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NEW DELHI

**Petition No. 11/MP/2024**

**Coram:**

**Shri Jishnu Barua, Chairperson  
Shri Ramesh Babu. V, Member  
Shri Harish Dudani, Member**

**Date of Order: 1<sup>st</sup> March, 2025**

**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 Renewable Energy Certificates single sided reverse auction contract, Renewable Energy Certificates single sided forward auction contract and continuous matching mechanism for REC trading.

**AND IN THE MATTER OF:**

Power Exchange India Limited  
9th Floor, 901, Sumer Plaza,  
Marol Maroshi Road, Marol Andheri (East),  
Mumbai 400059, India

**...Petitioner**

**Versus**

Grid Controller of India (GCIL) (Grid-India)  
(Formerly Power System Operation Corporation Ltd.)  
B-9 (1st Floor), Qutab Institutional Area,  
Katwaria Sarai, New Delhi -110016.

**...Respondent**

**Parties Present:** Ms. Shriya Gambhir, Advocate, PXIL

Shri Sakya Singha Chaudhuri, Advocate, PXIL  
Shri Avijeet Lala, Advocate, PXIL  
Shri Anil Kale, PXIL  
Shri Alok Mishra, GCIL  
Shri Gajendra Sinh, GCIL  
Shri Abhishek Jain, GCIL  
Shri Anisha Chopra, GCIL  
Shri Kashif Usman, GCIL  
Shri Kailash Chand, GCIL

### **आदेश/ ORDER**

1. The Petitioner, Power Exchange India Limited (PXIL), filed the present petition to seek approval of various mechanisms for trading Renewable Energy Certificate (RECs) on PXIL's PRATYAY platform, namely, Renewable Energy Certificates single sided reverse auction contract, Renewable Energy Certificates single sided forward auction contract and Continuous Matching Mechanism. These mechanisms are proposed to be operated under Regulation 5(4) of the Central Electricity Regulatory Commission (Power Market) Regulations, 2021 (PMR 2021), in accordance with Regulation 25 of PMR 2021.
2. The Petitioner previously filed Petition No. 379/MP/2022 before the Commission and made the prayer for the introduction of these Contracts for the exchange of REC among other prayers. The Commission, in its Order in Petition No. 379/MP/2022 dated 08.10.2023, directed that the matter of Reverse and Forward auction Contracts in the REC segment be examined based on the needs of the stakeholders and subsequently through a separate proceeding.
3. Accordingly, the Petitioner has made the following prayers:
  - (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.*

### **Submission by the Petitioner**

4. The Petitioner submitted the following:

- (i) Regulation 11(2) of the Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 (REC Regulations 2022) provides for the bilateral trade of RECs through traders and the same is allowed on any or all days of a month. However, the existing two auction sessions, i.e., on the second Wednesday and last Wednesday of the month, for the trading of RECs on a power exchange, restrict 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.
- (ii) The Petitioner also received a request from one of its Proprietary Members, namely, M/s Power Company of Karnataka Limited (PCKL) to operate multiple auction sessions, i.e., every week on Wednesday or at least twice a month, as it would enable Sellers to liquidate inventory against their account.
- (iii) Further, with increasing RPO targets for DISCOMs and the obligated entities, the demand for RECs is expected to rise, necessitating more frequent trading sessions to prevent financial year-end price disruptions. Frequent sessions will enable buyers to plan procurement and allocate funds effectively, while sellers can offload RECs regularly, stabilizing prices. Additionally, allowing the Petitioner to conduct exclusive trading sessions for clients through Any Day Single-Sided Auctions will further enhance client service and flexibility.
- (iv) Therefore, the Petitioner requested the Commission to approve the introduction of different types of contracts as part of the REC mechanism that would be operated on any day of the month based on market participants' requirements.

### **New Contracts for REC Trading**

The Petitioner proposed the following contact:

- (v) **Reverse Auction Contract:** In this contract, the Discoms and the obligated entities, who would want to buy RECs, can have exclusive one-sided auction sessions initiated by the buyer for the purchase of RECs, wherein multiple sellers would submit offers for the sale of RECs, upto the quantum requisitioned by buyer. The buyer would specify its requirement in terms of the 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 processes, i.e., the Initial Price Offer (IPO) stage and Reverse Auction.
- (vi) **Forward Auction Contract:** The auction would be initiated by the seller for the sale of RECs, wherein multiple buyers would submit bids for the purchase of RECs up to the quantum requisitioned by the seller. The introduction of the forward auction in RECs will enable the seller to sell their RECs in exclusive auction sessions on pre-specified

days by creating a forward auction event on 'PRATYAY' system. The forward auction contract would be an additional avenue in the 'PRATYAY' system for the sale of RECs, in addition to the proposed Reverse Auction Contracts and the existing Uniform Price Auctions.

