



भारत सरकार Government of India

विद्युत मंत्रालय Ministry of Power

उत्तर पूर्वी क्षेत्रीय विद्युत समिति

North Eastern Regional Power Committee

एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय

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No.: NERPC/COM/CC_Corr/2018/4875-4921

October 20, 2023

To

1. Chief Engineer (Commercial) -cum- CEI, Deptt. of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
2. MD, APDCL, Bijuli Bhawan, Paltan Bazar, Guwahati-781 001
3. MD, AEGCL, Bijuli Bhawan, Paltan Bazar, Guwahati-781 001
4. MD, APGCL, Bijuli Bhawan, Paltan Bazar, Guwahati-781 001
5. MD, MSPDCL, Secure Office Bldg. Complex, 3rd Floor, South Block, Near 2nd MR Gate, Imphal – 795 001
6. MD, MSPCL, Keishampat, Imphal – 795 001
7. Director (Distribution), MePDCL, Lumjingshai, Short Round Road, Shillong – 793 001
8. Director (Transmission), MePTCL, Lumjingshai, Short Round Road, Shillong – 793 001
9. Director (Generation), MePGCL, Lumjingshai, Short Round Road, Shillong – 793 001
10. Engineer-in-Chief (P&ED), Govt. of Mizoram, New Secretariat Complex, Khatla, Aizawl – 796 001
11. Engineer-in-Chief (P&E), Department of Power, Govt. of Nagaland, Kohima – 797 001
12. Director (Tech), TSECL, Banamalipur, Agartala – 799 001
13. Director (Generation), TPGL, Banamalipur, Agartala – 799 001
14. GM (Transmission), TPTL, Banamalipur, Agartala – 799 001
15. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
16. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
17. ED (Commercial), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
18. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
19. Group GM, NTPC Limited, Bongaigaon Thermal Power Project, P.O. Salakati, Kokrajhar-783369
20. GM (Comml), NTPC Limited, ER-II HQ, Plot No. N-17/2, Third Floor, Naya Palli, Bhubaneswar-751012
21. MD, OTPC, 10th Floor, Core-4 & Central, Scope Minar, Laxami Nagar, New Delhi Delhi , 110092
22. MD, NETC, #2C, 3rd Floor, D-21, DMRC Building, Corporate Park, Sector-21, Dwarka, Delhi-77
23. Head Transmission, KMTL, 7th Floor, Fulcrum, Sahar Road, Andheri (East), Mumbai-400099
24. ED, NERTS, PGCIL, Dongtieh-Lower Nongrah, Lapalang, Shillong -793 006
25. AGM (BD), NVVN, Core 5, 3rd floor, Scope Complex, 7 Institutional Area, Lodhi Rd., N. Delhi-3
26. Vice President, PTCIL, 2nd Floor, NBCC Tower, 15, Bhikaji Cama Place, New Delhi – 110066
27. Dy. COO, CTUIL, “Saudamini”, 1st Fkoo, Plot No. 2, Sector-29, Gurugram, Haryana - 122001
28. ED, NERLDC, Dongtieh-Lower Nongrah, Lapalang, Shillong -793 006
29. Chief Engineer, GM Division, CEA, Sewa Bhawan, R.K. Puram, New Delhi – 110066

Sub: Minutes of the 49th Commercial Sub-Committee Meeting held on 21st September 2023

Sir/Madam,

Please find enclosed herewith the minutes of the 49th Commercial Sub-Committee Meeting held on 21st September 2023 at Hotel Aurika, Udaipur, Rajasthan for your kind information and further necessary action.

Encl.: As above

भवदीय / Yours faithfully,

(एस. एम. आइमोल / S. M. Aimol)

निदेशक / Director

Copy to:

1. CGM (Comml), APDCL, Bijuli Bhawan, Paltan Bazar, Guwahati-781 001
2. ED (Comml), MSPDCL, Secure Office Bldg. Complex, South Block, Near 2nd MR Gate, Imphal-01
3. SE (EM), MePDCL, Lumjingshai, Short Round Road, Shillong – 793 001
4. S.E. (Commercial), Department of Power, Govt. of Mizoram, Khatla, Aizawl – 796 001
5. A.C.E. (Gen & Trans), Department of Power, Govt. of Nagaland, Kohima – 797 001
6. AGM (C&SO), TSECL, Agartala – 799 001
7. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
8. Head of SLDC, SLDC Complex, AEGCL, Kahilipara, Guwahati - 781019
9. Head of SLDC, MSPCL, Manipur, Imphal.
10. Head of SLDC, MePTCL, Lumjingshai, Short Round Road, Shillong – 793 001
11. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
12. Head of SLDC, Department of Power, Nagaland, Dimapur.
13. Head of SLDC, TSECL, Tripura, Agartala – 799 001
14. GM, Loktak HEP, NHPC Limited, Vidyut Vihar, Komkeirap, P.O. Loktak, Manipur – 795 124
15. DGM (Comml), NTPC Limited, 16th Rupalim Path, Rukhmini Nagar, Guwahati-781022
16. GM (Comml), OTPC, Core 4 & Central, 10th Floor, SCOPE Minar, Laxmi Nagar, Delhi – 110092
17. Head of the Plant, OTPC, Palatana, Kakraban, Gomati District, Tripura - 799116
18. MD, NETC, #2C, 3rd Floor, D-21, DMRC Building, Corporate Park, Sector-21, Dwarka, Delhi-77

(एस. एम. आइमोल / S. M. Aimol)
निदेशक / Director



North Eastern Regional Power Committee

Minutes

of

49th Commercial Sub-Committee Meeting

Date: 21/09/2023 (Thursday)

Time: 10:00 hrs

Venue: Udaipur, Rajasthan

The 49th Commercial Subcommittee Meeting (CCM) of NERPC was held on September 21, 2023, at Hotel Aurika, Udaipur, Rajasthan. The list of participants is attached at **Annexure-I**.

The meeting was hosted by OTPC and NETC. The meeting began with the ceremonial lighting of lamps and bouquets presented to dignitaries: Shri K. B. Jagtap, Member Secretary, NERPC, Shri Sanil C. Namboodiripad, MD, OTPC, Shri Amaresh Mallick, CGM (i/c), NERLDC, Shri Shantikumar, MD, MSPDCL, and Shri S. M. Aimol, Director, NERPC.

Shri Sanil C. Namboodiripad, MD, OTPC, welcomed participants and expressed gratitude for giving the opportunity to OTPC for hosting the 49th CCM. He wished all delegates a comfortable stay and a productive meeting.

Thereafter, Sh. S M Aimol, Director, NERPC, highlighted the importance of CC meetings, particularly in light of stringent regulations from MoP/CERC, such as IEGC Regulation 2023, DSM, Sharing Regulations, GNA, etc. He encouraged NER constituents to raise concerns within the CC forum on these regulations if any so that the issue can be flagged to CERC. He informed that for the benefit of the CC members, two ppt presentation has been arranged during this meeting (1) New Products introduced in PXIL, (2) OTC Platform and its usability to DISCOMs.

Following, Shri. Amaresh Mallick, CGM (i/c), NERLDC, stressed the importance of compliance with the IEGC Regulation 2023, set to take effect on October 1, 2023, urging NER constituent members to ensure compliance.

Sh. Shantikumar, MD MSPDCL, thanked NERPC, OTPC, and NETC for organising the 49th CCM and highlighted the challenges faced by DISCOMs due to delayed grants from State Governments.

Sh. K. B. Jagtap, Member Secretary, NERPC, in his Keynote Address extended his gratitude to OTPC and NETC for hosting the event in the picturesque city of Udaipur. In his speech, he congratulated the NER states for securing PSDF (Power System Development Fund) funds for upgrading SCADA (Supervisory Control and Data Acquisition) systems at SLDCs (State Load Dispatch Centers). He emphasized the importance of swift implementation of the same. He also highlighted the resolutions adopted during the 24th TCC/RPC meeting held at Tawang in June 2023. These resolutions included urging the Central Government for handholding support for three years in terms of finance for meeting manpower requirements for O&M the huge assets (transmission and distribution elements) created under Comprehensive and NERPSIP (North Eastern Region Power System Improvement Project).

He congratulated all stakeholders on recent accomplishments in NER, such as the commissioning of 132kV Roing-Chapakhowa D/C line, Kopili stg-II 25 MW, and Kopili Unit 3 and 4, each with a capacity of 50 MW. He also noted the successful charging of 220kV Balipara-Sonabil circuit II, which bolstered ATC (Available Transfer Capability) in the NER region.

He proceeded to discuss the evolution of India's power sector, highlighting the persisting challenges. These challenges include perennial losses incurred by power distribution companies (discoms), which have resulted in delayed payments to generators and hindered infrastructure development. In response, he underscored the importance of a comprehensive overhaul, encompassing policy, organizational, managerial, and technological changes. He also shared insights into various reform initiatives, such as discom restructuring, regulatory reforms, operational enhancements, and managerial improvements, drawing from the diverse experiences of different states. He also stressed the need for increased public private participation in distribution, the successful implementation of franchisee models, and the potential benefits of delicensing distribution.

After this, Member Secretary, NERPC requested Director, NERPC to take up the agenda for discussion.

After detailed deliberation of agenda, the meeting concluded with the vote of thanks from NETC by Shri Ritesh Kumar, Head HR, NETC and from NERPC Secretariat side by Shri Abhijeet Agrawal, Dy. Director.

The ppt presentations on “New Products introduced in PXIL” and “OTC Platform & its usability to Discoms made by PXIL and New Age Market in Electricity (NAME) respectively are attached at **Annexure II & III**.

C O N F I R M A T I O N O F M I N U T E S

1. CONFIRMATION OF MINUTES OF THE 48th COMMERCIAL SUB-COMMITTEE MEETING OF NERPC.

Minutes of the 48th CC Meeting held on 19th April 2023 at at Thenzawl Golf Course & Resort, Mizoram was circulated vide no. No.: NERPC/COM/CC_Min/2018/814-858 dated 4th May 2023.

Deliberation of the Sub-committee

As no observation has been received from any of the constituents. Therefore, the sub-committee confirmed the minutes of the 48th CCM.

The Sub-committee noted as above.

I T E M S F O R D I S C U S S I O N

2 AGENDA ITEMS FROM NERPC

2.1 Recent CERC Regulations

The following CERC regulations/order(s) have been notified:

1. Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023 w.e.f. 1st October 2023.
2. Implementation of the “Ancillary Services” Regulations (TRAS), 2022 w.e.f. 1st June 2023.
3. Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) (First Amendment) Regulations, 2023 w.e.f. 1st October 2023.
4. Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (First Amendment) Regulations, 2023 w.e.f. 1st October 2023.

This is for information of the members.

Deliberation of the Sub-committee

Agenda 2.1 covered the notification of four recent CERC Regulations. NERLDC highlighted the significant clauses of the IEGC Regulations, 2023, with commercial implications (**Annexure 2.1**).

Other CERC Regulations previously discussed in past meetings were briefly discussed. Member Secretary, NERPC urged all NER constituent members to ensure compliance.

The Sub-committee noted as above.

2.2 Annual Contribution towards NERPC Board Fund and “NERPC Secretariat Establishment Fund” for FY 2023-24:

A. Board Fund Contribution status for FY 2023-24:

The status of payment for FY 2022-23 (as on 01.09.2023) is as given below:

F.Y 2023-24			
Constituents	Status of Payment	Constituents	Status of Payment
NTPC	DUE	Ar. Pradesh	DUE
NHPC	DUE	Assam / APDCL	Payment Received
PTC	Payment Received	Manipur/MSPDCL	Payment Received
NVVN	DUE	Meghalaya/MeECL	Payment Received
OTPC	Payment Received	Mizoram	DUE
NEEPCO	Payment Received	Nagaland	DUE
PGCIL	Payment Received	Tripura/TSECL	Payment Received
KMTL	Payment Received		

Constituents are requested to kindly deposit their respective amount towards Board Fund of NERPC for FY 2023-24.

Deliberation of the Sub-Committee

Director, NERPC extended appreciation to all the constituents of NERPC who have promptly made their payments for the Board Fund contribution for FY2023-24. Further, he earnestly requested constituents who are yet to make their contributions for FY2023-24 to do so at the earliest.

The Sub-committee noted as above.

B. Annual Contribution towards “NERPC Secretariat Establishment Fund” for FY 2023-24:

In the 24th NERPC Meeting held on 28th June 2023, it was decided that the NERPC members will finance all NERPC Secretariat Expenses except for 'Salary'.

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The NERPC forum had approved the proposed Budget Estimate (BE) of Rs. 285.76 lakhs (approx.) for FY 23-24, which is to be shared by State Utilities/Departments and CPSUs/Private members in the ratio of 1:3, respectively. The contribution amount for each member/Utility for FY 2023-24 has been agreed upon and approved by the NERPC forum as provided below.

Utilities	Annual contribution in INR
State Utilities / DoPs	Rs. 7.52 Lakhs each
Central Utilities & Private Members	Rs. 22.56 lakhs each

Constituents are requested to kindly deposit their respective amount towards NERPC Secretariat Establishment Fund for FY 2023-24. The account details have been shared vide our letter dated 28.08.2023.

As on 13/09/2023, the following Utilities/DoPs have made the requisite payment:

- (1) MePGCL
- (2) NHPC
- (3) AEGCL
- (4) OTPC
- (5) MePDCL

Deliberation of the Sub-committee

Director, NERPC conveyed appreciation to those constituents who have timely remitted their payments for the NERPC Secretariat Establishment Fund contribution for FY2023-24. Additionally, he urged remaining constituents to kindly make the payment at the earliest.

Senior Manager, TSECL raised concerns about the additional burden on Tripura state utilities due to the separate treatment of TPTL, TPGL, and TSECL. He proposed that TSECL be considered as the sole state utility for the State of Tripura for the purpose of NERPC Secretariat Establishment Fund Contribution.

In response, Member Secretary, NERPC suggested that TSECL may send a formal letter outlining their concerns to the NERPC Secretariat for further examination.

The Sub-committee noted as above.

2.3 Membership of APPCPL to NERPC

Arunachal Pradesh Power Corporation Private Limited (APPCPL) has requested CEA to include them as member of NERPC. CEA has sought comments from NERPC for the same. It may be noted that both PTC and NVVN, who are traders,

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are already member of NERPC as agreed by NERPC forum. The matter is hereby placed for consideration.

In the 24th TCC/NERPC meeting the forum opined that the item is to be first discussed in Sub-Committee meeting(s) for detailed study and is therefore referred to the Sub Committee(s) of NERPC.

Deliberation of the Sub-committee

Arunachal Pradesh Power Corporation Private Limited (APPCPL) had submitted a request to join NERPC as a member. However, since representative from APPCPL was not present in the meeting, the forum decided to drop this agenda item temporarily until APPCPL can provide representation in the future meeting.

The Sub-committee noted as above.

3. AGENDA ITEMS FROM ASSAM

3.1 Transmission Charges for Monthly billing for power supply to Arunachal Pradesh from Assam:

As decided in the 36th Commercial Sub-Committee meeting of NERPC, under the agenda (3.2), NERPC Secretariat would issue a statement in respect of the subject mentioned, w.e.f. August 2018. The statement of transmission charges upto FY 2021-22 has been issued. The monthly interstate meter readings furnished by APDCL for the period FY 2022-23 is provided below

FY 2022-23					
Month	Export (MWh) from Assam to AP	Import (MWh) to Assam from AP	Net Energy (MWh)	Transmission Rate (in Rs./KWh) approved by AERC	Transmission Charges (in INR)
Apr-22	4794.16	0	4794.16	0.432	2071077.12
May-22	5774.9	0	5774.9	0.432	2494756.8
Jun-22	6536.57	0	6536.57	0.432	2823798.24
Jul-22	7478.22	1.1	7477.12	0.432	3230115.84
Aug-22	8080.61	0.05	8080.56	0.432	3490801.92
Sep-22	8587.915	0	8587.915	0.432	3709979.28
Oct-22	6947.59	0.05	6947.54	0.432	3001337.28
Nov-22	6843.5	0	6843.5	0.432	2956392
Dec-22	6257.185	0	6257.185	0.432	2703103.92
Jan-23	6479.2	0	6479.2	0.432	2799014.4
Feb-23	5390.965	0.1	5390.865	0.432	2328853.68
Mar-23	6452.42	0	6452.42	0.432	2787445.44
TOTAL			79621.935		34396675.92

The above reading is to be ratified by Ar. Pradesh so that NERPC can issue the statement. APDCL had already furnished the applicable AERC Transmission rates as Rs. 0.432/kWh for FY 2022-23.

Deliberation of the Sub-committee

During the meeting, it was noted that representatives from APDCL (Assam Power Distribution Company Limited) and the Department of Power, Arunachal Pradesh, were absent. The NERPC Secretariat had already forwarded the readings to Arunachal Pradesh for ratification. In light of this, it was decided that Arunachal Pradesh and APDCL may resolve the matter through bilateral discussions. They were requested to keep the NERPC Secretariat informed of the progress in the matter.

The Sub-committee noted as above.

3.2 Discontinuation of the raising of monthly bilateral charge bills to APDCL on account of completion of the AEGCL's scope of work related to "LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL):

This is regarding the asset "LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL)" which is being developed as per the Transmission Service Agreement (TSA) signed between NER II Transmission Ltd. and AEGCL.

As per the minutes of the meeting taken by Chief Engineer (PSPM), CEA on 10-08-2020, AEGCL was to construct 2 nos. of 132KV bays at Gohpur 132KV S/S so as to match with the LILO of one circuit of 132 KV Biswanath Chariali (PG) to Itanagar 132KV D/C(Zebra) line at Gohpur (AEGCL) of NER II Transmission Ltd. (NTL).

Due to delay in completion of the AEGCL's part of work as mentioned above, the entire cost was loaded and charged as bilateral bill to APDCL by CTU Ltd. which was subsequently being recovered from the wheeling charge of AEGCL. However, it is to inform you that AEGCL has already completed the above work on 25-08-2022 and test charged on 10-11-2022 and 11-11-2022 respectively. Now, the Forum may please discuss the above issue and take necessary steps to discontinue the raising of the bilateral bill to APDCL along with necessary adjustments of bills already raised till date after the completion of AEGCL's work, i.e., 11-11-2022. Relevant documents are attached as **Annexure 3.2**.

Deliberation of Sub-committee

AEGCL informed the forum that they had successfully completed the mentioned work on August 25, 2022, and conducted test charges on November 10 and 11, 2022, respectively.

However, CTU (Central Transmission Utility) indicated that the power flow in the said line commenced on August 13, 2023. CTU further recommended that AEGCL address this matter bilaterally with NER II Transmission Limited (NTL) while keeping CTU informed for further resolution.

The Sub-committee noted as above.

4. AGENDA ITEMS FROM TSECL

4.1 *Outstanding Dues of Mizoram*

As on date, an amount of Rs 9.78 crores is outstanding excluding the surcharge with Mizoram. It is to mention that TSECL is to make timely payment to Gail/ONGC regularly to avoid surcharge etc as well as to avoid regulation of Gas supply. Therefore, Mizoram is requested to ensure monthly payment to avail rebate as well as to avoid surcharge, regulation of power supply etc.

Deliberation of the Sub-committee

Sr. Manager, TSECL informed the forum that Mizoram has made the outstanding payment.

The Sub-committee noted as above.

4.2 *Outstanding Dues of Manipur*

Outstanding with Manipur is only Rs7.96 lacs as on date excluding surcharge. It is requested kindly to make payment immediately.

Deliberation of the Sub-committee

Sr. Manager, TSECL requested MD, MSPDCL to expedite the clearance of outstanding dues owed to Tripura. In response, MD, MSPDCL assured that the dues would be settled as soon as possible.

The Sub-committee noted as above.

4.3 *Merchant Power of OTPC Palatana.*

Tripura is managing increased power demand of the State including Cross Border commitment through IEX Purchase during any kind of outage of ISGS as well as State Generation. To mitigate the power management criticality considering further increase of State demand in near future, Tripura has already communicated to OTPC for allocation of their 40 MW Merchant power. Hence

NERPC is requested kindly to look into the matter so that OTPC may expedite for allocation of their merchant power to Tripura as per CERC tariff. TSECL requested OTPC for consideration of allocation of merchant power. In the commercial forum the matter was discussed so many times. The matter was also discussed in the last NERPC/TCC meeting also. Hence NERPC is requested kindly to look into the matter so that TSECL can enjoy the merchant power on long term basis as an early date.

Deliberation of the Sub-committee

Chief Commercial Officer (CCO), OTPC clarified that the decision to allocate Merchant Power rests entirely with the OTPC Board. This decision is contingent on several factors, including market performance and returns and attract CAG observation also.

Senior Manager, TSECL requested OTPC to consider allocating to Tripura if the OTPC Board decides to allocate the Merchant Power.

The Sub-committee noted as above.

4.4 Power crisis due to huge demand.

NE region presently facing huge demand due to hot weather. Power is not available in the DAM as well as RTM market also. In this critical period BGTPP, OTPC, Monarchak generates less due to Coal and Gas shortage. NERPC/NERLDC has taken the BGTPP matter seriously. Forum is requested kindly to take up the matter with ONGC for less gas supply.

Deliberation of the Sub-committee

Tripura highlighted the issue of reduced availability of NER Plants, specifically BGTPP and OTPC, due to shortages of coal and gas, respectively. In response, the Additional General Manager (Addl. GM) from NTPC explained that the coal shortage at NTPC BGTPP was primarily due to delays in fuel transportation, and measures were being taken to address this issue. OTPC, on the other hand, explained that the reduced availability of OTPC was a result of gas scarcity and reassured their commitment to ensuring higher gas availability during peak demand periods.

The forum collectively urged NER Generating Stations to enhance their availability and strive for increased generation during peak and high-demand seasons to alleviate the power crisis.

The Sub-committee noted as above.

5. AGENDA ITEMS FROM NERLDC

5.1 *Deviation Pool Account outstanding:*

Status of Deviation charges outstanding as on 04/09/2023 is attached (**Annexure 5.1(a)**).

Manipur is the major defaulter.

Manipur – Net O/s Payable to Pool is ₹ 6.40 Crores

[Deviation Principal, ₹ 6.31 Crores + Deviation Interest, ₹ 0.09 Crores].

Clearance of O/s payable had been regularly followed up. [Recent letter is attached for reference (**Annexure 5.1(b)**)]

Manipur is requested to take immediate necessary action in this regard.

All the pool members are requested to clear outstanding payable due within the stipulated time to avoid late payment interest.

Deliberation of the Sub-committee

NERLDC requested concern utilities to clear the dues at the earliest.

The Sub-committee noted as above.

Action: MSPDCL (Manipur).

5.2 *Reactive charges outstanding:*

Status of Reactive charges outstanding as on 04/09/2023 is attached (**Annexure-5.2**).

O/s Payable to Reactive Pool by Manipur - ₹ 8.97 Lakhs. (Principal, ₹ 8.53 Lakhs + Interest, ₹ 0.44 Lakhs)

O/s Payable to Reactive Pool by Mizoram - ₹ 11.15 Lakhs. (Principal, ₹ 10.23 Lakhs + Interest, ₹ 0.92 Lakhs)

Manipur & Mizoram are required to take necessary action.

All the pool members are requested to clear outstanding payable due within the stipulated time to avoid late payment interest.

Deliberation of the Sub-committee

NERLDC requested concern utilities to clear the outstanding dues at the earliest.

The Sub-committee noted as above.

Action: MSPDCL (Manipur), and Mizoram.

5.3 *Signing of DSM & Reactive Reconciliation Statements:*

Status of signing of Reconciliation statements of DSM & Reactive as on 04/09/2023 is attached in **Annexure-5.3**.

Pending DSM reconciliation with – NHPC (2 Quarters) & OTPC (2 Quarters).

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Pending Reactive reconciliation with – Manipur (5 Quarters) & Mizoram (1 Quarter).

Manipur, Mizoram, NHPC & OTPC are requested to sign the reconciliation statements as early as possible.

Deliberation of the Sub-committee

Concerned constituents were requested to sign the reconciliation statements at the earliest.

The Sub-committee noted as above.

Action: MSPDCL (Manipur), Mizoram, NHPC& OTPC.

5.4 Opening of LC against Deviation Charges Liability:

As per CERC (Deviation Settlement Mechanism and related matters) Regulations 2022, the LC amounts pertaining to NER entities are mentioned below (Refer **Annexure-5.4**):-

Constituents	LC to be opened in FY 23-24 ₹ (in Lakhs)	Present Status
Ar. Pradesh	68.78	LC of ₹ 242.48 Lakhs, valid till 31/03/2024.
Assam	100.71	LC of ₹ 230.68 Lakhs, valid till 01/12/2023.
Manipur	19.29	LC Not opened
Meghalaya	14.61	Sufficient amount retained in Pool
Mizoram	1.76	LC of ₹ 11.46 Lakhs, valid till 14/02/2024.
Nagaland	2.78	LC of ₹ 74.18 Lakhs, valid till 20/03/2024.
Tripura	30.54	LC of ₹ 144.00 Lakhs, valid till 28/03/2024.

Necessary action may be taken by Manipur regarding the opening of LC to adhere to CERC stipulation.

Deliberation of the Sub-committee

Concerned constituents were requested to open the requisite LC at the earliest.

The Sub-committee noted as above.

Action: MSPDCL (Manipur).

5.5 Signing of RLDC Fee and Charges Reconciliation Statements:

NERLDC Fees and Charges Reconciliation Statements for Q-I of FY 2023-24 were issued on 27/07/2023. We have received Signed/Reconciled copy from few users. All remaining users are requested to send the signed Reconciliation Statements at the earliest.

Deliberation of the Sub-committee

Concerned constituents were requested to send the signed reconciliation statements at the earliest.

The Sub-committee noted as above.

Action: concerned utilities.

5.6 NERLDC Fees & Charges Outstanding:

NERLDC is raising Fees & Charges bill on monthly basis on the first working day of every month in terms of CERC (Fees & Charges of RLDC and other related matters) Regulation, 2019. We are receiving payment against NERLDC Fees & Charges billings from almost all the users on time. Latest status of Fees & Charges outstanding is mentioned below: -

SI No	Name of User	Description	Amount (₹)
1	MSPDCL, Manipur	Fees & Charges Monthly Bill & Surcharge Bill	26,30,640.00
2	P & E Dept., MIZORAM	Fees & Charges Monthly Bill & Surcharge Bill	13,61,606.00

MSPDCL, Manipur and P&E Dept, Mizoram are requested to clear the outstanding.

Deliberation of the Sub-committee

Concerned constituents were requested to clear the outstanding at the earliest.

The Sub-committee noted as above.

Action: MSPDCL (Manipur) & Mizoram.

6. AGENDA ITEMS FROM NERTS

6.1 Outstanding dues:

The total outstanding dues (pertaining to both PoC as well as non-PoC billing) payable by NER beneficiaries to CTUIL/POWERGRID as on **31.08.2023** is detailed below: -

(All Figures in Rs. Crores)

State/DIC	Outstanding dues > 45 days	Total Outstanding dues	Remarks
Arunachal Pradesh	-0.03	-0.03	Only small amount of non-Poc due.

APDCL, Assam	0.00	76.86	<i>Approx. 1.5 months receivables</i>
MSPDCL, Manipur	6.73	16.57	<i>Approx. 03 months receivables</i>
MSPCL, Manipur	3.50	3.61	<i>Approx. 05 months receivables and pending arrear bills</i>
MeECL, Meghalaya	2.59	14.33	<i>Approx. 02 months receivables</i>
Mizoram	7.82	14.70	<i>Approx. 03 months receivables & pending non-Poc dues.</i>
Nagaland	0.00	4.87	<i>Approx. 0.5 months receivables</i>
TSECL, Tripura	0.00	15.52	<i>Approx. 1.5 months receivables</i>

Concerned DICs with >45 days outstanding dues, viz. MeECL, Mizoram, MSPDCL, & MSPCL may be impressed upon to clear the outstanding dues immediately since POWERGRID and other transmission licensees (on behalf of whom CTUIL does the billing & collection) are facing financial constraints due to accumulation of such huge outstanding dues.

Deliberation of the Sub-committee

Chief Manager, NERTS requested concerned constituents to clear the outstanding dues at the earliest.

The Sub-committee noted as above.

Action: concerned utilities.

6.2 Status of LC of NER beneficiaries (as per new requirement):

As it is known to all concerned that Central Transmission Utility of India Ltd (CTUIL), a subsidiary of POWERGRID, has started functioning as CTU w.e.f. 01.04.2021 as per notification dated 09.03.2021 issued by MoP, GoI and accordingly, the Billing, Collection and Disbursement of transmission charges (*for PoC billing*), a function of CTU, is being undertaken by CTUIL with effect from **01.04.2021**.

Consequent to above, separate LCs in favour of CTUIL (*for PoC Billing*) and POWERGRID (*for non-PoC billing*) in place of existing LCs, which are in favour of POWERGRID, are to be maintained by DICs in line with provisions of Regulation

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19 of CERC Sharing Regulations, 2020 and to avail CTUIL rebate scheme for FY 2022-23.

