

**BEFORE THE CENTRAL ELECTRICITY  
REGULATORY COMMISSION, NEW DELHI  
PETITION NO. .../MP/2024**

**IN THE MATTER OF:**

Petition under Section 66 of the Electricity Act 2003 read with Regulation 25 of the CERC (Power Market) Regulations, 2021 for approval of introduction of Green-Real Time Market (G-RTM) at Indian Energy Exchange Ltd.

**AND**

**IN THE MATTER OF:**

**Indian Energy Exchange Limited (IEX)**                      **...Petitioner**  
9<sup>th</sup> Floor, Max Towers, Sector 16 B,  
Gautam Buddha Nagar, Uttar Pradesh – 201301

**Vs.**

**National Load Despatch Centre (NLDC)**                      **...Respondent**  
B-9 (1st Floor), Qutab Institutional Area,  
Katwaria Sarai, New Delhi 110016



## INDEX

Sr. No.	DESCRIPTION	Page No.
1.	Index	2
2.	Petition	3-24
3.	Prayer	25-26
4.	Affidavit	27-28
5.	Annexure-I	29-38
6.	Annexure-II	39-254



**For Indian Energy Exchange Limited**

**Place : Noida**

**Dated: 12<sup>th</sup> July 2024**



**BEFORE THE CENTRAL ELECTRICITY  
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**IN THE MATTER OF:**

**Indian Energy Exchange Limited (IEX)                      ...Petitioner**

**Vs.**

**National Load Despatch Centre (NLDC)                      ...Respondent**

**MOST RESPECTFULLY SHOWETH:**

1. The Indian Energy Exchange Limited (hereinafter referred to as the "IEX" or as the "Exchange"), is a company



incorporated under the provisions of the Companies Act, 1956 and having its corporate office at Plot No. C-001/A/1, 9<sup>th</sup> Floor, Max Towers, Sector 16 B, Noida, Gautam Buddha Nagar, Uttar Pradesh – 201301.

2. The Hon'ble Central Electricity Regulatory Commission (hereinafter referred to as "Hon'ble Commission" or "CERC") was pleased to grant permission to the IEX to set up, operate and commence power exchange operations by its orders dated 31.8.2007 and 9.6.2008. That IEX has been in operation since 27.06.2008.
3. By way of the present Petition, the Petitioner herein seeks approval of this Hon'ble Commission to introduce Green Real Time Market (G-RTM) in the Real Time Market (RTM) segment on its platform for providing exclusive trading in Renewable Energy.



## **BACKGROUND**

4. It is submitted that during more than a decade of its operations, IEX has provided flexibility to participants by offering diversified products across different timeframes to trade in electricity in accordance with the Byelaws, Rules and Business Rules of the Exchange and Regulations & approvals of this Hon'ble Commission. The electricity transactions on the Exchange are governed by Power Market Regulations and Connectivity and GNA to the ISTS Regulation 2023 and Procedures issued thereof.
5. IEX commenced its operations by introducing Day Ahead Market (DAM) facilitating participants to procure power for the next day. Subsequently, it offered four products in the Term Ahead Market (TAM) segment, helping participants manage their power needs up to 11 days in advance, which has been increased to upto three (3) months after the Hon'ble Commission Order dated 08.06.2022 in Petition No.



219/MP/2021. The Exchange also introduced Real Time Market (RTM) as per the framework notified by Hon'ble Commission, facilitating participants by providing flexibility to buy/sell power one (1) hour in advance.

6. In order to facilitate market based off-take of renewable power, presently the Exchange is offering Green Intra-Day, Green DAC, Green Term Ahead Market (G-TAM) and Green Day Ahead Market (G-DAM) which also provide avenue to the obligated entities to fulfill their Renewable Purchase Obligations (RPO). The Exchange is also aiding the obligated entities in meeting their RPO compliances by providing the platform for trading of RECs.
7. With a strong policy support from Government of India (GoI) and enabling regulatory framework by the Hon'ble Commission, the capacity addition from renewable energy sources has seen a phenomenal growth in recent times. The



installed generation capacity from renewable energy sources (including hydro) has reached around 191 GW i.e. around 43 % of the total installed capacity of around 442 GW. The CAGR in generation capacity addition from renewable energy sources has in fact been more than 20% during last few years. The GoI target is to achieve RE capacity of 500 GW by 2030. The GoI has also specified the RPO targets under the Energy Conservation Act 2001 vide its notification dated 20.10.2023, which provides as below-

*“In exercise of the powers conferred by clauses (n) and (x) of section 14 of the Energy Conservation Act, 2001 (52 of 2001), the Central Government in consultation with the Bureau of Energy Efficiency, hereby specifies the minimum share of consumption of non-fossil sources (renewable energy) by designated consumers as energy or feedstock and different share of consumption for different types of non-fossil sources for different designated consumers in respect of electricity distribution licensee and other designated consumers who are open access consumers or captive users to the extent of consumption of electricity from sources other than distribution licensee as a percentage of their total share of energy consumption indicated in the Table below:*



S.N	Year	Wind renewable energy	Hydro renewable energy	Distributed renewable energy*	Other renewable energy	Total renewable energy
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	2024-25	0.67%	0.38%	1.50%	27.35%	<b>29.91%</b>
2.	2025-26	1.45%	1.22%	2.10%	28.24%	<b>33.01%</b>
3.	2026-27	1.97%	1.34%	2.70%	29.94%	<b>35.95%</b>
4.	2027-28	2.45%	1.42%	3.30%	31.64%	<b>38.81%</b>
5.	2028-29	2.95%	1.42%	3.90%	33.10%	<b>41.36%</b>
6.	2029-30	3.48%	1.33%	4.50%	34.02%	<b>43.33%</b>

*Note 1: ...*

*Note 2: The wind renewable energy component shall be met by energy produced from Wind Power Projects (WPPs) commissioned after the 31st March, 2024.*

*Note 3: The hydro renewable energy component shall be met only by energy produced from Hydro Power Projects [including Pump Storage Projects (PSPs) and Small Hydro Projects (SHPs)], commissioned after the 31st March, 2024:*

*Provided that the hydro renewable energy component may also be met out of the free power being provided to the State/DISCOM from the Hydro Power Projects commissioned after the 31st March, 2024:*

...

*Note 4: ...*

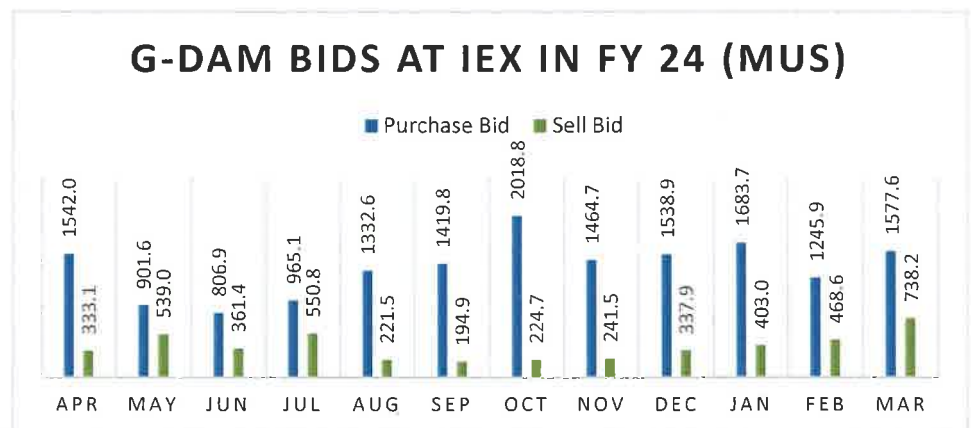
*Note 5: The other renewable energy component may be met by energy produced from any renewable energy power project other than specified in Note 2, 3 and 4 and shall comprise energy from all WPPs and Hydro Power Projects [including Pump Storage Projects (PSPs) and Small Hydro Projects (SHPs)], including free power, commissioned before the 1st April, 2024.”*





It is envisaged that the higher deployment of renewable energy will advance economic development, improve energy security, improve access to energy and mitigate climate change in a sustainable manner.

8. In FY 24, a total of around 2.5 BUs of renewable power has been traded in the G-DAM at the IEX platform. However, it is observed that significant demand for RE could not be served. Details of Buy and sell bids received at Exchange are as under:



Notably, in G-DAM, there is adequate demand for RE power at the Exchange platform but lack of availability of sell has resulted in non-fulfilment of the demand. In FY 24, the total purchase bids were 16.5 BUs against total sell bids of 4.6 BUs i.e. almost 72% demand of RE power could not be served in G-DAM. It may also be noted that out of the 56 BUs of power traded in the Integrated DAM, merely 2.5% was green power. We have received interest from several stakeholders suggesting introduction of Green Real Time Market (G-RTM) that will be closer to delivery which can facilitate renewable power trade in the market. Some of the key suggestions received from the stakeholders in this respect are as below:

**a. Navigating variability in renewable power generation:**

It has been suggested that G-RTM would aid market participants in navigating fluctuations in renewable energy generation from RE projects. The G-RTM product would



allow trading within shorter time windows which would facilitate to handle the dynamic nature of RE generation.

- b. **Additional avenue to sell RE:** Stakeholders have suggested that the G-RTM would present a new avenue for RE generators to sell power and for obligated entities to fulfil their RPOs.
- c. **Sale from merchant projects:** One of the stakeholders has requested to facilitate RE power sale from merchant projects through G-RTM.

The suggestions of the stakeholders are enclosed as **Annexure- I.**

- 9. On assessing the need of the Green Real Time Market (G-RTM), it has been understood that-
  - a. Not many RE Generators are participating in the green market. Further, it is also observed that many generators are selling infirm power for a short duration.



- b. Presently, there is no avenue for the RE sellers to sell their power along with green attributes closer to delivery in the most competitive manner.
- c. The Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023 provides for revisions of schedule in 7/8 time-blocks for the RE bilateral transactions, to deal with the variability. However, in case of RE Generators participating in G-DAM or G-TAM, since these are firm transactions (cannot be revised), RE Generators are not able to manage the forecasting errors in these transactions. Therefore, there is a need of an avenue to provide real time dispatch of RE power to reduce the impact of forecasting errors. For eg. an RE generator may sell its 50-60% capacity in GDAM/GTAM and retain the remaining 30-40% for trade in G-RTM to deal with any variations in real time. It will also provide the overall system stability and minimize the deviations.



d. The National Electricity Plan (NEP) 2023 prepared by the Central Electricity Authority (CEA) has projected the share of renewable capacity in the total installed capacity to increase to 336 GW i.e., around 55% by 2026-27. Similarly, the RE generation is expected to increase to around 710 BUs (35% of total) in 2026-27. Market based mechanisms that provide avenues for managing the variations owing to high RE system can help achieve the desired RE capacity. This is also substantiated by the fact that the Guidelines for Tariff Based Competitive Bidding process for procurement of power from Grid Connected Solar and Wind projects specifically allow the sale of excess RE power through the Exchanges, as can be seen from the paragraph reproduced below from Solar PV guidelines dated 28.07.2023 -

***“6.2 Power Procurement***

...

*(d). In order to allow optimization of operation of RE, the Generator is allowed to supply power from the RE power*



*plant in excess of contracted capacity, to any third party or power exchange without requiring any No Objection Certificate (NOC) from the Procurer. The Generator may also sell the power which was offered on day ahead basis to the Procurer (within Contracted Capacity) but not scheduled by the Procurer, to any third party or in power exchange without requiring NOC from the Procurer. ”*

The above facility is also provided in respect of procurement of firm and dispatchable power (FDRE) from Grid Connected RE Power Projects with Energy Storage Systems.

- e. It is further seen that the NEP 2023 projects installation of 7.5 GW of Pump Storage Project (PSP) and around 8.6 GW/34 GWh RE based Battery Energy Storage System (BESS) by 2026-27. Further, the Ministry of Power has issued guidelines dated 15.03.2024 for Viability Gap Funding (VGF) for development of 4,000 MWh of BESS capacity in the country. The guidelines emphasise on discharge of BESS through the market during high stress hours. Such a BESS is best suited to provide



injection/demand response closer to delivery and it is only in such short intervals that BESS can be best utilised once there is adequate information on market volumes and prices. A BESS project will always likely to bid closer to real time based on market indicators.

10.To facilitate promotion of RE power and integration of RE generation in the Grid through market mechanism, it is humbly submitted that the time is now apt to introduce Exchange based Real Time Contracts for trade exclusively in renewable energy to provide avenues to existing and prospective RE Generators for sale of RE through the Exchange platform and to provide more options to Obligated Entities to fulfill their RPO.

11.In view of the above and in order to facilitate the RE integration and to provide a platform to trade RE power closer to delivery, it is proposed to introduce a green product



in RTM segment for facilitating the trading of RE power with separate price formation for RE power and Conventional power. The salient features of the proposed G-RTM are similar as that of the existing Real Time Market (RTM) with specific attributes of the green segment. Key features of the proposed G-RTM contract are as below-

- a. There shall be an Integrated Real Time Market (I-RTM) in Power Exchange with separate price formation for RE Power and Conventional Power.
- b. There shall be a single G-RTM market for all type of Renewable Energy i.e., Solar, Wind, Hydro or others.
- c. Participants of G-RTM would have the option to transfer their unselected bids to the RTM.
- d. The entire set of bids will be cleared one after another. First bids and offers in G-RTM would be matched taking into consideration the availability of transmission. After this, the bids and offers received in RTM including carry





forward bids would be cleared considering the balance transmission capacity after allocation under the G-RTM.

- e. Power sold through the G-RTM shall be eligible for RPO fulfilment of buyers as per the RPO category in GoI notification dated 20.10.2023.
- f. The price determination process will be a two-step process and other processes like bidding, settlement, scheduling will remain combined for both, however clear identification of type of transaction (G-RTM/ RTM) will be ensured.

**Framework of Proposed Green Real Time Market (G-RTM) at IEX:**

12.The overall framework of the proposed Green Real Time Market (G-RTM) on IEX platform is similar to the existing framework of Real Time Market (RTM):

**a. Eligibility of Participation:**

- i. Sellers: All grid connected entities shall be eligible to sell electricity in G-RTM subject to Standing clearance



issued by RLDC/SLDCs through NOAR containing details viz. maximum quantity, type of RE Category i.e., Wind RPO/HPO/Other RPO etc.

- ii. Buyers: All the entities which are eligible to procure electricity through Open Access shall be eligible to participate in G-RTM as buyer subject to Standing Clearance issued by NLDC/RLDC/SLDCs through NOAR containing details viz. maximum buy quantum, time period etc.

**b. Other Contract details of G-RTM:**

- i. All other contract specifications are similar to the ones existing for the conventional RTM as briefly provided below:
- Risk Management: As per existing practice of Real Time Market.
  - Matching mechanism: Double-sided closed bid Auction.



- Price Discovery methodology: Uniform market clearing price for all buyers and sellers who are cleared.
- Scheduling: As per procedure of scheduling of Collective transactions. No revision of schedule will be permissible.

**c. Bidding mechanism:**

- i. Sellers and Buyers may place bid for two 15 minutes-time blocks in a session. The bids may be submitted as per available types of bids (Single/Block etc.) with an option to carry forward uncleared Bid in RTM with same or different price quote.
- ii. Sellers and Buyers will have option to place bids in advance in the trading system i.e. before the start of trading session for a particular delivery period. However, such advance bids will get activated only in the trading session for the respective delivery period.



- d. **Price Discovery methodology:** Price shall be discovered based on Double-sided closed bid Auction mechanism. A Uniform market clearing price will be discovered for all buyers and sellers who are cleared.
- e. **Auction Timing:** Each session of 15 Minute duration on rolling basis with a gap of 15 minutes (E.g. 2245 to 2300 than 2315 to 2330).
- f. **Delivery:** Same Day (T) or Next day (T+1) for 2 time-blocks of 15 minutes.
- g. **Delivery Point:** At Regional Periphery.
- h. **Transmission Congestion management:** As per the existing practice of market splitting followed in Electricity Day Ahead Market.
- i. **Deviation Settlement Mechanism:** As per applicable Regulations notified by Appropriate Commission.
- j. **Timelines:**

TIME	DETAILS
2245 hrs. to 2300 Hrs.	<ul style="list-style-type: none"> <li>Integrated Bid - Call session for G-RTM &amp; RTM</li> </ul>



By 23:15 Hrs.	<ul style="list-style-type: none"> <li>• NLDC to inform available ATC in the interfaces/control areas/ regional transmission system.</li> <li>• Exchange to determine MCP and ACP for G-RTM and RTM sequentially.</li> <li>• Communication of combined Transmission Corridor required for G-RTM and RTM to NLDC.</li> <li>• NLDC to confirm available Transmission Corridor for Scheduling of G-RTM and RTM.</li> <li>• Exchange to publish Final Results.</li> <li>• Scheduling request of Collective Transaction in G-RTM and RTM to NLDC</li> <li>• Publishing constrained and unconstrained results on the website</li> </ul>
By 23.30 Hrs.	<ul style="list-style-type: none"> <li>• Communication of Schedule to SLDCs.</li> <li>• Exchange will issue obligation to Members</li> </ul>
0000 Hrs. to 0030 Hrs.	<ul style="list-style-type: none"> <li>• Delivery</li> </ul>

**k. Real Time Market Contract Specifications:**

1.	Contract Name	Green Real Time Contract
2.	Trading system	IEX trading system
3.	Trading Session	Each session of 15 Minute duration on rolling basis with a gap of 15 minutes (E.g. 2245 to 2300 than 2315 to 2330)
4.	Delivery Period	Half hourly delivery consisting two 15-Min time blocks.
5.	Minimum volume	0.1 MW
6.	Minimum volume step	0.1 MW
7.	Minimum quotation step	Rs. 1 per MWh
8.	Auction method	Double sided close bid auction with uniform Market Clearing Price for all buyers and sellers.
9.	Order Code	Trader's ID, instrument, quantity/price combination



10.	Delivery point	Periphery of Regional Transmission System in which the grid-connected entity is located.
11.	Settlement	Settlement at ACP x volume traded in MWh
12.	Transmission charges	As per Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) Regulations 2022, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and detailed procedure issued by the NLDC as amended from time to time
13.	Transmission losses	Payable in kind from delivery point to its grid connection point.
14.	Pay in and Pay out	Pay-in on day 'T' or 'T+1' and Pay-out on 'T+1' or 'T+2' where 'T' is the Trade day.
15.	Eligibility	Sellers: Standing Clearance issued by respective LDC specifying maximum quantum and Category of Renewable Energy Generation (e.g., Wind/ Hydro/ Other RPO etc.) Buyers: All eligible Open Access buyers

### 13. Benefits of the proposed Green Real Time Contract (G-RTM):

- a. An avenue to provide real time dispatch of RE power to reduce the impact of forecasting errors.
- b. Buyers will get additional avenues to procure renewable power.



- c. Multiple buyers & sellers participating in the green segment based on the principle of collective transactions will lead to efficient price discovery. This will also provide appropriate pricing signals to the RE sector.
- d. It will enable obligated entities to procure renewable power at competitive prices on a real time basis and help meet their RPOs.
- e. RE buyers/sellers can fall back upon the conventional RTM through order carry forward feature or directly to fulfill their requirements in case the bids are not selected in G-RTM.
- f. All of the above will lead to overall promotion of the RE sector and help in achieving the GoI RE capacity addition targets.

14. In view of the above and considering the overall development of RE market, it is humbly submitted that the Hon'ble



Commission may accord approval to launch proposed Green Real Time Contract at IEX platform.

15.The required amendment in the Business Rules of the IEX and contract specifications of Green Real Time Market is annexed hereto as **Annexure-II** for approval of the Hon'ble Commission.

16.The Petitioner herein craves leave of the Hon'ble Commission to submit further additional information in support of this petition.





**Prayer:**

In the premise, the Petitioner respectfully submits that this Hon'ble Commission may be pleased to:

- a. Accord approval to introduce Green Real Time Contracts (G-RTM) in the Real Time Market.
- b. Accord approval for proposed amendments in Business Rules of IEX for introduction of Green Real Time Market (G-RTM).
- c. Hold that the power procured from proposed G-RTM contract shall be eligible for compliance of Renewable Purchase Obligation of Buyers as per GoI notification dated 20.10.2023 issued under the Energy Conservation Act 2001 or any other notification issued by the GoI time to time.
- d. Direct for appropriate modifications in Standing Clearance format for endorsement of the type of RPO (As per GoI notification dated 20.10.23) to facilitate the participation of RE Sellers in G-RTM and issuance of Green Energy purchase certificate to the buyers to fulfil their RPO.



- e. Direct inclusion for enabling provisions for G-RTM in the RTM procedures.
- f. Pass such further order or orders as may be considered necessary in the facts and circumstances of the case.

**For Indian Energy Exchange Limited**

**Place : Noida**

**Dated: 12<sup>th</sup> July 2024**



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Plot No. C-001/A/1, 9th Floor, Max Towers,  
Sector 16 B, Gautam Buddha Nagar, UP- 201301

**Vs.**

**National Load Despatch Centre (NLDC)    ...Respondent**

Grid Controller of India Limited  
B-9 (1st Floor), Qutab Institutional Area,  
Katwaria Sarai, New Delhi 110016





## AFFIDAVIT

I, Gaurav Maheshwari, Son of R.L Maheshwari aged about 40 years and having my office at Plot No. C-001/A/1, 9<sup>th</sup> Floor, Max Towers, Sector 16 B, Noida, Gautam Buddha Nagar, Uttar Pradesh – 201301 do hereby solemnly state as under.

1. I am working as Asst. Vice President in the Indian Energy Exchange Limited, New Delhi, and I am well conversant with the facts of the case and hence competent and authorized to sign this affidavit.
2. I have gone through the contents of the above Petition and I say that the facts stated therein are based on the records of the Petitioner and believed by the deponent to be true.



## VERIFICATION

I, the deponent above named do hereby verify that the contents of my above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed therefrom.

Verified at Noida on 12<sup>th</sup> day of July 2024.



ATTESTED  
N.K. YADAV  
Regd. 4641, Advocate  
Govt. of India  
G.B. Nagar



12 JUL 2024

**Saurabh Srivastava/IEX/Regulatory Affairs**

---

**Subject:** FW: Green RTM Segment - Request

---

**From:** Seshagiri Rao N <[seshagirirao.n@greenkogroup.com](mailto:seshagirirao.n@greenkogroup.com)>

**Sent:** Tuesday, May 7, 2024 3:31:55 pm

**To:** Mayank Gupta <[Mayank.Gupta@iexindia.com](mailto:Mayank.Gupta@iexindia.com)>

**Cc:** Sivamuthu Kumar/IEX/Business Development <[Sivamuthu.Kumar@iexindia.com](mailto:Sivamuthu.Kumar@iexindia.com)>; Pratul Gupta <[pratul.g@greenkogroup.com](mailto:pratul.g@greenkogroup.com)>; Dinu Viswanath <[dinu.viswanath@greenkogroup.com](mailto:dinu.viswanath@greenkogroup.com)>; Suryanarayana Peri <[surya.peri@greenkogroup.com](mailto:surya.peri@greenkogroup.com)>

**Subject:** Green RTM Segment - Request

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Dear Sir,

As you are aware, we have a large portfolio of solar and wind assets across India. Though the primary channel for sale of power has been PPA driven and partial capacities are transacting through power exchanges. Going forward we are also examining possibilities on merchant sale of RE power on the exchange platform as the power market evolves.

So far, we could see only GDAM product in exchanges. Whereas, we request your kind office to examine the potential of introducing Green -RTM markets and its benefits to stakeholders.

Thanks & Regards,

Seshagiri Rao N | VP – Commercial | Extn 1015 | M +91 9959552017



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## Saurabh Srivastava/IEX/Regulatory Affairs

---

**Subject:** FW: Request to bring the Green Real-Time Market (G-RTM) for Renewable Energy Trading

---

**From:** Hyma Madhavi Chapala <[hymamadhavi@general-carbon.com](mailto:hymamadhavi@general-carbon.com)>

**Sent:** Tuesday, April 30, 2024 12:36 PM

**To:** Vindyanchal Kumar/IEX/Business Development <[Vindyanchal.Kumar@iexindia.com](mailto:Vindyanchal.Kumar@iexindia.com)>

**Cc:** Priyanka Pothana <[priyanka.p@general-carbon.com](mailto:priyanka.p@general-carbon.com)>

**Subject:** Request to bring the Green Real-Time Market (G-RTM) for Renewable Energy Trading

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Dear Sir

Following our recent discussion about the need for a Green Real-Time Market (G-RTM) product, we propose its implementation to facilitate real-time trading of green power.

G-RTM would benefit market participants by:

Enabling them to manage fluctuations in renewable energy (RE) generation.

Providing a platform to trade green power within shorter time windows, reflecting the dynamic nature of RE sources.

Similar to the existing Real-Time Market (RTM), G-RTM would focus specifically on green power.

This product offers several advantages:

For Renewable Energy Generators: A new avenue to sell power directly, reducing reliance on RECs (Renewable Energy Certificates) whose prices are currently very low.

For Obligated Entities: A means to fulfill their Renewable Purchase Obligations (RPOs) more efficiently, potentially avoiding the cost impact of Delayed Supply Mechanism (DSM) charges.

We'd be happy to continue discussing G-RTM and its potential benefits for your organization in more detail.

Thanks and Regards,  
**HYMA MADHAVI CHAPALA**  
(CONSULTANT)



GC Advisory

**GC Advisory Services Pvt. Ltd.**

701-704, B wing, Kukreja Centre, Sector - 11, CBD- Belapur, Navi Mumbai 400 614.

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## Saurabh Srivastava/IEX/Regulatory Affairs

---

**Subject:** FW: Subject: Request to bring the Green Real-Time Market (G-RTM) product.

---

**From:** Anand Kumar <[anand.kumar@hygenco.in](mailto:anand.kumar@hygenco.in)>

**Sent:** Tuesday, April 30, 2024 1:09:07 PM

**To:** Vindyanchal Kumar/IEX/Business Development <[Vindyanchal.Kumar@iexindia.com](mailto:Vindyanchal.Kumar@iexindia.com)>

**Cc:** Anshul Gupta <[anshul@hygenco.in](mailto:anshul@hygenco.in)>

**Subject:** Subject: Request to bring the Green Real-Time Market (G-RTM) product.

**⚠ CAUTION:** This email originated from outside of the organization. Do not click links or open attachments and reply email unless you recognize the sender email address and know the content is safe.

Dear Sir,

In reference to our discussion on the Green Real-Time Market (G-RTM) product requirement, we propose the introduction of G-RTM to facilitate real-time trading of green power. This platform would assist market participants in managing fluctuations in renewable energy (RE) generation from renewable energy projects. The G-RTM product would operate similarly to the conventional Real-Time Market (RM) but with a specific focus on green power. It would allow for trading within shorter time windows to better accommodate the dynamic nature of RE generation.

Moreover, the G-RTM offers a new avenue for renewable energy generators to sell power and for obligated entities to fulfill their Renewable Purchase Obligations (RPOs), eliminating the need for REC claims later. This approach avoids the downward spiral of REC prices in each trading session and also helps to mitigate the impact of Demand Side Management (DSM).

We welcome the opportunity to delve deeper into discussions about the G-RTM product and its potential benefits for your organization.

Thanks,

Anand Kumar  
Head - Policy Affairs & Project Development  
Hygenco Green Energies Private Limited



A: Hygenco Green Energies Pvt. Ltd., L4, Springhouse Coworking, JMD Regent Arcade Mall, MG Road, Gurugram, Haryana, India 122001  
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W: [www.hygenco.in](http://www.hygenco.in)

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## Saurabh Srivastava/IEX/Regulatory Affairs

---

**Subject:** FW: Request to bring the Green Real-Time Market (G-RTM) product

---

**From:** Gaurav Srivastava <[gaurav.srivastava@fourthpartner.co](mailto:gaurav.srivastava@fourthpartner.co)>  
**Sent:** Tuesday, April 30, 2024 2:09 PM  
**To:** Vindyanchal Kumar/IEX/Business Development <[Vindyanchal.Kumar@iexindia.com](mailto:Vindyanchal.Kumar@iexindia.com)>  
**Subject:** Request to bring the Green Real-Time Market (G-RTM) product

**⚠ CAUTION:** This email originated from outside of the organization. Do not click links or open attachments and reply email unless you recognize the sender email address and know the content is safe.

Dear Sir/Ma'm,

Following our discussion regarding the necessity of implementing the Green Real-Time Market (G-RTM) product, we advocate for its introduction to facilitate the real-time trading of green power.

This platform would aid market participants in navigating fluctuations in renewable energy (RE) generation from renewable energy projects. Operating similarly to the conventional Real-Time Market (RM), the G-RTM product would have a specific focus on green power, allowing for trading within shorter time windows to better accommodate the dynamic nature of RE generation.

Additionally, the G-RTM presents a new avenue for renewable energy generators to sell power and for obligated entities to fulfil their Renewable Purchase Obligations (RPOs), eliminating the need for REC claims later. This approach prevents the downward spiral of REC prices in each trading session and will help mitigating the impact of Demand Side Management (DSM).

We are eager to further explore.



Gaurav Srivastava

Business Development

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## Saurabh Srivastava/IEX/Regulatory Affairs

---

**Subject:** FW: Need For Green Real Time Market

---

**From:** Shreyans Naval <[shreyans.naval@renew.com](mailto:shreyans.naval@renew.com)>

**Sent:** Friday, June 28, 2024 1:28 PM

**To:** Dhruv Dhiman/IEX/Business Development <[Dhruv.Dhiman@iexindia.com](mailto:Dhruv.Dhiman@iexindia.com)>; Gaurav Maheshwari/IEX/Regulatory Affairs <[Gaurav.Maheshwari@iexindia.com](mailto:Gaurav.Maheshwari@iexindia.com)>; Mayank Gupta <[Mayank.Gupta@iexindia.com](mailto:Mayank.Gupta@iexindia.com)>

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**Subject:** Need For Green Real Time Market

**⚠CAUTION:** This email originated from outside of the organization. Do not click links or open attachments and reply email unless you recognize the sender email address and know the content is safe.

Hi,

We are writing to highlight the need and importance of a market segment (**Green Real Time Market - GRTM**) where renewable power, along with green attributes, can be sold at real time. As the share of renewable energy sources like wind and solar in the energy mix continues to grow, there's a need for a market mechanism that can efficiently manage the variability and intermittency of these resources. Such market segment will provide a platform for real-time trading of renewable energy, allowing grid operators to balance supply and demand more effectively and hence support the integration of renewable energy. This segment will offer market participants greater flexibility in managing their energy portfolios. Renewable energy generators can respond to price signals in real time, optimizing their generation schedules to maximize revenue. Conversely, consumers can also adjust their consumption patterns based on real-time price signals, and will get one more avenue to fulfil their Renewable Purchase Obligation (RPO) efficiently. It must be noted that lately SECI and other REIAs have also provided flexibility in their PPAs where developers can also buy around 5% of the contracted energy from markets and supply under PPA, however, it has to be green energy only. Considering the intermittent nature of renewable sources, such requirement or flexibility will majorly be required in real time only so there has to be a segment where green power can be traded on real time basis.

Furthermore, apart from above mentioned, any such segment (GRTM) in the power exchange is anticipated to fulfil several other critical requirements in the future energy landscape:-

- **Grid Stability and Reliability:** Renewable energy generation can be unpredictable due to factors like weather conditions. GRTM enables grid operators to procure additional renewable energy or balance resources in real time to maintain grid stability and reliability, minimizing the risk of supply-demand imbalances and grid disruptions.
- **Price Discovery:** Real-time trading in the GRTM facilitates price discovery for renewable energy on a more granular level, reflecting the instantaneous supply-demand dynamics. This transparency in pricing incentivizes efficient utilization of renewable energy resources and encourages investment in grid-responsive technologies.
- **Support for decentralized energy systems:** With the proliferation of distributed energy resources (DERs) such as rooftop solar panels and battery storage systems, GRTM provides a mechanism for these assets to participate in real-time energy trading. This fosters the development of decentralized energy systems and empowers consumers to engage in energy markets actively.

By facilitating increased utilization of renewable energy and enabling more efficient grid operations, GRTM contributes to reducing greenhouse gas emissions and promoting environmental sustainability. The real-time optimization of renewable energy resources helps accelerate the transition to a low-carbon energy system. All said and done, with best of forecasting tools also one cannot achieve 100% accuracy on day ahead, intra day forecast, that too 1-2 hours ahead, gives a better visibility to the generator and hence should have an option to offer the power in green day ahead market.

Overall, the implementation of **GRTM** in the power exchange and power market is expected to enhance grid flexibility, improve renewable energy integration, support grid stability, promote price transparency, empower consumers, and advance environmental sustainability in the future energy landscape. We request you to kindly take up with

Regards,

**Shreyans Naval** | Energy Markets

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MIT TECHNOLOGY REVIEW  
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2023

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TOP 10 COMPANIES  
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2021



# **BUSINESS RULES**

## **OF**

# **INDIAN ENERGY EXCHANGE LIMITED**

Indian Energy Exchange Limited  
Plot No. C-001/A/1, 9th Floor, Max Towers, Sector 16B, Noida, Uttar Pradesh-201301  
Phone: 0120 – 4648100 | [www.iexindia.com](http://www.iexindia.com)

## Contents

<b>1. INTRODUCTION AND MEMBERSHIP .....</b>	<b>7</b>
1. Introduction .....	7
2. Applicability .....	7
3. Business operations .....	7
4. Eligibility for trading .....	8
5. Membership Application and Admission .....	8
6. Transfer of membership .....	8
7. Surrender of membership .....	8
8. Insurance .....	8
<b>2. MARKET OPERATIONS .....</b>	<b>9</b>
9. Market Segment .....	9
10. Deposits .....	9
11. Forms of Additional Deposit .....	10
12. Trading Days .....	11
13. Trading hours .....	11
14. Clearing Banks .....	12
15. Clearing House .....	13
16. Risk management system .....	14
17. Transaction fees .....	14
18. Dealing with Clients .....	14
19. Trading Margin and Service Charges .....	17
20. Trading System .....	18
21. Approved Users .....	18
22. Connectivity .....	19
23. Expansion of trading terminals .....	20
24. Force majeure .....	21
25. Contingency management .....	21
26. Major breakdown of the system or failure of communication link .....	22
<b>4. INSPECTION AND DISCIPLINARY ACTIONS .....</b>	<b>23</b>
27. Records, Books of accounts and Inspection .....	23
28. Fines and penalties .....	24
29. Mechanism for redressal of grievances .....	24
30. Submission of Information on Service Charge: .....	24
31. Arbitration .....	25
<b>Annexure –I .....</b>	<b>26</b>
Membership Undertaking .....	26
<b>Annexure –IIA .....</b>	<b>33</b>
Member - Client Agreement (Between a Trader Member and the Client) .....	33
<b>Annexure – IIB .....</b>	<b>36</b>
Member - Client Agreement (Between a Facilitator Member and the Client) .....	36
<b>Annexure - IIC .....</b>	<b>39</b>
Undertaking by and on behalf of the Client of a Facilitator Member .....	39
<b>Annexure - III .....</b>	<b>41</b>
CLIENT REGISTRATION FORM .....	41
<b>Annexure – IV .....</b>	<b>47</b>
Risk Disclosure Document .....	47
<b>Annexure – V .....</b>	<b>48</b>
Contract Note .....	48
<b>Annexure-VI .....</b>	<b>50</b>
Network Connectivity Undertaking .....	50



<b>Annexure-VII</b> .....	<b>51</b>
Monthly Report on Service Charge (Integrated Day Ahead Market & Real Time Market) ...	51
<b>Annexure-VIII</b> .....	<b>52</b>
Monthly Report on Service Charge (ITD,DAC,TAM and G-ITD, G-DAC, G-TAM) .....	52
<b>Annexure IX</b> .....	<b>53</b>
Monthly Report on Service Charge (REC Market) .....	53
<b>Annexure X</b> .....	<b>54</b>
Monthly Report on Service Charge (ESCerts Market) .....	54
<b>Annexure XI</b> .....	<b>55</b>
Procedure for inspection of Facilitator & Trader Members.....	55
<b>SCHEDULE A – INTEGRATED DAY-AHEAD MARKET (I-DAM) SEGMENT</b> .....	<b>79</b>
<b>Annexure –A1</b> .....	<b>96</b>
Green Day-Ahead Market Contract Specifications (GDAM) .....	96
<b>Annexure –A2</b> .....	<b>97</b>
Day-Ahead Market Contract Specifications (DAM) .....	97
<b>Annexure –A3</b> .....	<b>98</b>
High Price Day Ahead Market Contract Specifications (HP-DAM) .....	98
<b>Annexure –A4</b> .....	<b>99</b>
Methodology of market splitting.....	99
<b>SCHEDULE B1: INTRA-DAY AND CONTINGENCY MARKET SEGMENT</b> .....	<b>101</b>
<b>Annexure B11</b> .....	<b>104</b>
Contract Specification- Regional Intra-Day Contract .....	104
<b>Annexure B12</b> .....	<b>107</b>
Contract Specification: - Regional Day Ahead Contingency Contracts (DAC) .....	107
<b>SCHEDULE B2: TERM AHEAD MARKET (TAM) SEGMENT</b> .....	<b>110</b>
<b>Annexure B21</b> .....	<b>127</b>
Contract Specification: Daily Contracts .....	127
<b>Annexure B22</b> .....	<b>131</b>
Contract Specification: Weekly Contracts .....	131
<b>Annexure B23</b> .....	<b>135</b>
Contract Specification: Monthly Contracts .....	135
<b>Annexure B24</b> .....	<b>139</b>
Contract Specification: Any-Day(s) Single Sided Contracts .....	139
<b>SCHEDULE C: RENEWABLE ENERGY CERTIFICATE (REC) MARKET</b> .....	<b>143</b>
<b>Annexure C1</b> .....	<b>154</b>
REC Contract Specifications .....	154
<b>Annexure C2</b> .....	<b>155</b>
Certificate of Purchase of REC(s) .....	155
<b>SCHEDULE D: ENERGY SAVINGS CERTIFICATE (ESCERT) MARKET</b> .....	<b>156</b>
<b>Annexure D1</b> .....	<b>167</b>
Energy Savings Certificate (ESCert) Contract Specifications .....	167
<b>Annexure D2</b> .....	<b>168</b>
Certificate of Purchase of ESCert(s) .....	168
<b>SCHEDULE E – INTEGRATED REAL TIME MARKET (RTM)</b> .....	<b>169</b>
<b>Annexure –E1</b> .....	<b>177</b>
<b>GREEN REAL-TIME MARKET 15-MINUTE CONTRACT SPECIFICATIONS</b> .....	<b>177</b>
<b>Annexure –E2</b> .....	<b>179</b>
Real-Time Market 15-minute contract specifications .....	179
<b>SCHEDULE F1: GREEN INTRA-DAY AND CONTINGENCY MARKET</b> .....	<b>180</b>
<b>Annexure F11</b> .....	<b>183</b>
Contract Specification: Green Intra-Day Contract.....	183
<b>Annexure F12</b> .....	<b>185</b>
Contract Specification: Green Day-Ahead Contingency Contract .....	185

<b>SCHEDULE F2: GREEN TERM-AHEAD MARKET (G-TAM)</b>	<b>187</b>
Annexure F21	192
Contract Specification: Green Daily Contracts	192
Annexure F22	196
Contract Specification: Green Weekly Contracts	196
Annexure F23	200
Contract Specification: Green Monthly Contracts	200
Annexure F24	204
Contract Specification: Green Any-Day(s) Single Sided Contracts	204
Annexure F25	209
Certificate of Purchase of Renewable Energy	209
<b>SCHEDULE G – ANCILLARY SERVICES MARKET (ASM)</b>	<b>210</b>
Annexure –G	216
Ancillary Services Market (ASM) Bid Specifications	216
<b>VERSION CONTROL</b>	<b>217</b>
<b>1. INTRODUCTION AND MEMBERSHIP</b>	<b>5</b>
1. Introduction	5
2. Applicability	5
3. Business operations	5
4. Eligibility for trading	6
5. Membership Application and Admission	6
6. Transfer of membership	6
7. Surrender of membership	6
8. Insurance	6
<b>2. MARKET OPERATIONS</b>	<b>7</b>
9. Market Segment	7
10. Deposits	7
11. Forms of Additional Deposit	8
12. Trading Days	9
13. Trading hours	9
14. Clearing Banks	10
15. Clearing House	11
16. Risk management system	12
17. Transaction fees	12
18. Dealing with Clients	12
19. Trading Margin and Service Charges	15
20. Trading System	16
21. Approved Users	16
22. Connectivity	17
23. Expansion of trading terminals	18
24. Force majeure	19
25. Contingency management	19
26. Major breakdown of the system or failure of communication link	20
<b>4. INSPECTION AND DISCIPLINARY ACTIONS</b>	<b>21</b>
27. Records, Books of accounts and Inspection	21
28. Fines and penalties	22
29. Mechanism for redressal of grievances	22
30. Submission of Information on Service Charge	22
31. Arbitration	23
Annexure –I	24
Membership Undertaking	24
Annexure –IIA	31

Member – Client Agreement (Between a Trader Member and the Client) .....	31
<b>Annexure – IIB .....</b>	<b>34</b>
Member – Client Agreement (Between a Facilitator Member and the Client) .....	34
<b>Annexure – IIC .....</b>	<b>37</b>
Undertaking by and on behalf of the Client of a Facilitator Member .....	37
<b>Annexure – III .....</b>	<b>39</b>
CLIENT REGISTRATION FORM .....	39
<b>Annexure – IV .....</b>	<b>45</b>
Risk Disclosure Document .....	45
<b>Annexure – V .....</b>	<b>46</b>
Contract Note .....	46
<b>Annexure – VI .....</b>	<b>48</b>
Network Connectivity Undertaking .....	48
<b>Annexure – VII .....</b>	<b>49</b>
Monthly Report on Service Charge (Integrated Day Ahead Market & Real Time Market) ...	49
<b>Annexure – VIII .....</b>	<b>50</b>
Monthly Report on Service Charge (ITD, DAC, TAM and G-ITD, G-DAC, G-TAM) .....	50
<b>Annexure – IX .....</b>	<b>51</b>
Monthly Report on Service Charge (REC Market) .....	51
<b>Annexure – X .....</b>	<b>52</b>
Monthly Report on Service Charge (ESCerts Market) .....	52
<b>Annexure – XI .....</b>	<b>53</b>
Procedure for inspection of Facilitator & Trader Members .....	53
<b>SCHEDULE A – INTEGRATED DAY-AHEAD MARKET (I-DAM) SEGMENT .....</b>	<b>77</b>
<b>Annexure – A1 .....</b>	<b>94</b>
Green Day-Ahead Market Contract Specifications (GDAM) .....	94
<b>Annexure – A2 .....</b>	<b>95</b>
Day-Ahead Market Contract Specifications (DAM) .....	95
<b>Annexure – A3 .....</b>	<b>96</b>
High Price Day Ahead Market Contract Specifications (HP-DAM) .....	96
<b>Annexure – A4 .....</b>	<b>97</b>
Methodology of market splitting .....	97
<b>SCHEDULE B1: INTRA-DAY AND CONTINGENCY MARKET SEGMENT .....</b>	<b>99</b>
<b>Annexure B11 .....</b>	<b>102</b>
Contract Specification- Regional Intra-Day Contract .....	102
<b>Annexure B12 .....</b>	<b>105</b>
Contract Specification: - Regional Day Ahead Contingency Contracts (DAC) .....	105
<b>SCHEDULE B2: TERM AHEAD MARKET (TAM) SEGMENT .....</b>	<b>108</b>
<b>Annexure B21 .....</b>	<b>125</b>
Contract Specification: Daily Contracts .....	125
<b>Annexure B22 .....</b>	<b>129</b>
Contract Specification: Weekly Contracts .....	129
<b>Annexure B23 .....</b>	<b>133</b>
Contract Specification: Monthly Contracts .....	133
<b>Annexure B24 .....</b>	<b>137</b>
Contract Specification: Any-Day(s) Single Sided Contracts .....	137
<b>SCHEDULE C: RENEWABLE ENERGY CERTIFICATE (REC) MARKET .....</b>	<b>141</b>
<b>Annexure C1 .....</b>	<b>152</b>
REC Contract Specifications .....	152
<b>Annexure C2 .....</b>	<b>153</b>
Certificate of Purchase of REC(s) .....	153
<b>SCHEDULE D: ENERGY SAVINGS CERTIFICATE (ESCERT) MARKET .....</b>	<b>154</b>
<b>Annexure D1 .....</b>	<b>165</b>

Energy Savings Certificate (ESCert) Contract Specifications .....	165
<b>Annexure D2 .....</b>	<b>166</b>
Certificate of Purchase of ESCert(s) .....	166
<b>SCHEDULE E – REAL TIME MARKET (RTM) .....</b>	<b>167</b>
<b>Annexure –E1 .....</b>	<b>174</b>
Real Time Market 15-minute contract specifications .....	174
<b>SCHEDULE F1: GREEN INTRA-DAY AND CONTINGENCY MARKET .....</b>	<b>175</b>
<b>Annexure F11 .....</b>	<b>178</b>
Contract Specification: Green Intra-Day Contract .....	178
<b>Annexure F12 .....</b>	<b>180</b>
Contract Specification: Green Day-Ahead Contingency Contract .....	180
<b>SCHEDULE F2: GREEN TERM-AHEAD MARKET (G-TAM) .....</b>	<b>182</b>
<b>Annexure F21 .....</b>	<b>187</b>
Contract Specification: Green Daily Contracts .....	187
<b>Annexure F22 .....</b>	<b>191</b>
Contract Specification: Green Weekly Contracts .....	191
<b>Annexure F23 .....</b>	<b>195</b>
Contract Specification: Green Monthly Contracts .....	195
<b>Annexure F24 .....</b>	<b>199</b>
Contract Specification: Green Any-Day(s) Single-Sided Contracts .....	199
<b>Annexure F25 .....</b>	<b>204</b>
Certificate of Purchase of Renewable Energy .....	204
<b>SCHEDULE G – ANCILLARY SERVICES MARKET (ASM) .....</b>	<b>205</b>
<b>Annexure –G .....</b>	<b>211</b>
Ancillary Services Market (ASM) Bid Specifications .....	211
<b>VERSION CONTROL .....</b>	<b>212</b>

## CHAPTER- I

### 1. INTRODUCTION AND MEMBERSHIP

#### 1. Introduction

- 1.1 These Business Rules shall be termed as 'the Business Rules of Indian Energy Exchange Limited' or for the sake of brevity as 'IEX Business Rules' or 'these Business Rules.'
- 1.2 These Business Rules shall at all-time be subject to and read consistent with the provisions of the Electricity Act, 2003, the Rules made thereunder by the Central Government and Regulations, Codes, and directives issued thereunder by the Central Electricity Regulatory Commission (hereinafter referred as the 'Commission') including and in particular the Central Electricity Regulatory Commission (Power Market) Regulations, 2021, Central Electricity Regulatory Commission (Terms and Conditions of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2022 and Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates ) Regulations, 2016 as amended from time to time or their statutory reenactment.
- 1.3 In case of any inconsistency between these Business Rules and directives issued under these Rules of the one part and any of the provisions of the Electricity Act, 2003, the Rules made thereunder by the Central Government and Regulations, Codes, and directives issued thereunder by the Commission including and in particular the Central Electricity Regulatory Commission (Power Market) Regulations, 2021, Central Electricity Regulatory Commission (Terms and Conditions of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2022 and Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates) Regulations, 2016 of the other part the later will prevail to the exclusion of the former.
- 1.4 These Business Rules may be amended or changed from time to time by the Exchange and wherever required with the approval of the Commission and shall further be subject to such modification or change as may be directed by the Central Commission from time to time.
- 1.5 The Exchange may issue clarifications, circulars or directives, as may be required from time to time, to remove any difficulty or ambiguity in implementing the provisions of any of Business Rules. Such clarifications, circulars or directions issued shall have binding force.
- 1.6 **Conflict between Rules, Bye Laws and Business Rules**  
 In event of any conflict between Bye Laws and Business Rules, the content of Bye Laws shall supersede and in the event of any conflict between Rules and Bye Laws or Rules and Business Rules, the Rules shall supersede. Without prejudice to the generality of the above, in case of any ambiguity or any confusion with regard to any of the provisions of Business Rules, the clarification given by Exchange shall be binding.

#### 2. Applicability

- 2.1 These Business Rules shall be enforceable on the Exchange Members, Clearing Banks, Clients, and all other participants operating on or through the Exchange in respect of their rights and obligations relating to Contracts admitted on the Exchange.

#### 3. Business operations

- 3.1 The Exchange shall conduct transactions in Electricity Contracts, Renewable Energy Certificate (REC) Contracts and Energy Saving Certificates (ESCert) Contracts permitted by the Commission under the Electricity Act, 2003, rules and regulations made thereunder, and any other Act or any other authority as may be applicable.

#### 4. Eligibility for trading

- 4.1 At the Exchange, only the Exchange Members, who have been admitted as such by the Exchange, are eligible to enter into Contracts, and undertake transactions within the Exchange relating to such Contracts. Persons, who are not Exchange Members, can participate only as Clients through a registered Exchange Member. At the discretion of the Exchange, Clients may be allowed direct access on the Exchange ATS, on an application made for the said purpose by the Member representing the Client.

#### 5. Membership Application and Admission

- 5.1 A person who desires to be a Member of the Exchange shall submit the application seeking such Membership in the format prescribed by the Exchange, Membership Undertaking as per **Annexure-I** and also deposit the fee and charges specified for the purpose.
- 5.2 The admission to Membership shall be at the sole discretion of the Exchange. The Exchange may appoint a Committee, if it considers appropriate, to review and consider the application and make recommendation to the Exchange on the application filed by the person.
- 5.3 As a condition of being admitted as a Member of the Exchange the person applying for Membership shall pay the fees and charges, including all securities, deposits, and guarantees as may be decided by the Exchange from time to time.
- 5.4 Exchange may charge the following fees to the Member
- Admission Fee ( one time non-refundable)
  - Security Deposit
  - Processing Fee (one time non-refundable)
  - Member Subscription Fees
  - Transaction fee
  - Client /Portfolio Subscription Fees
  - Any other Fee as may be prescribed by Exchange from time to time.

#### 6. Transfer of membership

- 6.1 No Member shall be entitled to transfer the Membership except as may be specifically permitted by the Exchange from time to time and the transfer of Membership if agreed to by the Exchange shall be subject to satisfactory settlement of all pending dues and claims against the Member and further subject to payment of such transfer fees to the Exchange as may be specified for the purpose.

#### 7. Surrender of membership

- 7.1 In case of surrender of membership, the Members shall only be eligible for return of margin deposits and security deposits made by him, subject to final settlement and adjustment of all pending dues, outstanding contracts and charges, fees, and other payments to the satisfaction of the Exchange. The refund of security deposit shall not be made if the membership is surrendered within three (3) years from the date of admission of the Member. The Member shall continue to pay annual subscription and other charges until the surrender of his membership is accepted by the Exchange, after which all such recurring charges are discontinued. There shall be no processing fee applicable in case of surrender of membership.

#### 8. Insurance

- 8.1 The Members may obtain insurance cover at their own cost so as to protect themselves from risks and hazards relating to their business operations at the Exchange.

## CHAPTER- II

### 2. MARKET OPERATIONS

#### 9. Market Segment

- 9.1 The Exchange will operate such market segments as permitted in law and as it may from time to time decide subject to the provisions of the Act, Rules and Regulations framed thereunder. The types and category of market segments available for contracts and transactions on the Exchange shall be notified by the Exchange from time to time. The description of market segments operated by the Exchange and the terms and conditions applicable to such market segments are given in the Schedules A to G of these Business Rules.
- 9.2 The Exchange may from time to time amend or modify or introduce new market segments as the Exchange may consider appropriate and the amended market segments shall operate from the time notified for this purpose by the Exchange.
- 9.3 The Exchange will from time to time decide on the trading session, trading segments, trading days, trading duration, security deposit, margin and collaterals to be maintained, order placement, matching, clearing and settlement, Delivery procedure and other parameters applicable for each trading or contract type in compliance with CERC (Power Market) Regulations, 2021 and as amended from time to time.
- 9.4 The Exchange has the right to introduce, continue or discontinue any market segment, including all the terms and conditions for transactions undertaken within each market segment subject to approval of the Commission, as applicable. The introduction of any market segment by the Exchange or the terms and condition specified therein will not vest or create in a Member any right whatsoever that will require the Exchange to continue with such market segments with or without any modification or change of the terms and conditions for transactions undertaken within each market segment.

#### 10. Deposits

##### 10.1 Initial Security Deposit

The Exchange Members are required to pay security deposit in accordance with Rule 5 of the Rules titled "Membership" at the time of admission, which will be used as initial margin for giving exposure to the Members linked to the percentage of the Margin applicable for each Contract. This is payable by way of demand draft or RTGS or cheque drawn in favor of 'Indian Energy Exchange Limited' or any other mode through banking transactions as may be decided by the Exchange. Initial Security deposit shall be invested as per the investment guidelines of Hon'ble Commission for Settlement Guarantee Fund (SGF) and 70% of the return earned on the initial Security Deposit so invested in a year shall be paid to the Members in proportion to the amount deposited by the Members as initial deposit and duration for which deposit was held with the Exchange, within 45 days after the last date of the financial year.

##### 10.2 Additional Security Deposit

Any Margins over and above the initial margin will be considered as additional deposit. The Members may remit additional security deposit in the form of minimum 50% cash and of the balance in the form of bank guarantee or fixed deposit from any of the Exchange approved banks.

- 10.3 The security deposit paid by the Member is refundable deposit, and interest on the same shall be paid as per clause 10.1 above. Security deposit, whether initial deposit and additional deposit, paid by the Members shall constitute a part of the Settlement Guarantee Fund



(SGF). In case of surrender or transfer of membership, the initial deposit and/or the additional deposit is refundable subject to settlement of all pending dues, claims and charges, subject to lock-in period of 3 (three) years from the date of membership for initial deposit. There is no such lock-in period in respect of additional deposit.

## 11. Forms of Additional Deposit

- 11.1 The additional deposit and margin will be directly debited from the Members Settlement Account opened in any of the Clearing Banks or in the form of bank guarantee, fixed deposits, subject to conditions specified above.
- 11.2 In case the Member opts to transfer funds from his settlement account, he will have to give written intimation to the Exchange for debiting its Settlement Account towards additional deposit. In case a Member intends to get his additional security deposit released to it during its tenure or on its maturity, the Member shall inform the Exchange, in writing, at least one week in advance. Any request for withdrawal of the additional security deposit will be considered by the Exchange subject to clearance of Exchange dues.
- 11.3 **Bank Guarantee:** The Exchange will accept bank guarantees strictly as per the format prescribed by it as decided by the Exchange and such bank guarantees shall be acceptable from the approved banks of the Exchange only. The tenure of bank guarantee instrument should be for a minimum period of 3 months and a maximum period of three (3) years having an additional claim period of three (3) months. The bank guarantee must be issued by the bank on behalf of the Member. A third party bank guarantee instrument issued on behalf of person other than the Member himself will not be accepted by the Exchange.
  - a. A Member will be required to renew the bank guarantee submitted by it prior to its expiry. In case of renewal of bank guarantees with a specific claim period, the Members shall furnish the renewal document strictly in the prescribed format at least seven (7) working days before the date of expiry of the bank guarantee.
  - b. The Members may also opt to give a fresh bank guarantee in favor of "Indian Energy Exchange Limited" instead of renewing the expired bank guarantees.
  - c. A bank guarantee deposited by a Member, whose validity period is over, shall be excluded for the purpose of computing the benefit provided to such Member towards exposure seven (7) working days before the date of expiry of the bank guarantee. The processing of bank guarantee instruments, its validation and upload in to the system whereby the trading limits of the respective Member will be enhanced will take at least three (3) working days.
  - d. While submitting the bank guarantee, Exchange Members shall ensure that the bank guarantee instrument strictly conforms to the format specified by the Exchange and that:
    - i. No relevant portion is left blank,
    - ii. All handwritten corrections and blanks are authenticated by the bank by affixing the bank seal and stamp along with the signature of at least one authorized signatory,
    - iii. All irrelevant portions struck off on the printed format should also be authenticated by the bank by affixing the bank seal and stamp along with the signature of at least one authorized signatory,
    - iv. Each page of the bank guarantee should bear the bank guarantee number and should be signed (with bank's seal/stamp) by at least one authorized signatory of the bank,
    - v. It is free from any discrepancy.
  - e. In case the bank guarantee does not strictly conform to the above-mentioned conditions, the same shall not be accepted by the Exchange.



