



केन्द्रीय विद्युत विनियामक आयोग  
CENTRAL ELECTRICITY REGULATORY COMMISSION  
नई दिल्ली  
NEW DELHI



याचिका संख्या./ Petition No. 375/MP/2022 and 379/MP/2022

कोरम/ Coram:

श्री जिष्णु बरुआ, अध्यक्ष /Shri Jishnu Barua, Chairperson

श्री आई. एस. झा, सदस्य/ Shri I. S. Jha, Member

श्री अरुण गोयल, सदस्य/ Shri Arun Goyal, Member

श्री पी. के. सिंह, सदस्य / Shri P. K. Singh, Member

आदेश दिनांक/ Date of Order: 08<sup>th</sup> of October, 2023

**Petition No. 375/MP/2022**

**IN THE MATTER OF:**

Petition under Section 66 of The Electricity Act, 2003 read with the Regulation 5(4) and 25 of the CERC (Power Market) Regulations, 2021 for approval of amendments in Renewable Energy Certificate Contracts at Indian Energy Exchange in accordance with the CERC (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022

**AND IN THE MATTER OF:**

**Indian Energy Exchange Limited,**

Plot No. C-001/A/1, 9<sup>th</sup> Floor, Max Towers,

Sector 16 B, Noida, Gautam Buddha Nagar,

Uttar Pradesh- 201301

...Petitioner

**Versus**

**National Load Despatch Centre (NLDC)**

Grid Controller of India Limited (Formerly Power System Operation Corporation Limited)

B-9 (1<sup>st</sup> Floor), Qutab Institutional Area,

Katwaria Sarai, New Delhi 110016

...Respondent



**Petition No. 379/MP/2022 along with IA No. 23/IA/2023**

**IN THE MATTER OF:**

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 introduction of the single sided reverse auction and single sided forward auction for renewable energy certificates at Power Exchange India Limited.

And

**IN THE MATTER OF:**

Interlocutory Application under Regulation 68 and Regulation 114 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for amendment of pleadings read with Order VI Rule 17 of the Code of Civil Procedure, 1908 for amendment of pleadings.

**AND IN THE MATTER OF:**

**Power Exchange India Limited**

9<sup>th</sup> Floor, 901, Sumer Plaza,  
Marol Maroshi Road, Marol Andheri (East),  
Mumbai 400059, India

...Petitioner

**Versus**

**National Load Despatch Centre (NLDC)**

Grid Controller of India Limited (Formerly Power System Operation Corporation Limited)  
B-9 (1<sup>st</sup> Floor), Qutab Institutional Area,  
Katwaria Sarai, New Delhi 110016

...Respondent

**Parties Present:** Shri Jogendra Behera, IEX

Shri Gaurav Maheshwari, IEX

Ms. Nithya Balaji, Advocate, PXIL

Shri Anil V Kale, PXIL

Shri Sakya Singha Chaudhuri, Advocate, PXIL

Ms. Nithya Balaji, Advocate, PXIL

Shri Alok Mishra, GCIL



Shri Kailash Saini, GCIL  
Shri K. Usman, NLDC  
Shri Gajendra Singh Vasava, NLDC

## **आदेश/ ORDER**

The Petitioner, Indian Energy Exchange Limited (IEX) in Petition No. 375/MP/2022 has sought approval for the changes made in its Bye Laws, Rules & Business Rules to align these with the CERC (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 (hereafter in referred as “REC Regulations, 2022”) in compliance with Regulation 11(3) of the REC Regulations 2022.

2. The Petitioner, Power Exchange India Limited (PXIL) in Petition No. 379/MP/2022, has sought approval 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. The Petitioners have made the following prayers:

### **Petition No. 375/MP/2022**

- a. Accord approval of proposed amendments in the REC Contract at IEX platform.*
- b. Accord approval to do away with the restriction on REC registered projects on participation in Green markets (viz. GDAM, GITD, GDAC & GTAM).*
- c. Approve the mechanism of allocation of RECs suggested in the petition or any other suitable methodology uniformly across Power Exchanges keeping in view the requirement of providing origin on REC purchase certificate to the obligated entities and to provide level playing field.*
- d. Take up the matter with FOR so that SERCs may converge on this aspect and incorporate it in their regulatory framework for fulfilment of RPOs by obligated entities.*
- e. Approve increasing REC auctions on Weekly basis.*
- f. Approve Reverse Auction and Continuous matching REC segment.*
- g. Consider present Petition under “Regulatory Compliance Application” category and adjust the surplus fee.*
- h. Direct Central Agency to make appropriate modifications with regard to eligibility conditions of issuance of RECs and enabling procedure for Reverse auction and continuous transactions in RECs at Power Exchange.*
- i. Pass such further order or orders as may be considered necessary in the facts and circumstances of the case.*



### **Petition No. 379/MP/2022**

- 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. Permit the Petitioner to operate existing 'Double Sided Closed Bid' with uniform price mechanism as approved in Order in Petition No. 215/2010 dated 17.09.2010 with Vintage Non Solar session for transaction in Non Solar RECs issued prior to 01.04.2017.
- d. Permit the Petitioner to operate existing 'Double Sided Closed Bid' auction with uniform price mechanism as approved in Order in Petition no 215/2010 dated 17.09.2010 without identifying the RECs as Solar or Non Solar and by allowing a combined session for transacting in RECs of different technologies by relaxing under provision of Regulation 18;
- e. Accord approval to the Petitioner to run 'Double Sided Closed Bid' with uniform price mechanism at different periodicity as may be notified by the Petitioner in advance in transaction calendar to be issued by Exchange platform, instead of only last Wednesday of the month;
- f. Accord approval for the procedure for sharing of information between power exchange and the Nodal Agency for redemption of RECs under proposed Reverse Auction and Forward Auction Contracts;
- g. Amend existing 'Procedure for redemption of Renewable Energy Certificate' to operate 'Double Sided Closed Bid' with Uniform price mechanism at different periodicity based on trading calendar to be issued by Exchange platform;
- h. Approve inclusion of (b) to (d) in Business Rules of the Petitioner for transaction in Renewable Energy Certificate;

### **IA No. 23/IA/2023**

1. To allow the Petitioner to amend the clearance of eligible sell quantum approved earlier vide this Hon'ble Commission's order dated 26.10.2012 in Petition No. 174/MP/2012 with proposed step-wise methodology as under:
  - (a) **Step-1:** Clear all participants that have quoted a price better than the market clearing price.
  - (b) **Step-2:** Identify source wise residual requirement at the market clearing price after deducting quantum cleared from bids that are better than market clearing price
  - (c) **Step-3:** For bids received at the market clearing price
    - i. When source wise availability is more than preference received from Buyer, pro-rata clearance to be made among all Sellers.
    - ii. When source wise availability is equal to preference received from Buyer, then the same to be fully cleared



- iii. *When source wise availability is less than preference received from Buyer, then pro-rata clearance to be made to match preference received from Buyer, residual quantum if any to be cleared on pro-rata basis from pool of other sources*
  - iv. *When preference for available sources is not provided by any Buyer then pro-rata clearance to be made from pool of all sources.*
2. *Pass such order(s) that this Hon'ble Commission may deem fit to remove difficulties and allow implementation of the above;*

### **Petition No. 375/MP/2022**

#### **Submission by the Petitioner**

4. The Petitioner (IEX) has made the following submissions:
- a. Keeping in view the changes brought in the REC Regulations 2022, the proposed framework for the REC Contract is as follows:
    - i. **Type of Contracts:** It is proposed that a single REC will be traded without any categorization as the REC Regulations, 2022 have dispensed with the categorization of RECs and instead the concept of multiplier has been introduced.
    - ii. **Eligibility for Participation in REC Contracts**
      - **Sellers:** Generators/ Discoms /Open Access Consumers having relevant RECs issued by the Central Agency.
      - **Buyers:** All the entities which are Obligated Entities or any entity wanting to purchase RECs on voluntary basis shall be eligible to participate in REC Contract as buyer.
      - **Other Contract details of REC:** All other contract specifications are similar to the ones existing in the REC Contract except the removal of floor and forbearance price.