- (vii) **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 sessions for ease of participation.
- (viii) The Reverse Auction, Forward Auction, and Continuous matching Contracts will help to unlock the market for RECs in a more efficient manner as they seek to address the requirements of clients both on the buy and sell side. Moreover, the flexibility in the REC market, both in terms of periodicity of trade and different Contracts will add depth to the REC segment. Further, transactions through power exchange will provide the much-needed security of payment as well as prompt clearance.
- (ix) Further, it is submitted that the Commission vide its Order dated 07.06.2022 has approved the introduction of 'Any Day Single Sided Reverse Auction Contract' for the purchase of power covering delivery duration from 'T+2' to 'T+90' days. Further, the Petitioner, vide its circular dated 26.09.2022, has introduced a reverse auction based contract for transacting in conventional, solar, wind, and other types of renewable power.

#### **Certificate of Purchase to Buyer**

- (x) The Petitioner proposed to issue a 'Certificate of Purchase' to all cleared buyers providing information on the type and number of RECs purchased by the buyer under the reverse auction, forward auction, and continuous matching methods in a manner similar to 'Certificate of Purchase' prescribed under Part-V Clause 5.2 (e) of 'Procedure for Implementation of REC Mechanism'. The Petitioner has requested the Commission to issue necessary direction in this regard to GRID-INDIA as a matter of abundant precaution once these new methods of auction are approved.

#### **Hearing held on 29.01.2024 (1<sup>st</sup> Hearing)**

5. After hearing the representatives of the Petitioner and the Respondent, the Commission admitted the Petition and directed the Petitioner to give wide publicity to its proposed contract by uploading on its website for 21 days, inviting comments from the stakeholders and general public, and filing an affidavit with a detailed study incorporating the comments received from the stakeholders and its response.

#### **Reply on Behalf of Respondent, Grid Controller of India Limited on 12.02.2024**

6. The Respondent submitted the following:
- (i) The Petitioner's request to increase the frequency of auction sessions was addressed in Petition No. 379/MP/2022, where a public consultation was held by the Central

Agency and received mixed responses from the stakeholders. After discussion with power exchanges and the Central Agency, it was proposed to hold trading sessions bi-weekly for six months. The Commission approved holding REC contract auctions on the 2nd and the last Wednesday of each month for the next six months and directed the Central Agency to submit a review report based on feedback from the stakeholders and the exchanges.

### **New Contacts for REC Trading**

- (ii) The Respondent submitted that if the Commission allows the introduction of multiple contracts, the issue of liquidity crunch may be addressed by implementing a well-structured trading calendar allowing different contracts in a manner that multiple auctions are not held simultaneously.
- (iii) If the Commission decides to allow the introduction of new contracts on the exchange, the Commission may take the view of allowing only one of the proposed contracts, preferably continuous matching contracts, and the performance of such approved contracts may be reviewed subsequent to their introduction at the power exchange before extending further approvals to this market segment.
- (iv) Reverse and Forward Auction Contracts should not be held one day prior to and on the day of the double-sided closed bid auctions of the RECs, which is presently held on the 2<sup>nd</sup> and last Wednesday of the month
- (v) For a Continuous matching Contract, the scheduling of the continuous auction sessions may be done in a manner such that trade is executed at the Central Agency end after aggregating the bilateral trade orders from the electricity traders and all the exchanges.
- (vi) The contract specifications specifying the different types of the certificate (optional) – Solar/ Hydro/ Non-Solar, may be removed in view of the fungibility of REC by the Commission and the Minimum Value Quotation Step for the Reverse/ Forward Auction stage may be kept at Rs 5/- or Rs 10/- to complete the auction process within a reasonable timeline.
- (vii) The Petitioner has not proposed any Margin/Additional Margin as per the risk mitigation requirement of respective contracts, which needs to be included in accordance with Regulation 25(2) (v) of the PMR.
- (viii) Further, requested that, if such contracts are approved by the Commission, the Central Agency may be given appropriate time to develop the procedure for this process as it will require approximately three months for REC Web portal modifications and an additional month to develop trading procedures and information exchange protocols with power exchanges.