- 11.4 **Fixed Deposit Receipts:** Members may submit fixed deposit receipt (FDR) issued by the approved banks for the purpose of Additional deposit. The FDR should be issued in the favour of 'Indian Energy Exchange Limited - A/C Member name' by any of the approved bank(s). All such fixed deposits shall be under lien of the Exchange and the bank must confirm that such lien has been recorded and that the Exchange has first charge on such fixed deposit receipts by issuing a letter along with the fixed deposit receipt. The Member shall submit the fixed deposit certificate along with a letter issued by the Member himself. The processing of fixed deposit instruments, its validation and upload in the system will normally take three (3) working days and therefore, the Members should be normally entitled to get additional exposure limit after three (3) working days from receipt thereof by the Exchange. The FDR should be suitably discharged on the backside.

## 12. Trading Days

- 12.1 The Exchange shall operate on all days except Exchange specified holidays. A list of holidays for each calendar year will be notified by the Exchange in advance. In case of Sundays and public or bank holidays, the Exchange shall run the order books whereby a Member can put his quotes for such holidays.
- 12.2 The Exchange shall in advance publish the trading and settlement calendar intimating the Members and Clients about the timelines of trading and other related activities.

## 13. Trading hours

- 13.1 The Exchange will have specified trading sessions for each market segment.
- 13.2 The Exchange will notify trading hours for new products as and when these are launched.
- 13.3 **Contractual liability termination:** Members can extinguish their contractual liabilities only by delivery and not by financial settlement.
- 13.4 **Invalidation of a traded Contract:** The Exchange may invalidate a matched Contract if according to the Exchange; a Member has attempted to conclude the transaction in violation of the Bye-laws of the Exchange or with an intention of price manipulation, price rigging or price distortion.
- 13.5 **Settlement Guarantee:** Subject to the Bye-Laws, the Exchange shall guarantee the settlement of the net settlement liability of the Clearing Members or the Clients, as applicable, for all the trades done on the Exchange in accordance with the Bye-Laws of the Exchange. The settlement guarantee of the Exchange is confined only to the extent of settlement liability in terms of daily funds pay-in and pay-out up to the extent of funds available in the Settlement Guarantee Fund, subject to force majeure.
- 13.6 **Governing law and jurisdiction:** Every Contract executed as per Bye-laws of the Exchange shall take effect as a Contract made in New Delhi and shall be governed by the laws of India under the jurisdiction of the Courts of New Delhi.
- 13.7 **Contract specifications:** The contract specification for each contract shall be specified in relevant Schedules which form part of these Business Rules. The specifications shall specify details of the delivery procedure and other trading and settlement parameters relating to tick size, unit of trading, unit of delivery, delivery point, minimum and maximum order size, and other relevant matters. All such contract specifications will be notified to the Members, which will form an integral part of these Business Rules and shall be binding on all Members and, Clients trading on the Exchange. Any Contract entered into in violation of these norms or not conforming to the specifications laid down by the Exchange shall be considered as void.

## 14. Clearing Banks

### 14.1 Exchange to regulate

The Exchange shall specify the processes, procedures, and operations that every Clearing Member shall be required to follow for participation in the clearing and settlement activities and operating their bank accounts with the Clearing Banks appointed by the Exchange.

### 14.2 Functions of Clearing Bank

The Exchange has appointed Clearing Banks for electronic transfer of funds between Clearing Members or the Clients, as applicable, and the Exchange. The Exchange reserves right to include or exclude some of the Banks at its absolute discretion.

### 14.3 Members to have account with the Clearing Bank

Every Exchange Member shall have designated bank accounts known as Member Settlement Account with any of such branches of the designated Clearing Banks appointed by the Exchange. Members shall operate the Settlement Account only for the purpose of settlement of deals entered through the Exchange, for the payment of margin money and for any other purpose as may be specified by the Exchange. Every Exchange Member is required to open the following accounts with any of the Clearing Banks:

- a. Settlement Account or Clearing Account: All Exchange Members or the Clients, as applicable, will have to open their Settlement Account with any the approved Clearing Banks. The Member or the Client, as applicable, will not have cheque book facility for issuing cheque to any third party or outsiders. The Trader Member can also provide option to its buyer clients to transfer money in Member's Settlement account directly. The Member will have to transfer the money from Settlement Account to its Client Account by giving instruction to the bank. Apart from such transfer, only the Exchange will have power to withdraw money from this account by way of direct debit instruction. In respect of all pay in, Margins, charges and other dues payable to the Exchange, the Exchange will send direct debit instructions to the bank advising them to debit Settlement Account of the respective Member or the Clients, as applicable, by such payable amount. Similarly, the Exchange will credit the pay out, refund of Margins to this account only. The Trader Member will not use the Clients' funds for meeting his own obligation.
- b. Client Account: In addition to the Settlement Account, Trader Member will have to open a Client Account. The Member may receive the client's funds in its Settlement or Client account. However, Member should make payments to its Clients towards their receivable amount from its Client account only.

### 14.4 Clearing Bank to act as per the instructions of the Exchange

The Exchange shall instruct the Clearing Bank as to the debits and credits to be carried out for the funds settlement between the Members or the Clients, as applicable. For this purpose, the Members or the Clients, as applicable, will submit an authority letter to the bank, authorizing the Exchange to issue such debit and credit based on the Exchange's instructions. The Clearing Bank shall act as per the instructions received from the Exchange for the funds movement. Instructions of the Exchange as to debits and credits to a Member's accounts or the accounts of the Clients, as applicable, shall be deemed to be irrevocable, confirmed and binding. In order to enable the Exchange to issue such instructions for debiting their account and also to authorize the Exchange in respect of freezing the account or to hold further debits or to block the funds, every Member or the Clients, as applicable, will be required to submit a written undertaking addressed to the bank to such effect. This undertaking will also authorize the bank to sweep the Client account of the Trader Member for any shortfall in the Settlement Account. Besides, the Exchange will also have the power to freeze various accounts of the Member or the Client,

as applicable, maintained with the Clearing Bank, in case of any default or shortfall in pay in or Margin account.

#### **14.5 Clearing Bank to inform Exchange of default in funds settlement**

If there is any funds default arising out of the instructions received from the Exchange, the Clearing Bank shall inform the Exchange immediately.

#### **14.6 Clearing Account(s) of Exchange in the Clearing Bank**

The Exchange will maintain its Settlement Account with the Clearing Bank and all money received from the Members or the Clients, as applicable, towards pay in or Margin, shall be used appropriately for settlement.

### **15. Clearing House**

#### **15.1 Regulation of Clearing House**

The Exchange and Clearing House will monitor and perform all activities relating to funds settlement, margining, managing the settlement guarantee fund, and other relevant matters.

#### **15.2 Functions of Clearing House**

The Clearing House will collect Margins from the Members or the Clients, as applicable, effect pay in and pay out and monitor delivery and settlement process. For carrying out such activities, it may appoint various agencies as its agents and may delegate such activities and responsibilities to such agencies, as it may desire. Save as except if it is scheduled otherwise by the Exchange, the funds pay in will take place on the same days as that of the trading and funds payout will be done on the day after delivery i.e. on (T+2) where T stands for the trading day.

#### **15.3 Lien on Member's deposits and assets**

A Member or the Clients, as applicable is liable to clear all the dues against its trading liability irrespective of whether such liability is generated on its own account or on behalf of its Client Account. When a Member or the Client, as applicable defaults in making such payment to the Clearing House all deposits, Margins, funds payout and other assets of such defaulter Member or the Client, as applicable lying with the Exchange shall be under lien and first charge of the Exchange, irrespective of the fact whether such assets or deposits belong to the Trader Member or its Clients. No Client or any other person shall have any claim any charge or right on any such deposit, margin or delivery documents under any circumstances.

#### **15.4 Clearing code and clearing forms**

A Member shall be allotted a unique member specific clearing code which must appear on all forms used by the Member connected with the operation of the Clearing House. All clearing forms shall be signed by the Member or its authorized signatory.

#### **15.5 Specimen signatures**

A Member shall file with the Clearing House specimens of his own signature and of the signatures of his authorized signatory.

#### **15.6 Notices and directions**

All Clearing Members shall comply with the instructions, resolutions, orders, notices, directions and decisions of the Executive Committee in all matters connected with the operations of the Clearing House.

#### **15.7 Liability of the Clearing House**

The only obligation of the Clearing House in this matter shall be to facilitate payment in respect of the Contracts for purchase /and sale of electricity units.

**15.8 Liability of the Exchange**

Notwithstanding to the provisions of the Bye-Laws, no liability shall attach either to the Exchange, its officials, or to the Executive Committee or any member of the Executive Committee by reason of anything done or omitted to be done by the Clearing House in the course of its operations nor shall the Exchange, its officials, or the Executive Committee or any member of the Executive Committee be liable to answer in any way for the title, ownership, quantity or validity of any delivery or any documents passing through the Clearing House nor shall any liability attach to the Exchange, its officials, the Executive Committee or any member of the Executive Committee in any way in respect of such delivery and any other documents.

**15.9 False or misleading statements**

The Exchange may fine, suspend or expel a Clearing Member who makes any false or misleading statement in the clearing forms required to be submitted in conformity with these Business Rules or any resolutions, orders, notices, directions and decisions of the Clearing House.

**15.10 Class of Contracts covered**

The Clearing House shall be responsible in the manner stated above only in respect of Contracts executed on the trading system of the Exchange as per the Rules, Bye-Laws and these Business Rules.

**15.11 Procedure of effecting transactions on bank holidays**

In cases where the Exchange has to collect the funds pay in for trades done but there is a bank holiday, the Exchange, in consultation with the Clearing Bank, shall evolve a process where it will take a confirmation from the banks for the availability of funds and block such funds against the obligation of respective Members or the Clients, as applicable. If the banking system is available, the Exchange will debit the funds pay in on such holidays after finalization of the trade

**16. Risk management system**

- 16.1 A Member or the Clients, as applicable, is allowed to transact only when it maintains the requisite Margin, including any additional Margin as specified for the respective trading segment or the type of contracts or the directions issued by the Exchange. Bank balance lien marked in favour of Exchange can also be allowed towards margin required for facilitation of intraday and day ahead contingency products, at the discretion of the Exchange.

**17. Transaction fees**

- 17.1 The Exchange will charge a transaction fee as may be specified by Exchange from time to time on the transactions carried out through the Exchange subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchases and sales separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member or the Clients, as applicable.

**18. Dealing with Clients**

- 18.1 There are two categories of Clients for Electricity/Renewable Energy Contracts.

- a. Grid-connected Client: A Client who is eligible to buy or sell electricity and is connected to the grid. The entities including but not limited to, Distribution Licensees, Generators, Consumers and Open Access Users can become Grid-connected Clients.

- b. **Trader Client:** A Client who is eligible to trade in electricity under the Electricity Act, 2003 and has a legally valid power purchase/sale agreement, which gives the Client the right to purchase and sell electricity. A Trader Client will register each power purchase/sale agreement with the Member who will be registering the same with the Exchange. The entities such as trading licensees can become Trader Clients.
- 18.2 In the REC Market segment, the Member transacting on behalf of others can have Eligible entity, obligated entity or entity willing to purchase RECs as Client. Such Client will be known as REC Client. The Exchange may introduce new category of Clients consistent with the Act and regulations issued by commission.
- 18.3 In the ESCert Market segment, the Member transacting on behalf of others can have Eligible Entity (a Designated Consumer) as Client. Such Client will be known as ESCert Client. The Exchange may introduce new category of Clients consistent with the Electricity Act 2003 and Energy Conservation Act 2001 and regulations issued by the Commission.
- 18.4 Clients who have been provided direct access to the Exchange ATS shall be referred to Direct Access clients.
- 18.5 Every Trader Member shall enter into an agreement with each of its Clients as per **Annexure-IIA**, and as amended by the Exchange from time to time before accepting or placing orders on the Client's behalf. Similarly, every Facilitator Member shall enter into an agreement with each of its Clients as per **Annexure-IIB**, and as amended by the Exchange from time to time before accepting or placing orders on the Client's behalf. In addition, the Clients of the Facilitator Members shall execute an undertaking in favour of the Exchange as **Annexure IIC** as amended by the Exchange from time to time before he is permitted to transact any contract on the Exchange. A Member intending to trade on its own account as Client need not sign such agreement, however, the Client Registration and other documents required to be submitted by the Member will be submitted to the Exchange.
- 18.6 When establishing a relationship with a Client, the Exchange Members must take reasonable steps to assess the background, genuineness, beneficial identity, financial soundness of such person, and its trading objectives by registering the Client with them in the format as per **Annexure-III** (Client to Member & Member to Exchange Forms). The Exchange may prescribe changes in such formats through circulars from, time to time with prior intimation to the Commission. The Member shall also obtain:
- An approved copy of the board resolution permitting the transactions in contracts allowed on the Exchange.
  - A copy of Power Purchase or Sale Agreement(s) with a grid connected entity from Trader Clients.
  - Other relevant documents.
- 18.7 The Exchange Member shall make the Client aware of particulars of Member's registration number allocated by the Exchange, an employee primarily responsible for the business of dealing in Contracts permitted by the Exchange including any limitations or liability attached thereto and the capacity in which the Member acts and the Client's liability thereon by issuing to the Client a copy of the Risk Disclosure Document as per **Annexure-IV**. The Exchange Member shall furnish a copy of the Risk Disclosure Document to all its Clients and to get and maintain their acknowledgement on second copy of the same document.
- 18.8 The Exchange Member shall provide extracts of relevant provisions governing the rights and obligations of Clients as Clients of Exchange Members, relevant manuals, notifications, circulars any additions or amendments thereto of the Exchange, or of any regulatory authority, to the extent it governs the relationship between Members and Clients, to the Clients at no extra cost.



- 18.9 The Exchange Member shall also bring to the notice of its Clients, any indictments, strictures or disciplinary actions taken against the Member by the Exchange or any other regulatory authority. The obligations of the Exchange Member in this context shall, inter alia, include the following:
- a. An Exchange Member shall make adequate disclosures of relevant material information in the dealings with its/ his Clients.
  - b. No Exchange Member or person associated with the Member shall guarantee a Client against a loss in any transactions affected by the Exchange Member for such Client.
  - c. The Exchange Member shall not recommend to the Client a sale or purchase of Contracts available on the Exchange, unless it has reasonable grounds to believe that such recommendation is suitable for the Client on the basis of facts, if any, disclosed by the Client, whether in writing or orally, regarding the objectives; Client's capacity of dealing with the specific Contracts and investment. The Member shall take all possible measures to keep confidentiality of information related to its Client(s) including bids, trades.
  - d. The Exchange Member shall make adequate disclosures of relevant material information in its dealing with its Client including the latest UMCP and Area MCPs along with cleared quantities, proprietary orders (buy/sell), any relevant announcement from the Exchange relating to Margin, trading restrictions as to price, or quantity.
  - e. The Exchange Member shall not furnish any false or misleading information or advice with a view to inducing the Client to do business in particular Contract or Contracts and which shall enable the Exchange Member to profit thereby.
  - f. The Exchange Member shall explain the trading system and order matching process to the Client before accepting any orders from it and to a direct access client before giving consent.
  - g. Where the Client requires an order to be placed or any of its order to be modified after the order has entered the system but has not been traded, the Exchange Member shall ensure that it obtains order placement/modification details in writing from such Client on whose behalf such orders are placed by them. The Exchange Member shall accordingly provide the Client with the relevant order confirmation/modification slip or copy thereof, forthwith.
  - h. Where the Client requires any of its order to be cancelled after the order has been entered in the system before the end of trading period, the Exchange Member shall obtain the order cancellation details in writing from the Client on whose behalf such orders are placed by them. The Exchange Member shall accordingly provide the Client with the relevant order cancellation details, forthwith.
  - i. The Exchange Member shall not accumulate or withhold Client's order for Contracts permitted by the Exchange, if it has adequate margin of such Client with it. The Exchange Member shall place all orders forthwith.
  - j. The Exchange Member shall act promptly in accordance with the instructions provided by the Client unless it has discretion as to the timing relating to entering and/or execution of the order, in which case it must exercise prudently its judgment as to the best moment for entering that order in the system.
  - k. The Exchange Member shall provide the Client with a copy of the trade confirmation slip as generated on the ATS, forthwith on execution of the trade and with a contract note for the trade executed in the specified format as per **Annexure- V**.
  - l. Exchange Member shall at all time keep the money of the Client in the Member's Clients Account maintained with the Clearing Bank. The Member shall not use this money for its own transactions or for transactions of such other Client or for any purpose other than Margin and pay in relating to transactions entered into by such

Client paying the margin. In case, Member is Client of its own, it does not need to maintain a separate account.

- m. The Member shall collect adequate Margin from its Client before entertaining any order from it. In case of a direct access client, the Member should take sufficient margin and also should specify trading/ obligation limits, which such direct access clients can commit on the Exchange.
  - n. It will be responsibility of the Members to inform their Clients about the successful trades and their physical and financial obligations, based on the Exchange's reports received by them.
- 18.10 Clients can have their own trading terminal through which they can put their orders electronically. In order to keep anonymity of bid prices, the Client may enter his bids through the terminal. Any trade undertaken by a Client via direct access will be done in the name of the Member, and the Member shall be fully responsible for all orders entered by the Client and for the conduct of all such trades as principal.
- 18.11 Member should collect/pay money from/to its clients through banking transaction only like cheque/demand draft, NEFT/RTGS, Online fund transfer etc.

## **19. Trading Margin and Service Charges**

Subject to the provisions of these Business Rules and the provisions of the Act, Rules and Regulations made thereunder the Trading Margin and Service Charges that a Member can charge to its Clients, for providing services may be mutually agreed to between them.

Provided that Service Charge for providing services to their clients by Facilitator Members shall not be more than the ceiling specified in the CERC (Power Market) Regulations, 2021 and its amendments thereof. This ceiling would be an overall ceiling including the service charges of any subordinate service providers, if any.

Provided however the Facilitator Member who is not trading licensee shall not provide any credit or financing or working capital facility to their Clients.

Provided that Trading Margin for providing services to their clients by Trader Members shall be trading margin as per Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of trading license and other related matters) Regulations, 2020 and as amended from time to time.

### **19. A. Guidelines for dealings with sub-ordinate service providers.**

If any intermediary(s) is appointed /involved directly or indirectly between the Facilitator Member and the Client and service provided by the intermediary has a direct or indirect nexus with the Exchange trading facility, such an intermediary would have the status of sub-ordinate service provider. Facilitator Member shall inform the Exchange of such subordinate service provider(s) in writing within a week of such appointment /involvement.

Exchange shall conduct the inspection of books of accounts of the subordinate service provider as and when required, the Facilitator Member has to ensure that the detail sought by the Exchange are provided by the subordinate service provider to the Exchange.

If services given by the intermediary to the client are in a bundled form (Providing other service also along with trading facility), the rate of Service Charges for Exchange trades will be ascertained separately in writing.

The ceiling on Service Charges, as defined by CERC, would be an overall ceiling in totality including the service charges of any subordinate service providers.

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## CHAPTER- III

### 3. TRADING SYSTEM

#### 20. Trading System

- 20.1 The entire trading operation at the Exchange shall be conducted under the Automated Screen based Trading system, which is also called as 'TWS'.
- 20.2 Trading on the Exchange shall be allowed only through approved workstation(s) located at approved locations for the office(s) of a Member. If an approved workstation of a Member is connected by LAN or any other way to other workstations at any other place it shall require a prior approval of the Exchange. For every TWS, a Member shall be required to obtain a specific permission from the Exchange and obtain user id in advance.
- 20.3 Each Member shall have a unique identification number which shall be provided by the Exchange and which shall be used to log on (sign on) to the system.
- 20.4 A Member shall have a non-exclusive permission to use the TWS as provided by the Exchange in the ordinary course of business as an Exchange Member.
- 20.5 A Member shall not have any title, rights or interest with respect to TWS, its facilities, software and the information provided by the Exchange. The permission to use the TWS shall be subject to payment of such charges as the Exchange may from time to time prescribe in this regard.
- 20.6 A Member shall not, permit itself or any other person(s) to:
  - use the software provided by the Exchange for any purpose other than the purpose as approved and specified by the Exchange,
  - use the software provided by the Exchange on any equipment other than the workstation approved by the Exchange,
  - copy, alter, modify or make available to any other person the software provided by the Exchange,
  - use the software in any manner other than the manner as specified by the Exchange,
  - attempt directly or indirectly to decompile, disassemble or reverse engineer the same.
- 20.7 A Member shall not, by itself or through any other persons on its behalf, publish, supply, show or make available to any other person or reprocess, retransmit, store or use the facilities of the TWS or the information provided by the TWS except with the written approval of the Exchange.
- 20.8 The Exchange will provide the application software for installation of TWS. However, the Member has to arrange at its own cost the system software personnel required for installation of trading application. Besides, it has to arrange for installation of trading application software at his TWS at its own cost.
- 20.9 The Exchange Member shall maintain confidentiality of bid information of Clients during and after the trade sessions.

#### 21. Approved Users

- 21.1 For every TWS to be used by a Member, it shall be required to obtain registration of the Approved User in the specified format, who will be responsible for such TWS. Such Approved Users can be its own employees responsible for such TWS or branch. Before termination of any of such Approved Users, the Member shall be required to obtain prior written approval of the Exchange. In case it is found that a Member has allotted a TWS to any user not registered with the Exchange, such Member will be suspended by the Exchange forthwith.
- 21.2 In case of lease line connection, the Member will get registration up to two (2) Approved User without any cost, but any Approved User over and above such Users will be permitted by the Exchange on payment of fee as prescribed through circulars.



## 22. Connectivity

- 22.1 In order to connect the TWS of the Members with the IEX server, the Members will have option to connect with IEX using any of the connectivity options as provided by the exchange through any service provider authorized by the exchange.

### a. Network Connectivity with IEX

IEX is committed to provide secure connectivity channel with all the members. For the same IEX will review the latest available technology and provide recommendation to all the members via suitable communication mode. Members are requested to make best use of suggested technological solution for communication with IEX or they can use other available technology at their own risk.

### b. Application procedure

All applications to Service provider and co-ordination with Service provider will be taken care by the IEX Systems Department. Interested Members may send the necessary details in the specified format.

### c. Equipment requirement:

A Member has to procure one router, dedicated for the IEX connectivity. The details of the router are as under:

- (i) The router should have one serial interface, one ISDN (optional) and one Ethernet Interface.
- (ii) **Leased line modems:** In case the service providers (like MTNL or TATA Tele) do not provide leased line modems, Members have to procure one pair of leased line modems separately.

### d. Recurring charges

Members are requested to pay the necessary charges towards installation, equipment rental, leased line etc. payable to the service provider (MTNL or TATA Tele) directly. Members may also have to pay any additional charges raised by the service providers / Govt. agencies as and when applicable.

### e. Back-up link

Members having Leased Line connectivity are required to obtain ISDN BRI line from their local telecom service provider. For automatic switch over, in case of leased line failure, ISDN backup line is required to be terminated on the same router on which leased line is connected. In order to avoid usage during non-trading hours because of automatic dialing, Members are advised to disconnect the ISDN line after trading hours and re-connect before the next trading session.

All Members having leased line are requested to avail the ISDN backup facility to avoid disruption in trading due to problems in leased line connectivity.

Members should note that installation/ STD/ usage charges/ any other charges related to the ISDN link is to be paid by Members to their respective telecom service provider.

### f. Router configuration

The Exchange will provide necessary step-by-step router configuration to the Member once the leased line is commissioned. However, the configuration and testing of the router at the Member end will be the responsibility of the respective users. All Members are obliged to co-ordinate with the IEX System Department for any assistance

### g. Payment

Members have to pay all applicable charges (with applicable taxes) for network connectivity to relevant agency as per guidelines issued by IEX from time to time.

### h. Number of terminals

In case a Member wants to install more terminals, they may request for additional leased lines. As such there is no limitation on number of leased lines that one Member can opt

for. Separate user IDs would be allocated for LL connectivity, which cannot be used for Internet, VSAT or other media. For ensuring additional security, the User IDs will be tagged with IP addresses.

**i. Crisis management**

In the event of network failure, Members are requested to escalate the same to respective service provider, contact details of the same shall be published on our website and also through circulars of the Exchange from time to time. Also members shall inform IEX to expedite the process of resolving the issue.

**j. Undertaking**

All Members are obliged to provide the Exchange with an undertaking on company's letterhead in the enclosed format given in **Annexure-VI**.

On receipt of the application along with the undertaking and payment, the application will be forwarded immediately to Service provider for further processing. It may take four (4) to (6) weeks for Service provider to complete the process of providing Network connectivity to the Member.

## **23. Expansion of trading terminals**

- 23.1 With every Lease line installation, a Member will be entitled to have up to five (5) trading terminals at the same location. All classes of Members are entitled to expand their trading terminals. A Member can set up multiple terminals either in the same city, where he is located or in multiple cities within India, either by way of opening branch offices or by appointing their franchise/approved users, but in such cases, all its obligations will be netted out at the Member level, and he shall be required to settle all such trades, in respect of margin, pay in as well as final settlement as any other trade settlement procedure of the Exchange, irrespective of the fact whether the trades are done by it or through its other terminals.

### **23.2 Terms relating to expansion of terminals**

A Member shall be entitled to expand its trading terminals by virtue of opening up branches, tying up with Approved Users. For setting up such terminals, it will be required to apply to the Exchange in the prescribed format specifying name of the Approved User in charge of such terminal, giving details of the location where the additional terminal is to be installed and also to undertake responsibility relating to all trades done through such terminal. The Exchange will not charge any additional fee or deposit for setting up such additional terminals except the cost of Lease line installation and deposit, software installation and out of pocket expenses relating thereto. There can be various models of expansion of terminals, such as:

- a. Direct connectivity to IEX system:** The Member can install terminals at various places, which can be linked to the IEX system through Lease line directly. In such cases also, the Member will be able to set trading limits for all such terminals from his office using the Member administrator terminal (MAT).
- b. Private network of a Member:** If a Member is already having a private network or he proposes to put in place a private network of leased line or ISDN connectivity for expanding his terminals, such private networks could be connected to IEX system by way of installing one lease line at Member's central office. However, if the number of terminals is large, the Member may be required to get a leased line (which would be decided by the Exchange on case to case basis) with adequate bandwidth between his central office and the Exchange office so as to support the interactive traffic of all such terminals. In respect of performance and maintenance of such private network, the Member has to bear all costs and assume all responsibilities and the Exchange will not be responsible in any manner. This is subject to the Member obtaining relevant approvals from the relevant statutory agency.

## 24. Force majeure

- 24.1 Notwithstanding the provisions of the Bye-Laws on force majeure, in case of the settlement of power contracts, the injection and drawal by the power generators and consumers depend upon the transmission corridors available with regional grids. In case of non-availability of transmission corridors because of system constraints notified by System Operator on the day of delivery, the outstanding Contracts will be settled as per following mechanism:-
- i) Collective Transactions:
    - a. All the buyers and sellers at the import and export sides will be arranged in descending order.
    - b. Exchange will identify the Buyers and sellers up to double of the quantity required to be curtailed on buy and sell sides respectively.
    - c. Curtailment on pro rata basis will be carried on from such identified buyers and sellers.
    - d. In case if the proportion of curtailment is 50% or more of the total quantity, exchange will curtail the quantity on pro rata basis across all impacted portfolios. During rainy seasons in case of any real time curtailment, exchange will curtail hydro power plants only as a last resort.
  - ii) Bilateral Transaction: Curtailment will be carried out contract wise as per the instructions of System Operator.
- 24.2 In case of trading system related problems, while the Exchange will attempt to rectify the problem at the earliest, however, it will not be responsible for the consequential losses, if any.
- 24.3 In the event of disruption in the office or administrative services of the Exchange or the designated Clearing Bank due to technical reasons including Computer System breakdown or due to absence, non-attendance and/or strike by the employees or due to any unforeseen circumstances or due to natural or other calamities such as earthquake, outbreak of war, general strike or any such circumstance of a force majeure nature, the daily clearing shall be suspended for such days and period till normalcy is restored. The Exchange shall immediately notify all the Members about the suspension and/or postponement of daily clearing settlement as also about the restoration or return of normalcy and resumption of daily clearing and settlement work. If the circumstances so demand, the Exchange may order closure of the market in accordance with relevant Bye-laws and call an emergency meeting of the Board of the Exchange to deal with the abnormal situation.
- 24.4 Any restriction imposed by NLDC/RLDCs on account of transmission bottlenecks or restriction/failure of REC Registry System or restriction/failure of ESCerts Registry System(D-CRM) and otherwise will be treated as force majeure without any liability on the Exchange.

## 25. Contingency management

- 25.1 As per the CERC Order dated 21.02.2024 in Petition No. 02/SM/2024, the Exchange will not accept any request for manual entry or modification or cancelation of bids on behalf of Member during trading hours or post trading hours. The Member shall indemnify the Exchange against any losses or costs arising out of the above situation.
- 25.2 In case of any mismatch between scheduling request by the Exchange and final schedule issued by LDC, the final schedule issued by the NLDC shall be considered for adjustments in the obligations and the trades shall be reversed to the extent of such mismatch.

Similarly, in case of subsequent changes on account of curtailment of transmission capacity by the Load Dispatch Centre(s), the trades shall be reversed to the extent of such curtailment as mentioned in clause no. 24.1. Reversal of trade shall be done at the respective Area Clearing Prices. The difference in the amount payable and recoverable due to such reversal shall be adjusted from the Congestion Revenue Account.

## **26. Major breakdown of the system or failure of communication link**

- 26.1 In the event of a major breakdown of the Exchange system or failure of communication link with NLDC, leading to interruption in Exchange Operations or on the directions of the NLDC, the Exchange may extend the trading hours . Such decisions will be taken considering the overall interests of the market. The decision of the Exchange in this regard shall be final and binding.
- 26.2 In such cases, the Exchange will take appropriate decision, as may be expedient to do so under those circumstances.

## CHAPTER- IV

### 4. INSPECTION AND DISCIPLINARY ACTIONS

#### 27. Records, Books of accounts and Inspection

- 27.1 The Exchange will conduct inspection of books of accounts of the Facilitator & Trader Members periodically. The scope of such inspection will, in normal circumstances, be limited to the operations of the Member at the Exchange and its off-market deals, but in special circumstances the Exchange may decide for extending the scope of such inspection. The scope of such inspection of these Members will cover compliance with the rules and regulations of the exchange, volume transacted, the trading margin or Service Charge, as the case may be, collected, and noncompliance with the regulations of CERC, if any. The Exchange, directly or through empaneled Chartered Accountant Firms, will conduct such inspection. All Exchange Members shall be required to maintain Books of Accounts, documents, counterfoil of contract notes and other details for such period, as may be directed by the Exchange. They shall produce such records before the inspection team as per directions issued by the inspection team and extend their full co-operation in terms of providing information so as to carry out inspection smoothly. In addition to the normal inspection of the Books of Accounts, audit of statutory compliance and adherence to the Articles, Bye-laws, Rules, Business Rules, circulars and notifications issued by the Exchange from time to time, the Exchange may take suitable action based on the inspection report, if it deems proper. The detailed procedure for inspection of these members is provided as annexure XI.

Without in any manner affecting the scope and extent of the powers of the Exchange, the inspection may cover the following aspects:

- a. Failure to follow the norms as prescribed by the Exchange for Client accounts, know-your-client scheme, improper / non execution of the Member-Client Agreement, and other relevant matters.
- b. Unauthorized use or / misuse of the TWS, software and other facilities provided by the Exchange.
- c. Improper maintenance of books and records.
- d. Violations in the issue of contract notes (not having pre-printed serial nos., signatory not authorized, contract note not in proper format, (e.g. contract price and brokerage not appearing on the contract notes separately, proper rates not given or any information on the contract note tampered with in comparison to the data available with the Exchange, unauthorized change of Client codes against the Trade nos., printing of Order number on the contract note, and similar matters).
- e. Failure to abide by or respond to the circulars, communications, notices issued by the Exchange.
- f. Unfair trade practices and market misconduct including insider dealing.
- g. Attempt to forge or indulged in forging of signatures or authorizations of officials (or any other regulatory body),
- h. Suppression of material facts and not taking prior approval of the Exchange regarding change in shareholding pattern, nature of organization, activities, change in memorandum and articles of association, change of address, change of telephone / fax numbers, or such things which are likely to affect his operations on the Exchange, including information about himself being convicted, declared insolvent, and other similar matters.
- i. Coercing, attempting or indulging in influencing another Member.
- j. Dealing with blacklisted Clients or persons.
- k. Other relevant matters which may affect the efficient and transparent operations of the markets.

Provided that, in case of any conflict between the above scope and the scope of the inspection specified by the CERC in the Order dated 9<sup>th</sup> May, 2018 pertaining to Petition No 12/SM/2016, the later will prevail.

## **28. Fines and penalties**

In case of any violation on the part of the Member the Exchange shall have the authority to levy penalty on such Members.

## **29. Mechanism for redressal of grievances**

If any complaint received with regard to the claim, differences or disputes between the Exchange Members inter se or between an Exchange Member and a Client or against Exchange or arising out of or in relation to trades, Contracts and transactions executed on the Exchange or with reference to anything incidental thereto or in pursuance thereof or relating to their validity, construction, interpretation or fulfillment and/or the rights, obligations and liabilities of the parties thereto and including any question of whether such trades, contracts and transactions have been entered into or not shall be addressed by the Exchange through a grievance redressal mechanism on receipt of a written complaint from the aggrieved party by the Exchange. Such complaint shall be resolved through the administrative mechanism under the supervision of the Grievance Redressal Forum. In case of non-redressal of such grievances through the Forum, the same shall be dealt as per the Arbitration and Conciliation procedure of the Exchange as specified under the Bye-laws of the Exchange.

## **30. Submission of Information on Service Charge:**

Each Facilitator Member of the Exchange shall charge its Service Charge in accordance with the CERC (Power Market) Regulation, 2021. The Exchange will monitor Service Charge levied by a Facilitator Member from its clients in the manner prescribed below:

- 30.1 **Manner of Calculation:** The manner of determining the charges to be recovered by a Member from his client shall be in accordance with Power Market Regulations 2021 and as specified by the CERC in para 14 of the order dated 21<sup>st</sup> Dec 2011 in suo-motu petition number 123/2011.
- 30.2 **Manner of Collection:** The Member may determine charges as explained in Clause 30.1 above, on a regular periodicity; however, it should be collected from the client at least once in every quarter. The Member can however decide to have a shorter collection cycle. Members can also collect the charges in advance however they should settle the account with their clients on the basis of working as per clause 30.1 above and the settlement cycle defined hereunder. The Member should collect money from its clients through cheque/demand draft or through net banking transaction. However, there shall not be any cash transaction between a Member and his client.
- 30.3 **Settlement Cycle:** Periodicity of settlement of accounts between Member and clients shall be at least on financial year basis or as prescribed by the Exchange from time to time. However, Members can adopt a shorter period of settlement if they so desire.
- 30.4 **Submission of Monthly Report:** Each Member shall furnish detail of service charges on monthly basis separately in respect of transactions in Integrated Day Ahead Market/Real Time Market, Intra-Day/ DAC /Term Ahead market/Green Intra-Day/DAC/Term Ahead Market, Renewable Energy Certificate market / Energy Saving Certificate market in the formats appended at **Annexure-VII**, **Annexure-VIII**, **Annexure-IX** and **Annexure X** respectively, as applicable, of these Business Rules, so as to reach the Exchange on or before the end of succeeding month.
- 30.5 **Records:** Each Member shall maintain books of Accounts as per clause 27.1 of this Chapter.



### 30.6 Procedure for securing compliance

- a) Where the Exchange, on the basis of material in its possession is satisfied that the Member is contravening, or is likely to contravene, above conditions, it shall serve a notice to the Member narrating the conditions contravened or likely to be contravened by him to invite his objections or suggestions.
- b) The notice may be served on him by delivering the same at the registered office or at the usual or his last known place of residence or business, either through registered post or speed post or by hand delivery through a messenger where the Exchange is satisfied that it is not reasonably practicable to serve the notice on the Member through registered post or speed post or by hand delivery or in any other manner as considered appropriate by the Exchange in the facts and circumstances of the case.
- c) The Exchange may issue a notice specifying the conditions contravened or likely to be contravened by the Member to bring the matters to the attention of persons affected or likely to be affected by such contraventions, to invite suggestions from such persons.
- d) The Member or the persons affected or likely to be affected by the contravention of the conditions may file their objections or suggestions within the time specified by the Exchange from the date of receipt of notice under clause (a) or (c) as the case may be.
- e) The Exchange shall on consideration of the objections and suggestions received as aforesaid, pass such directions as may be necessary to secure compliance of the above conditions.

### 31. Arbitration

- 31.1 A Member or Client can file reference to arbitration in accordance with the provisions of the Bye-Laws in the prescribed format along with a fee of Rs. 5,000 or such other fee as may be decided by the Exchange.
- 31.2 Each arbitrator will receive a sitting fee as decided by the Exchange per meeting for participation in arbitration proceedings.
- 31.3 The total cost of arbitration, cost of conducting proceedings, sitting fee, documentation, cost of obtaining legal or expert opinion, cost of litigation, cost of hiring of professional for resolving a dispute, will be shared by both the parties to the dispute equally during the course of proceedings pending final adjustment and for that matter, the Exchange will demand adequate deposits from the concerned Members and Clients periodically for meeting such costs on ad-hoc basis. On declaration of award, the entire cost of the proceedings will be borne by the parties in the manner as may be decided by the arbitrators and documented in the award and the Exchange shall ensure final adjustment of accounts between the parties.
- 31.4 Any dispute involving claim upto Rs. 1 lakh shall be decided by the Exchange administratively and claims involving more than Rs. 1 lakh shall only be filed with Arbitration Panel.
- 31.5 Subject to the Arbitration provisions the courts in Delhi will have jurisdiction in the matter irrespective of the location or residence of the Exchange Member or where the transaction has been initiated or completed and all transaction will be deemed to have taken place in Delhi.

**INSTRUCTIONS TO FILL MEMBERSHIP UNDERTAKING**

1. The MEMBERSHIP UNDERTAKING has to be executed on a Non-Judicial Stamp Paper of the value of Rs. 300/- or the value prevailing in the State of residence or business of the person seeking Membership, whichever is more.
2. Each and every blank in the Undertaking shall be duly filled.
3. The signature of two authorized signatories and rubber stamp shall be affixed on each and every page of the Undertaking.
4. Two persons shall sign as witnesses against each authorized signatory on the last page of the Undertaking.
5. In case of a corporate entity the common seal of the Company and in case of a firm the rubber stamp shall be affixed on the last page of the Undertaking.
6. The Undertaking shall be Notarized.
7. The following shall be typed on the Stamp Paper (as the first page).

**Membership Undertaking**

This Non-Judicial Stamp paper of Rs.300 forms part and parcel of this Undertaking submitted by ..... to Indian Energy Exchange Limited executed by

Mr./Mrs./Ms. \_\_\_\_\_ on  
day of \_\_, 20 \_\_.on behalf of -----

This undertaking is given at \_\_\_\_ this ..... day of ....., 20....

To Indian Energy Exchange Limited, New Delhi, India Hereinafter called “IEX” (which expression shall unless it be repugnant to the context or meaning thereof be deemed to mean and include their successors and assigns)

**Signature (1).....**  
**Rubber Stamp**

**Signature (2).....**  
**Rubber Stamp**

**Notary (Stamp & Seal)**

**Notary (Stamp & Seal)**



BY

.....  
Registered Office:

.....  
Hereinafter called “the Undersigned” (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and permitted assigns).

WHEREAS THE Undersigned is desirous to be admitted as the ..... Member of IEX hereinafter referred as Member.

AND WHEREAS IEX has agreed to admit the Undersigned as a ..... Member on IEX in accordance with the Rules, Bye-Laws, and Business Rules of IEX in force from time to time subject to the Undersigned furnishing the Undertaking in the manner and on the terms specified herein below:

NOW THEREFORE in consideration of IEX admitting the Undersigned as a Member of IEX, the Undersigned hereby undertakes and agrees that:

1. The Undersigned shall comply with all such requirements, existing and future, with regard to and in connection with admission and continuance of the Undersigned as a Member.
2. On being admitted as a Member, the Undersigned shall be active participant of IEX.
3. The Undersigned shall abide by, comply with and be bound by the Rules, Bye- Laws, and Business Rules of IEX, as in force from time to time and any clarification, directive, circular, order, notice, instruction issued by the IEX and in force from time to time.
4. The Undersigned shall abide by the code of conduct applicable to Member as laid down by IEX from time to time.
5. The Undersigned agrees that IEX shall be entitled to amend its Rules, Bye-laws, and Business Rules unilaterally and the Undersigned shall be deemed to have consented to any amendment made to the Rules, Bye-laws, and Business Rules of IEX, and accordingly shall be bound by the Rules, Bye-laws, and Business Rules prevailing from time to time and IEX shall be entitled to exercise all powers vested in it under its Rules, Bye-Laws Business Rules and Circulars by which the Undersigned unconditionally agrees to be bound.

**Signature (1).....**  
**Rubber Stamp**

**Signature (2).....**  
**Rubber Stamp**

**Notary (Stamp &Seal)**

**Notary (Stamp &Seal)**

6. The Undersigned shall maintain and preserve such information, records, books and documents pertaining to the working of the Undersigned as a Member for such period as may be specified by IEX from time to time.
7. The Undersigned shall permit IEX or any person authorized by it for inspection, access to all records, books, information, documents and its offices as may be required.
8. The Undersigned shall submit periodic reports, statements, certificates and such other documents as may be required by IEX, and shall comply with such audit requirements as may be prescribed by IEX from time to time.
9. The Undersigned shall follow and comply with such orders or instructions, whether being in the nature of a penalty, fine or otherwise, as may be issued by IEX or any committee of IEX duly constituted for the purpose, in the event of the Undersigned committing any violation of any Rules, Bye-Laws, Business Rules, Circulars or practice or code of conduct prescribed by IEX in respect of conduct of the business on IEX.
10. The Undersigned shall conduct business at IEX prudently and shall ensure that it will not be prejudicial or detrimental to public interest in general, and to the interest of IEX in particular.
11. If any difference or dispute shall arise as to the interpretation, meaning or effect of this Undertaking or as to the rights and liabilities of the Undersigned or in respect of any other matter relating to IEX operations, the decision of IEX shall be final, conclusive and binding on the Undersigned.
12. The Undersigned shall abide by and adopt the Rules, Bye-Laws, and Business Rules of the clearing and settlement systems of IEX and any other agencies appointed by IEX for this purpose and any amendments made thereto from time to time.
13. The Undersigned shall pay the costs and expenses including fees prescribed by IEX from time to time, as communicated by IEX within due date as indicated in Invoice/Demand Note from IEX and in case of nonpayment by due date IEX may deduct from the settlement account.
14. The Undersigned shall use IEX infrastructure facilities and equipment only for the purpose for which they are permitted to be used so and for no other purpose.

**Signature (1).....**  
**Rubber Stamp**

**Signature (2).....**  
**Rubber Stamp**

**Notary (Stamp & Seal)**

**Notary (Stamp & Seal)**

15. The Undersigned shall furnish security deposits, pledge of securities, hypothecation of movables, lien on bank accounts or such other security as may be required by IEX from time to time and to do all acts, deeds and things to enable IEX to exercise all or part of the above mentioned securities to secure recovery of default in payment and other incidental charges relating to default and other dues of IEX and clearing house, if any.
16. The Undersigned shall bring in additional margin deposits and funds as and when required as decided by IEX from time to time to participate in the trading and clearing operations on IEX.
17. The Undersigned is aware that the Undersigned would be/is admitted as a Member of IEX on paying the prescribed membership fee and security deposit and that the membership is not transferable for a minimum period of 3 (three) years. or such other minimum period as may be stipulated from time to time by IEX and the Undersigned does unequivocally undertake that the Undersigned shall not be entitled to make any claim for refund of the security deposit for a minimum period of 3 (three) years from the date of deposit or such other minimum period as may be stipulated from time to time by IEX even if the Undersigned intends to cease to be the Member or discontinue to transact on IEX.
18. Without prejudice to what has been undertaken above, IEX shall be entitled to forfeit any property, funds, amounts, deposits or other sums due to the Undersigned or to the credit of the Undersigned in such events or contingencies as may be stipulated in the Rules, Bye-laws and Business Rules of IEX in force from time to time.
19. IEX shall not be held responsible or liable for any loss to the Undersigned or the Clients of the Undersigned on account of failure of computer systems, telecommunication network and other equipment installed by IEX at the offices of the Undersigned and IEX shall also not be held responsible for any misuse, mishandling, damage, loss, defect or injury to the computer systems, telecommunication network and other equipment installed by IEX.
20. IEX shall have the right to inspect and supervise all computer systems, software programs, telecommunications equipment, VSAT/MPLS and the like, which are provided by IEX at the office of the Undersigned.

**Signature (1).....**  
**Rubber Stamp**

**Signature (2).....**  
**Rubber Stamp**

**Notary (Stamp & Seal)**

**Notary (Stamp & Seal)**

21. The Undersigned shall not make any alterations, modifications and changes to the computer systems, software programs, telecommunications equipment, VSAT and the like installed by IEX without prior written consent of IEX.
22. The Undersigned shall not disclose, reveal, publish and advertise any material information relating to operations, membership, software, hardware, and the like of IEX without prior written consent of IEX except and to the extent as may be required in the normal course of its business. Similarly, the Undersigned shall not use without prior written approval of IEX, the name of IEX to directly or indirectly promote the business of the undersigned.
23. The Undersigned shall from time to time and of its own notify to IEX any change in the composition of the Board of Directors of the Undersigned and where in the opinion of IEX any change in the composition of the Board of Directors of the Undersigned has resulted or is likely to result due to such change any direct or indirect transfer of shares or securities in the share capital of the Undersigned, IEX will be entitled to review continuation of the Undersigned as a Member of IEX and, the Undersigned shall be bound by any decision taken by IEX in this regard which shall be final.
24. The Undersigned hereby confirms and undertakes that it is competent in all respects to become a Member of IEX and participate in contracts transacted at IEX. The Undersigned further confirms that in case of any doubt or reference in future regarding validity of its candidature to become a Member, the onus to prove the same shall lie on the Undersigned itself and IEX shall not be liable for any matter in case of such eventuality.
25. The Undersigned shall execute, sign, and subscribe to such other documents, papers, agreement, covenants, bonds, and/or undertakings as may be prescribed or required by IEX from time to time.
26. The Undersigned undertakes to make such contributions to Settlement Guarantee Fund or any other fund pertaining to IEX as and when required by IEX and also comply with all requirements of IEX in respect thereof.
27. The Undersigned shall arrange to get itself registered with respective relevant authorities as may be required from time to time under any law of the land for the purpose of participating in the operations of IEX.
28. The Undersigned has received and/or will obtain required consent from respective DISCOM/STU/SLDC/RLDC, as applicable, to carry out its business as Member on the platform of IEX.

**Signature (1).....**  
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**Signature (2).....**  
**Rubber Stamp**

**Notary (Stamp & Seal)**

**Notary (Stamp & Seal)**

29. The Undersigned shall abide by provisions of the Electricity Act, 2003 or any rules or regulations made there under or Grid Code or any other applicable Act or law or any rules or regulations made there under.
30. The Undersigned shall subscribe to at its cost the mandatory centralized insurance cover as required by IEX for the Members at IEX to pay the insurance premium as may be required by IEX and also to comply with all requirements of IEX in respect thereof. The Undersigned shall not have any objection to create a default reserve fund by transferring a specified amount out of the Settlement Guarantee Fund, as may be decided by the Exchange from time to time, every year to meet the liability of the Undersigned defaulting in paying dues of the Exchange.
31. The Undersigned shall forthwith notify IEX in writing as and when any notice is received by the Undersigned in connection with any institution of insolvency proceedings against the Undersigned and that the Undersigned shall also inform IEX in writing before the Undersigned initiates any insolvency proceedings to be declared to be insolvent. The Undersigned further shall forthwith inform IEX in writing on the onset of any circumstance which is likely to or may render the Undersigned to be declared to be insolvent(s) or which is likely to or may render the Undersigned liable to be subject to insolvency proceedings.
32. The fees, security deposits, other monies and any additional deposits paid, whether in the form of cash, bank guarantee, securities or otherwise, with IEX, by the Undersigned from time to time, shall be subject to a first and paramount lien for any sum due to IEX and all other claims against the Undersigned for due fulfillment of engagements, obligations and liabilities of the Undersigned arising out of or incidental to any dealings made subject to the Rules, Bye-Laws, and Business Rules of IEX. IEX shall be entitled to adjust or appropriate such fees, deposits and other monies for such dues and claims, to the exclusion of other claims against the Undersigned, without any reference to the Undersigned.
33. Without prejudice to the rights, remedies whether legal or otherwise available to IEX upon the Undersigned's non-compliance with this Undertaking, the Undersigned shall indemnify and keep indemnified IEX against any loss, injury or damage suffered by IEX whether legal or otherwise arising due to its non-compliance with the provisions of this Undertaking.
34. This Undertaking shall be binding upon the heirs, legal representatives, successors and assigns of the Undersigned in the same manner as the Undersigned.
35. The Undersigned further agrees that IEX reserves the right to terminate the membership of the applicant, at its absolute discretion and at any time, for any reason whatsoever and without communicating those reasons to the Undersigned.

**Signature (1).....**  
**Rubber Stamp**

**Signature (2).....**  
**Rubber Stamp**

**Notary (Stamp & Seal)**

**Notary (Stamp & Seal)**

36. The Undersigned shall forthwith notify, in writing, IEX of any change in its constitution or articles of association or Management
37. The Undersigned does hereby confirm that the information provided in the application form of the Undersigned for the Member of IEX is true and correct to the best of the knowledge and belief of the Undersigned and that this Undertaking will be binding on the successors, heirs, legal representatives and permitted assigns of the Undersigned.

Signed and delivered by the hereunder named Member.

**Name of the Member**.....

**Signature (1)**.....  
**Name of the Authorised Signatory**  
**Rubber Stamp**

**Signature (2)**.....  
**Name of the Authorised Signatory**  
**Rubber Stamp**

**Witnesses**

**Name:** ..... **Signature:** .....

**Address:**  
 .....  
 .....

**Name:** ..... **Signature:** .....

**Address:**  
 .....  
 .....

The common seal of \_\_\_\_\_  
 \_\_\_\_\_ has been hereunto affixed pursuant to a  
 resolution passed at a meeting of the Board of Directors of the Company or Partners of the Firm,  
 as the case may be, held on \_\_\_\_\_ day of  
 \_\_\_\_\_ 20\_\_\_\_ in the presence of \* \_\_\_\_\_

**COMMON SEAL:**

**Signature (1 )**.....

**Signature (2)**.....

**Rubber Stamp:**

**Rubber Stamp:**

**Common seal:**

\* As required by the Articles of Association of the Company

**Notary (Stamp & Seal)**

**Member - Client Agreement (Between a Trader Member and the Client)**

This agreement is made at New Delhi on this ..... day of.....20.....

**By and Between**

....., a company/ firm/ individual or any other body duly formed and registered under the Relevant Act, hereinafter called MEMBER, having its registered office at .....,

**And**

....., a company / firm / individual or any other body duly formed and registered under the Relevant Act, hereinafter called CLIENT, having its registered office address at .....

WHEREAS the MEMBER is registered with the INDIAN ENERGY EXCHANGE LIMITED (hereinafter called IEX) as Trader Member,

AND WHEREAS the CLIENT being desirous of executing contracts transacted on the platform of the IEX as defined in the Rules, Bye – laws and Business Rules of the IEX through the MEMBER has accordingly made an application with the MEMBER for registration,

AND WHEREAS the MEMBER has satisfied and shall continue to satisfy itself about the genuineness and financial soundness of the CLIENT for transacting contracts and achieving objectives relevant to the services to be provided.

AND WHEREAS the CLIENT has satisfied and shall continue to satisfy itself of the capability of the MEMBER to deal in the contracts transacted on the platform of the IEX before transacting any contracts through the MEMBER.

AND WHEREAS the MEMBER has taken steps and shall continue to take steps to make the CLIENT aware of the precise nature of the liability of the IEX and the MEMBER for the contracts to be transacted, including the limitations on that liability and the capacity in which the MEMBER acts and the MEMBER has accordingly brought the contents of the Risk Disclosure Document to the notice of the CLIENT and has explained to the CLIENT the significance of the said document.

NOW THEREFORE, in consideration of the mutual understanding arrived at, the parties thereto have agreed to the terms and conditions, as follows:

**Obligations of MEMBER**

1. The MEMBER shall keep money deposited by the CLIENT in a separate account, distinct from its own account or account of any other person and shall not use such money for any purpose other than the purpose of settlement of the contracts transacted by the CLIENT.
2. The MEMBER shall not charge Trading Margin exceeding the limit, as specified by the Central Electricity Regulatory Commission. “

3. The MEMBER shall not, without the concurrence of the CLIENT, disclose to any person or authority, except as specifically required under any law for the time being in force or to meet any regulatory requirement, any information pertaining to the CLIENT contained in the client registration form or any other information furnished by the CLIENT to the MEMBER in confidence from time to time.

### **Obligations of CLIENT**

4. The CLIENT shall abide by the provisions of the Electricity Act, 2003, Grid Code, Rules and Regulations made thereunder or any other applicable Act or Rules or Regulations made under such Act.
5. The CLIENT shall be bound by the Rules, Bye-Laws, Business Rules, and Circulars of the IEX.
6. The failure, if any, of the CLIENT to understand the risks involved in the contracts transacted on the platform of the IEX as contained in the Risk Disclosure Document or otherwise, shall not render a contract transacted as void or voidable at the option of the CLIENT and the CLIENT is and shall continue to be responsible for all the risks and consequences for transacting such contracts, whether transacted by it or its duly authorised representative.
7. The CLIENT shall pay to the MEMBER Trading Margin and statutory levies as applicable from time to time for the contracts transacted through the MEMBER and for the services rendered by the MEMBER to the CLIENT.
8. The CLIENT shall deposit with the MEMBER such money as may be required to open and/or maintain account or maintain any position.
9. The CLIENT shall notify to the MEMBER in writing any change in the information disclosed in the 'client registration form' submitted at the time of opening of the account or any time thereafter.