An approval is needed from the Commission on the required amendment in SCHEDULE C of Business Rules of the IEX and contract specifications of REC Contract.

- (b) In accordance with Regulation 19(2)(c) of the REC Regulations 2022, the existing REC contract for Non-Solar RECs issued prior to 01.04.2017 will remain available for the trading till further directions of the Supreme Court/ Commission.
- (c) It is requested to clarify that the energy sold by RE capacity registered under REC mechanism in the any conventional market (DAM/RTM/TAM) at Power Exchange



will be eligible for issuance of RECs and in case the energy is sold in the Green Markets (viz. GDAM, GITD, GDAC & GTAM) by such RE capacity, no RECs will be issued against such energy sold in the Green markets at Power Exchanges. Accordingly, it is proposed to do away with the restriction on participation of the REC registered projects in Green Markets imposed due to the eligibility conditions provided under the REC Regulations 2010.

(d) In the present REC market, the price discovery and matching methodology is based on double sided closed bid auction where there is no one to one matching. In this case, the origin of the RE source can only be specified on pro-rata basis. Thus, the purchase certificate may be issued indicating the % clearance of each type of RE source of sellers cleared in the market. However, considering that SERCs have specified separate RPO trajectory for different technologies and the trading licensee will be able to provide source specific RECs on a bilateral basis the REC market offered by the Power Exchanges based on simple pro-rata basis will become redundant. In view of the above, the following mechanism is proposed for pro-rata allocation of RECs based on Buyer's Preference:

- (i) Buyers will indicate their preferences i.e., Solar, Non-Solar, Hydro etc. at the time of submitting the bids
- (ii) Price discovery will take place considering the RECs regardless of the buyer's preferences. A single MCP will be computed for the market.
- (iii) Selected sellers/RECs will be allocated to the buyers as per their preferences. Solar RECs will be allocated to the buyers having solar preferences and vice versa. In case number of RECs on buy side is less than the number of RECs selected in a particular category the buyers will get RECs as per their preferences and in case the buy side is more, the RECs will be allocated on a pro-rata basis.
- (iv) In this mechanism the buyers will be able to get RECs as per their preferences and it will be a level playing field with the trading licensees. The allocation of RECs on the basis of buyer's category preference is more suitable than indicating the origin on pro-rata basis based on technology-wise cleared RECs.

(e) The Commission may approve the mechanism to be uniformly applied across Power Exchanges or specify any other suitable methodology as may be deemed appropriate keeping in view the requirement of obligated entities and providing a level playing



field with the trading licensee without which the REC market at the Power exchange will become redundant.

- (f) As the SERCs align their Regulations, RECs can be made fungible or utilized to meet RPOs across different technologies.
- (g) Presently the REC trading session is conducted only once i.e., on last Wednesday of the month. The Petitioner has received requests from stakeholders for increasing the frequency of REC trading sessions. Accordingly, the Petitioner has proposed for consideration of the Commission:
  - (i) **Weekly Auction:** The frequency of such sessions may be increased from once in a month to once in a week so that the buyers will have opportunity to buy from the market at shorter intervals.
  - (ii) **Reverse Auction:** It may be considered to allow the buyers to buy RECs through reverse auction where the price is discovered based on competitive bidding. Buyers requiring RECs beyond a minimum limit may be allowed to buy through reverse auctions. In reverse auction, the buyer may also specify the underlying technology.
  - (iii) **Bilateral Trade:** It may also be considered to allow the buyers to buy RECs through continuous trade available during the day. Small buyers viz. the obligated open access consumers or even voluntary buyers looking forward to reduce their carbon footprint may purchase RECs through this mechanism whenever the need arises.
- (h) The Petitioner has prayed to consider the present petition under Regulatory Compliance category, keeping in view the interest of the market and to expedite the approval process. The present petition is filed under the Miscellaneous Petition category seeking approval on the changes made in the Petitioner's Bye Laws, Rules & Business Rules to align these with the REC Regulations 2022 in compliance with Regulation 11(3) of the REC Regulations 2022.

### **Hearing dated 15.12.2022**

5. The case was called out for hearing on 15.12.2022. After hearing the representatives of the Petitioner and the Respondent, NLDC, the Commission admitted the Petition and





directed the Petitioner to seek public comments on the proposed amendments to the REC contract.

6. The Petitioner prayed for an interim order in view of bidding session which was scheduled on 28.12.2022. The Commission vide RoP directed as under:

“

- (a) *On the issue of enabling REC registered projects for participation in Green Markets (viz. GDAM, GITD, GDAC & GTAM), the Commission noted that the Central Agency has already modified the Detailed Procedure under REC mechanism and as per Clause 7.2 (c) of the said procedure, uncleared bids of RE generating stations in Green Day Ahead Market transferred and cleared in DAM are eligible for issuance of REC subject to eligibility conditions under REC mechanism. This being in line with the REC Regulations, 2022, the energy sold by RE capacity registered under REC mechanism in any conventional market (DAM/RTM/ TAM) at Power Exchange shall be eligible for issuance of RECs and in case the energy is sold in the Green Market by such RE capacity then no such RECs will be issued against such energy sold in the Green Markets at Power Exchanges.*
- (b) *On the issue of increasing the frequency of REC sessions on Power Exchanges from once in a month to once in a week, the Commission directed the Central Agency to examine the issue and to take action based on public consultation in this regard.*
- (c) *On the proposal of allowing Reverse Auction where the price is discovered based on competitive bidding and allowing buyers to buy RECs through continuous trade available during the day, the Commission directed the Power exchanges to submit detailed proposal in this regard after public consultations which can be examined subsequently through separate proceeding.*
- (d) *On the issue of fungibility in RECs and pro-rata allocation of RECs based on source, the Commission noted that categorization of RECs has been dispensed with, on introduction of the concept of multiplier under REC Regulations, 2022. With due regard to the fact that different categories of RPOs still exist for the buyers, the Commission in its Statement of Reasons Order dated 11.06.2022 on REC Regulations, 2022 had stated that the Central Agency will be required to indicate origin of RE source while issuing REC certificates.*
- (e) *Accordingly, the Commission directed that while the price discovery and matching methodology in the REC market on power exchanges will continue to be based on double sided closed bid auction mechanism, pending and subject to final orders in this petition, the mechanism of pro-rata allocation based on buyer's preference as proposed by the Petitioner may be followed by the Power Exchanges to allocate cleared RECs in the Power Exchanges among the buyers of RECs.*
- (f) *A comprehensive report shall be submitted by the Petitioner and NLDC by 15.01.2023 on the above interim mechanism highlighting origin of RE source of RECs, buyer's*





*preference RECs based on origin of RE source, pro-rata allocation based on buyer's preference."*