### **Rejoinder by the Petitioner, PXIL dated 18.03.2024**

7. The Petitioner, in its Rejoinder, has submitted the following:

- (i) The Petitioner agreed with GRID-India's recommendation to schedule trading sessions for different REC contracts on separate days to prevent overlaps. Upon approval of new contracts, the Petitioner will issue a trading calendar for the 'PRATYAY' platform.
- (ii) The Petitioner submitted a draft 'Procedure for Redemption of Certificates – Reverse Auction' in its Petition, which allows the Central Agency to validate inventory before matching, submit clearance information, and quickly disseminate matching results to market participants.
- (iii) In response to GRID-India's submission that Reverse Auction Contracts and Forward Auction Contracts should not be allowed one day and on the day of the double-sided closed bid uniform pricing auctions, the Petitioner has submitted that as directed by Commission in Order in Petition no 379/MP/2022 dated 08.10.2023, REC auctions are conducted bi-weekly in a month. Since there is no variation in inventory between the instant at which the Contract is executed and delivery of the Contract, i.e., extinguishment of RECs, the forward auction contract will not be listed for transaction one day and on the day of double-sided closed bid uniform price auctions scheduled on 2nd Wednesday and last Wednesday of the month.
- (iv) GRID-India proposed that Continuous Matching contracts be scheduled to execute trades at the Central Agency after aggregating bilateral trade orders from all exchanges. The Petitioner submitted that currently, no bilateral transactions in the REC segment are approved on the Petitioner's 'PRATYAY' platform, and the dates for such trades are not publicly available. It will issue a trading calendar with transaction dates for the Continuous Auction Contract on the 'PRATYAY' platform, ensuring it does not coincide with the double-sided closed bid uniform price auction held on the 2nd and last Wednesday of the month.
- (v) The type/category of REC in the contract allows the obligated entities to choose the type of RECs for purchase in the Auction event. The MOP's 20.10.2023 notification outlines RPO compliance under four categories, while GRID-India's 20.12.2022 letter specifies the source origin for each REC type. The Commission, in its Order dated 08.10.2023, directed the obligated entities to approach their respective SERCs for REC purchases in auctions held by the power exchanges.
- (vi) For reverse and forward auctions, the Petitioner also prescribed a minimum value quotation step as Rs 1/- per certificate or as prescribed by the Buyer, with flexibility for variation between auctions.
- (vii) Upon approval to introduce any contract in the REC segment, it is submitted that the margin requirements will be prescribed in accordance with Regulation 25(2)(v) and Regulation 26 of PMR, 2021, and notified to market participants via Circular.
- (viii) PXIL also highlighted its capability to provide a transparent, neutral, and standardized platform for REC trading. It stressed the importance of allowing flexibility in

introducing diverse contracts to improve efficiency, liquidity, and cost-effectiveness, ultimately benefiting all market participants.

**Hearing held on 20.03.2024 (2nd Hearing)**

8. During the course of the hearing, the learned counsel for the Petitioner submitted that the Petitioner made wide publicity of its proposed contract by uploading it on its website to invite comments from the stakeholders and the general public. Upon the request of the Petitioner, the Commission permitted the Petitioner to file the additional affidavit.

**Submission of the additional information on an affidavit on behalf of Petitioner on 30.03.2024**

9. The Petitioner submitted that it has published the Public Notice dated 01.02.2024 bearing no. PXIL/S&R/23-24/03 and invited the stakeholders to submit their comments/suggestions on "Introduction of REC Reverse auction, Forward Auction and Continuous Matching Contract" till 22.02.2024 but has not received any comments/suggestions/objections from the stakeholders for such period till 26.03.2024.

**Additional Affidavit on behalf of Respondent on 10.04.2024**

10. The Respondent submitted that the Petitioner cited the Grid India Letter dated 20.12.2022 in order to justify the specification of the category, i.e., type of REC, in the contract specification. However, the Commission, in its Order dated 08.10.2023, in Petition No. 379/MP/2022, determined that RECs will be single technology agnostic and fungible in nature. Consequently, specifying the type of certificate in the contract specification for the various contracts proposed vide the present petition is deemed unnecessary.