### **General**

10. This agreement may be terminated at any time by mutual consent of the parties or by giving notice of at least one month by one party to the other party of its intention to terminate this agreement:

Provided that termination shall not have any effect on the contracts transacted before the date of termination and the parties shall be subject to same rights and obligations in respect of such contracts as in force on the date of their transaction.

11. In the event of the death or insolvency of the CLIENT or its otherwise becoming incapable of receiving and paying for the contracts which the CLIENT has transacted or delivering or transferring the contracts transacted, the MEMBER may, with the prior approval of the IEX, close out the transactions of the CLIENT and the CLIENT or its legal representative shall be liable for any losses, costs and be entitled to any surplus resulting from such closing out.



12. All contracts transacted shall be subject to the Rules, Bye-laws, Business Rules and Circulars of the IEX and shall be deemed to have taken effect as wholly made, entered into and to be performed in the city of New Delhi.

13. Unless otherwise agreed to by the parties, the courts at New Delhi shall have the jurisdiction over all matters arising under this agreement.

Provided that where the Exchange is party to any proceeding, the courts at New Delhi shall have the exclusive jurisdiction.

14. All claims, differences and disputes arising between the parties to this agreement arising out of or under this agreement shall be settled through arbitration conducted under the Rules, Bye-laws, Business Rules and Circulars of the IEX.

In WITNESS THEREOF, the parties to agreement have caused these presents to be executed as of the day and year first above written.

SIGNED for and on behalf of

THE Member

By .....

Signature .....

Title .....

Witness .....

.....  
.....

THE Client

By .....

Signature .....

Title .....

Witness .....

**Member - Client Agreement (Between a Facilitator Member and the Client)**

This agreement is made at New Delhi on this ..... day of.....20.....

**By and Between**

....., a company/ firm/ individual or any other body duly formed and registered under the Relevant Act, hereinafter called MEMBER, having its registered office at .....,

**And**

....., a company / firm / individual or any other body duly formed and registered under the Relevant Act, hereinafter called CLIENT, having its registered office address at .....

WHEREAS the MEMBER is registered with the INDIAN ENERGY EXCHANGE LIMITED (hereinafter called IEX) as Facilitator Member,

AND WHEREAS the CLIENT being desirous of executing contracts transacted on the platform of the IEX as defined in the Rules, Bye-laws and Business Rules of the IEX through the MEMBER has accordingly made an application with the MEMBER for registration,

AND WHEREAS the MEMBER has satisfied and shall continue to satisfy himself about the genuineness and financial soundness of the CLIENT for transacting the Contracts and achieving objectives relevant to the services to be provided.

AND WHEREAS the CLIENT has satisfied and shall continue to satisfy himself of the capability of the MEMBER to deal in the Contracts transacted on the IEX through the MEMBER.

AND WHEREAS the MEMBER has taken steps and shall continue to take steps to make the CLIENT aware of the precise nature of the liability of the IEX and the MEMBER for the Contracts to be transacted, including the limitations on that liability and the capacity in which the MEMBER acts and the MEMBER has accordingly brought the contents of the Risk Disclosure Document to the notice of the CLIENT and has explained to the CLIENT the significance of the said document.

NOW THEREFORE, in consideration of the mutual understanding arrived at, the parties thereto have agreed to the terms and conditions, as follows:

**Obligations of MEMBER**

1. The MEMBER shall not collect any money deposited from the CLIENT in respect of the Contracts transacted on the Exchange:

Provided that wherever the MEMBER collects any money from the CLIENT, the MEMBER shall keep the money collected from the CLIENT in a separate account, distinct from his own account or account of any other person and shall not use such money for any purpose other than the purpose of settlement of the Contracts transacted by the CLIENT.

2. The MEMBER shall not charge Service Charge exceeding the limit as specified by the Central Electricity Regulatory Commission
3. The MEMBER shall not, without the concurrence of the CLIENT, disclose to any person or authority, except as specifically required under any law for the time being in force or to meet any regulatory requirement, any information pertaining to the CLIENT contained in the client registration form or any other information furnished by the CLIENT to the MEMBER in confidence from time to time.

### **Obligations of CLIENT**

4. The CLIENT shall abide by the provisions of the Electricity Act, 2003, Grid Code, Rules and Regulations made thereunder or any other applicable Act or Rules or Regulations made under such Act.
  - a. The CLIENT shall be bound by the Rules, Bye-laws, Business Rules, and Circulars of the IEX.
  - b. The failure, if any, of the CLIENT to understand the risks involved in the Contracts transacted on the IEX as contained in the Risk Disclosure Document or otherwise, shall not render any Contract transacted as void or voidable at the option of the CLIENT and the CLIENT is and shall continue to be responsible for all the risks and consequences for transacting such Contracts, whether transacted by him or his duly authorised representative.
  - c. The CLIENT shall pay to the Service Charge and statutory levies as applicable from time to time for the Contracts transacted through the MEMBER and for the services rendered by the MEMBER to the CLIENT.
  - d. The CLIENT shall deposit with the MEMBER such money as may be required to open and/or maintain account or maintain any position in accordance with the Power Market Regulations.
  - e. The CLIENT shall notify to the MEMBER in writing any change in the information disclosed in the 'client registration form' submitted at the time of opening of the account or any time thereafter.

### **General**

- f. This agreement may be terminated at any time by mutual consent of the parties or by giving notice of at least one month by one party to the other party of its intention to terminate this agreement:

Provided that termination shall not have any effect on the Contracts transacted before the date of termination and the parties shall be subject to same rights and obligations in respect of such Contracts as in force on the date of their transaction.

- g. In the event of the death or insolvency of the CLIENT or its otherwise becoming incapable of receiving and paying for the Contracts which the CLIENT has transacted or delivering or transferring the Contracts transacted, the MEMBER may, with the prior approval of the IEX, close out the transactions of the CLIENT and the CLIENT or its legal representative

shall be liable for any losses, costs and be entitled to any surplus resulting from such closing out.

- h. All Contracts transacted on the Exchange shall be subject to the Rules, Bye-laws, Business Rules and Circulars of the IEX and shall be deemed to have taken effect as wholly made, entered into and to be performed in the city of New Delhi.
- i. Unless otherwise agreed to by the parties, the courts at Delhi/New Delhi shall have the jurisdiction over all matters arising under this agreement:

Provided that where the Exchange is party to any proceeding, the courts at Delhi/New Delhi shall have the exclusive jurisdiction.

- j. All claims, differences and disputes arising between the parties to this agreement arising out of or under this agreement shall be settled through arbitration conducted under the Rules, Bye-laws, Business Rules and Circulars of the IEX.

In WITNESS THEREOF, the parties to agreement have caused these presents to be executed as of the day and year first above written.

SIGNED for and on behalf of

THE Member

By .....

Signature .....

Title .....

Witness .....

<sup>1</sup> .....

.....

THE Client

By .....

Signature .....

Title .....

Witness .....

---

<sup>1</sup>Details to be given include Name of Member, Membership Registration No and Address

**Undertaking by and on behalf of the Client of a Facilitator Member**

This undertaking is given at New Delhi on this ..... day of.....20.....

**By**

....., a company / firm / individual or any other body duly formed and registered under the Relevant Act, hereinafter called CLIENT, having its registered office address at .....

WHEREAS the CLIENT being desirous of transacting the Contracts on the platform of the Indian Energy Exchange Ltd, hereinafter called the EXCHANGE as defined in the Rules, Bye-laws and Business Rules of the EXCHANGE through -----, admitted as the Facilitator Member of the EXCHANGE, hereinafter called FACILITATOR MEMBER and made an application with the FACILITATOR MEMBER for registration as the CLIENT.

AND WHEREAS the CLIENT based on the application made by him has been registered with the FACILITATOR MEMBER.

AND WHEREAS the CLIENT is aware that the Central Electricity Regulatory Commission has decided that the Facilitator Members shall not provide any credit or financing or working capital facility to their Clients.

AND WHEREAS In view of the above decision of the Central Electricity Regulatory Commission, the CLIENT has approached the EXCHANGE to permit it to transact the Contracts admitted on the EXCHANGE in compliance with the decision.

AND WHEREAS the FACILITATOR MEMBER has taken steps to make the CLIENT aware of the precise nature of the liability of the EXCHANGE for the Contracts to be transacted, and the MEMBER has accordingly brought the contents of the Risk Disclosure Document to the notice of the CLIENT and has explained to the CLIENT the significance of the said document.

AND WHEREAS the EXCHANGE has permitted the CLIENT to transact the Contracts admitted on the EXCHANGE on the condition that the CLIENT opens the Settlement Account and other accounts as required under the Bye-laws, Rules and Business Rules of the EXCHANGE individually in its own name and make all payments directly to the EXCHANGE.

NOW THEREFORE, the CLIENT undertakes and agrees to abide the following terms and conditions, namely:

1. The CLIENT shall transact the Contracts admitted on the EXCHANGE on opening the Settlement Account and other accounts as required under the Bye-laws, Rules and Business Rules of the EXCHANGE individually in its own name and make all payments directly to the EXCHANGE.
2. The CLIENT shall open and/or maintain Settlement Account and any other account as may be required under the Bye-laws, Rules and Business Rules of the EXCHANGE and deposit such margin or money as may be required to maintain any position to be able to transact the Contracts admitted on the Exchange.

3. The CLIENT shall indemnify the Exchange and keep the Exchange indemnified against loss caused to the Exchange on account of default of the CLIENT under the Bye-laws, Rules, Business Rules, clarification, directive, circular or notice of the Exchange.
4. The CLIENT shall pay all costs and expenses including taxes, levies, fees prescribed by the EXCHANGE from time to time, within due date as indicated by the EXCHANGE and in case of non-payment by due date the EXCHANGE shall be at liberty to recover the dues in any manner as it considers appropriate and without demur or objection from the CLIENT. The CLIENT undertakes to indemnify the EXCHANGE against any loss arising in account of non-payment or delay in payment of the dues of the EXCHANGE by the CLIENT.
5. The failure, if any, of the CLIENT to understand the risks involved in the Contracts transacted on the EXCHANGE as contained in the Risk Disclosure Document explained to him by the FACILITATOR MEMBER or otherwise, shall not render any Contract transacted by him as void or voidable at the option of the CLIENT and the CLIENT is and shall continue to be responsible for all the risks and consequences for transacting such Contracts.
6. The CLIENT shall notify to the EXCHANGE and the FACILITATOR MEMBER in writing any change in the information submitted at the time of opening of the account or any time thereafter.
7. This agreement shall stand terminated on the CLIENT ceasing to be the Client of the FACILITATOR MEMBER.
8. In the event of the death or insolvency of the CLIENT or its otherwise becoming incapable of receiving and paying for the Contracts which the CLIENT has transacted or delivering or transferring the Contracts transacted, the EXCHANGE may close out the transactions of the CLIENT and the CLIENT or its legal representative shall be liable for any losses, costs and be entitled to any surplus resulting from such closing out.
9. All Contracts transacted on the Exchange shall be subject to the Rules, Bye-laws, Business Rules and Circulars of the IEX and shall be deemed to have taken effect as wholly made, entered into and to be performed in the city of New Delhi.

SIGNED for and on behalf of

The Client

By .....

Signature .....

Designation/Title

Witness .....

Witness .....

**CLIENT REGISTRATION FORM**  
 (Member to Exchange & Client to Member)

To,  
**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

From:-  
 Member: \_\_\_\_\_  
 Membership Code: \_\_\_\_\_  
 Membership Category: Faci./Prop./Trader

Dear Sir,

We request you to register the following entity as our Client. The details of Registration are as under:

**Segment:**

<input type="checkbox"/> Electricity/Renewable Energy	<input type="checkbox"/> REC	<input type="checkbox"/> ESCERTS
<input type="checkbox"/> Grid Connected Client	<input type="checkbox"/> Eligible Entity	<input type="checkbox"/> Buyer
<input type="checkbox"/> Trader Client	<input type="checkbox"/> Obligated Entity	<input type="checkbox"/> Seller
<input type="checkbox"/> Solar	<input type="checkbox"/> Voluntary Entity	
<input type="checkbox"/> Non-Solar		
<input type="checkbox"/> Hydro (HPO)		

1.	Name of the Client:			
2.	Registered Office Address:			
	City:	State:	Pin Code:	Country:
	Telephone (with STD Code):		Fax (with STD Code):	
	Email:			
3.	Address for Correspondence: <input type="checkbox"/> Same as above			
	City:	State:	Pin Code:	Country:
	Telephone (with STD Code):		Fax (with STD Code):	
	Email:			
	Name of the contact person(s):			
	Designation:		Mobile:	
4	Unit Address: Same as Registered Office Address <input type="checkbox"/>		Same as Correspondence Address <input type="checkbox"/>	
	City:	State:	Pin Code:	Country:
	Telephone (with STD Code):		Fax (with STD Code):	
	Unit Head Name:		Mobile:	

- This form is to be signed in duplicate.
- The original copy should be submitted to exchange within 7 days of registration.
- True copy (duplicate) to be submitted to the Member for their records.

5.	Nationality		
6.	Constitution	Please tick the appropriate option : Individual / Registered Partnership Firm / Limited Liability Partnership / Private Limited Company / HUF / Public Limited Company/ Institution / PSU / Others (Please Specify):_____	
7.	If, Already Registered with IEX	a) Name of Member: b) Client Registration Code:	
8.	GSTIN:		
	GST Registration Address		
9.	Date of Incorporation / Registration:		
10.	Permanent Account No.:		
11.	TAN No.:		
12.	Bank Account Details:		
12.1	Bank Account Number: <i>(Please provide details of only operational bank account)</i>		
	Bank Name and Branch Address:		
	IFSC Code:	Account Operational since:	
12.2	Client Settlement Account Number: <i>(if applicable)</i>		
	Bank Name and Branch Address:		
	Beneficiary Name:		



<b>13.</b>	<b>ELECTRICITY/RENEWABLE ENERGY SEGMENT</b>	
13.1	If Trader Client, Trader Name:	
13.2	Grid Connection Details	
	Type of Entity	Regional <input type="checkbox"/> Intra State <input type="checkbox"/>
13.3	DISCOM / RLDC / STU :	State:
13.4	Substation:	Connected Voltage Level:
13.5	Maximum Drawl Capacity:	Maximum Injection Capacity:
13.6	Consumer Category (as specified by Discom):	
13.7	Client Category: (Please tick the appropriate option)	
13.7.1	Distribution Licensee <input type="checkbox"/>	Private <input type="checkbox"/> Government <input type="checkbox"/>
13.7.2	Open Access Consumer <input type="checkbox"/>	Full Open Access <input type="checkbox"/> Partial Open Access <input type="checkbox"/> Please tick the appropriate option : <b>Industrial</b> : Metal / Textile / Food / Services or IT / Automobiles / Chemical / Cement / Ceramic / Electronics Products / Home Products / Paper / Glass / Oil & Gas / Jewelry / Polyester & Yarn / Plastic / Others (Please Specify): _____ <b>Commercial</b> : Educational Institute / Housing / Hotels / Office Complex / Malls / Hospital / Metro / Airport / Others (Please Specify): _____
13.7.3	Generator <input type="checkbox"/>	Please tick the appropriate option : CGS / SGS / IPP / CPP / Co-generation plant / Others (Please Specify): _____ Coal / Gas / Hydro / Small Hydro / Solar / Wind / Other Renewable / Others (Please Specify): _____
13.7.4	Captive User <input type="checkbox"/>	Generator Type : _____ Consumer Type : _____
This form is only to be filled up by clients trading in electricity segment on IEX.		

<b>14.</b>	<b>REC Segment</b>								
<b>14.1</b>	<b>Eligible Entity Details</b>								
	S. No. .*	Project Name & Unit No.	Source****	Unique project Identification Code	Location & Sub Station	Installed Capacity	Date of Commissioning	Accreditation Certificate No.**	Registration Certificate No.***
	<p>* if Registered units are more than five, provide details on a separate sheet in the format prescribed above.  ** Each registered entity will be given a unique portfolio number and treated as separate client.  *** Enclose Copy of Accreditation &amp; Registration Certificate for each unit.  **** Mention the appropriate option:  Solar PV/ Solar Thermal,  Wind / Small Hydro / Biomass / Co generation /Others</p>								
<b>14.2</b>	<b>Obligated Entity Client Details</b>								
<b>14.2.1</b>	<b>Category of Obligated Entity</b>								
<b>14.2.2</b>	Distribution Licensee <input type="checkbox"/> Open Access Consumer <input type="checkbox"/> Captive User <input type="checkbox"/>								
<b>14.2.3</b>	Facility Number:								
<b>14.2.4</b>	State of which RPO to be met:								
<b>14.2.5</b>	Registration No. (if issued by Central Agency):								
<b>14.2.6</b>	Maximum Demand / Contracted Demand:								
<b>14.3</b>	<b>Voluntary Entity Client Details</b>								
<b>14.3.1</b>	<b>Category of Voluntary Entity</b>								
<b>14.3.2</b>	Individual <input type="checkbox"/> Corporate <input type="checkbox"/> Other <input type="checkbox"/>								
<b>14.3.3</b>	Registration No. (if issued by Central Agency):								
<b>14.3.4</b>	Maximum Demand / Contracted Demand:								
This form is only to be filled up by clients trading in REC segment on IEX.									

15.	<b>ESCerts Segment</b>								
15.1	Eligible Entity (EE) PAT Details:								
	S. No. .*	Plant Name	Plant State	Plant Location	Year of Establishment	PAT Cycle	No. of ESCerts		DC Registration No.**
							Issued	To be Purchased	
* If registered units are more than five, provide details on a separate sheet in the format prescribed above. * * Enclose Copy of Registration Certificate for each unit.									
15.2	Name of State Designated Agency:								
This form is only to be filled up by clients trading in ESCerts segment on IEX.									

The information furnished above is true to the best of my knowledge and belief. We undertake to inform changes in any of the above in writing immediately to the Exchange/Member and further undertake that to and for the benefit of the Exchange, we shall be bound by the Bye-Laws, Rules and Business Rules of the Exchange, as amended from time to time, and shall maintain with the Exchange details of an individual whom the Exchange may contact in connection with any matter whatsoever relating to my activities, and further understand and agree that my registration with the Exchange shall be terminated if Member/Client fail to comply with Electricity Act 2003, Rules and Regulations made thereunder and Rules any of these Bye-Laws, Rules and Business Rules, as amended from time to time.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Client Signature:  
Name of the Authorised Signatory:

Designation of the Authorised Signatory:  
Name of Client:  
Affix Rubber Stamp

Member Signature:  
Name of the Authorised Signatory:

Designation of the Authorised Signatory:  
Name of Member:  
Affix Rubber Stamp

**Enclosures:****For the Exchange**

1. Electricity/Renewable Energy Segment: ☐
  - Copy of Power Purchase/Sale Agreement. (for Trader Client only) ☐  
*On expiry of above Agreement, Member to submit revised agreement or request for deactivation of client.*
  - NOC issued by SLDC/RLDC, if available. NOC to be submitted before trading. ☐  
*In case of Renewable Energy Generator, type of source shall be mentioned for participation in Green Contracts.*
  - Member Client Agreement (MCA). ☐
  - Risk Disclosure Document ☐
2. REC Segment
  - Certificate of Accreditation & Registration for each registered unit. ☐
  - Member Client Agreement (MCA). ☐
  - Certified copy of GST Registration certificate of the applicant. ☐
  - Risk Disclosure Document ☐
3. ESCerts Segment
  - Certificate of Registration for each registered unit as Eligible Entity. ☐
  - Member Client Agreement (MCA). ☐
  - Certified copy of GST Registration certificate of the applicant. ☐
  - Risk Disclosure Document ☐

**For the Member:**

1. Certified true copy of the Latest Annual Report/Auditors Report. ☐
2. Certified true copy of PAN card of the Applicant. ☐
3. Proof of Address. ☐

### Risk Disclosure Document

[THIS DOCUMENT SHOULD BE READ BY EACH AND EVERY PROSPECTIVE CLIENT BEFORE ENTERING INTO MEMBER-CLIENT AGREEMENT AND SHOULD BE READ IN CONJUNCTION WITH THE RULES, BYE\_LAWS AND BUSINESS RULES OF INDIAN ENERGY EXCHANGE LIMITED (IEX)]

IEX has not passed the merits of participating on the Exchange but has passed the adequacy or accuracy of this disclosure document. This brief statement does not disclose all of the risks and other significant aspects of trading. In light of the risks, the CLIENT should undertake such transactions only if it understands the nature of the contracts (and contractual relationships) into which the CLIENT is entering and the extent of the CLIENT's exposure to risk. The CLIENT should carefully consider whether trading is appropriate for it in light of his experience, objectives, financial resources and other relevant circumstances. Trading requires not only the necessary financial resources but also adequate knowledge of Electricity Act 2003, Energy Conservation Act 2001, Rules and Regulations including but not limited to OA Regulations, Grid Code, Power Market Regulation, REC Regulation and ESCerts Regulations. In case of any adverse consequences or loss resulting from execution of contracts, the IEX or any regulatory authority shall not be responsible and it will not be open for any CLIENT to take the plea that no adequate disclosure was made or it was not explained the full risk involved by the MEMBER. The CLIENT will be solely responsible for the consequences and no contract can be rescinded on that account. The CLIENT must ask the MEMBER of the IEX to provide full details of the contract i.e., the contract specifications and the associated obligations.

#### **Deposited cash and property**

The CLIENT should familiarize itself with the protections accorded to the money or other property it deposits particularly in the event of a firm insolvency or bankruptcy. The extent to which the CLIENT may recover its money or property may be governed by specific legislation or local rules. In some jurisdictions, property, which has been specifically identifiable as the CLIENT's own, will be pro-rated in the same manner as cash for purposes of distribution in the event of a shortfall. In case of any dispute with the MEMBER, the same shall be subject to arbitration as per the Rules, Bye-Laws and Business Rules and Circulars of the IEX.

#### **Commission and other charges**

Before the CLIENT begins to trade, it should obtain a clear explanation of all commission, fees and other charges for which it will be liable. These charges will affect the CLIENT's net profit (if any) or will increase its loss.

#### **Trading facilities**

The IEX offers electronic trading facilities, which are computer-based systems for order-routing, execution, matching, registration or clearing of contracts. As with all facilities and systems, they are vulnerable to temporary disruption or failure. The CLIENT's ability to recover certain losses may be subject to limits on liability imposed by the system provider, the market, and/or the MEMBER of the IEX. Such limits may vary; the CLIENT should ask the MEMBER with which it deals for details in this respect.

This document does not disclose all of the risks and other significant aspects involved in participation on an electricity/REC market/ESCerts market at the platform of IEX. The CLIENT should therefore study all aspects of participation in electricity/REC contracts/ESCerts contracts carefully before becoming involved in it. The CLIENT hereby acknowledges that he has received and understood this risk disclosure statement.

**Client's Signature** (If Partner, Corporate, or other Signatory, then attest with company seal.)

Date : .....( DD-MM-YYYY)

**Contract Note**

Tel. no..... Fax no. ....

(Subject to exclusive jurisdiction of the courts in New Delhi only)

Name of the

Member.....

**Authorized Signatory**

Dealing Office address/ Tel no. / Fax no.

**Name of the Member**

**Address of the Member**

To, Client Name/ Code No./ Order Ref. No. Sir/  
Madam, I/ We have this day done by order and on  
your account the following transactions:

Contract No:.....

To be stamped as per the provisions applicable under the relevant Stamp Act

Date:

Order No.	Trade No.	Trade Time	Contract	Bought for you				Amount (Rs.)	Sold for you					
				Quantity	Price	Value (Rs.)	Brokerage (Total)		Contract	Quantity	Price (Rs.)	Value	Brokerage (Total)	Amount (Rs.)

**OTHER LEVIES, IF ANY:**

Trading Margin/Service Charges has been charged as stated and has been at rates not exceeding the official scale of Trading Margin/Service Charges and indicated separately. This contract is subject to the Rules, Bye- Laws and Regulations and usages of Indian Energy Exchange Limited, New Delhi.

Yours faithfully

Date: For.....

**Authorized Signatory****EXTRACTS FROM THE BYE-LAWS & BUSINESS RULES TO ARBITRATION**

All claims, differences or disputes between the Members inter se and between Members and Clients arising out of or in relation to dealings, contracts and transactions made subject to the Bye-Laws, Rules and Business Rules of the Exchange or with reference to anything incidental thereto or in pursuance thereof or relating to their validity, construction, interpretation, fulfillment or the rights, obligations and liabilities of the parties thereto and including any question of whether such dealings, transactions and contracts have been entered into or not shall be submitted to arbitration in accordance with the provisions of these Bye-Laws.

In all dealings, contracts and transactions, which are made or deemed to be made subject to the Bye-Laws, Rules and Business Rules of the Exchange, the provisions relating to arbitration as provided in these Bye-Laws and Business Rules shall form and shall be deemed to form part of the dealings, contracts and transactions and the parties shall be deemed to have entered into an arbitration agreement in writing by which all claims, differences or disputes of the nature referred to in clause (1) above shall be submitted to arbitration as per the provisions of these Bye-Laws and Business Rules.

All claims, differences or disputes referred to in clause (1) above shall be submitted to arbitration within six months from the date on which the claim, difference or dispute arose or shall be deemed to have arisen. The time taken in conciliation proceedings, if any, initiated and conducted as per the provisions of the Act and the time taken by the Relevant Authority to administratively resolve the claims, differences or disputes shall be excluded for the purpose of determining the period of six months.

Save as otherwise specified by the Exchange, the seat of ARBITRATION shall be at New Delhi.

(For more details please refer the Bye-Laws of INDIAN ENERGY EXCHANGE LIMITED.)

## Network Connectivity Undertaking

On Company's letterhead

### **Undertaking**

I/we \_\_\_\_\_ do hereby undertake the following:

1. I/We agree that the circuit will be used purely for IEX trading purpose only.
2. I/We agree that this circuit will not be interconnected to any of the Leased Line/ Data Circuit/ Network/ PSTN/EPABX etc. of SERVICE PROVIDER or any other service providers which is not permitted by the rules of Telegraph Authority/SERVICE PROVIDER. I/We further agree to extend facility to the Telegraph authority/SERVICE PROVIDER in order to enable monitoring of the purpose, performance and operation of the circuit, as and when required.
3. I/we hereby agree to abide by the provisions of Indian Telegraph Rules in force and as modified from time to time and such other terms and conditions prescribed by the telegraph Authority/SERVICE PROVIDER.
4. I/We agree that necessary charges for registration/installation/Advance annual rental/Arrears, if any will be paid to the controlling/billing authority of SERVICE PROVIDER & IEX, as and when we receive demand note/advice from SERVICE PROVIDER/IEX and when such charges become due.
5. I/We agree that I/We shall pay the cancellation charges and other expenses incurred to establish the circuit as requested by me/us that may become payable, in the event of cancellation of the application/closure of the circuit at a later date.
6. I/We do hereby agree to indemnify the Govt. of India/ DoT/ SERVICE PROVIDER and keep them indemnified against any loss damage claim, cost, charges, expenditure incurred by or made against them in respect of loss of rent/ call charges, violation of C.U.G. norms due to misuse of the circuit or otherwise whatsoever in the matter.
7. In case SERVICE PROVIDER provides us Network connecting mediums, it will be our responsibility to maintain the same safely. In case of any physical damage or theft we will bear the charges specified by SERVICE PROVIDER.

Stamp & Signature of the Authorized Signatory

Date:

Place:



## Annexure-VII

## Monthly Report on Service Charge (Integrated Day Ahead Market & Real Time Market)

SERVICE CHARGE OF ELECTRICITY TRADED BY FACILITATOR MEMBERS OF IEX IN INTEGRATED DAY AHEAD MARKET & REAL TIME MARKET																					
Name of the Member:																					
Code of the Member:																					
Delivery Date	Portfolio Code	Service Charge (Rs.)																Total Charges (Rs.)	Remarks	Date of Invoice	Invoice No.
	Time block*	1	2	3	4	5	6	..	..	..	91	92	93	94	95	96					

**Monthly Report on Service Charge (ITD,DAC,TAM and G-ITD, G-DAC, G-TAM)**
**VOLUME AND PRICE OF ELECTRICITY TRADED BY FACILITATOR MEMBERS OF IEX**
**Name of the Member:**
**Code of the Member:**

Application No.	Trade Date	Delivery Date	Portfolio No.	Portfolio Name	ITD/DAC.TAM/ G-ITD/G-DAC/GTAM Instrument/ Contract Name	Final Scheduled Volume (MWh)	Final Price (Rs.)	Service Charges (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Service charges shall also include charges of any subordinate service provider.

**Annexure IX****Monthly Report on Service Charge (REC Market)****VOLUME AND PRICE OF REC TRADED BY FACILITATOR MEMBERS OF IEX****Name of the Member:****Code of the Member:**

Serial No.	Trade Date	Portfolio No.	Portfolio Name	REC	Final Volume	Final Price (Rs.)	Service Charges (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Service charges shall also include charges of any subordinate service provider.

**Annexure X****Monthly Report on Service Charge (ESCerts Market)****VOLUME AND PRICE OF ESCERTS TRADED BY FACILITATOR MEMBERS OF IEX****Name of the Member:****Code of the Member:**

Serial No.	Trade Date	Portfolio No.	Portfolio Name	Instrument/ Contract	Final Volume	Final Price (Rs.)	Service Charges (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Service charges shall also include charges of any subordinate service provider.

**Annexure XI****Procedure for inspection of Facilitator & Trader Members****Part A: INSPECTION OF FACILITATOR MEMBERS****I. Scope of Inspection for Facilitator Members as per CERC order on Petition No. 12/SM/2016**

S. No.	Reference	Requirement	Description
1	Clause 5.4a (Chapter-5) of IEX Rules	Net-worth	Compliance with the capital adequacy norms as may be prescribed by the Exchange.
2	Clause 5.16 (Chapter-5) of IEX Rules	Change In Authorized Signatories, Shareholding Pattern & Directors	Every Exchange Member shall promptly notify the Exchange in writing about any change in the information provided by the Member at the time of admission or at a later stage to the Exchange.
3	Clause 5.26 (Chapter-5) of IEX Rules	Special Provisions For Partnership Firm As Member	<ul style="list-style-type: none"> <li>No Partner shall be admitted without prior approval from the Exchange.</li> <li>Change in the name of a partnership shall be done with prior approval from the Exchange.</li> <li>Any Partner of the firm should not become a partner in more than one partnership firm carrying on the business of facilitating transactions in electricity or Renewable Energy Certificates and/or clearing.</li> <li>No dissolution or reconstitution of the firm without the approval of the Exchange.</li> </ul>
4	Clause 8.1 (Chapter-I) of IEX Business Rules	Insurance cover any indemnity for exchange trades	The Members shall be required to obtain insurance cover at their own cost, so as to protect themselves from risks and hazards relating to their business operations at the Exchange.
5	Clause 18.9 (Chapter-2) of IEX Business Rules	Disclosure/Reporting To Clients	<p>The Exchange Member shall also bring to the notice of its Clients, any indictments, strictures or disciplinary actions taken against the Member by the Exchange or any other regulatory authority. The obligations of the Exchange Member in this context shall, inter alia, include the following:</p> <ul style="list-style-type: none"> <li>The Exchange Member shall not recommend to the Client a sale or purchase of Contracts available on the Exchange, unless it has reasonable grounds to believe that such recommendation is suitable for the Client.</li> </ul>

S. No.	Reference	Requirement	Description
			<ul style="list-style-type: none"> <li>The Exchange Member shall make adequate disclosures of relevant material information in its dealing with its Client including the latest UMCP and Area MCPs along with cleared quantities, proprietary orders (buy/sell), any relevant announcement from the Exchange relating to Margin, trading restrictions as to price, or quantity.</li> <li>The Exchange Member shall not furnish any false or misleading information or advice with a view to inducing the Client to do business in particular Contract or Contracts and which shall enable the Exchange Member to profit thereby.</li> <li>It will be responsibility of the Members to inform their Clients about the successful trades and their physical and financial obligations, based on the Exchange's reports received by them.</li> </ul>
6	Clause 4.15 (Chapter-4) & Clause 5.15 (Chapter-5) of IEX Bye-Laws	Maintenance of Order Book & Transactions Records	Members shall have separate records of each of their Clients, including orders for execution of transactions in Contracts. Members shall preserve the records of Client's orders for transactions for each Client separately with the time and date of receipt of order, details of executed transactions for each Client and books of accounts relating to the same, for a period of three years for production whenever required by the Exchange.
7	Clause 18 (Chapter-II) of IEX Business Rules	Client Registration Documents	<ul style="list-style-type: none"> <li>Member shall enter into an agreement with each of its Clients as per format prescribed by Exchange.</li> <li>Members must take reasonable steps to assess the background, genuineness, beneficial identity, financial soundness of such person, by obtaining registering the Client with them in the format prescribed as Client Registration Form and Self Registration Form prescribed by the Exchange.</li> </ul> <p>The Member shall also obtain:</p> <ol style="list-style-type: none"> <li>an approved copy of the board resolution permitting the</li> </ol>

S. No.	Reference	Requirement	Description
			<p>transactions in contracts allowed on the Exchange .</p> <p>b. a copy of Power Purchase or Sale Agreement(s) with a grid connected entity from Trader Clients.</p> <p>c. other relevant documents.</p> <ul style="list-style-type: none"> <li>The Exchange Member shall issue Risk Disclosure Document to all the clients as per format prescribed by Exchange.</li> </ul>
8	Clause 12.1.13 (Chapter-12) of IEX Bye-Laws	Utilization of client's funds	<ul style="list-style-type: none"> <li>A Member will not utilize his Client's funds for his own trading or any other Client's trading.</li> <li>The Member, including Facilitator Member, transacting on other's behalf, will have to ensure that the funds pay out of one Client cannot be adjusted with that of the funds pay in of another Client.</li> </ul>
9	Clause 18.9(l) (Chapter-II) of Business Rules & Clause 8.7 (Chapter-8) of IEX Bye-Laws	Maintenance Of Separate Bank Account	<ul style="list-style-type: none"> <li>Exchange Member shall at all times keep the money of the Client in the Member's Clients Account maintained with the Clearing Bank.</li> </ul>
10	Clause 18.7 (k) (Chapter-II) of IEX Business Rules	Issuance Of Contract Notes	<ul style="list-style-type: none"> <li>The Exchange Member shall provide the Client with a copy of the trade confirmation slip as generated on the ATS, forthwith on execution of the trade and with a contract note for the trade executed in the specified format as per Annexure- V.</li> </ul>
11	Clause 19 (Chapter-II) of IEX Business Rules	Excess Service Charges/ Trading Margin Charged By Member	<ul style="list-style-type: none"> <li>Each Member of the Exchange shall charge its Trading Margin/ Service Charge in accordance with the CERC (Power Market) Regulation, 2021.</li> </ul>
12	IEX Circular or Circular No. IEX/Inspection/ 111/2012 Dated 09/11/2012	Cash Dealings	<ul style="list-style-type: none"> <li>The Facilitator Member should collect money from its clients through cheque/demand draft or through net banking transaction only.</li> </ul>

S. No.	Reference	Requirement	Description
13	CERC order on petition no. 12/SM/2016 dated 9 <sup>th</sup> May 2018	Month wise summary of total transaction done at the exchange	
14	CERC order on petition no. 12/SM/2016 dated 9 <sup>th</sup> May 2018	Details of invoices raised on each client during the aforesaid period confirming the Service Charges (SC)/Trading Margin charged to them	

## II. PROCEDURE FOR ANNUAL INSPECTION OF FACILITATOR MEMBER'S AS PER CERC ORDER ON PETITION NO. 12/SM/2016

The inspection of Facilitator members would be done on annual basis and the following details would be checked.

- Upon intimation to members, they will be required to give duly filled & signed declaration confirming compliance with various compliance requirements applicable on them. The declaration will primarily include confirmation regarding compliance with following requirements:
  - Intimation to Exchange regarding change in Member's detail (Like Authorized Signatories for Exchange transactions, Directors & Shareholding etc.)
  - Disclosure & Information to the Clients related to provisions governing the rights and obligations of Clients, notifications, circulars or any relevant announcement from the Exchange to clients etc.
  - Maintenance of record of orders received from clients.
  - Maintenance of record of the transactions executed on behalf of clients.
 Standard format of the declaration to be given by Members is attached as **Annexure-i**.
- Net-worth Certification: As per Business Rules of the Exchange minimum Net-worth requirement for Facilitator Members in Electricity segment is Rs. 1.50 Crores & REC segment 50 Lacs only, to ensure the compliance with the same Members would be required to submit Net-worth Certificate, certified by practicing chartered accountant, on annual basis. Net-worth Certificate format attached as **Annexure-ii**.
- Volume & Service Charge details:
  - Monthly report on Member service charges of Facilitator members
  - Details of commercial arrangements member had/have with its clients, towards various service charges along with the copy of supporting documents like agreement/ terms sheet/ Memorandum of understanding etc confirming the same;



- Service Charges (SC) of clients, in the format attached as Annexure- 1 for I-DAM & RTM, Annexure- 2 for TAM, Annexure- 3 for REC & Annexure-4 for ESCERTS.
- Details of invoices raised on each client during the aforesaid period confirming the Service Charges (SC) charged to them. [Format attached as Annexure- 5].
- Arrangements with the sub-ordinate service provider including payment details.
- From Exchange's record maximum SC allowed as per CERC Regulations i.e. 2 paisa/unit would be calculated for each contract/block and will be compared with SC reported by Member.

In all cases data would be provided for the financial year. Data provided by the members against the above points, would be verified during on-site inspection.

**Annexure-i****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

**Subject: Declaration for Annual Compliance Submission FY 20xx-xx**

Dear Sir

In reference to above cited subject, We hereby confirm, that we have complied with the Exchange's Rules, Business Rules & Bye Laws and related matters in general and following in particulars as applicable on us:-

**Name of the Member:****Code of the Member:**

<b>S. No.</b>	<b>Compliance Requirement</b>	<b>Remarks</b>
1	<p>We have notified the changes to the Exchange in writing about any change in the information provided by us at the time of admission or at a later stage to the Exchange.</p> <p>Further Shareholding Pattern, Directors detail &amp; Authorized Signatories as on March 31, 20xx is attached as <b>Annexure-i (a)</b>.</p>	
2	<p><b>Additional Compliance if Member is Partnership Firm:</b></p> <ul style="list-style-type: none"> <li>• We have not admitted any Partner without the approval of the Exchange.</li> <li>• We have not changed name of a partnership without the approval of the Exchange.</li> <li>• None of the Partner of the firm becomes a partner in more than one partnership firm carrying on the business of facilitating transactions in electricity or Renewable Energy Certificates and/or clearing.</li> <li>• We have not dissolution or reconstitution of the firm without the approval of the Exchange.</li> </ul>	
3	<p><b>Disclosure &amp; Information to the Clients:</b></p> <ul style="list-style-type: none"> <li>• We have intimated the indictment, stricture or disciplinary action (if any) taken against us by the Exchange or any other regulatory authority to the clients.</li> <li>• We have not recommended to the Client a sale or purchase of Contracts available on the Exchange, unless we have reasonable grounds to believe that such recommendation is suitable for the Client.</li> </ul>	

S. No.	Compliance Requirement	Remarks
	<ul style="list-style-type: none"> <li>We have provided information to the Clients about their successful trades, physical obligations and financial obligations were provided on timely basis.</li> <li>We have provided extracts of relevant provisions governing the rights and obligations of Clients, notifications, circulars or any relevant announcement from the Exchange to clients.</li> <li>We have provided the client with copy of the trade confirmation slip as generated on the ATS, forthwith on execution of the trade and with a contract note for the trade executed in the specified format.</li> <li>We have not furnished any false or misleading information or advice with a view to inducing the Client to do businesses in particular Contract or Contracts and which enable us to profit thereby.</li> </ul>	
4	<b>Utilization of clients funds:</b> <ul style="list-style-type: none"> <li>We have not utilized Client's funds for our own trading or any other Client's trading.</li> <li>We have not provided any credit or financing or working capital facility to our clients.</li> </ul>	
5	<b>Insurance Cover:</b> <ul style="list-style-type: none"> <li>Insurance cover has been obtained to protect from risks and hazards relating to business operations at the exchange.</li> </ul>	
6	We have maintained the record of orders received from clients as required under IEX Rules & Regulations.	
7	We have maintained record of all the transactions executed on behalf of clients as required under IEX Rules & Regulations.	
8	We have not done any unauthorized use of the Member's ADMIN Terminal & TWS provided by the Exchange.	

Thanking you,  
Yours Sincerely

For (Name of the Member)

Name & Designation of Authorised Signatory

## Annexure-i (a)

## A. Share Holding Pattern as on March 31, 20xx

S. No.	Name of Shareholder	No. of shares Held	Face Value per share (Rs.)	Amount Paid up Capital (Rs.)	% of Total

## B. Directors Detail as on March 31, 20xx

S. No.	Name of Director	Category	Remarks

## C. Authorized Signatories for Exchange transactions as on March 31, 20xx

S. No.	Name of Authorized Signatory	Designation	Contact Details

**Annexure-ii**

**Net-worth Certificate Format**

**Certificate dated ..... submitted by ..... to Indian Energy Exchange.**

**CERTIFICATE**

This is to certify that the Net worth of M/s. /Mr. /Ms. .... as on ..... is Rupees ..... only.

It is further certified that the computation of Net worth, based on my/ our scrutiny of the books of accounts, records and documents, is true and correct to the best of my / our knowledge and as per information provided to my / our satisfaction.

Place: For (Name of Accounting Firm)

Date:

Name of Partner/Proprietor

Chartered Accountant Membership Number  
(Rubber stamp)

## Annexure-1-I-DAM &amp; RTM

For the Period

## SERVICE CHARGE OF ELECTRICITY TRADED BY FACILITATOR MEMBERS OF IEX IN INTEGRATED DAY AHEAD MARKET & REAL TIME MARKET

Name of the Member:

**Code of the Member:**

[illegible]

\*Each Time block is equivalent to 15 minutes.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail.

Note: (3) Service charges shall also include charges of any subordinate service provider.

**Annexure-2 ITD, DAC,TAM .G-ITD,G-DAC  
& GTAM**

For the Period

VOLUME AND PRICE OF ELECTRICITY TRADED BY FACILITATOR MEMBERS OF IEX (ITD, DAC,TAM ,G-ITD,G-DAC & GTAM)

**Name of the Member:**

**Code of the Member:**[illegible]

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Service charges shall also include charges of any subordinate service provider.

For the Period

**Annexure-3 REC**

## VOLUME AND PRICE OF REC TRADED BY FACILITATOR MEMBERS OF IEX

Name of the Member:

Code of the Member:

Serial No.	Trade Date	Portfolio No.	Portfolio Name	REC	Final Volume	Final Price (Rs.)	Service Charges (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Service charges shall also include charges of any subordinate service provider.

For the Period

**Annexure-4 ESCERTs**

## VOLUME AND PRICE OF ESCERTS TRADED BY FACILITATOR MEMBERS OF IEX

Name of the Member:

Code of the Member:

Serial No.	Trade Date	Portfolio No.	Portfolio Name	Instrument/ Contract	Final Volume	Final Price (Rs.)	Service Charges (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Service charges shall also include charges of any subordinate service provider.

For the Period

Annexure-5 Invoices

## INVOICE DETAIL

Name of the Member:

Code of the Member:

Invoice Date	Invoice No.	Invoice Period	Client Code	Client Name	Segment ( I-DAM/ RTM/ITD/DAC / TAM/ REC/ ESCerts/G-ITD/G-DAC/ GTAM)	Quantity (MW)	Service Charge Rate	TM Amount (Rs.)	Tax (If Any)	Total Amount (Rs.)

Note: (1) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (2) Service charges shall also include charges of any subordinate service provider.



**Part B : INSPECTION OF TRADER MEMBERS****I. Scope of Inspection for Trader Members as per CERC order on Petition No. 12/SM/2016**

S. No.	Reference	Requirement	Description
1	Clause 5.4a (Chapter-5) of IEX Rules	Net-worth	Compliance with the capital adequacy norms as may be prescribed by the Exchange.
2	Clause 5.16 (Chapter-5) of IEX Rules	Change In Authorized Signatories, Shareholding Pattern & Directors	Every Exchange Member shall promptly notify the Exchange in writing about any change in the information provided by the Member at the time of admission or at a later stage to the Exchange.
3	Clause 5.26 (Chapter-5) of IEX Rules	Special Provisions For Partnership Firm As Member	<ul style="list-style-type: none"> <li>No Partner shall be admitted without prior approval of the Exchange.</li> <li>Change in the name of a partnership shall be done with prior approval of the Exchange.</li> <li>Any Partner of the firm should not become a partner in more than one partnership firm carrying on the business of facilitating transactions in electricity or Renewable Energy Certificates and/or clearing.</li> <li>No dissolution or reconstitution of the firm without the approval of the Exchange.</li> </ul>
4	Clause 8.1 (Chapter-I) of IEX Business Rules	Insurance cover covering any indemnity for exchange trades	The Members shall be required to obtain insurance cover at their own cost, so as to protect themselves from risks and hazards relating to their business operations at the Exchange.
5	Clause 18.9 (Chapter-2) of IEX Business Rules	Disclosure/Reporting to Clients	<p>The Exchange Member shall also bring to the notice of its Clients, any indictments, strictures or disciplinary actions taken against the Member by the Exchange or any other regulatory authority. The obligations of the Exchange Member in this context shall, inter alia, include the following:</p> <ul style="list-style-type: none"> <li>The Exchange Member shall not recommend to the Client a sale or purchase of Contracts available on the Exchange, unless it has reasonable grounds to believe that such recommendation is suitable for the Client.</li> <li>The Exchange Member shall make adequate disclosures of relevant material information in its dealing with its Client including the latest UMCP</li> </ul>

S. No.	Reference	Requirement	Description
			<p>and Area MCPs along with cleared quantities, proprietary orders (buy/sell), any relevant announcement from the Exchange relating to Margin, trading restrictions as to price, or quantity.</p> <ul style="list-style-type: none"> <li>The Exchange Member shall not furnish any false or misleading information or advice with a view to inducing the Client to do business in particular Contract or Contracts and which shall enable the Exchange Member to profit thereby.</li> <li>It will be responsibility of the Members to inform their Clients about the successful trades and their physical and financial obligations, based on the Exchange's reports received by them.</li> </ul>
6	Clause 4.15 (Chapter-4) & Clause 5.15 (Chapter-5) of IEX Bye-Laws	Maintenance of Order Book & Transactions Records	<p>Members shall have separate records of each of their Clients, including orders for execution of transactions in Contracts.</p> <p>Members shall preserve the records of Client's orders for transactions for each Client separately with the time and date of receipt of order, details of executed transactions for each Client and books of accounts relating to the same, for a period of three years for production whenever required by the Exchange.</p>
7	Clause 18 (Chapter-II) of IEX Business Rules	Client Registration Documents	<ul style="list-style-type: none"> <li>Member shall enter into an agreement with each of its Clients as per format prescribed by Exchange.</li> <li>Members must take reasonable steps to assess the background, genuineness, beneficial identity, financial soundness of such person, by obtaining registering the Client with them in the format prescribed as Client Registration Form and Self Registration Form prescribed by the Exchange.</li> </ul> <p>The Member shall also obtain:</p> <ol style="list-style-type: none"> <li>an approved copy of the board resolution permitting the transactions in contracts allowed on the Exchange .</li> <li>a copy of Power Purchase or Sale Agreement(s) with a grid connected entity from Trader Clients.</li> <li>other relevant documents.</li> </ol>

S. No.	Reference	Requirement	Description
			<ul style="list-style-type: none"> <li>The Exchange Member shall issue Risk Disclosure Document to all the clients as per format prescribed by Exchange.</li> </ul>
8	Clause 12.1.13 (Chapter-12) of IEX Bye-Laws	Collection of Pay-in/ Margin by the Member	<ul style="list-style-type: none"> <li>A Member will not utilize his Client's funds for his own trading or any other Client's trading.</li> <li>The Member, including Facilitator Member, transacting on other's behalf, will have to ensure that the funds pay out of one Client cannot be adjusted with that of the funds pay in of another Client.</li> <li>The Trader Member will have to ensure that it collects the funds pay in/margin from the buyer Client in advance and also ensure that the funds payout is given to the seller Client immediately.</li> </ul>
9	Clause 18.9(I) (Chapter-II) of Business Rules & Clause 8.7 (Chapter-8) of IEX Bye-Laws	Maintenance Of Separate Bank Account	<ul style="list-style-type: none"> <li>Exchange Member shall at all times keep the money of the Client in the Member's Clients Account maintained with the Clearing Bank. The Member shall not use this money for its own transactions or for transactions of such other Client or for any purpose other than Margin and pay in relating to transactions entered into by such Client paying the margin.</li> </ul>
10	Clause 18.7 (k) (Chapter-II) of IEX Business Rules	Issuance Of Contract Notes	<ul style="list-style-type: none"> <li>The Exchange Member shall provide the Client with a copy of the trade confirmation slip as generated on the ATS, forthwith on execution of the trade and with a contract note for the trade executed in the specified format as per Annexure- V.</li> </ul>
11	Clause 19 (Chapter-II) of IEX Business Rules	Excess Service Charges/ Trading Margin Charged By Member	<ul style="list-style-type: none"> <li>Each Member of the Exchange shall charge its Trading Margin/ Service Charge in accordance with the CERC (Power Market) Regulation, 2021.</li> </ul>
12	CERC order on petition no. 12/SM/2016 dated 9 <sup>th</sup> May 2018	Month wise summary of total transaction done at the exchange	
13	CERC order on petition no.	Details of invoices raised on each client during the aforesaid	

S. No.	Reference	Requirement	Description
	12/SM/2016 dated 9 <sup>th</sup> May 2018	period confirming the Service Charges (SC)/Trading Margin charged to them	

## II. PROCEDURE FOR ANNUAL INSPECTION OF TRADER MEMBER'S AS PER CERC ORDER ON PETITION NO. 12/SM/2016

The inspection of trading members would be done on annual basis and the following details would be checked.

- Upon intimation to members, they will be required to give duly filled & signed declaration confirming compliance with various compliances requirements applicable on them. The declaration will primarily include confirmation regarding compliance with following requirements:
  - Intimation to Exchange regarding change in Member's detail (Like Authorized Signatories for Exchange transactions, Directors & Shareholding etc.)
  - Disclosure & Information to the Clients related to provisions governing the rights and obligations of Clients, notifications, circulars or any relevant announcement from the Exchange to clients etc.
  - Maintenance of record of orders received from clients.
  - Maintenance of record of the transactions executed on behalf of clients.
 Standard format of the declaration to be given by Members is attached as **Annexure-i**.
- Net-worth Certification: As per Business Rules of the Exchange minimum Net-worth requirement for membership in Electricity segment is Rs. 1.50 Crores, to ensure the compliance with the same Members would be required to submit Net-worth Certificate, certified by practicing chartered accountant, on annual basis. Net-worth Certificate format attached as **Annexure-ii**.
- Volume & Trading Margin details:
  - Month wise summary of total transaction done at the exchange.
  - Arrangements with the sub-ordinate service provider including payment details.
  - Details of commercial arrangements member had/have with its clients, towards various service charges along with the copy of supporting documents like agreement/ terms sheet/ Memorandum of understanding etc confirming the same;
  - Trading margin of clients, in the format attached as Annexure- 1 for I-DAM & RTM, Annexure- 2 for ITD/DAC/TAM, Annexure- 3 for REC & Annexure-4 for ESCERTS.
  - Details of invoices raised on each client during the aforesaid period confirming the trading margin charged to them. [Format attached as Annexure-5].

In all cases data would be provided for the financial year. Data provided by the members against the above points, would be verified during on-site inspection.

**Indian Energy Exchange Limited**

Plot No. C-001/A/1, 9th Floor,  
 Max Towers, Sector 16 B,  
 Noida, Gautam Buddha Nagar,  
 Uttar Pradesh – 201301

**Subject: Declaration for Annual Compliance Submission FY 20xx-xx**

Dear Sir

In reference to above cited subject, We hereby confirm, that we have complied with the Exchange's Rules, Business Rules & Bye Laws and related matters in general and following in particulars as applicable on us:-

**Name of the Member:**

**Code of the Member:**

S. No.	Compliance Requirement	Remarks
1	<p>We have notified the changes to the Exchange in writing about any change in the information provided by us at the time of admission or at a later stage to the Exchange.</p> <p>Further Shareholding Pattern, Directors detail &amp; Authorized Signatories as on March 31, 20xx is attached as <b>Annexure-i (a)</b>.</p>	
2	<p><b>Additional Compliance if Member is Partnership Firm:</b></p> <ul style="list-style-type: none"> <li>• We have not admitted any Partner without the approval of the Exchange.</li> <li>• We have not changed name of a partnership without the approval of the Exchange.</li> <li>• None of the Partner of the firm becomes a partner in more than one partnership firm carrying on the business of facilitating transactions in electricity or Renewable Energy Certificates and/or clearing.</li> <li>• We have not dissolution or reconstitution of the firm without the approval of the Exchange.</li> </ul>	
3	<p><b>Disclosure &amp; Information to the Clients:</b></p> <ul style="list-style-type: none"> <li>• We have intimated the indictment, stricture or disciplinary action (if any) taken against us by the Exchange or any other regulatory authority to the clients.</li> <li>• We have not recommended to the Client a sale or purchase of Contracts available on the Exchange, unless we have reasonable grounds to believe that such recommendation is suitable for the Client.</li> </ul>	

S. No.	Compliance Requirement	Remarks
	<ul style="list-style-type: none"> <li>We have provided information to the Clients about their successful trades, physical obligations and financial obligations were provided on timely basis.</li> <li>We have provided the client with copy of the trade confirmation slip as generated on the ATS, forthwith on execution of the trade and with a contract note for the trade executed in the specified format.</li> <li>We have provided extracts of relevant provisions governing the rights and obligations of Clients, notifications, circulars or any relevant announcement from the Exchange to clients.</li> <li>We have not furnished any false or misleading information or advice with a view to inducing the Client to do businesses in particular Contract or Contracts and which enable us to profit thereby.</li> </ul>	
4	<b>Utilization of clients funds:</b> <ul style="list-style-type: none"> <li>We have not utilized Client's funds for our own trading or any other Client's trading.</li> <li>Funds pay out for one client has not been adjusted with that of the funds pay in of another Client.</li> <li>We have ensured funds pay in/ margin from the buyer Client in advance and also ensure that the funds payout is given to the seller Client immediately.</li> </ul>	
5	<b>Insurance Cover:</b> <ul style="list-style-type: none"> <li>Insurance cover has been obtained to protect from risks and hazards relating to business operations at the exchange.</li> </ul>	
6	We have maintained the record of orders received from clients as required under IEX Rules & Regulations.	
7	We have maintained record of all the transactions executed on behalf of clients as required under IEX Rules & Regulations.	
8	We have not done any unauthorized use of the Member's ADMIN Terminal & TWS provided by the Exchange.	

Thanking you,  
Yours Sincerely

For (Name of the Member)

Name & Designation of Authorised Signatory

**Annexure-i (a)****A. Share Holding Pattern as on March 31, 20xx**

S. No.	Name of Shareholder	No. of shares Held	Face Value per share (Rs.)	Amount Paid up Capital (Rs.)	% of Total

**B. Directors Detail as on March 31, 20xx**

S. No.	Name of Director	Category	Remarks

**C. Authorized Signatories for Exchange transactions as on March 31, 20xx**

S. No.	Name of Authorized Signatory	Designation	Contact Details

**Net-worth Certificate Format**

**Certificate dated ..... submitted by ..... to Indian Energy Exchange.**

**CERTIFICATE**

This is to certify that the Net worth of M/s. /Mr. /Ms. .... as on ..... is Rupees ..... only.