The status of LCs (**as per above new requirement**) of NER DICs as on **31.07.2023** is as follows: -

State/DIC	LC in favour of CTUIL (for PoC billing)	LC in favour of POWERGRID (for Non-PoC billing)
Arunachal Pradesh	Available	Available
APDCL	Available	Available
MSPDCL	Available (Enhancement of Rs. 91.85 Lakhs required)	-
MSPCL	-	Not Available
MeECL	Available	Available
Mizoram	Already Expired on 07.07.2023	Already Expired on 11.07.2023
Nagaland	Available	Available
TSECL	Available (enhancement of Rs. 11.31 Lakhs required)	Available

Mizoram has been requested to reopen the LCs and Manipur & Tripura may be impressed upon to enhance their LCs to the requisite amounts.

Deliberation of the Sub-committee

The sub-committee requested Manipur & Tripura to comply with the CERC regulations and enhance/open their LCs to the requisite amount.

Chief Manager, NERTS further informed that Mizoram as already renewed the LC.

The Sub-committee noted as above.

Action: concerned utilities.

6.3 Early Commissioning of LILO of one circuit of Pare HEP — North Lakhimpur (AEGCL) 132 kV D/C line (With ACSR Zebra Conductor) at Nirjuli (POWERGRID) substation under NERSS-IX:

The SCOD of the said transmission system was June 2023. However, during 199th OCC meeting M/s Sterlite (MUMIL) has raised the agenda for preponement of commissioning schedule of the above line from earlier SCOD of June'23 to

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March'2023, anticipating the possible difficulty in getting shut down of Ranganadi- Naharlagun/ Nirjuli line for completion (Agenda point C.3). Forum has also agreed to the agenda point raised by M/s Sterlite (M/s MUML).

Based on above, POWERGRID also put their best effort to complete the associated bays within March'23 to match the early commissioning of associated Transmission line. Factually POWERGRID has commissioned the 132kV Pare Bay and 132kV North Lakhimpur Bay on 30.03.2023.

In light of the above it is proposed that, forum may kindly ratify the DOCO of the associated bays since date of commissioning i.e. on 30.03.2023.

Deliberation of the Sub-committee

CGM, NERTS informed that NERTS has commissioned the 132kV Pare Bay and 132kV North Lakhimpur Bay on 30.03.2023.

The Sub-committee noted as above.

6.4 Recovery of cost of VSAT scheme in Roing, Tezu, Namsai and Shillong:

It was approved in 20th NERPC meeting that the project implementation cost for VSAT scheme for Telemetry data communication purpose at NERLDC, Shillong in Roing, Tezu, Namsai and Shillong station would be recovered one time from NER States. However, the modalities for recovery process and sharing with each constituent State of NER has not yet been decided. It may also be noted that the system has already been commissioned on 00:00hrs dtd 09.04.2021 and is functional. Total project cost for the said scheme as per LOA is INR 68,15,021(Excl. of GST). This agenda point was also deliberated in 25th NeTEST meeting held on 25.05.23 at Shillong and referred to the CCM by the forum.

Deliberation of the Sub-committee

The forum decided that this cost would be shared by the NER DICs based on the proportion of Weighted Average Long-Term Agreement (LTA)/Medium-Term Open Access (MTOA) in Megawatts (MW) for April 2021, the month in which the project was commissioned.

In this context, the amount owed to each DIC was calculated and is provided in a table below. The DICs are kindly requested to make their respective payments at the earliest convenience.

Site	LTA / MTOA (MW)	Proposed One time recovery Rate iro VSAT system (Excl. of GST) in Rs.	Additional GST @ 18%	Total in INR
Arunachal Pradesh	287.76	623677.13	112261.88	735939
Assam	1621.87	3515162.71	632729.29	4147892
Manipur	237.32	514355.91	92584.06	606940
Meghalaya	336.28	728837.03	131190.67	860028
Mizoram	136.41	295648.45	53216.72	348865
Nagaland	170.05	368558.16	66340.47	434899
Tripura	353.27	765660.34	137818.86	903479
Total	3142.96	6811899.72	1226141.95	8038042

The Sub-committee noted as above.

Action: concerned utilities.

6.5 Preventive shifting of towers in pile foundation due to massive & wayward erosion of river in Northeastern Region:

Recently, in Northeastern Region, it is observed that some of river stretches suffering unpredictable and wayward erosion for which every year some of towers of different transmission lines become endangered and prone to collapse. It is to be mentioned that such situation is prevailing in Dikrong river for which every alternate year tower collapse was encountered for 400kV Ranganadi – Balipara D/C Line till 2015. To arrive in permanent solution, the issue was deliberated in 111th OCC Meeting for preventive shifting of 10 nos. of tower from open cast foundation to pile foundation, which was subsequently, approved in 15th NERPC Meeting with financial implication of Rs. 22.00 Crores on POC Mechanism. Accordingly, preventive shifting to pile foundation was done and issue of tower collapse could be resolved permanently. The MOM of 111th OCCM and 15th NERPC is attached in **Annexure – 6.5(a) & (b)** respectively for ready reference.

In accordance to above, POWERGRID, NERTS assessed vulnerability of some more towers in different river stretches of the Region detailed below where erosion is unpredictable and similar action is required for stable operation of Transmission Lines. The detailed photographs and brief are attached in **Annexure – 6.5(c)**.

SN	LINE	RIVER	AREA	TOWER NO.
1	132 kV S/C Salakati - Gelephu TL.	Deosiri	Shantipur, Chirang, Assam	123 & 121
2	132 kV S/C Roing - Pashighat TL	Siang	Arunachal Pradesh	153, 154, 155 & 156

3	220 kV S/C Misa - Kopili TL	Kopili	Kopili, Dima-Hassao, Assam	002
4	400 kV D/C Balipara - Bongaigaon ckt 1&2 TL.	Nonoi	Tangla, Udalguri, Assam	305
5	400 kV D/C Balipara - Bongaigaon ckt 1&2 TL.	Mara pagladia	Barama, Baksa, Assam	458 & 459
6	400 kV D/C Binaguri - Bongaigaon TL.	Anthihar a	Gorufella, Kokrajhar, Assam	90
7	400 kV D/C BNC-Ranganadi TL.	Chatrang	Gohpur, Assam	174
8	400 kV D/C Misa - Mariani TL	Manjha	Manjha, Karbi-Anglong, Assam	822 & 844
9	400kV D/C Alipurduar - Jigmilling Line	Hell	Dotma, Kokrajhar, Assam	260
10	400 kV D/C Balipara - Bongaigaon ckt 3&4 TL.	Belsiri	Upper Benchimari, Sonitpur, Assam	126
11	800KV HVDC BNC-Agra Line	Pasnoi	Gejenga-guri, Sonitpur, Assam	276
TOTAL NO. OF TOWERS =				17 NOS.

The tentative rate for different voltage class of tower will be approximately as below:

S N	Voltage	Cost of Pile Shifting (In Rs. Lakhs)			Total Cost (In Rs. Lakhs)	Remarks, If any
		Foundation	Tower Cost	Execution		
1	132 KV HVAC	200	11.08	21.25	232.33	
2	220 KV HVAC	250	16.68	26.28	293.36	
3	400 KV HVAC	300	40.63	47.99	388.62	
4	800 KV HVDC	325	43.00	50.00	418.00	
NOTE: Execution cost inclusive of Survey, Soil investigation, Dismantling and Erection, De-stringing, and re-stringing, ERS shifting etc. etc.						

Accordingly, approximate expenditure is calculated as below:

SN	VOLTAGE CLASS	NO. OF TOWERS (In Nos.)	RATE (In Rs. Lakh)	AMOUNT (In Rs. Lakh)	REMARKS
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1	132 KV HVAC	6	232.33	1393.98	
2	220 KV HVAC	1	293.36	293.36	
3	400 KV HVAC	9	388.62	3497.58	
4	800 KV HVDC	1	418.00	418.00	
TOTAL =				5602.92 Lakhs (Say 57 Crores)	
RUPEES FIFTY-SEVEN CRORES ONLY					

Matter was deliberated in 205th OCC meeting (copy of MOM attached) wherein forum agreed in-principle for approval of the proposal of POWERGRID and referred to upcoming CCM meeting for further discussion. However, the forum requested the state utilities to do necessary studies and provide comments and feedback to NERPC within 15/09/2023, if any.

Deliberation of the Sub-committee

The matter was deliberated in detail and the forum agreed in-principle for approval of the proposal of POWERGRID and referred to upcoming TCC/NERPC meeting for further needful.

The Sub-committee noted as above.

7. AGENDA ITEMS FROM OTPC

7.1 Outstanding Dues of OTPC against NER beneficiaries – OTPC:

The current total outstanding dues of OTPC against the NER beneficiary states (as on 11-09-2023) are as under:

(Amount in Rs Crores)

Sl. No.	Beneficiary	Outstanding Dues (>45 Days)	Total Outstanding
1	Manipur	7.60	25.93
2.	Mizoram	28.46	98.25
	Total	36.06	124.18

The forum is requested to impress upon Manipur and Mizoram to clear their current dues.

Deliberation of the Sub-committee

OTPC requested Manipur and Mizoram to liquidate the outstanding dues at the earliest.

The Sub-committee noted as above.

Action: Manipur & Mizoram

8. AGENDA ITEMS FROM NEEPCO

8.1 *Renovation and Modernization of 291 MW Assam Gas Based Power Station, Dibrugarh District, Assam – proposal for beneficiary consent:*

The 291 MW Assam Gas Based Power Station (AGBPS) commenced commercial operation in April 1999. Since commissioning the station has been consistently supplying reliable power at very low tariffs to the beneficiaries. However, the performance of the station started to get impaired due to it nearing the completion of its useful life of 25 years.

As the station is now in the fag end of its useful life of 25 years as defined by the Tariff Regulations, 2019 (Regulations 17 and 27 - “Special provisions for tariff for Thermal Generation Station which have completed 25 years of operation from Date of Commercial Operation” and “Additional Capitalization on account of Renovation and Modernization” respectively), it is now necessary to undertake Renovation & Modernization activities for its life extension.

A Detailed Project Report has been prepared for the Renovation & Modernization works keeping in mind the life extension of the plant, besides the normal O&M activities necessary for extension of its useful life which is due to expire in March 2024. The proposed life extension is for 20 years. Salient aspects of the proposal are as below:

1. Estimated Cost: Rs. 883.12 crores (inclusive of IDC 164.84 crs) at Dec 2022 price levels, including depreciated values of the existing assets.
2. Tariff: The First-Year (i.e 2024-25) Capacity Charge on completion of the Renovation & Modernization works based on the estimated cost as mentioned above has been worked out at Rs. 1.13 per unit with a levellised Capacity Charge over the expected 20 years extended useful life of the plant of Rs. 1.59 per unit.
3. Present Energy charge considering the average fuel cost of the FY 2023-24 is Rs. 4.735 per unit.

Completion of Renovation and Modernization of the 291 MW Assam Gas Based Power Station (AGBPS), i.e. 33.5 MW X 6 Gas Turbine units + 30 MW X 3 Steam turbine units are scheduled for March, 2031 in a phased manner.

The proposal is therefore, placed before this esteemed house with a request for consent in terms of Regulations 17 (1) and 27 (1) of the Tariff Regulations, 2019 for undertaking the Renovation & Modernization works of the Power Station as detailed above.

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Application for determination of tariff shall be filed before the Hon'ble Commission on completion of the Renovation works as per the Regulation 27 (4) of the Central Electricity Regulatory Commission (Terms and condition of Tariff) Regulations, 2019. However, till determination of tariff by CERC, it is proposed that a provisional Capacity Charge rate of Rs. 1.59/unit and Energy Charge Rate (ECR) based on actual monthly cost of fuel be adopted by the House subject to suitable adjustment on determination of final tariff by CERC.

Therefore, the proposal is placed for deliberation and approval in the esteemed house under the aegis and guidance of NERPC.

Deliberation of the Sub-committee

NEEPCO presented a proposal for the R&M of the 291 MW Assam Gas Based Power Station. CGM (Commercial), NEEPCO informed that the estimated cost for the R&M project is approximately Rs. 883.12 crores. The R&M would extend the useful life of the power station by an additional 20 years.

In accordance with the Regulations 17(1) and 27(1) of the Tariff Regulations 2019, NEEPCO sought the consent of NER Beneficiaries for proceeding with the R&M project.

The forum acknowledged NEEPCO's proposal and expressed its interest in seeking the consent of NER Beneficiaries individually. All the States present in the meeting agreed in-principle for the R & M of the Power Station. However, it was decided that NEEPCO would take written consent from all beneficiaries individually.

The forum strongly urged NER Beneficiaries to positively consider and provide their consent for this crucial power station R&M, emphasizing its potential benefits and the importance of ensuring the continued efficient operation of the 291 MW Assam Gas Based Power Station.

The Sub-committee noted as above.

Action: concerned utilities.

ADDITIONAL AGENDA ITEMS

9. AGENDA ITEMS FROM OTPC

9.1 Operational difficulties for OTPC Palatana Project in wake of CERC IEGC 2023 Regulations

CERC has recently published the CERC IEGC 2023 regulations which shall be effective from 1st October 2023.

“Revision of Declared Capacity and schedule, shall be allowed on account of forced outage of a unit of a generating station or ESS (as an injecting entity) only in case of bilateral transactions and not in case of collective transaction..... Provided that the generating station or ESS (as injecting entity) or trading licensee or any other agency selling power from a generating station or unit(s) thereof or ESS may revise its estimated restoration time once in a day....”

The regulations are silent on whether revision of DC is possible on account of fuel supply variations.

Inability of generating stations to revise the DC on real time basis shall be a concern for stations like Palatana as fuel supply is not in our control and fuel gas availability keeps on varying throughout the day. Accordingly, Palatana station has to revise its schedule as per gas availability to maximize its PAF and to avoid DSM penalties. We had also discussed with our fuel supplier for constant supply of gas but they had informed that it's not possible due to a small local gas grid and uneven yield of different gas wells. As such maintaining a schedule without revision on real time basis during the day is not possible for Palatana project.

OTPC had also elaborated these concerns during submission of comments on IEGC draft regulations. We had submitted that:

“Palatana plant operates in a localized gas grid with instantaneous gas supply and consumption as there is no storage facility for fuel gas being supplied to the plant. The fuel gas supply can only be controlled by the fuel supplier and neither by Palatana station. The plant furnishes its DC on the basis of gas supply committed by the fuel supplier.”

“However, the plant is located in remote location and is using gas from isolated gas fields. The gas supply to the plant can not be varied under short notice to ramp up/down generation upto 3% of ex-bus capacity. We are connected to small localize gas grid and are consumer of nearly 60% of total gas produced in our gas grid. Such variation of gas flow may lead to tripping of all the plants connected to gas grid.”

We request the forum to discuss the relevant clause of IEGC regulations 2023 as it will not only affect Palatana but other gas-based stations in North East as well.

Deliberation of the Sub-committee

The CC forum discussed Clause 49.7 of the CERC IEGC 2023 Regulations, which is effective from 1st October 2023. Clause 49.7 addresses the revision of Declared

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Capacity (DC) and schedules in the event of forced outages of generating station units or Energy Storage Systems (ESS) for bilateral transactions, but it does not explicitly address revisions due to fuel supply variations.

The concern raised during the meeting was primarily related to gas-based generating stations, such as the Palatana station, which face challenges in maintaining a schedule without the ability to revise it in real-time due to the varying availability of fuel gas throughout the day. The CC members noted that Palatana station operates in a localized gas grid with no storage facility for fuel gas, and the gas supply can only be controlled by the fuel supplier, making real-time adjustments essential.

OTPC also highlighted the unique challenges faced by gas-based stations in the Northeast due to the remote locations and reliance on isolated gas fields.

After a thorough discussion, it was decided that NERPC Secretariat would write a letter to CERC, presenting the difficulties faced by gas-based NER generating stations, including Palatana, to consider these challenges and explore potential amendments or clarifications in the regulations to accommodate the specific operational constraints of such stations.

The Sub-committee noted as above.

10. AGENDA ITEMS FROM NHPC

10.1 *NHPC Wind Power Jaisalmer, Rajasthan -reg.*

Capacity	: 50 MW (2 MWX25 WTG)
Location	: Jaisalmer Rajasthan
Owner	: NHPC Limited
Project Cost	:350 crores (EPC-302.5 +47.55 O&M charges)
Pooling Station	: Inox Pooling Station Dangri, Jaisalmer, 33/220 KV
Connectivity	: STU Connected at Akal, Jaisalmer, 220/400 KV.
Nearest ISTS Pooling Station	: 400 KV Bhadla-II via Ramgarh at Jaisalmer.
COD	:30 Spt,2016
Design Energy	:94 MU

Status of PPA: Project was initially developed on preferential tariff with Rajasthan as single beneficiary.

Further PPA was signed on 28.09.2016 on Pooled Cost of Power Purchase of Rajasthan on yearly basis for the period of three years & PPA expired on 31.03.2019.

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PPA proposed for signing with Rajasthan for balance life @Rs 3.14 per unit +REC mechanism @Rs 1.00 per unit + GBI @Rs 0.50 per unit which amounts to @Rs 4.64 per unit.

PPA could not be signed as some developers approached High Court & Matter is Subjudice at Present at Rajasthan High Court.

Proposal of NHPC: Due to uncertainty and blocking of huge money, NHPC intends to exit from Rajasthan & explore another beneficiary.

Proposed Tariff: @4.64 per unit.

All charges up to delivery point of ISTS Station shall be borne by NHPC & after delivery point, all ISTS charges, transmission charges, transmission loss, connectivity etc. shall be to the account of Purchaser.

Deliberation of the Sub-committee

During the 49th CC Meeting, the National Hydroelectric Power Corporation (NHPC) informed the members about the availability of wind power from the NHPC Jaisalmer Plant.

NHPC extended a request to the North-Eastern Region (NER) Beneficiaries to consider availing this power if it is required for their energy needs.

The Sub-committee noted as above.

DATE AND VENUE OF NEXT COMMERCIAL COMMITTEE MEETING
--

The next Commercial Coordination Sub-Committee meeting will be held in the month of December 2023/January 2024. The date and venue will be intimated separately.

Annexure-I**List of Participants in the 49th CCM Meeting held on 21st September, 2023**

Name & Designation	Organization	Contact No.
-	Ar.Pradesh	-
Sh. Nillutpal Boruah, AGM (SO), AEGCL	Assam	7002885719
Sh. Tridip Borah, AGM (T), AEGCL	Assam	09864602779
Sh. Bijendra Prasad, Asst. Mgr (F&A)	Assam	09957536210
Smti Neeha Hazarika, JM, MO (SLDC)	Assam	08876892037
Sh. Shantikumar, MD, MSPDCL	MSPDCL	
Smti Laishram Ritu, DGM	Manipur	09612882984
Sh. F.E.Kharshiing, CE (Dist.), MeECL	Meghalaya	-
Smt. R.G.L.Mawlong, EE MeECL	Meghalaya	09436998350
Sh. M.Kharkongor, AAO, MeECL	Meghalaya	08974847546
-	Mizoram	-
Er.Riikongutuo Suohu, SE (E) & Head SLDC	Nagaland	08575000014
Sh. S.I.Asangba Tikhir, EE	Nagaland	06969546933
Sh. Debabrata Pal, Sr.Manager	Tripura	09436500244
Sh. Devapriya Choudhury, CGM (Coml.) & I/c ED (Coml.)	NEEPCO	09435339747
Sh. Munin Choudhury, GM O/o ED (Coml.)	NEEPCO	08787891254
Sh. Amaresh Mallick, CGM(I/c)	NERLDC	09436302720
Sh. Biswajit Sahu, Sr. GM	NERLDC	09425409539
Sh. Rabindra Kumar, Sr.DGM	NERLDC	09599113468
Sh. Gaurav Bhattacharjee, Asst. Manager	NERLDC	09402304210
Sh. P.Kanungo, CGM (AM)	PGCIL	09436302823
Sh. A.Acharya, Ch.Manager	PGCIL	09402106974
Sh. M.K.Baruah, Sr.GM (Coml.)	PGCIL	09401454830
Sh. Sanil N, MD	OTPC	-
Sh. Shree Narayan, CTO	OTPC	09908194963
Sh. Avininder Gupta, CFO	OTPC	09717595999
Sh. S.C. Misra, CHRO	OTPC	09958672345
Sh. Arup Ch.Sarmah, CCO	OTPC	09871839502
Sh. Mayand Sinha, Head-Corp (HR&M)	OTPC	09910030013
Sh. Sajjan K.Sharma, Head-Corp (F&A)	OTPC	09990643435
Sh. Samarjeet Thakur, Head-Corp (C&M)	OTPC	09818094445
Sh. Prabhat Chandra, Head-O&M	OTPC	09560299324

Sh. Utkarsh Katre, Lead-Comm (PM&L)	OTPC	09125313788
Smti Rashmi Wattal, Section-Head (Coml.)	OTPC	09953099154
Sh. Dinesh Laha, Lead-Comm (RA&L)	OTPC	08918720645
Sh. Subodh Kr.Pradhan, AGM (ER-II)	NTPC	09437049168
Sh. Vijendra Singh, DGM (Coml.)	NTPC	09650991000
Sh. Rajesh Kumar, GSM (Coml.)	NHPC	09816654889
Sh. S.K.Meena, GSM (Elect)	NHPC	09911187919
Sh. Ritesh Kumar, HoD (HRD&Admin)	NETC	09868804280
Sh. Naveen Kr.Mishra, Sr.Manager	NETC	09818004674
Sh. Rajeev Maggo, CFO	NETC	08800750081
Sh.Santosh Kumar	NETC	09100463477
Sh. Anil R.Sah, DGM	NETC	0999055047
Sh. Ratan Singh Basnet, Manager (Proj)	NETC	08297125197
Sh. Harish Dhir, Head-Transmission	KMTL	09987222567
Sh. Manoj Kumar Gupta, DGM (Trans.)	KMTL	09996789264
Sh. Ajay Upadhyay, DGM (Comml.)	CTU	08826896875
Sh. K.B.Jagtap, Member Secretary	NERPC	-
Sh. S.M.Aimol, Director	NERPC	08974002106
Sh. A.Agrawal, Dy.Director (Comml.)	NERPC	09871266951
Sh.Dinesh Kr.Singh, AD-I	NERPC	07042118261

Annex.-II



Power Exchange India Limited: New Age Platform For Power Trading

NERPC: UDAIPUR 21 September 2023

In this presentation...



- ❖ **About PXIL**
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- ❖ **Market Segment & Trading Mechanism**
 - ❖ **Integrated Day Ahead Spot**
 - ❖ **Real Time Market**
 - ❖ **Long Duration Contract**
- ❖ **Why Multiple Exchanges**
- ❖ **Why PXIL**
- ❖ **Performance So Far**
- ❖ **Membership & Offer**

About PXIL



Promoters and Shareholders

Promoters

NSE Investments Limited (NSE)

**National Commodity and Derivatives Exchange
(NCDEX)**

The largest exchanges in India with deep experience in creating vibrant markets

Other Shareholders

Central Government Entities

Power Finance Corporation
Limited

NTPC Vidyut Vyapar Nigam
Limited

State Government Entities

West Bengal State Electricity
Distribution Co. Ltd

Gujarat Urja Vikas Nigam Ltd

Madhya Pradesh Power
Management Co. Ltd

Private Sector Entities

GMR Energy Limited

Tata Power Trading Company Limited

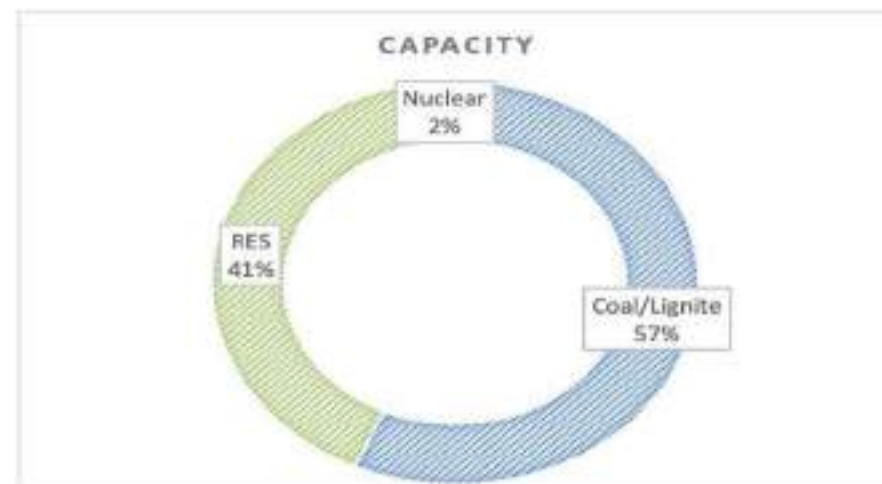
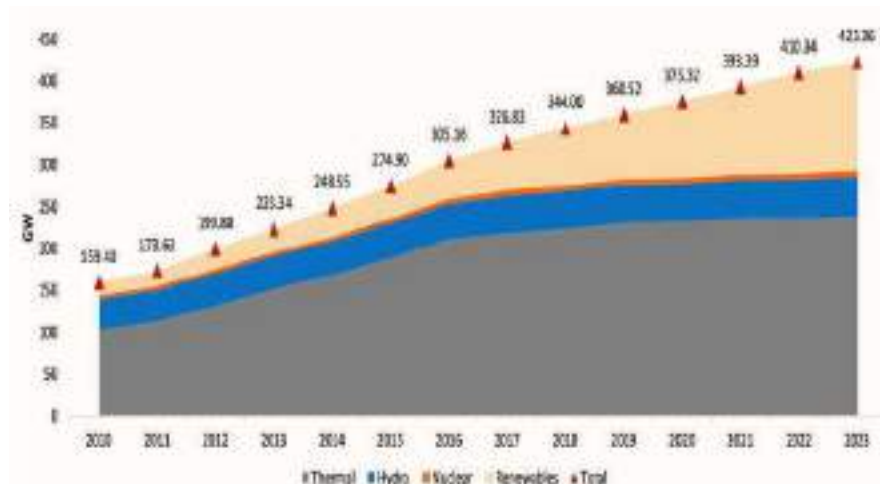
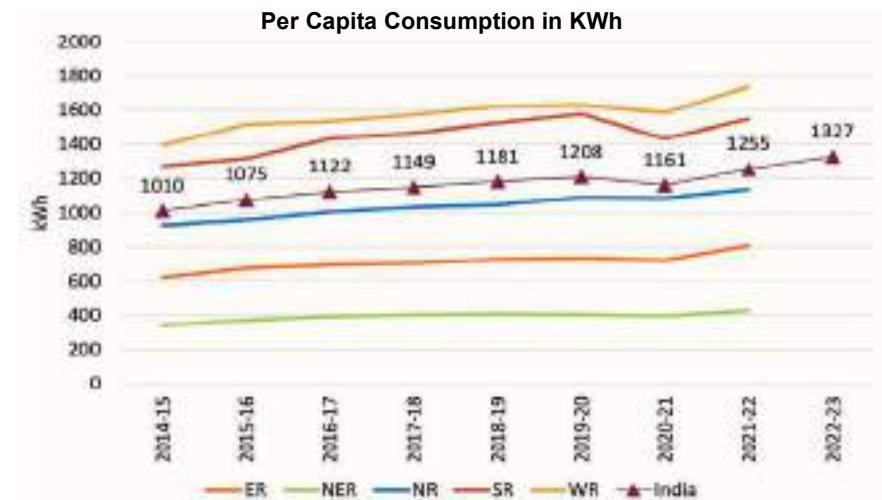
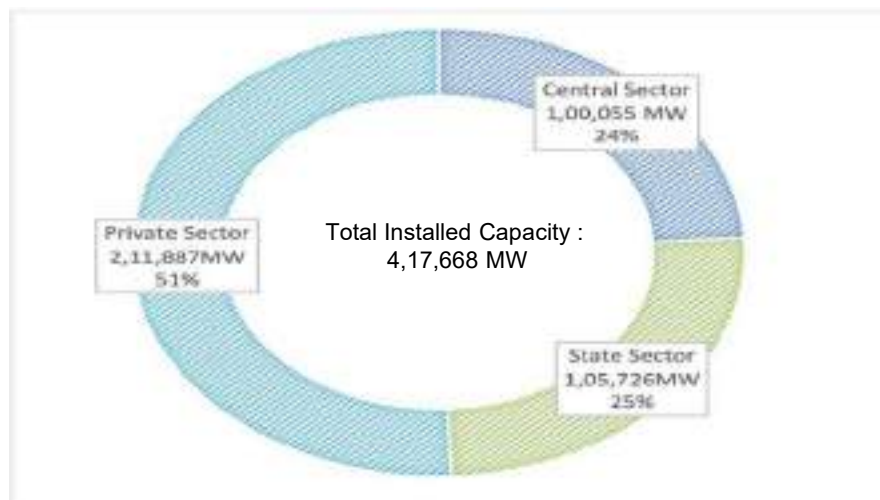
JSW Energy Limited

PXIL leverages the experience of its Promoters, State Governments and most active Private players in running the Exchange

Sector @ Glance



Sector @ Glance...