**Hearing held on 12.06.2024 (3<sup>rd</sup> Hearing)**

11. During the course of the hearing, the counsel of Petitioner submitted that the Petitioner did not receive any comments from the stakeholders on the proposal of the Petitioner, the Commission directed the Petitioner to again give wide publicity to its proposed contract(s) by uploading on its website.

**Affidavit on behalf of Petitioner to Comments filed by Prayas (Energy Group) on 19.07.2024**

12. The Petitioner submitted that Prayas mainly commented upon three aspects viz. (i) a pilot for forward auction be held each month, and the next steps be initiated based on the outcome of such auction session, (ii) disallow the traders directly to undertake the bilateral transaction in RECs, and (iii) exchanges be allowed to hold weekly sessions for trading of RECs under uniform price discovery mechanism.
13. In response, the Petitioner submitted that introducing new contracts, such as Forward and Reverse Auctions on power exchanges, would enhance market efficiency, foster price discovery, and provide a transparent and standardized trading platform. Also, it suggested the introduction of continuous matching sessions to address liquidity issues while stressing that such measures would improve the REC market's functioning and

highlighted that the existing REC Regulations, 2022, allow traders to engage in bilateral transactions on any day, which provides market flexibility. However, power exchanges are constrained to only two sessions per month, creating an imbalance.

**Hearing held on 22.07.2024 (4<sup>th</sup> Hearing)**

14. During the course of the hearing, the Commission directed the Petitioner to furnish the details on analysing the potential impact of providing the buyer/ seller an acceptance window to accept/ reject the discovered result of the reverse/ forward auction on the price and inventory of RECs, proposed margin requirements, share of different categories of sellers & buyers of RECs in the bid volume and the cleared volume and the proposed trading window and Trading Calendar for continuous matching.

**Submission by PXIL on 21.8.2024**

15. In response to the ROP dated 22.07.2024, the Petitioner submitted the following information:

**(I) Analyze the potential impact of providing the buyer/ seller an acceptance window for accepting/ rejecting the discovered result of the reverse/ forward auction on the price and inventory of RECs. :** In the Reverse Auction initiated by the buyer, after the IPO stage, the power exchange submits the bid quantum information to the REC Registry for clearance. Once cleared, sellers participate in the auction, and the results, including acceptance or rejection, are updated in the registry. In a Forward Auction initiated by the seller, similar procedures are followed with inventory updates based on acceptance or rejection. The acceptance or rejection of bids is influenced by demand-supply dynamics, and if the discovered price is unsatisfactory, partial acceptance or rejection may occur, keeping the inventory of un-cleared sellers unchanged.

**(II) Proposed Margin Requirements:** The proposed margin requirements for the Forward Auction Contract, Reverse Auction Contract, and Continuous Matching Contract are as follows: For the sell side, there is no margin requirement. For the buy side, at the pre-bid stage (IPO Stage), the margin will be 100% of the trade value, calculated as the bid price multiplied by the quantity. At the pre-trade stage, the margin will be 118% of the trade value, inclusive of GST. Any revision to the above margin framework would be implemented after seeking approval from the Risk Assessment and Management Committee under the provision of Regulation 26 of PMR, 2021.

**(III) Share of different categories of sellers & buyers of RECs in the bid volume and the cleared volume:** The Petitioner submitted the source - wise breakup of RECs displayed on the REC Registry of India's website along with the category-wise buyer and seller bid quantum information for auction dates 10.01.2024 to 31.07.2024.

**(IV) Proposed Trading Window and Trading Calendar for a continuous matching:** The proposed trading window for Continuous Matching Contracts is from 12:00 to 14:00 hours. Trading sessions will be held daily from Monday to Friday, except



during the second and last week of each month when 'uniform price auction sessions' are scheduled.

**Hearing held on 22.08.2024 (5th Hearing)**

16. During the course of the hearing, the learned counsel of the Petitioner submitted that on 10.8.2024, the total inventory of the RECs stood at 3.64 crores, and approximately 78% of such inventory belongs to the distribution licensees having procured the renewable energy beyond their obligations, and the forward auction will only help them achieve the highest price for their RECs. Upon hearing, the Commission permitted the Respondent to file its reply/response to the Petitioner's affidavit dated 21.8.2024.