It is further certified that the computation of Net worth, based on my/ our scrutiny of the books of accounts, records and documents, is true and correct to the best of my / our knowledge and as per information provided to my / our satisfaction.

Place: For (Name of Accounting Firm)

Date:

Name of Partner/Proprietor

Chartered Accountant Membership Number  
(Rubber stamp)



## Annexure-1-I-DAM &amp; RTM

For the Period

TRADING MARGIN OF ELECTRICITY TRADED BY TRADER MEMBERS OF IEX (Integrated Day Ahead Market & Real Time Market)

Name of the Member:

Code of the Member:

[illegible]

\*Each Time block is equivalent to 15 minutes.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail.

Note: (3) Trading Margin shall also include charges of any subordinate service provider.

### Annexure-2 ITD/DAC/TAM & G-ITD/G-DAC/GTAM

For the Period

VOLUME AND PRICE OF ELECTRICITY TRADED BY TRADER MEMBERS OF IEX (ITD/DAC/TAM & G-ITD/G-DAC/GTAM)

Name of the Member:

**Code of the Member:**

[illegible]

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Trading Margin shall also include charges of any subordinate service provider.

For the Period

**Annexure-3 REC**

## VOLUME AND PRICE OF REC TRADED BY TRADER MEMBERS OF IEX

Name of the Member:

Code of the Member:

Serial No.	Trade Date	Portfolio No.	Portfolio Name	REC	Final Volume	Final Price (Rs.)	Trading Margin (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Trading Margin shall also include charges of any subordinate service provider.

For the Period

**Annexure-4 ESCERTs**

## VOLUME AND PRICE OF ESCERTS TRADED BY TRADER MEMBERS OF IEX

Name of the Member:

Code of the Member:

Serial No.	Trade Date	Portfolio No.	Portfolio Name	Instrument/ Contract	Final Volume	Final Price (Rs.)	Trading Margin (Rs.)	Remarks	Invoice Date	Invoice No.

Note: (1) Data shall be submitted transaction-wise and should not be aggregated.

Note: (2) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (3) Trading Margin shall also include charges of any subordinate service provider.

For the Period

**Annexure-5 Invoices****INVOICE DETAIL**

Name of the Member:

Code of the Member:

Invoice Date	Invoice No.	Invoice Period	Client Code	Client Name	Segment ( I-DAM/ RTM/ ITD/DAC/TAM/ REC/ ESCerts/ G- ITD/G- DAC/GTAM)	Quantity (MW)	Trading Margin Rate	TM Amount (Rs.)	Tax (If Any)	Total Amount (Rs.)

Note: (1) Soft copy of data shall be submitted to IEX in an Excel Sheet through E-mail:

Note: (2) Trading Margin shall also include charges of any subordinate service provider.

# SCHEDULES

## SCHEDULE A – INTEGRATED DAY-AHEAD MARKET (I-DAM) SEGMENT

The Integrated Day Ahead Market (I-DAM) segment shall provide integrated market for trade in electricity generated from renewable and conventional sources with separate price formation of renewable and conventional power. The Contracts in this market shall be available for one-day delivery period on day-ahead basis which will be matched through closed double-sided auction. Congestion on transmission network will be managed through implicit auction or market splitting. The contracts concluded in this segment are scheduled in accordance with the procedures issued by NLDC for 'Scheduling of Collective Transactions'. All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc., will be as per specific rules mentioned herein.

### 1. Trading Days

The Exchange shall operate Integrated Day-Ahead Market segment on all days except Exchange specified holidays.

### 2. Trading hours

The Exchange will have trading sessions for all trading days as under:

Session	Contract Type	Monday to Sunday
I	Green Day Ahead Market (GDAM)	10.00 am to 11.00 am
II	Day ahead Market (DAM)	10.00 am to 11.00 am
III	High Price Day Ahead Market (HPDAM)	10.00 am to 11.00 am

The Exchange shall not extend the trading hours, except for the provisions listed in Clause 26.1 of these Business Rules.

3. **Contract specifications:** The contract specification of 'Green Day Ahead Market' and 'Day Ahead Market' and 'High Price Day Ahead Market' shall be as per **Annexure A1**, **Annexure A2** & **Annexure A3** respectively to this Schedule.
4. **Delivery Point:** Delivery point shall be the seam of the respective grid connected entity. However, for the purpose of the contract, the trade schedule shall be reckoned at the periphery of the regional transmission system in which the grid connected entity is located. The actual schedule at various seams including that of grid connected entities shall be worked out after incorporation of transmission losses in kind. The trade schedules shall be used for the purpose of payment of transmission charges and wheeling charges (if applicable). For example delivery point of a state embedded entity in Maharashtra will be at the seam of the intra state entity. For a trade schedule of 100 MW purchase by this entity, the schedule for this transaction at WRTS periphery would be 100 MW, at Maharashtra periphery would be 96 MW (assuming 4% regional loss) and at the intra state entity periphery would be 91.20 MW (assuming 5% Maharashtra state loss). The transmission charges payable will be for 100 MW. Additional losses in the above example have been assumed to be nil and the same if any would be applied as per procedure for scheduling of collective transactions, issued by NLDC.

Similarly, in the above example, if the State embedded entity in Maharashtra has a trade schedule of 100MW sell, then the schedule at the WRTS periphery and State periphery will be 104.17 MW and 109.65 MW respectively

5. **Order types:** The Exchange Members will be able to submit the following types of orders:

- 5.1 **Single bid:** Single bid will specify multiple sequences of price and quantity pairs in a portfolio manner. The quantity shall be assumed to vary linearly between two price pairs.
  - 5.2 **Block bid:** Block bid will specify one price and one quantity for a combination of continuous 15 minute<sup>2</sup>time blocks. Selection criterion shall be average of Area Clearing Price (ACP) for the quoted 15 minute time blocks, of the respective Client's bid area. It will be an 'All or None' type of order. Maximum number of block bids and maximum quantity per block bid shall be prescribed by the Exchange from time to time, with the prior approval of the commission.
  - 5.3 **Minimum Quantity Block Bid:** Minimum Quantity Block Bids will specify one price and one quantity for a combination of continuous 15-minute time blocks along with a 'Minimum Quantity percentage' and number of sub-bids. The Minimum quantity block bids are block bids wherein partial acceptance of Block Bid is possible. The minimum quantity percentage will specify the quantity up to which the block bid can be accepted whereas the number of sub-bids will specify the size in which the remaining quantity shall be divided into. The system will first consider 'Min Quantity' in selection criteria. If it is selected, the system would then consider remaining sub bids in selection criteria till it has reached to the equilibrium at which no further sub-bids can be selected. Maximum number of Minimum Quantity Block Bids, Minimum quantity percentage limit and maximum number of sub-bids per block bid shall be prescribed by the Exchange from time to time.
  - 5.4 **Profile Block Bids:** Profile Block bid will specify one price and varying quantities for a combination of continuous 15-minute time blocks. Selection criterion shall be based on weighted average of Area Clearing Price (ACP) for the quoted 15-minute time blocks, of the respective Client's bid area. It will be an 'All or None' type of order. Maximum number of profile block bids and maximum quantity per block bid shall be prescribed by the Exchange from time to time.
  - 5.5 **Linked Bid:** In the linked bid two different block bids can be linked as parent and child bid. The child bid is considered for selection only when the parent bid is selected. Both the bids will be selected if the combined value obtained from parent and child bid is found to be positive.
  - 5.6 **Other bids:** The Exchange shall introduce other types of bids viz. flexi bid as per the requirement of the market. Details of such other possible bids shall be notified by the Exchange from time to time.
- 6. Treatment of Transmission Charges and Losses** The bids and offers submitted will be for delivery at the specified delivery point. Transmission charges and losses will be dealt as under:
- 6.1 **Transmission charges:** Buyers and Sellers shall be required to pay in cash for the transmission charges for their respective Regional and State transmission systems and wheeling charges for distribution network (if applicable). These charges shall be payable as stipulated by the appropriate commission. These charges shall be recovered by the Exchange and paid as per CERC (Open Access in inter State Transmission) Regulation 2008, as amended from time to time.
  - 6.2 **Transmission losses:** Buyers and Sellers shall be required to pay in kind for the transmission losses, as applicable, for their respective Regional and State transmission systems. These losses shall be as declared by the RLDCs / SLDCs and

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<sup>2</sup>Time block for bidding in DAM Market segment has been modified from one hour to fifteen minutes with effect from 01st April, 2012

additional losses if any as declared by NLDC. The requisition submitted by the Exchange would be based on the trade schedule and would not reflect losses. The schedules issued by NLDC/RLDCs/SLDCs shall reflect the losses.

- 6.3 **Scheduling and System Operation Charges:** Scheduling and System operational charges for respective LDCs shall be payable by the Exchange in accordance with the Procedures issued by NLDC for 'Scheduling of Collective Transactions'. Such charges shall be recovered by the Exchange and socialized amongst all Buyers and Sellers.

## 7. Modification and cancellation of orders

A Member can modify or cancel his orders from its MAT/TWS during the trading hours only. As per the CERC Order dated 21.02.2024 in Petition No. 02/SM/2024, the Exchange will not entertain any request from Members to accept, modify or cancel the bids during or after the trading hours, except in case of any direction from NLDC or CERC.

## 8. Order validation

Orders and bids entered into the Trading System shall be subject to various validation requirements as prescribed by the Exchange including price and quantity restrictions as decided by the Exchange. Orders that do not meet the validation checks will not be accepted by the Exchange. The Exchange shall specify from time to time price steps (tick size) in which orders shall be entered on the trading system of the Exchange.

## 9. Matching rules

- 9.1 The matching of bids shall be governed by the principle of maximization of economic surplus. The Exchange may employ such mathematical tools and models viz. Mixed Integer Programming etc. for obtaining the best possible solution for maximization of economic surplus and its improvements thereof from time to time. The detailed description of the algorithms of such mathematical models shall be made available through a document on the website of the Exchange, which shall be updated with every new version of the algorithm.
- 9.2 All Clients shall be assigned unique client ID / Portfolio ID as per Rules.
- 9.3 The Exchange may launch more than one order book running either parallel or at different time spans. Subject to the approval of the CERC, the Exchange is also entitled to modify or change the matching rules relevant to any market or order books any time where it is necessary to do so.
- 9.4 Without prejudice to the generality of the above, the order matching rules will have the following features. All purchase and sale bids shall be aggregated for tracing a demand supply curve. The bid and offer portfolio shall be assumed to be a sloping curve. The final traded quantity can be less than minimum volume specified in the contract specification. Following rules shall be followed while aggregating the demand supply bids:
- All purchase bids can have only non-increasing quantity for every increase in the bid price, and every sale bid will have only non-decreasing quantity for every increase in the bid price.
  - Bid and offer quantity shall be assumed to vary linearly between consecutive prices.

The meaning of phrase “Bid and offer quantity shall be assumed to vary linearly between consecutive prices” is as under:

“While submitting Single bids (purchase or sell), a Participant specifies various price quantity pairs. These pairs can be represented as points on a graph with Quantity and Price as its two axes. Points representing two consecutive prices are joined by straight line. It is presumed that all points in this line segment are individually representing various price quantity pairs.”

For working out solution, all purchase bids and all sell bids are aggregated to give a demand curve and a supply curve. The point at which these curves intersect gives the Market Clearing Price. Volume quoted by individual participants corresponding to this Market Clearing Price is allocated to them. The process is explained as under:

Consider the following bids:

(i) **Buy Bids**

Buy Bid -1				
Price(Rs/MWh)	0	4000	8000	20000
Quantity(MWh)	2000	2000	1000	500

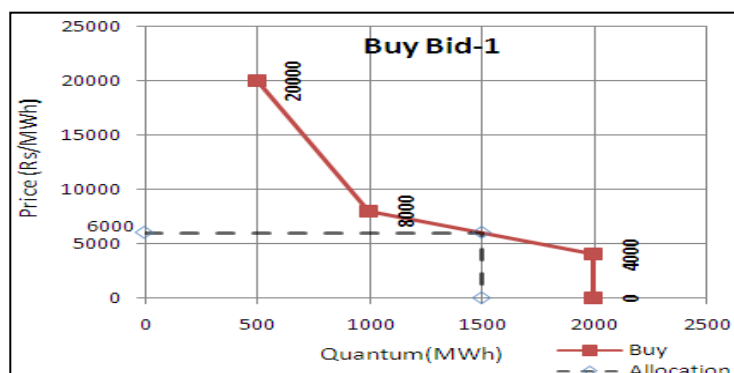


Figure 1: Buy Bid-1

Buy Bid-2				
Price(Rs/MWh)	0	2000	6000	20000
Quantity(MWh)	1000	500	300	300

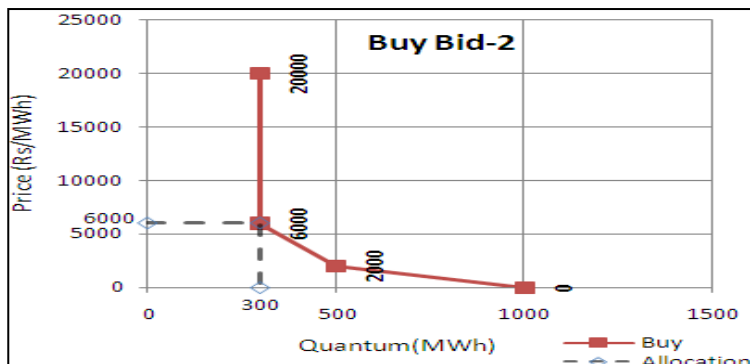


Figure 2: Buy Bid-2



**(ii) Sell Bids**

Sell Bid-1					
Price(Rs/MWh)	0	4000	6000	9000	20000
Quantity(MWh)	-0	-500	-1000	-1300	-1300

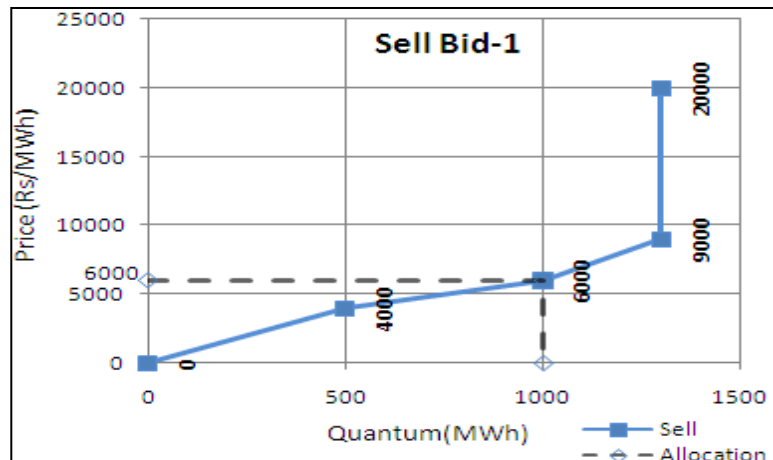


Figure 3: Sell Bid-1

Sell Bid-2				
Price(Rs/MWh)	0	3000	7000	20000
Quantity(MWh)	-0	-500	-900	-900

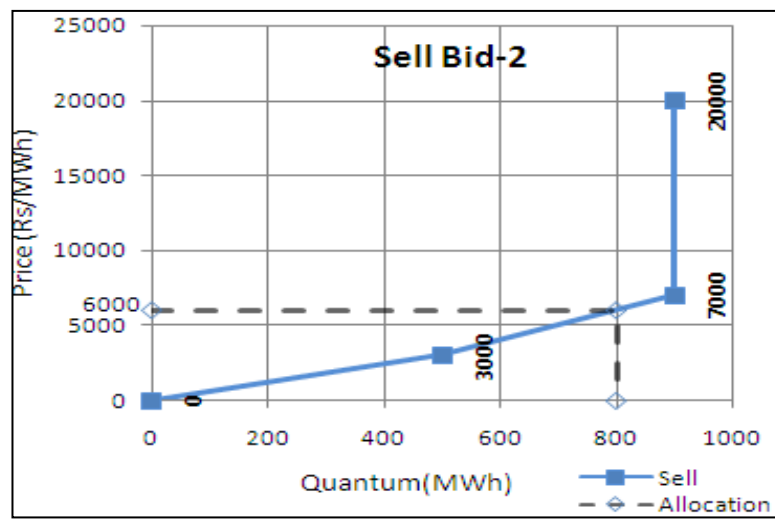
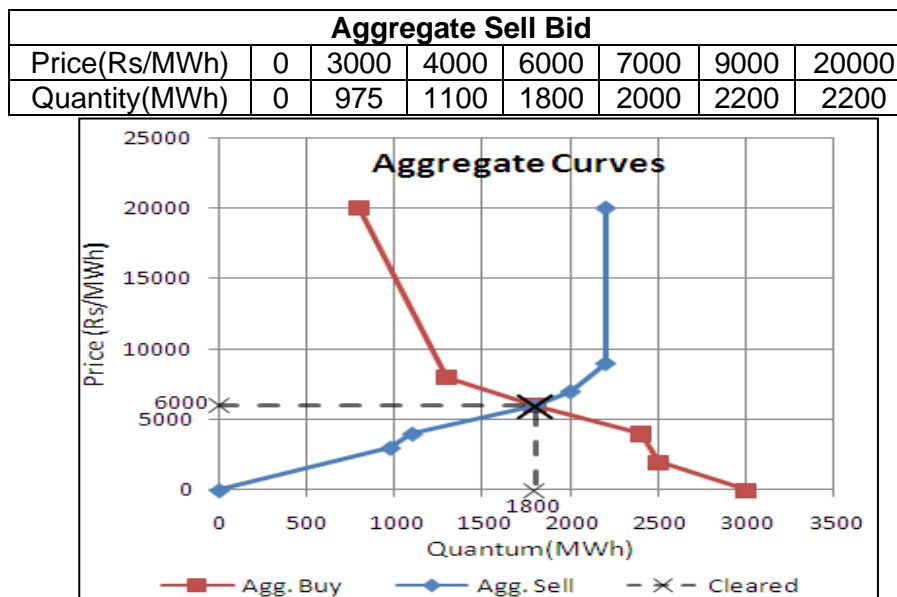


Figure 4: Sell Bid-2

**(iii) Aggregate Curves:** The aggregate curve of the above purchase and sell bids will then be:

Aggregate Buy Bid						
Price(Rs/MWh)	0	2000	4000	6000	8000	20000
Quantity(MWh)	3000	2500	2400	1800	1300	800



**Figure 5: Aggregate Curves**

In Buy Bid-2, the price tick corresponding to Rs 4000/MWh was not given but the same exists for Buy Bid-1. For Buy Bid-2, the straight line between price ticks Rs 2000/MWh and Rs 6000/MWh is negatively sloped. To calculate the aggregate buy bid, the quantity corresponding to the price Rs 4000/MWh is calculated using the equation of straight line through two points.

Accordingly, the aggregate quantity at the price Rs 4000/MWh= 2400MWh

In the similar manner, aggregate buy and sell curves are constructed. In the present example these aggregated curves cut each other at Rs 6000/MWh and the cleared volume is 1800MWh. Hence the volume corresponding to the price Rs 6000/MWh in the respective Buy and Sell bids shall be allocated to the respective buyers. In the present case, 1500MWh shall be allocated to buyer-1 and 300MW to buyer-2, whereas allocating 1000MWh to seller-1 and 800MWh to seller-1.

Accordingly, the bidder will get quantity allocation, what he has quoted at the Market Clearing Price.

Aggregate supply and demand curves may intersect vertically while finding the solution. There is no possibility of a horizontal overlap. This is because a Single bid can never have two volumes at one price.

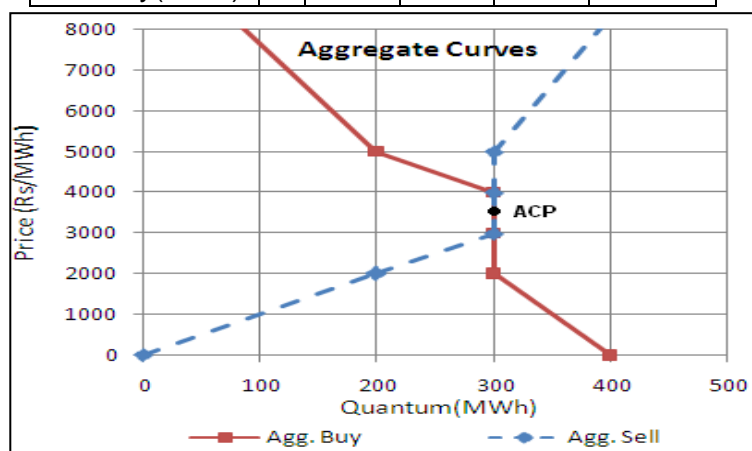
In cases of vertical overlap, midpoint of the overlapped section shall be considered as the ACP; however, in case overlap starts right at the minimum price ('zero' has been set by the Exchange as minimum price minimum price (Zero) shall be considered as ACP. For example, consider the following aggregate Buy and sale bids

Aggregate Buy bid:

Price(Rs/MWh)	0	2000	4000	5000	20000
Quantity(MWh)	400	300	300	200	0

Aggregate sell bid:

Price(Rs/MWh)	0	2000	3000	5000	20000
Quantity(MWh)	0	200	300	300	450



**Figure 6: Aggregate Curves- Vertical Overlap**

In the above case, the aggregate buy and sell curves overlap between the price range Rs 4000/MWh and Rs 3000/MWh. Midpoint of the overlap shall be considered as ACP, which is **Rs 3500/MWh**.

- c. For single bids Member and Client must indicate quantity to buy and sale at zero (minimum) and maximum prices, else the bid shall not be accepted.
- d. In case selection is to be made out of more than one similarly placed bid then, bid will be selected based on time priority of the bids submission.

Bid selection based on time priority, in case of similarly placed bids, shall be considered only for Block bids. Priority for Block bid selection is as stated below in order of priority:

- i. **Price:-** Most favorable price shall be given priority
- ii. **Volume :-** Block bid which maximizes the market volume is favored
- iii. **Time:-** Block bids submitted earlier attract priority

For example: Consider two block bids having the same price and quantity, submitted at different time periods, as shown in table below:

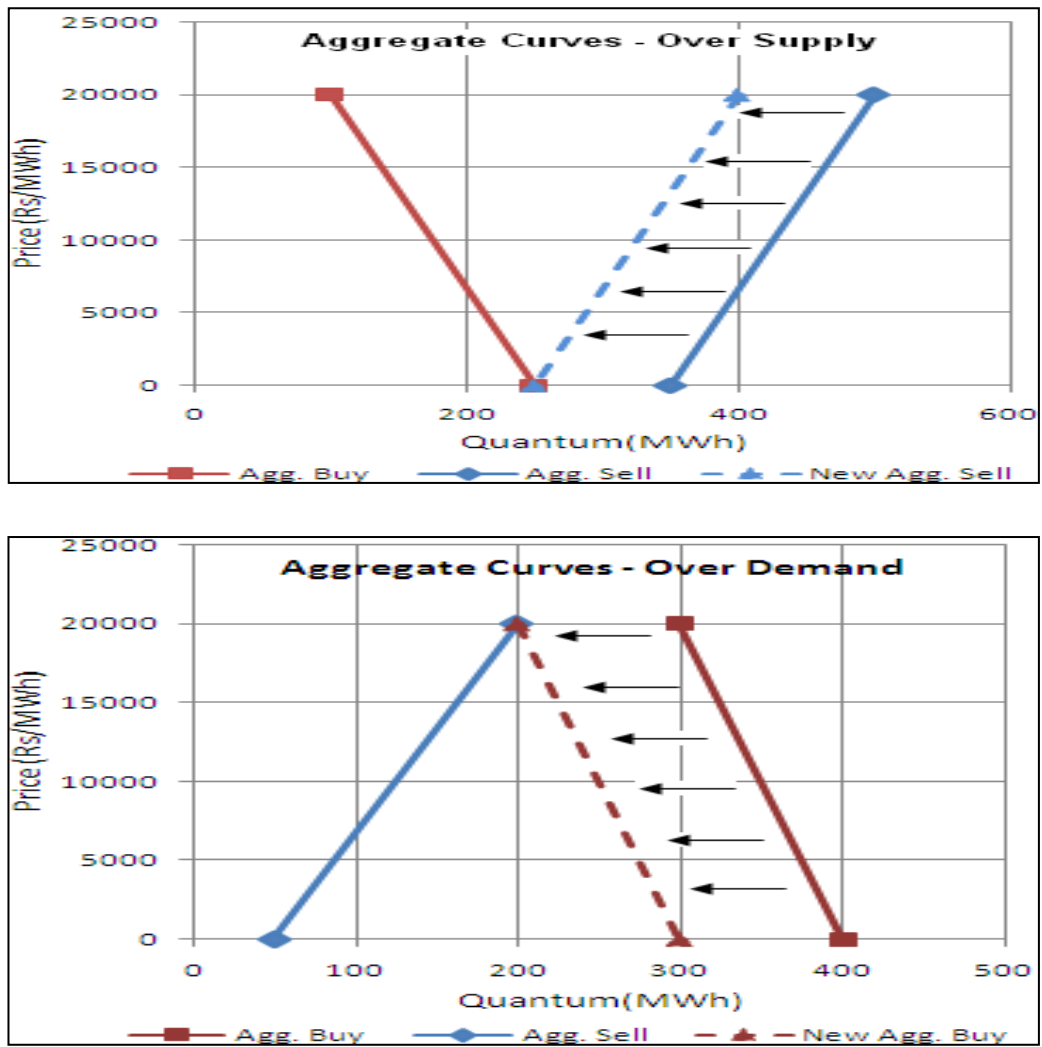
	Bid- hours	Price(Rs/MWh)	Qty(MW)	Time of bid submission
Block bid-1	B1022	4500	100	10:30:43
Block bid-2	B1022	4500	100	10:30:44

Block bid-1 will be selected, in case only one of the above two bids can be selected by applying the time preference criteria.

- e. All block bids shall be considered indivisible and they shall either be included or excluded in totality.
- f. Normal rounding off principle shall be applied up to two decimal points in price and quantity. When each Contract volume is rounded, the sum of rounded sale and rounded purchase will sometimes be not equal. The sales should always be equal to the purchase, hence the system will adjust the rounding off by allocating 1 (one) unit to the Contract volume having the highest value, and this process continues until the rounding deviation is eliminated.
- g. In case of transmission congestion, solution shall be worked out on the basis of market splitting. Decisions of the Exchange in this respect shall be binding on all parties concerned. The congestion revenue, which is the excess arising due to market splitting will be transferred to a separate account and shall be utilized as directed by the CERC.
- h. The ACP computed after considering transmission constraints shall be considered for settlement of trades.
- i. If the buy and sell curves do not cross each other between the price range defined by the Exchange, then in case of oversupply, sell offers will be reduced proportionately so that curves cross each other at minimum price and in case of over demand, purchase bids will be reduced proportionately so that curves cross each other at maximum price.

Over-Supply is a condition where aggregate sell volume is greater than aggregate purchase volume at the minimum price (set by the exchange); whereas Over-Demand is a condition when aggregate purchase volume is greater than aggregate sell volume (at the maximum price) set by the exchange.

In case of over-supply, as shown in figure below, where supply and demand curves does not intersect each other, the entire aggregated supply curve is shifted to the left so that both the curves intersect at the minimum. In the graph below, aggregate supply curve is shifted by 100MW to the left (from 350MW to 250MW at Rs0/MWh) so that both the curves now intersect at the minimum price point. Here the ACP would be Rs 0/MWh, being the point of intersection with modified supply curve. In such situation quantity is prorated amongst suppliers at minimum price. Therefore, in present case quantities quoted by all suppliers would be reduced by a factor of (250/350), and this revised quantity would be allocated to individual supplier.



**Figure 7: Over Supply and Over Demand Situation**

Considering the other case as in graph which represents non-intersecting curves, when there is over-demand. In such situation the aggregated supply and demand curves are made to intersect at the maximum price point by shifting the demand curve to the left. In this case demand curve is shifted 100MW to the left so that now the curves intersect at the maximum price point, which is Rs 20000/MWh. The MCP in this case would be Rs. 20000/- and the quantity allocation amongst buyers at this price.

Pro rata allocation of quantum is done in such over-supply and over-demand cases. For example, take the case of over-demand as shown in the graph above. Consider that there are four sellers totaling 200MW and two buyers totaling 300MW at Rs20000/MWh; buyer-1 and buyer-2 contributing 100MW and 200MW respectively. All sellers would be selected whereas buyer-1 will get  $(100 \times 200 / 300)$  MW and buyer-2 will get  $(200 \times 200 / 300)$  MW. Similar prorata allocation shall be done to sellers, in case of over-supply.

- j. In some cases, a bid might be rejected by the system even though it would appear to be a valid bid. This can happen in a situation where inclusion of such bid and

offer might result in change in MCP at which this bid cannot be accepted. Rejection of such bids is known as paradoxically rejected bids.

When block bid exclusion process is finished, it may have resulted in one or more block bids which appear to be rejected even though the bid price is more favorable than the average price. This type of rejection of a Block Bid is "Paradoxically rejected bids". The reason for rejection is that in case if the system accepts these bids, the average price of market changes in such a way that the block bids are no longer justified to be in. This may be both due to price as well as volume balancing

### **Example:**

1. **Block Bid:** Consider the following single and block bids:

#### **Block Bid (Sell):**

	Bid- hours	Price(Rs/MWh)	Qty(MWh)
Block bid	From 02:00 To 04:00	3500	-50

#### **Hour-3:**

	Price	0	1999	2000	2999	3000	3999	4000	4999	5000	20000	ACP
<b>Excluding Block Bid</b>	<b>Buy Qty</b>	400	400	325	325	325	325	100	100	0	0	<b>3999.11</b>
	<b>Sell Qty</b>	-0	-0	-200	-200	-300	-300	-300	-300	-350	-350	
<b>Including Block Bid</b>	<b>Buy Qty</b>	400	400	325	325	325	325	100	100	0	0	<b>2999.75</b>
	<b>Sell Qty</b>	-50	-50	-250	-250	-350	-350	-350	-350	-400	-400	

#### **Hour-4:**

	Price	0	999	1000	2999	3000	4500	4501	4999	5000	20000	ACP
<b>Excluding Block Bid</b>	<b>Buy Qty</b>	400	400	300	300	300	300	100	100	0	0	<b>4500.13</b>
	<b>Sell Qty</b>	-0	-0	-150	-150	-275	-275	-275	-275	-350	-350	
<b>Including Block Bid</b>	<b>Buy Qty</b>	400	400	300	300	300	300	100	100	0	0	<b>2999.80</b>
	<b>Sell Qty</b>	-50	-50	-200	-200	-325	-325	-325	-325	-400	-400	

The quantity associated with Block bid, i.e. 50MW, is included in the calculation by adding 50MW at the zero price tick.

By including the Block bid, the ACP of hour-3 has dropped from Rs 3999.11/MWh to Rs. 2999.75/MWh. In hour-4, the ACP dropped from Rs. 4500.13/MWh to Rs 2999.80/MWh. The average ACP of hour-3 and hour-4 before inclusion of Block bid is Rs. 4249.62/MWh, and after inclusion is Rs. 2999.78/MWh. The Block bid order was placed at Rs. 3500/MWh, therefore if it is accommodated, fails to meet the criteria as the Block bid price is not better than the average

ACP of the respective bid hours. On exclusion of the block bid, the price discovered in both the hours is higher than the Block bid's price, and therefore seems unjustified. Because of this paradox, in the final solution this bid is not selected although the results suggest that it should have been selected. Because of this paradox, such bid rejection is categorized as paradoxically rejected bids.

2. **Minimum Quantity Block Bid:** Considering the following Minimum Quantity Block bid in above example:

Minimum Quantity Block bid	Bid- hours	Price (Rs/MWh)	Qty (MWh)	Minimum Quantity	Sub-bids
	From 02:00 To 04:00	3500	-50	50%	5

In this case the whole Block Bid is not selected then, the selection of Block Bid will be carried out based on the following steps:

Step 1: Consider the minimum quantity 25 MW (50% of 50 MW) for selection. The selection process of this minimum quantity block bid is similar to the above example of block bid.

Step 2 : If "Min. Quantity" of 25 MWh is selected in the selection criteria then remaining quantity (50% of 50MW i.e. 25 MW) will be divided in 5 sub-bids of equal quantity i.e. 5 MW each and include each sub-bid sequentially i.e. 30MW, 35MW, 40 MW, 45MW and 50MW till each of them is selected or system has reached to the equilibrium at which no further bids can be selected.

For above case following will be the new result: -

#### **Hour-3**

	Price	0	1999	2000	2999	3000	3999	4000	4999	5000	20000	ACP
Including Block Bid of 25 MW	Buy Qty	400	400	325	325	325	325	100	100	0	0	3499.50
	Sell Qty	-25	-25	-225	-225	-325	-325	-325	-325	-375	-375	

#### **Hour-4**

	Price	0	999	1000	2999	3000	4500	4501	4999	5000	20000	ACP
Including Block Bid of 25 MW	Buy Qty	400	400	300	300	300	300	100	100	0	0	3750
	Sell Qty	-25	-25	-175	-175	-300	-300	-300	-300	-375	-375	

The average ACP of hour-3 and hour-4 after inclusion of 25 MW Block bid is calculated as Rs. 3624.75/MWh and since the Block bid order was placed at Rs. 3500/MWh, hence the Block Bid will be selected. The System will now change the Block Bid size to 30 MW and this process will continue till system reaches the equilibrium price.

3. **Profile Block Bid:** - Considering the following Profile Block bid in above example:

	Block Bid- hours	Hours	Price(Rs/MWh)	Qty(MWh)
Profile Block bid	From 02:00 To 04:00	02:00 to 03:00	3500	-40
		03:00 to 04:00		-25

In this case, the selection process of a Profile Block Bid will be similar to the normal Block Bid as illustrated in Example 1 above except that the selection of Profile Block Bid will be based on the comparison of Profile Block Bid price (3500 Rs/MWh) with the weighted average ACP of the Block Bid Hours

#### Hour-3 (02:00 to 03:00):

	Price	0	1999	2000	2999	3000	3999	4000	4999	5000	20000	ACP
Including Block Bid	Buy Qty	400	400	325	325	325	325	100	100	0	0	2999.85
	Sell Qty	-40	-40	-240	-240	-340	-340	-340	-340	-390	-390	

#### Hour-4 (03:00 to 04:00):

	Price	0	999	1000	2999	3000	4500	4501	4999	5000	20000	ACP
Including Block Bid	Buy Qty	400	400	300	300	300	300	100	100	0	0	3750
	Sell Qty	-25	-25	-175	-175	-300	-300	-300	-300	-375	-375	

The weighted average clearing price of Hour-3 and Hour-4 is Rs. 3288.37/MWhr which is lower than Block Bid Price of Rs. 3500/MWhr, hence the Profile Block Bid shall be rejected. Where, the weighted average price has been calculated based on the formula: Weighted Average Price=  $\sum (\text{Bid Quantity (Buy/Sell)} \times \text{Clearing Price}) / (\sum \text{Bid Quantity})$

## 10. Margin requirements

- 10.1 Initial Deposit: The initial security deposit paid by a Member or the Client, as applicable, will be considered as his initial margin deposit, which shall be the minimum Margins required.
- 10.2 Additional Deposit: The Exchange, on a daily basis, will compute the minimum margin that should be available with the Member or the Client, as applicable, for start of trade. This will be the average value of trades of respective Member for last seven (7) days in case of new Members, it will be the total number of trading days if it is less than seven (7) days) of trading or the initial margins given to the Exchange by the Member. In case if the average value is more than the available initial margins with the Exchange, the Member or the Clients, as applicable, has to bring in the difference in the form of additional deposit. However, in case of abnormal increase in the expected obligations of a Member or the Client, as applicable, the Exchange can demand additional deposit from that Member or the Client, as applicable. Decisions of the Exchange in this respect, shall be binding on the Member and other parties.
- 10.3 Refund of Additional Deposit: If there is a surplus deposit lying with the Exchange towards margin, it will be refunded to the Member, or the Client, as applicable, on receipt of a written request from the Member or the Client, as applicable, for refund. Refund of additional deposit shall be made within seven (7) working days of receipt of request for refund.



- 10.4 The Member or the Client, as applicable, will have to bring in additional funds in case if his existing margins are less than the margins calculated as in Rule 10.2 mentioned above. The Member or the Client, as applicable, will be able to get information regarding additional margin requirement, through file transfer protocol (FTP) at end of the trading session. Unless the Member or the Client, as applicable, brings in the additional deposit required, he will not be allowed to put his order.
- 10.5 Special Margin: The Exchange may levy more margin or across market for covering any enhanced risk.

## 11. Integrated Day-Ahead Market Operations

- 11.1 The Integrated Day-Ahead market operations and the exact time schedule relating to pay-in and pay-out activities shall be adhered to by the Exchange Members in order to have smooth and orderly operations of the Exchange. These market operations shall be in accordance with the 'Procedures for scheduling of Collective Transactions' issued by NLDC and are subject to approval from the CERC for activities related to NLDC/RLDCs or SLDCs shall be as follows:
- (a) **Order accumulation period (Bidding phase)**: Integrated Bidding session also referred to as the Bid call period for Green Day Ahead Market (GDAM), Day Ahead Market (DAM) and High Price Day Ahead Market (HP-DAM) will start from 10.00 am to 11.00 am on all seven (7) days of a week except Exchange declared holidays. Before the opening of the trading session, the Exchange will validate available Margins of the Members required as per Business Rule 10 above. If sufficient Margins are not available, then Member shall not be allowed to submit his bids, till such time sufficient Margins are brought in by the Member. During the bidding sessions on trading day, orders entered by Members in the Trading Platform shall be automatically stored in the central order book of GDAM, DAM & HP-DAM without giving rise to Contracts. The Members may opt for transfer of unsuccessful bids of GDAM to DAM and DAM to HP-DAM with same or different price, subject to eligibility of the participant. Orders entered by the direct access clients shall be treated as orders entered by Members. After the end of the bidding session, bid matching will take place.
  - (b) **Provisional bid matching process**: At the end of the bid session, the trading platform will seek to match orders for each Contract sequentially i.e. first Green Day Ahead Market will be matched followed by Day Ahead Market considering the uncleared bids of Green Day Ahead Market, if any and then High Price Day Ahead Market considering the uncleared bids of Day Ahead Market, if any, subject to eligibility conditions. During this matching process, orders cannot be entered into the trading platform, and orders already entered cannot be cancelled or modified. All bids and offers are aggregated and Provisional Market Clearing Price or Unconstrained MCP will be determined separately for Green Day Ahead Market, Day Ahead Market & High Price Day Ahead Market based on the unconstrained scenario.
  - (c) After the provisional market clearing price determination phase is concluded, the Members, whose orders have been partially or fully executed, will be provided all relevant trade information regarding each execution that has occurred by the trading platform.

- (d) **Provisional obligation determination process:** After end of the bid matching session, a provisional obligation report will be generated at 11.45 AM for each Contract, which will provide the quantity and amount of provisional pay in / pay out and transaction fee payable etc. The information regarding Provisional Market Clearing Price shall be sent to all Members. All Buyers will have to keep funds ready as per the provisional obligation in their respective Settlement Account.
- (e) **Delivery allocation determination process:** On the basis of Provisional Solution as above, the Exchange will send to the NLDC, by 11.45 AM every day, combined requisition for Transfer Capabilities Verification and Reservation, across different transmission corridors for the successful bids in Green Day Ahead Market, Day Ahead Market and High Price Day Ahead Market. NLDC based on the margins available, shall indicate the ATC at different corridors for the successful trades by 12.15 PM.
- (f) Based on the ATC received from NLDC, the Exchange will re-run the bid matching process sequentially i.e., first Green Day Ahead Market will be matched followed by Day Ahead Market considering the uncleared bids of Green Day Ahead Market, if any with the balance ATC after matching of Green Day Ahead Market and then High Price Day Ahead Market considering the eligible uncleared bids of Day Ahead Market, if any based on the remaining ATC after matching of Day Ahead Market.
- (g) On the basis of final bid matching process as in (g) above the Exchange will generate the final result separately for Green Day Ahead Market, Day Ahead Market and High Price Day Ahead Market. In case of congestion, in various power transmission corridors, the solution shall be determined through market splitting process, which may result into different prices for different areas. These prices are Area Clearing Price (ACP). Final obligation of Members shall be worked out on the basis of such ACP. On the basis of the ACP, final obligation report will be generated. A period of half hour from the time of issue of the final obligation will be provided to Members for raising any dispute/s in relation to their final obligation. An automated bank file for debit and credit of Settlement Accounts of the respective Members by the amount payable / receivable will be generated and sent to the respective Clearing Banks. The funds pay in from the buyer Members will be done on the same day i.e. on "T" day where the "T" stands for trade. The funds pay out to the seller Members will be given on the T+2 day, where the second day is the bank working day. In case of trades confirmed on Sundays, the funds pay-out will be done on Tuesdays, subject to bank holidays. The Bank will run the pay in file at the scheduled time and report to the Exchange regarding successful debits. After final obligation is worked out, the Exchange shall work out margin or additional margin required from the Member. This margin or additional margin will have to be brought in by the Member before the opening of the market on the next day. The TWS of the Member shall not be activated till sufficient funds are brought in by the Member.
- (h) The market splitting methodology adopted by the Exchange is explained in the **Annexure A4** of this Schedule.
- (i) Congestion amount is the amount by which total funds pay in may exceed total funds pay out, this arises because of the market splitting, and the said difference shall be transferred to the congestion revenue account and shall be utilized as directed by the CERC. The transfer of funds shall be as per the provisions of the CERC (Power Market) Regulations, 2021, as amended from time to time.

- (j) In case of real time curtailment, HP-DAM shall be considered first for curtailment followed by DAM and then GDAM in terms of Rule 24 of the Business Rules.
- (k) For the purpose of compliance of Renewable Purchase Obligation (RPO) and Hydro Purchase Obligation (HPO), the Exchange shall provide detailed statement specifying the total quantity and proportion (solar/ non-solar/ hydro) in which Renewable Energy has been purchased by the successful buyer in Green Day Ahead Market (GDAM).

The Exchange timelines are as under. They are subject to change as per 'Procedures for scheduling of Collective Transactions' issued by NLDC and Central Electricity Regulatory Commission (Open Access in Inter-State Transmission) Regulations 2008, as amended from time to time.

TIME	DETAILS
10.00 AM to 11.00 AM	• Integrated Bid - Call session for GDAM, DAM & HP-DAM.
By 11.00 AM	• Funds pay out pertaining to previous day's delivery, margin refund request (if any)
By 11.45 AM	<ul style="list-style-type: none"> <li>• Exchange to determine MCP /ACP of GDAM, DAM &amp; HP-DAM sequentially &amp; intimate provisional results to the Members.</li> <li>• Communication of combined Transmission Corridor required for GDAM, DAM &amp; HP-DAM to NLDC.</li> <li>• Communication to bank to confirm &amp; block the funds pay in from Buyer Members; settlement account.</li> </ul>
By 12.15 PM	<ul style="list-style-type: none"> <li>• NLDC to confirm available transmission corridor for scheduling.</li> <li>• Exchange will receive confirmation from bank for availability &amp; blocking of clear balance.</li> </ul>
By 1.00 PM	<ul style="list-style-type: none"> <li>• Exchange to determine MCP/ACP sequentially for GDAM, DAM &amp; HP-DAM based on final ATC.</li> <li>• Exchange submits the application for scheduling of GDAM, DAM &amp; HP-DAM to the NLDC</li> </ul>
By 2.00 PM	<ul style="list-style-type: none"> <li>• Exchange will issue to Members OBLIGATION based on ISTS Charges Rate as notified by NLDC</li> <li>• File to be sent by Exchange to banks for actual debits</li> </ul>
By D+1	• Exchange will issue OBLIGATION to Members based on charges communicated by NLDC to Exchange.

The Exchange may change the above timings depending on the experience gained during the operations. It may also revise the time-line in consultation with NLDC according to market feedback.

## 12. Delivery procedure

- 12.1 After finalization of successful trades, the Exchange will send its requisition to the NLDC and respective State Load Dispatch Centers as per Detailed Procedure issued by the NLDC.

- 12.2 NLDC will include these requisitions in their final schedules after adjusting for transmission losses as per the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and detailed procedure issued by the NLDC as amended from time to time.
- 12.3 The quantity of power scheduled by respective NLDC/SLDCs, in respect of Exchange traded Contracts, shall be deemed to have been delivered. The scheduling procedure will be as per the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008, as amended from time to time and detailed procedure issued by the NLDC thereunder.

Transmission charges and losses shall be in accordance with the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008, and, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time, detailed procedures issued by the NLDC thereunder and rate of Transmission Losses as determined by the NLDC for ISTS and as prescribed by the concerned SERC / SLDC for use of intra-state network.

- 12.4 Any shortage or excess delivery of electricity from the total schedule, including schedule for Contracts traded on the Exchange of the grid connected entity will be settled by them under Deviation Settlement mechanism as per the procedure laid down by the CERC or any other settlement system as prescribed by concerned SERC.
- 12.5 Taxes, duties, cess and other levies: The price of all the Contracts shall be quoted on the basis of actual value of the electricity Contract excluding the transmission charges, losses, scheduling and system operation charges, taxes, duties, cess and other levies and the same shall be borne by the Buyers or Sellers as applicable.
- 12.6 Metering of electricity: Arrangement for metering shall be made by the Seller/Buyer at the point of injection and the point of off-take from the GRID should conform to the provisions of Indian Electricity Grid Code (IEGC) and Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008, as amended from time to time. The Members and the relevant authority shall be responsible to resolve the issues related to metering of electricity. The Members shall indemnify and keep indemnified the Exchange from any disputes related to metering.
- 12.7 Transmission Charges of STU or State transmission licensees, wheeling charges of distribution licensee and Scheduling and Operation Charges of State Load Dispatch Centre shall be recovered from the Members and shall be paid to the STU / SLDCs respectively as per CERC's / SERC's regulations by the Exchange.

### **13. Risk management system**

- 13.1 A Member or the Client, as applicable, is allowed to trade only when it maintains the higher of the following margin deposit:
  - i) The margin deposited by the Member or the Client, as applicable, is at least or equivalent to the average value of trades done by it for last seven (7) days; or
  - ii) The initial margins prescribed by the Exchange for any Member or the Client, as applicable,

In case of clients having their own settlement account, no margins shall be collected however to manage risk of default such clients shall be allowed to bid only to the extent of funds available in their settlement bank account, lien marked in favour of the Exchange, net of provision towards applicable charges.

- 13.2 After receiving the Available Transfer Capability (ATC) for the Exchange from the NLDC the Exchange processes the final bid matching solution..
- 13.3 An Exchange Member or the Client, as applicable, can pay Additional Margin by depositing funds in its Settlement Account and inform the Exchange through fax or email any time during the trading session. Thereafter, based on the instruction received, the Exchange will collect the funds from the Settlement Account and increase the margin deposit of the Member or the Client, as applicable. In case, a Member or the Client, as applicable, fails to bring in any additional margin at beginning of the trading session, such Members or the Clients, as applicable, will not be allowed to put orders till Margins are brought in. The decisions of the Exchange shall be final and binding on the Members or the Clients, as applicable.
- 13.4 In case a Member or the Client, as applicable, fails to pay to the Exchange any amount towards its final pay in, the Exchange will be at liberty and has the power and discretion not to allow further trades and initiate appropriate action against such Member or the Client, as applicable. Any loss arising out of such instructions by the Exchange shall be borne by the defaulting Member or the Client, as applicable. The Exchange may also impose penalty on such defaulting member or the Client, as applicable.

#### 14. Surveillance

- 14.1 Validation of orders: Members are required to ensure that bids and offers are in conformity with relevant regulatory provisions. In order to avoid any abnormal orders being put by the Exchange Members like high bid or offer rate, bids quantity or offer quantity submitted higher than the declared capacity/demand by the Member, or the maximum quantity of purchase or sale as allowed in the Standing Clearance, the Exchange will validate such orders through software on a daily basis, wherever possible. Further, the order value of the Member will also be compared with the available limits of such Member for any over utilization.
- 14.2 **Price movement:** The Exchange will observe any variation in prices as compared to past data. Further, the price movement in the Exchange shall be correlated with that of the bilateral markets that is available with the Exchange.
- 14.3 **Market behavior:** The Exchange shall compare the trend in other national or bilateral markets with that of the Exchange. Any unwarranted change in the price pattern or order trend in this will be brought under the notice of the Exchange management.
- 14.4 **Correlation with Deviation Settlement Mechanism (DSM):** The trend in the Deviation rate and the prices in the Exchange shall be compared for any major differences. In case of individual Member its trend of trading on the Exchange shall also be compared with his DSM obligations.
- 14.5 **Price rigging, concentration, price manipulation and other market abuses:** The Exchange will monitor concentration, price rigging, price manipulation and other market abuses and take suitable actions whenever such practices are identified.

**Green Day-Ahead Market Contract Specifications (GDAM)**

1.	Product definition	96 separate fifteen-minute time blocks throughout the following delivery day (D).
2.	Trading system	IEX trading system
3.	Auction timings	10:00 AM to 11:00 AM of previous day (D-1)
4.	Minimum volume	0.1MW (Minimum allowable quantity for buy/ sell in the standing clearance, it should not be less than this quantity)
5.	Minimum volume step	0.1 MW
6.	Minimum quotation step	Rs. 1 per MWh
7.	Quotation method	Double sided close bid auction with uniform Market Clearing Price for all buyers and sellers.
8.	Order wording	Trader's ID, instrument, quantity/price combination
9.	Delivery point	Periphery of Regional Transmission System in which the grid-connected entity is located.
10.	Settlement	Daily settlement at ACP x volume traded in MWh (by the Client or Member as the case may be). Final settlement adjusted for any force majeure deviations.
11.	Transmission charges	<p>a) Regional Transmission System: As Per Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.</p> <p>b) State Transmission System: As per the concerned State Electricity Regulatory Commission's Regulations/ CERC (Open access in ISTS) Regulations, 2008, as amended from time to time.</p>
12.	Transmission losses	Payable in kind from delivery point to its grid connection point, as applicable.
13.	Eligibility	<p><u>Sellers</u>: NOC/Standing Clearance issued by respective LDC specifying maximum quantum and source of Renewable Energy Generation (e.g., Solar, Non-Solar, Hydro (HPO) etc.)</p> <p><u>Buyers</u>: All eligible Open Access buyers.</p>



**Annexure –A2****Day-Ahead Market Contract Specifications (DAM)**

1.	Product definition	96 separate fifteen-minute time blocks throughout the following delivery day (D).
2.	Trading system	IEX trading system
3.	Auction timings	10:00 AM to 11:00 AM of previous day (D-1)
5.	Minimum volume	0.1MW (Minimum allowable quantity for buy/ sell in the standing clearance, it should not be less than this quantity)
6.	Minimum volume step	0.1 MW
7.	Minimum quotation step	Rs. 1 per MWh
8.	Quotation method	Double sided close bid auction with uniform Market Clearing Price for all buyers and sellers.
9.	Order wording	Trader's ID, instrument, quantity/price combination
10.	Delivery point	Periphery of Regional Transmission System in which the grid-connected entity is located.
11.	Settlement	Daily settlement at ACP x volume traded in MWh (by the Client or Member as the case may be). Final settlement adjusted for any force majeure deviations.
12.	Transmission charges	<p>a) Regional Transmission System: As Per Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.</p> <p>b) State Transmission System: As per the concerned State Electricity Regulatory Commission's Regulations/ CERC (Open access in ISTS) Regulations, 2008, as amended from time to time.</p>
13.	Transmission losses	Payable in kind from delivery point to its grid connection point, as applicable

### High Price Day Ahead Market Contract Specifications (HP-DAM)

1.	Product definition	96 separate fifteen-minute time blocks throughout the following delivery day (D).
2.	Trading system	IEX trading system
3.	Auction timings	10:00 AM to 11:00 AM of previous day (D-1)
4.	Minimum volume	0.1MW (Minimum allowable quantity for buy/ sell in the standing clearance, it should not be less than this quantity)
5.	Minimum volume step	0.1 MW
6.	Minimum quotation step	Rs. 1 per MWh
7.	Quotation method	Double sided close bid auction with uniform Market Clearing Price for all buyers and sellers.
8.	Order wording	Trader's ID, instrument, quantity/price combination
9.	Delivery point	Periphery of Regional Transmission System in which the grid-connected entity is located.
10.	Settlement	Daily settlement at ACP x volume traded in MWh (by the Client or Member as the case may be). Final settlement adjusted for any force majeure deviations.
11.	Transmission charges	<p>a) Regional Transmission System: As Per Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.</p> <p>b) State Transmission System: As per the concerned State Electricity Regulatory Commission's Regulations/ CERC (Open access in ISTS) Regulations, 2008, as amended from time to time.</p>
12.	Transmission losses	Payable in kind from delivery point to its grid connection point, as applicable
13	Eligibility	<p><u>Sellers:</u> Valid NOC/Standing Clearance issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in HP-DAM.</p> <p><u>Buyers:</u> All eligible Open Access buyers with valid NOC/Standing clearance specifying maximum quantum issued by Load dispatch Centre.</p>



### Methodology of market splitting

As per Rule 18.3. (g), in case of transmission congestion a solution is to be worked out on the basis of market splitting. In this document a concept of market splitting is explained along with suitable examples.

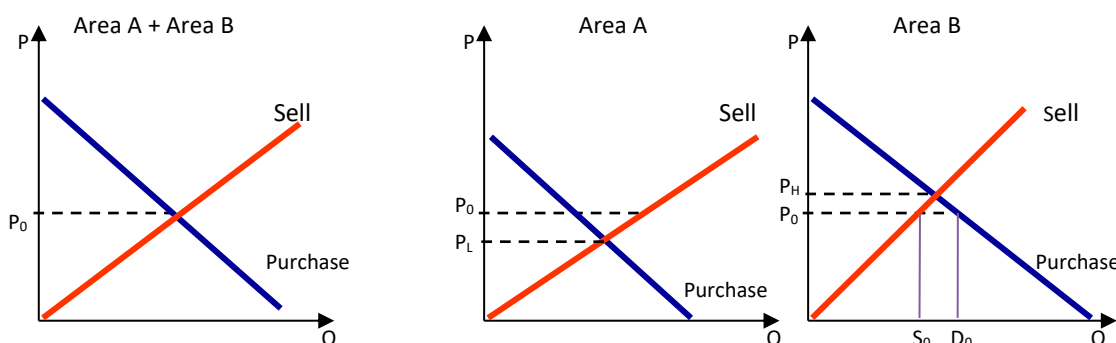
#### Market Splitting:

Market splitting is an evolved form of implicit auctioning wherein energy component and corresponding transmission capacity between bid areas are traded simultaneously. In the market splitting methodology areas on either side of congested corridor are identified separately and initially both are cleared as if there is no interconnection between the areas, and then the area which has highest price, draws electricity from the area with the lower price just as much as the capacity of the congested line will allow. Allowing this flow into higher price area will reduce prices in the higher price bid area and would increase prices in the lower price bid area depending upon the bid prices in the respective areas.

For a simple situation involving only two areas A and B is illustrated as under:

In the first step, all bids from both areas are aggregated together, similar to the System Price calculation. The common price,  $P_0$ , for both areas are established.