Market Segment @ PXIL



Market Segment

Integrated Day Ahead Spot

DAS

- Delivery for next day: 15 min contracts, Daily Trade
- Price discovery: Closed Double Sided Auction

HP-DAS

- Segment within I-DAS on day ahead basis.
- Separate price discovery with price cap of Rs 20/unit and floor price zero
- Same bidding Hour as IDAS, but market clearing will follow GDAS-DAS-HPDAS sequential priority

Term Ahead Contracts

- Contracts from 15 minutes to 3 month duration.
- LDC: Monthly contract up to 3 months delivery under Reverse Auction (RA) and Uniform Price contract (UPC)
- Intraday Market: Hourly and or 15 minute contracts on the same day, operates on 24X7 basis
- Day Ahead Contingency: 24 hourly & or 15 minute contracts on day ahead basis for 00:00 hours of next day
- Weekly and Daily contracts

Green Term Ahead Contract

- 15- minute quotation of quantity (MW) and price (Rs/MWh)
- Price discovery and matching on 'continuous trade basis.'

Renewable Energy Certificates

1REC= 1 MWh

- Green Attributes as Certificates
- Seller: RE generator not under feed in tariff
- Buyer: Obligated entities
- Certificate validity: Till exhaust

Real Time Market

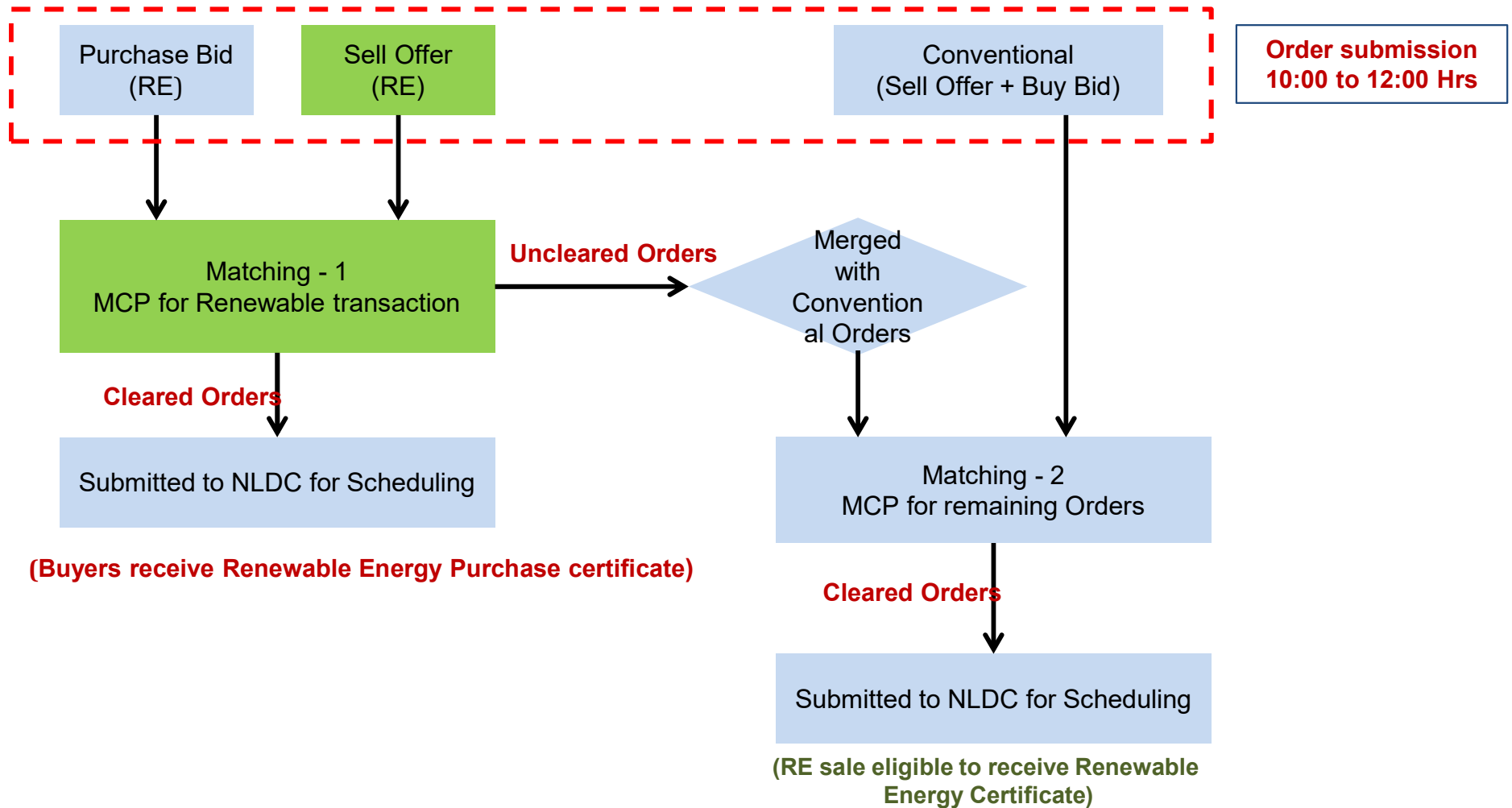
- Half hourly market(48 times per day)
- Delivery for 30 min in two time blocks of 15 min each.
- Double sided closed auction with uniform price

Energy Saving Certificates

- 1ESCerts= 1 Mtoe (Metric Tonne Oil Equivalent)



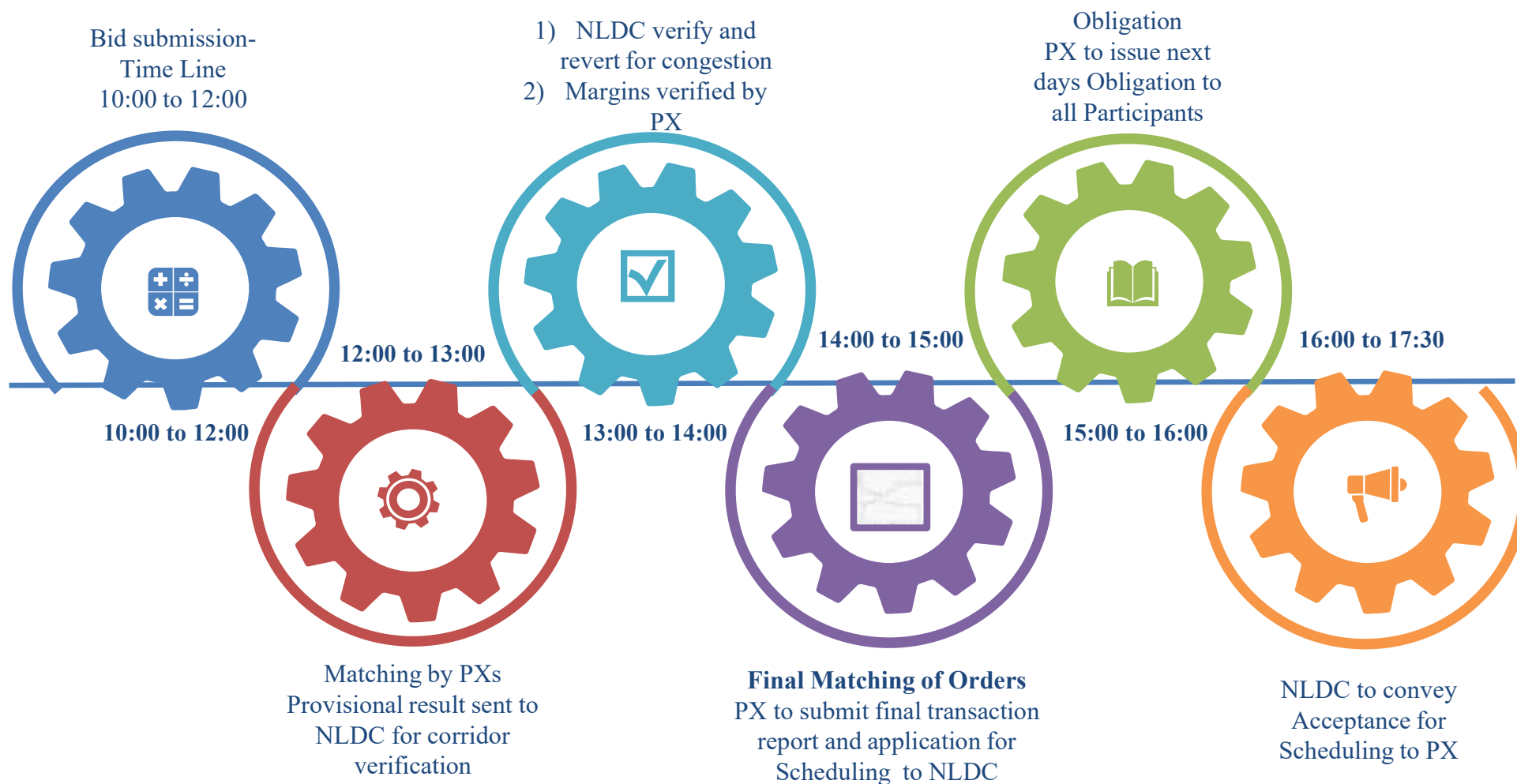
Integrated DAM – Market structure



Integrated Day Ahead Market

- ❑ **Development of Integrated Day Ahead Market (DAM) in Power exchanges**
 - ✓ Separate Price formation for RE Power and Conventional Power
 - ✓ Retain competitive characteristics of Multiple Power exchanges
 - ✓ Promote capacity addition in Renewable Energy
- ❑ **Benefits of RE transaction through Power Exchanges**
 - ✓ Investment signal for RE sector
 - ✓ Provide prompt payment to RE generators
 - ✓ Option to meet RPO requirement throughout the year
 - ✓ Avoid providing instructions for curtailment of RE power
 - ✓ Mitigate Price risk of Discom in purchase power under long term PPA
 - ✓ Unlock untapped RE potential

IDAM-System Process Flow & Timeline



Day Ahead Contracts

Bidding Window: 10:00 AM to 12 Noon

Sellers	Qty (MW)	Price (₹/kWh)
S1	50	2.5
S2	150	3
S3	200	4.5
S4	150	5
S5	300	6
S6	80	6

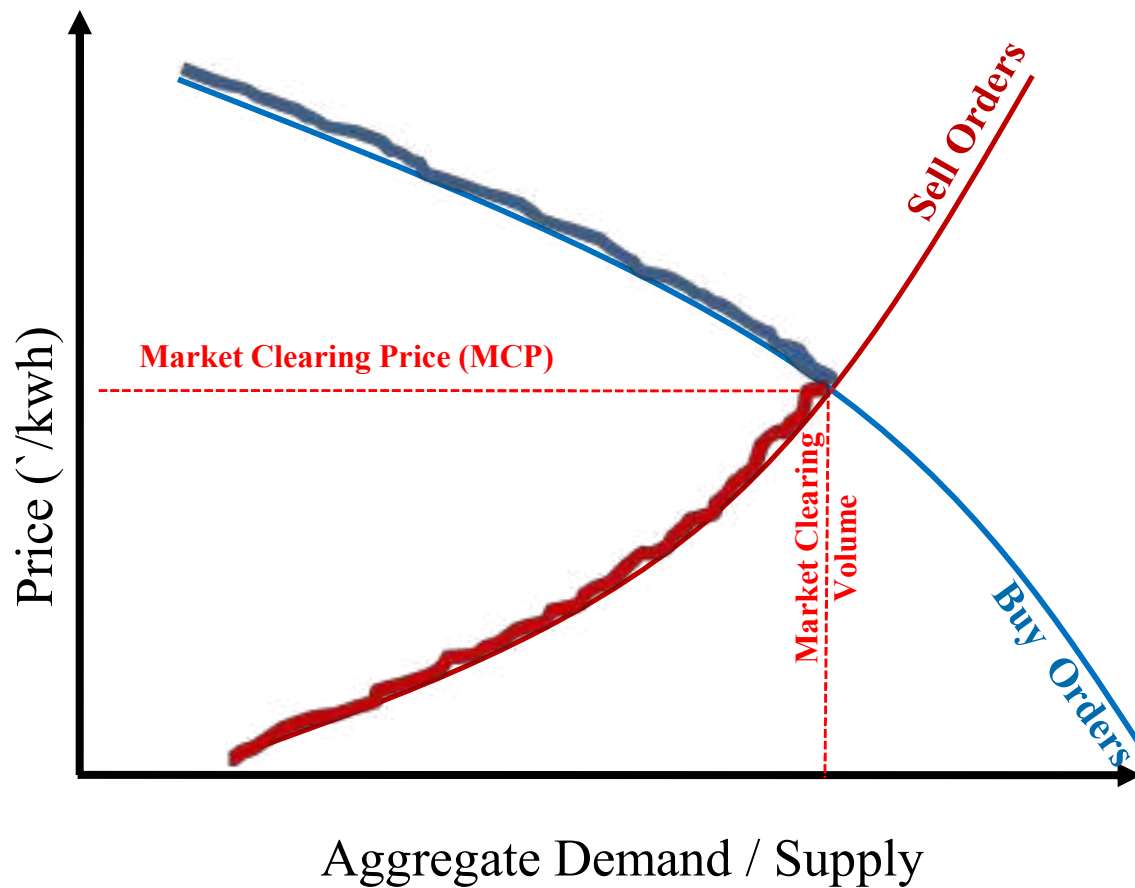
Buyers	Qty (MW)	Price (₹/kWh)
B1	150	5
B2	100	4.5
B3	100	3.5
B4	200	3
B5	400	2.5

After Gate Closure at 12 noon

Price (₹/ kWh)	Aggregate Supply (MW)
2.5	50
3	200
4.5	400
5	550
6	930

Price (₹/ kWh)	Aggregate Demand (MW)
5	150
4.5	250
3.5	350
3	550
2.5	950

Demand – Supply Matching

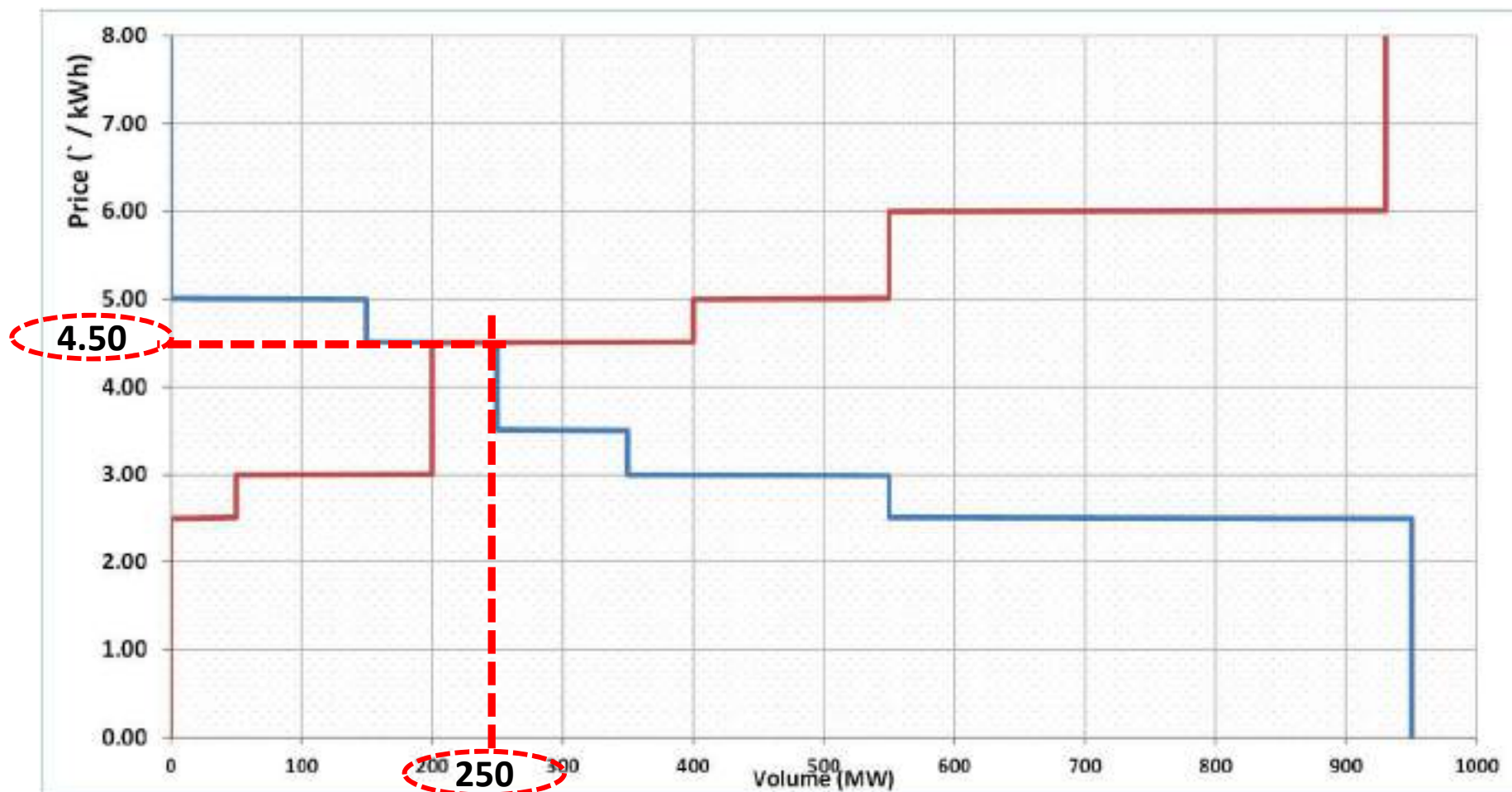


- All sell at Price equal to or lower than MCP is cleared
- All buy at Price equal to or higher than MCP is cleared
- All Trades are Settled at MCP
- Financial transactions settled based on PX schedule
- Variations in Supply or Drawl from schedule Settled under UI

Working Methodology

Aggregate Demand

Aggregate Supply



Day Ahead Contracts

Eligible bids for contract determination

Sellers	Qty (MW)	Price (₹/kWh)		Aggregate Supply (MW)
S1	50	2.5		50
S2	150	3		200
S3	200	4.5	← MCP at ₹4.50 →	400
S4	150	5		550
S5	300	6		850
S6	80	6		930

Buyers	Qty (MW)	Price (₹/kWh)		Aggregate Demand (MW)
B1	150	5		150
B2	100	4.5	← MCP at ₹4.50 →	250
B3	100	3.5		350
B4	200	3		550
B5	400	2.5		950

- ✓ Total Sell Eligible – 400 MW, Total Buy – 250 MW, Cleared quantum- 250 MW
- ✓ Eligible Buyer: B1-150 MW, B2- 100 MW
- ✓ Eligible Seller: S1- 50 MW, S2- 150 MW, S3- 50 MW

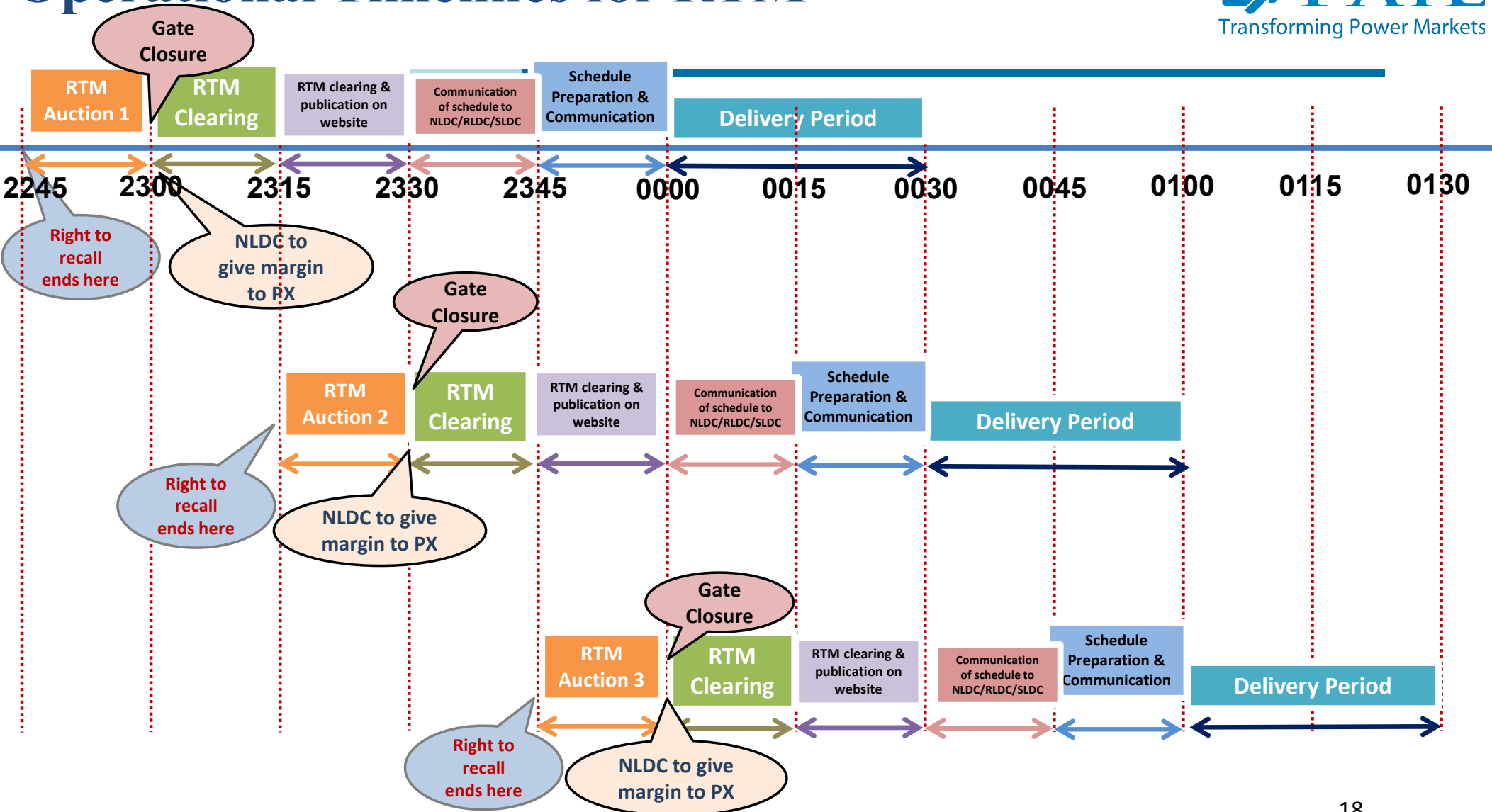
Real Time Market



Real Time Market - Salient Features

- ❖ Half Hourly Market having 48 bidding sessions every day.
- ❖ Price Discovery: Uniform Pricing , price and volume discovered for every 15 minutes block.
- ❖ Auction: Double Sided Closed auction.
- ❖ Nodal Agency : NLDC
- ❖ Gate Closure: No bid modification / revision of schedule or declared capability for specific half hour.
- ❖ One Hour time between gate closure and delivery.

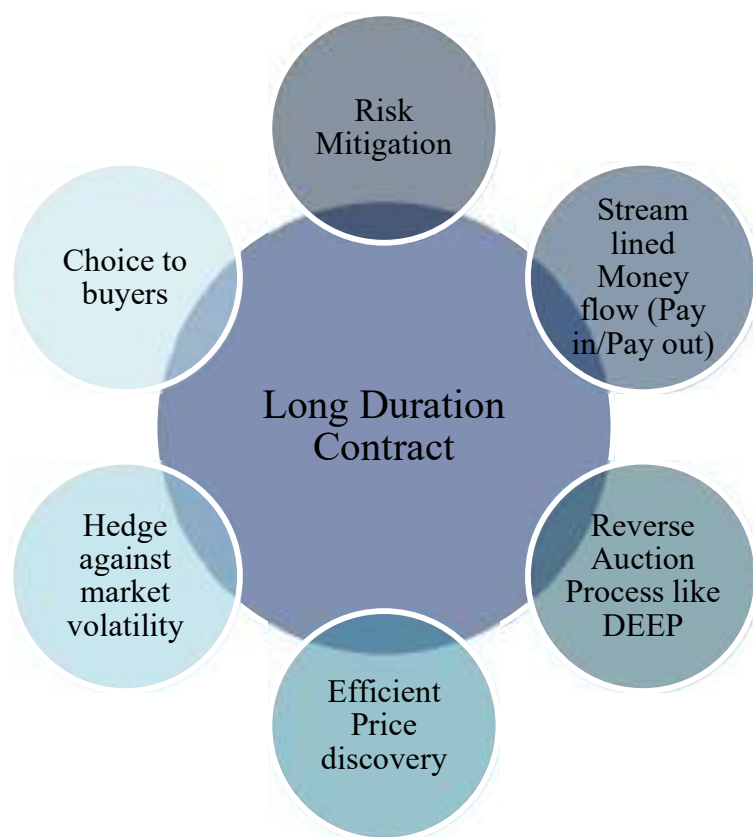
Operational Timelines for RTM



Long Duration Contract



Long Duration Contract



- ❖ Long Duration contracts at the exchange platform will lead to greater liquidity in Power Market
- ❖ Create a Competitive market structure over 'DEEP' & Increase share of electricity traded on Power exchanges
- ❖ Enable state power distribution companies to tie-up short-term power supply for up to three months on Power exchanges
- ❖ Ensure Timely payments to generators
- ❖ Opportunity to Industrial Consumers/SEZs/CPPs to purchase power at competitive rates to meet energy requirement for a longer period

Long Duration Contract: Products & Timelines

**DAILY
CONTRACT**

**WEEKLY
CONTRACT**

**MONTHLY
CONTRACT**

**ANY DAY
SINGLE SIDE**

Uniform Price Auction

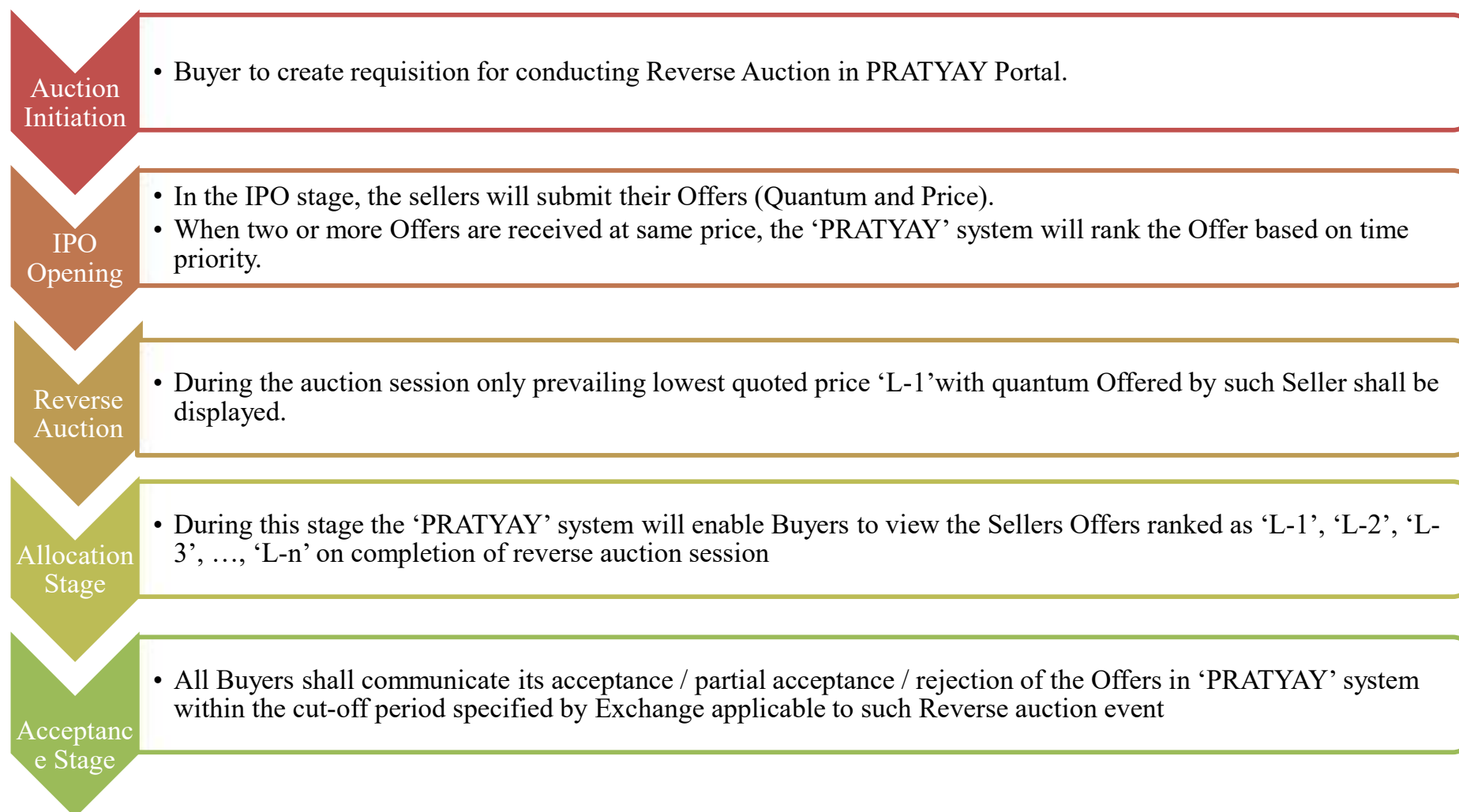
Reverse Auction

Contract	Bidding Time-line		Bidding Time	Delivery Period	Remarks
	Start Date	End date			
Daily Contract	On Daily Basis	Two Days before Delivery Day	12:00-17:00 hours	T+2 to T+90 Days	
Weekly Contract	Monday to Friday	Friday of the week prior to delivery	12:00-17:00 hours	TW+1 to T+12 Week	
Monthly Contract	On Daily Basis	For the first month contract: 10 days before the end of current month, for second month contract: 5 days before the end of current month and for the third month contract-last day of current month	12:00-17:00 hours	TM+1 to TM+3 Months	
Reverse Auction	On Daily Basis	Two Days before Delivery Day	00:00-24:00 hours	T+2 to T+90 Days	Buyer Defined