**Additional affidavit on behalf of Respondent on 10.09.2024**

17. The Respondent submitted the following:
- (i) The Commission previously allowed REC contract trading sessions twice a month (2nd and last Wednesday) for six months, directing a review report from the Central Agency. After gathering stakeholder feedback, the majority recommended continuing this schedule. The Central Agency proposed maintaining the bi-monthly auction sessions and confirmed it would continue the sessions until further directions from the Commission.
  - (ii) The Continuous Matching Contract for the exchanges operates akin to the current bilateral trades conducted by electricity traders. Presently, RECs are being traded bilaterally through Electricity Traders, which is allowed every day. However, the frequency of bilateral trades through the electricity traders has decreased during the last six months, with only one session in June-2024. Further, the RECs traded through Traders were as low as 3,637 in May-2024. The ratio of RECs traded through traders w.r.t. RECs traded through Power Exchanges during the last three months is less than 1%.
  - (iii) The Petitioner proposed to hold daily sessions of Continuous matching contracts from Monday to Friday, except during the second week and last week of the month when uniform price auction sessions are held. However, to ensure liquidity, the Respondent suggested initially scheduling sessions twice a month (1st and 3rd Wednesday) and reviewing performance before further approvals.
  - (iv) The Central Agency requested for four months to develop procedures, modify the REC Web portal, and establish protocols for information exchange if the Commission approves the REC exchange contracts.

**Submission filed by Petitioner on 30.09.2024 on the reply to additional affidavit filed by Respondent**

18. The Petitioner submitted the following:
- (i) The Petitioner clarified that Continuous Matching Contracts differ from bilateral trades as they operate under a "price-time priority" mechanism defined in Regulation 2(1)(q) of the CERC PMR, 2021. Unlike bilateral trades, which require at least three working days to materialize as per CERC REC Regulations, 2022, Continuous Matching

Contracts execute transactions instantly and continuously. The proposed mechanism involves the Central Agency verification of sell bids, enabling eligible entities to participate in these sessions, with inventory updates based on clear trade outcomes. This process is distinct from bilateral trade practices.

- (ii) The Petitioner welcomed the suggestion of the Respondent to initially schedule a continuous matching session on the 1st and 3rd Wednesday of the month. However, it is submitted that the Petitioner vide Affidavit dated 21.08.2024 sought permission to conduct daily sessions from Monday to Friday and requested the Commission to grant approval for the same.
- (iii) The Petitioner welcomed the Respondent's suggestion regarding REC portal modifications and the development of the protocol for the exchange of information between Power Exchange and Central Agency and expressed willingness to support the necessary developments.

#### **Hearing held on 08.10.2024 (6<sup>th</sup> Hearing)**

19. During the course of the hearing, the representative of the Respondent requested four months to develop procedures and modification of the REC Web portal, proposed bi-monthly sessions for continuous matching contracts to ensure sufficient liquidity due to low trade volumes in bilateral REC trades electricity traders over the past six months. The counsel of Petitioner reiterated its request for approval to conduct daily sessions from Monday to Friday. Considering the submissions, the Commission reserved the matter for Order.

#### **Analysis and Decision**

20. We have carefully examined the proposals submitted by PXIL for trading RECs on its platform. We observe that PXIL has proposed three new mechanisms for the trading of RECs, namely Reverse Auction, Forward Auction, and Continuous Matching. We note that the Petitioner had previously prayed before the Commission for the introduction of these contracts, amongst other prayers, in its Petition No. 379/MP/2022. The Commission, in its Order dated 08.10.2023 in Petition No. 379/MP/2023, observed that given the small share of the REC Market, the introduction of new products in the power exchanges is not considered expedient at this stage. Further, considering the submission by Respondent that these would require major operational changes, the Commission directed that the Reverse and Forward auction Contracts in REC can be allowed based on the needs of the stakeholders, which can be examined subsequently through a separate proceeding.
21. The Respondent in the present petition has submitted that although the introduction of multiple contracts for the same commodity, i.e., RECs, provides flexibility to the market participants to meet their specific needs, it may also cause loss of liquidity in the market, given the small size of the REC Market. A new segment in a market should be introduced gradually as it is expected that initially, the liquidity will be low for the newer contracts

and will also affect the volume of the existing double-sided closed bid uniform pricing auction contract.