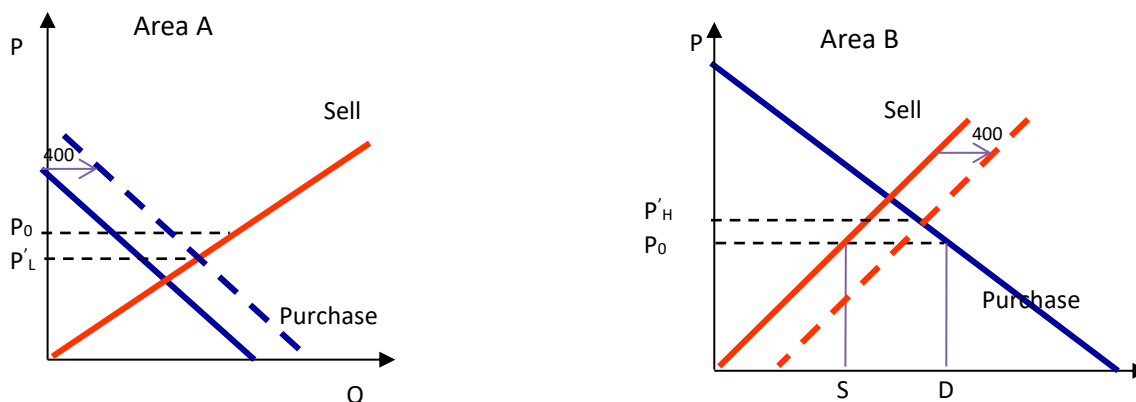
The bids are then aggregated in the area A and B separately. The aggregated curves could then look like this:



In this example the aggregated curves of area A intersect at a lower price,  $P_L$ , than the common price,  $P_0$ . Applying  $P_0$  in area A show that the sale at  $P_0$  is greater than the purchase at  $P_0$ . Thus area A is surplus area. On the contrary, the aggregated curves of area B intersect at a higher price,  $P_H$ , than the common price  $P_0$ . Applying  $P_0$  in area B show that the purchase at  $P_0$  is greater than the sale at  $P_0$ . Thus, area B is a deficit area.

At this step, the transmission capacity is introduced in the Area Price calculation process. The power flow will always be from the surplus area to the deficit area, thus the transmission capacity from A to B will be used. The needed capacity is simply the difference between sale  $S_0$  and purchase  $D_0$  at price  $P_0$  in the deficit area. Assume that  $S_0=2000$  and  $D_0=2600$ , giving a difference of 600. If the available capacity from A to B is 600 or higher, the resulting area prices in both A and B will be  $P_0$ .

If the available capacity from A to B is 0, the area prices will be  $P_L$  in area A and  $P_H$  in area B. If the available capacity is anywhere between 0 to 600, e.g. 400, the available capacity is added to the purchase curve in the surplus area (A) and to the sale curve in the deficit area (B). This results in a parallel displacement of these curves, as shown below:



The area price will now be set at the intersection of the sale curve and displaced purchase curve in area A, and at the intersection of the displaced sale curve and the purchase curve in area B. The transmission capacity is utilized so that the power flow exactly equals the available capacity. As a consequence of this, the area prices in A and B are leveled as much as possible.  $P'_H$ ,  $P'_L$  are the new intersection points on movement of demand / supply curves. The difference between  $P_H$  and  $P_L$  is now lesser than it otherwise would have been (if no power flow is possible between area A and area B). In case there is no constraint, price in area A and area B will be equal. The Area Price calculation is now complete, including the congestion management described above. The main objective of the concept is fulfilled:

- All grid constraints are relieved
- The available capacities are fully utilized
- The sale-purchase balance requirement is satisfied in both areas (at different price levels).

## SCHEDULE B1: INTRA-DAY AND CONTINGENCY MARKET SEGMENT

This market segment will cover intra-day and day ahead contingency electricity contracts. This market segment will operate in accordance with the procedures issued by NLDC for 'Scheduling of Bilateral Transactions'. All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc, will be as per specific rules mentioned herein.

### 1. Contracts

The Exchange shall make the contracts as specified in this section available for trading as per the trading calendar. These contracts will be traded in accordance with provisions of trading as specified in the respective Contract Specification. The trade sessions, matching rules applied in each trade session for concluding the contracts, risk management and settlement for such contracts will be as per specific contract specifications provided herein. The delivery of such contracts will be in accordance with CERC (Open Access in Inter-State Transmission) Regulations, 2008, as amended from time to time and relevant procedures issued by NLDC and by Open Access Regulations of concerned State. The Exchange holds the right to modify all other parameters except those specified in regulation 25 of CERC (Power Market) Regulation, 2021.

Following contracts shall be available for trading in this Market:

#### 1.1 Intra-Day Contracts

The Exchange shall make the Intra Day contracts and High Price Intra Day Contracts available for trading hourly and or 15 minute contracts on same day on rolling basis till some hour/time block prior to the delivery of electricity as specified in the contract specification. The Exchange will carry out trading in such contracts through 'Continuous Trade' sessions. The timeline for trade matching sessions will be specified in Contract Specifications. Scheduling of the transactions shall be in accordance with CERC (Open Access in Inter-State Transmission) Regulation, 2008, as amended from time to time and relevant procedures issued by NLDC/POSOCO as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Intra-Day Contracts are given at **Annexure- B11**.

#### 1.2 Day-Ahead Contingency Contracts

The Exchange shall make Day Ahead Contingency Contracts and High Price Day Ahead Contingency Contracts available for trading 24-hourly and or 15-minute contracts on day-ahead basis for 00:00 hours to 24:00 hours of next day. The Exchange will carry out trading in such contracts through 'Continuous Trade' sessions. The timeline for trade matching sessions will be specified in Contract Specifications. Scheduling of the transactions shall be in accordance with CERC (Open Access in Inter-State Transmission) Regulation, 2008, as amended from time to time and relevant procedures issued by NLDC/POSOCO as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Day-Ahead Contingency Contracts are given at **Annexure- B12**.

### 2. Trading Days and trading hours

The Exchange shall operate this segment on all days except Exchange specified holidays. The Exchange shall declare Trading & Settlement calendar in advance indicating trading sessions

and trading days for each of Contracts. The Exchange may extend, advance or reduce trading hours by notifying the Members as and when it deems fit and necessary.

### 3. Matching Methodology

The matching of contracts will employ Continuous matching methodology. In Continuous matching, the participants shall submit buy and sell offers on a continuous basis during the trading period. The buyers and sellers will be matched on continuous basis with price-time priority. For a specific Contract, the seller with minimum quote and buyer with the maximum quote are considered as best seller and best buyer respectively. Best five buy and sell bids, excluding the details of participants, shall be displayed on the trader's workstation (TWS) to all the participants to show the market depth. In case, best buy order is better than or same as best sell order, they will be matched resulting into Contracts. Such matching will continue till the end of trading period. In case, best buy order is inferior to the best sell, they will continue to be available in the order book, without resulting into Contracts. Market depth of best five orders in terms of price shall be displayed to all the participants. Order-depth option displays the best five placed orders in terms of price whereas Price-depth option displays the best five prices by cumulating the volumes under similarly priced bids.

### 4. Order Management

The Exchange may launch more than one order book running either parallel or at different time spans. All Clients shall be assigned unique client ID / Portfolio ID code which may be same or different for different market segments. The types of order available in continuous trading sessions are as follows:

#### 4.1 Timing Constraints

- I. Rest of day (Day): The order will be valid till the end of trading hours of that trading day.
- II. Immediate or Cancel (IOC): The order placed will not be in pending status and will be cancelled immediately in case if not traded.
- III. End of Session (EOS)

#### 4.2 Execution constraints

- I. Fill or Kill (FoK): This order will match the whole order OR delete the whole order.

### 5. Matching Rules

The order matching rules for Continuous trade session will have the following features

- a) In case of continuous market segment, the order is immediately checked if it can be matched.
- b) The Orders are matched based on price and time priority. In case of more than one order having the same price, the order with the earlier time will get the priority in matching.
- c) The best buy order is matched with the best sell order when (buy price  $\geq$  Sell Price). For order matching, the best buy order is the one with the highest price and the best sell order is the one with the lowest price.
- d) An order may match partially with another order resulting in multiple trades.

### 6. Margin Requirement

The Members or the Clients, as applicable, participating in this market segment will have to make available margins to the Exchange from time to time as provided in Clause 6 of Schedule B2 of these Business Rules

**7. Risk Management System**

As per Clause 7 of Schedule B2 of these Business Rules.

**8. Surveillance**

As per Clause 8 of Schedule B2 of these Business Rules.

**9. Delivery procedure**

Delivery procedure as provided in Clause 9 of Schedule B2 of these Business Rules.

**10. Transaction fees**

The Exchange will charge a transaction fee as may be specified by the Exchange from time to time on the transactions carried through the Exchange subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchases and sales separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member or the Clients, as applicable.

**11. Reports**

- I. After end of trading session, the Exchange will make available the reports to the Members which consist of Trade file Report, Provisional Obligation Report, Final Obligation Report and other relevant matters.
- II. Based on the Exchange's Reports, the Members can inform their Clients about their successful trades along with their obligation.

**12. Force Majeure**

As per Clause 12 of Schedule B2 of these Business Rules.

**Annexure B11****Contract Specification- Regional Intra-Day Contract**

<b>Sr No.</b>	<b>Topic</b>	<b>Details</b>
1	Contract Name*	Regional Intra Day -Contracts (ITD) / High Price Intra Day Contracts (HP-ITD)
2	Regions	Regional contracts one each for each electrical region will be available for trading -i.e., for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER)
3	Contract Code*	"Type of Contract- Hour No. – Region (E.g.ITD-H21-NR) Where, ITD: Intraday Contracts: Hour of delivery Region detail: NR: Northern Region".
4	Contract Type	Delivery Option - Firm Delivery
5	Contract available for Trading	Hourly and 15 min contracts for consecutive time period on same day will be available for trading.
6	Trading day*	Every calendar day of the year for same delivery date.
7	Trading Session*	Continuous Trading session will be made available to the members for bidding separately for ITD and HP-ITD Contracts.
8	Bidding process	Seller will submit bid for the contract of that region to which he belongs. Whereas a buyer can buy any regional contract. Netting off (square off) of positions will not be allowed.
9	Matching of Bids	Continuous trade session: Details in clause no. 5 (B) of Schedule B2 of Business Rules. Each trade will be sent for scheduling, on trade to trade basis.
10	Trading Hours	Continuous trade session: 00:15 hrs to 19:30 hrs on trading days
11	Minimum Volume Quotation*	1 MW
12	Minimum Volume Step*	1 MW
13	Lot size	1 MWh
14	Maximum bid size*	Bids should not be more than the allowed MW in any of Concurrence/clearance issued by its SLDC to the members/clients at any time. It will be the responsibility of the member to adhere to this rule.
15	Price Quote Basis	Rs. per MWh (excluding all fees, charges, taxes, if applicable)
16	Price Tick*	Rs. 1 per MWh
17	Quantity Variation	Zero quantity variation allowed.
18	Settlement	Traded price * Quantity scheduled by RLDC at delivery point.
19	Initial Margins (Operational Limit)*	105% margin from buyers of the total order value should be available in cash with the exchange at the time of bidding for continuous trading sessions.
20	Variation Margin*	NA

21	Transaction Fees*	Fees payable by buyer and seller to Exchange for the quantity approved by nodal RLDC at delivery point as specified by the exchange from time to time
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### **Trading Cycle**

	Details	Time (Hrs)
22	Continuous Trade Session (Daily)	0030 to 2000
23	SLDC Clearance and Declaration Form sent to Members	As specified in TAM Trading and Settlement Calendar
24	Submission of SLDC Clearance to the Exchange by the Member	As specified in TAM Trading and Settlement Calendar
25	Submission of Application to Nodal RLDC <sup>(1)</sup>	As per Procedure for Scheduling of Bilateral Transaction.
26	Approval from nodal RLDC	As per CERC Order dated 08.04.2015 in Petition no. 006/SM/2015.
27	Payin /adjustment on T+1 basis where T is the trading day	Post receipt of nodal RLDC approval
28	Payout on T+2 basis where T is the trading day	By 1100
29	Payment of charges to Nodal RLDC as per "Procedure for Scheduling of Bilateral Transaction".	1500
	<sup>(1)</sup> Application for Scheduling will be sent only when the SLDC Clearances from buyer and seller are received by the Exchange. In case, the SLDC approval is not received from SLDCs of buyer/ seller as per specified in Trading and Delivery Calendar, then it will be considered as default by buyer/seller.	

### **Delivery Procedure**

30	Delivery	Delivery shall commence 3.5 hours after expiry of the contract. Trade once executed shall not be revised and shall be sent for scheduling, and at no point of time during the contract period shall be allowed to be revised. The quantity shall be deliverable as per the schedule issued by the respective RLDC.
31	Delivery period	Delivery for each hour or 15-minute.



32	Delivery point	The delivery point shall be at Seller's Regional Periphery as per Procedure for Scheduling of Bilateral Transaction and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.
33	Application for Scheduling	Application for Scheduling will be Submitted to Nodal RLDC on Contingency basis as per the "Procedure for Scheduling of bilateral transactions".
34	LDC Clearance	The buyer and seller will have to take concurrence from their respective SLDC for scheduling of Power. This concurrence has to be submitted as per the timelines specified in the Trading and Delivery Calendar. NOC / Prior Standing Clearance issued by the SLDC in format PX-I as per CERC (Interstate Open Access) Regulations, are also valid for these transactions. To participate in HP-ITD Contract, Sellers shall be required to provide valid NOC/Standing Clearance issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in High Price Contracts.
35	Application fees, Operating and Transmission Charges and Losses	Seller will bear all the Transmission, Scheduling & Operating charges and Transmission Losses (in kind) up to the delivery point and Buyer shall bear all the Transmission, Scheduling & Operating charges including Application Fees and Transmission Losses from delivery point up to their point of drawl , as applicable. The charges shall be applied on the quantum of power scheduled at seller's Regional Periphery.
36	Alternate route	The buyer will be deemed to have consented for all possible routes; however, they can give preference amongst the possible routes.
37	Force majeure	In case of force majeure, the Exchange will settle the contract as per final schedule issued by RLDCs.
38	Fines & penalties	As decided by the Exchange from time to time and informed through circular.

### **Settlement procedure**

39	Payment of Application fees, Transmission & Operating Charges by Members	Application fees. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal RLDC will be recovered from the buyer and seller members on receipt of the acceptance from the nodal RLDC.
40	Funds pay in by Members	Exchange will debit/ adjust the funds pay-in on the next day of trading from buyer's member/ clients as applicable. Excess margins, if any due to partial concurrence received will be refunded back to the member on the settlement day.
41	Funds pay out to Members	Amount equivalent to net obligation will be credited at 12.00 noon on T+1 basis (where T stands for Trading day.)

\* Exchange may modify these parameters from time to time with prior intimation to its Members.



**Annexure B12****Contract Specification: - Regional Day Ahead Contingency Contracts (DAC)**

Sr No.	Item	Details
1	Contract Name*	Region wise Day-Ahead Contingency Contracts (DAC)/ High Price Day-Ahead Contingency Contracts (HP-DAC)
2	Regions	Regional contracts one each for each electrical region will be available for trading i.e. for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER)
3	Contract Code*	“Type of Contract- Hour No. – Region “ (E.g.DAC-H21-WR) Where, DAC: Day Ahead Contract Hour: Hour of delivery Region detail WR: Western Region.
4	Contract Type	Delivery Option – Firm Delivery
5	Contract available for Trading	Hourly and 15 minutes contracts for next day from 00:00 Hrs. to 24:00 Hrs.
6	Trading day*	A day before delivery day or as per trading calendar declared in advance.
7	Trading Session*	On each trading day, one continuous trading session will be made available to the members for bidding separately for DAC and HP-DAC Contracts.
8	Bidding process	Seller will submit bid for the contract of that region to which he belongs. Whereas a buyer can buy any regional contract. Netting off (square off) of positions will not be allowed.
9	Matching of Bids	Continuous trade session. Details in clause 5 (B) of Schedule B2 of Business Rules. Each trade will be sent for scheduling, on trade to trade basis.
10	Trading Hours	Continuous trade session: 01.00 PM to 11.30 PM on trading day i.e. one day before delivery date or as per trading calendar
11	Minimum Volume quotation*	1 MW
12	Minimum Volume Step*	1MW
13	Lot size	1 MW * 1 Hour
14	Maximum bid size*	Bids should not be more than the allowed MW in any of Concurrence/Clearance issued by its SLDC to the Members/Clients at any time. It will be the responsibility of the Member to adhere to this rule.
15	Price Quote Basis	Rs. Per MWh (excluding all fees, charges, taxes, if applicable)
16	Price Tick*	Rs. 1 per MWh
17	Volume Tick size	1 MWh
18	Quantity Variation	Zero quantity variation allowed.
19	Settlement	Traded price * Quantity scheduled by RLDC at delivery point.

20	Initial Margins (Operational Limit)*	105% margin from buyers of the total order value should be available in cash with the exchange at the time of bidding for continuous trading sessions.
21	Variation Margin*	NA
22	Extreme Loss Margin*	NA
23	Transaction Fees*	Fees payable by buyer and seller to Exchange for the quantity approved by nodal RLDC at delivery point as specified by the exchange from time to time

### **Trading Cycle**

	Details	Time (Hrs)
24	Continuous Trade Session (Daily)	1500 – 2330
25	SLDC Clearance and Declaration Form sent to Members	As specified in TAM Trading and Settlement Calendar
26	Submission of SLDC Clearance to the Exchange by the Member	As specified in TAM Trading and Settlement Calendar
27	Submission of Application to Nodal RLDC <sup>(1)</sup>	As per Procedure for scheduling of Bilateral transactions
28	Approval from nodal RLDC	As per CERC Order dated 08.04.2015 in Petition no. 006/SM/2015.
	Pay in/ adjustment on T+1 basis where T is the trading day	Post receipt of nodal RLDC approval
	Payout on T+2 basis where T is the trading day	By 1100
29	Payment of charges to Nodal RLDC as per Procedure for Scheduling of Bilateral Transaction.	1500
	<sup>(1)</sup> Application for Scheduling will be sent only when the SLDC Clearances from buyer and seller are received by the Exchange. In case, the SLDC approval is not received from SLDCs of buyer/ seller as specified in Trading and Delivery Calendar, then it will be considered as default by buyer/seller.	

### **Delivery Procedure**

30	Delivery	Delivery shall commence 3.5 hours after expiry of the contract. Trade once executed shall not be revised and shall be sent for scheduling, and at no point of time during the contract period shall be allowed to be revised. The quantity shall be deliverable as per the schedule issued by the respective RLDC.
31	Delivery period	Delivery for each hour or 15 minute.
32	Delivery point	The delivery point shall be at Seller's Regional Periphery as per Procedure for Scheduling of Bilateral Transaction and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.
33	Application for Scheduling	Application for Scheduling will be Submitted to Nodal RLDC on Contingency basis as per the "Procedure for Scheduling of bilateral transactions"

34	LDC Clearance	The buyer and seller will have to take concurrence from their respective SLDC for scheduling of Power. This concurrence has to be submitted as per the timelines specified in the Trading and Delivery Calendar. NOC / Prior Standing Clearance issued by the SLDC in format PX-I as per CERC (Interstate Open Access) Regulations, are also valid for these transactions. To participate in HP-ITD Contract, Sellers shall be required to provide valid NOC/Standing Clearance issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in High Price Contracts.
35	Application fees, Operating and Transmission Charges and Losses	Seller will bear all the Transmission, Scheduling & Operating charges and Transmission Losses (in kind) up to the delivery point and Buyer shall bear all the Transmission, Scheduling & Operating charges including Application Fees and Transmission Losses from delivery point up to their point of drawl, as applicable. The charges shall be applied on the quantum of power scheduled at seller's Regional Periphery.
36	Alternate route	Unless preference is specified by the buyer, he will be deemed to have consented for all possible transmission corridors from seller's injection point till drawal point.
37	Force majeure	In case of force majeure, the Exchange will settle the contract as per final schedule issued by RLDCs.
38	Fines & penalties*	As decided by the Exchange from time to time and informed through circular.

### **Settlement procedure**

39	Payment of Application fees, Transmission & Operating Charges by Members	Application fees, Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal RLDC, will be recovered from the buyer and seller members on receipt of acceptance from the nodal RLDC.
40	Funds pay in by Members	Exchange will debit/adjust the funds pay-in on the next day of trade from buyer's member's /clients, as applicable. Excess margins, if any due to partial concurrence received will be refunded back to the member on the settlement day.
41	Funds pay out to Members	Exchange will credit the funds pay out in seller's member's settlement account on D+1 basis at 12.00 noon for each delivery day subject to confirmation of delivery pay in by the seller.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

## SCHEDULE B2: TERM AHEAD MARKET (TAM) SEGMENT

The Term Ahead Market segment will cover electricity contracts with timeframes of daily, weekly and monthly etc. as approved by CERC. The Term Ahead Market will operate in accordance with the procedures issued by NLDC for 'Scheduling of Bilateral Transactions'. All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc, will be as per specific rules mentioned herein.

### 1. Contracts

The Exchange shall make the contracts as specified in this section available for trading as per the Trading & Settlement calendar. These contracts will be traded in accordance with provisions of trading as specified in the respective Contract Specification. The trade sessions, matching rules applied in each trade session for concluding the contracts, risk management and settlement for such contracts will be as per specific contract specifications provided herein. The delivery of such contracts will be in accordance with CERC (Open Access in Inter-State Transmission) Regulations, 2008, as amended from time to time including reenactment thereof; CERC (Indian Electricity Grid Code) Regulations, 2010 as amended from time to time including reenactment thereof; CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time including re-enactment thereof; CERC (Power Market Regulations), 2021 as amended from time to time including reenactment thereof; Procedure for Scheduling of Bilateral Transaction and Procedure for Short Term Open Access in inter State Transmission System through National Open Access Registry (NOAR) as amended from time to time including reenactment thereof and by Open Access Regulations of concerned State and procedure made thereunder. The Exchange holds the right to modify parameters as permitted by CERC. These contracts will be further differentiated on time of day basis (Peak, Off-Peak basis etc.).

Following contracts shall be available for trading in Term-Ahead Market:

#### 1.1 Daily Contracts

The Exchange shall make the Daily Contracts and High Price Daily Contracts available for trading up to a period as may be specified by the Exchange from time to time within the timelines approved by CERC for delivery of electricity for pre-specified time- blocks of the day. The Exchange will carry out trading in such contracts through 'Uniform Price Step Auction'. The timeline for trade matching sessions will be specified in contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulations and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Daily Contracts are given at **Annexure- B21**.

#### 1.2 Weekly Contracts

The Exchange shall make the Weekly Contracts and High Price Weekly Contracts available for trading maximum up to a period as may be specified by the Exchange from time to time within the timelines approved by CERC for delivery of electricity for pre-specified time-blocks on all the days of the week. The Exchange will carry out trading in such contracts through 'Uniform Price Step Auction'. The timeline for trade matching sessions will be specified in contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulations and relevant procedures issued by POSOCO/NLDC as specified in the

contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Weekly Contracts are given at **Annexure- B22**.

### **1.3 Monthly Contracts**

The Exchange shall make the Monthly contracts and High Price Monthly Contracts available for trading maximum up to a period as may be specified by the Exchange from time to time within the timelines approved by CERC for delivery of electricity for pre-specified time blocks on all days of calendar Month. The Exchange will carry out trading in such contracts through 'Uniform Price Step Auction'. The timeline for trade matching sessions will be specified in contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulation and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Monthly contracts are given at **Annexure- B23**.

### **1.4 Any Day(s) Single Sided Contracts**

The Exchange shall make the Any-Day(s) Single Sided contracts and High Price Any Day Single Sided Contracts available for trading maximum up to a period as may be specified by the Exchange from time to time within the timelines approved by CERC for delivery of electricity as may be requisitioned by the buyer. The Exchange will carry out trading in such contracts through 'Reverse Auction' where Buyer is the requisitioner. The timeline for trade matching sessions will be specified in contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulation and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The Exchange may specify minimum conditions related to quantum, time etc. to be fulfilled by the bidders for participating in these contracts. The contract specifications of Any-Day(s) Single Sided contracts are given at **Annexure- B24**.

## **2. Trading Days and trading hours**

The Exchange shall operate this segment on all days except Exchange specified holidays. The Exchange shall declare Trading & Settlement calendar in advance indicating trading sessions and trading days for each of Contracts. The Exchange may extend, advance or reduce trading hours by notifying the Members as and when it deems fit and necessary.

## **3. Matching Methodologies**

The matching of contracts will apply the following matching methodologies:

### **3.1 Uniform Price Step Auction**

In Uniform Price Step Auction, the participants submit their orders for sale and buy during the call auction phase. Such orders are automatically stored in the order book without giving rise to Contracts. After the end of the call auction phase, there is a call auction freeze phase. Until the call auction freeze phrase, members can enter new orders (or quotes) or modify their existing orders. Execution of trade takes place after the call auction freeze phase is over. The matching of orders takes place in accordance with matching rules given in subsequent sections. All trades are effected at uniform price known as Equilibrium Price (EP). All orders that have prices that are better than the equilibrium price are executed, and the ones that have a price equal to the equilibrium price are executed according to a First In First Out (FIFO) algorithm. The algorithm for determining Equilibrium Price is given in the matching rules. In such auction, the transmission network constraints are not considered implicitly while matching the orders. The following auction methodology will be adopted:

**3.1.1 Open auction:** In the open auction, the participants submit their order for sale and buy during the auction phase. Complete list of order prices and aggregated quantities of buy and sale bids will be displayed to market participants maintaining bidder's anonymity. The participants can modify, delete or enter new orders during call auction period.

### **3.2 Reverse Auction:**

**3.2.1** In Reverse Auction, buyer will create the requisitions (quantum, time period with minimum acceptable quantity from single seller) and sellers to submit their offers (quantum, minimum acceptable quantum and price) against each requisition. In each reverse auction there would be one buyer and multiple sellers. The sellers will compete amongst themselves for the requisition made by the buyer.

**3.2.2** The auction shall be conducted in two stages namely Initial Price Offer (IPO) and Reverse Auction.

**3.2.3** In the IPO stage, the sellers will submit their price and quantity (during IPO session seller can view, modify and delete) against each requisition. The system will rank the Bidders according to their price bids. If two or more sellers quote the same price, the ranking of the sellers shall be done based on time priority basis. The Bidder with the highest price bid in IPO stage will be called the H1 Bidder. The Highest Bidder(H1) will be eliminated provided that the total quoted quantity after elimination is not less than twice the requisitioned quantity. The elimination process will be carried out for each of the requisition separately. One event may have more than one requisition.

**3.2.4** After completion of IPO stage, Reverse Auction will be conducted. During the auction session only prevailing lowest quoted price (L1) will be displayed to the market. The Reverse Auction shall continue for period of 120 minutes or as may be specified by the Exchange from time to time. The Exchange shall also from time to time specify the duration before the scheduled closure of Reverse Auction during which if there is a change in the lowest quoted price (L1) the Reverse Auction would get auto extended by that duration. For example, if during the last 10 (ten) minutes before the scheduled close time of Reverse Auction, if a price bid is received which is lower than the L1, the close time of Reverse Auction will be automatically extended by 10(ten) minutes from the time of the last price bid received. This process of auto extension will continue till there is a period of 10 (ten) minutes during which no price bid is received which is lower than the prevailing L1.

**3.2.5** During the Reverse Auction the seller will have the option of reducing the price quoted by them in decrements of 1 Rs./MWh or multiples thereof and the option of increasing the quantum quoted by them by 1 MW or multiples thereof or as may be specified by the Exchange.

**3.2.6** The seller after the Reverse Auction process will be ranked in accordance with the price offered in ascending order. The sellers, in order of their rankings, combinedly offering the quantum of power up to the requisitioned capacity would be the Successful Bidders.

**3.2.7** In the event, of two or more sellers quoting the same price during Reverse Auction stage, the ranking of the seller shall be done based on a time priority basis.

**3.2.8** Buyers shall communicate its acceptance/partial acceptance/rejection of trade to the Exchange within the timeline (after the closure of RA) as may be specified by the Exchange from time to time.

**3.2.9** The buyer shall procure power from the Successful Bidders in the order of their rankings. until the accepted quantity is met.



## 4. Matching Rules

The matching rules for the two matching methodologies provided in Clause 3 are provided below along with the illustrations:

### 4.1 Uniform Price Step Auction

4.1.1. A Matching of the auction will only take place if there are crossing prices (buy price  $\geq$  Sell Price) in the order book, that is, if the best bid price is equal to or higher than the best ask price. In that case, the equilibrium price is determined according to the following criteria:

1. Maximum tradable volume: The Equilibrium Price will be the price at which there is maximum tradable volume.
2. Minimum unbalance: If there is more than one price with equal value for maximum tradable volume, the price that leaves the least volume untraded at its level is chosen as Equilibrium Price.

4.1.2. If Auction Session has overlapping Buy and Sell orders resulting in at least 1 trade (if there are crossing prices i.e. best buy price  $\geq$  best Sell Price) then the system would use the below mentioned principles to determine that Session's Auction Uniform Price. If system achieves more than one potential Auction Uniform Price by Principle 1, then the algorithm would move to Principle 2 to narrow down the options and so on. If any Principle achieves a single potential Auction Uniform Price, then that price would be assigned as that Session's Auction Uniform Price. The Auction Uniform Price calculation logic is explained below with the help of an example:

4.1.3 The Order Book would be sorted on Best Buy and Best Sell basis for a product e.g. 'AUCREC SOLAR' at the end of the Auction session as below:

BUY			SELL		
Order	Qty	Price	Price	Qty	Order
A	4,500	825	831	290	J
B	28,200	824	828	11,420	K
C	1,900	822	826	21,650	L
S	49,700	820	825	8,500	M
D	8,000	819	823	1,900	N
E	16,400	818	820	17,500	O
F	5,400	815	819	3,600	P
G	900	814	818	11,600	Q
H	4,575	812			R

#### 4.1.4 Principle: Determining the Maximum Tradable Volume

The principle would establish the **price(s)** at which **maximum tradable volume** would be **executed**. There would be two steps involved in applying this principle.

- I. **STEP 1** – Determine the Cumulative Buy and Sell quantities at each eligible price. The Cumulative Buy and Sell quantities at each price for 'XYZ' are as follows:

BUY		Price	SELL	
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity
0	0	831	290	76,460
0	0	828	11,420	76,170
0	0	826	21,650	64,750
4,500	4,500	825	8,500	43,100
32,700	28,200	824	0	34,600

32,700	0	823	1,900	34,600
34,600	1,900	822	0	32,700
84,300	49,700	820	17,500	32,700
92,300	8,000	819	3,600	15,200
108,700	16,400	818	11,600	11,600
114,100	5,400	815	0	0
115,000	900	814	0	0
119,575	4,575	812	0	0

- II. **STEP 2** – Establish the total tradable volume at each eligible price (i.e. Maximum Quantity which may be traded at that each price). The total tradable volume at a price would be computed as 'Minimum of Cumulative Buy and Cumulative Sell quantity' at the respective price. The Maximum Tradable Volume (MEV) for each eligible price is as below:

BUY		Price	SELL		Maximum Executable Volume
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity	
0	0	831	290	76,460	0
0	0	828	11,420	76,170	0
0	0	826	21,650	64,750	0
4,500	4,500	825	8,500	43,100	4,500
32,700	28,200	824	0	34,600	32,700
32,700	0	823	1,900	34,600	32,700
34,600	1,900	822	0	32,700	32,700
84,300	49,700	820	17,500	32,700	32,700
92,300	8,000	819	3,600	15,200	15,200
108,700	16,400	818	11,600	11,600	11,600
114,100	5,400	815	0	0	0
115,000	900	814	0	0	0
119,575	4,575	812	0	0	0

**Note:** The Maximum Tradable Volume is the highest value amongst 'Maximum Tradable Volume' derived for all price points.

In this example, the maximum quantity that may be traded is 32,700 at prices 820, 822, 823 and 824. Therefore, as per Principle 1, the Prices eligible for Auction Uniform Price Calculation are 820, 822, 823 and 824. The algorithm would eliminate all other price points as the potential Auction Uniform Price. To further narrow the choices for Auction Uniform Price, Principle 2 would be used to determine the Minimum Unbalance level.

#### 4.1.5 Principle: Establishing the Minimum Unbalance

The second principle would ascertain the eligible price levels (from prices 820, 822, 823 and 824) at which the Unmatched Quantity is a minimum.

The Minimum Unbalance at each price level is equal to 'Cumulative Buy Quantity – Cumulative Sell Quantity'

BUY		Price	SELL		Maximum Executable Volume	Minimum Unbalance (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		



<b>32,700</b>	28,200	<b>824</b>	0	<b>34,600</b>	32,700	-1,900
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900
84,300	49,700	<b>820</b>	17,500	32,700	32,700	51,600

Ignoring the positive and negative signs, the lowest number in the Minimum Unbalance column is 1,900. The minimum Unbalance occurs at prices 822, 823 and 824. Therefore, as per completion of Principle 2, the Prices eligible for Auction Uniform Price Calculation are 822, 823 and 824. The algorithm would further eliminate 820 as Auction Uniform prices and the algorithm would continue to the 3<sup>rd</sup> step to establish the Auction Uniform Price.

**Note:** 0 is the lowest Minimum Unbalance Quantity.

#### 4.1.6 Principle: Ascertaining where the Market Pressure exists

The third principle should ascertain where the market pressure of the potential Auction Uniform Price prices exists: on the buy or the sell side.

- If all the potential Auction Uniform Prices have positive (+) Minimum Surplus then the market pressure is on the BUY side (Buyer's Market) and the Auction Uniform Price would be highest of the potential Auction Uniform Prices (Assuming that residual BUY pressure would likely cause the price to rise)

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Minimum surplus with all +ve Surplus, so Buyer's Market and Uniform Price MAX (100,99) = 100
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
200	200	100	0	150	150	50	
200	0	99	150	150	150	50	

- If all the potential Auction Uniform Prices have negative (-) Minimum Surplus then the market pressure is on the SELL side (Seller's Market) and the Auction Uniform Price should be lowest of the potential Prices (Assuming that residual SELL pressure would likely cause the price to fall)

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Min surplus with all – Surplus, so Seller's Market and Uniform Price MIN (99,98) = 98
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
150	150	99	0	200	150	-50	
150	0	98	200	200	150	-50	

- If the potential Auction Uniform Prices have either 'positive (+) as well as negative (-) Minimum Surplus Minimum Surplus' of 'If the Minimum Surplus is zero for each potential

Price' then the algorithm should not further eliminated any potential Auction Uniform Prices derived from Principle 2 and should continue to Principle 4 carrying forward all the potential Auction Uniform Prices

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
<b>32,700</b>	28,200	<b>824</b>	0	<b>34,600</b>	32,700	-1,900
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900

In this example it is not yet possible to calculate as Auction Uniform Prices, since the potential Auction Uniform Prices have positive (+) as well as negative (-) Minimum Surplus. Therefore, at the completion of Principle 3, the Prices eligible for Auction Uniform Price Calculation are 822, 823 and 824 and the algorithm continues to the fourth and final step to establish the Auction Uniform Price.

#### 4.1.7 Principle: Average of Price Points having Minimum Unbalance

The fourth and final principle determines Auction Uniform Price from the range of prices established in Principle 3 (from prices 822, 823, 824).

There are two steps to this Principle. The first step should be to narrow the options of potential Auction Uniform Prices to 2 potential Auction Uniform Prices from within the derived price range

##### a. STEP 1

- I. If the result of Principle 3 is a combination of positive and negative Market Pressure, then the algorithm should mark the two prices where the sign changes.

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900

- II. If the Minimum Surplus for all potential Auction Uniform Prices is zero, then the algorithm should mark the highest and lowest prices within the potential price range as the potential Auction Uniform Prices.

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Min Surplus with all 0, so Uniform Price AVG (110, 105) = 107.50
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
1000	<b>1000</b>	110	0	1000	1,000	0	
1000	0	105	<b>1000</b>	1000	1,000	0	

In this example the sign at 822 is positive and changes to negative to 823. Therefore, the algorithm chooses 822 and 823 as the potential Auction Uniform Prices to be applied in this principle.

#### b. STEP 2

The Auction Uniform Price should be defined as the average of 2 derived potential Auction Uniform Prices i.e. 822 and 823. Auction Uniform Price =  $AVG(822, 823) = 822.50$

The determined official Auction Uniform Price would be '**822.50**'

**Note:** if determined Auction Uniform Price is not as per Product's Price Tick then Auction Uniform Price would be rounded off to the nearest product's price tick

All the matching orders would get traded at the Determined Auction Uniform Price, regardless of the price actually stated when placing an order. The Order Priority for matching purpose would be determined on '**Price-Time**' Priority basis. All the Auction Session's Unmatched Pending Orders would get cancelled

**Note:** If the Auction session has no overlapping Buy and Sell orders (i.e. Trades = 0), then the 'Three step Conditional Decision Rule Approach' to determine 'Auction Uniform Price' would not be referred.

## 4.2 Reverse Auction

The order matching rules for reverse auction session will have the following features

**4.2.1 Process I: Auction Initiation by Buyer:** Buyer will initiate process for auction by bidding their requirements in the System.

<b>Auction Details:</b> <b>Auction No.:</b> XXXX <b>Time Left:</b> 00:00 hrs/min <b>Currency :</b> INR					
<b>Auction Type:</b> Reverse Auction					
<b>Title:</b> XXXX State Electricity Distribution					
<b>Auction Start Date/Time:</b> DD/MM/YYYY xx:xx hrs.			<b>Auction Close Date/Time:</b> DD/MM/YYYY		
<b>Market Status:</b> Open/Close			<b>Pre-bidding (IPO) :</b> Open / Close		
Delivery Period	Close Time	Required Quantity/Min. Bid Quantity	Your Bid Price	Your Bid Quantity	Bid Status
01.10.2019-00:00 To 31.10.2019-24:00	30.09.2019 16:14:57	300 MW 20 MW	Xxxx	Xxx	
01.11.2019-00:00 To 30.11.2019-24:00	30.09.2019 16:16:05	400 MW 20 MW	Xxxx	Xxx	
Status bar:					

**4.2.2 Process II: IPO Opening:** Seller(s) will place their bids against the auction initiated by buyer. During this stage seller(s) will be submitting their bid with nothing visible to the participating seller(s) except their own price and quantity. During IPO seller(s) can increase, decrease price, quantity and can delete their bid also.

**4.2.3 Process III: IPO Stage- Elimination Round:** Once IPO is closed, process of bid elimination will start in the following manner:

- I. **Step 1:** Ranking of sell bids received under IPO in ascending order. If multiple sellers have quoted the same price, then the ranking shall be done on the basis of time priority basis
- II. **Step 2:** Elimination Round- The Bidder with the highest price bid in IPO stage will be called the H1 Bidder. The system will then analyze all the quantities offered by the Bidders in the IPO stage. The Highest Bidder(H1) will be eliminated provided that the total quoted quantity after elimination is not less than twice the Requisitioned Quantity.

H1 Bid Eliminated if,  $\{(Total\ Quoted\ Qty. - H1\ Bid)\} \geq 2 * Requisitioned\ Qty.\}$

- III. **Step 3:** After Closure of IPO, L1 rate will be published to eligible sellers and appropriate message to H1 Seller. For better understanding of **Elimination Round**, few cases are provided below.

Requisition by buyer	Delivery Period	Period	Buyer Name	Minimum Quantity from Single Seller
200	1-10-2019 to 31-10-2019	RTC	WBS	20

**Case 1:**

- Total Quantity quoted by Seller: 520MW
- Quantity Requisition by Buyer: 200MW
- As the condition mentioned in Step 2 i.e. 520MW (Total Quoted Qty) - 100MW (Seller 5 H1 Bid)  $\geq 2 * 200MW$  (Requisitioned Quantity) is fulfilled
- Bid of seller 5 will be eliminated from system and L1 price will be discovered.

Particulars	Sellers bid at the end of IPO	Ranking of Sell Bid	Elimination Round	Publishing L1 Rate
<b>Case-1</b>	Seller-1 (100,4200)	Seller-4 (120,3400)	Seller-5 (100,6300)	Publish 3400 as L1 for IPO
	Seller-2 (100,5000)	Seller-3 (100,3500)		
	Seller-3 (100,3500)	Seller-1 (100,4200)		
	Seller-4 (120,3400)	Seller-2 (100,5000)		
	Seller-5 (100,6300)	Seller-5 (100,6300)		

**Case 2:**

- Total Quantity quoted by Seller: 420MW
- Quantity Requisition by Buyer: 200MW
- As the condition mentioned in Step 2 i.e. 420MW (Total Quoted Qty) - 50MW (Seller 2 H1 Bid)  $\geq 2 * 200MW$  (Requisitioned Quantity) is not fulfilled
- No seller bid will be eliminated from system and L1 price will be discovered.

Particulars	Sellers bid at the end of IPO	Ranking of Sell Bid	Elimination Round	Publishing L1 Rate
<b>Case-2</b>	Seller-1 (50,4000)	Seller-6 (100,3200)	No seller will get eliminated (Rejecting Quantity of H1 will reduce the total quantity less than twice of the	Publish 3200 as L1 for IPO
	Seller-2 (50,5000)	Seller-5 (100,3300)		
	Seller-3 (50,3500)	Seller-4 (70,3400)		
	Seller-4 (70,3400)	Seller-3 (50,3500)		

	Seller-5 (100,3300)	Seller-1 (50,4000)	requisitioned quantity of buyer.)	
	Seller-6 (100,3200)	Seller-2 (50,5000)		

**Case 3:**

- Total Quantity quoted by Seller: 370MW
- Quantity Requisition by Buyer: 200MW
- As the condition mentioned in Step 2 i.e. 370MW (Total Quoted Qty) - 100MW (Seller 2 H1 Bid)  $\geq 2 \times 200\text{MW}$  (Requisitioned Quantity) is not fulfilled.
- No seller bid will be eliminated from system and L1 price will be discovered.

Particulars	Sellers bid at the end of IPO	Ranking of Sell Bid	Elimination Round	Publishing L1 Rate
<b>Case-3</b>	Seller-1 (50,4000)	Seller-5 (50,3300)	No seller will get eliminated (Rejecting Quantity of H1 will reduce the total quantity less than twice of the requisitioned quantity of buyer.)	Publish 3300 as L1 for IPO
	Seller-2 (100,5000)	Seller-4 (120,3400)		
	Seller-3 (50,3500)	Seller-3 (50,3500)		
	Seller-4 (120,3400)	Seller-1 (50,4000)		
	Seller-5 (50,3300)	Seller-2 (100,5000)		

**Case 4:**

- Total Quantity quoted by Seller: 620MW
- Quantity Requisition by Buyer: 250MW
- As the condition mentioned in Step 2 i.e. 620MW (Total Quoted Qty) - 100MW (Seller 6 H1 Bid)  $\geq 2 \times 250\text{MW}$  (Requisitioned Quantity) is fulfilled H1 Seller will get eliminated.
- However as both seller 6 and 5 are H1 hence the elimination will take place as per time priority basis. Accordingly, seller-6 (100,6300) will be eliminated and L1 price will be discovered.

Particulars	Sellers bid at the end of IPO	Ranking of Sell Bid	Elimination Round	Publishing L1 Rate
<b>Case-4</b>	Seller-1 (100,4200)	Seller-4 (120,3400)	Since both seller 6 and 5 both are H1 but Seller-6 (100,6300) is eliminated because of time priority.	Publish 3400 as L1 for IPO
	Seller-2 (100,5000)	Seller-3 (100,3500)		
	Seller-3 (100,3500)	Seller-1 (100,4200)		
	Seller-4 (120,3400)	Seller-2 (100,5000)		
	Seller-5 (100,6300)	Seller-5 (100,6300)		
	Seller-6 (100,6300)	Seller-6 (100,6300)		

**4.2.4 Process IV: Starting of Reverse Auction (RA):** After completion of IPO-Elimination Round, e- Reverse Auction will start, this process will follow the steps as mentioned below:

- I. **Step 1:** Start of e- Reverse Auction as per Timelines for 120 Minutes with auto extension feature. The Exchange may specify any other timeline based on the market feedback.
- II. **Step 2:** Only L1 price is published to market and no quantity is displayed against that.
- III. **Step 3:** Modification of downward price is allowed, Rate can only be decreased by Re. 1/Mwhr or multiples thereof, and quantity must be non-zero and can only be increased by 1 MW or multiples thereof or as may be specified by the Exchange.

- IV. **Step 4:** Publishing of new L1 price with any change in the quoted price by the bidder.
- V. **Step 5:** Reverse Auction lasts for 120 minutes from the start of e-Reverse Auction subject to Auto Extension as applicable.
- VI. **Step 6:** Auto extension of 10 Minutes, in case new L1 discovered in last 10 minutes of closing auction is less than from previous one. The Exchange may specify any other timeline based on the market feedback.
- VII. **Step 7:** Last Auto extension to be triggered latest by market closing time, beyond that no further extension of Reverse Auction to be considered.
- VIII. **Step 8:** Ranking of these seller bids in increasing order of their bid price. In case two sellers have quoted the same price then ranking will be done on time priority basis.
- IX. **Step 9:** Selection of sellers as per their ranking i.e., from lowest to highest ranked seller where lowest rank is ascribed to the seller offering lowest bid price.
- X. **Step 10:** Results of Reverse Auction Process.

## 5. Order Management

The Exchange may launch more than one order book running either parallel or at different time spans. All Clients shall be assigned unique client ID / Portfolio ID code which may be same or different for different market segments. The types of order available in different trading sessions are mentioned below.

### 5.1 Uniform Price Step Auction Session

Following orders types are available in this auction session.

#### 5.1.1 Timing Constraints

- a. End of Session (EOS): Valid for auction session only

## 6. Margin Requirement

The Members or the Clients, as applicable, participating in Term Ahead Market segment will have to make available the following types of margins to the Exchange from time to time as described below:

- 6.1 Initial Margin (Operational limit):** Initial Margins have to be submitted to the Exchange by the Member or the Client, as applicable, before start of their trading. Initial Margins will be computed on the total order value. The percentage of the order value required as initial margins shall be defined in the contract specification. This initial margin will be blocked automatically from the total available deposits. The trading system will automatically reject orders in case the initial margin exceeds the balance deposits available. Initial Margins will be released only after such time as defined in the Contract Specification. The release of Margin Funds shall be based on the Members or the Clients, as applicable, request and after adhering to the risk management procedures of the exchange.
- 6.2 Additional Margin (Basis Margin):** Additional Margin will be computed as a percentage of the traded value and will be collected in different trenches as per the contract specifications. The Members or the Client, as applicable, will have to pay the Additional Margin to the exchange based on their trade confirmation. The Member or the Client, as applicable, will have to make available the Additional Margin before the end of the trading day or as may be specified in respective contract specification. Unlike Initial Margin which



is a pre trade margining system, Additional Margins will be computed on the traded value at client level. This margin will be blocked from the available cash or non-cash collaterals and will be released progressively as per the risk assessment by the Exchange. In case if the Member or the Client, as applicable, fails to bring in the additional margin within the specified period then the trades will be cancelled and penalty will be levied to the Member or the Client as applicable. All other forms of margin collected by the exchange till such time may also be impounded.

- 6.3 Ad hoc Margin:** The Exchange may collect any ad hoc margins from time to time in case if it is observed that the available margins collected by the Exchange are inadequate to cover the risks. Prior intimation of the same will be provided to the Members or the Clients, as applicable.
- 6.4** Each of the above namely Initial Margin, Additional Margin and Ad-hoc Margin as the case may be shall be payable and be paid in cash or such non cash security or collateral as the Exchange may notify from time to time. If there is a surplus deposit lying with the Exchange towards margin, the additional deposit will be refunded to the Member or the Client, as applicable.
- 6.5** The Member or the Client, as applicable, will get information regarding Additional Margin requirement, through file transfer protocol (FTP) at end of the trading session. In case the Member or the Client, as applicable, does not have adequate Cash / Non-cash collaterals, the Member or the Client, as applicable, at the entire discretion of the Exchange, can be barred from further trading on the Exchange.
- 6.6** The Exchange automatically on its own may not adjust the unutilized additional margin in the other market segments against the margins applied in TAM segment and vice versa.

## 7. Risk Management System

- 7.1** At the time of submission of the order, Exchange will verify the availability of Initial Margin and the order would be accepted only if sufficient funds are available under this head. Initial Margin shall be in form of cash or non-cash as may be specified in the contract specifications. Further the orders will not be accepted if earlier calls for additional, and ad-hoc margins, have not been fulfilled. The Members or the Clients, as applicable, will be allowed to take exposure on the initial security deposit as decided by the Exchange. Thereby a Member can put an order to buy or sell in a contract as per his available exposure with the Exchange. Exchange has the right to give exposure limits based on the bank balance or available margins of such Member, or Client as the case may be, or both.
- 7.2** Additional Margins in the form of cash / non cash collaterals has to be paid by the Member or the Client, as applicable, to the Exchange as per the Contract Specification and as per the Trading and Settlement Calendar. In case if the Member or the Client, as applicable, fails to bring in the required Additional Margin as per the schedule mentioned, then the Exchange can cancel the trade and may impound the available Initial Margin and Additional Margin and also recover penalty from the member or the Client, as applicable,
- 7.3** During the entire tenure of the contract, Exchange will monitor traded price of a contract with that of the price of the contract with same underlying traded earlier and in case of change in the Prices between two trading sessions. Exchange will have the right to collect from its members an Ad hoc margin during the tenure of the contract to cover any additional risk arising out of Price Movement in the Market.
- 7.4** Types of Financial and delivery defaults and penalties levied thereof:

#### 7.4.1 Financial defaults can be of two types:

**7.4.1.1 Margin default:** In case if a Member or a Client, as applicable, fails to bring in the Additional margin after the trade, on the day of trade or as per the timelines provided in the respective contract specification, the Exchange may cancel the trade and impose penalty on the defaulting Member or Client, as the case may be, equivalent to 5% and 1% of the trade value for the contracts up to 15 days and beyond 15 days respectively or as may be specified by the Exchange from time to time. In case of margin default in Any Day(s) Single Sided Contracts, the Exchange shall impose penalty equivalent to initial margin collected from Seller in Reverse auction. The Exchange will withhold the Initial Margins and send non-cash collateral for liquidation, if any, to collect the penalty amount. The penalty amount will then be passed on to the counter party as compensation after adjustment of charges, if any, and deducting administrative charges for the Exchange which will be 5% of the penalty amount. subject to maximum of Rs. 10,000 (including taxes). Similarly, in case if a Member or a Client fails to pay Ad hoc margins demanded by the Exchange, the Exchange will have the right to take all the above mentioned actions against the Member or the Client, as applicable.

**7.4.1.2 Funds pay in default:** In case if a Buyer Member or a Client, as applicable, fails to make good the funds pay in on any of the pay in day, the Exchange will be at liberty and has the power and discretion to terminate the contract and initiate appropriate action against such Member or the Client, as the case may be. The total margins collected till that period will be withheld and sent for liquidation. An amount equivalent to shortfall in contracted quantity at the rate of 20% of the trade price i.e.  $[(\text{contracted quantity} - \text{delivered quantity}) * \text{trade price} * 0.20]$  or as may be specified by the Exchange from time to time shall be imposed as penalty. The penalty amount shall be passed on as compensation to the counterparty after adjustment of applicable charges, if any and deducting administrative charges for the Exchange which will be 5% of the penalty amount subject to maximum of Rs. 10,000 (including taxes). Similarly, in case if a Member or a Client fails to pay Ad hoc margins demanded by the Exchange after application is submitted, the Exchange will have the right to take all the above mentioned actions against the Member or the Client, as applicable.

#### 7.4.2 Delivery defaults can be of following types:

**7.4.2.1 Failure to receive SLDC clearance:** In case, the Exchange does not receive the SLDC clearance as per the scheduled time from the Member, the Exchange may cancel the trade and impose penalty on the defaulting Member or Client, as applicable, equivalent to 5% and 1% of the trade value for the contracts up to 15 days and beyond 15 days respectively or as may be specified by the Exchange from time to time. In case of Any Day(s) Single Sided Contracts, the Exchange shall impose penalty equivalent to initial margin collected from Seller in Reverse auction. The Exchange will withhold the Initial Margins and send non-cash collateral for liquidation, if any, to collect the penalty amount. The penalty amount will then be passed on to the counter party as compensation after adjustment of applicable charges, if any, and deducting administrative charges for the exchange which will be 5% of the penalty amount subject to maximum of Rs. 10,000 (including taxes).

**7.4.2.2 Failure in Seller's ability to deliver:** In case of failure in delivery by Seller, the difference between the traded quantity and actual delivery is settled under Deviation Settlement Mechanism.



**7.4.2.3 Revision of Schedule:** Exchange shall not revise the schedule once application for schedule has been made. In case System Operator on account of reasons other than force majeure or constraints in the transmission corridor revises the schedule, a penalty shall be imposed on defaulting Member or Client, as the case may be. The penalty amount will be equivalent to shortfall in contracted quantity at the rate of 20% of the trade price i.e.  $[(\text{contracted quantity} - \text{delivered quantity}) * \text{trade price} * 0.20]$  or as may be specified by the Exchange from time to time. The penalty amount shall be passed on to counterparty as compensation after adjustment of applicable charges, if any, and deducting administrative charges for the Exchange which will be 5% of the penalty amount. subject to a maximum of Rs. 10,000 (including taxes). The penalty amount shall be passed on to the counterparty at the end of the contract duration or at the time of cancellation of the contract. If the duration of the contract is more than a month/30 days then the computation of penalty amount and passing on that as a compensation to the counterparty shall be carried out on a monthly/30 days basis.

**7.4.2.4** Amount for everyday Pay-in and Pay-out shall be on net basis and the member will be responsible for settling funds obligation between its client's pay-in and pay-out.

## 8. Surveillance

- 8.1** In order to ensure market integrity and to avoid market abuses, the Exchange will use various on-line and off-line surveillance tools. The Exchange shall have the right to take appropriate actions in such cases, which are discussed as under.
- 8.2** Validation of orders: Members are required to ensure that bids and offers are in conformity with relevant regulatory provisions. In order to avoid any abnormal orders being put by the Exchange Members like high bid price or bid quantity, the Exchange will validate such orders either through software or manually on a daily basis, wherever possible. Further, the order value of the Member will also be compared with the available limits of such Member for any over utilization. Members are required to ensure that the bids are for the quantity registered with the Exchange for trading which shall be on the basis of their capacity to arrange open access from their respective SLDC. In case the quantity is beyond the above limits, then Exchange will have right to cancel or modify one or more order.
- 8.3 Price movement:** The Exchange will observe any variation in prices as compared to past data. Further, the price movement in the Exchange shall be correlated with that of the bilateral markets that is available with the Exchange.
- 8.4 Market behavior:** The Exchange shall compare the trend in other national or bilateral markets with that of the Exchange. Any unwarranted change in the price pattern or order trend in this will be brought under the notice of the Exchange management.
- 8.5 Correlation with Deviation Settlement Mechanism (DSM):** The trend in the DSM rate and the prices in the Exchange shall be compared for any major differences. In case of individual Member its trend of trading on the Exchange shall also be compared with his DSM obligations.
- 8.6 Price rigging, concentration, price manipulation and other market abuses:** The Exchange will monitor concentration, price rigging, price manipulation and other market abuses and take suitable actions whenever such practices are identified.