Long Duration Contract: Margin & Bid Security

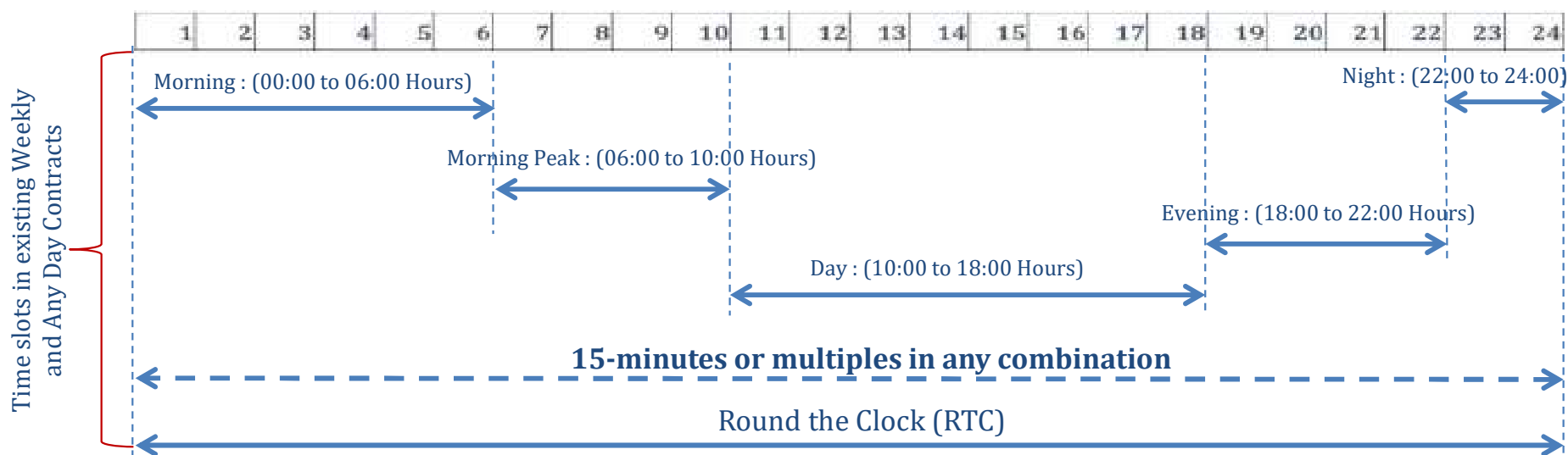
Contract	Entity	Pre-Bid Margin	Pre-trade Margin	Post-Trade Margin	Delivery Margin	Remarks
UPC: Daily Weekly & Monthly	Buyer	Rs. 40/- per MWh	Nil	15 % of the total cost of power for the contract	100 % of Cost of Power for next three calendar days + 5% of the cost of power for the cost of power for the remaining days.	After Matching and before Application to RLDC,
	Seller	Nil	Nil	10% of the total cost of power for the contract	Nil	The applicable margin shall be Post-Trade Margin or Delivery Margin whichever is higher
Any Day Single Side Reverse Auction	Buyer	The buyer must pay a nominal non-refundable fee up to Rs. 1,00,000 for initiating the reverse auction.	Nil	Post Trade Margin of 15%	100 % of Cost of Power for next three calendar days + 5% of the cost of power for the cost of power for the remaining days.	After Matching and before Application to RLDC The applicable margin shall be Post-Trade Margin or Delivery Margin whichever is higher
		This fee will be adjusted in the additional				
		margins to be collected from buyer after the successful				
		execution of the contract				
	Seller	Rs. 40/MWh (equivalent to 30,000/MW/Month)	Nil	10% of Total Trade value	-	-

Reverse Auction – Process Flow



Trading slots – Daily, Weekly and Monthly Contracts

- Delivery duration to be in pre-specified time blocks



Daily, Weekly and Monthly Contracts: CERC in Order dated 07.06.2022 has prescribed ‘Pre-specified time blocks notified to market participants well in advance through Circulars’.

Circular No. PXIL/Operation/2022-2023/399: An additional Hourly slots between 00:00 to 24:00 Hrs can also be selected for bidding in UPC Auction.

Any Day Single Sided Reverse Auction: Prescribes ‘User defined days and time blocks’

Uniform Price Auction – Month Ahead Contracts

Delivery Period

- The monthly period shall be from start of next Calendar month (M1) up to end of month (M3)

Auction Days

- For the first month (M1) contract-10 days before the end of current month (M0), for second month (M2) contract-5 days before the end of current month and for the third month (M3) contract- last day of current month

Auction Timing

- 12:00 to 17:00 Hours Monday to Friday
- (The Exchange reserves the right to revise the auction time for single or multiple days in one or more days in advance)

Duration of Contracts

- Round the Clock, Morning, Morning Peak, Day, Evening, Night and user defined slots.

Uniform Price Auction – Month Ahead Contracts

- Month of transaction designated as ‘Month 0’

Segment	1-Month Ahead	2-Month Ahead	3-Month Ahead
Start day of Bidding	1 st day of Month 0	1 st day of Month 0	1st day of Month 0
Last day of Bidding	10 days prior to close of ‘Month0’	5 days prior to close of ‘Month0’	Last day of Month 0

Transaction Month

1 - Month Ahead

2 - Month Ahead

3 - Month Ahead

Delivery Month

On 1st day of the Month, the counter is reset to M0, M1 to M3

Why Multiple Exchanges ?

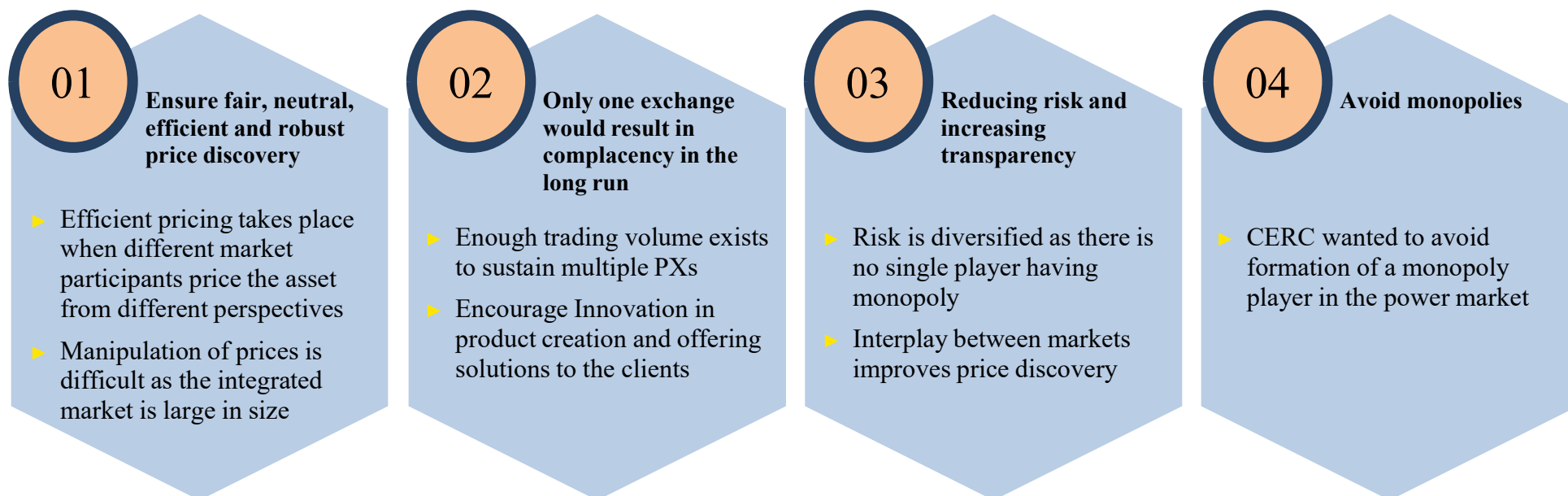


Access and Utilization of an alternate platform is a necessity



- **Validation of the discovered Prices**
 - *Opportunity to compare prices; checks and balances for price formation; scrutiny and audit of clearing algorithms etc.*
- **Better quality and service levels**
 - *competition & innovation amongst Exchanges e.g. GST portal; time reduction in IntraDay Contract; Data & Customization Services etc.*
- **Innovation & development of Power Markets**
 - *longer tenure contracts; Green contracts; resolution of CERC and SEBI jurisdictional issues*
- **Long term systemic risks**
 - *protection against unintended monopoly & market failure of any one Exchange*

CERC adopted multiple PXs for Power Markets



“Citing the example of satisfactory multiplicity of Stock Exchange (NSE & BSE) and Commodities Exchange (MCX, NCDEX) in the country, they favoured establishment of more than one power exchange to encourage competition for their sustained performance, since one PX would be a monopoly and would tend to be complacent in the long run”

-Statement of reasons: Development of a common platform for electricity trading, 2006¹⁴

Source: ¹⁴Power Market Regulations, Statement of Reasons, Development of a common platform for electricity trading

Summary - Maximizing Value by using both the Exchanges

- ❑ DAS on IEX is driven by large players on both the Buy and Sell side; more than **75%** of volumes in DAS constitute
 - **5-10** portfolios on the Buy Side comprising of State Utilities
 - **10-15** portfolios on the Sell Side comprising of large IPPs
- ❑ Price elasticity for participants is very high when participation is only through one Exchange
- ❑ Spreading liquidity and utilizing prices in both the Exchanges will result in better realization.
- ❑ Using TAM (Any Day & Weekly) will help in further optimization of power procurement costs by stabilizing and improving price formation in DAS

A Case Study



Volume Transacted by NER Utilities in DAM Market

BUYER

Utility	April'23		May'23		June'23		July'23		August'23	
	Buy Volume	Price	Buy Volume	Price	Buy Volume	Price	Buy Volume	Price	Buy Volume	Price
Tripura Utility	0.84	7.39	7.55	6.11	7.93	6.07	1.46	6.49	0.92	5.08
Manipur Utility	0.21	9.43	0	0	0	0	0	0	0	0
Meghalaya Utility	4.82	3.87	25.42	3.78	31.17	4.34	13.27	3.78	13.95	3.91
Assam Utility	65.03	6.27	93.28	5.93	159.62	5.74	36.96	4.59	53.41	5.81
Arunachal Utility	2.35	4.28	1.52	3.19	1.36	4.13	0	0	0	0
Nagaland Utility	0	0	0	0	0.85	5.26	0	0	0	0

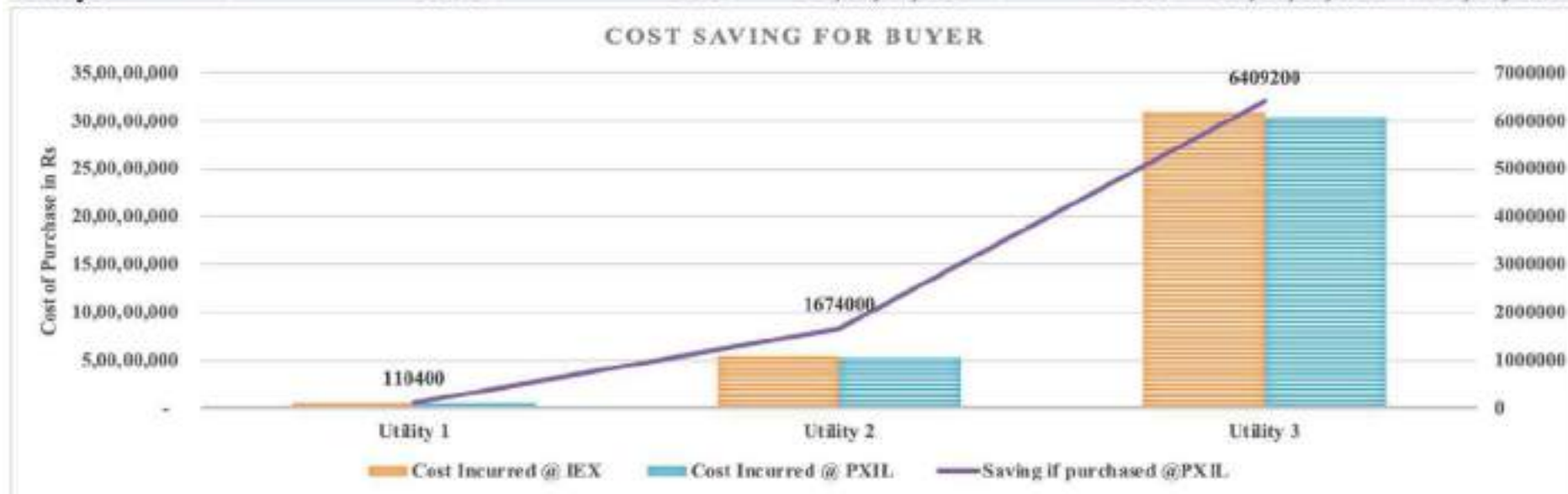
SELLER

Utility	April'23		May'23		June'23		July'23		August'23	
	Sell Volume	Price	Sell Volume	Price	Sell Volume	Price	Sell Volume	Price	Sell Volume	Price
Mizoram Utility	7.85	6.93	7.69	7.04	6.37	7.76	4.24	7.15	12.11	8.15
Nagaland Utility	1.25	5.64	0.48	7.7	2.92	7.62	4.24	6.08	6.92	8.17
Tripura Utility	3.89	4.24	0	0	0	0	0	0	0	0
Meghalaya Utility	0.18	5.66	0.29	9.99	9.63	8.25	6.35	9.53	21.57	9.65
Assam Utility	48.57	5.09	26.87	3.86	60.62	4.59	10.02	3.15	21.05	6.67
Arunachal Utility	8.67	5.62	5.95	5.88	12.05	6.44	22.66	5.03	18.45	6.74
Manipur Utility	0	0	0	0	1.55	5.31	1.59	4.17	1.14	5.68

What to Choose DAM vs TAM (PXIL)

Case1 (Buyer Case) -We have considered purchased volume of 3 NER Utilities for August'23 where they have purchased from Competitor exchange in Day Ahead Market and replaced it with PXIL TAM purchase, considering the same hour purchase and volume.

Utility	Volume Transacted In MUs	Competitor DAM Price Rs/Unit	Cost Incurred @ Competitor Exchange	PXIL TAM Price Rs/Unit	Cost Incurred @ PXIL	Saving if purchased @PXIL
Utility 1	0.92	5.08	46,73,600	4.96	45,63,200	1,10,400
Utility 2	13.95	3.91	5,45,44,500	3.79	5,28,70,500	16,74,000
Utility 3	53.41	5.81	31,03,12,100	5.69	30,39,02,900	64,09,200



What to Choose DAM vs TAM (PXIL)

Case2 (Seller Case) -We have considered sell volume of 6 NER Utilities for August'23 where they have sold power at competitor exchange in Day Ahead Market and replaced it with PXIL TAM sell, considering the same hour sell and volume.

Utility	Volume Transacted In MUs	Competitor DAM Price Rs/Unit	Cost of sell @ Competitor	PXIL TAM Price Rs/Unit	Cost of sell @ PXIL	Profit @PXIL
Utility 1	0.36	5.01	18,03,600	5.16	18,57,600	54,000
Utility 2	12.11	8.15	9,86,96,500	8.3	10,05,13,000	18,16,500
Utility 3	6.92	8.17	5,65,36,400	8.32	5,75,74,400	10,38,000
Utility 4	21.57	9.65	20,81,50,500	9.8	21,13,86,000	32,35,500
Utility 5	21.05	6.67	14,04,03,500	6.82	14,35,61,000	31,57,500
Utility 6	18.45	6.74	12,43,53,000	6.89	12,71,20,500	27,67,500

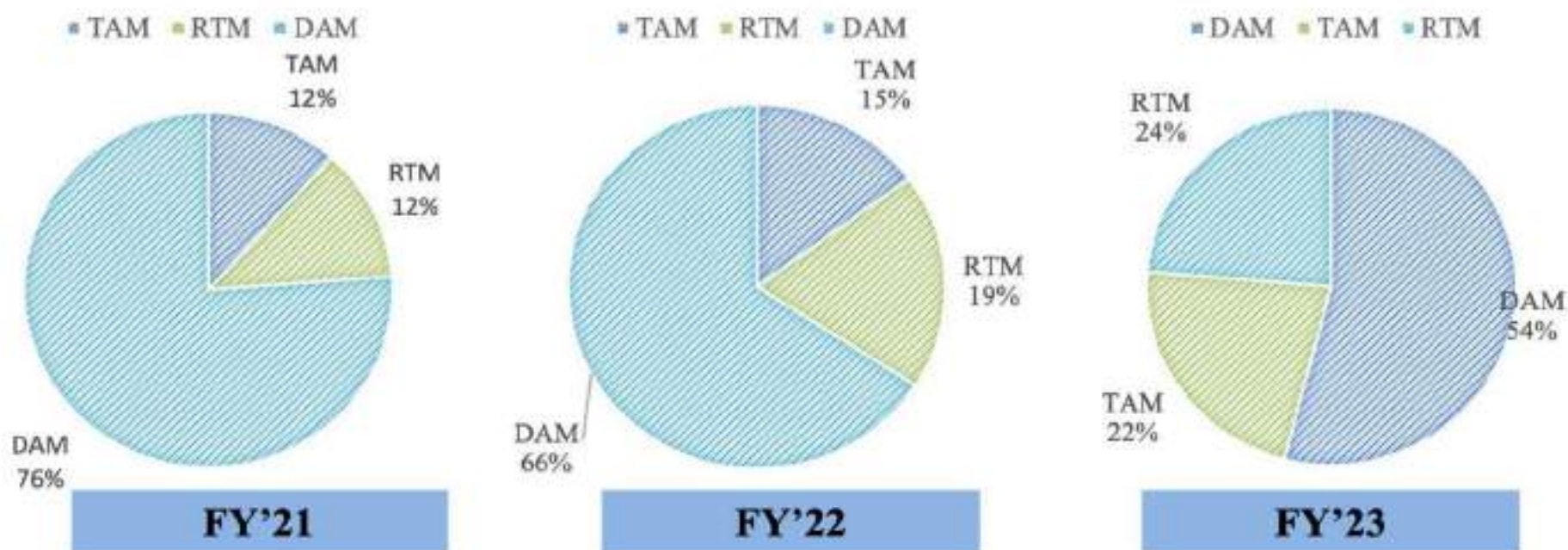


Changing Market Composition

With the introduction of multiple duration contract under TAM market segment its been observed that participants/utilities have shifted their volume from DAM to TAM and it can be visible from the below chart.

The possible reasons for the shift are :

1. Long Term Price visibility
2. Tailor made contract as per requirement.
3. Mostly TAM contract are Bilateral in nature.



Why PXIL: The Key Differentiators



System Technology & Infrastructure

PXIL	Competitor Exchange
Cloud based system for All products	Web based for only RA. For rest Trader Workstation (TWS).
Can be accessed from anywhere.	Can be accessed only from machines where it is installed
No need to update system at Trader end. Trader terminal is always up to date	Traders needs to update TWS applications in case of any patch release or system update by the other exchange.
Reports can be generated any time from anywhere. Reports can be downloaded from SFTP as well	Reports can be only downloaded from SFTP.
Easy to understand and single bid entry screen	Other exchange is replicating PXIL web-based technology for bid entry and reports download.
No need for external system for bid creation	Complicated and multiple bid entry screen, difficult to understand
	Because of complexity , Trader have to use bid creation software (excel Macro)

Lowest Margin Requirement

PXIL				Competitor Exchange	
Product	Party	Pre-Bid Margin/	Post Trade or Delivery Margin whichever is higher	Initial Margin (on Bidding)	Additional Margin (post Matching)
Daily & weekly	Buyer	Rs. 40/ MWh	Post Trade Margin of 15% or Delivery Margin equal to 100 % of Cost of Power for next three calendar days + 5% cost of power for the remaining days.	5% of Order Value	50% of the Trade Value
	Seller	Nil	10% of Total Trade value	5% of Order Value	50% of the Trade Value
Monthly	Buyer	Rs. 40/ MWh	Post Trade Margin of 15% or Delivery Margin equal to 100 % of Cost of Power for next three calendar days + 5% cost of power for the remaining days..	1% of the order value	20% of the Trade Value
	Seller	Nil	10% of Total Trade value	1% of the order value	20% of the Trade Value


















Bid Margin Comparison with Other Exchange

Products	Bid in MW	Delivery in Hour	No of Delivery Days	PXIL		Competitor Exchange	
				Pre-Bid Margin / MWh Price@3000/MWh		Initial Margin %	Price @ 3000
Daily	150	24	1	40	1,44,000	5%	5,40,000
Daily	150	24	7		10,08,000		37,80,000
Daily	150	24	30		43,20,000		1,62,00,000
Daily	150	24	60		86,40,000		3,24,00,000
Weekly	150	24	7		10,08,000		37,80,000
Weekly	150	24	28		40,32,000	1%	1,51,20,000
Weekly	150	24	35		50,40,000		1,89,00,000
Monthly	150	24	30		43,20,000		32,40,000
Monthly	150	24	60		86,40,000		64,80,000
Monthly	150	24	90		1,29,60,000		97,20,000

Products	Bid in MW	Delivery in Hour	No of Delivery Days	PXIL	Other Exchange	
				Price @ 3000	Post Trade Margin	Price @ 3000
Daily	150	24	1	1,08,00,000	50%	1,08,00,000
Daily	150	24	7	3,45,60,000		3,78,00,000
Daily	150	24	30	4,86,00,000		16,20,00,000
Daily	150	24	60	9,72,00,000		32,40,00,000
Weekly	150	24	7	3,45,60,000		3,78,00,000
Weekly	150	24	28	4,59,00,000	20%	15,12,00,000
Weekly	150	24	35	5,67,00,000		18,90,00,000
Monthly	150	24	30	4,86,00,000		6,48,00,000
Monthly	150	24	60	9,72,00,000		12,96,00,000
Monthly	150	24	90	14,58,00,000		19,44,00,000

Bulk File Upload Facility in DAM Market

- Single file required for putting/submitting any combination of bids viz green, conventional, HPDAM (Normal/ Block/ OCF), unlike different files format for different products in the other exchange.

PXIL IDAS upload file	Other Exchange DAM upload files					
	 Block bid upload - DAM	 Single Bid sell - DAM	 Block Bid Hydro	 Sample al DAM Buy Block	 Sample al DAM Buy Single	 Block Bid Solar
	 PXIL IDAS Upload file	 DAM Sell Block wise OCF to HPDAM	 DAM Sell Single Block wise OCF to	 GDAM Block Bid wise OCF to DAM	 GDAM Single Bid ock wise OCF to DAM	 Single DAM Bid Hydro
	 Single Bid Non Solar	 Single Bid Renewable Purchas	 Single Bid Solar	 Block Bid Non Solar	 Block Bid Renewable Purchas	

- PXIL file has got header for intuitive understanding and clarity of upload file format
- Only 100 price point across 96-time block can be put in other exchange while in case of PXIL upto 164 price point is possible.

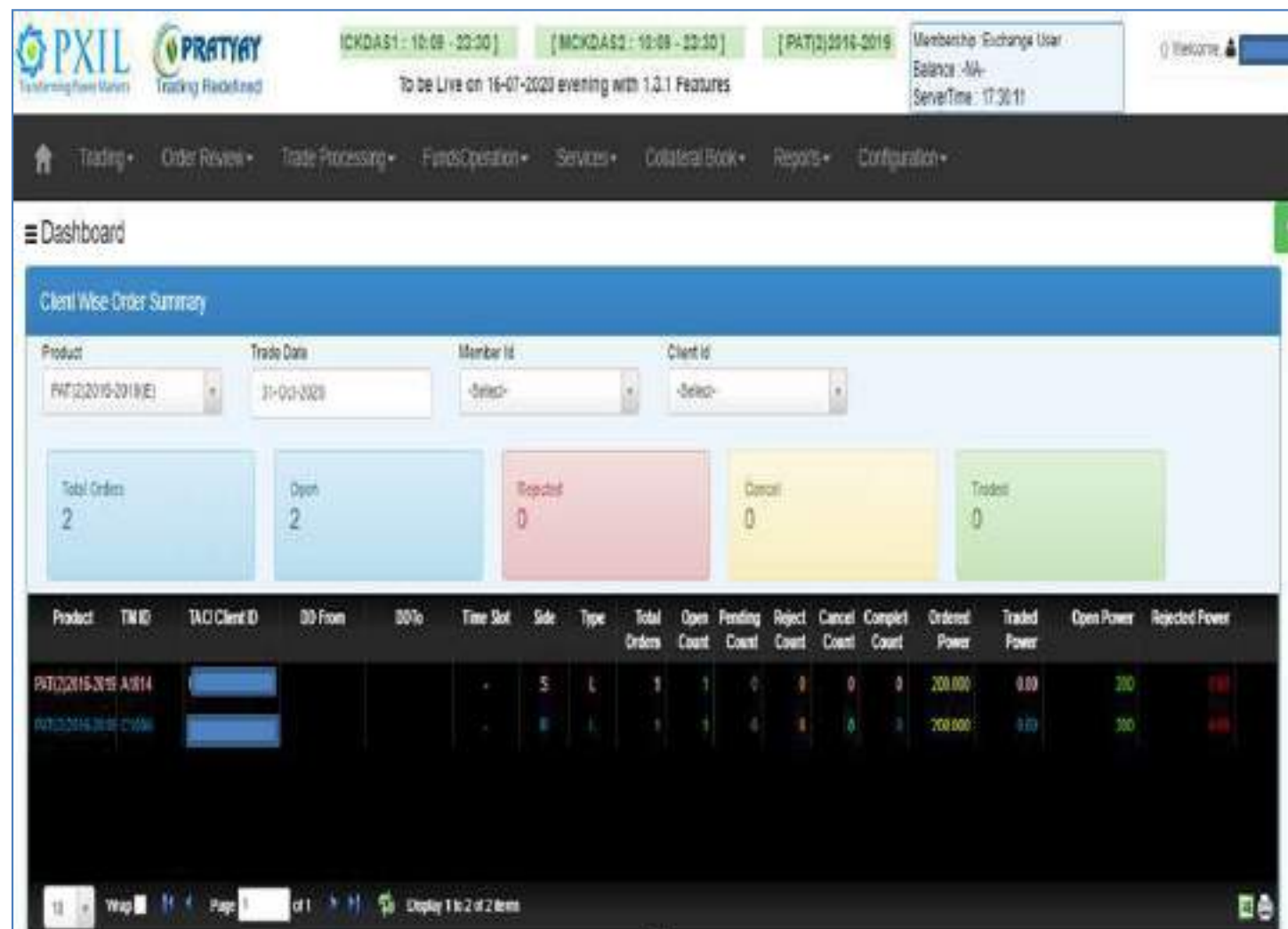
PXIL offers a State-of-the-art Technology Platform

Web Based Application	<ul style="list-style-type: none"> ▪ Accessibility: Anywhere Anytime ▪ Security: Secure access to right people 	<ul style="list-style-type: none"> ▪ Auto Upgrades ▪ Auto Maintenance
Easier Workflow to Members	<ul style="list-style-type: none"> ▪ Order Entry ▪ Order Cancellation/Re-initiation 	<ul style="list-style-type: none"> ▪ NOC updation ▪ Margin Management
Modularity	<ul style="list-style-type: none"> ▪ Combination of services ▪ ORMS (Order and Risk Management System) 	
Flexibility	<ul style="list-style-type: none"> ▪ Ability to configure new products 	
Scalability	<ul style="list-style-type: none"> ▪ Cloud based infrastructure 	
Configurability	<ul style="list-style-type: none"> ▪ Multiple Matching methodologies ▪ Easily configurable contract specs 	
Reduced time to Market	<ul style="list-style-type: none"> ▪ New Products 	
Layered Architecture	<ul style="list-style-type: none"> ▪ Grid Nodes – 3 Layers Configured (Total 6) ▪ Region, State, Discom 	<ul style="list-style-type: none"> ▪ Membership – Multiplicity of users – Segregation of Roles - Corporate User, Dealers, Client, Clearing Member
Easier Workflow	<ul style="list-style-type: none"> ▪ Web Based Application ▪ Rich Client Application- Bid Creation & Submission, Bulk Upload, Folders (Client Input, Input & Output) 	
Risk Management	<ul style="list-style-type: none"> ▪ Same Day Pay-in for DAS ▪ Min-Max Margin 	
Reports	<ul style="list-style-type: none"> ▪ Exhaustive Reporting at different stages 	



Key features - 'PRATYAY' Trading system

- ❑ **Cloud based Services**
 - ✓ Web based Portal
 - ✓ Scalability
- ❑ **Multi front end suites**
 - ✓ Web trading portal
 - Trading
 - Fund related Operations
 - Reports
 - ✓ Rich Client for trading
 - ✓ API for communication with external applications



The screenshot displays the PRATYAY Trading system interface. At the top, there are logos for PXIL and PRATYAY, along with session information for ICMDAS1, ICMDAS2, and PAT2016-2019. A message states "To be Live on 16-07-2023 evening with 1.3.1 Features". The user is logged in as "Membership: Exchange User" with a balance of "-NA-" and server time of "17:30:11".