**Reply by the Respondent dated 30.12.2022**

7. The Respondent has submitted the following:
- a. **Enabling participation of Renewable Energy (RE) generators registered under Renewable Energy Certificate (REC) in Green Market Segments and Clarification on eligibility conditions for issuance of REC(s):**
    - i. The REC Regulations 2022 allow registration of the partial capacity of RE Generator under the REC framework. So, it can get registered under the REC framework for part capacity and for the other part capacity, it can participate in the Integrated Day Ahead Market (IDAM) segment of the market.
    - ii. A provision of advance accreditation and advance registration has been added in the detailed REC Procedure so that such REGS, which in normal circumstances is ineligible for accreditation due to the required conditions of the accreditation/registration process as per REC Regulations 2022, in special circumstances may become eligible for issuance of certificates and thus can get themselves accredited/registered.
    - iii. The REC Regulations, 2010 allowed the RE generators registered under the REC Mechanism to participate in the conventional market like Day Ahead Market (DAM) / Real Time Market (RTM) / Term Ahead Market (TAM), and REC(s) were issued against such injection of energy. The REC Regulations, 2022 retain this provision and allow registration of full or part capacity under the REC Mechanism and participation in the conventional market. Similarly, the energy injected under conventional market contracts (DAM/RTM/TAM) will be eligible for issuance of REC(s) provided all other eligibility criteria for issuance of REC(s) as per REC Regulations 2022 are fulfilled.
  - b. **Specifying the origin/source of RE power in the certificate to be issued by power exchange:**
    - i. In the SOR of the REC Regulations 2022, the Commission clarified that the Central Agency shall indicate the origin of RE source while issuing the Certificates. A process in this regard has been developed by the Central Agency



and communicated to the power exchanges, through which the source of origin of the Certificates will be informed to the exchanges/traders.

- ii. The Petitioner has proposed pro-rata allocation of REC(s) based on buyers' preferences. In this regard, the Respondent submitted that the buyers, apart from the REC(s) of choice, will also be allocated REC(s) that they may not require for their RPO fulfilment, as per proposed methodology. REC(s) with the seller have perpetual validity. However, once the REC is purchased by a buyer it is meant for compliance of RPO for the same or previous financial years as allowed by the appropriate commission. So, to avoid this situation, it is proposed that the power exchanges take the choice of buyers. If a buyer doesn't have any specific preference, they can specify "Any" as their choice. Price discovery is to be made irrespective of the buyer's choice considering a single REC with a single market clearing price (MCP) (double-sided closed bid auction). Post discovery of MCP the REC(s) may be allocated as per the choice of buyers on a pro-rata basis (seller side pro-rata).
- iii. The only drawback of this method is that after this allocation, some of the sellers who were selected based on the price discovery will be eliminated as per the buyers' preference. Further, a buyer selecting "Any" as their choice will have higher chances of getting REC(s) which will be an incentive for opting for this choice. A higher number of buyers opting for "Any" as its choice will lead to a lesser number of sellers being rejected after the price discovery.
- iv. As the categorization based on different technologies will impact the allocation of REC(s) based on a pro-rata basis, it is important that each exchange uniformly follows the categorization based on which the preference of the buyer(s) is sought.

**c. Increasing the frequency of REC auctions & other contracts:** NLDC submitted that it has been observed that the REC(s) are mostly purchased by the obligated entities in the 3<sup>rd</sup> and 4<sup>th</sup> quarter of the financial year, as the RPO Targets are to be met on annual basis. Moreover, the energy injection reports are validated on monthly basis by the respective SLDC or RLDC, based on which REC(s) are issued to the eligible entities and inventory is updated. Further, there is a huge gap between the buyers and the sellers of the REC(s). Therefore, increasing the frequency of the REC



trading sessions will not increase the liquidity in the market. Moreover, the higher number of sessions will result in a higher cost to the participants, power exchanges, and the Central Agency. So, the Central Agency is of the view that there is no need of increasing the frequency of REC trading sessions.

### **Rejoinder by the Petitioner dated 09.01.2023**

8. The Petitioner has submitted the following:

a. **Enabling participation of RE generators registered under REC, in Green Market Segments and Clarification on eligibility conditions for issuance of REC(s):**

While the Respondent agrees with the understanding conveyed by the REC Regulations 2022 and the SOR therein, that impose the primary criteria for a generating station to qualify for REC is that the power sold from such a generating station is not accounted for RPO compliance of the obligated entity, the same is not adequately captured in the modified procedure issued on 05.12.2022. As per the Modified Detailed Procedure issued by Central Agency, in Clause 7.2(c), it is provided that the only uncleared bids of REGS in GDAM transferred and cleared in DAM shall be eligible for issuance of REC. Since the procedure contains the relevant provision only for GDAM uncleared quantum, the stated clarity is not available. It is, therefore, requested that clarity be provided by modifying the procedure dated 05.12.2022 to such extent. As provided under the REC Regulations 2022 any REGS having its capacity registered under the REC mechanism and selling power through the conventional segments (not accounted for RPO compliance) in the Power Exchanges should be eligible for issuance of REC.

b. **Specifying the origin/source of RE power in the certificate to be issued by power exchange:** It is observed that in the alternate method suggested by the Respondent, the buyers will be able to get the REC types as per their preferences; however, as indicated, there is a chance of sellers getting eliminated even if they are selected in the auction. While the said proposal can also be considered by the Commission, the Petitioner's proposal has been made keeping in view the need to fulfil the trades (buy/sell) that get executed. The Petitioner agrees with the views of the respondent that each Exchange should uniformly follow the categorization based on which the preference of the buyer(s) is sought.



- c. **Increasing the frequency of REC auctions & other contracts:** The Petitioner submitted that since the REC Regulations 2022 have expressly allowed trading of RECs outside of the market and the procedures issued by the Respondent have allowed such trading to be done on any day of the choice of participants, the concern regarding the liquidity in the market are unwarranted. Further since the traders are already allowed to conduct trading sessions on any day, the concern regarding increase in cost due to increase in the frequency of exchange- based trading is also misplaced. Further, CERC vide Order dated 09.12.2022 in Petition No. 15/SM/2022 has also approved the revised charges to be levied by POSOCO for its activities related to registration, REC issuance etc. Increasing the frequency of trading sessions will provide flexibility to the market participants. Instead of waiting till last Wednesday of the month, both buyers and sellers can participate in the market and trade during the month as per their requirements. DISCOMS can purchase RECs based on their RPO requirements and availability of funds whereas RE sellers can sell RECs to meet their immediate working capital requirements. It is submitted by the Petitioner that the frequency of REC trading sessions may be increased to once in a week instead of the existing practice of once in a month.

**Written Submission by Petitioner on 17.01.2023 in compliance with directions in RoP**

9. The Petitioner has submitted the following:
- a. In accordance with the directions of the Commission, a Public Notice was notified on the proposal for amendments in Renewable Energy Certificate Contracts at Indian Energy Exchange in accordance with the REC Regulations, 2022 seeking comments/ suggestions from the stakeholders.
  - b. The stakeholders have given positive feedback on the proposal of the amendments in REC contract under REC Regulations 2022. They have supported the methodology of allocation of RECs based on the buyer's technology preferences and appreciated the proposal for increasing the frequency of REC sessions from once in a month to once in a week. The stakeholders have affirmed that increase in the frequency of sessions will help the buyers and sellers to utilize the exchange platform to transact in REC in a more flexible manner based on their requirements. DISCOMS can purchase RECs



based on their RPO requirements and availability of funds whereas the RE sellers can sell RECs to meet their immediate working capital requirements.