## 9. Delivery procedure

- 9.1** All Contracts (trades) shall be for delivery of power as per the requisition submitted by the Exchange and scheduled by NLDC / RLDCs / SLDCs subject to following conditions:
  - i. the contracts are settled only by physical delivery without netting;

- ii. the rights and liabilities of parties to the contracts are not transferable;
  - iii. no such contract is performed either wholly or in part by any means whatsoever, as a result of which the actual delivery of electricity covered by the contract or payment of the full price therefor is dispensed with;
  - iv. no circular trading shall be allowed and the rights and liabilities of parties to the specific delivery contracts shall not be transferred or rolled over by any other means whatsoever;
  - v. the trading shall be done only by authorized grid connected entities or trading licensees on behalf of grid connected entities, as participants;
  - vi. the contracts can be annulled or curtailed, without any transfer of positions, due to constraints in the transmission system or any other technical reasons, as per the principles laid down by CERC in this regard. However, once annulled, the same contract cannot be reopened or renewed in any manner to carry forward the same transaction.
  - vii. The capacity offered, as a sell bid in the contracts from a resource in the same time-block, shall be separate and non-overlapping. Non-compliance of the same by any of the parties to the transaction shall lead to its debarment as a member or client and/or revocation or suspension of registration, along with the other actions for market abuse taken under the PMR 2021 and other applicable Regulations of the Commission.
- 9.2** Delivery Point: The delivery point of all the contracts shall be at the Seller's injection point /State Periphery/Regional Periphery as may be specified by the Exchange in accordance with the provisions of applicable regulations and procedures.
- 9.3** Unless otherwise specified by any procedure or regulations, after finalization of successful trades, the Exchange will send details to both the counter parties to obtain concurrence from their respective SLDC. The participants would be required to submit these concurrences in the prescribed Format in accordance with the 'Procedure for Scheduling of Bilateral Transactions' and as specified in the Trading & Settlement Calendar issued by the Exchange time to time. Exchange will make application for scheduling as per the schedule mentioned in the Trading & Settlement Calendar. In case if the "Concurrence from SLDC" received from both the parties does not match with each other, the Exchange will consider the minimum of the two quantity for the purpose of the application for scheduling.
- 9.4** The Buyer shall accept the decision on routes that may be available to carry the power without any reservation. Buyer will be deemed to have consented for all possible routes for delivery of the power; however, they can give preference amongst the possible routes along with the concurrence. In absence of any preference from the buyer, the Exchange at its absolute discretion can decide the route through which application is to be made and also the alternate routes to be mentioned in such application.
- 9.5** Nodal RLDC's acceptance for scheduling will be binding on both buyers and sellers. In case of anticipated congestion in one or more transmission corridor, the Exchange will have the right to participate in the electronic bid on behalf of the Members as per the guidelines laid down in the 'Procedure for Scheduling of Bilateral Transactions'.
- 9.6** Trade once executed shall not be revised except as provided in the Contract Specification and shall be sent for scheduling as per the Trading and Settlement Calendar. The schedule shall not be revised during the delivery period except as provided in the Contract Specification.
- 9.7** Any shortage or excess delivery of electricity from the total schedule will be settled by the respective participants under Deviation Settlement mechanism as per the procedure laid down by the CERC or any other settlement system as prescribed by concerned SERC.

- 9.8 Taxes, duties, cess and other levies:** The price of all the Contracts shall be quoted at delivery point excluding the transmission charges, losses, scheduling and system operation charges, taxes, duties, cess, surcharge and other levies and the same shall be borne by the Buyers or Sellers as applicable.
- 9.9 Metering of electricity:** Arrangement for metering shall be made by the Seller/Buyer as per the requirements of respective SLDC / RLDC. Members and the relevant authority shall be responsible to resolve the issues related to metering of electricity. Members shall indemnify and keep indemnified the Exchange from any disputes related to metering.
- 9.10 Transmission Losses:** Seller shall bear in kind the transmission/ distribution losses, if any, from its own interface up to the delivery point. Buyer shall be required to bear in kind all the transmission/ distribution losses from the delivery point up to its own interface. Transmission loss percentage for the respective transmission system as applicable at the time of actual delivery shall be applied for deriving scheduled quantities at various points in the transmission route in accordance with the Procedure for Scheduling of Bilateral Transaction and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.
- 9.11 Transmission Charges:** All the transmission charges shall be calculated on the total quantum of power scheduled at seller's Regional Periphery. Seller shall pay for the transmission charges and Wheeling Charges (wherever applicable) up-to the point of delivery and Buyer shall bear all the charges for enroute regional transmission system and also the transmission and wheeling charges (wherever applicable) for its respective State grid in accordance with the Procedure for Scheduling of Bilateral Transaction and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time..
- 9.12 Scheduling and Operating charges:** Seller will pay for the Scheduling and Operating charges up to delivery point i.e. for the concerned RLDCs /SLDCs involved in transaction. Buyer will bear all the Scheduling and Operating charges from its interface up to delivery point i.e. for the concerned RLDCs /SLDCs involved in transaction. Application fees for the Nodal RLDC will be paid by the buyer.
- 9.13** All Transmission, Wheeling charges, Scheduling, Operating charges and application fees will be paid to the concerned RLDC/SLDCs as per advice received from them and the same will be recovered from the buyers and sellers.
- 9.14** The Application fee for processing the 'Concurrence from SLDC' shall be paid by Buyer and Seller for their respective SLDCs.
- 9.15 E bidding consent:** In the event, it is reiterated that the implementation of the contract finalized between the Buyer and the Seller through Power Exchange shall be subject to the availability of the transmission capacity and constraints in the system. In the event of anticipated congestion in one or more transmission corridor and a need for participating in the e-bidding for securing transmission corridor as per the guidelines laid down in the procedure for scheduling of bilateral transaction, the following shall apply:
- 9.15.1 The Exchange will have the right to participate in the e-bidding on behalf of the Members as per the above guidelines for bilateral transactions;
  - 9.15.2 In case of more than one transaction contracted through the Exchange, the Exchange will have the right to participate in the e-bidding for both the transactions;
  - 9.15.3 Each of the Buyer participating in the transaction through the Exchange shall notify to the Exchange the maximum transmission charges for which the Exchange can bid on his behalf.

- 9.15.4 In case any of the Buyer participating in the Exchange is not willing to give consent for e-bidding, there will be an automatic reduction in the contracted quantity for such Buyer and the schedule for dispatch of the related quantum affected by the anticipated congestion may not be implemented, although the Exchange will forward to the concerned RLDC the request for scheduling subject to the availability of the transmission capacity;
- 9.15.5 In case the Buyer notifies the maximum transmission charges to which they are agreeing to pay, the Exchange will participate on behalf of the respective Buyer in the e-bidding up to the same limit;
- 9.15.6 The decision on the person entitled to the transmission corridor based on e-bidding taken by the concerned RLDC shall be binding on the parties.

## **10. Transaction fees**

The Exchange will charge a transaction fee as may be specified by the Exchange from time to time on the transactions carried through the Exchange subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchases and sales separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member or the Clients, as applicable.

## **11. Reports**

- 11.1 After end of trading session, the Exchange will download the reports to the Members which consist of Trade file Report, Provisional Obligation Report, Final Obligation Report and other relevant matters.
- 11.2 Based on the Exchange's Reports, the Members can inform their Clients about their successful trades along with their obligation.

## **12. Force Majeure**

- 12.1 Any condition which in the opinion of System Operator is a Force majeure condition including curtailment imposed by System Operator in scheduling of power due to constraints in the transmission system.
- 12.2 The contracted power will be treated as deemed reduced for the period of Force majeure as may be validated by the concerned System Operator without any liability on Buyer and Seller.

**Annexure B21****Contract Specification: Daily Contracts**

S. No.	Item	Details
1.	Contract Name	Daily Contracts (DLY)/ High Price Daily Contracts (HP-DLY)
2.	Contract Type	National or Electrical Region-specific contracts for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER) or combination thereof for physical delivery of electricity, as may be notified by the Exchange.
3.	Delivery Duration	Daily contracts for delivery in a calendar day will be available starting from T+2 day to maximum up to T+90 days on a rolling basis. (T-Trade Day)
4.	Trading day*	Trading will be available on the days as per Trading and Settlement calendar declared in advance
5.	Bidding Session*	Bidding session will be made available to the Members/Clients for bidding on each Trading Day on Daily Basis up to two days before delivery day separately for Daily Contracts and High Price Daily Contracts.
6.	Bidding Timeline*	00:00 hours to 24:00 hours on trading days.
7.	Bidding process	Sellers and Buyers to submit order specifying duration, quantum in MW and price in Rs./MWh.
8.	Price Discovery and Matching methodology	Uniform Price Step Open Auction
9.	Minimum Volume Quotation*	1 MW
10.	Minimum Volume Step*	1 MW
11.	Lot size*	1 MW * 15 minutes or combination thereof as may be notified by Exchange from time to time.
12.	Maximum bid size	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the Member/Clients to adhere to this rule.
13.	Price Quote	Rs. per MWH (excluding all fees, charges, taxes etc.)
14.	Price Tick*	Rs. 1 per MWh
15.	Quantity Variation	No quantity variation allowed.
16.	Risk Management Mechanism*	<p>a) <u>Initial Margins (Operational Limit)</u> Initial Margins equivalent to 5% of the order value or as may be specified by the Exchange from time to time will be collected from the Members/Clients (both from buyer &amp; seller) at the time of bidding. The initial margins could be in the form of cash or non-cash or combination of both. In the absence of initial margins, the Members/Clients will not be allowed to place the bids.</p> <p>b) <u>Additional Margins (Basis Margin)</u></p>



		<p>After the trade and prior to submitting Application before the concerned Load Dispatch Center for scheduling, Additional Margin equivalent to the 50% of the Trade Value or as may be specified by the Exchange based on risk assessment, will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margin</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as Pay in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
17.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of change in schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
18.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity.
19.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the exchange from time to time, as approved by the Commission.
20.	Delivery Mechanism	<p>a) <u>Delivery:</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery point:</u> The delivery point shall be at Seller's injection point/Regional/State Periphery, as may be specified by the Exchange.</p> <p>c) <u>SLDC Clearance:</u> Post trade, in case of buyer/seller connected to State transmission or distribution system, the buyer/seller shall provide concurrence of SLDC of their respective State to the Exchange. The concurrence shall be submitted to the Exchange as per the timelines specified in the Trading &amp; Settlement calendar. In case of any mismatch between the buyer and seller</p>

		<p>concurrence in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. In case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller. To participate in HP-DLY Contracts, Sellers shall be required to provide valid NOC/Standing Clearance/concurrence issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in High Price Contracts.</p> <p>d) <u>Application for Scheduling:</u>  Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Settlement Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on a best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses:</u>  Seller shall bear the Transmission charges, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear the Transmission charges, Scheduling &amp; Operating charges including Application Fees and Transmission Losses, as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route:</u>  The buyer will be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule:</u>  No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p>
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		<p>h) <u>E-bidding:</u>  In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.</p>
21.	Payment of Application Fees & Charges:	Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on the receipt of the acceptance from the nodal LDC.
22.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/ cancelled and penalty may be imposed on the defaulting entity as per Clause 7.4 of Schedule B2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/revision of the contract, after adjustment of charges, if any, and deduction of Exchange administrative charges.
23.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members



**Contract Specification: Weekly Contracts**

S. No.	Item	Details
1.	Contract Name	Weekly Contracts (WK)/ High Price Weekly Contracts (HP-WK)
2.	Contract Type	National or Electrical Region-specific contracts for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER) or combination thereof for physical delivery of electricity, as may be notified by the Exchange.
3.	Delivery Duration	The weekly contracts will be available for trading for calendar Weeks from Monday to Sunday from TW+1 week to maximum up to TW+12 weeks on a rolling basis. (TW-Trade Week).
4.	Trading day	Trading will be available on the days as per Trading & Settlement calendar declared in advance.
5.	Bidding Session	Bidding session will be made available to the members/Clients on each Trading Day from Monday to Friday for next week onwards separately for Weekly contracts and High Price Weekly Contracts.
6.	Bidding Timeline*	12:00 P.M. to 5.00 PM on trading days.
7.	Bidding process	Sellers and Buyers to submit order specifying duration, quantum in MW and price in Rs./ MWh.
8.	Price Discovery and Matching Methodology	Uniform Price Step Open Auction
9.	Minimum Volume quotation*	1 MW
10.	Minimum Volume Step*	1MW
11.	Lot size*	1 MW * 15 minutes or combination thereof as notified by exchange from time to time.
12.	Maximum bid size	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the Member or the Clients to adhere to this rule.
13.	Price Quote	Rs. Per MWH (excluding all fees, charges, taxes etc.)
14.	Tick size*	Rs. 1 per MWH
15.	Quantity Variation	No quantity variation allowed.
16.	Risk Management Mechanism*	<p>a) <u>Initial Margins (Operational Limit)</u> Initial Margins equivalent to 5% of the order value or as may be specified by the Exchange from time to time will be collected from the Members/Clients (both from buyer &amp; seller) at the time of bidding. The initial margins could be in the form of cash or non-cash or combination thereof. In the absence of initial margins, the Members/Clients will not be allowed to place the bids. .</p> <p>b) <u>Additional Margins (Basis Margin)</u></p>

		<p>After the trade and prior to submitting Application before the concerned Load Dispatch Center for scheduling of transactions, Additional Margin equivalent to the 50% of the Trade Value or as may be specified by the Exchange based on risk assessment, will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non-receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margin</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as Pay in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
17.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of change of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
18.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade and partial quantity has been scheduled, the contracted quantity shall be equal to sum of quantity scheduled and balance trade quantity to be delivered.
19.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point, as specified by the Exchange from time to time, as approved by the Commission.
20.	Delivery Mechanism	<p>a) <u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery point</u> The delivery point shall be at Seller's injection point/Regional/State Periphery, as may be specified by the Exchange.</p> <p>c) <u>SLDC Clearance</u> Post trade, in case of buyer/seller connected to State transmission or distribution system, the buyer/ seller shall provide concurrence of SLDC of their respective State to the Exchange. The concurrence shall be submitted to the</p>

		<p>Exchange as per the timelines specified in the Trading &amp; Settlement calendar. In case of any mismatch between the buyer and seller concurrence in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. In case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller. To participate in HP-WK Contracts, Sellers shall be required to provide valid NOC/Standing Clearance/concurrence issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in High Price Contracts.</p> <p>d) <u>Application for Scheduling</u>  Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Settlement Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses</u>  Seller will bear the Transmission, Scheduling &amp; Operating charges and Transmission and wheeling Losses (in kind), as applicable, up to the delivery point and Buyer shall bear all the Transmission charges, Scheduling &amp; Operating charges including Application Fees and Transmission Losses (in kind), as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route</u>  The buyer will be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule</u>  No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p> <p>h) <u>E-bidding</u>  In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will</p>
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		collect the requisite amount from the concerned member/client before e bidding.
21.	Payment of Application Fees and Charges	Application fees shall be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on receipt of the acceptance from the nodal LDC.
22.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 7.4 of Schedule B2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/ revision of the contract after adjustment of charges, if any and deduction of Exchange administrative charges.
23.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

**Annexure B23**

Contract Specification: Monthly Contracts		
S. No.	Item	Details
1.	Contract Name	Monthly Contracts (MTH) / High Price Monthly Contracts (HP-MTH)
2.	Contract Type	National or Electrical region-specific contracts for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER) or combination thereof for physical delivery of electricity, as may be notified by the Exchange.
3.	Delivery Duration	The Monthly contracts will be available for calendar Months from TM+1 Month to maximum up to TM+3 Months on a rolling basis. (TM-Trade Month)
4.	Trading day	Trading will be available on the days as per Trading & Settlement calendar declared in advance.
5.	Bidding Session	Bidding session will be made available to the members/Clients for bidding on each Trading Day separately for Monthly contracts and High Price Monthly Contracts. From <ul style="list-style-type: none"> <li>First Day of the zero Month (M0)</li> </ul> To <ul style="list-style-type: none"> <li>For the first month (M1) contract –ten days prior to the end of zeroth month (M0);</li> <li>For the second month (M2) contract – five days prior to the close of zero month (M0);</li> <li>For the third month (M3) contract – last day of zero month (M0).</li> </ul>
6.	Bidding Timeline*	12:00 PM to 05:00 PM on trading days
7.	Bidding process	Sellers and Buyers to submit order specifying duration, quantum in MW and price in Rs/MWh.
8.	Price Discovery and Matching Methodology	Uniform Price Step Open Auction
9.	Minimum Volume quotation*	1 MW
10.	Minimum Volume Step*	1MW
11.	Lot size*	1 MW * 15 minutes or combination thereof as notified by Exchange.
12.	Maximum bid size	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the Member or the Clients to adhere to this rule.
13.	Price Quote	Rs. per MWH (excluding all fees, charges, taxes etc.)
14.	Tick size*	Rs. 1 per MWH
15.	Quantity Variation	No quantity variation allowed.
16.		a) <u>Initial Margins (Operational Limit)</u>

	Risk Management Mechanism*	<p>Initial Margins equivalent to 1% of the order value or as may be specified by the Exchange from time to time will be collected from the Members/Clients (both from buyer &amp; seller) at the time of bidding. The initial margins could be in the form of cash or non-cash or combination of both. In the absence of initial margins, the Members/Clients will not be allowed to place the bids.</p> <p>b) <u>Additional Margins (Basis Margin)</u> After the trade and prior to submitting Application before the concerned Load Dispatch Center for scheduling, Additional Margin equivalent to the 20% of the Trade Value or as may be specified by the Exchange based on risk assessment will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margin</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as pay in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
17.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of revision of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
18.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade, and partial quantity has been scheduled, the contracted quantity shall be equal to sum of quantity scheduled and balance trade quantity to be delivered.
19.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the exchange from time to time, as approved by the Commission.
20.	Delivery Mechanism	<p>a) <u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery point</u> The delivery point shall be at Seller's Injection point/Regional/State Periphery as may be specified by requisitioner.</p>



		<p>c) <u>SLDC Clearance</u>  Post trade, in case of buyer/seller is connected to State transmission or distribution system, the buyer/seller shall provide concurrence of SLDC of their respective State to the Exchange for the traded quantity. The concurrence shall be submitted to the Exchange as per the timelines specified in the trading calendar. In case of any mismatch between the buyer and seller concurrence in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. In case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller. To participate in HP-MTH Contracts, Sellers shall be required to provide valid NOC/Standing Clearance/concurrence issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in High Price Contracts.</p> <p>d) <u>Application for Scheduling</u>  Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Delivery Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses</u>  Seller will bear the Transmission, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear all the Transmission, Scheduling &amp; Operating charges including Application Fees and Transmission Losses (in kind), as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route</u>  The buyer shall be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule</u>  No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p> <p>h) <u>E-bidding</u>  In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e-bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price</p>
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		quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.
21.	Payment of Application Fees and Charges	Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on receipt of the acceptance from the nodal LDC.
22.	Default & penalties*	In case of default, the future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 7.4 of Schedule B2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/revision of the contract after adjustment of charges, if any, and deduction of Exchange administrative charges.
23.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.



<b>Contract Specification: Any-Day(s) Single Sided Contracts</b>		
<b>S. No.</b>	<b>Item</b>	<b>Details</b>
1.	Contract Name*	Any-Day(s) Single Sided Contracts (ADY) / High Price Any-Day(s) Single Sided Contracts (HP-ADY)
2.	Contract Type	Contracts for physical delivery of electricity
3.	Delivery Duration*	Any-Day(s) Single Sided contracts will be available for user defined Day(s) and hour(s)/time block(s) from T+2 day to maximum upto T+90 days (T-Trade Day)
4.	Trading day*	Trading will be available on the days as per Trading & Settlement calendar declared in advance.
5.	Bidding session*	Bidding sessions will be made available to the members/Clients for bidding on each Trading Day on Daily basis upto 2 days before delivery as per Trading & Settlement calendar.
6.	Bidding Timeline*	00:00 hours to 24:00 hours on trading days or as per Trading & Settlement calendar.
7.	Bidding process	<u>Reverse Auction</u> : Buyer to specify its requirement in terms of quantum in MW and duration. Sellers to bid their offers specifying quantum in MW and Price in Rs/MWh against the requirement of buyer during the auction window. Buyer and Seller may also specify minimum quantum. The bidding shall take place in 2 stages i.e. Initial Price Offering (IPO) and Reverse Auction. In case, Buyer opts for HP-ADY contract, only High Price Contract eligible Sellers shall be permitted to place bid in such contract.
8.	Price Discovery and Matching Methodology	Reverse Auction for buyer's requisition in terms of Schedule B2 of the IEX Business Rules.
9.	Minimum Volume quotation*	1 MW
10.	Minimum Volume Step*	1MW
11.	Minimum Requisition/Offer Quantity	Bidder while initiating the Reverse Auction will have to submit a minimum requisition or offer quantity of 500 MWhr or as may be specified by the Exchange from time to time
12.	Lot size*	1 MW * 15 minutes or combination thereof.
13.	Maximum bid size*	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the member/Clients to adhere to this rule.
14.	Price Quote	Rs. per MWh (excluding all fees, charges, taxes etc.)
15.	Tick size*	Rs. 1 per MWh
16.	Quantity Variation	No quantity variation allowed.
17.	Risk Management Mechanism*	a) <u>Initial Margins (Operational Limit)</u> The buyer has to pay a nominal non-refundable fee up to Rs. 1,00,000 or as may be specified by the Exchange for initiating

		<p>the reverse auction. This fee will be adjusted in the additional margins to be collected from buyer after the successful execution of the contract.</p> <p>The seller will be required to provide an initial margin calculated at the rate of 30000/MW/Month or part thereof, or as may be specified by the Exchange, at the time of bidding in the Reverse Auction. The initial margin can be in the form of cash or non-cash collateral. If a seller gets eliminated during the Reverse Auction or the trade gets rejected by Buyer, the initial margin as collected will be refunded to the seller. If the seller gets selected, then the initial margin will get adjusted with the Additional Margin to be collected from the seller.</p> <p>In absence of adequate initial margin, seller will not be allowed to place bid.</p> <p>b) <u>Additional Margins (Basis Margin)</u> On acceptance of the trade and prior to submitting Application before the concerned Load Dispatch Center for scheduling, Additional Margin equivalent to 50%, 25%, and 20% of the Trade Value for contracts up to 7 days, 15 days and beyond 15 days respectively or as may be specified by the Exchange from time to time will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margin</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as pay-in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
18.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of revision of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
19.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade and partial quantity has been scheduled, the contracted quantity shall be equal to sum of quantity scheduled and balance trade quantity to be delivered.

20.	Right to Reject	After the Reverse Auction, the Buyer may partially or fully reject the trade within the timelines as may specified by the Exchange from time to time. During such time, the bid will remain valid and the successful bidders will not be able to change their bid. In case no communication is received from the Buyer regarding acceptance of the trade or on non-payment of additional margin, within stipulated time, the trade shall be deemed to be rejected by the Buyer.
21.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the exchange from time to time, as approved by the Commission.
22.	Delivery	<p>a) <u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery point</u> The delivery point shall be as may be specified by the Exchange.</p> <p>c) <u>SLDC Clearance</u> Post trade, in case of buyer/seller is connected to State transmission or distribution system, the buyer/seller shall provide concurrence of SLDC of their respective State to the Exchange for the traded quantity. The concurrence shall be submitted to the Exchange as per the timelines specified in the trading calendar. In case of any mismatch between the buyer and seller NOC in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. Except otherwise provided, in case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller. To participate in HP-ADY Contracts, Sellers shall be required to provide valid NOC/Standing Clearance/concurrence issued by respective Load Dispatch Centre specifying maximum quantum and endorsement of eligibility to participate in High Price Contracts.</p> <p>d) <u>Application for Scheduling</u> Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Delivery Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses</u> Seller will bear the applicable Transmission, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear applicable Transmission, Scheduling &amp; Operating charges including Application Fees and Transmission Losses (in kind),</p>

		<p>as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route</u> The buyer shall be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule</u> No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p> <p>h) <u>Cancellation of trade</u> The Buyer who has initiated Reverse Auction shall have the right to partially or fully reject the trade within the timelines (maximum 2 days before delivery start) as may be specified by the Exchange.</p> <p>i) <u>E-bidding</u> In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e-bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.</p>
23.	Payment of Application Fees and Charges	Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on the next day of receiving the acceptance from the nodal LDC.
24.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 7.4 of Schedule B2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/ revision of the contract after adjustment of charges, if any and deduction of Exchange administrative charges.
25.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

## SCHEDULE C: RENEWABLE ENERGY CERTIFICATE (REC) MARKET

### 1. Introduction

This market segment will cover Renewable Energy Certificate contracts in accordance with CERC (Terms and Conditions of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2022 as amended from time to time.

- 1.1 REC Market will operate in accordance with the procedures issued by Central Agency for trading of RECs.
- 1.2 This market segment will cover Renewable Energy certificates which are issued to eligible entities for generation of electricity Based on renewable energy sources.
- 1.3 All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc, will be as per specific rules mentioned herein.

### 2. Membership

- 2.1 The different terms and conditions for Members of the Exchange is defined in the Rules. The Member shall be governed by Regulation 26 of CERC (Power Market) Regulation, 2021. Additional eligibility conditions, if any, for Members to participate in REC segment will be notified by the Exchange from time to time through circulars.

### 3. Client

- 3.1 A separate category of Client is introduced for the participants who wish to trade only RECs at the Exchange.
- 3.2 A Member, trading for his own account or on behalf his Clients, shall pay the Exchange, Annual Client Fees, as decided by the Exchange. Exchange, on receipt of such client fee shall issue a registration identification code.

### 4. Fees and Charges

- 4.1 The detail of the Fees and charges are specified in Clause 5.4 of the Business Rules. The Member and Client who wish to register and trade in REC segment shall pay such fees and charges as decided by the Exchange from time to time

### 5. Trading Days

- 5.1 The Exchange shall operate on days as notified by the Exchange in advance for each calendar year in accordance with detailed procedure issued by the Central Agency.

### 6. Trading hours

- 6.1 Trading hours shall be as per approved detailed procedure issued by the Central Agency.

## 7. Market Operations

- 7.1 REC Market segment will operate in accordance with the procedures issued by Central Agency for trading of RECs. The REC market operations and the exact time schedule relating to pay in and pay out activities shall be adhered by all the Exchange Members in order to have smooth and orderly operations of the Exchange.
- 7.2 Summary of terms and conditions of the contract is as specified in Contract Specifications at **Annexure C1**.

## 8. Trading phases

### 8.1 Pre-trade phase

The Exchange will validate available margins of the Buying participants required as per contracts specifications. Members will be allowed to place orders upto the available margins.

### 8.2 Order accumulation phase (Bidding phase)

Bidding session also referred to as the Order call period will start from 13.00 Hrs to 15.00 Hrs on the trading days specified as per the REC Trading calendar published from time to time. Orders entered by the direct access clients shall be treated as orders entered by Members. The orders collected during the order accumulation phase will not be visible to the market participants.

### 8.3 Order matching and trade finalization phase

At the end of the bidding phase, the trading platform will seek to match orders. During this matching process, orders cannot be entered into the trading platform, and orders already entered cannot be cancelled or modified. A report of all offers received by the exchange shall be prepared in the format approved by the Central Agency and would be sent to the Central Agency. Central Agency will verify availability of sufficient number of certificates in the sellers account and confirm the same to the exchange. In case, based on the report received from the Central Agency it is found that sufficient number of certificates are not available in the account of the seller, his offer shall be rejected. All bids and offers (after rejecting offers as mentioned above) are aggregated and Market Clearing Price and Market Clearing Volume shall be determined by 16.30 Hrs.

After the final market clearing price and volume determination phase is concluded by 16.30 Hrs, Members, whose orders have been executed, will be provided all relevant trade information regarding final trade on the trading platform. The Exchange shall also inform the Central Agency about the same by 17.00 Hrs.

### 8.4 Obligation determination process (Settlement Phase)

After end of the order matching and trade finalization phase, an obligation report will be generated by the Exchange at 17.00 Hrs, which will provide the quantity and amount of pay in / pay out and transaction fee payable etc. The Exchange will advise the Clearing Banks for transfer of pay-in at 17.00 hrs and pay-out at 11.00 hrs of next bank working day to / from Member's accounts.



**8.5 Delivery phase**

On the basis of trade finalized, Central Agency shall extinguish the requisitioned number of RECs from the respective seller's account by 18.00 Hrs of the trade day. Information would be sent to the Central Agency as per the agreed data interchange formats. The Exchange shall also send a written invoice to all the successful buyers and sellers by 17.30 Hrs stating the total number of RECs purchased / sold by them along with the unique identification code for each transaction.

8.6 The information regarding Market Clearing Price and Market Clearing Volume shall be posted on the website by 18.00 Hrs.

8.7 The Exchange shall issue an electronically printable certificate as per format prescribed by CERC at **Annexure C2**, along with the REC account statement pertaining to such certificate, to the Buyers within five days of trading.

8.8 The Exchange timelines are as under. They are subject to change as per procedure specified by the Central Agency towards implementation of REC mechanism as approved by CERC and Central Electricity Regulatory Commission (Terms and Conditions of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2022.

TIME on TRADE DAY	DETAILS
<b>Pre-trade Phase:</b>	
By 12.00 Hrs	Exchange to check initial margin check for Members
<b>Order Accumulation phase (Bidding)</b>	
13.00 Hrs to 15.00 Hrs	Order Accumulation
<b>Order matching and trade finalization</b>	
By 15.30 Hrs	<ul style="list-style-type: none"> <li>Exchange to send details of maximum offer placed by Sellers to Central Agency</li> </ul>
By 16.00 Hrs	<ul style="list-style-type: none"> <li>Central Agency to send report confirming valid RECs with Eligible Entities</li> </ul>
By 16.30 Hrs	<ul style="list-style-type: none"> <li>Finalization of trade results after removal of defaulters' orders</li> <li>Exchange to inform participants about trade results</li> </ul>
By 17.00 Hrs	<ul style="list-style-type: none"> <li>Exchange to inform Central Agency the details of buyers and sellers</li> </ul>
<b>Settlement Phase</b>	
By 17.00 Hrs	<ul style="list-style-type: none"> <li>Files to be sent by Exchange to banks for actual debits/ (Pay-in)</li> </ul>
By 11.00 Hrs (next bank working day)	<ul style="list-style-type: none"> <li>Files to be sent by Exchange to banks for actual credits (Pay-out)</li> </ul>
<b>Delivery Phase</b>	
By 18.00 Hrs	<ul style="list-style-type: none"> <li>Central Agency to extinguish RECs in Seller's Account</li> </ul>
	<ul style="list-style-type: none"> <li>Exchange to raise invoices to each participant as proof of transfer of RECs.</li> </ul>

The above timelines shall be subject to change as per approved detailed procedure issued by the Central Agency.

## 9. Order management

### 9.1 Order types

The Exchange Members will be able to submit the following types of orders:

- a. **Single bid:** Single order will specify the price and quantity of RECs to be traded.

### 9.2 Modification and cancellation of orders:

A Member shall be permitted to modify or cancel his orders, during the trading hours.

### 9.3 Order validation

Orders entered into the Trading System shall be subject to various validation requirements as prescribed by the Exchange including price and quantity restrictions as decided by the Exchange. Orders that do not meet the validation checks will not be accepted by the Exchange. The Exchange shall specify from time to time price steps (tick size) in which orders shall be entered on the trading system of the Exchange.

## 10. Matching rules

- 10.1 All the Clients shall be assigned unique ID / Portfolio ID. The Exchange may launch more than one order book running either parallel or at different time spans. Subject to the approval of the CERC, the Exchange is also entitled to modify or change the matching rules relevant to any market or order books any time where it is necessary to do so.

### 10.2 Uniform Price Auction for Renewable Energy Certificates

The matching of bids will be done through Uniform Price Auction. The methodology used is described as below.

A Matching of the auction will only take place if there are crossing prices (buy price  $\geq$  Sell Price) in the order book, that is, if the best order price is equal to or higher than the best ask price. In that case, the equilibrium price is determined according to the following criteria:

1. Maximum tradable volume: The Equilibrium Price will be the price at which there is maximum tradable volume.
2. Minimum unbalance: If there is more than one price with equal value for maximum tradable volume, the price that leaves the least volume untraded at its level is chosen as Equilibrium Price.

If Auction Session has overlapping Buy and Sell orders resulting in at least 1 trade (if there are crossing prices i.e. best buy price  $\geq$  best Sell Price) then the system would use the below mentioned principles to determine that Session's Auction Uniform Price. If system achieves more than one potential Auction Uniform Price by Principle 1, then the algorithm would move to Principle 2 to narrow down the options and so



on. If any Principle achieves a single potential Auction Uniform Price, then that price would be assigned as that Session's Auction Uniform Price.

The Auction Uniform Price calculation logic is explained below with the help of an example:

The Order Book would be sorted on Best Buy and Best Sell basis for a product e.g. 'AUCREC SOLAR' at the end of the Auction session as below:

BUY			SELL		
Order	Qty	Price	Price	Qty	Order
A	4,500	825	831	290	J
B	28,200	824	828	11,420	K
C	1,900	822	826	21,650	L
S	49,700	820	825	8,500	M
D	8,000	819	823	1,900	N
E	16,400	818	820	17,500	O
F	5,400	815	819	3,600	P
G	900	814	818	11,600	Q
H	4,575	812			R

### 1) Principle: Determining the Maximum Tradable Volume

The principle would establish the **price(s)** at which **maximum tradable volume** would be **executed**. There would be two steps involved in applying this principle.

- a. **STEP 1** – Determine the Cumulative Buy and Sell quantities at each eligible price. The Cumulative Buy and Sell quantities at each price for 'XYZ' are as follows:

BUY		Price	SELL	
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity
0	0	831	290	76,460
0	0	828	11,420	76,170
0	0	826	21,650	64,750
4,500	4,500	825	8,500	43,100
32,700	28,200	824	0	34,600
32,700	0	823	1,900	34,600
34,600	1,900	822	0	32,700
84,300	49,700	820	17,500	32,700
92,300	8,000	819	3,600	15,200
108,700	16,400	818	11,600	11,600
114,100	5,400	815	0	0
115,000	900	814	0	0
119,575	4,575	812	0	0

- b. **STEP 2** – Establish the total tradable volume at each eligible price (i.e. Maximum Quantity which may be traded at that each price). The total tradable volume at a price would be computed as 'Minimum of Cumulative Buy and Cumulative Sell quantity' at the respective price. The Maximum Tradable Volume (MEV) for each eligible price is as below:

BUY		Price	SELL		Maximum Executable Volume
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity	
0	0	831	290	76,460	0
0	0	828	11,420	76,170	0
0	0	826	21,650	64,750	0
4,500	4,500	825	8,500	43,100	4,500
32,700	28,200	824	0	34,600	32,700
32,700	0	823	1,900	34,600	32,700
34,600	1,900	822	0	32,700	32,700
84,300	49,700	820	17,500	32,700	32,700
92,300	8,000	819	3,600	15,200	15,200
108,700	16,400	818	11,600	11,600	11,600
114,100	5,400	815	0	0	0
115,000	900	814	0	0	0
119,575	4,575	812	0	0	0

**Note:** The Maximum Tradable Volume is the highest value amongst 'Maximum Tradable Volume' derived for all price points.

In this example, the maximum quantity that may be traded is 32,700 at prices 820, 822, 823 and 824. Therefore, as per Principle 1, the Prices eligible for Auction Uniform Price Calculation are 820, 822, 823 and 824. The algorithm would eliminate all other price points as the potential Auction Uniform Price. To further narrow the choices for Auction Uniform Price, Principle 2 would be used to determine the Minimum Unbalance level.

## 2) Principle: Establishing the Minimum Unbalance

The second principle would ascertain the eligible price levels (from prices 820, 822, 823 and 824) at which the Unmatched Quantity is a minimum.

The Minimum Unbalance at each price level is equal to 'Cumulative Buy Quantity – Cumulative Sell Quantity'

BUY		Price	SELL		Maximum Executable Volume	Minimum Unbalance (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
32,700	28,200	824	0	34,600	32,700	-1,900
32,700	0	823	1,900	34,600	32,700	-1,900
34,600	1,900	822	0	32,700	32,700	1,900
84,300	49,700	820	17,500	32,700	32,700	51,600

Ignoring the positive and negative signs, the lowest number in the Minimum Unbalance column is 1,900. The minimum Unbalance occurs at prices 822, 823 and 824. Therefore, as per completion of Principle 2, the Prices eligible for Auction Uniform Price Calculation are 822, 823 and 824. The algorithm would further eliminate 820 as Auction Uniform prices and the algorithm would continue to the 3<sup>rd</sup> step to establish the Auction Uniform Price.

**Note:** 0 is the lowest Minimum Unbalance Quantity.

### 3) Principle: Ascertaining where the Market Pressure exists

The third principle should ascertain where the market pressure of the potential Auction Uniform Price prices exists: on the buy or the sell side.

- a. If all the potential Auction Uniform Prices have positive (+) Minimum Surplus then the market pressure is on the BUY side (Buyer's Market) and the Auction Uniform Price would be highest of the potential Auction Uniform Prices (Assuming that residual BUY pressure would likely cause the price to rise)

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Minimum surplus with all +ve Surplus, so Buyer's Market and Uniform Price MAX (100,99) = 100
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
200	200	100	0	150	150	50	
200	0	99	150	150	150	50	

- b. If all the potential Auction Uniform Prices have negative (-) Minimum Surplus then the market pressure is on the SELL side (Seller's Market) and the Auction Uniform Price should be lowest of the potential Prices (Assuming that residual SELL pressure would likely cause the price to fall)

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Min surplus with all – Surplus, so Seller's Market and Uniform Price MIN (99,98) = 98
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
150	150	99	0	200	150	-50	
150	0	98	200	200	150	-50	

- c. If the potential Auction Uniform Prices have either 'positive (+) as well as negative (-) Minimum Surplus' of 'If the Minimum Surplus is zero for each potential Price' then the algorithm should not further eliminated any potential Auction Uniform Prices derived from Principle 2 and should continue to Principle 4 carrying forward all the potential Auction Uniform Prices

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
<b>32,700</b>	28,200	<b>824</b>	0	<b>34,600</b>	32,700	-1,900
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900

In this example it is not yet possible to calculate as Auction Uniform Prices, since the potential Auction Uniform Prices have positive (+) as well as negative (-) Minimum

Surplus. Therefore, at the completion of Principle 3, the Prices eligible for Auction Uniform Price Calculation are 822, 823 and 824 and the algorithm continues to the fourth and final step to establish the Auction Uniform Price.

#### 4) Principle: Average of Price Points having Minimum Unbalance

The fourth and final principle determines Auction Uniform Price from the range of prices established in Principle 3 (from prices 822, 823, 824).

There are two steps to this Principle. The first step should be to narrow the options of potential Auction Uniform Prices to 2 potential Auction Uniform Prices from within the derived price range

##### a. STEP 1

- i. If the result of Principle 3 is a combination of positive and negative Market Pressure, then the algorithm should mark the two prices where the sign changes.

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
32,700	0	823	1,900	34,600	32,700	-1,900
34,600	1,900	822	0	32,700	32,700	1,900

- ii. If the Minimum Surplus for all potential Auction Uniform Prices is zero, then the algorithm should mark the highest and lowest prices within the potential price range as the potential Auction Uniform Prices.

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Min Surplus with all 0, so Uniform Price AVG (110, 105) = 107.50
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
1000	1000	110	0	1000	1,000	0	
1000	0	105	1000	1000	1,000	0	

In this example the sign at 822 is positive and changes to negative to 823. Therefore, the algorithm chooses 822 and 823 as the potential Auction Uniform Prices to be applied in this principle.

##### b. STEP 2

The Auction Uniform Price should be defined as the average of 2 derived potential Auction Uniform Prices i.e. 822 and 823. Auction Uniform Price = AVG (822,823) = 822.50

The determined official Auction Uniform Price would be '**822.50**'

**Note:** if determined Auction Uniform Price is not as per Product's Price Tick then Auction Uniform Price would be rounded off to the nearest product's price tick

All the matching orders would get traded at the Determined Auction Uniform Price, regardless of the price actually stated when placing an order. The Order Priority for matching purpose would be determined on 'Price-Pro-rata' basis. All the Auction Session's Unmatched Pending Orders would get cancelled

**Note:** If the Auction session has no overlapping Buy and Sell orders (i.e. Trades = 0), then the 'Three step Conditional Decision Rule Approach' to determine 'Auction Uniform Price' would not be referred. An illustration of price pro-rata basis allocation of quantity is shown below:

### Step 1- Order Entry

Orders Details					
Order Entry	Participant	Qty	Price	Result	Allotment (Pro rata)
9.	Buyer1	50	5000	Selected	50
10	Buyer2	20	4000	Selected	20
11	Buyer3	10	2000	Rejected	0
	<b>Total</b>	<b>80</b>			<b>70</b>

1	Seller1	10	4000	Selected	5
2	Seller2	20	4000	Selected	10
2	Seller3	5	4000	Selected	3
4	Seller3	2	3000	Selected	2
5	Seller3	40	5000	Rejected	0
6	Seller4	10	2000	Selected	10
7	Seller5	20	2000	Selected	20
8	Seller6	20	1000	Selected	20
	<b>Total</b>	<b>127</b>			<b>70</b>

### Step 2- Discovery of Price Equilibrium

Derivation of Equilibrium Price and Vol						
CB	B	Price	S	CS	TV	UB
50	50	5000	40	127	50	-77
70	20	4000	35	87	70	-17
70	0	3000	2	52	52	18
80	10	2000	30	50	50	30
80	0	1000	20	20	20	60
<b>Price Discovered</b>		<b>4000</b>				
<b>Volume Cleared</b>		<b>70</b>				

### Step 3- Trade Details

Allocation based on Pro rata priority (PR)					
	Participant	Participant	Qty	Price	Reason
Trade1	Buyer1	Seller6	20	4000	Price Priority
Trade2	Buyer1	Seller5	20	4000	Price Priority
Trade3	Buyer1	Seller4	10	4000	Price Priority
Trade4	Buyer2	Seller3	2	4000	Price Priority
Trade5	Buyer2	Seller3	3	4000	Pro Rata Allotment
Trade6	Buyer2	Seller2	10	4000	Pro Rata Allotment
Trade7	Buyer2	Seller1	5	4000	Pro Rata Allotment
		<b>MCV</b>	<b>70</b>		

Step 3A- Pro Rata Working				
Pro Rata Working				
18	Pending Qty	WT	Allocation	Rounded Allocation
Seller1	10	0.2857143	5.14285714	5
Seller2	20	0.5714286	10.2857143	10
Seller3	5	0.1428571	2.57142857	3
	35	1	18	18

**Note: In case of rounding off difference at the time of pro rata allocation, the same will be adjusted in following manner:**

- One unit each of the total rounding off error would be adjusted to/from the highest selected quantum in the descending order.
- However total selected quantity along with rounding off adjustment will not exceed the total bid quantity of individual order.

## 11. Margin requirements

- 11.1 Initial Deposit: The initial security deposit paid by a Member will be considered as his initial margin deposit, which shall be the minimum Margins required.
- 11.2 The Member, or the Client as the case may be, will be allowed to place a purchase order against cash amount made available, equivalent to 100% of the order value. Funds in the Settlement Account of the Member will be blocked to provide exposure for the purchase orders.
- 11.3 Special Margin: The Exchange may levy additional margin on Member(s) or across the market for covering any enhanced risk.

## 12. Deposits

- 12.1 All the Members who wish to buy RECs from the Exchange are required to deposit the cash amount as a security deposit to their settlement account to the extent they wish to buy RECs from the Exchange. For example, if a Member wants to buy 100 RECs from the Exchange at Rs. 2300/REC, he is required to maintain Rs. 2,30,000/- in his settlement account before the trade begins at the Exchange. The Member will not be allowed to put Buy orders exceeding the total amount available into his settlement account.

No security deposit is required for the members who wish to sell RECs on the Exchange. However, the Exchange may from time to time revise the security deposit requirements of members buying or selling RECs on the Exchange.

## 13. Risk management system

- 13.1 The Member, or the Client as the case may be, will be allowed to place a purchase order against cash amount made available, equivalent to 100% of the order value.
- 13.2 After receiving confirmation about availability of RECs in the depository account of Eligible Entity, then the Exchange processes the final bid matching solution. While processing bid matching solution, the bids of the Sellers for whom the balance in the depository account with the central agency is reported short, shall not be considered. The Exchange has the right to impose penalty on defaulting Member as decided from time to time.

- 13.3 In case of clients having their own settlement account, operational limit will be provided as per their bank balance after reducing amount towards applicable charges.

## **14. Surveillance**

- 14.1 In order to ensure market integrity and to avoid market abuses, the Exchange will use various on-line and off-line surveillance tools. The Exchange shall have the right to take appropriate actions in such cases.
- 14.2 Validation of orders: Members are required to ensure that bids and offers are in conformity with relevant regulatory provisions. In order to avoid any abnormal orders being put by the Exchange Members like high bid or offer rate, the Exchange will validate such orders either through software or manually on every trading day, wherever possible.
- 14.3 Price movement: The Exchange will observe any variation in prices as compared to past data.
- 14.4 Market behavior: Any unwarranted change in the price pattern or order trend shall be brought to the notice of the Exchange management.
- 14.5 Price rigging, concentration, price manipulation and other market abuses: The Exchange will monitor concentration, price rigging, price manipulation and other market abuses and take suitable actions whenever such practices are identified.

## **15. Transaction fees**

- 15.1 The Exchange will charge a transaction fee as may be specified by the Exchange from time to time on the transactions carried through the Exchange in this market segment subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchases and sales separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member.

## **16. Reports**

- 16.1 After end of trading session, the Exchange will make available downloadable reports to the Members which consist of Trade file Report, Final Obligation Report and other relevant matters.
- 16.2 Based on the Exchange's Reports, the Members can inform their Clients about their successful trades along with their obligation.
- 16.3 Exchange shall also report trade details to the CERC / Central Agency as well as the State Nodal Agency.

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**REC Contract Specifications****1. General Terms**

Name of the Tradable Instrument:	Renewable Energy Certificate
Underlying	Green Attributes of 1MWh of electricity generated by eligible Renewable Generator allowed in CERC (Terms and Conditions of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2022
Instrument Types	RECs
Price Quotation	INR/REC
Price tick:	1 INR
Volume tick:	1 REC
Minimum Order volume limit:	1 REC
Transaction Fee	Fees payable by REC buyer and seller to Exchange for the quantity approved by Central Agency as specified by the exchange from time to time.

**2. Trading Methodology, its phases and associated schedules**

Trading Method	Closed double-sided uniform price auction
Trading System	IEX Trading System
Pre-trade phase	By 12.00 Hrs
Order Accumulation or Bidding phase	Between 13.00 Hrs and 15:00 Hrs of the Trading Day
Order matching and trade finalization phase	Between 15:00 Hrs and 17:00 of the Trading Day
Settlement and Delivery phase:	Between 17:00 Hrs and 18:00 of the Trading Day
Post-auction phase:	Between 17.00 and 18:00 Hrs of the Trading Day

<b>Order Types</b>	As defined in Schedule C of IEX Business Rules
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**3. Collateral and Margining**

IEX requires Purchasing Participants to make funds available equivalent to their order value. Sellers shall submit orders only upto number of RECs available in their account held with Central Agency. In case of violation, the Sellers will be liable for penalties as specified in the 'Procedures for redemption of Renewable Energy Certificate issued by Central Agency.

**4. Delivery of RECs**

Delivery of RECs shall be as per the procedure issued by Central Agency in pursuance to CERC (Terms and Conditions of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2022.

**5.** Exchange may modify the terms and conditions of contract subject to CERC (Power market) Regulations, 2021 as amended from time to time.



## Certificate of Purchase of REC(s)



### Certificate of Purchase of REC(s)

Certificate No.:

Issued On-[DD-MMM-YYYY]

BUYER NAME - [NAME OF CORPORATION]

[#Issued] Certificates

Session ID

This certifies that **[REC Buyer Name]** is the holder of **[Number of Certificates]** non transferable Renewable energy certificate(s) bought on \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, through ***Indian Energy Exchange Limited.***

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of ***Indian Energy Exchange Limited.***

*This is a computer generated statement hence doesn't require signature.*

## SCHEDULE D: ENERGY SAVINGS CERTIFICATE (ESCert) MARKET

### 1. Introduction

- 1.1 The Energy Savings Certificate (ESCert) Market segment is introduced on the Exchange to facilitate transaction of ESCerts in accordance with Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates) Regulations 2016 dated 27<sup>th</sup> May 2016 and its amendments thereof (hereinafter referred as 'ESCerts Regulations') notified by Central Electricity Regulatory Commission.
- 1.2 The ESCerts issued to Designated Consumers in accordance with the Energy Conservation Act 2001 (EC Act) read with Energy Conservation (Energy Consumption Norms and Standards for Designated Consumers, Form, Time within which, and Manner of Preparation and Implementation of Scheme, Procedure for Issue of Energy Savings Certificate and Value of Per Metric Ton of Oil Equivalent of Energy Consumed) Rules 2012 and its amendments thereof ("hereinafter referred as PAT Rules") are qualified for transaction on Exchange subject to Clause 3 of this Schedule D.
- 1.3 Exchange shall operate ESCert Market in accordance with the Detailed Procedure issued by the Administrator under Regulation 7(a) of ESCerts Regulations.
- 1.4 This market segment will typically cover Energy Savings Certificates, based on issuance in a specific cycle as per PAT Rules.
- 1.5 All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc, shall be as per specific rules mentioned herein.

### 2. Definitions:

- 2.1 "**Administrator**" means the Bureau of Energy Efficiency;
- 2.2 "**Cycle**" means a period as specified in PAT Rules, commencing from the 1<sup>st</sup> day of April of the starting year and ending on the 31<sup>st</sup> day of March of the target year. The first Cycle would cover a period of 3 years commencing from the 1<sup>st</sup> April, 2012 and ending on the 31<sup>st</sup> March, 2015;
- 2.3 "**Designated Consumer**" means any consumer notified by the Central Government under clause (e) of section 14 of the Energy Conservation Act, 2001 and for which a target is notified under the Statutory Orders issued by the Government of India from time to time ;
- 2.4 "**Eligible entity**" means any designated consumer registered with Registry who has been issued or deemed to have been issued ESCerts and desire to sell or purchase such ESCerts for compliance with the energy consumption norms and standards specified under clause (g) of section 14 of the EC Act.
- 2.5 "**ESCerts**" means the Energy Savings Certificates issued by the Central Government in the Ministry of Power to the designated consumer under sub-section (1) of section 14(A) of EC Act, 2001.
- 2.6 "**Registry**" means the agency designated by Government of India in the Ministry of Power to perform such functions as defined in ESCerts Regulations.
- 2.7 "**Transaction of ESCerts**" means sale or purchase of ESCerts under the Perform, Achieve and Trade (PAT) scheme on Power Exchanges, and includes delivery of ESCerts.

**3. Eligibility:**

- 3.1 Only 'Eligible Entities' are eligible for transaction of ESCerts on Exchange.
- 3.2 'Eligible Entities' can either buy or sell ESCerts, as the case may be, on the Exchange in a Cycle.
- 3.3 All 'Eligible Entities' who intend to participate for the transaction of ESCerts on Exchange shall register themselves with the Exchange as Member or Client in accordance with the Rules and Byelaws of the Exchange.
- 3.4 'Eligible Entities', who have been barred from transaction of ESCerts on Exchange by Registry or Administrator or Commission or Exchange or by any statutory body, shall not be eligible for transaction of ESCerts on Exchange.

**4. Membership**

- 4.1 All the existing categories of Members of the Exchange shall be eligible for transaction of ESCerts at the Exchange Platform. However, if any Member is interested in only carrying out transaction in ESCerts, the same shall also be as per regulation 26 of CERC (Power Market) Regulation, 2021 and amendments thereof shall also be allowed. Additional eligibility conditions, if any, shall be specified by the Exchange from time to time through circulars.

**5. Client**

- 5.1 A category of Client termed as 'ESCert Client' is introduced for the participants who wish to transact in ESCerts on the Exchange. All Clients, whether existing or new, shall be required to register themselves through any Member of the Exchange for transacting in ESCerts on the Exchange. Only new clients shall receive a registration identification code from the Exchange provided that they comply with all the requirements prescribed by the Exchange from time to time.

**6. Fees**

- 6.1 The detail of the Fees and charges are specified in Clause 5.4 of the Business Rules. The Member and Client who wish to register and trade in EsCerts segment shall pay such fees and charges as decided by the Exchange from time to time.

**7. Trading Days**

- 7.1 The Exchange shall operate ESCert market on days as notified by the Exchange in accordance with detailed procedure issued by the Administrator.

**8. Trading hours**

- 8.1 Trading hours shall be as per approved detailed procedure issued by the Administrator.

**9. Market Operations**

- 9.1 ESCert Market segment shall operate in accordance with the procedures issued by the Administrator for transaction of ESCerts on Exchange. The ESCerts market timelines shall be adhered to by all the Exchange Members in order to have smooth and orderly operations of the Exchange.

**10. Contract specifications:** The contract specification shall be as per **Annexure D1** to this Schedule.**11. Trading phases****11.1 Pre-trade phase**

The Exchange shall validate available margins of the Buying participants required as per contracts specifications. Members shall be allowed to place orders upto the available margins.

#### **11.2 Order accumulation phase (Bidding phase)**

Bidding session also referred to as the Order call period shall be available from 13.00 Hrs to 15.00 Hrs on the trading days specified in the ESCerts Trading calendar issued by Exchange from time to time. The participants shall place their sell/buy bids within the Bidding session. Orders entered by the direct access clients shall be treated as orders entered by Members. The orders collected during the order accumulation phase will not be visible to the market participants.

#### **11.3 Order Verification phase**

Post bidding session, sell bids received from the participants shall be sent to Registry through D-CRM portal by 15.30 Hrs for verification of quantity of ESCerts offered for Sell against the quantity of ESCerts available for transaction with the concerned participant in their Registry account. Registry shall send confirmation report by 16.00 Hrs to exchange. In case, bids have been confirmed by Registry, same shall be processed for order matching. However, in case, cumulative sell bids placed exceed the quantity of ESCerts available in their registry account, Registry shall declare such eligible entities as defaulter, bids of such participants shall not be processed for order matching

#### **11.4 Order matching and transaction finalization phase**

After Order verification phase, the trading platform shall seek to match orders. During this matching process, orders cannot be entered into the trading platform, and orders already entered cannot be cancelled or modified. All buy bids and confirmed sell bids are aggregated and Market Clearing Price (MCP) and Market Clearing Volume (MCV) shall be determined by 17.00 Hrs through the closed double-sided uniform price auction for that particular trading session of ESCerts market.

After the final market clearing price and volume determination phase is concluded by 17.00 Hrs, Members whose orders have been executed, will be provided all relevant trade information regarding final trade on the trading platform.

#### **11.5 Obligation determination process (Settlement Phase)**

After end of the order matching and transaction finalization phase, an obligation report will be generated by the Exchange at 17.00 Hrs, which will provide the quantity of ESCerts transacted and amount of pay in / pay out and transaction fee payable etc. The Exchange will advise the Clearing Banks for transfer of pay-in at 17.00 hrs and pay-out at 11.00 hrs of next bank working day to / from Member's or Client's accounts, as applicable.