The main navigation bar includes: Trading, Order Review, Trade Processing, Funds Operation, Services, Collateral Book, Reports, and Configuration. The "Dashboard" section is active, showing a "Client Wise Order Summary" for Product "PAT2016-2019(E)", Trade Date "31-03-2023", Member Id, and Client Id. The summary shows:

- Total Orders: 2
- Open: 2
- Rejected: 0
- Cancel: 0
- Traded: 0

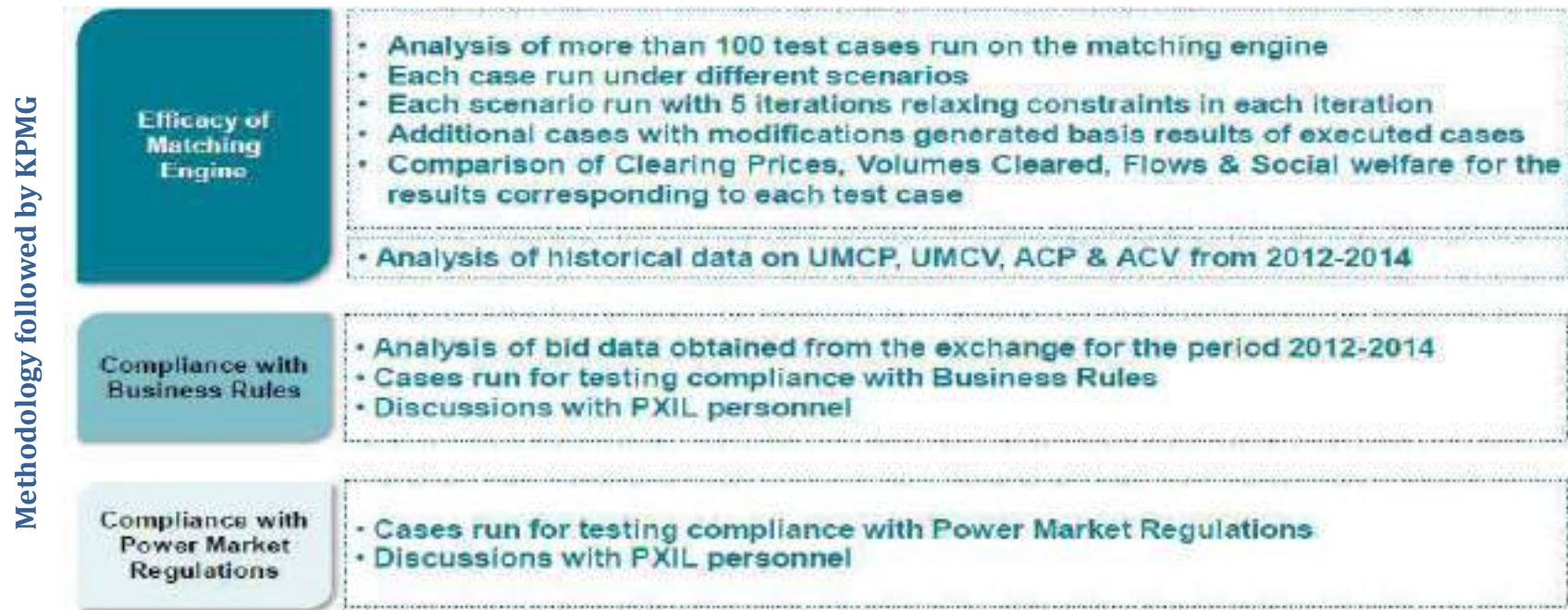
Below this is a table with the following columns: Product, TM ID, TAC/Client ID, DO From, DO To, Time Slot, Side, Type, Total Orders, Open Count, Pending Count, Reject Count, Cancel Count, Complete Count, Ordered Power, Traded Power, Open Power, and Rejected Power. The table contains two rows of data for the product "PAT2016-2019(A)14".

Product	TM ID	TAC/Client ID	DO From	DO To	Time Slot	Side	Type	Total Orders	Open Count	Pending Count	Reject Count	Cancel Count	Complete Count	Ordered Power	Traded Power	Open Power	Rejected Power
PAT2016-2019(A)14						S	L	1	1	0	0	0	0	200.000	0.00	200	0.00
PAT2016-2019(A)14						B	L	1	1	0	0	0	0	200.000	0.00	200	0.00

At the bottom, there is a pagination bar showing "Page 1 of 1" and "Display 1 to 2 of 2 items".

Market Clearing Engine of PXIL has been audited by CERC

CERC deployed independent consultant KPMG for algorithmic audit of PXIL Matching Engine



KPMG Report to CERC

“With regards to Section 10 of the Power Market Regulation, 2010, following are our observations:

- ❑ Price discovery process is *fair, efficient and neutral*.....
- ❑
- ❑ The exchange is in compliance with the regulatory requirement of *extensive and quick price dissemination*”

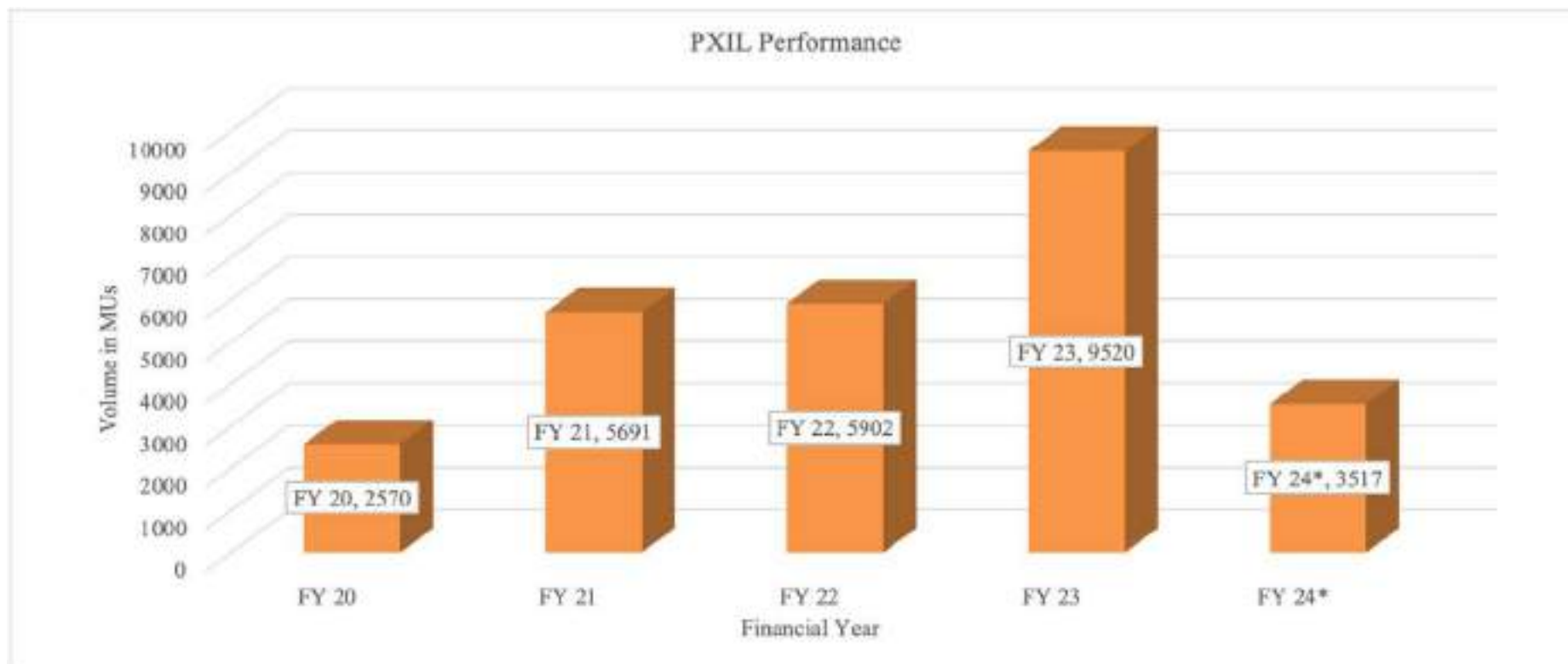
PXIL Performance



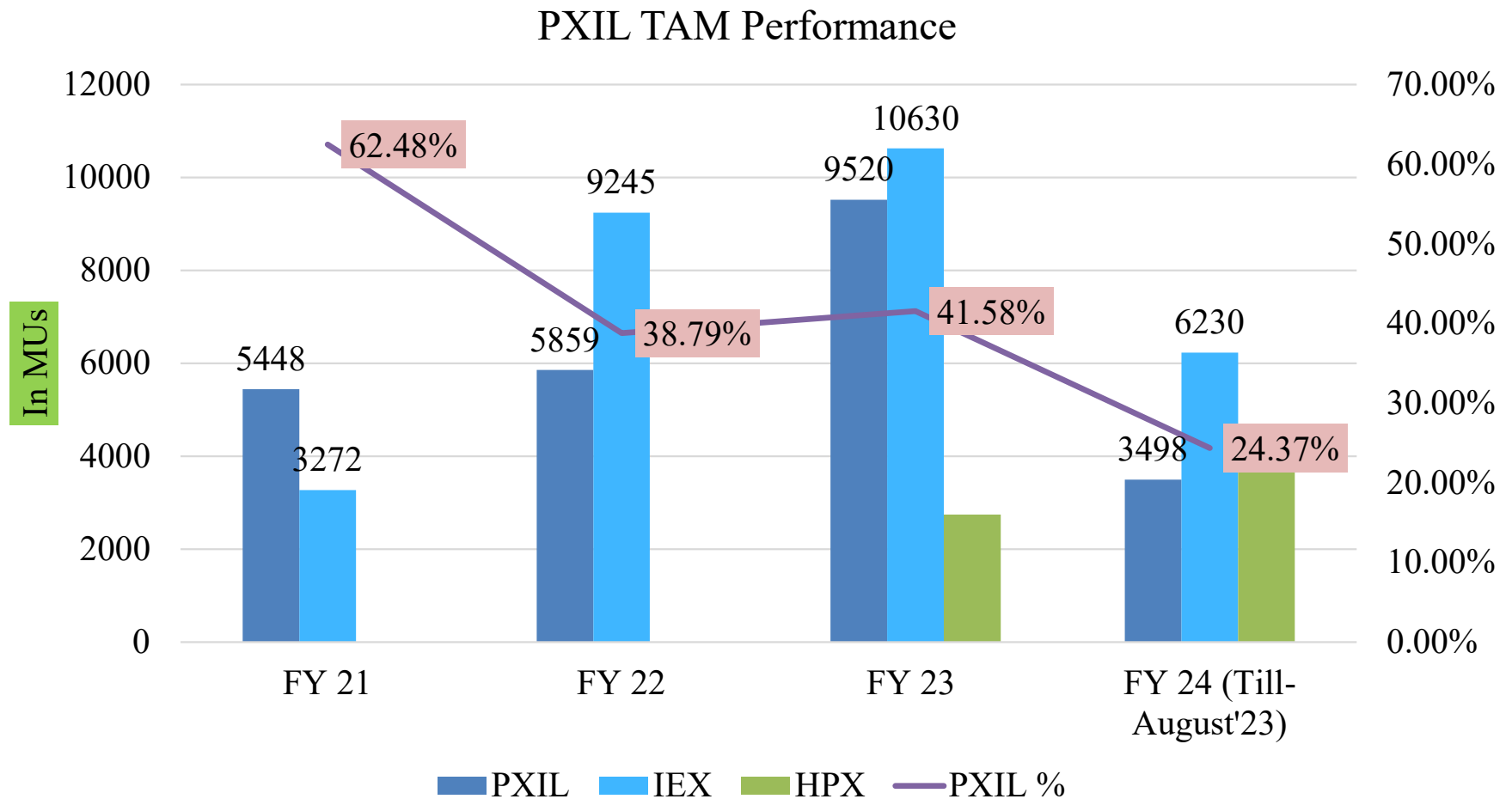
Performance over Last 4 Years (PXIL)

PXIL ACHIEVES 9520 MUs in FY'23 CUMULATIVE VOLUME WITH 61% YoY GROWTH AS COMPARED TO FY'22.

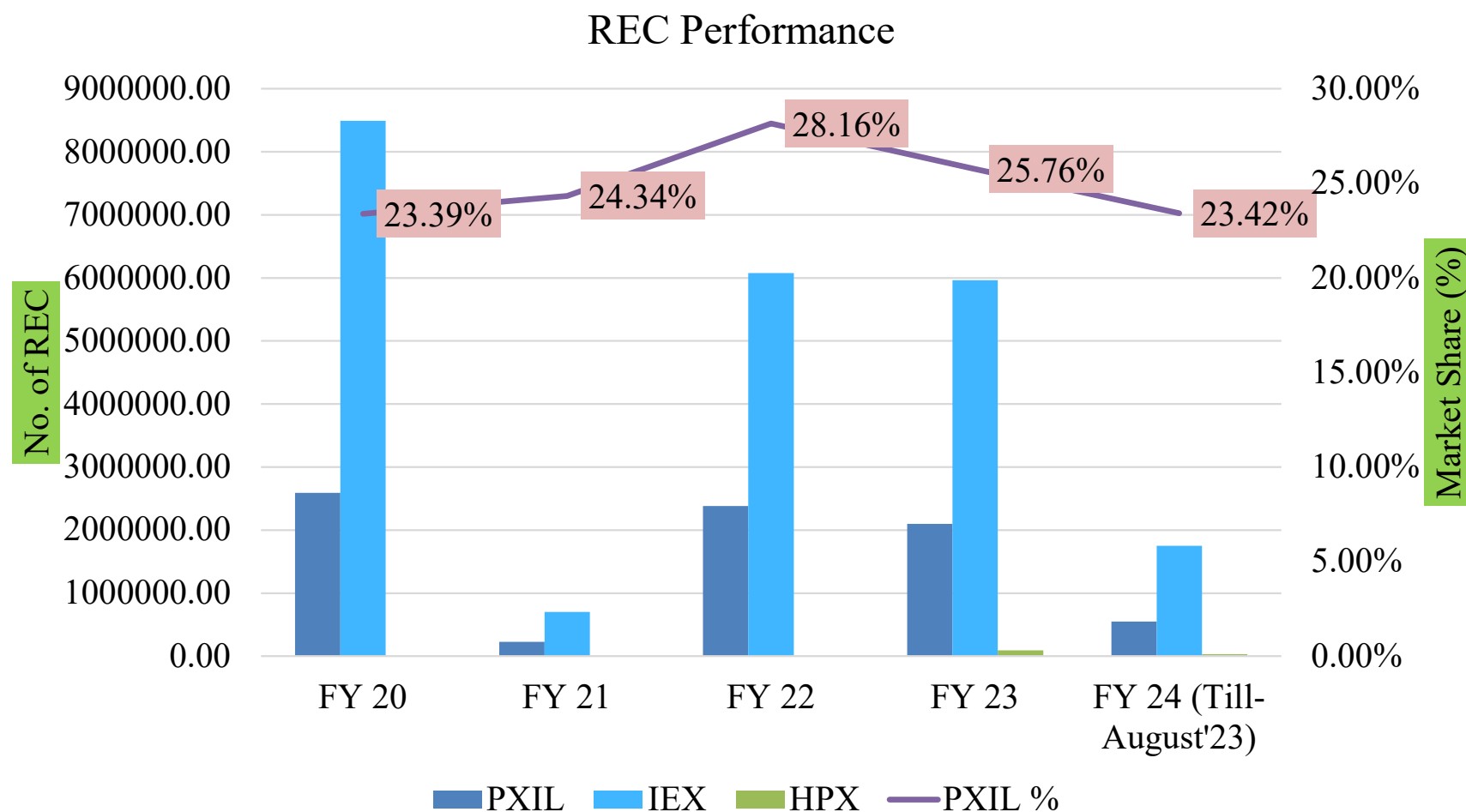
For the first quarter of the fiscal year 2024, PXIL achieved 1959 MUs across all its market segments.



Performance over Last 3 Years (Term Ahead Market)



Performance over Last 3 Years (REC)



Membership Offer



Membership Offer

Sl. No	Components	Regular Fee Structure	Special Discount	Benefits to NER Utilities
1	Category of Membership	Trading & Self Clearing Membership	Trading & Self Clearing Membership	
2	Market Segment	All (Physical, Green, REC & Escerts)	All (Physical, Green, REC & Escerts)	
3	a. One Time Fees	Rs. 10,00,000/-	Rs. 0/-	Completely Discounted on the occasion of 15th Anniversary
	b. Processing Fees	Rs. 5000/-	Rs. 0/-	
	c. GST @ 18% on (a+b)	Rs. 1,80,900/-	Rs. 0/-	
	Total	Rs. 11,85,900/-	Rs. 0/-	
4	Annual Fees	Rs. 2,50,000/-	Rs. 2,50,000/-	Annual Fees of Rs. 2,95,000/- would be payable after 90 days of start of transaction and would be valid for one year from the date of payment
	GST @18%	Rs. 45,000/-	Rs. 45,000/-	
	Total	Rs. 2,95,000/-	Rs. 2,95,000/-	
5	Security Deposit	Rs. 25,00,000/-	Rs. 6,25,000/-	Only the component related to SGF i.e 25% of the IFSD- ammounting to Rs 6.25 Lakhs would need to be deposited. This amount can also be used for the purpose of placing margin at the exchange

- The special offer provides a direct commercial benefit of Rs 30.6 Lakh to NER utilities and allows access to PXIL's state of the art technology platform ' PRATYAY' at no initial payments, even the Annual fees would be payable only after 90 days of the start of transaction.
- In addition, an initial in depth training and familiarization program, continued training and upskilling sessions and PRATYAY dashboards for managing portfolio would help NER utilities to better manage their portfolio.



THANK YOU

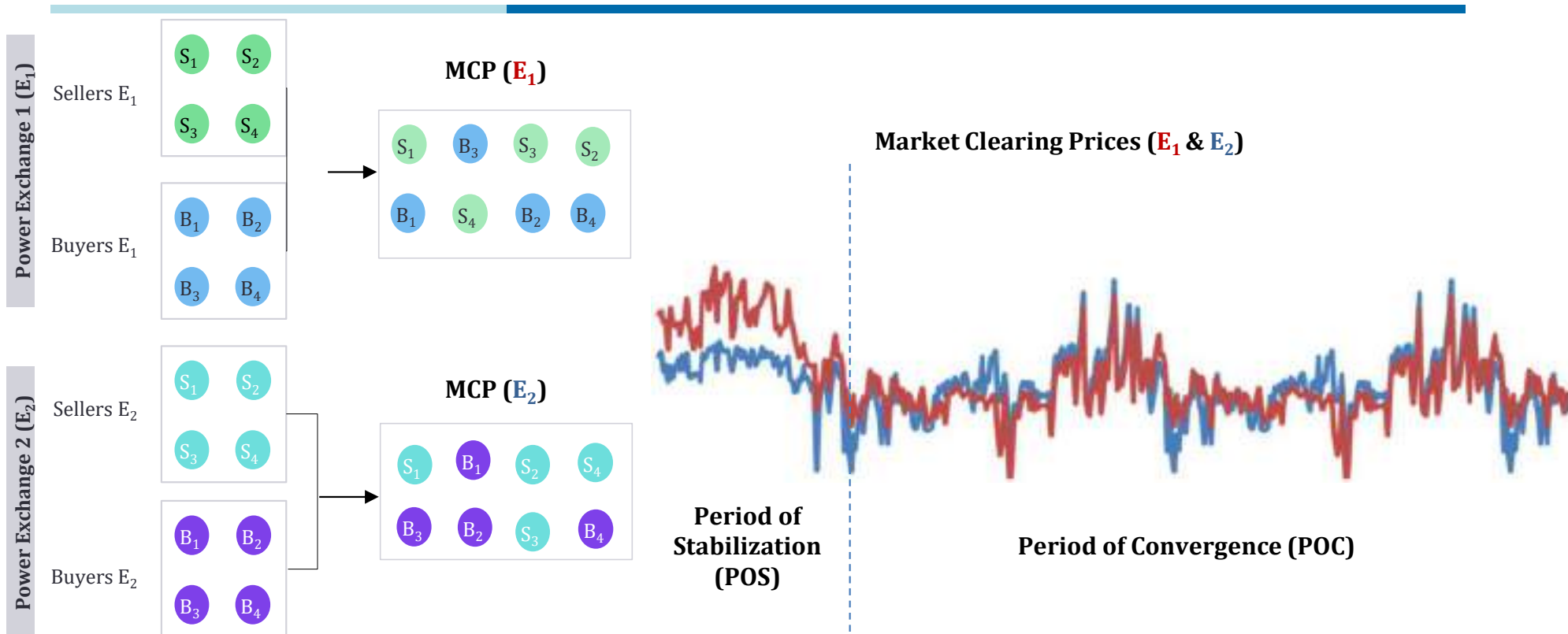
POWER EXCHANGE INDIA LIMITED

901, 9th Floor, Sumer Plaza, Marol Marishi Road, Marol
Andheri (East), Mumbai-400059, India

Website: www.powerexindia.com

CIN:- U74900MH2008PLC179152

Key requirements for efficient operation of both the Exchanges



- Patience during the Period of Stabilisation
- Higher consistency and sustained participation
- Vertically splitting the volumes bid on both the Exchanges

Sell Volume Transacted by NER Utilities in TAM Market in Past Year

Exchange	NER Utilities	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Total Sell (Mus)	% Share
HPX	Manipur Utility	0	0	0	0	0	0.17	0	0.84	0	0.63	0	3.22	4.86	8%
	Manipur Power Department	0	0	0	0	0	0	0	0	0	0.2	0	0	0.2	
	ONGC Tripura Power Company Limited	0	0	0	0	0	0	0	0	0.1	43.68	0	0	43.78	
	Sell Volume on HPX													48.84	
IEX	Arunachal Pradesh Utility	0	0.58	0.69	2.89	4.44	5.15	2.23	2.06	0	2.03	10.94	29.95	60.96	71%
	Manipur Utility	0	0	0	0	0	0	0	0	0	0	0	0.22	0.22	
	Meghalay Utility	0	0.26	0	2.68	0	0.13	0	0	0	0	0	0	3.07	
	Nagaland utility	0	1.95	2.02	0	0	0	0	0	0	0	0	0.44	4.41	
	ONGC Tripura Power Company Limited	0	0	6.72	13.96	0.48	57.95	0	0.72	40.96	115.55	52.08	71.84	360.26	
	Sell Volume on IEX													428.92	
PXIL	Arunachal Pradesh Utility	0.73	22.99	22.77	10.03	0.88	3.03	2.47	4.21	0.07	3.47	1.7	1.72	74.07	21%
	Manipur Utility	0	0	0	0	0	0	0	0	0	0	0	0.04	0.04	
	Meghalay Utility	0	0	0	5.44	0.02	5.68	0	0	0	0	0	0	11.14	
	Nagaland Utility	0.16	3.32	0	0	0	0	0	0	0	0	0	0.07	3.55	
	North Eastern Electric Power Corporation Limited	0	0	0	0	0	0	0	34.19	1.7	0	0	0	35.89	
	Sell Volume on PXIL													124.69	
Grand Total														602.45	100%

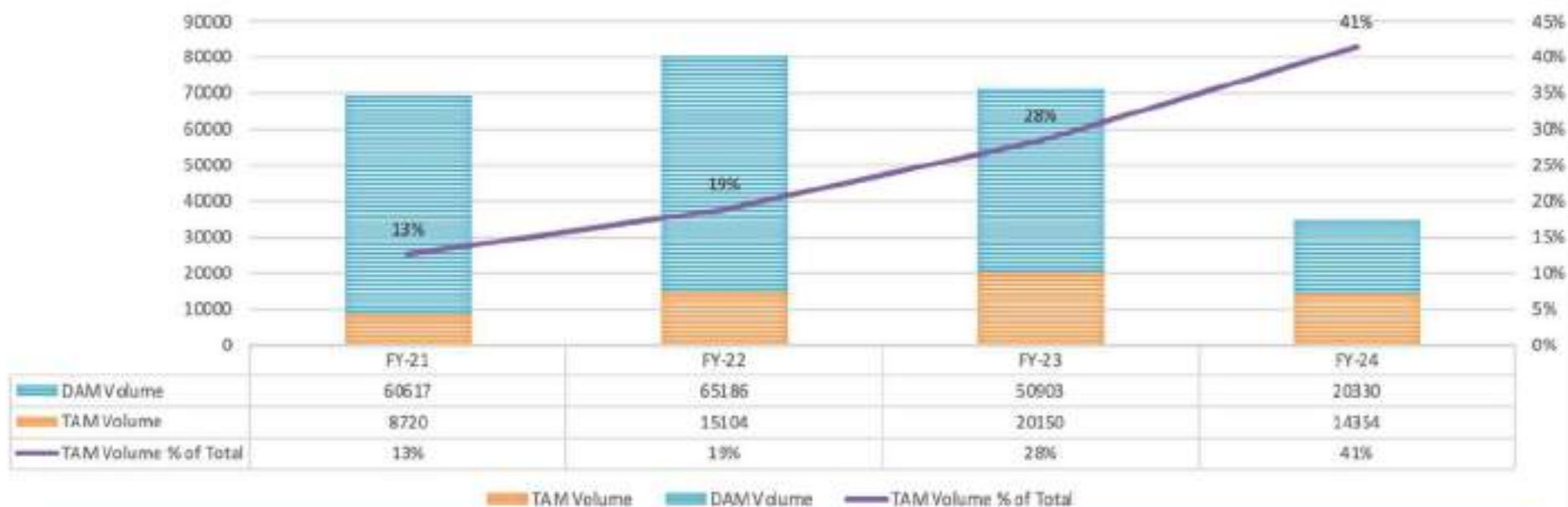
Changing Market Composition

With the introduction of multiple duration contract under TAM market segment its been observed that participants/utilities have shifted their volume from DAM to TAM and it can be visible from the below chart.

The possible reasons for the shift are :

1. Long Term Price visibility
2. Tailor made contract as per requirement.
3. Mostly TAM contract are Bilateral in nature.

VOLUME SHIFT CHART



What to Choose DAM vs TAM (PXIL)

Case1 (Buyer Case) -We have considered purchased volume of 3 NER Utilities for August'23 where they have. purchased from Competitor exchange in Day Ahead Market and replaced it with PXIL TAM purchase, considering the same hour purchase and volume.

