industrial houses to move to a higher dependency on renewable energy for meeting their power requirements. The forward auction route will provide these entities additional economic incentive to procure renewable energy. In this regard, Petitioner would seek to refer to the communication from PCKL, which is procuring renewable energy more than the RPO targets.

d. It is submitted that even for RE generators, the forward auction would bring in economic incentive to set up projects under the REC route. Under the 2010 Regulations, the RE projects were allowed, inter alia, to sell power to local Discoms at the average pooled power purchase cost (APPPC) to generate RECs. Gradually, majority of the states have done away with the APPPC + REC mechanism. The 2022 Regulations have not provided for such mechanism and has left price discovery of RECs completely on market forces. The forward auction will allow RE generators who want to participate in REC market to unlock the best value for their investments and risk. Forward Auction details with the NLDC Procedure for redemption of certificate by Forward Auction is following.

Procedure for redemption of Certificates Forward Auction

- **STEP 1:** The Power Exchange will register itself with the Central Agency on REC web portal. Already registered Power exchange shall deem to be registered.

- **STEP 2:** The Eligible Entity shall place for dealing of renewable energy certificates, on any Power Exchange authorized to deal in renewable energy certificates as per REC Regulations & amendment thereof. The total quantity of Certificates placed for dealing on the Power Exchange(s) by the eligible entity shall be less than or equal to the total quantity of valid Certificates held by the eligible entity as per the records of the Central Agency.

- **Step 3:** After getting Seller requisition for Forward auction Power Exchanges(s) will issue circular on their sites for detail information to Buyer. Power exchange will inform to Central agency that they should block the same number of RECs requested for trading from seller side till auction session completed.

- **Step 4:** During IPO stage exchange received bids from Buyer side for Forward auction. Exchange will validate bids with seller's requirement and qualify the buyers for forward auction process.

- **Step 5:** Before start of the Forward auction Exchange should request The Central Agency for a report to confirming the availability of the valid RECs with the Seller. In case the maximum bid volume placed for dealing in the Power Exchange(s) lower or equal to the quantity of valid RECs held by the Seller as per the records of the Central Agency then exchange will go ahead with auction process. In case the maximum bid volume placed for dealing in the Power Exchange(s) exceeds the quantity of valid RECs held by the Seller as per the records of the Central Agency then exchange will penalise the seller.

 - **Step 6:** Once received report from the central agency power exchange will run the Forward auction for buyers and at the end of auction will declare the results.

 - **Step 7:** After completion of auction session Results will be sent to Seller for acceptance or rejection. Once received acceptance from the seller exchange will share the same information with the Central agency.

 - **Step 8 :** The Power Exchange(s) will submit monthly trading report, regarding the exchange of REC(s) to the Commission with a copy to the Central Agency before 15th of next month.
- e. **Continuous matching Contract:** In this Contract the principle of ‘price-time priority’ is applicable as prevalent in existing Day Ahead and Intra Day Contingency Contracts operating under provisions of Regulation 5(2) of CERC (Power Market) Regulations, 2021. Buyers and Sellers will submit their bids to meet their transacting requirements. The Exchange will issue a calendar for conducting continuous auction session for ease of participation. A copy of the Contract Specification of Bilateral REC with details and example, along with NLDC procedure for redemption of certificate by Bilateral REC is following.

Procedure for Continuous REC trading

STEP 1: The Exchanges register itself with the Central Agency on REC web portal.

STEP 2: The eligible entity (seller) will inform, in advance, to the Central Agency about the number of Certificates intended to be sold through Exchange Between 10 Am to 12 Pm. The eligible entities may apply online on any day of every month and mention the quantity of RECs which they want to sell through Exchange.

- **12:00 to 12:30:** Exchange will submit quantity received from Seller for verification and blocking.

STEP 3: 12:30 to 13:00

The Central Agency will check the trade applications. The cumulative quantity of Certificates placed for dealing by the Exchange of an eligible entity should be less than or equal to the total quantity of valid Certificates blocked by the eligible entity as per the records of the Central Agency, otherwise the application(s) will be rejected by the Central Agency.

STEP 4: The Central Agency will block such a number of Certificates in the Registry as informed by the eligible entities. Blocked Certificates will be on 'First-in' basis.

STEP 5: The above blocked Certificates will not be allowed to be exchanged through other Exchange or Electricity Traders until it's deblocked by the central agency on the basis of request by the eligible entity. For deblocking of certificates, the eligible entity shall place request through REC web portal only after completion of trading session irrespective of its participation or not in the session. The eligible entity can check the status of its blocked certificates on the REC web portal.

- **13:00 to 16:00:** Continuous trading session

STEP 6: 16:00 to 16:30

The Exchange will place a request to the Central Agency for a trade, specifying the quantity of the certificates that have been exchanged. The Exchange will take the seller code and the buyer code from the Central Agency.

Between **16:30 to 17:00** On successful processing of the application, the Central Agency will be extinguishing the Certificates, exchanged through Exchange, in its record. The certificates will be extinguished by the Central Agency in the 'First-in-First-out' order.

- f. The Reverse Auction, Forward Auction and Continuous matching Contracts will help in unlocking the market for RECs in a more efficient manner as they seek to address the requirement of clients both on the buy and sell side. Moreover, the flexibility in REC market both in terms of periodicity of trade and different Contracts will add depth to the REC segment. Further, transaction through power exchange will provide the much-needed security of payment as well as prompt clearance.

Prayers

In view of the above facts and circumstances, the Petitioner respectfully prays that this Hon'ble Commission may be pleased to:

- A.** Accord approval for introduction of Reverse Auction Contracts to meet Buyers RECs purchase requirement.
- B.** Accord approval for introduction of Forward Auction Contract to meet Sellers RECs sale requirement.
- C.** Accord approval for introduction of Continuous matching Contract to meet market participants REC transaction requirement.

- D.** Accord approval for the procedure for sharing of information between power exchange and the Nodal Agency for redemption of RECs under proposed Reverse Auction, Forward Auction Contracts and Continuous matching Contract.

- E.** Approve inclusion of (a) to (c) in Business Rules of the Petitioner for transaction in Renewable Energy Certificate.

- F.** Pass such order(s) that this Hon'ble Commission may deem fit to remove difficulties and allow implementation of the above; and

- G.** Pass such other relief (s) / Order(s) that this Hon'ble Commission may deem fit.