22. Each of the mechanisms proposed by PXIL has been examined in the subsequent paragraphs in terms of the provisions of PMR 2021. 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;*

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

*....."*

***(i) Single sided Reverse Auction***

23. The Petitioner has proposed one-sided auction sessions initiated by the buyer for the purchase of RECs, wherein multiple sellers would submit offers for the sale of RECs up to the quantum requisitioned by the buyer. The buyer would specify its requirement in terms of the 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.
24. The Commission vide its Order dated 07.06.2022 in Petition No. 229/MP/2021 had approved the introduction of 'Any Day Single Sided Reverse Auction Contract' for the purchase of power covering delivery duration from 'T+2' to 'T+90' days, observing that such contracts at the Exchange will facilitate the discovery of competitive prices, and also provide counterparty risk management by ensuring timely payment on the day close to delivery. The Respondent has submitted that the current double-sided closed bid uniform pricing auction contract for RECs also facilitates the discovery of competitive prices and provides counterparty risk management by ensuring timely payment. The Respondent has further submitted that if Reverse Auction contracts are to be introduced, there will be a requirement for a well-structured trading calendar to maintain the required liquidity in all the segments of the REC market.

25. We note that Reverse Auction as a price discovery mechanism in electricity contracts has been approved by the Commission. However, unlike electricity, which is real time demand supply sensitive, RECs serve as a regulatory compliance instrument. The basic premise of the REC framework and REC prices thereof is that the revenue for a project registered under the REC mechanism should be comparable to the revenue from the sale of bundled green power for a regulated tariff route project. It was in view of the fact that the RE market has adequately matured and the prices of renewable technologies have reduced drastically that the price of REC is left to be discovered based on the demand and supply situation in the REC market. We agree with the Respondent that the current double-sided closed bid uniform pricing auction facilitates competitive prices while balancing supply and demand, considering the size of the REC market.
26. In reply to specific query of the Commission regarding the potential impact of providing an acceptance window to accept/ reject the discovered result of the reverse/ forward auction on the price and inventory of RECs, the Petitioner has submitted that in case of rejection/ partial acceptance under bucket filling, inventory of un-cleared sellers will remain constant on completion of auction. While the Petitioner has strained to explain the impact on inventory 'on completion of auction', the Commission is sensitive about the possibility of lock in of the particular REC inventory, rendering it unavailable for other contracts till the time the result is accepted/rejected. This may impact the liquidity in the REC market.
27. Therefore, in view of the current size of the market and to avoid further fragmentation of the liquidity, we are of the view that Reverse Auction as price discovery mechanism should not be introduced at this stage of time. Hence, we do not approve the same.

***(ii) Single sided Forward Auction***

28. The Petitioner has proposed that an 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 the seller. The Respondent has submitted that the proposed Forward Auction Contract for RECs follows the price discovery on the basis of incremental price quotes by the buyers wherein the highest prevailing buy price is selected, and therefore, does not strictly go with the spirit of efficient price discovery. The Respondent has laid reliance on Order of this Commission in Petition No. 229/MP/2021 dated 07.06.2022, wherein the Commission disallowed introduction of 'Any Day Single Sided Forward Auction Contract' for purchase of power covering delivery duration from 'T+2' to 'T+90' days observing that the price discovery on the basis of incremental price quotes by the buyers does not strictly go with the spirit of efficient price discovery.
29. We have evaluated the submission by the parties and also the stakeholder comments. It is noted that the RECs essentially seek to address the mismatch between availability of RE sources and the requirement of the obligated entities to meet their renewable purchase obligation (RPO). A forward auction, i.e. price discovery based on incremental price

quotes, may lead to a rise in REC prices as the buyers compete for the same limited quantum of RECs. The Commission is of the view that this would increase the compliance cost for obligated entities and may discourage participation, thereby undermining the purpose of REC mechanism. Therefore, in the interest of the obligated entities and considering the utility of the mechanism, we disapprove Forward Auction as price discovery mechanisms for trading of RECs.