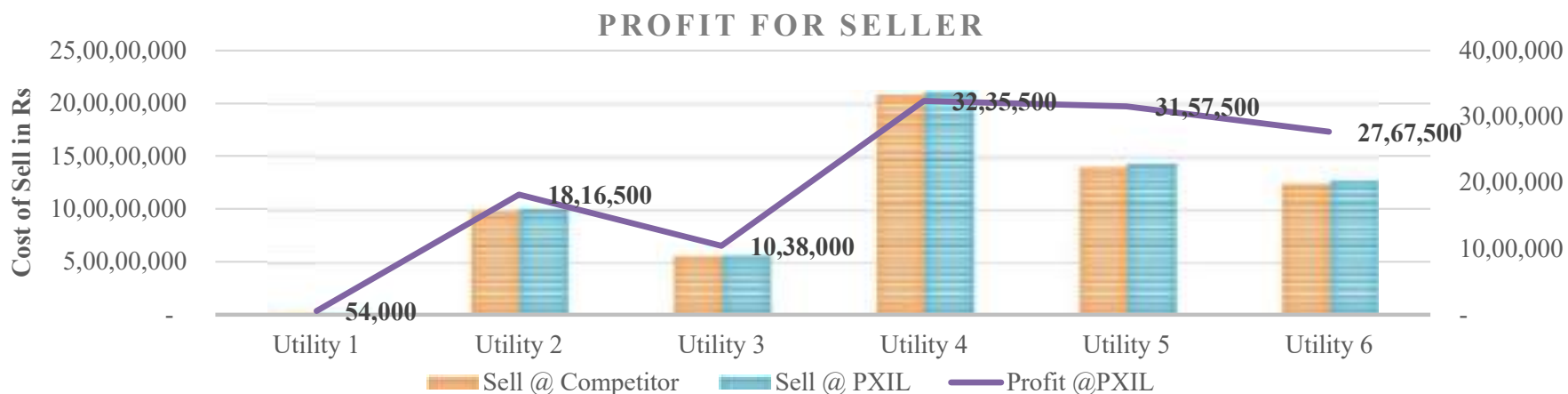
Utility	Volume Transacted In MUs	Competitor DAM Price Rs/Unit	Cost Incurred @ Competitor Exchange	PXIL TAM Price Rs/Unit	Cost Incurred @ PXIL	Saving if purchased @PXIL
Utility 1	0.92	5.08	46,73,600	4.96	45,63,200	1,10,400
Utility 2	13.95	3.91	5,45,44,500	3.79	5,28,70,500	16,74,000
Utility 3	53.41	5.81	31,03,12,100	5.69	30,39,02,900	64,09,200



What to Choose DAM vs TAM (PXIL)

Case2 (Seller Case) -We have considered sell volume of 6 NER Utilities for August'23 where they have sold power at competitor exchange in Day Ahead Market and replaced it with PXIL TAM sell, considering the same hour sell and volume.

Utility	Volume Transacted In MUs	Competitor DAM Price Rs/Unit	Cost of sell @ Competitor	PXIL TAM Price Rs/Unit	Cost of sell @ PXIL	Profit @PXIL
Utility 1	0.36	5.01	18,03,600	5.16	18,57,600	54,000
Utility 2	12.11	8.15	9,86,96,500	8.3	10,05,13,000	18,16,500
Utility 3	6.92	8.17	5,65,36,400	8.32	5,75,74,400	10,38,000
Utility 4	21.57	9.65	20,81,50,500	9.8	21,13,86,000	32,35,500
Utility 5	21.05	6.67	14,04,03,500	6.82	14,35,61,000	31,57,500
Utility 6	18.45	6.74	12,43,53,000	6.89	12,71,20,500	27,67,500



Buy Volume Transacted by NER Utilities in TAM Market in Past Year

Exch.	NER Utilities	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Total Sell (Mus)	% Share
HPX	Arunachal PD	0	0	0	0	0	0	0.72	3.51	0	0	0	0	4.23	4%
	Manipur Power Department	0	0	0	0	0.51	2.97	2.34	1.38	0	0	0	0	7.2	
	MPLMe	0	0	0	0	0	0	0	0.08	0	0	0	0	0.08	
	MSPDCL	0	0	0	0	0.09	0	0	0	0	0	0	0	0.09	
	Nagaland PD	0	0	0	0	0	0	3.8	0	0	0.75	0	0	4.55	
	SCF MeSEB	0	0	0	0	0	0	0	0.28	0.28	0	0	0	0.56	
	Buy Volume on HPX														
IEX	APDCL	53.22	22.42	1.75	0	0.2	0	0	0	0	45.99	174.14	84.57	382.29	95%
	Arunachal PD	0	0	0	2.02	0	0	0	2.68	0	0	0	0	4.7	
	GVIPL	0	0	0	0	0	0	0	0	0	0	0	1.22	1.22	
	Manipur Power Department	0	0	0	3.36	2.07	0.16	0	0	0	0	0	0	5.59	
	MPLMe	0	0	0	0	0	0	0	0	0	0	0	1.06	1.06	
	Nagaland PD	0	0	0	1.44	0	0	0	0	0	0	0	0	1.44	
	SCF MeSEB	0	0	0	0	0	0	0	0.96	0.14	0	0	0	1.1	
Buy Volume on IEX														397.4	
PXIL	Manipur Power Department	0	0	0	0	1.91	1.69	1.13	0	0	0	0	0	4.73	1%
	MePDCL	0	0	0	0	0	0	0	0	0	0.8	0	0	0.8	
	SAPL1000	0	0	0	0.11	0	0.33	0	0	0	0	0.09	0	0.53	
	Buy Volume on PXIL														
Grand Total														420.17	100%

Volume Transacted by NER Utilities in DAM Market

BUYER

Utility	April'23		May'23		June'23		July'23		August'23	
	Buy Volume	Price	Buy Volume	Price	Buy Volume	Price	Buy Volume	Price	Buy Volume	Price
Tripura Utility	0.84	7.39	7.55	6.11	7.93	6.07	1.46	6.49	0.92	5.08
Manipur Utility	0.21	9.43	0	0	0	0	0	0	0	0
Meghalaya Utility	4.82	3.87	25.42	3.78	31.17	4.34	13.27	3.78	13.95	3.91
Assam Utility	65.03	6.27	93.28	5.93	159.62	5.74	36.96	4.59	53.41	5.81
Arunachal Utility	2.35	4.28	1.52	3.19	1.36	4.13	0	0	0	0
Nagaland Utility	0	0	0	0	0.85	5.26	0	0	0	0

SELLER

Utility	April'23		May'23		June'23		July'23		August'23	
	Sell Volume	Price	Sell Volume	Price	Sell Volume	Price	Sell Volume	Price	Sell Volume	Price
Mizoram Utility	7.85	6.93	7.69	7.04	6.37	7.76	4.24	7.15	12.11	8.15
Nagaland Utility	1.25	5.64	0.48	7.7	2.92	7.62	4.24	6.08	6.92	8.17
Tripura Utility	3.89	4.24	0	0	0	0	0	0	0	0
Meghalaya Utility	0.18	5.66	0.29	9.99	9.63	8.25	6.35	9.53	21.57	9.65
Assam Utility	48.57	5.09	26.87	3.86	60.62	4.59	10.02	3.15	21.05	6.67
Arunachal Utility	8.67	5.62	5.95	5.88	12.05	6.44	22.66	5.03	18.45	6.74
Manipur Utility	0	0	0	0	1.55	5.31	1.59	4.17	1.14	5.68

Annex.-III

NEW AGE MARKETS IN ELECTRICITY (NAME)

India's 1st OTC Platform

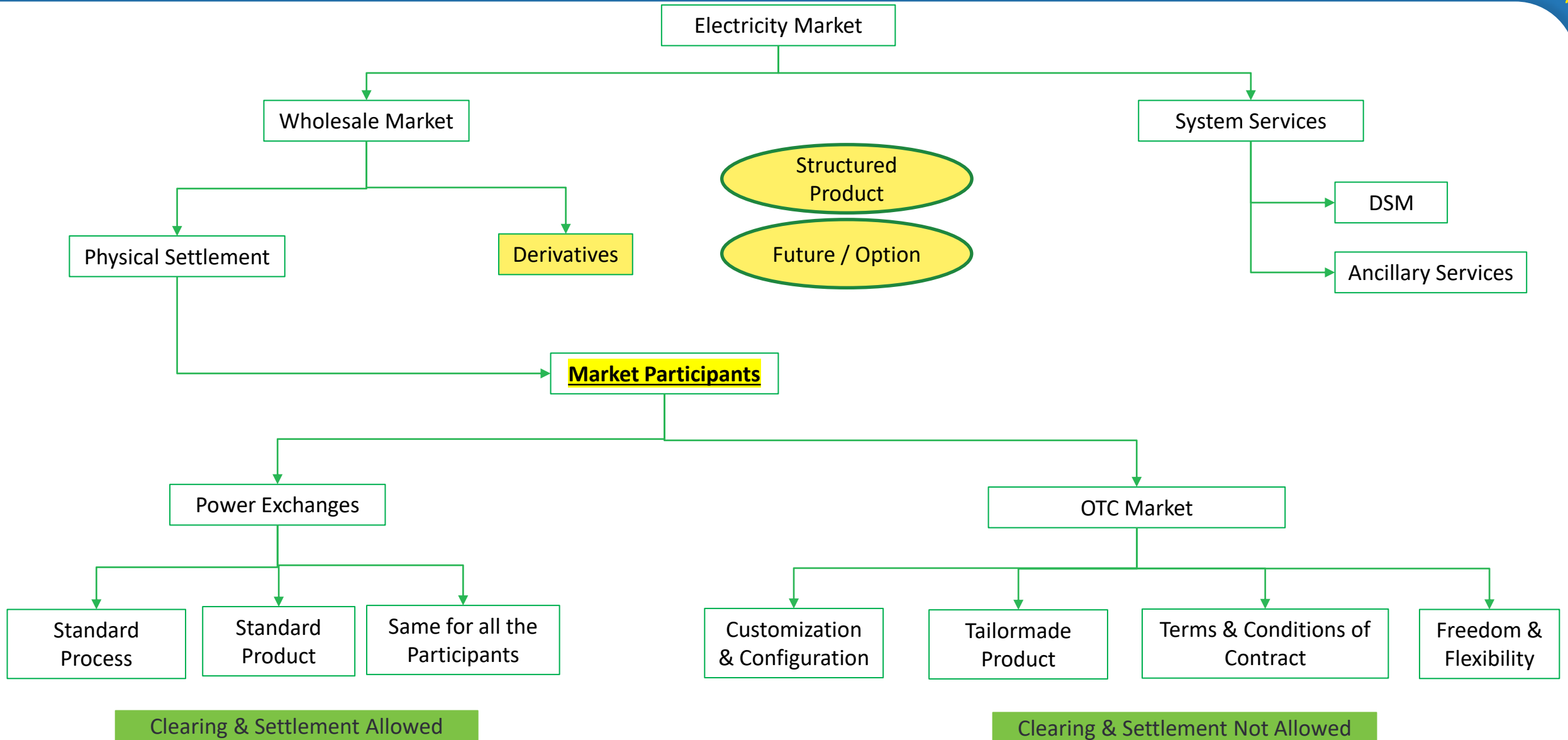
A CERC Regulated Entity

**Presentation to
Distinguished Members, 49th Commercial Co-ordination Committee,
North Eastern Power Committee (NERPC),
Udaipur, Rajasthan,
21st Sep, 2023 (Thursday)**

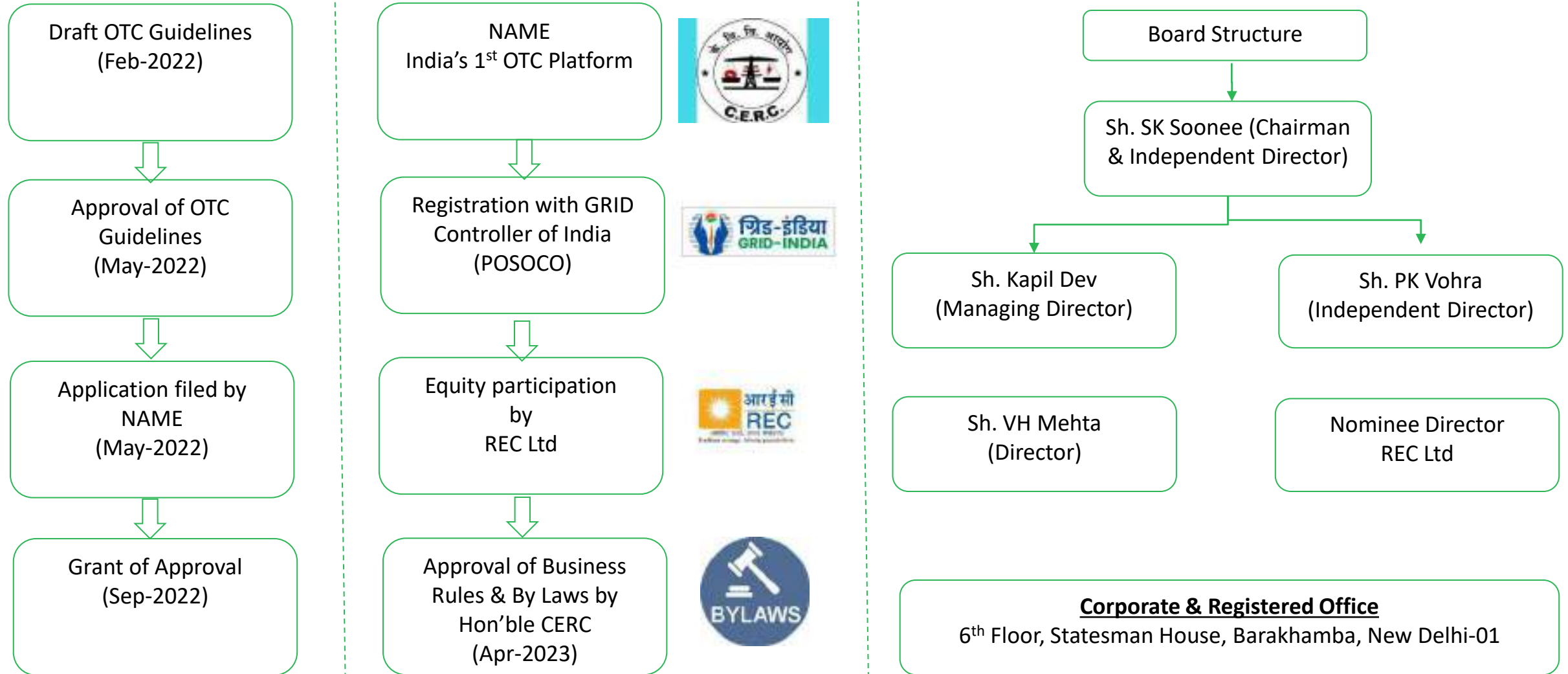


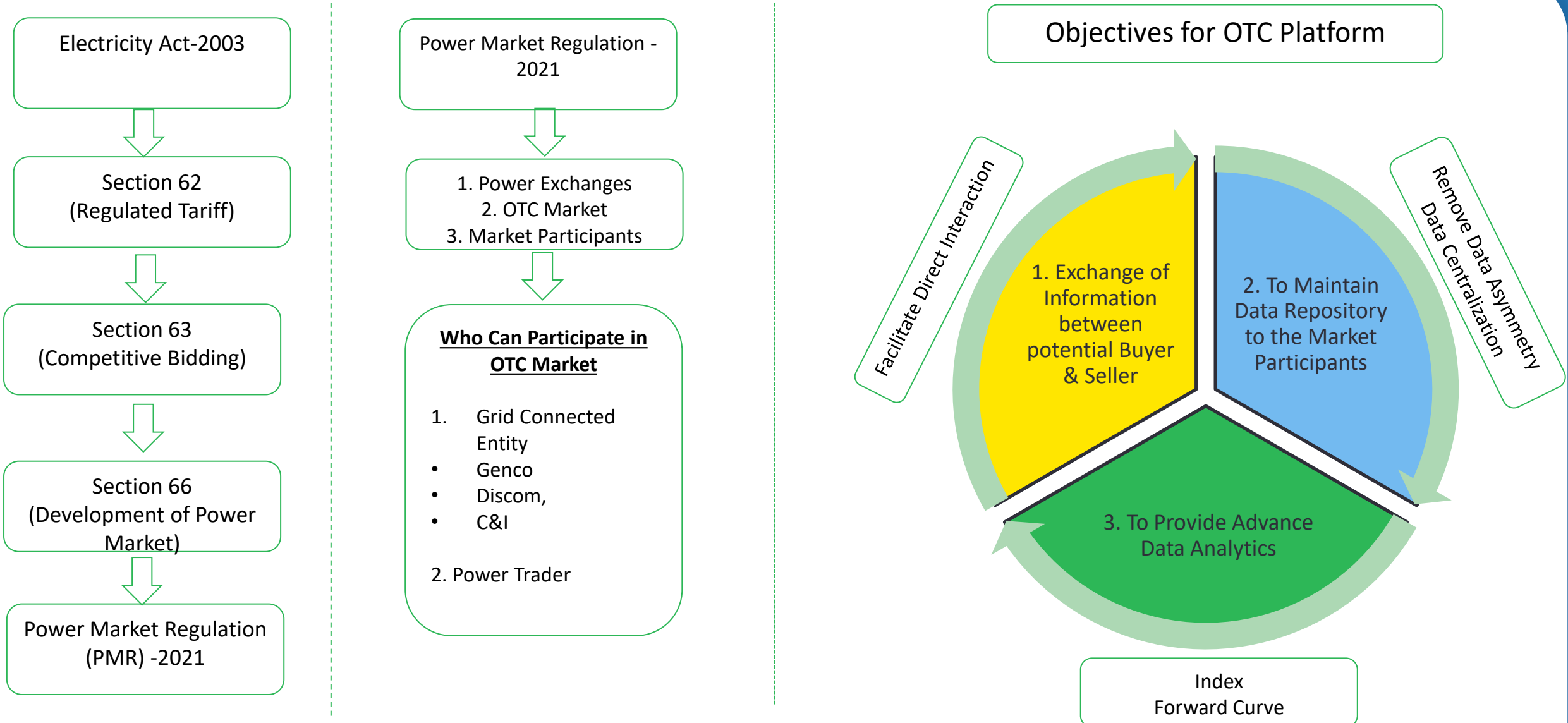
- 1) Introduction of New Age Markets in Electricity (NAME)
- 2) Regulatory Provisions Enabling OTC Platform & Market
- 3) Objectives of OTC Platform
- 4) Structure of OTC Market
- 5) Working of OTC Market
- 6) Complete Cycle of OTC Contract in Market (Listing to Financial Settlement)
- 7) Areas of Application for Discoms

Why OTC Platform is Required???

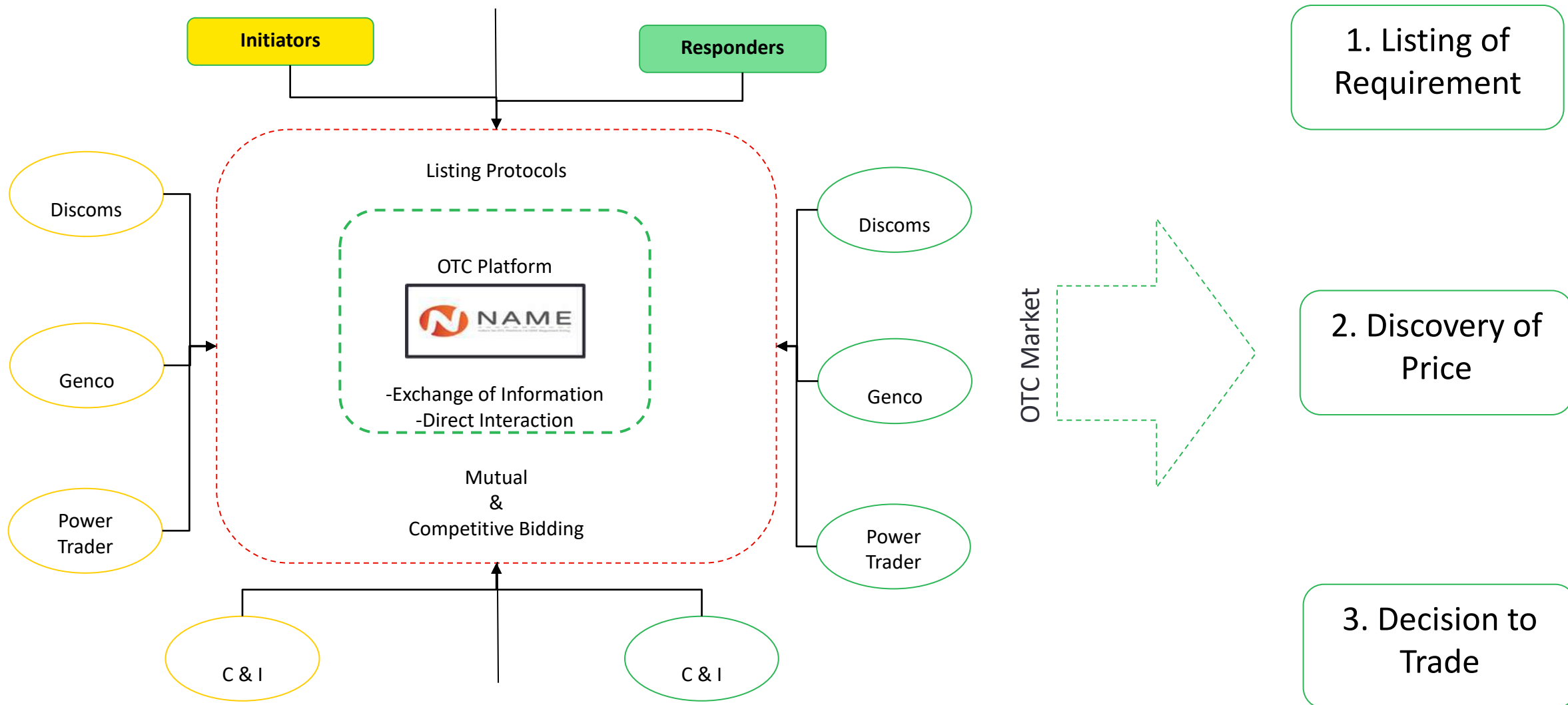


Introduction of New Age Markets in Electricity (NAME)