#### **11.6 Delivery phase**

On the basis of transaction finalized, Exchange shall send the confirmation report to Registry through D-CRM portal providing the ESCerts sell and buy volume along with the purchase certificate number for each of the participants who have successfully transacted ESCerts in the trading session by 17.15 Hrs. Based on the confirmation report uploaded by Exchange on D-CRM portal, Registry shall send the transaction approval acknowledgement to Exchange by 17.30 Hrs of the trade day. The Exchange shall also send transaction report to all the successful buyers and sellers by 18.00 Hrs stating the total number of ESCerts purchased / sold by them along with the unique identification code for each transaction.

- 11.7 The information regarding Market Clearing Price and Market Clearing Volume, sell and buy bids along with demand supply curves shall be published on IEX's website by 18.30 Hrs.
- 11.8 The Exchange shall issue an electronically printable ESCert purchase certificate as per format prescribed at **Annexure D2**, to the Buyers within five days of trading. – (IEX Format)
- 11.9 **Timelines:** Timelines for transaction of ESCerts on the Exchange shall be as under:

TIME on TRADE DAY	DETAILS
<b>Pre-trade Phase:</b>	
By 12.00 Hrs	Exchange to check initial margin for Members
<b>Order Accumulation phase (Bidding)</b>	
13.00 Hrs to 15.00 Hrs	Order Accumulation
<b>Order Verification phase</b>	
By 15.30 Hrs	Exchange to send details of maximum offer placed by Sellers and buy bids to Registry
By 16.00 Hrs	Registry to send report confirming valid ESCerts available with participant
<b>Order matching and transaction finalization</b>	
By 17.00 Hrs	Market clearing price and Market clearing volume determination and publishing of transaction results on Exchange Terminal
<b>Settlement Phase</b>	
By 17.00 Hrs	Files to be sent by Exchange to banks for actual debits (Pay-in)
By 11.00 Hrs (next bank working day)	Files to be sent by Exchange to banks for actual credits (Pay-out)
<b>Delivery Phase</b>	
By 17.15Hrs	Exchange to upload the confirmation report on D-CRM portal providing the final sell and buy volume of each participant.
By 17.30 Hrs	Registry to send the transaction approval acknowledgement to Exchange
By 18:00 Hrs	Exchange to send transaction report to each participant as proof of transfer of ESCerts.

## 12. Order management

### 12.1 Order types

Single bid/Single order type specifying the price and quantity of ESCerts to be traded shall be available for submission of orders by Members/Clients.

### 12.2 Modification and cancellation of orders:

Members/Clients shall be permitted to modify or cancel their orders, during the trading hours.

### 12.3 Order validation

Orders entered into the Trading System shall be subject to various validation requirements as prescribed by the Exchange including price and quantity restrictions as decided by the Exchange. Orders that do not meet the validation checks will not be accepted by the Exchange. The Exchange shall specify from time to time price steps (tick size) in which orders shall be entered on the trading system of the Exchange.

### 13. Matching rules

13.1 All the Clients shall be assigned unique ID / Portfolio ID, if not already assigned. The Exchange may launch more than one order book running either parallel or at different time spans. Subject to the approval of the CERC, the Exchange may modify or change the matching rules or order books any time where it is necessary to do so.

#### 13.2 Uniform Price Auction for Energy Savings Certificates

- (1) The matching of bids will be done through uniform price closed bid double sided auction. The methodology used is described as below.
- (2) A Matching of the auction will only take place if there are crossing prices (buy price  $\geq$  Sell Price) in the order book, that is, if the best order price is equal to or higher than the best ask price. In that case, the equilibrium price is determined according to the following criteria:
  - (a) Maximum tradable volume: The Equilibrium Price will be the price at which there is maximum tradable volume.
  - (b) Minimum unbalance: If there is more than one price with equal value for maximum tradable volume, the price that leaves the least volume untraded at its level is chosen as Equilibrium Price.
- (3) If Auction Session has overlapping Buy and Sell orders resulting in at least 1 trade (if there are crossing prices i.e. best buy price  $\geq$  best Sell Price) then the system would use the below mentioned principles to determine that Session's Auction Uniform Price. If system achieves more than one potential Auction Uniform Price by Principle 1, then the algorithm would move to Principle 2 to narrow down the options and so on. If any Principle achieves a single potential Auction Uniform Price, then that price would be assigned as that Session's Auction Uniform Price.
- (4) The Auction Uniform Price calculation logic is explained below with the help of an example: The Order Book would be sorted on Best Buy and Best Sell basis for a product e.g. 'ESCERT-C12-15' at the end of the Auction session as below:

BUY			SELL		
Order	Qty	Price	Price	Qty	Order
A	4,500	825	831	290	J
B	28,200	824	828	11,420	K
C	1,900	822	826	21,650	L
S	49,700	820	825	8,500	M
D	8,000	819	823	1,900	N
E	16,400	818	820	17,500	O
F	5,400	815	819	3,600	P
G	900	814	818	11,600	Q
H	4,575	812			R

#### (5) Principle: Determining the Maximum Tradable Volume

The principle would establish the price(s) at which maximum tradable volume would be executed. There would be two steps involved in applying this principle.

- (a) **STEP 1** – Determine the Cumulative Buy and Sell quantities at each eligible price. The Cumulative Buy and Sell quantities at each price for 'XYZ' are as follows:

BUY		Price	SELL	
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity
0	0	831	290	76,460
0	0	828	11,420	76,170
0	0	826	21,650	64,750
4,500	4,500	825	8,500	43,100
32,700	28,200	824	0	34,600
32,700	0	823	1,900	34,600
34,600	1,900	822	0	32,700
84,300	49,700	820	17,500	32,700
92,300	8,000	819	3,600	15,200
108,700	16,400	818	11,600	11,600
114,100	5,400	815	0	0
115,000	900	814	0	0
119,575	4,575	812	0	0

- (b) **STEP 2** – Establish the total tradable volume at each eligible price (i.e. Maximum Quantity which may be traded at that each price). The total tradable volume at a price would be computed as 'Minimum of Cumulative Buy and Cumulative Sell quantity' at the respective price. The Maximum Tradable/Executable Volume (MEV) for each eligible price is as below:

BUY		Price	SELL		Maximum Executable Volume
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity	
0	0	831	290	76,460	0
0	0	828	11,420	76,170	0
0	0	826	21,650	64,750	0
4,500	4,500	825	8,500	43,100	4,500
32,700	28,200	824	0	34,600	32,700
32,700	0	823	1,900	34,600	32,700
34,600	1,900	822	0	32,700	32,700
84,300	49,700	820	17,500	32,700	32,700
92,300	8,000	819	3,600	15,200	15,200
108,700	16,400	818	11,600	11,600	11,600
114,100	5,400	815	0	0	0
115,000	900	814	0	0	0
119,575	4,575	812	0	0	0

**Note:** The Maximum Tradable Volume is the highest value amongst 'Maximum Tradable Volume' derived for all price points.

In this example, the maximum quantity that may be traded is 32,700 at prices 820, 822, 823 and 824. Therefore, as per Principle 1, the Prices eligible for Auction Uniform Price Calculation are 820, 822, 823 and 824. The algorithm would eliminate all other price points as the potential Auction Uniform Price. To further narrow the choices for Auction Uniform Price, Principle 2 would be used to determine the Minimum Unbalance level.



**(6) Principle: Establishing the Minimum Unbalance**

The second principle would ascertain the eligible price levels (from prices 820, 822, 823 and 824) at which the Unmatched Quantity is a minimum.

- (a) The Minimum Unbalance at each price level is equal to 'Cumulative Buy Quantity – Cumulative Sell Quantity'

BUY		Price	SELL		Maximum Executable Volume	Minimum Unbalance (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
<b>32,700</b>	28,200	<b>824</b>	0	<b>34,600</b>	32,700	-1,900
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900
84,300	49,700	<b>820</b>	17,500	32,700	32,700	51,600

- (b) Ignoring the positive and negative signs, the lowest number in the Minimum Unbalance column is 1,900. The minimum Unbalance occurs at prices 822, 823 and 824. Therefore, as per completion of Principle 2, the Prices eligible for Auction Uniform Price Calculation are 822, 823 and 824. The algorithm would further eliminate 820 as Auction Uniform prices and the algorithm would continue to the 3<sup>rd</sup> step to establish the Auction Uniform Price.

**Note:** 0 is the lowest Minimum Unbalance Quantity.

**(7) Principle: Ascertaining where the Market Pressure exists**

The third principle should ascertain where the market pressure of the potential Auction Uniform Price exists: on the buy or the sell side.

- (a) If all the potential Auction Uniform Prices have positive (+) Minimum Surplus then the market pressure is on the BUY side (Buyer's Market) and the Auction Uniform Price would be highest of the potential Auction Uniform Prices (Assuming that residual BUY pressure would likely cause the price to rise)

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Minimum surplus with all +ve Surplus, so Buyer's Market and Uniform Price MAX (100,99) = 100
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
200	200	100	0	150	150	50	
200	0	99	150	150	150	50	

- (b) If all the potential Auction Uniform Prices have negative (-) Minimum Surplus then the market pressure is on the SELL side (Seller's Market) and the Auction Uniform Price should be lowest of the potential Prices (Assuming that residual SELL pressure would likely cause the price to fall)

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Min surplus with all – Surplus, so Seller's Market and Uniform Price MIN (99,98) = 98
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
150	150	99	0	200	150	-50	
150	0	98	200	200	150	-50	



- (c) If the potential Auction Uniform Prices have either 'positive (+) as well as negative (-) Minimum Surplus Minimum Surplus' of 'If the Minimum Surplus is zero for each potential Price' then the algorithm should not further eliminated any potential Auction Uniform Prices derived from Principle 2 and should continue to Principle 4 carrying forward all the potential Auction Uniform Prices

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
<b>32,700</b>	28,200	<b>824</b>	0	<b>34,600</b>	32,700	-1,900
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900

In this example it is not yet possible to calculate as Auction Uniform Prices, since the potential Auction Uniform Prices have positive (+) as well as negative (-) Minimum Surplus. Therefore, at the completion of Principle 3, the Prices eligible for Auction Uniform Price Calculation are 822, 823 and 824 and the algorithm continues to the fourth and final step to establish the Auction Uniform Price.

#### (8) Principle: Average of Price Points having Minimum Unbalance

The fourth and final principle determines Auction Uniform Price from the range of prices established in Principle 3 (from prices 822, 823, 824).

There are two steps to this Principle. The first step should be to narrow the options of potential Auction Uniform Prices to 2 potential Auction Uniform Prices from within the derived price range

##### (a) STEP 1

- (i) If the result of Principle 3 is a combination of positive and negative Market Pressure, then the algorithm should mark the two prices where the sign changes.

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity		
<b>32,700</b>	0	<b>823</b>	1,900	<b>34,600</b>	32,700	-1,900
<b>34,600</b>	1,900	<b>822</b>	0	<b>32,700</b>	32,700	1,900

- (ii) If the Minimum Surplus for all potential Auction Uniform Prices is zero, then the algorithm should mark the highest and lowest prices within the potential price range as the potential Auction Uniform Prices.

BUY		Price	SELL		Maximum Executable Volume	Minimum Surplus (CBO – CSO)	Multiple Min Surplus with all 0, so Uniform Price AVG (110, 105) = 107.50
Cumulative Buy Quantity	Buy Quantity at Price		Sell Quantity at Price	Cumulative Sell Quantity			
1000	<b>1000</b>	110	0	1000	1,000	0	
1000	0	105	<b>1000</b>	1000	1,000	0	

- (iii) In this example the sign at 822 is positive and changes to negative to 823. Therefore, the algorithm chooses 822 and 823 as the potential Auction Uniform Prices to be applied in this principle.

(b) **STEP 2**

The Auction Uniform Price should be defined as the average of 2 derived potential Auction Uniform Prices i.e. 822 and 823. Auction Uniform Price =  $\text{AVG}(822, 823) = 822.50$

The determined official Auction Uniform Price would be '**822.50**'

**Note:** if determined Auction Uniform Price is not as per Product's Price Tick then Auction Uniform Price would be rounded off to the nearest product's price tick

- (9) All the matching orders would get traded at the Determined Auction Uniform Price, regardless of the price actually stated when placing an order. The Order Priority for matching purpose would be determined on 'Price-Pro-rata' basis. All the Auction Session's Unmatched Pending Orders would get cancelled

**Note:** If the Auction session has no overlapping Buy and Sell orders (i.e. Trades = 0), then the 'Three step Conditional Decision Rule Approach' to determine 'Auction Uniform Price' would not be referred.

- (10) An illustration of price pro-rata basis allocation of quantity is shown below:

**Step 1- Order Entry**

Orders Details					
Order Entry	Participant	Qty	Price	Result	Allotment (Pro rata)
9.	Buyer1	50	5000	Selected	50
10	Buyer2	20	4000	Selected	20
11	Buyer3	10	2000	Rejected	0
	<b>Total</b>	<b>80</b>			<b>70</b>

1	Seller1	10	4000	Selected	5
2	Seller2	20	4000	Selected	10
2	Seller3	5	4000	Selected	3
4	Seller3	2	3000	Selected	2
5	Seller3	40	5000	Rejected	0
6	Seller4	10	2000	Selected	10
7	Seller5	20	2000	Selected	20
8	Seller6	20	1000	Selected	20
	<b>Total</b>	<b>127</b>			<b>70</b>

**Step 2- Discovery of Price Equilibrium**

Derivation of Equilibrium Price and Vol						
CB	B	Price	S	CS	TV	UB
50	50	5000	40	127	50	-77
70	20	4000	35	87	70	-17
70	0	3000	2	52	52	18
80	10	2000	30	50	50	30

80	0	1000	20	20	20	60
<b>Price Discovered</b>		<b>4000</b>				
<b>Volume Cleared</b>		<b>70</b>				

**Step 3- Trade Details**

Allocation based on Pro rata priority (PR)					
	Participant	Participant	Qty	Price	Reason
Trade1	Buyer1	Seller6	20	4000	Price Priority
Trade2	Buyer1	Seller5	20	4000	Price Priority
Trade3	Buyer1	Seller4	10	4000	Price Priority
Trade4	Buyer2	Seller3	2	4000	Price Priority
Trade5	Buyer2	Seller3	3	4000	Pro Rata Allotment
Trade6	Buyer2	Seller2	10	4000	Pro Rata Allotment
Trade7	Buyer2	Seller1	5	4000	Pro Rata Allotment
		<b>MCV</b>	<b>70</b>		

Step 3A- Pro Rata Working				
Pro Rata Working				
18	Pending Qty	WT	Allocation	Rounded Allocation
Seller1	10	0.2857143	5.14285714	5
Seller2	20	0.5714286	10.2857143	10
Seller3	5	0.1428571	2.57142857	3
	35	1	18	18

**(11) Note:** In case of rounding off difference at the time of pro rata allocation, the same will be adjusted in following manner:

- One unit each of the total rounding off error would be adjusted to/from the highest selected quantum in the descending order.
- However, total selected quantity along with rounding off adjustment will not exceed the total bid quantity of individual order.

**14. Margin requirements**

- 14.1 Initial Deposit: The initial security deposit paid by a Member will be considered as his initial margin deposit, which shall be the minimum Margins required.
- 14.2 The Member, or the Client as the case may be, will be allowed to place a purchase order against cash amount made available, equivalent to 100% of the order value. Funds in the Settlement Account of the Member/Client will be blocked to provide exposure for the orders.
- 14.3 Special Margin: The Exchange may levy additional margin on Member(s) or across the market for covering any enhanced risk.

**15. Deposits**

- 15.1 All Members who wish to purchase ESCerts on the Exchange are required to deposit cash amount as a security deposit in their respective settlement accounts equivalent in value to the extent they wish to trade ESCerts. For example, if a Member wants to buy 100 ESCerts from the Exchange at Rs. 2300/ESCert, he is required to maintain

Rs. 2,30,000/- net of haircut factor as defined by the Exchange from time to time. The haircut factor shall depend upon various levies charges and taxes applicable on such transactions, in his settlement account before the trade begins on the Exchange.

15.2 Member will not be allowed to place buy orders exceeding the total amount available in his settlement account net of haircut factor.

15.3 The Exchange may, from time to time, revise the security deposit requirements of Members transacting ESCerts on the Exchange.

## **16. Risk management system**

16.1 The Member, or the Client as the case may be, will be allowed to place a purchase order against cash amount made available, equivalent to 100% of the order value

16.2 The Exchange has the right to impose penalty, as decided from time to time, on defaulting Member, who short-sell ESCerts in excess of available ESCerts in his Registry account.

## **17. Surveillance**

17.1 In order to ensure market integrity and to avoid market abuses, the Exchange will use various on-line and off-line surveillance tools. The Exchange shall have the right to take appropriate actions in such cases.

17.2 Validation of orders: Members are required to ensure that bids are in conformity with relevant regulatory provisions. In order to avoid any abnormal orders being put by the Exchange Members the Exchange will validate such orders either through software or manually on every trading day, wherever possible.

17.3 Price movement: The Exchange will observe any variation in prices as compared to past data.

17.4 Market behavior: Any unwarranted change in the price pattern or order trend shall be brought to the notice of the Exchange management.

17.5 Price rigging, concentration, price manipulation and other market abuses: The Exchange will monitor concentration, price rigging, price manipulation and other market abuses and take suitable actions whenever such practices are identified.

## **18. Transaction fees**

18.1 The Exchange will charge a transaction fee as may be specified by Exchange from time to time on the transactions carried through the Exchange in this market segment subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchase and sale transactions separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member or the Client, as applicable.

## **19. Reports**

19.1 After end of trading session, the Exchange will provide successful Members with reports which consist of Trade file Report, Final Obligation Report and reports for other relevant matters.

19.2 Based on the Exchange Reports, Members can inform their Clients about their successful trades along with their obligation.

19.3 Exchange shall also report trade details to the CERC/ Registry.

\*\*\*

**Energy Savings Certificate (ESCert) Contract Specifications****1. General Terms**

Name of the Tradable Instrument:	Energy Savings Certificate (ESCert)
Underlying	Energy consumed in terms of one metric Ton of Oil Equivalent (mtoe). (Energy Savings Attributes of 1toe of energy savings by Designated Consumer certified and issued as per Energy Conservation (Energy Consumption Norms and Standards for Designated Consumers, Form, Time within which, and Manner of Preparation and Implementation of Scheme, Procedure for Issue of Energy Savings Certificate and Value of Per Metric Ton of Oil Equivalent of Energy Consumed) Rules, 2012)
Instrument Types	ESCert
Price Quotation	INR/ESCert
Price tick:	1 INR
Volume tick:	1 ESCert
<b>Price Limits</b>	
Minimum Order volume limit:	1 ESCert
Transaction Fee	Fees payable by ESCert buyer and seller to Exchange, for the transacted quantity. Such fee shall be specified by the Exchange from time to time.

**2. Trading Methodology, its phases and associated schedules**

Trading Method	Closed double-sided uniform price auction
Trading System	IEX Trading System
Pre-trade phase	By 12.00 Hrs
Order Accumulation or Bidding phase	13.00 Hrs to 15:00 Hrs of the Trading Day
Order Verification phase	By 15.30Hrs
Confirmation from Registry	By 16.00 Hrs
Order matching and transaction finalization phase	By 17:00 of the Trading Day
Settlement and Delivery phase	Between 17:00 Hrs and 18:00 of the Trading Day
<b>Order Types</b>	As defined in Schedule D of IEX Business Rules

**3. Collateral and Margining**

Exchange requires purchasing participants to make funds available equivalent to their order value and Sellers shall submit orders only upto number of ESCerts available in their account held with the Registry. In case of default for more than three cases, the Sellers may be liable for barred from transaction of ESCerts for next six months, notwithstanding any penalty due to be imposed as per the provisions of the Regulations and Procedure, by relevant authority.

**4. Delivery of ESCerts**

Delivery of ESCerts through Registry shall be as per the procedure issued by the Administrator in pursuance with Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates) Regulations, 2016.

- Exchange may modify the terms and conditions of contract subject to Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates) Regulations, 2016 and Central Electricity Regulatory Commission (Power Market) Regulations, 2021 as amended from time to time.

### Certificate of Purchase of ESCert(s)



### Certificate of Purchase of ESCert(s)

Number C-[Certificate No.]

Issued On-[DD-MMM-YYYY]

Serial No.-[.....]

**[NAME OF ELIGIBLE ENTITY]**

A [ ] Corporation

[#Issued] Certificates

**Session ID**

This certifies that **[ESCert Buyer, Location]** with **Portfolio ID** is the holder of **[Number Issued]** non-transferable Energy Saving Certificate(s) bought on \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, through **Indian Energy Exchange Limited**.

This certificate represented hereby is issued and shall be held subject to all the provisions of the regulations of Honorable CERC as amended from time to time and the Bye-laws, Rules and Business Rules of **Indian Energy Exchange Limited**.

*This is a computer generated statement hence doesn't require signature.*

## SCHEDULE E – INTEGRATED REAL TIME MARKET (I-RTM)

The Integrated Real Time Market (I-RTM) segment shall provide platform for integrated trading of electricity generated from renewable and conventional sources with separate price formation of renewable and conventional power through the Real Time Contracts for 15 min delivery period in a half hourly market which will be matched through double-sided closed bid auction with uniform price. Congestion on transmission network will be managed through implicit auction and market splitting. The contracts concluded in this segment shall be scheduled in accordance with the relevant “Procedures of Collective Transaction in Real Time Market” issued by National Load Dispatch Center (NLDC) and CERC Regulations. All terms and conditions of the contracts including eligibility, trading sessions, matching rules, margin requirement and delivery procedure etc., will be as per specific rules mentioned herein. For the purpose of PMR 2021, the I-RTM Segment shall be classified under ‘Real Time Market’.

### 1. Eligibility:

- 1.1 **Sellers:** All grid connected entities shall be eligible to sell electricity in 'Real Time Market' (RTM) subject to submission of Standing clearance issued by NLDC/RLDC/SLDCs to Exchange containing details viz maximum sell quantum, time period etc. as may be specified in the procedure issued by NLDC or its amendments from time to time. For participation in Green Real Time Market (G-RTM), the Standing Clearance issued by respective LDC through NOAR should specify type of RE Category i.e., Wind RPO/HPO/Other RPO etc.
- 1.2 **Buyers:** All the entities which are eligible to procure electricity through Open Access shall be eligible to participate in RTM as buyer subject to submission of NoG/Standing Clearance issued by NLDC/RLDC/SLDCs to Exchange containing details viz maximum buy quantum, time period etc. as may be specified in the procedure issued by NLDC or its amendments from time to time.
- 1.3 Generator will have an option to purchase electricity in RTM only in the case of forced outage of a unit(s) subject to submission of details viz. maximum buy quantum, time period etc. approved by RLDC/SLDCs to Exchange and fulfillment of other terms and conditions as may be specified in the procedure issued by NLDC or its amendments thereof.

### 2. Trading Days:

The Exchange shall operate Integrated Real-Time Market segment on all days except Exchange specified holidays.

### 3. Trading hours:

- 3.1 The Exchange will operate trading sessions for all trading days as under:

Sessions per Day	Market Type	Monday to Sunday
48	Real Time <u>Contracts Market</u>	Every alternate 15 min time block
<u>48</u>	<u>Green Real Time Market</u>	<u>Every alternate 15 min time block</u>

- 3.2 The Exchange shall not extend the trading hours, except for the provisions listed in Clause 26.1 of these Business Rules

### 4. Contract specifications:



The contract specification of 'Real Time Market' and 'Green -Real Time Market' shall be respectively as per **Annexure E1 & Annexure E2** to this Schedule.

## 5. Delivery Point:

Delivery point shall be the interconnection of the respective grid connected entity. However, for the purpose of the contract, the trade schedule shall be reckoned at the periphery of the regional transmission system in which the grid connected entity is located. The actual schedule at various interconnection~~s~~ including that of grid connected entities shall be worked out after incorporation of transmission losses in kind. ~~The trade schedules shall be used for the purpose of payment of transmission charges and wheeling charges (if applicable).~~

*For example, delivery point of a state embedded entity in Maharashtra will be at the seam of the intra state entity. For a trade schedule of 100 MW purchase by this entity, the schedule for this transaction at WRTS periphery would be 100 MW, at Maharashtra periphery would be 96 MW. (assuming 4% regional loss) and at the intra state entity periphery would be 91.20 MW (assuming 5% Maharashtra state loss). The transmission charges payable will be for 100 MW. Additional losses in the above example have been assumed to be nil and the same if any would be applied as per applicable procedure ~~for scheduling of collective transactions, issued by POSOCO.~~*

*Similarly, in the above example, if the State embedded entity in Maharashtra has a trade schedule of 100 MW sell, then the schedule at the WRTS periphery and State periphery will be 100.17 MW and 105.279-65 MW respectively (considering ISTS injection loss 0% and STU loss 5%).*

## 6. Order types: The Exchange ~~will~~may make available one or more type of orders from the following types of orders to be separately notified by the Exchange:

6.1 **Single bid:** Single bid will specify multiple sequences of price and quantity pairs in a portfolio manner. The quantity shall be assumed to vary linearly between two price pairs.

6.2 **Block bid:** Block bid will specify one price and one quantity for a combination of continuous two 15-minute time blocks. Selection criterion shall be average of Area Clearing Price (ACP) for the quoted 15-minute time blocks, of the respective Client's bid area. It will be an 'All or None' type of order. Maximum number of block bids and maximum quantity per block bid shall be prescribed by the Exchange from time to time, with the prior approval of the Commission.

6.3 **Minimum Quantity Block Bid:** Minimum Quantity Block Bids will specify one price and one quantity for a combination of continuous 15-minute time blocks along with a 'Minimum Quantity percentage' and number of sub-bids. The Minimum quantity block bids are block bids wherein partial acceptance of Block Bid is possible. The minimum quantity percentage will specify the quantity up to which the block bid can be accepted whereas the number of sub-bids will specify the size in which the remaining quantity shall be divided into. The system will first consider 'Min Quantity' in selection criteria. If it is selected, the system would then consider remaining sub bids in selection criteria till it has reached to the equilibrium at which no further sub-bids can be selected. Maximum number of Minimum Quantity Block Bids, Minimum quantity percentage limit and maximum number of sub-bids per block bid shall be prescribed by the Exchange from time to time.

6.4 **Profile Block Bids:** Profile Block bid will specify one price and varying quantities for a combination of continuous 15-minute time blocks. Selection criterion shall be based on



weighted average of Area Clearing Price (ACP) for the quoted 15-minute time blocks, of the respective Client's bid area. It will be an 'All or None' type of order. Maximum number of profile block bids and maximum quantity per block bid shall be prescribed by the Exchange from time to time.

- 6.5 **Other bids:** The Exchange may introduce other types of bids as per the requirement of the market. Details of such other possible bids shall be notified by the Exchange from time to time.

**7. Treatment of Transmission Charges and Losses:** The bids and offers submitted will be for delivery at the specified delivery point. Transmission charges and losses will be dealt as under:

- 7.1 **Transmission charges:** Buyers and Sellers shall be required to pay in cash for the transmission charges for ~~their respective Regional~~ Inter-State and State transmission systems and wheeling charges for distribution network (if applicable). These charges shall be payable as stipulated by the appropriate Commission. These charges shall be recovered by the Exchange and paid as per CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 ~~CERC (Open Access in inter-State Transmission) Regulation 2008~~ and CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 ~~procedure made thereunder~~, as amended from time to time and the procedures made thereunder.
- 7.2 **Transmission and distribution losses:** Buyers and Sellers shall be required to bear transmission losses in kind for ~~Inter-State their respective Regional~~ and distribution systems, as applicable. These losses are declared by the NLDC/RLDCs / SLDCs. The requisition submitted by the Exchange would be based on the trade quantum and would not reflect losses. The schedules issued by NLDC/RLDCs/SLDCs reflects such transmission losses.
- 7.3 **Scheduling and System Operation Charges:** ~~Scheduling and System operation charges for respective LDCs shall be payable by the Exchange in accordance with the Procedures issued by NLDC. Such charges shall be recovered by the Exchange through socializing such charges amongst all Buyers and Sellers. Buyers and Sellers will be required to pay the Scheduling and Operating Charges as specified~~ by the SERCs/LDCs.

**8. Order Management**

- 8.1 **Modification and cancellation of orders:** A Member shall be permitted to modify or cancel his orders, during the bidding session. No order will be cancelled after bidding session except in case of any direction from LDC or Regulatory Commission/ statutory requirement.
- 8.2 **Order validation:** Orders and bids entered into the Trading System shall be subject to various validation requirements as prescribed by the Exchange including price and quantity restrictions as decided by the Exchange. Orders that do not meet the validation checks will not be accepted by the Exchange. The Exchange shall specify from time to time price steps (tick size) in which orders shall be entered on the trading system of the Exchange.

**9. Matching rules:** The rules for matching of bids as specified in Clause 8 of SCHEDULE A – Integrated Day Ahead Market (I-DAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Real-Time Market Segment.

**10. Margin requirements:** Initial Security Deposit and Additional Deposit shall be considered as provided in Clause 10 of the IEX Business Rules. The Margins shall be calculated considering exposure of a Member in all the market segments. Decisions of the Exchange in this respect, shall be binding on the Member and Clients.

- 11. Integrated Real-Time Market Segment Operations:** The Integrated Real-Time market segment operations and the exact time schedule relating to pay-in and pay-out activities shall be adhered to by the Exchange Members in order to have smooth and orderly operations of the Exchange. These market operations shall be in accordance with the Procedures issued by NLDC. The operations activities shall be as follows:

**11.1 Order accumulation period (Bidding phase):**

- i) Integrated Bidding session for Green Real Time Market (G-RTM) and Real Time Market (RTM) for day (Do) shall be open for 15 minutes from 2245 hrs. to 2300 hrs. of previous Day (Do-1) for the delivery of power for the first two-time blocks of (Do) i.e. 0000 hrs. to 0030 hrs. and shall be repeated after every half an hour on rolling basis on all seven (7) days of a week except Exchange declared holidays.
- ii) During the bidding sessions on trading day, orders entered by Members in the Trading Platform shall be stored in the central order book of G-RTM and RTM without giving rise to Contracts. After the end of the bidding session, bid matching will take place and contracts shall be executed. The Members may opt for transfer of unsuccessful bids of G-RTM to RTM with same or different price, subject to eligibility of the participant. Orders entered by the direct access clients shall be treated as orders entered by Members.
- iii) Members will have option to enter orders in advance for all trading sessions or part thereof in a trading day, however, orders entered in advance will get activated in the respective bidding session. Such advance orders may be modified/deleted till end of respective bidding session.

**11.2 Bid matching process:**

- i) NLDC will communicate the ATC in each transmission corridor for the time blocks wherein contracts executed in a bidding session will be delivered (e.g. for delivery of power between 0000 hrs. to 0030hrs).
- ii) After each Bidding Session, the Exchange will run the bid matching process sequentially i.e., first Green Real Time Market will be matched followed by Real Time Market considering the uncleared bids of Green Real Time Market, if any, subject to eligibility conditions, with the balance ATC after matching of Green Real Time Market to determine constrained Area Clearing Price (ACP) and Area Clearing Volume (ACV) taking into consideration the ATC provided by NLDC.

**11.3 Congestion management:**

- i) In case of congestion, in various power transmission corridors, the solution shall be determined through market splitting process, which may result into different prices for different areas. These prices are Area Clearing Price (ACP). This price differential of different bid areas may generate Congestion amount.
- ii) Congestion amount is the amount by which total funds pay in may exceed total funds pay out, this arises because of the market splitting, and the said congestion amount will be transferred to a regulatory fund as may be directed by the Commission.

- iii) The market splitting methodology explained in the Annexure A4 of the Schedule – A (Integrated Day Ahead Market Segment) of these Business Rules shall be *mutatis-mutandis* applicable for the Integrated Real-Time Market ~~Segment~~.

iv) In case of real time curtailment, RTM shall be considered first for curtailment followed by G-RTM.

iii)v) For the purpose of compliance of Renewable Purchase Obligation (RPO), the Exchange shall provide detailed day-wise statement specifying the total quantity and proportion (wind RPO/hydro/ other RPO etc.) in which Renewable Energy has been purchased by the successful buyer in G-RTM.

#### 11.4 Clearing process:

- i) Based on the ACP, obligation reports will be generated and shall be made accessible through TWS.
- ii) The instructions of debit and credit of Settlement Accounts of the respective Members/Clients by the amount payable and receivable will be generated and sent to the respective Clearing Banks in banking hours.
- iii) The funds pay in from the buyer Members will be done on the “T” or “T+1” day where “T” stands for trade day. The funds pay out to the seller Members will be on the “T+1” or “T+2” day. In case of Bank Holiday, payout will be made on the bank working day. The Bank will run the pay in file at the scheduled time and report to the Exchange regarding successful debits.

#### 11.5 Timelines:

The Exchange timelines for one trading session is as under. This will be repeated for every bidding session on rolling basis. They are subject procedures issued by NLDC or CERC Regulations.

TIME	DETAILS
2245 hrs. to 2300 Hrs.	<ul style="list-style-type: none"> <li>• <u>Integrated Bid - Call session for G-RTM and RTM</u></li> </ul>
By 23:15 Hrs.	<ul style="list-style-type: none"> <li>• NLDC to inform available ATC in the interfaces/control areas/ regional transmission system.</li> <li>• <del>Exchange to determine MCP and ACP &amp; obligations of the Members</del> <u>for G-RTM and RTM sequentially.</u></li> <li>• <u>Communication of combined Transmission Corridor required for G-RTM and RTM to NLDC.</u></li> <li>• <u>NLDC to confirm available Transmission Corridor for Scheduling of G-RTM and RTM.</u></li> <li>• <u>Exchange to Publishing final constrained and unconstrained result on the website</u></li> <li>• Scheduling request of Collective Transaction in <u>G-RTM and RTM Real Time Market</u> to NLDC</li> </ul>
By 23.30 Hrs.	<ul style="list-style-type: none"> <li>• Communication of Schedule to <del>NLDC/RLDCs</del>/SLDCs.</li> <li>• Exchange will issue obligation report to Members</li> </ul>
0000 Hrs. to 0030 Hrs.	<ul style="list-style-type: none"> <li>• Delivery</li> </ul>

#### 12. Delivery procedure

~~12.1~~ After finalization of successful trades, the Exchange will send its requisition for scheduling to the NLDC/RLDC/SLDCs as per Detailed Procedure issued by the NLDC.

## 12.1

~~12.2~~ Respective LDC will include these requisitions in their final schedules after adjusting for transmission losses as per the CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations 2022 ~~Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008~~, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and detailed procedure issued by the NLDC as amended from time to time.

## 12.2

~~12.3~~ The quantity of power scheduled by respective NLDC/RLDCs/SLDCs, in respect of Exchange traded Contracts, shall be deemed to have been delivered. The scheduling procedure will be as per the CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations 2022 ~~Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008~~, as amended from time to time and detailed procedure issued by the NLDC thereunder.

## 12.3

12.4 Transmission charges and losses shall be in accordance with the CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations 2022 ~~Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008~~, and, Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time, detailed procedures issued by the NLDC thereunder and rate of Transmission Losses as determined by the NLDC for ISTS and as prescribed by the concerned SERC / SLDC for use of intra-state network.

12.5 Any shortage or excess delivery of electricity from the ~~total~~original schedule, including schedule for Contracts traded on the Exchange of the grid connected entity will be settled by them under Deviation Settlement / imbalance settlement mechanism as per the procedure laid down by the CERC or SERC, as may be applicable.

~~12.6~~ Taxes, duties, cess and other levies: The price of all the Contracts shall be quoted on the basis of actual value of the electricity Contract excluding the transmission charges, losses, scheduling and system operation charges, taxes, duties, cess and other levies and the same shall be borne by the Buyers or Sellers as applicable.

## 12.6

12.7 Metering of electricity: Arrangement for metering shall be made by the Seller/Buyer at the point of injection and the point of off-take from the GRID should conform to the provisions of Indian Electricity Grid Code (IEGC) and CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations 2022, ~~Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008~~, as amended from time to time. The Members and the relevant authority shall be responsible to resolve the issues related to metering of electricity. The Members shall indemnify and keep indemnified the Exchange from any disputes related to metering.

- 12.8 Transmission Charges of STU or State transmission licensees, wheeling charges of distribution licensee (if applicable), ~~and~~ Scheduling and Operation Charges and any other charges (as specified) of State Load Dispatch Centre shall be recovered from the Members and shall be paid to the STU / SLDCs respectively as per CERC's / SERC's regulations by the Exchange.

### 13. Risk management system

- 13.1 A Member can trade only when it maintains adequate margin deposits determined by the Exchange for such Member.
- 13.2 In case of Clients having their own settlement account, such clients shall be allowed to bid only to the extent of funds available in their settlement bank account and lien marked in favor of the Exchange, net of provision towards applicable charges.
- 13.3 An Exchange Member can pay additional margin by depositing funds in its Settlement Account and inform the Exchange through fax or email any time during the trading session. Thereafter, based on the instruction received, the Exchange will increase the bid limit and margin deposit of the Member with Exchange.
- 13.4 In case a Member fails to bring in additional margin, as may be required, at beginning of the trading session, such Members or the Clients, as applicable, may not be allowed to put orders till Margins are brought in. The decisions of the Exchange shall be final and binding on the Members.
- 13.5 In case a Member fails to pay to the Exchange any amount towards its final pay-in, the Exchange will be at liberty and has the power and discretion to restrict its subsequent trades at Exchange and initiate appropriate action against such Member. The Exchange may also impose penalty on such defaulting member or the Client, as applicable.

### 14. Surveillance

- 14.1 **Validation of orders:** Members are required to ensure that bids and offers are in conformity with relevant regulatory provisions. In order to avoid any abnormal orders being put by the Exchange Members like high bid or offer rate, bids quantity or offer quantity submitted higher than the declared capacity/demand by the Member, or the maximum quantity of purchase or sale as allowed in the Standing Clearance, the Exchange will validate such orders through software on a daily basis, wherever possible. Further, the order value of the Member will also be compared with the available limits of such Member for any over utilization.
- ~~14.2 **Price movement:** The Exchange will observe any variation in prices as compared to past data. Further, the price movement in the Exchange shall be correlated with that of the bilateral markets that is available with the Exchange.~~
- ~~14.3 **Market behavior:** The Exchange shall compare the trend in other national or bilateral markets with that of the Exchange. Any unwarranted change in the price pattern or order trend in this will be brought under the notice of the Exchange management.~~
- ~~14.4 **Correlation with Deviation Prices:** The trend in the DSM rate and the prices in the Exchange shall be compared for any major differences. In case of individual Member its trend of trading on the Exchange shall also be compared with his DSM obligations.~~

~~14.5 **Price rigging, concentration, price manipulation and other market abuses:** The Exchange will monitor concentration, price rigging, price manipulation and other market abuses and take suitable actions whenever such practices are identified.~~

**Real-Time Market 15-minute contract specifications**

<b>1.</b>	<b>Contract Name</b>	<b>Real-Time Contract</b>
<b>2.</b>	Trading system	IEX trading system
<b>3.</b>	Trading Session	Each session of 15 Minute duration on rolling basis with a gap of 15 minutes (E.g. 2245 to 2300 than 2315 to 2330)
<b>4.</b>	Delivery Period	Half hourly delivery consisting two separate 15-Min time blocks.
<b>5.</b>	Minimum volume	0.1 MW
<b>6.</b>	Minimum volume step	0.1 MW
<b>7.</b>	Minimum quotation step	Rs. 1 per MWh
<b>8.</b>	Auction method	Double sided close bid auction with uniform Market Clearing Price for all buyers and sellers.
<b>9.</b>	Order Code	Trader's ID, instrument, quantity/price combination
<b>10.</b>	Delivery point	Periphery of Regional Transmission System in which the grid-connected entity is located.
<b>11.</b>	Settlement	Settlement at ACP x volume traded in MWh
<b>12.</b>	Transmission charges	As per CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time. Transmission charges shall not be revised on retrospective basis.
<b>13.</b>	Transmission losses	Payable in kind from delivery point to its grid connection point
<b>14.</b>	Pay in and Pay out	Pay-in on day 'T' or 'T+1' and Pay-out on 'T+1' or 'T+2' where 'T' is the Trade day.



**Annexure –E2****Green Real-Time Market 15-minute contract specifications**

<b>1.</b>	<b><u>Contract Name</u></b>	<b><u>Green Real-Time Contract</u></b>
<b>2.</b>	<b><u>Trading system</u></b>	<b><u>IEX trading system</u></b>
<b>3.</b>	<b><u>Trading Session</u></b>	<b><u>Each session of 15 Minute duration on rolling basis with a gap of 15 minutes (E.g. 2245 to 2300 than 2315 to 2330)</u></b>
<b>4.</b>	<b><u>Delivery Period</u></b>	<b><u>Half hourly delivery consisting of two separate 15-Min time blocks.</u></b>
<b>5.</b>	<b><u>Minimum volume</u></b>	<b><u>0.1 MW</u></b>
<b>6.</b>	<b><u>Minimum volume step</u></b>	<b><u>0.1 MW</u></b>
<b>7.</b>	<b><u>Minimum quotation step</u></b>	<b><u>Rs. 1 per MWh</u></b>
<b>8.</b>	<b><u>Auction method</u></b>	<b><u>Double sided close bid auction with uniform Market Clearing Price for all buyers and sellers.</u></b>
<b>9.</b>	<b><u>Order Code</u></b>	<b><u>Trader's ID, instrument, quantity/price combination</u></b>
<b>10.</b>	<b><u>Delivery point</u></b>	<b><u>Periphery of Regional Transmission System in which the grid-connected entity is located.</u></b>
<b>11.</b>	<b><u>Settlement</u></b>	<b><u>Settlement at ACP x volume traded in MWh</u></b>
<b>12.</b>	<b><u>Transmission charges</u></b>	<b><u>As per CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time.</u></b>  <b><u>Transmission charges shall not be revised on retrospective basis.</u></b>
<b>13.</b>	<b><u>Transmission losses</u></b>	<b><u>Payable in kind from delivery point to its grid connection point</u></b>
<b>1.</b>	<b><u>Pay in and Pay out</u></b>	<b><u>Pay-in on day 'T' or 'T+1' and Pay-out on 'T+1' or 'T+2' where 'T' is the Trade day.</u></b>
<b>15.</b>	<b><u>Eligibility</u></b>	<b><u>Sellers: NOC/Standing Clearance issued by respective LDC specifying maximum quantum and source of Renewable Energy Generation (e.g., Solar, Wind, Hydro etc.)</u></b> <b><u>Buyers: All eligible Open Access buyers.</u></b>

## SCHEDULE F1: GREEN INTRA-DAY AND CONTINGENCY MARKET

The Green Intra-Day and Contingency segment comprises of contracts for trade in electricity generation from renewable energy sources e.g. Solar, Wind etc. and shall operate in accordance with the procedure issued by POSOCO for 'Scheduling of Bilateral Transactions' under CERC (Open Access in Inter-State Transmission) Regulations, 2008, as amended from time to time. There are three sub-segments within this market namely Solar, Non-Solar and Hydro. In Solar sub-segment, only electricity generated from solar energy sources shall be traded and in Non-Solar sub-segment, electricity generated from renewable energy sources other than Solar energy sources shall be traded and in Hydro sub-segment, only electricity generated from Hydro energy sources, which are eligible for compliance of Hydro Purchase Obligation (HPO) notified by appropriate Commission, shall be traded. This schedule provides market timelines of intra-day and day-ahead contingency as approved by the Commission. All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc. will be as per specific rules mentioned herein.

### 1. Eligibility:

As per Clause 1 of Schedule F2 of these Business Rules.

### 2. Renewable Purchase Obligation (RPO) / Hydropower Purchase Obligation (HPO):

The buyers may claim compliance of Solar and Non-Solar RPO against electricity procured from the 'Solar' and 'Non-Solar' sub-segments respectively and HPO against electricity procured from the 'Hydro' sub-segment, subject to applicable regulations. The Exchange will issue an electronically printable "Certificate of Purchase of Renewable Energy" as per format prescribed at **Annexure F25**, along with the trades executed pertaining to such certificate, to the Buyers within five days of trading. This Certificate shall be non-transferable and non-tradable.

### 3. Contracts

The Exchange shall make the contracts as specified in this section available for trading as per the Trading & Settlement calendar. These contracts will be traded in accordance with provisions of trading as specified in the respective Contract Specification. The trade sessions, matching rules applied in each trade session for concluding the contracts, risk management and settlement for such contracts will be as per specific contract specifications provided herein. The delivery of such contracts will be in accordance with CERC (Open Access in Inter-State Transmission) Regulations, 2008, as amended from time to time and relevant procedures issued by POSOCO/NLDC and by Open Access Regulations of concerned State. This Market segment shall have two types of contracts namely Intra-Day Contract and Day Ahead Contingency Contract as explained below:

#### 3.1. Intra-Day Contracts

The Exchange will make 15-minute contracts available for trading on previous day or same day on rolling basis till a specific time prior to the delivery of electricity. The Exchange will carry out trading in such contracts through 'Continuous Trade'. The timeline for trade matching sessions will be specified in Contract Specifications. Executed contracts will be sent for scheduling in accordance with CERC (Open Access in Inter-State Transmission) Regulation, 2008, as amended from time to time and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The contract specifications are given at **Annexure- F11**.

### 3.2. Day Ahead Contingency Contracts

The Exchange will make 15-minute contracts available for trading for delivery on next day from 00:00 Hrs. to 24:00 Hrs. The Exchange will carry out trading in such contracts through 'Continuous Trade'. The timeline for trade matching sessions will be specified in Contract Specifications. Executed contracts will be sent for scheduling in accordance with CERC (Open Access in Inter-State Transmission) Regulation, 2008, as amended from time to time and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The contract specifications are given at **Annexure- F12**.

### 4. Trading Days and trading hours

The Exchange shall operate this segment on all days except Exchange specified holidays. The Exchange shall declare trading calendar indicating trading sessions and trading days for each of Contracts. The Exchange may extend, advance or reduce trading hours by notifying the Members as and when it deems fit and necessary.

### 5. Matching Methodologies

The matching of contracts will employ Continuous matching methodology. In Continuous matching, the participants shall submit buy and sale offers on a continuous basis during the trading period. The buyers and sellers will be matched on continuous basis with price-time priority. For a specific Contract, the seller with minimum quote and buyer with the maximum quote are considered as best seller and best buyer. Best five buy and sell bids, excluding the details of participants, shall be displayed on the trader's work station (TWS) to all the participants to show the market depth. In case, best buy order is better than or same as best sale order, they will be matched resulting into Contracts. Such matching will continue till the end of trading period. In case, best buy order is inferior than the best sale, they will continue to be available in the order book, without resulting into Contracts. Market depth of best five orders in terms of price shall be displayed to all the participants. Order-depth option displays the best five placed orders in terms of price whereas Price-depth option displays the best five prices by cumulating the volumes under similarly priced bids..

### 6. Order Management

The Exchange may launch more than one order book running either parallel or at different time spans. All Clients will be assigned unique client ID / Portfolio ID code which may be same or different for different market segments. The types of order available in different trading sessions are mentioned below.

#### 6.1. Order types

The Exchange Members will be able to submit the following types of orders:

- 6.1.1. 'All or None' type of order or partial selection order or minimum quantity selection order.
- 6.1.2. Other order: The Exchange may introduce other types of orders as per the requirement of the market.

#### 6.2. Continuous Trade Session: Following orders are available in the Continuous Trade Session.

##### 6.2.1. Timing Constraints

- I. Rest of day (Day)

The order will be valid till the end of trading hours of that trading day.

- II. Immediate or Cancel (IOC): The order placed will not be in pending status and will be cancelled immediately in case if not traded.
- III. End of Session (EOS): Valid for auction session only

#### 6.2.2. Execution constraints

- I. Fill or Kill (FoK)

This order will match the whole order OR delete the whole order.

### 7. Matching Rules

The order matching rules for Continuous trade session will have the following features

- a) In case of continuous market segment, the order is immediately checked if it can be matched.
- b) The Orders are matched based on price and time priority. In case of more than one order having the same price, the order with the earlier time will get the priority in matching.
- c) The best buy order is matched with the best sell order when (buy price  $\geq$  Sell Price). For order matching, the best buy order is the one with the highest price and the best sell order is the one with the lowest price.
- d) An order may match partially with another order resulting in multiple trades.

### 8. Margin Requirement

Initial Security Deposit and Additional Deposit shall be considered as provided in Clause 10 of the IEX Business Rules. The Margins shall be calculated considering exposure of a Member in all the market segments and respective contract specifications. Decisions of the Exchange in this respect, shall be binding on the Member and Clients.

### 9. Risk Management System

As per Clause 9 of Schedule F2 of these Business Rules.

### 10. Surveillance

As per Clause 10 of Schedule F2 of these Business Rules.

### 11. Delivery procedure

As per Clause 11 of Schedule F2 of these Business Rules.

### 12. Transaction fees

The Exchange will charge a transaction fee, as may be specified by the Exchange from time to time, on the transactions carried through the Exchange subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchases and sales separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member or the Clients, as applicable.

### 13. Reports

- 13.1. After end of trading session, the Exchange will provide the reports to the Members which consist of Trade file Report, Provisional Obligation Report, Final Obligation Report and other relevant matters.

**13.2.** Based on the Exchange's Reports, the Members can inform their Clients about their successful trades along with their obligation.

### **Annexure F11**

#### **Contract Specification: Green Intra-Day Contract**

<b>S. No.</b>	<b>Topic</b>	<b>Details</b>
1.	Contract Name*	Green Intra-Day Contracts (Solar/Non-Solar/Hydro)
2.	Contract Code*	"Type of Contract- "Time block No." (E.g.GITDSL-01) (E.g.GITDNS-01) Where, GITD: Green Intraday Contracts SL: Solar NS: Non-Solar 01: Time block number 1, starting from 00:00 hours to 00:15 hours
3.	Contract Type	National or Regional Contract for physical delivery of electricity generated from Solar, Non-Solar and Hydro renewable energy sources.
4.	Contract available for Trading	Contracts available for delivery of 15 mins or combination thereof in a day from 1 <sup>st</sup> time block to 96 <sup>th</sup> time block
5.	Trading day*	Every day of the calendar year or as per trading calendar.
6.	Trading Session	Trading session will be made available to the Members on each Trading Day.
7.	Bidding process	Sellers and Buyers to submit bid specifying quantum (MW) and Price for each 15-minute time block or combination thereof.
8.	Matching of Bids	Continuous trade
9.	Trading Hours	0000 Hrs. to 2400 Hrs. in each trading session.
10.	Minimum Volume Quotation*	0.220 MW/ 0.1 MW (Hydro)
11.	Maximum bid size	Bids should not be more than the allowed quantity (MW) in any of Concurrence/clearance issued by respective Load Dispatch Center (LDC) to the Members/clients at any time. It will be the responsibility of the Member to adhere to this rule.
12.	Price Quote Basis	Rs. Per MWh (excluding all fees, charges, taxes, if applicable)
13.	Price Tick*	Rs. 1 per MWh
14.	Volume Tick size*	0.1 MW
15.	Quantity Variation	Not Allowed
16.	Settlement	Traded price * Quantity scheduled by LDC at delivery point.
17.	Initial Margins (Operational Limit)*	105% margin from buyers of the total order value should be available in cash with the Exchange at the time of bidding for continuous trading sessions.
18.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by LDC at delivery point as

		specified by the Exchange from time to time with the approval of the Commission
19.	Scheduling	As per Procedure for Scheduling of Bilateral Transactions.
20.	LDC Clearance	The buyer and seller will have to take concurrence from their respective LDC for scheduling of Power. This concurrence has to be submitted as per the timelines specified in the Trading and Delivery Calendar. NOC / Prior Standing Clearance issued by the LDC in format PX-I as per CERC (Interstate Open Access) Regulations, are also valid for these transactions.
21.	Application for Scheduling	Application for Scheduling will be Submitted to Nodal LDC as per the "Procedure for Scheduling of bilateral transactions".
22.	Revision of Schedule	Not Allowed.
23.	Delivery	The quantity shall be deliverable as per the schedule issued by the respective LDC.
24.	Delivery point	At the Regional periphery.
25.	Application fees, Operating and Transmission Charges and Losses	Seller will bear all the Transmission, Scheduling & Operating charges and Transmission Losses (in kind) up to the delivery point and Buyer shall bear all the Transmission, Scheduling & Operating charges including Application Fees and Transmission Losses from delivery point up to their point of drawl, as applicable. The charges shall be applied on the quantum of power scheduled at seller's Regional Periphery.
26.	Force majeure	In case of force majeure, the Exchange will settle the contract as per final schedule issued by LDCs.
27.	Fines & penalties*	As specified by the Exchange.
28.	Funds pay in by Members	Exchange will debit/ adjust the funds pay-in on the next day of trading from buyer's Member/ clients as applicable. Excess margins, if any due to partial concurrence received will be refunded back to the Member on the settlement day.
29.	Funds pay out to Members	Amount equivalent to net obligation will be credited on D+1 basis (where D stands for Delivery day.)

\* Exchange may modify these parameters from time to time with prior intimation to its Members.