### **Hearing dated 19.1.23**

10. The Commission directed as under:

- a. Central Agency to inform the outcome of consultation with stakeholders along with its observations on increasing the frequency of REC trading sessions in a month.
- b. Central Agency to conduct a meeting with all Power Exchanges for consensus on the methodology to be followed across Power Exchanges for allocation of RECs among buyers and submit on affidavit by 10.2.2023.
- c. All the Power Exchanges to follow interim mechanism of 'pro-rata allocation based on the buyer's preference' to allocate RECs among the buyers as per the direction in ROP dated 15.12.2022
- d. A detailed report to be submitted by the Petitioner and the Central Agency within two weeks on the interim mechanism highlighting origin of RE source of RECs and pro-rata allocation based on buyer's preference.

### **Additional Submission by Respondent w.r.t hearing dated 19.01.2023**

11. The Respondent has submitted the following:

- a. As per directions of the Commission, the Central Agency sought comments of the stakeholders by 27.1.2023 on increasing REC trading sessions. It is submitted that GRID – INDIA has received comments from 12 stakeholders on the matter of increasing frequency of trading of RECs on the power exchanges. The stakeholders gave mixed response on this matter of increasing frequency of trading.
- b. A meeting with representatives of the power exchanges was held on 02.02.2023 regarding methodology for allocation of RECs among buyers and increasing frequency of trading on the power exchanges. Discussion was held among all the power exchanges on the following methodology suggested by GRID – INDIA:



**Step 1:** Power exchanges will take choice from the buyers as Solar, Non-Solar and No Specific preference, through their portal at the time of the bid.

**Step 2:** Price discovery is to be made irrespective of the buyer's choice considering a single type of RECs with a single market clearing price (MCP) (double-sided closed bid auction).

**Step 3:** Post discovery of MCP, the RECs may be allocated as per the choice of buyers. If the required RECs on the buy side is less than the numbers of RECs cleared on sell side for a particular category, the buyers to be allocated full quantum of RECs as per their preferences and on seller side it will be on pro-rata basis based on number of cleared RECs. For cases where required RECs (buy side) are more than the RECs (cleared on sell side), the RECs are to be allocated on a pro-rata basis.

**Step 4:** Buyers who give their choice as “No Specific preference” to be allocated RECs on the pro-rata basis of the available RECs cleared on sale side after fulfilling the choice of the buyers.

**Step 5:** RECs selected after the price discovery but do not have any buyer for those (technology) RECs will be excluded from the final trade.

- c. A buyer selecting “No specific preference” will have higher chances of getting RECs which will be an incentive for opting for this choice if any type of RECs fulfils its RPO compliance requirement. A higher number of buyers opting for “No Specific Preference” will lead to a lesser number of RECs of sellers being rejected after the price discovery.
- d. The only difference between the methodology being followed by the exchanges in the January 2023 trading session and the methodology proposed by the Central Agency is that in the first method, after the allocation of RECs on the basis of choice of the buyers, the cleared RECs on sell side of other category are proportionally distributed among the buyers even if the buyer has not opted for that type of REC to meet its RPO compliance. The main demerit in this case is there is a financial burden to the buyer as it has to pay price for RECs of other category, which are not required for meeting its RPO



obligations. Once the RECs are allocated to the buyer, the RECs get extinguished.

- e. While in the proposed methodology, the unallocated RECs on sale side (after allocating on pro-rata basis to respective buyers of their preferred type and to the buyers with no specific preference) remains un-cleared. These un-cleared RECs can be traded in the next trading cycle and as such there is no financial burden on sale side.
- f. It was discussed that the basis on which the selected bids post discovery of MCP will be rejected in cases where there is no buyer of the technology should solely be on pro rata basis (proportional) irrespective of the price in the bid of the seller.
- g. It was further discussed that in this method, the buyers will get the RECs as per their choice and there will not be a revenue loss to the buyers as compared to the method being followed by the exchanges. RECs with the seller have perpetual validity while the REC once bought by the buyer has to be utilized for fulfilment of RPO in the same FY (with some exceptions). The seller will always have the option to sell its RECs in the subsequent trading sessions. However, the drawback of this method is that some of the RECs of the sellers which were selected based on the price discovery will be eliminated as per the buyer's preference which is not in line with the market principle of price discovery.
- h. GRID– INDIA suggested that the method used by the power exchanges in January 2023 and the method suggested by GRID – INDIA, both are sub optimal solutions to the present problem. The intent of the Regulation and REC framework envisage RECs as a medium to facilitate the RPO compliance of the obligated entities. Therefore, to fulfil this intent the choice of the obligated entity (the buyer) has to be kept paramount.
- i. IEX on 03.02.2023 through mail submitted that they agree with the REC allocation methodology suggested by GRID – INDIA. PXIL stated that they don't have any view as of now as they have already filed a Petition 379/MP/2022 in the CERC and will follow the methodology approved by





CERC. HPX through mail dated 06.02.2023 agreed with the REC allocation methodology suggested by GRID – INDIA

- j. **On the issue of increasing frequency of trading of RECs:** Based on the discussions with the power exchanges on the issue of increasing frequency of trading of RECs on Power Exchanges, it is proposed that the frequency of the trading sessions may be increased to fortnightly for a period of six months. Based on the response of the market during this period, the frequency of trade will be increased to once a week or may be kept the same as fortnightly or may again revert to once a month, under intimation to the Commission.

### **Hearing dated 22.2.23**

12. The representative of the Petitioner submitted that pursuant to the directions of the Commission vide RoP for the hearing dated 19.1.2023, a detailed consultation had been carried out with Respondent No.1 – Central Agency and in so far as frequency of REC trading session in a month is concerned, it has proposed that the trading sessions may be increased to fortnightly for a period of six months and based on the experience gained during this period, further decision may be taken thereafter, which is agreeable to the Petitioner. The representative of the Petitioner further submitted that in so far as the methodology for allocation of RECs among the buyers is concerned, the Central Agency has suggested the allocations strictly as per the buyer's preference. The representative of the Respondent No.1, Central Agency, suggested that the trading sessions of REC in the Power Exchanges be held on the 2<sup>nd</sup> and the last Wednesdays of each month.

### **Petition No. 379/MP/2022**

#### **Submission by the Petitioner PXIL**

13. The Petitioner PXIL has made the following submissions:
  - a. The Petitioner PXIL has proposed the following new contracts:
    - i. **Reverse Auction Contract:** Discoms and the obligated entities which 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 upto the quantum requisitioned by the buyer. The buyer



would specify its requirement in terms of quantum (nos.) of RECs to be purchased. Sellers will submit their offers providing quantum (nos.) and Price in Rs. / Certificate against the requisition made by the buyer in the auction window. The auction process will 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 the 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.

- ii. **Forward Auction Contract:** The auction would be initiated by the seller for sale of RECs, wherein multiple buyers would submit bids for purchase of RECs upto 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.
- b. The Reverse Auction and Forward Auction mechanism 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 products will also facilitate trading licensees to broaden the scope for their clients and add depth to the REC segment. Further, trading through power exchange will provide the much needed security of payment as well as prompt clearance.