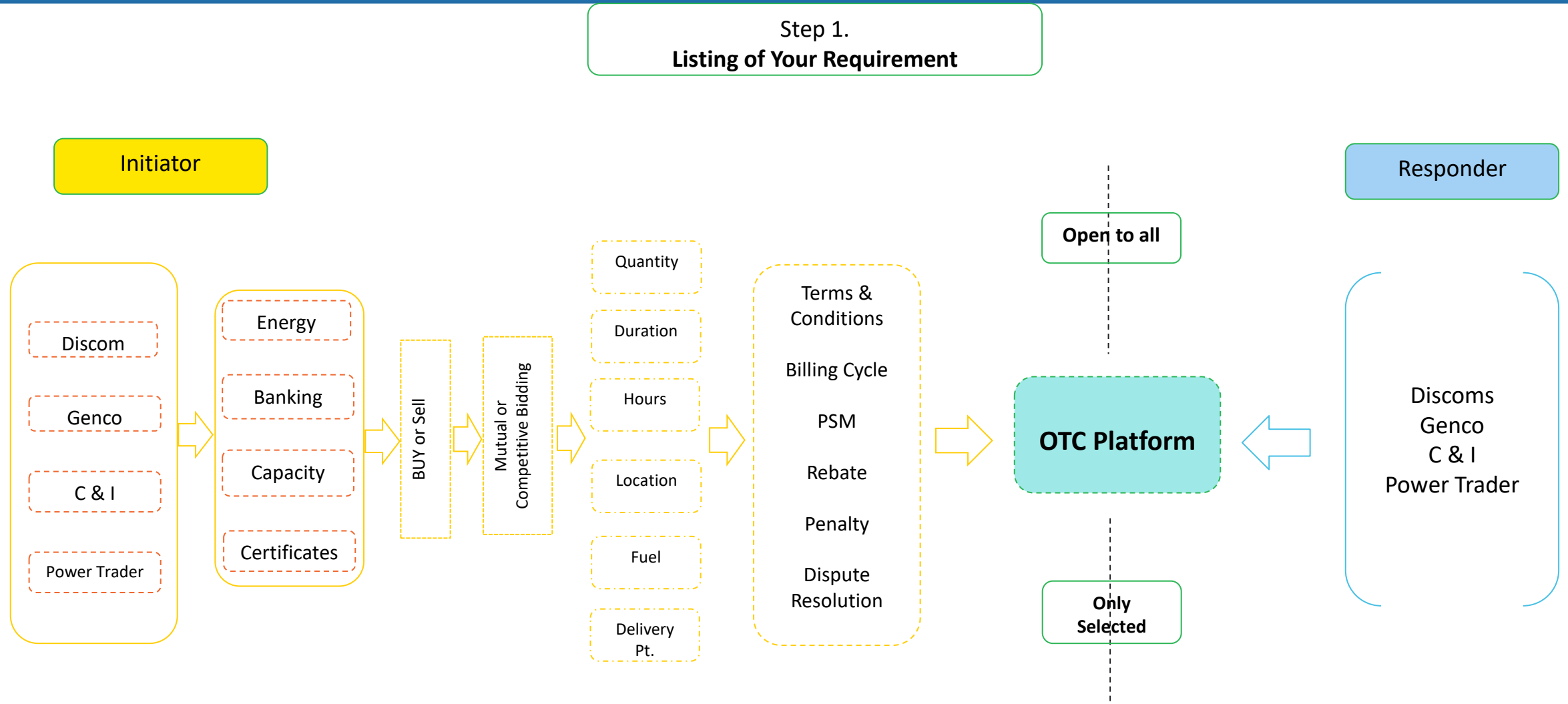




Structure of OTC Market & Role of OTC Platform

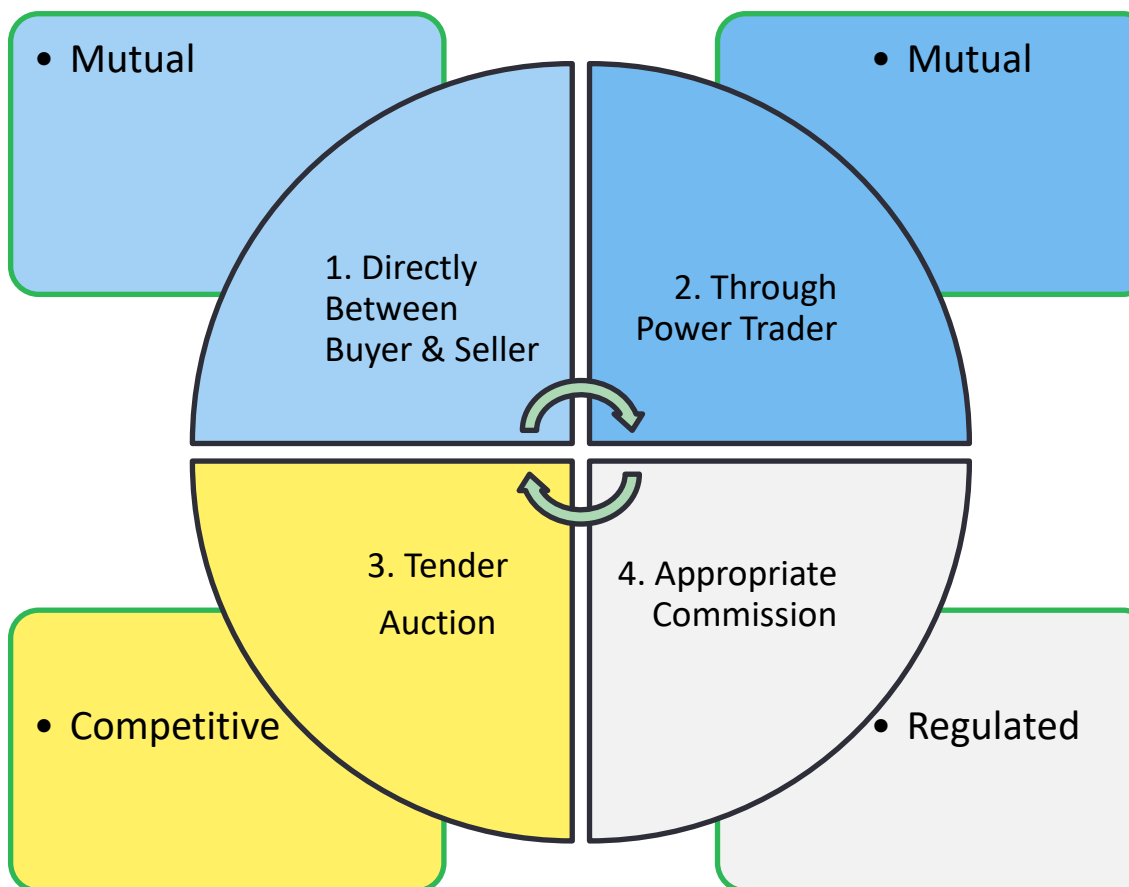


Exchange of Information on OTC Platform



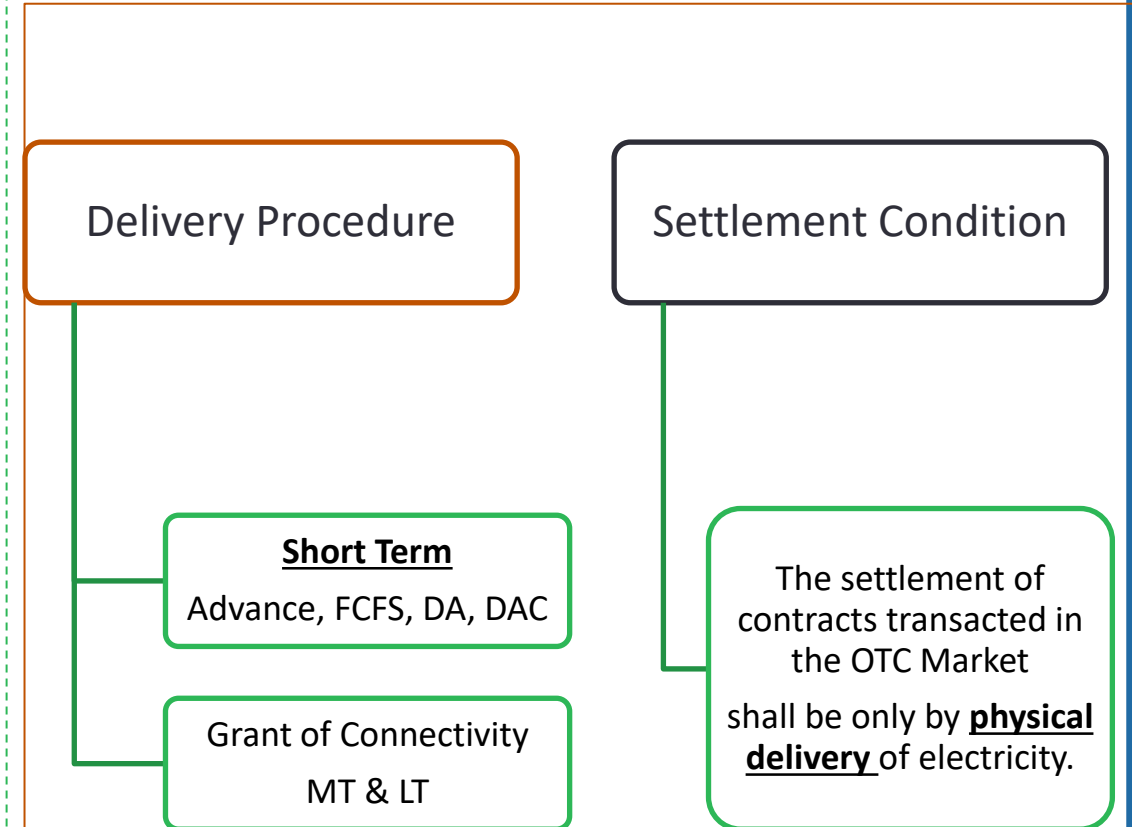
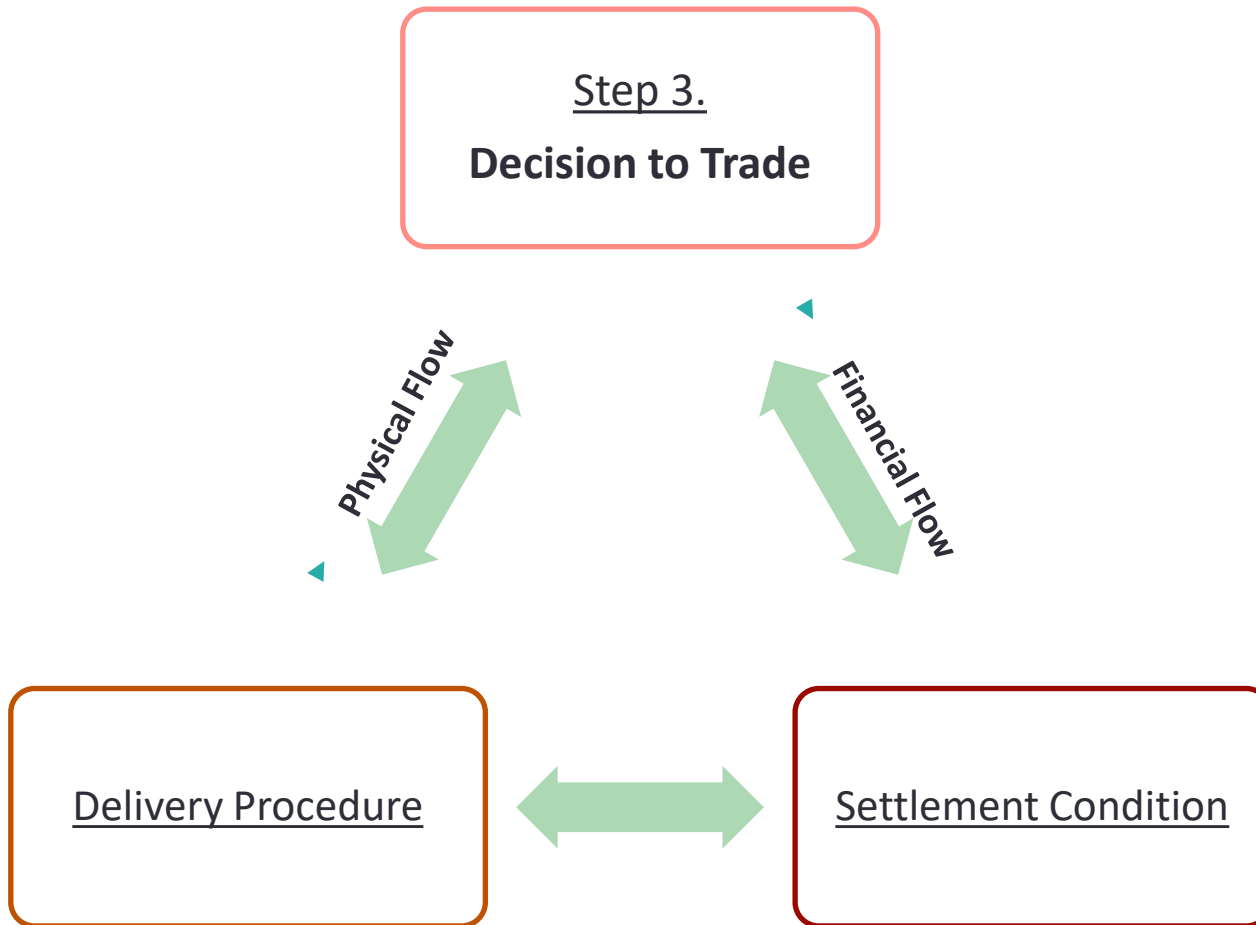
Methodology of Discovery of Price in OTC Market

Step 2. Methodology of Discovery of Price

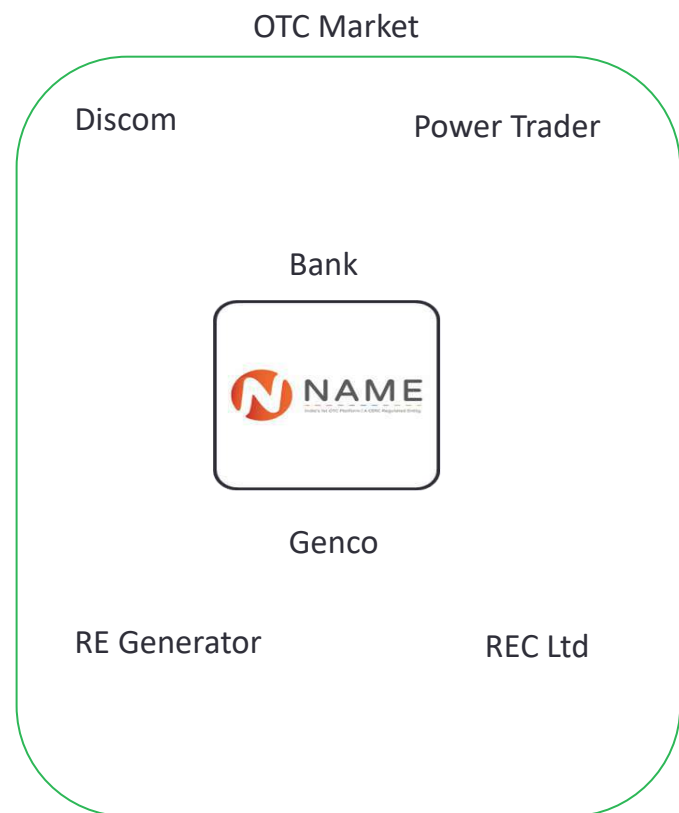


Decision to Trade

- a. Delivery Procedure
- b. Settlement Condition



Features of OTC Platform

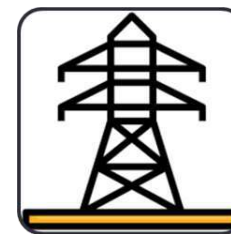
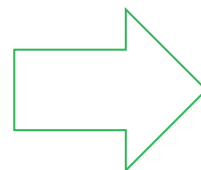


DIRECT INTERACTION

EXCHANGE OF INFORMATION

- Flexibility
- Freedom
- Configuration
- Customization

- Price Discovery
- Competitive Bidding
 - Mutual Agreement



Physical Flow

1. Self
2. Through Trader
3. Nodal Service Provider



Financial Flow

1. Self
2. Through Trader
3. REC Ltd

Unique Features about OTC Market

S.No.	Particular	“Other Terms of Contract”				Trading Protocol	Price
		Tenure	Delivery Point	Settlement Cycle	Allocation		
01	Energy	ST, MT & LT	-Buyer Periphery -Genco Ex-Bus -State Periphery -Regional Periphery	-Daily -Weekly -Monthly -Any Other	-Within State -Within Region -Open for All	-Competitive Bid -RfQ	-Single Part -Two Part -Variable -Indexed /Benchmarked -Discounted
02	Capacity	ST, MT & LT					
03	Banking	-Seasonal - Intraday -Day Ahead					
04	Certificates (REC & Ecerts)	-Any Time -Monthly -Yearly					

Diversity in Demand Pattern across various states in India

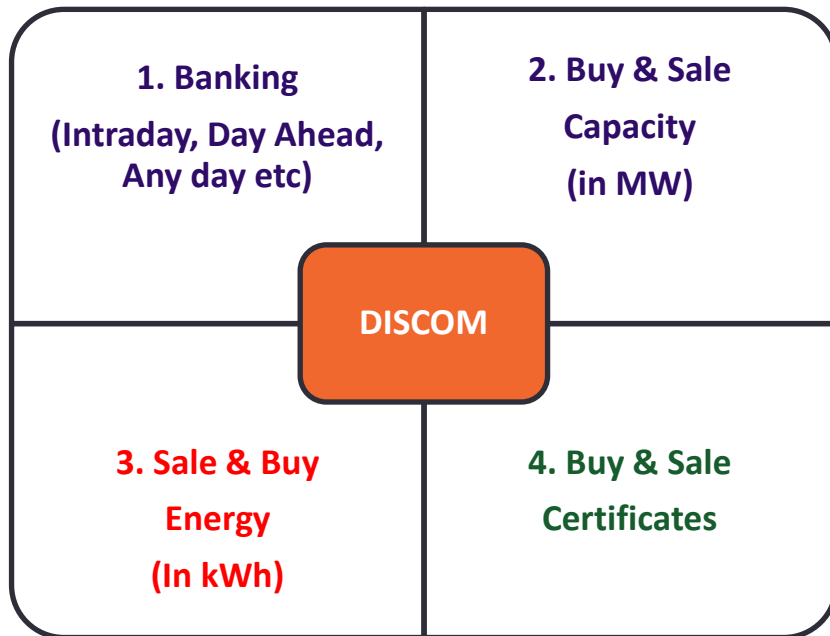
Figure 2: Diversity in demand patterns across various states in India over the year.

State	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
UP												
Rajasthan												
MP												
Maharashtra												
Gujarat												
Tamil Nadu												
Karnataka												
West Bengal												
Bihar												
Assam												
Meghalaya												

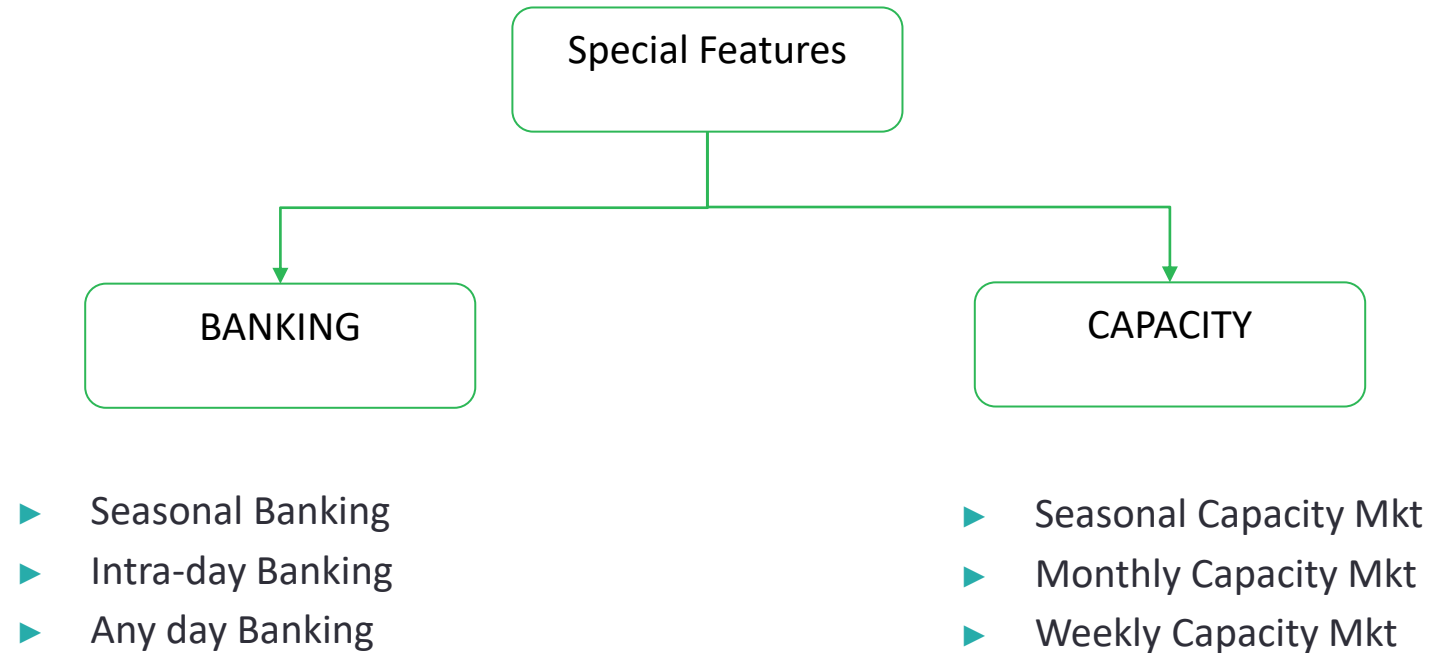
	High Demand / Scope for Buy
	Low Demand / Scope for Sell

Source: Grid Controller of
India Ltd's Analysis

Services Available



Special Features



Facilitating direct interaction between **buyers** and **sellers** of electricity in the OTC Market.

PMR-26.4

Attributes of Electricity as a commodity:

- Time of Delivery (Weather & Climate) ToD, Peak, RTC etc.
- Place of Delivery: Geography & Nodes in power system
- Lead time before delivery: Third dimension and depth of markets

To reduce the existing level of information asymmetry in the OTC Market.

PMR -26.4

Settlement Conditions: The settlement of contracts transacted in the OTC Market shall be only by physical delivery of electricity without netting.

5.1 (3)

Price discovery: The price and other terms of contract in the OTC Market shall be determined either through mutual agreement between the buyer and the seller or through a trading licensee or through competitive bidding process.

5.1 (1)

Advantage of Good
Credit Rating

Power Exchange & OTC

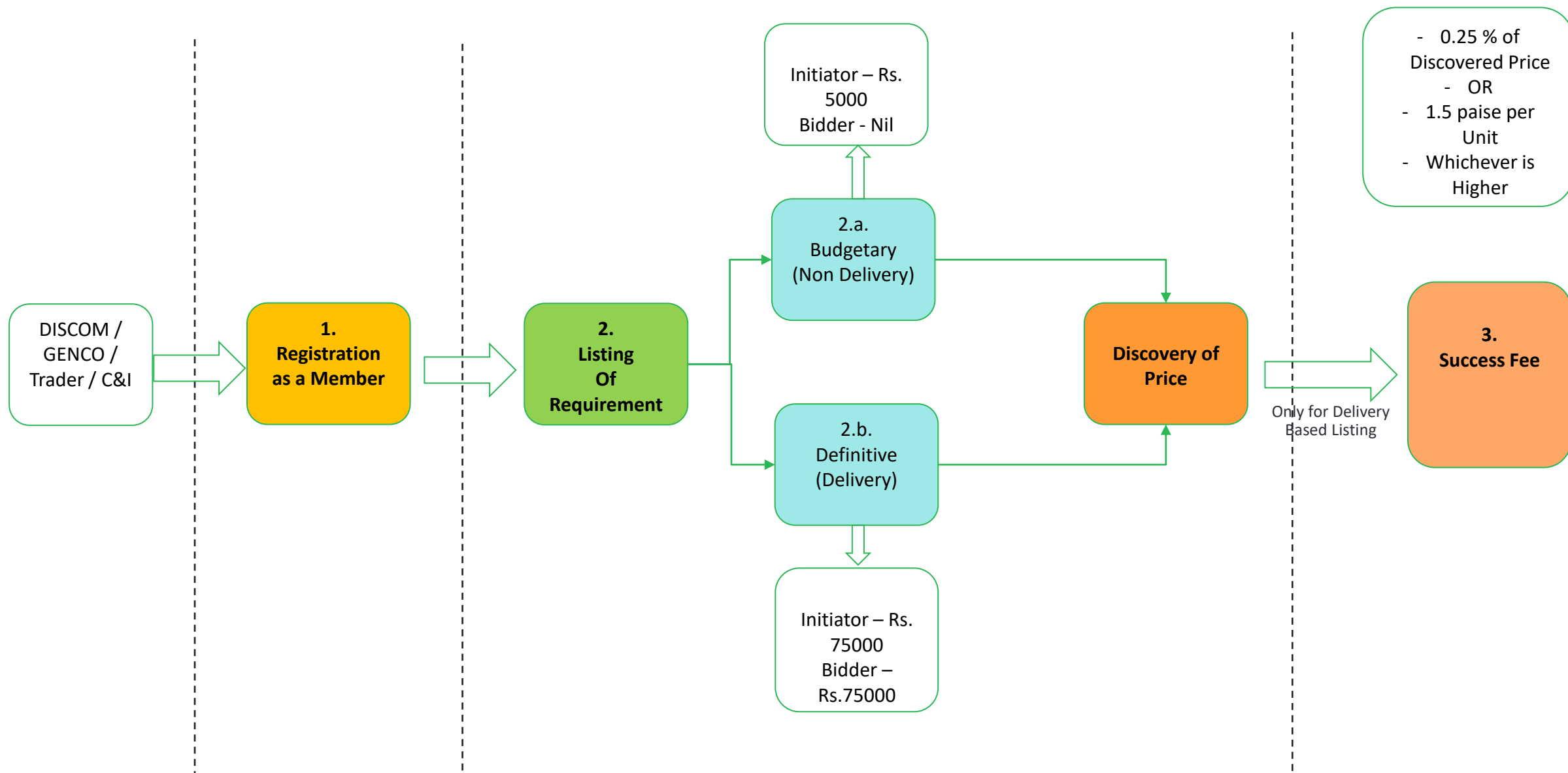
In Exchanges PRICE is an **after effect** of transaction

In OTC Markets **PRICE** is the **decision** to transaction



Going LIVE !!!
23rd October, 2023
Join Us on Mahurat Listing

Process Flow at OTC Platform



Commercial Implications as per CERC IEGC, 2023

Gaurav Bhattacharjee
Assistant Manager
NERLDC, GRID-INDIA



Reg. 39(11) & Annx. 4: Reactive Power Compensation

For all Regional entities	When voltage is below 97%	When voltage is above 103%
Pays to Reactive Pool	VAr drawal	VAr return/injection
Receives from Reactive Pool	VAr return/injection	VAr drawal

Where all voltage measurements are at the interface point with ISTS

The active power consumed by Inverter Based Resources (IBRs) covering wind, solar and energy storage for purpose of providing reactive power support, when operating under synchronous condenser/night-mode, shall not be charged under deviations and shall be treated as transmission losses in the ISTS

Reg. 39(11) & Annx. 4: Reactive Power Compensation

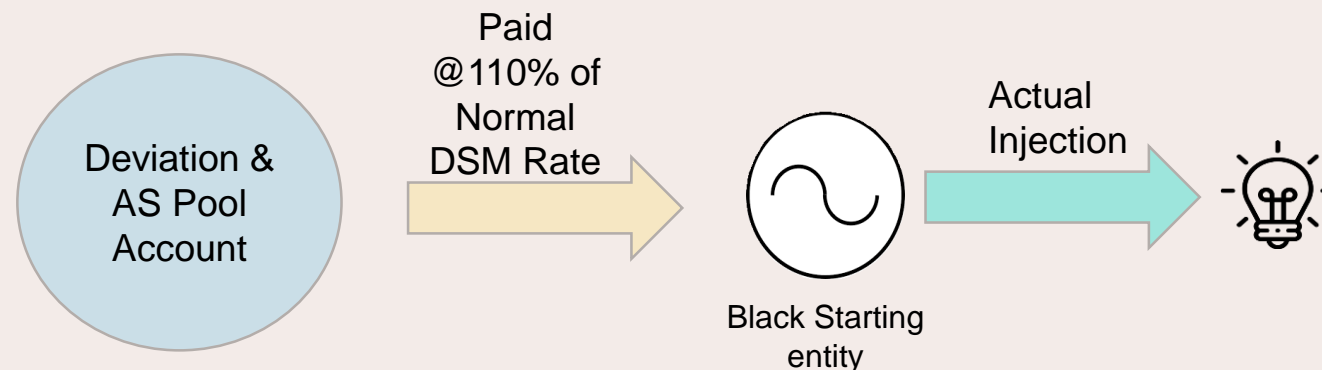
- RPC Secretariat shall issue the weekly statement for **VAR charges, to all regional entities**
- Charge for VArh shall be **@ 5 paise/kVArh** w.e.f. 01.10.2023
- This rate shall be escalated at 0.5 paise/kVArh per year thereafter
- Payment into regional Pool Account → within 10 days of issue of statement by RPC
- Disbursement → within 2 working days from receipt of payment into Pool Account
- Surcharge → @ 0.04% Simple Interest for each day of delay beyond 12 days
- Receivable entity shall also receive collected interest due to delay in payment by payable entities

Reg. 39(11) & Annx. 4: Reactive Power Compensation

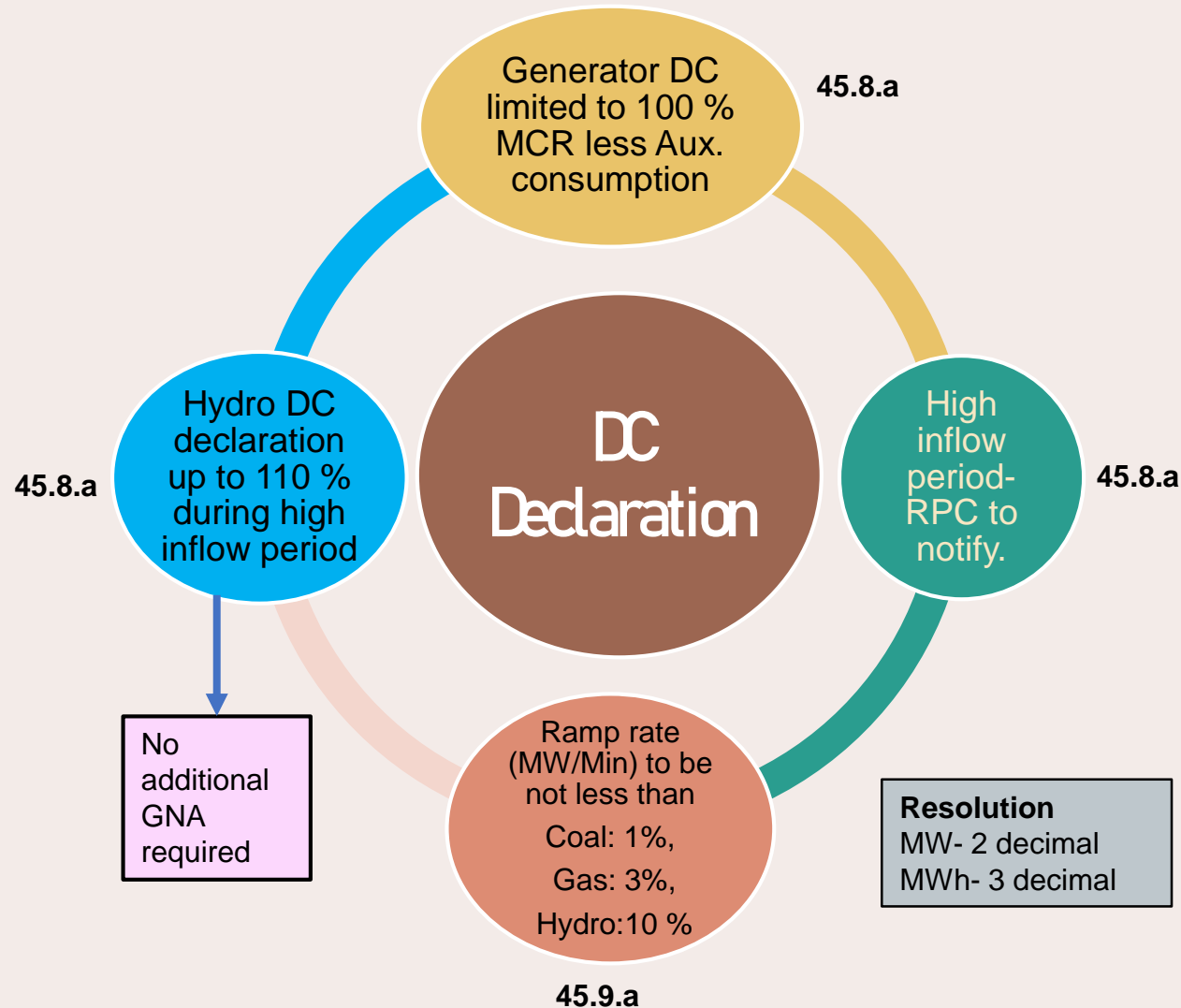
	As per IEGC-2010	As per IEGC-2023
1. Applicability	Regional Entity except Generating stations	All Regional Entity
2. VAR Charges	16.5 paise/KVArh (for FY 23-24) with 0.5 paise escalations every year	5 paise/KVArh w.e.f 01.10.2023; 0.5 paise/KVArh escalations every year
3. Interconnecting line between two Regional Entity state	They can adopt the mechanism laydown in the regulation	For any interconnecting line between two states, owned by the States, the interface points shall be treated in terms of this Regulation for the purpose of reactive power charges

Reg. 34(9): Black Start Support

- Any entity extending black start support, as identified by NLDC, RLDC and SLDC, by way of injection of power shall be paid for **actual injection @ 110% of the normal rate of charges for deviation** in accordance with DSM Regulations for the **last block in which the grid was available**
- The procedure in this regard shall be prepared by NLDC in consultation with stakeholders and approved by the Commission.