**Annexure F12****Contract Specification: Green Day-Ahead Contingency Contract**

<b>S. No.</b>	<b>Topic</b>	<b>Details</b>
<b>1.</b>	Contract Name*	Green Day-Ahead Contingency Contracts (Solar, Non-Solar and Hydro)
<b>2.</b>	Contract Code*	"Type of Contract- "Time block No." E.g.(GDACSL-01) or (GDACNS-01 ) Where, GDAC: Green Day Ahead Contingency contracts SL: Solar NS: Non-Solar 01: Time block number 1, starting from 00:00 hours to 00:15 hours
<b>3.</b>	Contract Type	National or Regional Contract for physical delivery of electricity generated from Solar, Non-Solar and Hydro renewable energy sources.
<b>4.</b>	Contract available for Trading	Contracts available for delivery of 15 mins time blocks or combination thereof for next day from 00.00 Hrs. to 24:00 Hrs.
<b>5.</b>	Trading day*	Every day of the calendar year or as per trading calendar.
<b>6.</b>	Trading Session*	Trading session will be made available to the Members on each Trading Day.
<b>7.</b>	Bidding process	Sellers and Buyers to submit bid specifying quantum (MW) and Price for each 15-minute time block or combination thereof as the case may be.
<b>8.</b>	Matching of Bids	Continuous trade
<b>9.</b>	Trading Hours	03.00 PM to 11.00 PM on each trading day day or as per trading calendar.
<b>10.</b>	Minimum Volume Quotation*	0.220 MW / 0.1 MW (Hydro)
<b>11.</b>	Maximum bid size	Bids should not be more than the allowed quantity (MW) in any of Concurrence/clearance issued by respective Load Dispatch Center (LDC) to the Members/clients at any time. It will be the responsibility of the Member to adhere to this rule.
<b>12.</b>	Price Quote Basis	Rs. Per MWh (excluding all fees, charges, taxes, if applicable)
<b>13.</b>	Price Tick*	Rs. 1 per MWh
<b>14.</b>	Volume Tick size*	0.1 MW
<b>15.</b>	Quantity Variation	Not Allowed
<b>16.</b>	Settlement	Traded price * Quantity scheduled by LDC at delivery point.
<b>17.</b>	Initial Margins (Operational Limit)*	105% margin from buyers of the total order value should be available in cash with the Exchange at the time of bidding for continuous trading sessions.
<b>18.</b>	Transaction Fees*	Fees payable by buyer and seller to Exchange for the quantity approved by LDC at delivery point as



		specified by the Exchange from time to time with the approval of the Commission.
<b>19.</b>	Scheduling	As per Procedure for Scheduling of Bilateral Transactions.
<b>20.</b>	LDC Clearance	The buyer and seller will have to take concurrence from their respective LDC for scheduling of Power. This concurrence has to be submitted as per the timelines specified in the Trading and Delivery Calendar. NOC / Prior Standing Clearance issued by the LDC in format PX-I as per CERC (Interstate Open Access) Regulations, are also valid for these transactions.
<b>21.</b>	Application for Scheduling	Application for Scheduling will be Submitted to Nodal LDC as per the "Procedure for Scheduling of bilateral transactions".
<b>22.</b>	Revision of Schedule	Not Allowed.
<b>23.</b>	Delivery	The quantity shall be deliverable as per the schedule issued by the respective LDC.
<b>24.</b>	Delivery point	At the Regional periphery.
<b>25.</b>	Application fees, Operating and Transmission Charges and Losses	Seller will bear all the Transmission, Scheduling & Operating charges and Transmission Losses (in kind) up to the delivery point and Buyer shall bear all the Transmission, Scheduling & Operating charges including Application Fees and Transmission Losses from delivery point up to their point of drawl, as applicable. The charges shall be applied on the quantum of power scheduled at seller's Regional Periphery.
<b>26.</b>	Force majeure	In case of force majeure, the Exchange will settle the contract as per final schedule issued by LDCs.
<b>27.</b>	Fines & penalties*	As specified by the Exchange.
<b>28.</b>	Funds pay in by Members	Exchange will debit the funds pay-in on each D-1 basis
<b>29.</b>	Funds pay out to Members	Exchange will credit the funds pay-out in seller's Member's settlement account on D+1 basis

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

## SCHEDULE F2: GREEN TERM-AHEAD MARKET (G-TAM)

The Green Term Ahead Market (G-TAM) segment comprises of contracts for trade in electricity generation from renewable energy sources e.g. Solar, Wind etc. and shall operate in accordance with the procedure issued by POSOCO for 'Scheduling of Bilateral Transactions' under CERC (Open Access in Inter-State Transmission) Regulations, 2008, as amended from time to time including reenactment thereof; CERC (Indian Electricity Grid Code) Regulations, 2010 as amended from time to time including reenactment thereof; CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as amended from time to time including re-enactment thereof; CERC (Power Market Regulations), 2021 as amended from time to time including reenactment thereof; Procedure for Scheduling of Bilateral Transaction and Procedure for Short Term Open Access in inter State Transmission System through National Open Access Registry (NOAR) as amended from time to time including reenactment thereof. There are three sub-segments within G-TAM market namely Solar, Non-Solar and Hydro. In Solar sub-segment, only electricity generated from solar energy sources shall be traded and in Non-Solar sub-segment, electricity generated from renewable energy sources other than Solar energy sources shall be traded and in Hydro sub-segment, only electricity generated from Hydro energy sources, which are eligible for compliance of Hydro Purchase Obligation (HPO) notified by appropriate Commission, shall be traded. This schedule provides market timelines of Daily, Weekly, Monthly contracts etc. as approved by the Commission. All terms and conditions of the contracts including trading sessions, matching rules, margin requirement and delivery procedure etc. will be as per specific rules mentioned herein.

### 1. Eligibility:

- 1.1. **Sellers:** Renewable Energy sources generating electricity from Solar Energy, other than Solar Energy and Hydro Energy qualified for HPO compliance shall be eligible to trade in 'Solar', 'Non-Solar' and 'Hydro' sub segment of respectively. The qualification of an electricity generation source as renewable source shall be determined as per norms of appropriate government (Center/State) or appropriate Commission, as the case may be. Renewable Energy Generators, Discoms, etc. shall be eligible to trade in G-TAM subject to issuance of NoC/Standing clearance by RLDC/SLDCs containing type of RE source along with other details viz maximum quantum etc. in accordance with the applicable regulations. Eligibility of RE sellers shall be ascertained at the time of registration at the Exchange based on NOC/Standing clearance issued by RLDC/SLDC, as applicable. RE Generators registered under REC mechanism shall not be eligible to participate in G-TAM segment.
- 1.2. **Buyers:** All the entities which are eligible to procure power through Open Access shall be eligible to participate in G-TAM as buyer. Buyers shall be eligible to participate in the G-TAM based on the same NoC/Standing Clearance issued for Short term Open Access. No separate NoC is required for the buyers.

### 2. Renewable Purchase Obligation (RPO) / Hydropower Purchase Obligation (HPO):

The buyers may claim compliance of Solar and Non-Solar RPO against electricity procured from the 'Solar' and 'Non-Solar' sub-segments of G-TAM respectively and HPO against electricity procured from the 'Hydro' sub-segment of G-TAM, subject to applicable regulations. The Exchange will issue an electronically printable "Certificate of Purchase of Renewable Energy" as per format prescribed at **Annexure F25**, along with the trades executed pertaining to such certificate, to the Buyers within five days of trading. This Certificate shall be non-transferable and non-tradable.

### 3. Contracts

The Exchange shall make the contracts as specified in this section available for trading as per the Trading & Settlement calendar. These contracts will be traded in accordance with provisions of trading as specified in the respective Contract Specification. The trade sessions, matching rules applied in each trade session for concluding the contracts, risk management and settlement for such contracts will be as per specific contract specifications provided herein. The delivery of such contracts will be in accordance with CERC (Open Access in Inter-State Transmission) Regulations, 2008, as amended from time to time and relevant procedures issued by POSOCO/NLDC and by Open Access Regulations of concerned State. Green Term-Ahead Market shall have following types of contracts as explained below:

#### 3.1. Daily Contracts

The Exchange will make the Daily Contracts available for trading on each trading day upto a period (Days) as may be specified by the Exchange from time to time within the timelines approved by CERC for delivery of electricity for pre-specified time-blocks during the day. The Exchange will carry out trading in such contracts through 'Uniform Price Step Auction'. The timeline for trade matching sessions is specified in the contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulation and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications are given at **Annexure- F21**.

#### 3.2. Weekly Contracts

The Exchange will make the weekly contracts available for trading on each trading day maximum up to a period as may be specified by Exchange from time to time within the timelines approved by CERC for delivery of electricity for pre-specified time-blocks on all the days of the week. The Exchange will carry out trading in such contracts through 'Uniform Price Step Auction'. The timeline for trade matching sessions is specified in contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulation and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications are given at **Annexure- F22**.

#### 3.3. Monthly Contracts

The Exchange shall make the Monthly contracts available for trading maximum up to a period as may be specified by Exchange from time to time within the timelines approved by CERC for delivery of electricity for pre-specified blocks of hours on all the days of calendar Month. The Exchange will carry out trading in such contracts through 'Uniform Price Step Auction'. The timeline for trade matching sessions will be specified in contract specifications. Scheduling of the transactions shall be in accordance with Open Access Regulation and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Monthly contracts are given at **Annexure- F23**.

#### 3.4. Any-Day(s) Single Sided Contracts

The Exchange shall make the Any-Day(s) Single Sided contracts available for trading maximum up to a period as may be specified by Exchange within the timelines approved by CERC for delivery of electricity as may be requisitioned by the buyer. The requisitioner

(buyer) may seek any time and day or combination thereof. The Exchange will carry out trading in such contracts through 'Reverse Auction' where Buyer will be the requisitioner. The timeline for trade matching sessions will be specified in contract specifications. Scheduling of the transactions will be in accordance with Open Access Regulation and relevant procedures issued by POSOCO/NLDC as specified in the contract specifications. The Exchange may specify minimum conditions related to quantum, time etc. to be fulfilled by the bidders for participating in these contracts. The Exchange holds the right to modify parameters as permitted by CERC. The contract specifications of Any-Day(s) Single Sided contracts are given at **Annexure- F24**.

#### **4. Trading Days and trading hours**

The Exchange shall operate this segment on all days except Exchange specified holidays. The Exchange shall declare Trading & Settlement calendar indicating trading sessions and trading days for each of Contracts. The Exchange may extend, advance or reduce trading hours by notifying the Members as and when it deems fit and necessary.

#### **5. Matching Methodologies**

The matching of contracts will apply following matching methodologies which are explained below.

##### **5.1. Uniform Price Step Auction**

In Uniform Price Step Auction method, the participants submit their orders for sale and buy during the call auction phase. Such orders are automatically stored in the order book without giving rise to Contracts. After the end of the call auction phase, there is a call auction freeze phase. Until the call auction freeze phrase, Members can enter new orders (offers and bids) or modify their existing orders. Execution of trade takes place after the call auction freeze phase is over. The matching of orders takes place in accordance with matching rules given in subsequent sections. All trades are affected at uniform price known as Equilibrium Price (EP). All orders that have prices that are better than the equilibrium price are executed, and the ones that have a price equal to the equilibrium price are executed according to a First In First Out (FIFO) algorithm. The algorithm for determining Equilibrium Price is given in the matching rules. In such auction, the transmission network constraints are not considered implicitly while matching the orders. The following auction methodologies will be adopted:

- 5.1.1. **Open auction:** In the open auction, the participants submit their order for sale and buy during the auction phase. Complete list of order prices and aggregated quantities of buy and sale bids will be displayed to market participants maintaining bidder's anonymity. The participants can modify, delete or enter new orders during call auction period.

##### **5.2. Reverse Auction:**

- 5.2.1. In Reverse Auction, buyer will create the requisitions (quantum, time period with minimum acceptable quantity from single seller) and sellers to submit their offers (quantum. Minimum acceptable quantum and price) against each requisition. In each reverse auction there would be one buyer and multiple sellers. The sellers will compete amongst themselves for matching with the requisition made by the buyer.
- 5.2.2. The auction shall be conducted in two stages namely Initial Price Offer (IPO) and Reverse Auction.
- 5.2.3. In the IPO stage, the sellers will submit their price and quantity (during IPO session seller can view, modify and delete) against each requisition. The system will rank the Bidders according to their price bids. If two or more sellers quote the same price, the ranking of

the sellers shall be done based on time priority basis. The Bidder with the highest price bid in IPO stage will be called the H1 Bidder. The Highest Bidder(H1) will be eliminated provided that the total quoted quantity after elimination is not less than twice the requisitioned quantity. The elimination process will be carried out for each of the requisition separately. One event may have more than one requisition.

- 5.2.4. After completion of IPO stage, Reverse Auction will be conducted. During the auction session only prevailing lowest quoted price (L1) will be displayed to the market. The Reverse Auction shall continue for period of 120 minutes or as may be specified by the Exchange from time to time. The Exchange shall also from time to time specify the duration before the scheduled closure of Reverse Auction during which if there is a change in the lowest quoted price (L1) the Reverse Auction would get automatically extended by that duration. For example, if during the last 10 (ten) minutes before the scheduled close time of Reverse Auction, if a price bid is received which is lower than the L1, the close time of Reverse Auction will be automatically extended by 10(ten) minutes from the time of the last price bid received. This process of auto extension will continue till there is a period of 10 (ten) minutes during which no price bid is received which is lower than the prevailing L1.
- 5.2.5. During the Reverse Auction the seller will have the option of reducing the price quoted by them in decrements of Rs.1/Mwh or multiples thereof and the option of increasing the quantum quoted by them by 1 MWh or multiples thereof or as may be specified by the Exchange.
- 5.2.6. The seller after the Reverse Auction process will be ranked in accordance with the price offered in ascending order. The sellers, in order of their rankings, combinedly offering the quantum of power up to the requisitioned capacity would be the Successful Bidders.
- 5.2.7. In the event, of two or more sellers quoting the same price during Reverse Auction stage, the ranking of the seller shall be done based on a time priority basis.
- 5.2.8. Buyers shall communicate its acceptance/partial acceptance/rejection of trade to the Exchange within the timeline (after the closure of RA) as may be specified by the Exchange from time to time.
- 5.2.9. The buyer shall procure power from the Successful Bidders in the order of their rankings until the accepted quantity is met.

## **6. Order Management**

The Exchange may launch more than one order book running either parallel or at different time spans. All Clients will be assigned unique client ID / Portfolio ID code which may be same or different for different market segments. The types of order available in different trading sessions are mentioned below.

### **6.1. Order types**

The Exchange Members will be able to submit the following types of orders:

- 6.1.1. 'All or None' type of order or partial selection order or minimum quantity selection order.
- 6.1.2. Other order: The Exchange may introduce other types of orders as per the requirement of the market.

### **6.2. Uniform Price Step Auction Session:** Following orders types are available in this auction session.

- 6.2.1. Timing Constraints:



I. End of Session (EOS)

Valid for auction session only

**7. Matching Rules**

The Exchange may modify or change the matching rules relevant to any market or order books with prior approval of Commission. The rules for matching of bids as specified in Clause 5 of SCHEDULE B2 – Term Ahead Market (TAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Green Term Ahead Market.

**8. Margin Requirement**

The Exchange shall collect Initial Margins, Additional Margins and Ad hoc Margins as provided in Clause 6 of SCHEDULE B2 – Term Ahead Market (TAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Green Term Ahead Market.

**9. Risk Management System**

The Risk Management System as specified in Clause 7 of SCHEDULE B2 – Term Ahead Market (TAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Green Term Ahead Market.

**10. Surveillance**

Surveillance as specified in Clause 8 of SCHEDULE B2 – Term Ahead Market (TAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Green Term Ahead Market.

**11. Delivery procedure**

Delivery Procedure shall be as specified in Clause 9 of SCHEDULE B2 – Term Ahead Market (TAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Green Term Ahead Market.

**12. Transaction fees**

The Exchange will charge a transaction fee, as may be specified by the Exchange from time to time, on the transactions carried through the Exchange subject to provisions of CERC (Power Market) Regulations, 2021 and approval of the Commission, as applicable. Such transaction fee will be computed on both purchases and sales separately. This fee will be billed separately on periodic basis and will be recovered from the settlement account of the Member or the Clients, as applicable.

**13. Reports**

**13.1.** After end of trading session, the Exchange will provide the reports to the Members which consist of Trade file Report, Provisional Obligation Report, Final Obligation Report and other relevant matters.

**13.2.** Based on the Exchange's Reports, the Members can inform their Clients about their successful trades along with their obligation.

**14. Force Majure**

Force Majure shall be as specified in Clause 12 of SCHEDULE B2 – Term Ahead Market (TAM) Segment of these Business Rules shall be mutatis-mutandis applicable for the Green Term Ahead Market.

**Annexure F21****Contract Specification: Green Daily Contracts**

S. No.	Item	Details
1.	Contract Name	Green Daily Contracts (Solar/ Non-Solar/ Hydro)
2.	Contract Type	National or Electrical Region specific contracts for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER) or combination thereof for physical delivery of electricity generated from Solar or Non-Solar or Hydro renewable energy sources, as may be notified by the Exchange.
3.	Delivery Duration*	The daily contracts for delivery in a calendar day starting from T+2 day to maximum upto T+90 days on a rolling basis. (T-Trade Day)
4.	Trading day*	Trading will be available on the days as per Trading and Settlement calendar declared in advance.
5.	Bidding Session*	Bidding session will be made available on each trading day to the Members/Clients for bidding separately in Solar, Non-Solar and Hydro Contracts on Daily Basis up to two days before delivery day.
6.	Bidding Timeline*	00:00 hours to 24.00 hours on trading day
7.	Bidding process	<p><u>Solar/Non-Solar</u> Sellers and Buyers to submit order specifying duration, quantum in MWh and price in Rs./MWh. Sellers to provide its profile having 15 minute time block wise quantity (MW). It may be an 'All or None' type of order or partial selection type order. Each profile of seller shall be aggregated and converted in MWh for the purpose of matching.</p> <p><u>Hydro</u> Sellers and Buyers to submit bid specifying duration, quantum (MW) and price in Rs/MWh for each 15-minute time block or combination thereof as the case may be.</p>
8.	Price Discovery and Matching Methodology	Uniform Price Step Open Auction
9.	Minimum Volume quotation*	0.1 MW
10.	Minimum Volume Step*	0.1 MW
11.	Lot size*	0.1 MW * 15 minutes or combination thereof as notified by Exchange from time to time.
12.	Maximum bid size	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the member/Clients to adhere to this rule.



13.	Price Quote Basis	Rs. per MWh (excluding all fees, charges, taxes etc.)
14.	Price Tick*	Rs. 1 per MWh
15.	Quantity Variation	No quantity variation allowed.
16.	Risk Management Mechanism*	<p>a) <u>Initial Margins (Operational Limit)</u> Initial Margins equivalent to 5% of the order value or as may be specified by the Exchange from time to time will be collected from the Members/Clients (both from buyer &amp; seller) at the time of bidding. The initial margins could be in the form of cash or non-cash or combination of both. In the absence of initial margins, the Members/Clients will not be allowed to place the bids.</p> <p>b) <u>Additional Margins (Basis Margin)</u> After the trade and prior to submitting Application before the concerned Load Dispatch Center for scheduling, Additional Margin equivalent to the 50% of the Trade Value or as may be specified by the Exchange based on risk assessment, will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margins</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as pay in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
17.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of change of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
18.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade and partial quantity has been scheduled, the contracted quantity shall be equal to sum of quantity scheduled and balance trade quantity to be delivered.

19.	Transaction Fee	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the Exchange from time to time, as approved by the Commission.
20.	Delivery Mechanism	<p>a) <u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery Point</u> The delivery point shall be at Seller's injection point/Regional/State Periphery, as may be specified by the Exchange.</p> <p>c) <u>SLDC Clearance</u> Post trade, in case of buyer/seller connected to State transmission or distribution system, the buyer/seller shall provide concurrence of SLDC of their respective State to the Exchange. The concurrence shall be submitted to the Exchange as per the timelines specified in the Trading &amp; Settlement calendar. In case of any mismatch between the buyer and seller concurrence in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. In case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller.</p> <p>d) <u>Application for scheduling</u> Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Settlement Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on a best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses</u> Seller will bear all the Transmission, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear all the Transmission, Scheduling &amp; Operating charges including Application Fees and Transmission Losses, as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route</u></p>

		<p>The buyer will be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule</u> No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p> <p>h) <u>E-bidding</u> In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.</p>
21.	Payment of Application Fees & Charges	Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on receipt of the acceptance from the nodal LDC.
22.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 9 of Schedule F2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/revision of the contract after adjustment of charges, if any, and deduction of Exchange administrative charges.
23.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

**Contract Specification: Green Weekly Contracts**

S. No.	Item	Details
1.	Contract Name	Green Weekly Contracts (Solar / Non-Solar/ Hydro)
2.	Contract Type	National or Electrical Region-specific contracts for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER) or combination thereof for physical delivery of electricity generated from Solar or Non-Solar or Hydro renewable energy sources, as may be notified by the Exchange.
3.	Delivery Duration	The weekly contracts will be available for calendar Weeks from Monday to Sunday from TW+1 week to maximum upto TW+12 weeks on a rolling basis. (TW-Trade Week).
4.	Trading day	Trading will be available on the days as per Trading and Settlement calendar declared in advance.
5.	Bidding Session	Bidding session will be made available to the Members/Clients for bidding on each Trading Day separately in Solar, Non-Solar and Hydro Contracts from Monday to Friday for next week onwards available weekly contracts.
6.	Bidding Timeline*	12:00 P.M. to 5.00 PM on trading day.
7.	Bidding process	<p><u>Solar/Non-Solar</u> Sellers and Buyers to submit order specifying duration, quantum in MWh and price in Rs/MWh. Sellers to provide its profile having 15-minute time block wise quantity (MW). It may be an 'All or None' type of order or partial selection type order. Each profile of seller shall be aggregated and converted in MWh for the purpose of matching.</p> <p><u>Hydro</u> Sellers and Buyers to submit bid specifying duration, quantum (MW) and price in Rs/MWh for each 15-minute time block or combination thereof as the case may be.</p>
8.	Price Discovery and Matching Methodology	Uniform Price Step Open Auction
9.	Minimum Volume quotation*	0.1 MW
10.	Volume Tick size*	0.1 MW
11.	Lot size	0.1 MW * 15 minutes or combination thereof as notified by exchange from time to time.
12.	Maximum bid size	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the

		responsibility of the Member or the Clients to adhere to this rule.
13.	Price Quote Basis	Rs. per MWhr (excluding all fees, charges, taxes etc.)
14.	Price Tick*	Rs. 1 per MWh
15.	Quantity Variation	Not allowed.
16.	Risk Management Mechanism*	<p>a) <u>Initial Margins (Operational Limit)</u> Initial Margins equivalent to 5% of the order value or as may be specified by the Exchange from time to time will be collected from the Members/Clients (both from buyer &amp; seller) at the time of bidding. The initial margins could be in the form of cash or non-cash or combination thereof. In the absence of initial margins, the Members/Clients will not be allowed to place bid.</p> <p>b) <u>Additional Margins (Basis Margin)</u> After the trade and prior to submitting of Application before the concerned Load Dispatch Center for scheduling of transactions, Additional Margin equivalent to the 50% of the Trade Value or as may be specified by the Exchange based on risk assessment will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non-receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margin</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as pay in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
17.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of change of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
18.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade, and partial quantity has been scheduled, the contracted quantity shall be equal to sum of

		quantity scheduled and balance trade quantity to be delivered.
19.	Transaction Fee	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the Exchange from time to time, as approved by the Commission.
20.	Delivery	<p>a) <u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery point</u> The delivery point shall be at Seller's injection point/Regional/State Periphery, as may be specified by the Exchange.</p> <p>c) <u>SLDC Clearance</u> Post trade, in case of buyer/seller connected to State transmission or distribution system, the buyer/ seller shall provide concurrence of SLDC of their respective State to the Exchange. The concurrence shall be submitted to the Exchange as per the timelines specified in the Trading &amp; Settlement calendar. In case of any mismatch between the buyer and seller concurrence in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. In case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled, and such event shall be considered as default on account of such buyer/seller.</p> <p>d) <u>Application for scheduling</u> Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Settlement Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses</u> Seller will bear all the Transmission, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear all the Transmission, Scheduling &amp; Operating charges including Application Fees and Transmission Losses (in kind), as</p>

		<p>applicable, from delivery point up to their point of drawl . The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route</u> The buyer will be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule</u> No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p> <p>h) <u>E-bidding</u> In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.</p>
21.	Payment of Application Fees and Charges	Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on the receipt of the acceptance from the nodal LDC.
22.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 9 of Schedule F2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation of the contract after adjustment of charges, if any and deduction of Exchange administrative charges.
23.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.



**Contract Specification: Green Monthly Contracts**

S. No.	Item	Details
1.	Contract Name	Green Monthly Contracts (Solar/ Non-Solar/ Hydro)
2.	Contract Type	National or Electrical Region-specific contracts for Northern Region (NR), Eastern Region (ER), Western Region (WR), Southern Region (SR) and North East Region (NER) or combination thereof for physical delivery of electricity generated from Solar or Non-Solar or Hydro renewable energy sources, as may be notified by the Exchange.
3.	Delivery Duration	The Monthly contracts will be available for calendar Months from TM+1 Month to maximum upto TM+3 Months on a rolling basis. (TM-Trade Month)
4.	Trading day	Trading will be available on the days or as per Trading and Settlement calendar declared in advance.
5.	Bidding session	Bidding session will be made available to the members/Clients for bidding on each Trading Day separately in Solar, Non-Solar and Hydro Contracts From <ul style="list-style-type: none"> <li>First Day of the zero Month (M0)</li> </ul> To <ul style="list-style-type: none"> <li>For the first month (M1) contract –ten days prior to the end of zeroth month (M0);</li> <li>For the second month (M2) contract – five days prior to the close of zero month (M0);</li> <li>For the third month (M3) contract – last day of zero month (M0).</li> </ul>
6.	Bidding Timeline	12:00 P.M. to 5.00 PM on trading day
7.	Bidding process	<u>Solar/Non-Solar</u> Sellers and Buyers to submit order specifying duration, quantum in MWh and price in Rs/MWh. Sellers to provide its profile having 15-minute time block wise quantity (MW). It may be an 'All or None' type of order or partial selection type order. Each profile of seller shall be aggregated and converted in MWh for the purpose of matching. <u>Hydro</u> Sellers and Buyers to submit bid specifying duration, quantum (MW) and price in Rs/MWh for each 15-minute time block or combination thereof as the case may be.
8.	Price Discovery and Matching Methodology	Uniform Price Step Open Auction
9.	Minimum Volume quotation*	0.1 MW
10.	Minimum Volume Step*	0.1 MW
11.	Lot size*	0.1 MW * 15 minutes or combination thereof as notified by Exchange.

12.	Maximum bid size	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the Member or the Clients to adhere to this rule
13.	Price Quote	Rs. per MWH (excluding all fees, charges, taxes etc.)
14.	Tick size*	Rs. 1 per MWH
15.	Quantity Variation	No quantity variation allowed.
16.	Risk Management Mechanism*	<p>a) <u>Initial Margins (Operational Limit)</u> Initial Margins equivalent to 1% of the order value or as may be specified by the Exchange from time to time will be collected from the Members/Clients (both from buyer &amp; seller) at the time of bidding. The initial margins could be in the form of cash or non-cash or combination of both. In the absence of initial margins, the Members/Clients will not be allowed to place the bids</p> <p>b) <u>Additional Margins (Basis Margin)</u> After the trade and prior to submitting of Application before the concerned Load Dispatch Center for scheduling, Additional Margin equivalent to the 20% of the Trade Value or as may be specified by the Exchange time to time based on risk assessment will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p>c) <u>Ad hoc Margin</u> Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p>d) <u>Funds pay in</u> Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as pay-in default.</p> <p>e) <u>Funds pay out</u> Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.</p>
17.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of revision of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
18.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade and partial quantity has been scheduled, the contracted quantity shall be equal to sum of quantity scheduled and balance trade quantity to be delivered.

19.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the exchange from time to time, as approved by the Commission.
20.	Delivery	<p>a) <u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p>b) <u>Delivery point</u> The delivery point shall be at Seller's injection point/Regional/State Periphery as may be specified by requisitioner.</p> <p>c) <u>SLDC Clearance</u> Post trade, in case of buyer/seller is connected to State transmission or distribution system, the buyer/seller shall provide concurrence of SLDC of their respective State to the Exchange for the traded quantity. The concurrence shall be submitted to the Exchange as per the timelines specified in the trading calendar. In case of any mismatch between the buyer and seller concurrence in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. In case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller.</p> <p>d) <u>Application for Scheduling</u> Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Delivery Calendar and as per the "Procedure for Scheduling of bilateral transactions" or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p>e) <u>Application fees, Operating and Transmission Charges and Losses</u> Seller will bear the Transmission, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear all the Transmission, Scheduling &amp; Operating charges including Application Fees and Transmission Losses (in kind), as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p>f) <u>Alternate route</u> The buyer shall be deemed to have consented for all possible transmission corridors from seller's injection point till drawl point.</p> <p>g) <u>Revision of Schedule</u> No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p>

		<p>h) <u>E-bidding</u></p> <p>In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e-bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.</p>
21.	Payment of Application Fees and Charges	Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on the receipt of the acceptance from the nodal LDC.
22.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 9.4 of Schedule F of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/revision of the contract after adjustment of charges, if any, and deduction of Exchange administrative charges.
23.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

**Contract Specification: Green Any-Day(s) Single Sided Contracts**

S. No.	Item	Details
1.	Contract Name	Green Any-Day(s) Single Sided Contracts (Solar/ Non-Solar/ Hydro)
2.	Contract Type	Contracts for physical delivery of electricity generated from Solar or Non-Solar or Hydro renewable energy sources.
3.	Delivery Duration	The Green Any-Day(s) Single Sided contracts will be available for buyer/seller defined Day(s) and hour(s)/time block(s) from T+2 day to maximum upto T+90 days on a rolling basis. (T-Trade Day).
4.	Trading day	Trading will be available on the days as per trading calendar declared in advance.
5.	Bidding session	Bidding sessions will be made available to the members/Clients for bidding on each Trading Day separately in Solar, Non-Solar and Hydro Contracts on Daily basis upto 2 days before delivery as per Trading & Settlement calendar.
6.	Bidding Timeline	00:00 hours to 24:00 hours on trading days or as per Trading & Settlement calendar.
7.	Bidding process	<p><u>Solar/ Non-Solar</u>  <u>Reverse Auction:</u> Buyer to specify its requirement in terms of quantum in MWh and duration. Sellers to bid their offers specifying quantum in MWh and Price in Rs/MWh against the requirement of buyer during the auction window. Buyer and Seller may also specify minimum quantum. The bidding shall take place in 2 stages i.e., Initial Price Offering (IPO) and Reverse Auction.</p> <p><u>Hydro</u>  <u>Reverse Auction:</u> Buyer to specify its requirement in terms of quantum in MW and duration. Sellers to bid their offers specifying quantum in MW and Price in Rs/MWh against the requirement of buyer during the auction window. Buyer and Seller may also specify minimum quantum. The bidding shall take place in 2 stages i.e., Initial Price Offering (IPO) and Reverse Auction.</p>
8.	Price Discovery and Matching Methodology	Reverse Auction for buyer's requisition in terms of Schedule F2 of the IEX Business Rules.
9.	Minimum Volume quotation*	0.1 MW
10.	Minimum Volume Step*	0.1 MW
11.	Minimum Requisition/Offer Quantity	Bidder while initiating the Reverse Auction will have to submit a minimum requisition or offer quantity of 500 MWhr or as may be specified by the Exchange from time to time.
12.	Lot size*	1 MW * 15 minutes or combination thereof.

13.	Maximum bid size*	At no point of time the bid quantity of Sellers/Buyers should be more than the maximum injection/drawl quantity allowed by the concerned Load Dispatch Center. It will be the responsibility of the member/Clients to adhere to this rule.
14.	Price Quote	Rs. per MWH (excluding all fees, charges, taxes etc.)
15.	Tick size*	Rs. 1 per MWH
16.	Quantity Variation	No quantity variation allowed.
17.	Risk Management Mechanism*	<p><u>Initial Margins (Operational Limit)</u></p> <p>The buyer has to pay a nominal non-refundable fee up to Rs. 1,00,000 or as may be specified by the Exchange for initiating the reverse auction. This fee will be adjusted in the additional margins to be collected from buyer after the successful execution of the contract.</p> <p>The seller will be required to provide an initial margin calculated at the rate of 30000/MW/Month or part thereof, or as may be specified by the Exchange, at the time of bidding in the Reverse Auction. The initial margin can be in the form of cash or non-cash collateral. If a seller gets eliminated during the Reverse Auction or the trade gets rejected by Buyer, the initial margin as collected will be refunded to the seller. If the seller gets selected, then the initial margin will get adjusted with the Additional Margin to be collected from the Seller.</p> <p>In absence of adequate initial margin, seller will not be allowed to place bid.</p> <p><u>Additional Margins (Basis Margin)</u></p> <p>On acceptance of the trade and prior to submitting of Application before the concerned Load Dispatch Center for scheduling, Additional Margin equivalent to 50%, 25%, and 20% of the Trade Value for contracts up to 7 days, 15 days and beyond 15 days respectively or may be as specified by the Exchange from time to time will be collected from the Member/Client (both from buyers &amp; sellers). Additional Margin can be in the form of cash or non-cash or combination thereof. Non receipt of the adequate Additional Margin from the Member/Client shall be treated as Margin default.</p> <p><u>Ad hoc Margin</u></p> <p>Exchange can impose Ad hoc Margin, which the Exchange can apply any time during the life of the contract.</p> <p><u>Funds pay in</u></p> <p>Amount equivalent to one day's obligation shall be collected from buyers on D-1 basis (D is Delivery Day). Any non-payment of funds shall be considered as pay-in default.</p> <p><u>Funds pay out</u></p>



		Amount equivalent to one day's obligation shall be disbursed to sellers on D+1 basis for each delivery day subject to confirmation of delivery by the seller.
18.	Price Settlement	Traded price * Quantity scheduled by Load Dispatch Center (LDC) at delivery point. In case of revision of schedule, the final price settlement shall be based on revised scheduled quantity. Netting off (square scheduled off) of positions shall not be allowed.
19.	Contracted quantity	Contracted quantity shall be the quantity approved and scheduled by LDC at delivery point against the Application for Scheduling made by Exchange. However, till the approval of application by LDC, traded quantity shall be considered as contracted quantity. In case, multiple applications are to be filed for single trade and partial quantity has been scheduled, the contracted quantity shall be equal to sum of quantity scheduled and balance trade quantity to be delivered.
20.	Right to Reject	After the Reverse Auction, the Buyer may partially or fully reject the trade within the timelines as may specified by the Exchange from time to time. During such time, the bid will remain valid and the successful bidders will not be able to change their bid. In case no communication is received from the Buyer regarding acceptance of the trade or on non-payment of additional margin, within stipulated time, the trade shall be deemed to be rejected by the Buyer.
21.	Transaction Fees	Fees payable by buyer and seller to Exchange for the quantity approved by nodal LDC at delivery point as specified by the exchange from time to time, as approved by the Commission.
22.	Delivery Mechanism	<p><u>Delivery</u> The quantity shall be deliverable as per the schedule issued by the LDC.</p> <p><u>Delivery point</u> The delivery point shall be as may be specified by the Exchange</p> <p><u>SLDC Clearance</u> Post trade, in case of buyer/seller is connected to State transmission or distribution system, the buyer/seller shall provide concurrence of SLDC of their respective State to the Exchange for the traded quantity. The concurrence shall be submitted to the Exchange as per the timelines specified in the trading calendar. In case of any mismatch between the buyer and seller NOC in terms of quantum and duration approved by SLDC, the minimum of two shall be considered for application for scheduling. Except as otherwise provided, in case, buyer/seller has not applied for such concurrence or applied for the quantity less than the traded quantity then the trade may be cancelled and such event shall be considered as default on account of such buyer/seller.</p>



		<p><u>Application for Scheduling</u> Application for Scheduling shall be submitted to nodal LDC by Exchange as specified in the Trading and Delivery Calendar and as per the “Procedure for Scheduling of bilateral transactions” or any other applicable procedure subject to receipt of adequate margins by Exchange. The Application shall be made on the first available date on best effort basis. The buyer and seller shall be deemed to have been consented for the type of Application and any variation between traded quantity and scheduled quantity on account of LDC approval.</p> <p><u>Application fees, Operating and Transmission Charges and Losses</u> Seller will bear the applicable Transmission, Scheduling &amp; Operating charges and Transmission Losses (in kind), as applicable, up to the delivery point and Buyer shall bear applicable Transmission, Scheduling &amp; Operating charges including Application Fees and Transmission Losses (in kind), as applicable, from delivery point up to their point of drawl. The charges shall be applied on the quantum of power scheduled at delivery point.</p> <p><u>Alternate route</u> The buyer shall be deemed to have consented for all possible transmission corridors from seller’s injection point till drawl point.</p> <p><u>Revision of Schedule</u> No revision of schedule allowed. Any revision by System Operator on account of reasons other than force majeure or constraints in the transmission corridor shall be treated as default by the party who is responsible for such event.</p> <p><u>Cancellation of trade</u> The Buyer who has initiated Reverse Auction shall have the right to partially or fully reject the trade within the timelines (maximum 2 days before delivery start) as may be specified by the Exchange.</p> <p><u>E-bidding</u> In the event, LDC conducts e-bidding process for allocation of transmission corridor in case of congestion, the Exchange will participate in the process of e-bidding as per the procedure for scheduling of bilateral transaction subject to consent of buyer/seller. The buyer/seller, if consented, shall provide price quote to be bided (excluding transmission charges) in the e-bidding. Exchange will collect the requisite amount from the concerned member/client before e bidding.</p>
23.	Payment of Application Fees and Charges	<p>Application fees will be collected from buyer on date of application to Nodal LDC. Transmission and Operating Charges as applicable on quantum scheduled at the delivery point and payable to the Nodal LDC, will be collected from the buyer and seller members/Clients on the receipt of the acceptance from the nodal LDC.</p>

24.	Default & penalties*	In case of default, the trade/future delivery under the contract shall be reduced/cancelled and penalty may be imposed on the defaulting entity as per Clause 9 of Schedule F2 of IEX Business Rules. Such penalty will be paid to the counter party as compensation against cancellation/ revision of the contract after adjustment of charges, if any and deduction of Exchange administrative charges.
25.	Force majeure	In case of force majeure the Exchange will settle the contract as per final schedule issued by LDC. The quantity reduced under force majeure shall not be treated as default.

\* Exchange may modify these parameters from time to time with prior intimation to its Members.

## Certificate of Purchase of Renewable Energy



### Certificate of Purchase of Renewable Energy

Number C-[**Certificate No.**]Issued On-[**DD-MMM-YYYY**]

Serial No.-[.....]

[**NAME OF CORPORATION**]

A [ ] Corporation

[**#Issued**] CertificatesEnergy Type [**Solar / Non Solar / Hydro**]**Session ID**

This is certified that [**Buyer**] has purchased [**Quantity in MWh**] of **Renewable Energy** generated from [**Solar / Non-Solar / Hydro**] energy source in the period from [**DD/MM/YYYY**] to [**DD/MM/YYYY**] through **Indian Energy Exchange Limited**.

This certificate represented hereby is issued on non-transferable and non-tradable basis and shall be held subject to Orders and Regulations of Honorable Central Electricity Regulatory Commission as amended from time to time and the Bye-laws, Rules and Business Rules of Indian Energy Exchange Limited.

*This is a computer-generated statement hence doesn't require signature.*

## SCHEDULE G – ANCILLARY SERVICES MARKET (ASM)

Ancillary Services Market (ASM) segment at Exchange shall facilitate bidding for procurement of capacity for Tertiary Reserve Ancillary Service (TRAS) by Nodal Agency namely National Load Dispatch Center (NLDC) in accordance with the Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2022 (AS Regulations 2022) and its amendments thereof. There shall be two sub-segments in AS Market namely Day Ahead Ancillary Services Market (AS-DAM) and Real Time Ancillary Service Market (AS-RTM). Separate window for TRAS-UP and TRAS-DOWN shall be available for bidding in each of the sub-segments. The eligible grid connected entity participating in AS Market shall be called as TRAS Providers. The TRAS providers may offer capacity in TRAS-UP and TRAS-DOWN in accordance with the “Detailed Procedure for Tertiary Reserve Ancillary Service (TRAS)” issued by National Load Dispatch Center (NLDC). All terms and conditions of the market including eligibility, bidding sessions, etc., will be as per specific rules mentioned herein.

### 1. Definitions:

- 1.1 “Ancillary Service” or “AS” in relation to power system operation, means the service necessary to support the grid operation in maintaining power quality, reliability and security of the grid and includes Primary Reserve Ancillary Service, Secondary Reserve Ancillary Service, Tertiary Reserve Ancillary Service, active power support for load following, reactive power support, black start and such other services as defined in the Grid Code;
- 1.2 “Commitment charge” means the amount payable to the TRAS Provider for the quantum of TRAS-Up cleared in the Day Ahead AS Market or the Real Time AS Market, as the case may be, but not instructed for despatch.
- 1.3 “Energy-Down bid” means the bid in Rs./MWh for the offered quantum submitted by the TRAS-Down Provider to pay to the concerned Deviation and Ancillary Service Pool Account;
- 1.4 “Energy-Up bid” means the bid in Rs./MWh for the offered quantum submitted by the TRAS-Up Provider;
- 1.5 “Tertiary Reserve Ancillary Service” or “TRAS” means the Ancillary Service comprising TRAS-Up and TRAS-Down and consists of spinning reserve or non-spinning reserve, which responds to despatch instructions from the Nodal Agency;
- 1.6 “TRAS-Down” means a TRAS that reduces active power injection or increases drawal or consumption, as the case may be, in response to despatch instructions of the Nodal Agency;
- 1.7 “TRAS-Down Provider” means an entity which provides TRAS-Down in accordance with the CERC AS Regulations;
- 1.8 “TRAS-Up” means a TRAS that increases active power injection or decreases drawal or consumption, as the case may be, in response to despatch instructions of the Nodal Agency;
- 1.9 “TRAS-Up Provider” means an entity which provides TRAS-Up in accordance with the CERC AS Regulations;

- 2. Eligibility:** A generating station or an entity having energy storage resource or an entity capable of providing demand response, on standalone or aggregated basis, connected to inter-State transmission system or intra-State transmission system shall be eligible for participation as TRAS Provider, if
- 2.1 it is capable of varying its active power output or drawl or consumption, as the case may be, on receipt of despatch instructions from the Nodal Agency; and
  - 2.2 it is capable of providing TRAS within 15 minutes and sustaining the service for at least next 60 minutes; and
  - 2.3 has 'standing clearance' from RLDC or SLDC through NOAR for TRAS, as the case may be, in accordance with the NLDC Procedure for TRAS; and
  - 2.4 has taken necessary registration for participation in AS market of the Exchange;
  - 2.5 The eligibility conditions shall be subject to CERC AS Regulations and Procedure made thereunder and its amendments time to time.

### 3. Membership

All the existing categories of Members, except exclusive ESCERTs and REC Members, of the Exchange shall be eligible for bidding in AS Market at the Exchange Platform subject to registration in ASM segment. Further, exclusive membership for ASM segment may be available if any participant is interested to participate only in ASM. Additional eligibility conditions, if any, shall be specified by the Exchange from time to time through circulars.

### 4. Client

A category of Client termed as 'TRAS Client' shall be available for the participants who wish to transact in ASM through Members of the Exchange. All Clients, whether existing or new, shall be required to register themselves through any Member of the Exchange for transacting in ASM on the Exchange. Only new clients shall receive a registration identification code from the Exchange provided that they comply with all the requirements prescribed by the Exchange from time to time.

### 5. Bidding Days:

The Exchange shall operate the ASM segment on all days except Exchange specified holidays.

### 6. Bidding hours:

- 6.1 The Exchange will operate bidding sessions on all bidding days as per following bidding hours:

Sessions per Day	Market Type	Monday to Sunday
1	Day Ahead Ancillary Services Market (AS-DAM)	10:00 a.m. to 12:00 Noon
48	Real Time Ancillary Services Market (AS-RTM)	As per timelines of RTM session

- 6.2 The Exchange may extend, advance or reduce trading sessions by notifying the Members as and when it deems fit or directions by NLDC.

## 7. Bid specifications:

The Bid specification of Ancillary Services Market (ASM) shall be as per **Annexure G** to this Schedule.

## 8. Order types: The Exchange will make available Single Bid types of order for TRAS-UP and TRAS Down bidding as detailed under:

8.1 The Single bid will specify multiple sequences of price and quantity pairs in a portfolio manner. The quantity shall be assumed to vary linearly between two price pairs.

8.2 In case of TRAS Up, the bids should be monotonically increasing bid.

8.3 In case of TRAS Down, the bids should be monotonically decreasing bid.

8.4 Any other type of order as may be specified.

8.5 Order Carry Forward (OCF) option: The time block wise Order Carry Forward (OCF) option will be available for eligible TRAS providers to transfer their uncleared single bids from DAM and HPDAM to AS-DAM segment for TRAS-Up bid only. TRAS Providers will not be able to transfer their uncleared block bids from DAM and HP-DAM to AS-DAM. Such an option will also not be available for TRAS Down bids in AS-DAM and for both TRAS Up and TRAS Down bids in AS-RTM.

## 9. Treatment of Transmission Charges and Losses: The bid quantum shall be for delivery at the Regional Periphery. Treatment of Transmission charges and losses shall be as per AS Regulations 2022 and procedure made thereunder.

## 10. Order Management

10.1 **Modification and cancellation of orders:** A Member shall be permitted to modify or cancel his orders, during the bidding session. No order will be cancelled after bidding session except in case of any direction from LDC or Regulatory Commission/ statutory requirement.

10.2 **Order validation:** Orders and bids entered into the Trading System shall be subject to various validation requirements as prescribed by the Exchange including price and quantity restrictions as decided by the Exchange. Orders that do not meet the validation checks will not be accepted by the Exchange.

## 11. Matching rules: Matching of bids and Price Discovery of TRAS-UP & TRAS-DOWN in ASM to be carried out by Nodal Agency. The rules for matching of bids shall be as per NLDC Procedure for TRAS. The Exchange shall not be liable for whatsoever loss to the TRAS Provider arising out of the matching and price discovery in AS Market.

## 12. Funds requirements: The funds requirement shall be calculated considering exposure of a Member only with respect to Exchange Fee and Charges in AS Market. Decisions of the Exchange in this respect shall be binding on the Member and Clients.

## 13. Ancillary Services Market Operations: The Ancillary Service Market operations activities timelines shall be adhered to by the Exchange Members in order to have smooth and orderly operations of the Exchange. These market operations shall be in accordance with the Procedures for TRAS issued by NLDC. The operations activities shall be as follows:

### 13.1 Pre bidding phase:

- i) Nodal Agency to communicate quantum of reserves to be procured by Nodal Agency before the start of bidding session separately for TRAS-UP & TRAS-DOWN for both DAM and RTM AS Market..
- ii) The quantum of reserves to be procured by Nodal Agency received by Exchange shall be available for the information of TRAS Provider.

### 13.2 Order accumulation period (Bidding phase):

- i) Bid session for Day Ahead Ancillary Services Market (AS-DAM) will be available from 10.00 am to 12.00 pm and bidding session in each alternate 15 min for Real Time Ancillary Services Market (AS-RTM) on all bidding days subject to availability of the quantum of reserves to be procured by Nodal Agency. Separate bidding window will be available for TRAS-UP & TRAS-DOWN.
- ii) During the bidding sessions on bidding day, orders entered by Members/Clients in the terminal shall be stored in the order book. Orders entered by the direct access clients shall be treated as orders entered by Members.
- iii) For TRAS-Up, time-block wise Energy-Up bid in Rs./MWh shall be submitted for the offer quantity in MW.
- iv) For TRAS-Down, time-block wise Energy-Down bid in Rs./MWh shall be submitted for the offer quantity in MW.
- v) The TRAS provider shall ensure that the capacity offered, as a sell bid for energy market and for TRAS from a resource in the same time-block, shall be separate and non-overlapping.
- vi) The orders accumulated during respective bidding session and orders carried forward using OCF option shall be combined for the purpose of forwarding bids to Nodal Agency for price discovery.

### 13.3 Bid Matching process:

- i) After the end of the bidding session, the Exchange shall verify funds available in the Settlement Account of the Member or Clients, as applicable, towards obligation of Exchange fee and charges on bid quantity.
- ii) Bids of those Members who have not brought sufficient funds shall be excluded from the bids to be forwarded to the Nodal Agency for price discovery and clearing.

### 13.4 Clearing Process:

- i) The Nodal Agency to communicate Market clearing price and cleared quantity separately for TRAS-UP & TRAS-DOWN of each TRAS provider.
- ii) The cleared quantum and price shall be informed to each selected TRAS Provider on receipt of this information from Nodal Agency.
- iii) Final obligation of Members only towards Exchange Fee & charges shall be worked out based on the cleared and dispatched quantity and accordingly invoice will be generated.



- iv) An automated bank file for debit of Settlement Accounts of the respective Members by the amount payable will be generated and sent to the respective Clearing Banks. The frequency of funds pay-in from the Members will be done as per the circular issued by Exchange time to time. The Bank will run the pay in file at the scheduled time and report to the Exchange regarding successful debits.

### 13.5 Timelines:

The Exchange timelines for one trading session is as under. This will be repeated for every bidding session. They are subject procedures issued by NLDC or CERC Regulations.

<b>Day Ahead Ancillary Services Market (AS-DAM)</b>	
<b>TIME</b>	<b>DETAILS</b>
By 1000 Hrs.	<ul style="list-style-type: none"> <li>NLDC to convey quantum of reserves to be procured for next day.</li> </ul>
1000 Hrs. to 1200 Hrs.	<ul style="list-style-type: none"> <li>Bid - Call session</li> <li>Separate window for TRAS-UP &amp; TRAS-DOWN</li> </ul>
By 1530 Hrs.	<ul style="list-style-type: none"> <li>Exchange to forward bids to NLDC</li> </ul>
By 1700 Hrs.	<ul style="list-style-type: none"> <li>NLDC to convey MCP and Cleared quantity which will be onward communicated to TRAS Providers</li> </ul>

<b>Real Time Ancillary Services Market (AS-RTM)</b>	
<b>TIME</b>	<b>DETAILS</b>
By 2245 Hrs.	<ul style="list-style-type: none"> <li>NLDC to convey quantum of reserves to be procured</li> </ul>
2245 hrs. to 2300 Hrs.	<ul style="list-style-type: none"> <li>Bid - Call session</li> <li>Separate window for TRAS-UP &amp; TRAS-DOWN</li> </ul>
After 23:00 Hrs.	<ul style="list-style-type: none"> <li>Exchange to forward bids to NLDC</li> </ul>
After 23.15 Hrs.	<ul style="list-style-type: none"> <li>NLDC to convey MCP and Cleared quantity which will be onward communicated to TRAS Providers</li> </ul>

## 14. Scheduling and Despatch of TRAS

- 14.1 Scheduling and dispatch of TRAS shall be according to the provisions of the prevailing Grid Code and as per NLDC Procedure for TRAS.
- 14.2 Instructions for Scheduling and dispatch of TRAS shall be issued by NLDC directly to the TRAS provider. Exchange shall not carry out scheduling and despatch of TRAS.

## 15. Exchange not assuming counter-party risk:

- 15.1 The Settlement in ASM with Exchange is limited towards the applicable Exchange Fee and charges as payment/settlement towards TRAS-UP/TRAS-DOWN services (viz commitment charges, MCP etc.) shall be carried out by Nodal Agency directly with the TRAS provider.
- 15.2 Therefore, Exchange shall not be liable for settlement or pay-in/pay-out with respect to TRAS-DOWN/TRAS-UP Services provided by the selected TRAS providers on instructions of the NLDC.
- 15.3 Further, the Bye-Laws, Rules and Business Rules of the Exchange, to the extent of Exchange assuming liability as counter party to each transaction shall not be applicable for the transactions carried out in the Ancillary Services Market and accordingly provisions with respect to Deposits, Settlement Guarantee Fund and all contractual terms with respect to delivery of traded contracts at Exchange shall not be applicable in Ancillary Market

Segment. The decision of the Exchange on the applicability of any provision of the Bye-Laws, Rules and Business Rules of the Exchange in the Ancillary Market Segment shall be final and binding.

## 16. Surveillance

- 16.1 **Validation of orders:** Members are required to ensure that bids and offers are in conformity with relevant regulatory provisions. In order to avoid any abnormal orders being put by the Exchange Members like bids quantity or offer quantity submitted higher than the declared capacity/demand by the Member, or the maximum quantity of purchase or sale as allowed in the Standing Clearance, the Exchange will validate such orders either through software or manually on a daily basis, wherever possible. Further, the order value of the Member will also be compared with the available limits of such Member for any over utilization.
- 16.2 **Price movement:** The Exchange will observe any variation in prices as compared to past data.
- 16.3 **Market behavior:** The Exchange shall compare the trend in other national markets with that of the ASM. Any unwarranted change in the price pattern or order trend in this will be brought under the notice of the Exchange management.
- 16.4 **Price rigging, concentration, price manipulation and other market abuses:** The Exchange will monitor concentration, price rigging, price manipulation and other market abuses and take suitable actions whenever such practices are identified.

## 17. Indemnification

All the TRAS providers shall keep Exchange indemnified at all times and shall undertake to indemnify, defend and save the Exchange harmless from any and all damages, losses, and claims arising out of or resulting from the activities carried out by NLDC with respect to the Ancillary Services Market.

**Ancillary Services Market (ASM) Bid Specifications**

1.	Product Name	<b>Day Ahead Ancillary Services Market (AS-DAM) &amp; Real Time Ancillary Services Market (AS-RTM)</b>
2.	Product description	Bidding for procurement of Tertiary Reserve Ancillary Services (TRAS) capacity by NLDC in Day-Ahead and Real-Time timeframe separately for TRAS-UP & TRAS-DOWN services.
3.	Bidding system	IEX Bidding system
4.	Bidding Session	<b>AS-DAM:</b> 10:00 AM to 12:00 PM of previous day (D-1) <b>AS-RTM:</b> Each session of 15 Minute duration on rolling basis with a gap of 15 minutes (E.g. 2245 to 2300 than 2315 to 2330)
5.	Capacity commitment period	<b>AS-DAM:</b> 00:00 Hrs to 24:00 Hrs. for next day on 15 min time block basis <b>AS-RTM:</b> Half hourly commitment consisting of two consecutive 15-Min time blocks.
6.	Bid Type	TRAS-UP & TRAS-DOWN
7.	Bidding Process	For TRAS-Up, Energy-Up bid in ₹/MWh shall be submitted for the offer volume in MW. For TRAS-Down, Energy-Down bid in ₹/MWh shall be submitted for the offer volume in MW. The capacity offered, as a sell bid for energy in the Power Exchange and for TRAS from a resource in the same time-block, shall be separate and nonoverlapping.
8.	Minimum volume	1 MW or as per NLDC Procedure for TRAS
9.	Minimum volume step	0.1 MW or as per NLDC Procedure for TRAS
10.	Minimum quotation step	Rs. 1 per MWh or as per NLDC Procedure for TRAS
11.	Bid Price Range	For HP-DAM Sellers - As per prevailing Bid Price Range in HP-DAM Other Seller – As per prevailing Bid Price Range in DAM. or as may be specified by CERC or NLDC.
12.	Matching method	As per NLDC Procedure for TRAS
13.	Transmission charges	As per NLDC Procedure for TRAS
14.	Transmission losses	As per NLDC Procedure for TRAS
15.	Eligibility	Valid Standing clearance issued by LDC through NOAR specifying the eligibility of the entity to participate in TRAS
16.	Transaction Fee	As may be specified by the Exchange in accordance with of the directions of Hon'ble CERC.

## Version Control

Version	Date	Modifications
1.	09.11.2010	Alignment of Bye-Laws, Rules & Business Rules with CERC (Power Market) Regulations, 2010.
2.	23.02.2011	Introduction of REC Market Segment (Schedule 'C').
3.	28.11.2011	Compliance with CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.
4.	30.03.2012	Modification of Time block for bidding from one hour to fifteen minutes in DAM.
5.	30.10.2012	Mechanism on the manner of collection, settlement and monitoring of members service charge charged by the professional member and modification in matching rules in TAM & REC market.
6.	20.11.2012	Modifications in DAM Specifications.
7.	14.12.1012	Modifications in Contract Specification:- Regional Intra-Day Contract
8.	18.07.2015	Introduction of Extended Market Session.
9.	17.05.2017	Introduction of ESCerts Market Segment (Schedule 'D') to the Business Rules.
10.	20.11.2018	Compliance of CERC order dated 09.10.2018.
11.	06.02.2020	Introduction of New Bid (Order) types at Indian Energy Exchange.
12.	29.05.2020	Incorporation of Schedule-E - Real Time Market.
13.	20.08.2020	Incorporation of Schedule-F- Green Term Ahead Market.
14.	22.10.2021	Incorporation of Green Day Ahead Contract in DAM.
15.	17.03.2022	Incorporation of Hydropower Contracts in Schedule-F- Green Term Ahead Market.
16.	03.05.2022	Alignment of Bye-Laws, Rules & Business Rules with CERC (Power Market) Regulations, 2021.
17.	23.06.2022	Introduction of contracts beyond T+11, Monthly and Any Day(s) Single Sided Contracts in TAM & G-TAM.
18.	07.03.2023	Introduction of HP-DAM
19.	16.05.2023	Introduction of Ancillary Services Market
20.	18.10.2023	Modification in REC Contract and Introduction of HP-TAM
21.	06.03.2024	Modifications in compliance with CERC Order dated 21.02.2024 in Petition No. 02/SM/2024