- c. It may also be noted that as far as trading licensees are concerned, they are at liberty to draw up their own products for dealing with RECs, which can be implemented bilaterally with their clients. Similar right should be available to power exchanges as competitors. Further, the ultimate objective is to promote renewable energy and provide necessary market for dealing in RECs. This would be best achieved if the markets are allowed to operate based on demand and supply.
- d. **Uniform price auctions at prescribed periodicity:** To be operated by the power exchange based on pre-defined calendar (preferably on weekly basis) to meet market participants trading requirements.
- e. **Certificate of Purchase to Buyer:** The Petitioner proposes to issue 'Certificate of Purchase' to all cleared buyers providing information on type and number of RECs purchased by buyer under the reverse auction and forward auction methods proposed above, in a manner similar to 'Certificate of Purchase' prescribed under Part-V Clause 5.2 (e) of 'Procedure for Implementation of REC Mechanism'. Necessary direction should be issued in this regard to NLDC as a matter of abundant precaution, once these new methods of auction are approved. That Part-V of the 'Procedure for Implementation of REC Mechanism' issued by NLDC prescribes the procedure for redemption of RECs applicable for existing monthly trading session held on last Wednesday of the month
- f. In case multiple sessions of 'uniform price auctions' proposed to be conducted based on trading calendar issued by the power exchange, the process of redemption of RECs would be similar to the redemption process applicable in the existing monthly auction session.
- g. The Petitioner submits that based on the directives provided at Regulation 27 of the REC Regulations 2022, it is proposed to provide at 'PRATYAY' platform two separate segments as under:
- i. Vintage Non-Solar session under directives provided at Regulation 27 (c) for transaction in Non-Solar REC issued prior to 01.04.2017.



- ii. Combined session for transacting in RECs issued under different technologies. This would avoid fragmentation of market and help build liquidity in the monthly auction session
- h. On conclusion of the above two auction sessions, the power exchange will issue 'Certificate of Purchase' to the cleared buyers specifying the number of RECs purchased by the buyers without any renewable energy source information mentioned in the Certificate such that the Buyer may utilize such Certificate to fulfil its RPO requirement across any RPO category. Since keeping any RE source information would over complicate the process of allocation of Certificates considering that RPO categories have been modified in MOP Order ref no 09/12/2021-RCM dated 22.07.2022 and the buyers do not have a choice of stating their RE source requirements while purchasing in a uniform price auction. Furthermore, the process of invoice generation for GST applicable on REC transaction executed by the buyer and the seller does not allow the possibility of any pro-rated allocation of RECs to buyers. The RECs transacted on the 'PRATYAY' platform through uniform price auction should not carry any renewable source information.

#### **Additional Submission by the Petitioner**

14. The Petitioner made additional submission as below vide affidavit dt. 16.01.2023 based on the auction session held on 28.12.2022:

- a. The auction session held on 28.12.2022 followed the 'Double Side Closed Bid' with 'Uniform price discovery' matching mechanism. This mechanism does not provide one-to-one matching of the orders submitted by the market participants. In view of the same, the Petitioner proposes two alternate mechanisms for allocation of 'source of origin' of the cleared RECs to buyer(s), namely, equitable allocation and preference-based allocation.
- b. **Equitable Allocation:** The equitable allocation would enable the 'Certificate of Purchase' issued to buyer(s) to reflect the percentage clearance of each type of REC source of sellers cleared during the session.



- c. The Petitioner issued the ‘Certificate of Purchase’ of the RECs to cleared buyer(s) providing information about composition of RE sources for RECs purchased during the session held on 28.12.2022.
- d. **Preference-Based Allocation:** Alternatively, PXIL has proposed to receive allocation preference from buyer at Order entry stage. The allocation preference will be made under two categories:
- i. Solar RPO
  - ii. Non-Solar RPO, enabling compliance to Enabling Buyer to meet compliance under HPO, Wind RPO and Other RPO as prescribed in Ministry of Power Order dated 22.07.2022
- In case the buyer does not submit preference, allocation will be made on random basis.
- e. Allocation is made to each Buyer based on its preference

**IA No. 23/IA/2023**

15. The Petitioner in Interlocutory Application (Diary No.105/2023) has prayed to amend the petition as under:

- a. The methodology to determine ‘Source of Origin’ information applicable to the cleared buyers is based on clearance methodology approved by the Commission vide order in Petition No. 174/MP/2012 dated 26.10.2012 in the matter of ‘Modification of allocation methodology for successful participants in Power exchange in Renewable Energy Certificate (REC) market’.
- b. With the implementation of REC Regulations, 2022 w.e.f. 05.12.2022, the RECs are now fungible trading instruments.
- c. On implementation of the REC Regulations 2022, during the three auction sessions i.e. sessions held on 27.12.2022, 25.01.2023 and 22.02.2023, the Petitioner has provided ‘Source of Origin’ information in ‘Certificate of Purchase’ to each cleared Buyer. That vide circular dated 27.01.2023, the Petitioner has implemented ‘preference’ for type of Certificates to be allocated while submitting bids in ‘PRATYAY’ system.



- d. While processing 'preference' for type of Certificate submitted at time of bid entry by the buyer, i.e. Solar / Small Hydro / Wind RPO / HPO / any other type of Certificate', the existing pro-rata clearance methodology applicable for bids cleared at MCP, approved vide Order dated 26.10.2012, constraints the 'PRATYAY' system from fulfilling the 'preference' submitted by Buyers, even though, the cleared quantum of sell available at MCP may be sufficient to fulfill the requirement of 'preference' submitted by Buyers.
- e. That since the combined session of different types of Certificates, i.e. Solar / Small Hydro / Wind RPO / HPO / any other type of Certificate is operated, the pro-rata clearance of Certificates for bids placed at the market clearing price does not result in optimal utilisation of different types of Certificates resulting in non-fulfilment of 'preference' provided by Buyers.
- f. Accordingly, the Petitioner seeks to amend the step-wise methodology for clearance of eligible quantum placed at market clearing price that was earlier approved vide Order dated 26.10.2012 in Petition 174/MP/2012.

### **Hearing dated 7.2.2023**

16. After hearing the learned counsel and the representative of the Petitioner, the Commission directed the Petitioner as under:

- a. To implead Central Registry/NLDC as party to the Petition and to file revised memo of parties and to admit and issue notice to the Respondent.
- b. To serve copy of the Petition on the Respondent, Central Registry/NLDC and the Respondent to file its reply/comments, if any.
- c. To give wide publicity to its proposal under the present Petition by uploading the same on its website for inviting comments from the stakeholders and general public and to file an affidavit with detailed study incorporating the comments received from the stakeholders and the response thereon.
- d. To submit detailed proposal for 'Reverse Auction Contracts' and 'Forward Auction Contract' (prayer (a) and (b) of the Petition) subsequently through separate proceeding.



- e. On allocation of certificates among buyer, the Petitioner to follow directions given in ROP dated 19.01.2023 in Petition No. 375/MP/2022, as an interim measure.