***(iii) Continuous Matching***

30. The Petitioner has proposed that in the proposed contract the principle of 'price-time priority' is applicable as prevalent in existing Day Ahead and Intra Day Contingency Contracts. Buyers and Sellers will submit their bids to meet their transacting requirements on continuous basis during the trading period and the orders will be matched as per the Price, Quantity and Time of order submission.
31. The Respondent has submitted that new segment in a market should be introduced gradually as it is expected that initially the liquidity will be low for the newer contracts and will also affect the volume of the existing double-sided closed bid uniform pricing auction contract. Therefore, the Respondent has submitted that not all the contracts proposed by the Petitioner may be considered at this moment and a gradual approach may be exercised. The Respondent further submitted that the Commission may take the view of allowing only one of the proposed contracts, preferably continuous matching contracts, and the performance of the such approved contracts may be reviewed subsequent to their introduction at the Exchange before extending further approvals to this market segment.
32. In view of the proposed mechanism, the Respondent has highlighted that the Continuous Matching shall operate akin to the current bilateral trades conducted by electricity traders and can be executed in a similar manner. In response, the Petitioner has submitted that the Bilateral Trades by traders, are allowed to materialize in at least 3 (three) working days excluding date of application, as prescribed in the 'Procedure for Redemption of Renewable Energy Certificate' and thus such bilateral trades are not continuous in nature. The Petitioner further submitted that the proposed contracts would follow the norms as prescribed in the Regulation 2(1)(q) of the CERC PMR, 2021 which defines "Continuous Transactions" as set of transactions executed in the Power Exchange(s), not being Collective Transactions, where the buy bids and the sell bids are matched on a continuous basis with "price -time priority".
33. We have taken into consideration the submissions of both the parties. With regard to allowing trading of RECs bilaterally through traders, the Commission has been of the considered view that transaction of RECs through traders would provide an opportunity to the investors to secure their revenue on a longer-term time horizon and in turn will mitigate their risks. Further, as observed from the review report submitted by the Respondent, the ratio of RECs traded through traders w.r.t. RECs traded through Power Exchanges is very low.

34. With regard to the proposed Continuous Matching contract being on principle of the existing Contingency contracts, we observe that the purpose of the Day Ahead and Intra Day Contingency Contracts in electricity is to address the contingencies occurring after closing of Day Ahead Market or the energy requirements closer to real-time. This shall not be applicable in the case of RECs as the demand for RECs is rather aligned with RPO compliance timelines. We are of the view that Continuous matching is better suited for electricity markets, where real-time supply and demand fluctuations necessitate immediate trade execution.
35. Further, we are of the view that with multiple continuous trades, there shall not only be fragmentation of liquidity but also provide multiple prices. This may also increase the risks for market manipulation. The existing periodic auction by aggregating trades at fixed interval prevents such manipulations and ensure transparent price discovery. In view of the foregoing reasons, we do not find merit in introducing continuous matching in trading of RECs.
36. On perusal of the submissions made by the Petitioner, we find that one of the contentions of the Petitioner is that the existing two auction sessions in a month allowed on power exchanges do not provide them with a level-playing field vis-à-vis traders who are allowed to trade RECs on all days of the month. In this context, we have examined the feedback report submitted by Grid-India in April 2024 on the method of allocation and experience of increased frequency of REC auction, in compliance of the Commission's Order dated 8<sup>th</sup> October 2023 in Petition No. 379/MP/2022. We noticed that the increased frequency of REC auction sessions, from once to twice a month, has been one of the factors contributing to the increase in REC transactions. Moreover, the majority of stakeholders have supported this increase in the frequency of REC auctions at power exchanges.
37. In view of the above, we find merit in examining the need for a further increase in the frequency of REC auction sessions conducted on power exchanges. Accordingly, we direct Grid-India to review the recent trend in REC transactions (both on power exchnages and bilaterally through traders), particularly in light of the recent developments in the REC market, and give recommendations on increasing the frequency of REC auction sessions at power exchanges in consultation with the stakeholders. Based on the report from Grid-India, the Commission shall decide on increasing the frequency of REC auction sessions on power exchanges.
38. The Petition No. 11/MP/2024 is disposed of in terms of the above.

Sd/-  
**(Shri Harish Dudani)**  
**Member**

Sd/-  
**(Shri Ramesh Babu V.)**  
**Member**

Sd/-  
**(Jishnu Barua)**  
**Chairperson**