**Reply by the Respondent**

17. NLDC has submitted the following:

- (a) With regard to the request to run 'Double Sided Closed Bid' with uniform price mechanism at different periodicity, it is submitted by NLDC that in the matter of petition no. 375/MP/2022 filed by IEX before the Commission, a meeting of all power exchanges (IEX, PXIL and HPX) to develop consensus, was organized on 02.02.2023 and based on the suggestions and the discussions in the meeting, it was proposed that at first the frequency of the trading sessions may be increased to fortnightly for a period of six months. The commission reserved the order in this matter vide order dated 22.02.2023.
- (b) With regard to the request for approval for introduction of Reverse Auction Contracts and Forward Auction Contract for the exchange of REC(s), it is submitted by NLDC that if such contracts are allowed by the Commission, it will require major changes in the REC Web portal. It will also require development of protocol for exchange of information between the power exchange and the Central Agency, timeline for application and approval of trade. It is requested by NLDC that if the Commission allows Reverse Auction Contracts and Forward Auction Contract for the exchange of REC(s), the Central Agency may be given appropriate time to develop the procedure for this process and execute necessary modifications in REC Web portal.
- (c) In compliance of Regulation 5.1 (vii) of CERC (DSM and Related Matters) Regulations, 2014, NLDC had a requirement for purchase of 2,57,415 nos. of non-solar RECs for FY 2020-21. NLDC had put its purchase bid of equal quantum of 85,805 nos. each in all three Power Exchange. IEX and HPX have allocated 85,805 nos. each of non-solar RECs against the purchase requirement of 85,805 nos. of non-solar RECs. However, PXIL has allocated 2,686 nos. of solar RECs and 83,119 nos. of non-solar RECs against the purchase bid of 85,805 nos. of non-solar RECs.
- (d) As per REC Regulations, 2022, the REC has now become a fungible trading





instrument. The new DSM Regulations 2022, which have come into force from 05<sup>th</sup> December 2022 have no such provision of balancing of deemed renewable purchase obligation (RPO) by NLDC. There is a requirement of purchase of 8,32,935 nos. of non-solar RECs by NLDC for the period Apr'21 to 04<sup>th</sup> Dec'22 as per provision of DSM regulation 2014. However, there is a surplus of 6,30,536 nos. of solar RECs for the period Apr'15 to 04<sup>th</sup> Dec'22. Looking into the fungible nature of RECs, it is submitted by NLDC that it may be allowed to purchase only 2,02,399 nos. of RECs after netting off against the 6,30,536 nos. of excess notional solar RECs available.

### **Rejoinder by Petitioner dated 18.3.2023**

1. The Petitioner in its rejoinder has submitted the following:
  - (a) The Petitioner on 28.12.2022, conducted an auction session under the provisions of REC Regulations 2022. As per the direction of the Commission, the Central Agency conducted a meeting with all the power exchanges for consensus on the methodology to be followed across the power exchanges for allocation of RECs among buyers. The Petitioner intimated that it had filed the petition and that it will abide by the directions of the Commission in the matter.
  - (b) The Petitioner has formulated step-wise procedure for redemption of certificates as applicable for Reverse auction and Forward auction, separately for its inclusion in 'Detailed Procedure for Implementation of REC mechanism' under provisions of REC Regulation 2022.
  - (c) Accordingly, the Commission is requested to approve introduction of single sided Reverse auction Contract and single sided Forward auction Contracts on 'PRATYAY' system of the Petitioner, with a direction to the Central Agency to issue 'Procedure for redemption of Certificates.'
  - (d) On implementation of REC Regulations 2022, during the three auction sessions i.e. sessions held on 27.12.2022, 25.01.2023 and 22.02.2023, the Petitioner has provided information about 'Source of Origin' in 'Certificate of Purchase' to each cleared buyer. That vide circular dated 27.01.2023, the Petitioner has implemented 'preference' for type of Certificates to be allocated while submitting bids in 'PRATYAY' system. Based on preference entered in



‘PRATYAY’ system, the Petitioner has allocated RECs to the cleared buyers by undertaking equitable allocation to all the successful participants in compliance to directives provided by the Commission in Order in Petition no 174/MP/2012 dated 26.10.2012.

2. **REC Auction Session dated 22.02.2023:**

- (a) Implementation of preference option to the cleared quantum has led to mismatch between preference submitted at the bid entry and allocation made from cleared set of Certificates during a session. The Petitioner is unable to fulfill/meet the ‘preference’ due to constraints in clearance of RECs directed vide the aforesaid order dated 26.10.2012.
- (b) The ‘PRATYAY’ system identifies the cleared quantum of buy and sell, based on the quantum cleared in a session. The ‘source of origin’ for each REC as provided by Central Agency is later apportioned to cleared buyers.
- (c) It is submitted that, while processing preference for the type of Certificate submitted at the time of bid entry by the buyer, i.e. Solar / Small Hydro / Wind RPO / HPO / any other type of Certificate’, the existing pro-rata clearance methodology applicable for the bids cleared at MCP, approved vide Order dated 26.10.2012, constraints the ‘PRATYAY’ system from fulfilling the ‘preference’ submitted by the buyers, even though, the cleared quantum of sell available at MCP may be sufficient to fulfill the requirement of ‘preference’ submitted by Buyers.
- (d) It is submitted that since the combined session of different types of Certificates, i.e. Solar / Small Hydro / Wind RPO / HPO / any other type of Certificate is operated, the pro-rata clearance of RECs for bids placed at the market clearing price does not result in optimal utilisation of different types of Certificates, resulting in non-fulfilment of ‘preference’ provided by Buyers.

The Petitioner proposes to amend the pro-rating of allocation for bids received at MCP by enabling pro-rating based on ‘preference’ submitted by Buyer.

**Hearing dated 21.3.2023**

3. The Representative of the Petitioner submitted the following:



- (a) In compliance with the directions of the Commission vide Record of Proceedings for the hearing dated 7.2.2023, the Petitioner had given wide publicity to its proposal under the present Petition by uploading it on its website for inviting the comments from the stakeholders/general public. However, no comment has been received from the stakeholders/ general public.
- (b) The 'Source of Origin' information provided to the buyer is dependent of RECs submitted by the eligible entities that get cleared based on the methodology approved by the Commission vide order dated 26.10.2012 in Petition No. 174/MP/2012 i.e. first clearing all participants who have quoted a price better than market clearing price and thereafter pro-rating the allocation quantity based on the quantity quoted by the participants at the market clearing price.
- (c) Upon implementation of REC Regulations, 2022, during the three auction sessions held by the Petitioner on 27.12.2022, 25.1.2023 and 22.2.2023, the Petitioner provided the 'Source of Origin' information to each cleared buyer. Based on their preference as entered in the system, the Petitioner has allocated the RECs to the cleared buyers by undertaking the equitable allocation to all successful participants in compliance to directives provided by the Commission in the aforesaid order dated 26.10.2012.
4. The representative of the Respondent submitted that the methodology adopted by the Petitioner does not appear to be in line with the discussions held in a joint meeting with all power exchanges on 2.2.2023 wherein it was also deliberated that after the market clearing price is discovered, all the RECs are to be considered at par.
5. After hearing the learned counsel for the Petitioner and the representative of the Respondent, GCIL, the Commission permitted the Respondent to file its submission on the aspects raised by the Petitioner.

**Reply by Respondent (NLDC) to Rejoinder dated 5.04.2023**

6. The Respondent (NLDC) has submitted the following:



- (a) The method applied by the Petitioner for allocation of RECs in the 25.01.2023 and 22.02.2023 session, as explained in the rejoinder does not adhere to the directions of the Commission as per ROP dated 15.12.2022 and 19.01.2023 in Petition No. 375/MP/2022 for allocating RECs to the buyers based on the mechanism of 'pro-rata allocation based on buyer's preference'.
- (b) The Petitioner proposed a different method for exchange of RECs through 'Double Sided Closed Bid' with uniform price as per Order for Petition 174/MP/2012. The method proposed goes against the principle of uniform price discovery mechanism in a double-sided closed bid auction. As per this principle, once market clearing price is discovered all the bids are treated at par. This mechanism adopts the principle of maximization of economic surplus (sum of buyer surplus and seller surplus), taking into account all the bids. Further, the Petitioner has quoted the Commission's order dated 26.10.2012 in Petition No. 174/MP/2012 filed for 'Modification of allocation methodology for successful participants in Power exchange in Renewable Energy Certificate (REC) market'. The subject order pertains to the allocation of RECs and the same is being used for the discovery of uniform price.
- (c) The methodology agreed in the meeting of all the power exchanges dated 02.02.2023 for the allocation of RECs was submitted to the Commission by the Respondent NLDC vide affidavit dated 09.02.2023 wherein, NLDC had submitted that IEX and HPX had agreed with the method discussed during the meeting. However, PXIL stated that they don't have any view as of now as they have already filed a petition in the CERC and will follow the methodology approved by CERC.

### **Analysis and Decision**

7. We note that the CERC REC Regulations 2022 have brought about changes in the REC framework, which necessitate revision in the bye-laws, rules & business rules of the power exchanges. Regulation 11(3) of the CERC REC Regulations, 2022 provides as under:



*“The Power Exchange(s) shall seek approval of the Commission, as may be required under the Central Electricity Regulatory Commission (Power Market) Regulations, 2021, to the respective Bylaws and Rules for exchange of Certificates in the Power Exchange(s).”*

8. Regulation 25 of the Central Electricity Regulatory Commission (Power Market) Regulations, 2021 (in short “the PMR 2021”) provides for “Approval or Suspension of Contracts by the Commission”. Regulation 25 is reproduced as under:

*“25. Approval or Suspension of Contracts by the Commission*

*(1) The Commission may, on its own or on an application made in this behalf, permit any Power Exchange to introduce new contracts as specified in clause (1) of Regulation 4 of these regulations:*

*.....*

*.....*

*(2) Any Power Exchange seeking permission to introduce a new contract under clause (1) of this Regulation, shall submit to the Commission complete and detailed contract specifications including the following:*

*(i) Type of contract;*

*(ii) Price discovery and matching methodology proposed*

*(iii) Timelines, including commencement of bidding and duration of bidding session till delivery commences;*

*(iv) Delivery mechanism and delivery duration i.e. whether delivery is for intraday, daily, weekly, monthly, seasonal, yearly or beyond;*

*(ii) Risk management mechanism including margining and final price settlement mechanism;*

*.....”*

9. We have heard the Petitioners & the Respondent in the two petitions and have carefully perused the submissions on record. The proposal of the Petitioners on the REC contracts, in view of the above regulations, and the concerning issues have been analysed in the subsequent paragraphs.

**(i) Enabling REC registered projects on participation in Green Markets (viz. GDAM, GITD, GDAC & GTAM) and eligibility conditions for issuance of RECs**

10. The Petitioner (IEX) requested to clarify that the energy sold by the RE generating station registered under the REC mechanism in any conventional market (DAM/HPDAM/RTM/DAC/TAM/HPTAM) at a power exchange shall be eligible for



issuance of RECs and in case the energy is sold in the Green Markets by such RE generating station, no REC will be issued against such energy sold in the Green markets at Power Exchanges.

11. In this context, the Commission had issued an interim order in the Record of Proceeding for hearing dated 15.12.2022. The Commission noted that the Central Agency has already modified the Detailed Procedure under the REC mechanism and as per Clause 7.2 (c) of the said procedure, the uncleared bids of the RE generating stations in Green Day Ahead Market transferred and cleared in DAM are eligible for issuance of REC subject to eligibility conditions under the REC mechanism. This being in line with the REC Regulations, 2022, the energy sold by the RE generating station registered under the REC mechanism in any conventional market at a power exchange shall be eligible for issuance of RECs and in case the energy is sold in the Green Market by such RE generating station, no REC shall be issued against such energy sold in the Green Markets at the power exchanges.

12. The Respondent (NLDC), submitted that the modified REC detailed procedure allows issuance of REC(s) to the Renewable Energy Generating Station (REGS) participating in IDAM and selling energy in the conventional segment of IDAM in case their bids remain uncleared in the RE segment of IDAM subject to the condition that the REGS fulfils all other eligibility criteria for issuance of REC(s) as per the REC Regulations 2022.

13. On consideration of the submission made by the Central Agency and in the light of the provisions of the REC Regulations 2022, we hold that the energy sold by the RE generating station registered under the REC mechanism in any conventional market contracts shall be eligible for issuance of REC(s) provided all other eligibility criteria for issuance of REC(s) as per the REC Regulations 2022 are fulfilled, and in case the energy is sold in the Green Market by such RE generating station, no REC shall be issued against such energy sold in the Green Markets at the power exchanges.

**(ii) Price Discovery & proposal for Reverse Auction and Forward Auction**

14. At present, in the REC market the price discovery is based on double sided uniform price auction. The Petitioner IEX, has proposed the same except for the removal of floor and



forbearance price. However, in addition to the above, IEX has also proposed Reverse Auction and Bilateral Trade for consideration. Under the Reverse Auction, the buyers are to be allowed to buy RECs through reverse auction where the price is discovered based on competitive bidding. Under Bilateral Trade, the buyers are to be allowed to buy RECs through continuous trade available during the day.

15. PXIL, in its petition has proposed two new contracts under REC market viz., Reverse Auction and Forward Auction. Reverse Auction is exclusive one-sided auction session 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. Forward Auction would be initiated by the seller for sale of RECs, wherein multiple buyers would submit bids for purchase of RECs up to the quantum requisitioned by seller.

16. During the hearing held on 15.12.2022 in Petition No. 375/MP/2022 and 07.02.2023 in Petition No. 379/MP/2022, the Commission observed that the proposals for reverse/forward auction & bilateral trade require more detailed scrutiny. The Respondent in its reply also mentioned that such proposal would need major changes in the REC web portal. Further this will require development of protocol for exchange of information between the power exchanges and the Central Registry, timeline of application and approval of trade etc. The Commission notes that the REC Regulations, 2022 have allowed transactions of RECs through traders in addition to the transactions through power exchanges. The traders generally engage in bilateral transactions. Provisions have been made in the Regulations for accounting of such transactions. The experience of this new dispensation of bilateral trade through traders will need be reviewed by the Commission based on the data being received in this regard. Given the small share of REC Market, introduction of new products in the power exchanges is not considered expedient at this stage. The Commission is in agreement with the Respondent and of the view that the Reverse Auction Contracts and Forward Auction Contracts for RECs can be allowed based on the needs of the stakeholders which can be examined subsequently through a separate proceeding.

17. Accordingly, we direct the power exchanges to continue the use of the double sided uniform price auction for price discovery of REC Contracts.





### **(iii) Mechanism for allocation of RECs**

18. The REC Regulations 2022 dispensed with the categorization of the RECs as Solar and Non-solar. However, considering the RPO categorisation as Solar/ Non-solar, the Commission directed the Central Agency to indicate the origin of RE source in the certificate. Based on the origin, both the power exchanges, IEX and PXIL, in their respective petitions have proposed the methodology for allocation of RECs to the buyers for RPO compliance. IEX has suggested allocation based on the buyers' preference and, the balance on pro-rata basis. PXIL, however, has suggested two alternatives – either proportionate to the type of REC at sell side or based on buyer's preference.

19. The Respondent has submitted that if allocation is done on the buyer's preference and thereon pro-rata basis, the buyers may be allocated RECs that they may not require for the RPO fulfilment. REC once purchased by a buyer is meant for RPO compliance. The Respondent suggested the allocation should be as per choice of the buyers. In this case, some of the sellers who were selected may be eliminated.

20. As directed by the Commission, the Central Agency held a meeting with the representatives of the power exchanges on 02.02.2023 regarding methodology for allocation of RECs, wherein GRID-India suggested a methodology of pro-rata allocation based on the buyer's preference. Post the meeting both IEX and PXIL, via email, agreed to the methodology suggested by GRID-India, although PXIL submitted that it would await the order in Petition No. 379/MP/2022 filed by it. GRID-India, however, stated in its submission that all the suggested solutions are sub-optimal.

21. In view of the above, the Commission felt the need to take up this matter with the state regulators. The Forum of Regulators in its 84<sup>th</sup> Meeting held on dated 03.02.2023 deliberated on the issue of 'Fungibility of RPO' and unanimously agreed to allow fungibility of RECs to fulfil any RPO specified by the State ERCs. The relevant extract from the minutes of the FOR meeting is reproduced below:

*“ 23. .... Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 were notified on 9th May,2022 in which the distinction between Solar and Non- solar*



*RECs was dispensed with and the concept of multiplier was brought in. Recent RPO trajectory issued by the Ministry of Power also allowed fungibility among different RE technologies to a great extent. However, State RPO framework still has separate RPO structure for different RE technologies. Hence, there is a dichotomy among the obligated entities like Discoms to buy RECs to fulfil technology specific RPO specified in the State RPO Regulations. Making REC fungible to meet RPO across different technologies would resolve this dilemma and hence it was requested the State ERCs may allow procurement of RECs to fulfil RPO across any RE technology source.*

.....  
26. *After discussion, the **Forum endorsed the idea and unanimously agreed to allow fungibility of RECs to fulfil any RPO specified by State ERCs. Accordingly, it was decided that the obligated entity can fulfil any category of RPO by procuring REC certificate as per the REC Regulations, 2022.***”

22. The Commission agrees with the decision of the Forum of Regulators and believes that fungibility of RECs to meet the requirement of RPO across any RE technologies would resolve the dichotomy between the Central and the State Regulatory framework. This will further facilitate the process of procurement of RECs by the obligated entities such that shortfall of any technology specific RPO by the obligated entities can be fulfilled with procurement of RECs as per the REC Regulations, 2022. The Commission believes that the obligated entities may approach their respective State Electricity Regulatory Commissions for appropriate approval in this regard in view of the unanimous decision arrived at in the FOR.

23. The Commission is conscious of the counterargument that such an arrangement might be counter-intuitive to the idea of technology specific RPO and would, therefore, urge that such categorization of RPO be phased out. In fact, the Commission notes that even the Government of India has been gradually moving towards fungibility. For instance, the earlier segmentation of solar and non-solar RPO no longer exists in the RPO categorization of the Government of India. The current carve outs are only for hydro, wind and others and it is expected that most of such technology specific RPOs shall be fulfilled through the green PPA route. Under the REC mechanism, the concept of multiplier is a substitute for separate technology specific carve out, and fulfils the same objective of encouraging the emerging and high cost technologies by assigning higher number of RECs for one megawatt hour of electricity generated and injected into the grid.

24. With due regard to the observation of the Respondent (NLDC) that the allocation of RECs based on the buyer's preference or on pro-rata basis are sub-optimal and in view of the unanimous decision of the FOR on fungibility of the RECs in fulfilling RPO across different RE technologies, the Commission notes that interim arrangement of pro-rata allocation of RECs based on the buyer's preference is no longer required. Instead, single technology agnostic RECs should be allowed through the power exchanges. Accordingly, the Commission directs the power exchanges and the Central Agency to implement the above decision from the trading session starting with the month following the month of issuance of this Order. The power exchanges and the Central Registry are directed to issue 'Certificate of Purchase' accordingly. This shall be applicable across all the power exchanges from the trading session starting with the month following the month of issuance of this Order. NLDC is directed to provide feedback on implementation of this method of allocation of RECs along with its views thereon, within six months from this Order.

**(iv) Increasing frequency of REC auctions**

25. Regulation 11(2) of the REC Regulations, 2022 stipulates that the Certificates shall be exchanged through power exchanges or through electricity traders in such periodicity as may be stipulated by the Central Agency in the Detailed Procedure. As per the timelines specified in the detailed procedure notified by Central Agency, trading on the power exchange shall be on monthly basis, carried out on the last Wednesday of every month, in accordance with the Rules/Byelaws of the power exchange approved by the Commission.

26. The above timelines are being followed by all the power exchanges at present. However, through the instant petitions, both the power exchanges have sought approval for increasing the frequency of auction sessions from monthly to weekly basis. The Petitioners have stated that the REC Regulations 2022 provide for exchange of RECs through trading licensees and the same is allowed on any or all days of a month. Further, the exchanges submitted that they have received requests from the stakeholders for increasing the frequency of sessions.

27. GRID-India submitted that the REC(s) are purchased by the obligated entities mostly in the 3rd and 4th quarter of the financial year, as the RPO Targets are to be met on an annual



basis. Further, there is a huge gap between the buyers and the sellers of the RECs. Therefore, increasing the frequency of the REC trading sessions may not increase the liquidity in the market. Moreover, the higher number of sessions may result in a higher cost to the participants, power exchanges, and Central Agency.

28. In view of the above, the Commission directed the Central Agency to undertake public consultation and inform the Commission about the outcome. As per the direction of Commission, the Central Agency issued a Public Notice inviting comments from the stakeholders for increasing the frequency of REC trading session. The Central Agency informed that the stakeholders gave mixed response on the matter. Further, a discussion was also held among the power exchanges and the Central Agency regarding the same. Based on the discussion, the Central Agency proposed that the frequency of the trading sessions may be increased to fortnightly basis for a period of six months. Based on the response of the market during this period, the frequency of trade will be increased to once a week or may be kept the same as fortnightly or may again revert to once a month, under intimation to the Commission.

29. We note that the Central Agency and the power exchanges have come to a consensus that the frequency of the trading sessions may be increased to fortnightly for a period of six months. Accordingly, we agree that the trading sessions of the REC contracts at the power exchanges shall be held on the 2nd and the last Wednesday of each month, for the next six months from the month of this Order. We direct the Central Agency to submit a review report within six months from the date of this Order, after seeking feedback from the power exchanges and the stakeholders on the experience of increased frequency of auctions.

30. In view of the above, the Central Agency is directed to make suitable provisions in the Detailed Procedure, as may be required. Further, the Petitioners are directed to align their Business Rules, Rules and Bye-Laws according to approvals granted in this Order and as per the detailed procedure and submit the same to the Commission. The Petitioners are also directed to upload the revised Business Rules, Rules and Bye-Laws on their websites before implementing the revised trade modalities for the REC Contracts. The trade specifications should be notified to the market participants well in advance with the help of circulars.



Needless to mention, if any discrepancy is noticed or if it appears that the revised Business Rules, Rules and Bye-Laws do not conform to the Regulations and/or to this Order in any respect, necessary directions may be issued for such compliance.

31. The Petition No. 375/MP/2022 and the Petition No. 379/MP/2022 are disposed of in terms of the above.

Sd/-  
पी. के. सिंह  
सदस्य

Sd/-  
अरुण गोयल  
सदस्य

Sd/-  
आई. एस. झा  
सदस्य

Sd/-  
जिष्णु बरुआ  
अध्यक्ष