Reg. 45(8): DC Declaration by Regional Entity Generating Stations



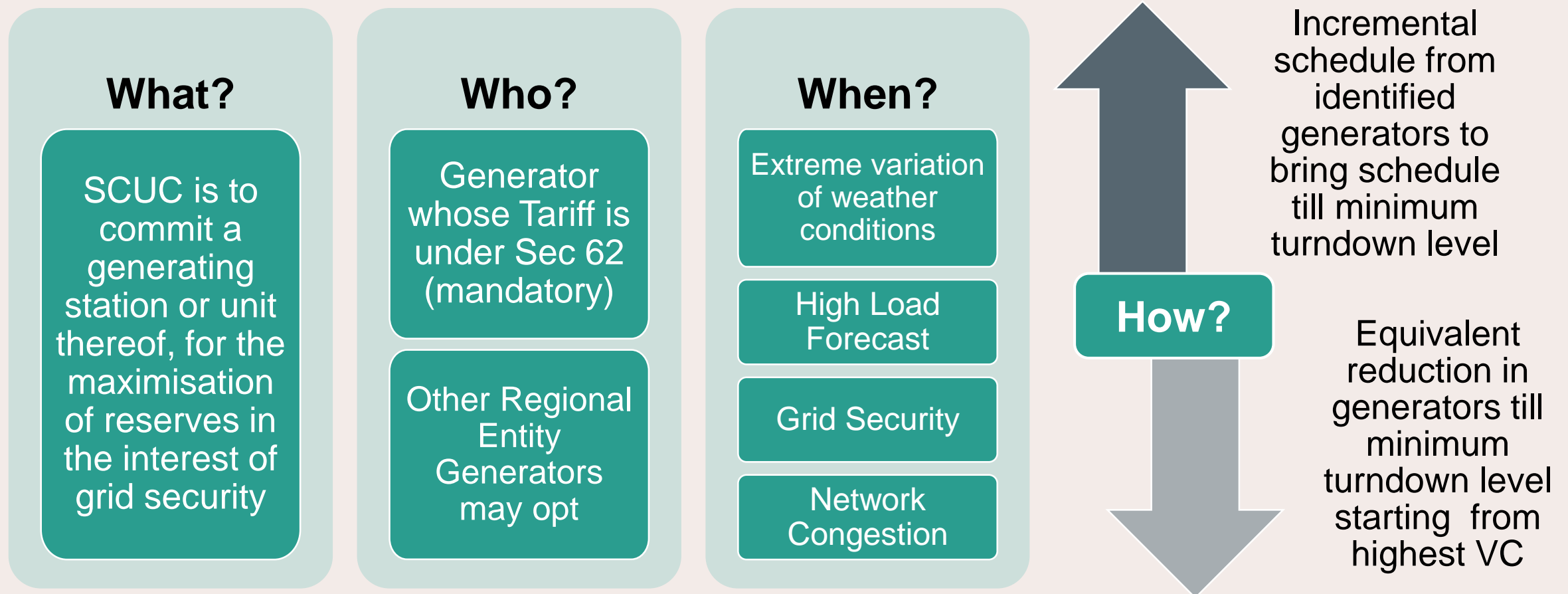
Reg. 45(8): DC Declaration by Regional Entity Generating Stations

- The regional entity generating stations other than WS sellers may be required to demonstrate their declared capacity as and when directed by the concerned RLDC
- In case of failure, it shall be treated as a mis-declaration for which charges shall be levied on the generating station by RPC
- Charges for first mis-declaration **for a block or multiple blocks** in a day shall be the charges corresponding to **two days' fixed charges at normative availability**
- For subsequent mis-declarations, the charges shall **increase in a geometric progression** over a period of a month

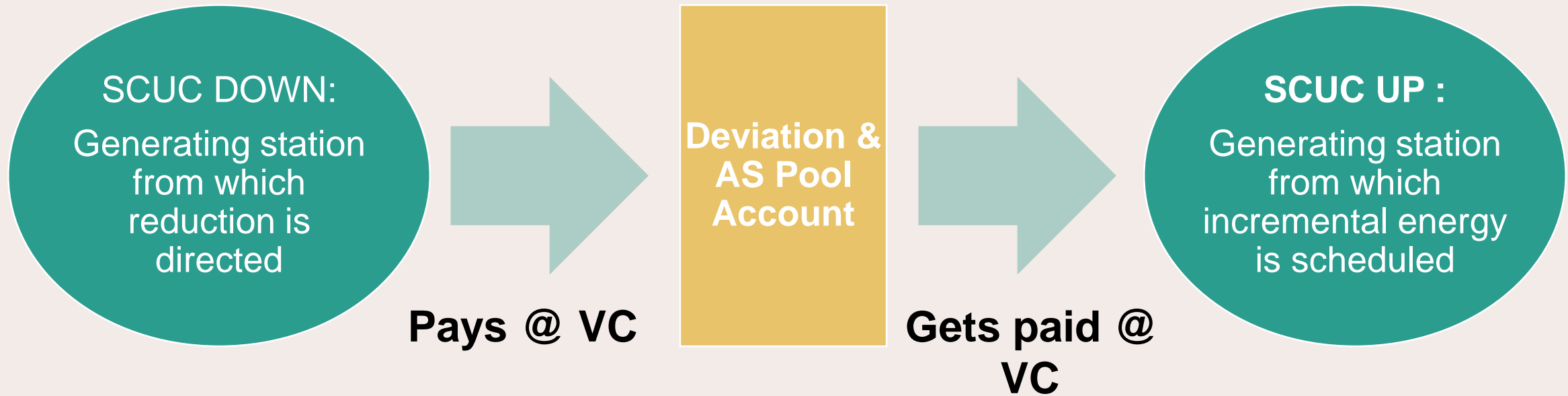
Reg. 45(12): Part Load Compensation

- Regional entity thermal generating stations whose tariffs are determined under **Section 62 or Section 63 of the Act**, shall be compensated for part load operation, that is, for generation below the normative level of operation
- Mechanism of part load compensation shall be as per existing provisions in IEGC, 2010 until revision in the procedure by CERC

Reg. 46: Security Constrained Unit Commitment (SCUC)



Payments related to SCUC



Generating station or unit thereof brought on bar under SCUC shall be paid Part Load Compensation from the Deviation and Ancillary Services Pool Account

Reg. 47: Unit Shut Down (USD)

- The identified generating stations or units thereof, not brought on bar under SCUC shall have the option to go under Unit Shut Down (USD) under specified conditions
- The generating company shall fulfill its obligation to supply electricity to its beneficiaries before going to USD
- Under emergency conditions, if such generating stations is brought on bar, as directed by NLDC , it shall be treated as a unit under SCUC and scheduled and compensated likewise

Reg. 49(2): Security Constrained Economic Despatch (SCED)

What?

SCED is to optimize generation despatch after gate closure and finalization of RTM schedules

Who?

All ISTS connected willing generators

Generator whose Tariff is under Sec 62 by declaring Energy charge

Other Regional Entity Generators by declaring SCED Compensation Charge

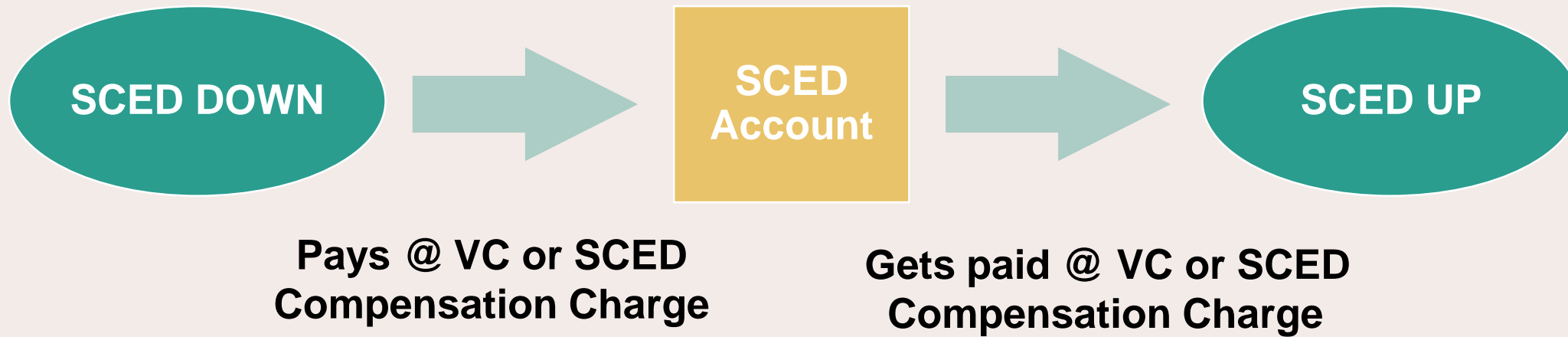
How?

SCED Up despatched from merit order stack (lowest to highest VC)

Corresponding SCED Down despatched generators in order of highest to lowest VC

For generating station going under USD: NLDC to consider SCED support only if $VC > \text{marginal price}$ & entire drawal schedule can be accommodated under SCED

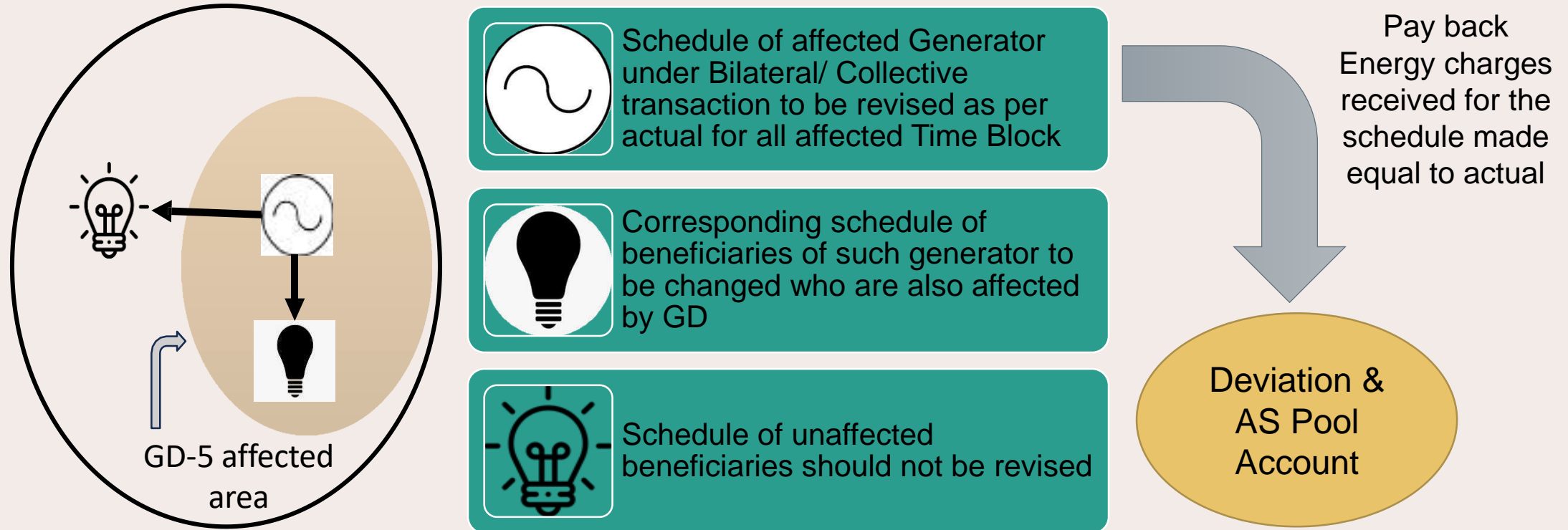
Payments related to SCED



- Net savings shall be shared between beneficiaries / buyers and the generating stations
- Generating station from which SCED down has been directed due to SCUC shall pay back to the Deviation & AS Pool Account @ energy charge or SCED Compensation Charge, equivalent to the decremented energy due to SCUC
- Part load compensation for reduction under SCED to be paid only to Generators whose tariff determined under Sec 62 from the savings in the SCED Account; others shall factor in while declaring the SCED Compensation Charge

Reg. 49(5): Schedule Revision due to GD-5

- When 40% of antecedent load/ generation is lost as per CEA grid standards
- RLDC to notify GD by posting in website including its duration



Thank you

Gaurav Bhattacharjee

bhattacharjee.gaurav@grid-india.in





ASSAM ELECTRICITY GRID CORPORATION LIMITED

OFFICE OF THE MANAGING DIRECTOR

Regd. Office: (FIRST FLOOR), BIJULEE BHAWAN, PALTANBAZAR, GUWAHATI - 781001

CIN: U40101AS2003SGC007238GSTIN: 18AAFCA4973J9Z3

PHONE: 0361-2739520 Web: www.aegcl.co.in

No. AEGCL/MD/Tech-888/NERPC/2020/Part-II/5

Dated: 12.09.2023

To,

The Member Secretary,
NERPC, Shillong,
Lawpalang, 793006

Sub: Agenda item from AEGCL for 49th Commercial Coordinate Meeting.

Dear Sir,

With reference to the subject cited above, please find enclosed herewith an agenda item from AEGCL for 49th Commercial Coordinate Meeting scheduled to be held on 21st September, 2023.

This is for your kind information and necessary action.

Thanking you,

Yours Faithfully,

Chief General Manager (PP&D),
AEGCL, Bijulee Bhawan

Memo No: AEGCL/MD/Tech-888/NERPC/2020/Part-II/5(a)

Date: 12.09.2023

Copy to:

1. P.S. to Managing Director, AEGCL, Bijulee Bhawan, Guwahati-01, for appraisal to MD.

Chief General Manager (PP&D),
AEGCL, Bijulee Bhawan



ASSAM ELECTRICITY GRID CORPORATION LIMITED

OFFICE OF THE MANAGING DIRECTOR

Regd. Office: (FIRST FLOOR), BIJULEE BHAWAN, PALTANBAZAR, GUWAHATI - 781001

CIN: U40101AS2003SGC007238GSTIN: 18AAFCA4973J9Z3

PHONE: 0361-2739520 Web: www.aegcl.co.in

Agenda

Discontinuation of the raising of monthly bilateral charge bills to APDCL on account of completion of the AEGCL's scope of work related to "LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL)".

This is regarding the asset "LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL)" which is being developed as per the Transmission Service Agreement (TSA) signed between NER II Transmission Ltd. and AEGCL.

As per the minutes of the meeting taken by Chief Engineer (PSPM), CEA on 10-08-2020 (Annexure-I), AEGCL was to construct 2 nos. of 132KV bays at Gohpur 132KV S/S so as to match with the LILO of one circuit of 132 KV Biswanath Chariali (PG) to Itanagar 132KV D/C(Zebra) line at Gohpur (AEGCL) of NER II Transmission Ltd. (NTL).

Due to delay in completion of the AEGCL's part of work as mentioned above, the entire cost was loaded and charged as bilateral bill to APDCL by CTU Ltd. which was subsequently being recovered from the wheeling charge of AEGCL. However, it is to inform you that AEGCL has already completed the above work on 25-08-2022 and test charged on 10-11-2022 and 11-11-2022 respectively. A copy of the letter has been attached herewith as 'Annexure-II' for your ready reference.

Now, the Forum may please discuss the above issue and take necessary steps to discontinue the raising of the bilateral bill to APDCL along with necessary adjustments of bills already raised till date after the completion of AEGCL's work, i.e., 11-11-2022.


R. Chelleng
CGM (PP & D)
O/o the MD, AEGCL



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली परियोजना प्रबोधन प्रभाग
Power System Project Monitoring Division

सेवा में/ To,

(संलग्न सूची के अनुसार)

विषय/Subject: Minutes of Meeting taken by Chief Engineer (PSPM), CEA on 10.08.2020 through video conferencing to discuss construction of inter-connecting elements / bays of AEGCL for commissioning of transmission scheme "Transmission System for NER System Strengthening Scheme-II (Part-B) and V" being implement by NER II Transmission Limited (NTL) under TBCB route - Regarding.

महोदय/Sir,

Minutes of Meeting taken by Chief Engineer (PSPM), CEA on 10.08.2020 through video conferencing to discuss construction of inter-connecting elements / bays of AEGCL for commissioning of transmission scheme "Transmission System for NER System Strengthening Scheme-II (Part-B) and V" being implement by NER II Transmission Limited (NTL) under TBCB route is enclosed at the Annexure.

भवदीय,

(U.M.Rao Bhogi)

Director

Phone NO. 011-26732332

Encl: as above.

प्रति सूचनार्थ/आवश्यक कार्रवाई हेतु:

1. Director (Trans), Ministry of Power, Shram Shakti Bhawan, New Delhi - 110001
2. PPS to Member(PS), CEA

Signature Not Verified

Digitally signed by U.M.RAO

BHOGI

Date: 2020.08.20 17:06:19 IST

Annexure

Minutes of Meeting taken by Chief Engineer (PSPM), CEA on 10.08.2020 through video conferencing to discuss construction of inter-connecting elements / bays of AEGCL for commissioning of transmission scheme "Transmission System for NER System Strengthening Scheme-II (Part-B) and V" being implement by NER II Transmission Limited (NTL) under TBCB route.

1. List of Participants is enclosed as Annexure-I
2. Chief Engineer (PSPM), welcomed all the participants and stated that COVID-19/ lockdown has affected progress of transmission projects badly. Therefore, all transmission utilities have to put additional efforts to meet the annual targets for 2020-21.
3. Representative of NTL informed that in-spite of all challenges presented by COVID-19, monsoon and difficult North-Eastern geographical terrain, NTL is in advance stage of execution of all elements. For overall system utilization and power evacuation, we need readiness of upstream & downstream elements matching our completion schedule. The status of element related to AEGCL is given below:

LILo of one circuit of Biswanath Chariyalli (PG) - Itanagar 132kV D/C (Zebra) line at Gohpur (AEGCL)

Length	: 16.97 ckm
Locations	: 30 nos.
Foundation completed	: 28 nos.
Tower erected	: 13 nos
Stringing completed	: 0 ckm
Anticipated COD	: Dec'20

4. Chief Engineer (PSPM) enquired about the progress of Gohpur 132kV Bays from AEGCL. Representative of AEGCL informed that they have already requested Govt. of Assam to release the amount towards financing the bay work but due to certain exigencies, State Govt. has curtailed the annual budgetary support to AEGCL. Therefore, AEGCL vide their letter dated 11-03-2020, had informed NTL that due to some financial issues there is a delay in execution of construction work pertaining to Gohpur Bays. AEGCL requested NTL to take up the construction of bay work and the amount will be reimbursed by AEGCL to NTL after completion of work. As this arrangement will help in expediting the commissioning of the project.
5. Representative of NTL stated that they never agreed for construction of above bays and reiterated that they can not do the construction of the bays. NTL also mentioned about the Minutes of Meeting held on 1st Feb 2020 at Guwahati under the chairmanship of Additional Secretary, Ministry of Power, wherein AEGCL was requested to share the LILo termination points at Gohpur Substation, so that NTL can complete their scope within stipulated time frame.

Annexure-I

List of Participants

CEA

1. SHRI V. K. SINGH
2. SHRI U.M. RAO BHOGI
3. SHRI R.K. MEENA
4. SHRI RAJESH
5. SHRI YADAV MANOJKUMAR

CHIEF ENGINEER (PSPM)
DIRECTOR (PSPM)
DEPUTY DIRECTOR (PSPM)
ASSISTANT DIRECTOR (PSPM)
ASSISTANT DIRECTOR (PSPM)

AEGCL

1. G. K. BHUYAN
2. A. J. CHOUDHURY

GM (P&E)
AGM (HQ)

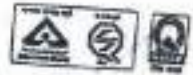
STERLITE POWER

1. T.A.N. REDDY
2. ARUN SHARMA
3. RAJESH SURI
4. ANKIT BHARDWAJ
5. ANKUR VASHISHTHA
6. SANDIP MAITY
7. B.K. SINGH
8. ROHIT GERA

CHIEF - BUSINESS & REGULATORY
CHIEF OPERATING OFFICER
SENIOR VP - DESIGN & ENGINEERING
PROJECT DIRECTOR
PROJECT DIRECTOR
AVP - DESIGN & ENGINEERING
PROJECT DIRECTOR
MANAGER


ASSAM ELECTRICITY GRID CORPORATION LIMITED

Regd. Office: 1ST FLOOR, BIJULEE BHAWAN, PALTAN BAZAR, GUWAHATI - 781001
 CIN: U40101AS2003SGC007238 GSTIN: 18AAFC44973J9Z3
 Phone: 0361 - 2739520 / Fax: 0361 - 2739513 Web: www.aegcl.co.in



অসম বিদ্যুৎ
 নেটওয়ার্ক
 কোর্পোরেশন

NO: AEGCL/AGM/TT/NL/ T-18/2023/.....1764.....Date: 14/03/2023

To,

✓ The Chief General Manager (PP&D)
 Office of the Managing Director, AEGCL
 Bijulee Bhawan, Paltan Bazar,
 Guwahati-I.

DM/PPD
 8/3

B A Am vi
 243

Sub: -

Clarification regarding completion/Test charging/ Commissioning of the newly constructed 132KV
 LILO bays at 132 KV Golpur GSS.
 Ref:- Mail received from CGM(PP&D), AEGCL, Dated:- 27/02/2023

Sir,

With reference to the subject cited above, I have the honour to inform you that the works related to erection and testing of the bay equipments was completed on the dates as given in the completion certificate i.e. 25.08.2022. However the bays were test charged on 10.11.2022 and 11.11.2022 only for the following reason:-

- Delay in installation of energy meters in the CRP by PGCIL. Since both the LILO lines are ISTS lines the energy meter installation is done by PGCIL and the energy meter installation was completed only on 15.10.2022
- Delay in SAS integration works. The SAS integration works of the LILO bays started from 01.11.2022 and was completed on 26.11.2022. The MOM has been enclosed for your reference. Because of these reasons, though the erection and testing of the bays was completed on 25.08.2022, the bays were test charged only on 10.11.2022 and 11.11.2022.

This is for favour of your kind information and necessary action.

Enclosed: - As above

Yours faithfully

(Rajib Kr. Handique)
 Asstt. General Manager,
 T&T Division, AEGCL
 North Lakhimpur

Memo. NO: AEGCL/AGM/TT/NL/ T-18/2023/.....Date:

Copy to: -

1. The Dy. General Manager, T&T Circle, AEGCL, North Lakhimpur. -- for favour of his kind information.
2. Relevant file

(Rajib Kr. Handique)
 Asstt. General Manager,
 T&T Division, AEGCL,
 North Lakhimpur

O/o the Asstt. General Manager, T & T Division, Nalkata, Near Nip Bypass Road, North Lakhimpur- 787031.
 Email: ttdivnlp@gmail.com / agm.northlakhimpur@aegcl.co.in Ph- 9707064763



Minutes of Meeting

Members Present		Project: SCADA INTEGRATION OF CRP PANEL - 1 & CRP PANEL-2
Nelumbo	M/s AEGCL	
Mr. Rohit Kumar	Mr. Pulin Saitla (RE) Mr. Nayan Mehta (AM) Mr. Sudip Borlik (AM)	M/s Contractor Jayanta Khaund M/S Iyathil Sharma
Date: 26-11-2022		Location: Golpur, Assam

Project Code: NCTPL-CRP-20-223,224
PO NO: BK/MLP/ALWCL/CHIMPUR/L-07

(a) M/s NTPC representative arrived on 132kV S/S Golpur Assam site 01.01NOV.2022

(b) The following activities were carried out on site:

- 1.0 The SCADA graphics including Substation Overview (S/O), Network overview, Events, CR events, Reports, Alarms, IP Addresses have been configured for 132kV Golpur-CHIMPU and B-CHARIALI Panels.
- 2.0 Integration of the CID files of BCU P3F30, Backup relay P3F30 and Micom P444 in WINCC through IEC Wizard in 132kV Golpur-CHIMPU and B-CHARIALI Panels.
- 3.0 Tagging and linking of all the LATCHING signals of BCU P3F30 relay, Backup relay (P3F30) and Micom relay was completed.
- 4.0 All Digital input & measurements, Digital output for 132kV Golpur-CHIMPU and B-CHARIALI Panels were checked, corrected, integrated as per the site requirements and displayed on SCADA screen.
- 5.0 Commands of ISO 89L, ISO 89A, ISO 89LE were checked from the SCADA for 132kV Golpur-CHIMPU and B-CHARIALI Panels.
- 6.0 Command of Circuit Breaker was checked from SCADA for 132kV Golpur-CHIMPU and B-CHARIALI Panels.
- 7.0 132kV Golpur-CHIMPU and B-CHARIALI Panels are successfully mapping with the existing system as per AEGCL guidelines and found satisfactory.
- 8.0 132kV Golpur-CHIMPU and B-CHARIALI Panels are successfully charged. ✓
- 9.0 Redundancy communication of relay's BCU P3F30, BACKUP P3F30 & MICOM P444 were successfully established in both the CHIMPU AND B-CHARIALI Panels.
- 9.0 EASERGY STUDIO & EASERGY PRO software was successfully installed in AEGCL laptop.
- 10.0 Communication status symbol of all the relays not as per existing system due to some differences in Schneider and Siemens relays. For the above mentioned reason there should not be any problem in relay operation and redundancy channel.

NOTE: -Relay's physical health node is not working with Siemens WinCC(V7.3) SCADA, due to this relay both port fail status is not updating on scada screen. It should be rectified as soon as possible
(c) M/s NTPC representative left the site on 26/11/2022.

Note: - All above points have been checked by M/s AEGCL and found OK.

	M/s NTPC	M/s AEGCL	M/s Contractor Jayanta Khaund
Signature	<i>Rohit Kumar</i>	<i>Sudip Borlik</i> AM, T&E, N&P <i>Nayan Mehta</i> AM, T&E, N&P	<i>Relay no go, must be rectified by NTPC/Schneider within ten days time.</i> <i>J.K. Sharma</i> 26/11/22
Name	Rohit Kumar	Sudip Borlik, Nayan Mehta	J.K. Sharma

for
26/11/22
132kV Golpur Substation
M/s AEGCL



ASSAM ELECTRICITY GRID CORPORATION LIMITED

OFFICE OF THE MANAGING DIRECTOR

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CIN: U40101AS2003SGC007238GSTIN: 18AAFCA4973J9Z3

PHONE: 0361-2739520 Web: www.aegcl.co.in



15



No. AEGCL/HQ/ACCTTS/14-15/65/Part-1/15

Dated: 11-07-2023

To,

The CGM
Central Transmission Utility of India Ltd. (CTU)
Plot No.2, Sector-29, Gurgaon, Haryana-122001.

Sub: Intimation of completion of the AEGCL's scope of work related to **"LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL)"**.

Ref: AEGCL/AGM/TT/NL/T-18/2023/1764 Dated: 14-03-2023

Sir,

With reference to the subject cited above, it is to inform you that the monthly bilateral charge bills raised by CTU Ltd. to Assam Power Distribution Corporation Ltd.(APDCL) is being subsequently adjusted from the Wheeling charge bills of AEGCL due to non-completion of AEGCL's part of work related to **"LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL)"** as per the Transmission System Agreement between NER II Transmission Ltd. and AEGCL.

Now, as per the letter referred above, it is to inform you that AEGCL has already completed the work related to erection and testing of the bay equipments on **25-08-2022** and test charged on **10-11-2022** and **11-11-2022** respectively. A copy of the letter has been attached herewith for your ready reference. However, surprisingly CTU Ltd. has raised the bilateral bill after completion of the AEGCL's part of work.

You are therefore, requested to kindly discontinue the raising of monthly bilateral charge bills to APDCL from now onwards and make necessary adjustments of the bills already raised to APDCL for the period after completion of AEGCL's work, i.e. **11-11-2022**.

You are also requested to kindly communicate the adjustments made in this regard to the undersigned as and when made.

Thanking you,

Yours faithfully,

CGM (F & A),

AEGCL, Bijulee Bhawan
Paltanbazar, Ghy-01

Memo No. : AEGCL/HQ/ACCTTS/14-15/65/Part-1/15(a) Dated : 11-07-2023

1. Member Secretary, NERPC, Jowai Road, Umpling, Shillong, Meghalaya-793006.
2. ED, North Eastern Regional Load Despatch Centre (NERLDC), Grid Controller of India Limited (GRID-INDIA), POWERGRID Complex, Dongtelh, Lower Nongrah, Lapalang, Shillong-793006, Meghalaya.
3. ED, NERTS, POWERGRID Complex, Dongtelh, Lower Nongrah, Lapalang, Shillong-793006, Meghalaya.
4. MD, AEGCL, Bijulee Bhawan, Paltanbazar, Guwahati.
5. CGM (PP&D), AEGCL, Bijulee Bhawan, Paltanbazar.
6. GM (M&PR), AEGCL, Bijulee Bhawan, Paltanbazar.
7. CGM, (Comm & EE), APDCL, Bijulee Bhawan, Paltanbazar.
8. Office Copy.

CGM (F & A),

AEGCL, Bijulee Bhawan
Paltanbazar, Ghy-01



ASSAM ELECTRICITY GRID CORPORATION LIMITED

OFFICE OF THE MANAGING DIRECTOR

Regd. Office: (FIRST FLOOR), BIJULEE BHAWAN, PALTANBAZAR, GUWAHATI - 781001

CIN: U40101AS2003SGC007238GSTIN: 18AAFCA4973J9Z3

PHONE: 0361-2739520 Web: www.aegcl.co.in

No. AEGCL/HQ/ACCTTS/14-15/65/Part-1/16

Dated: 28-08-2023

To,

The CGM
Central Transmission Utility of India Ltd. (CTU)
Plot No.2, Sector-29, Gurgaon, Haryana-122001.

Sub: Reminder regarding discontinuance of monthly bilateral charge bills raised to APDCL.

Ref: AEGCL' letter No. AEGCL/HQ/ACCTTS/14-15/65/Part-1/15 Dated: 11-07-2023.

Sir,

With reference to the subject cited above, it is for kind reminder that AEGCL has already intimated vide letter as referred above regarding the completion of the AEGCL's part of work related to "LILO of one CKT of 132 KV Biswanath Chariali (PG) to Itanagar at Gohpur (AEGCL)" as per the Transmission System Agreement between *NER II Transmission Ltd.* and *AEGCL*. The erection and testing of the bay equipments were completed on **25-08-2022** and test charged on **10-11-2022** and **11-11-2022** respectively.

However, it has been seen that the monthly bilateral charge bill is still being raised by CTU Ltd. to Assam Power Distribution Corporation Ltd. (APDCL) which are subsequently being adjusted from the Wheeling charge bills of AEGCL by APDCL, despite the fact that AEGCL's has already completed its part of work as agreed between.

You are therefore, requested once again to kindly discontinue the raising of monthly bilateral charge bills to APDCL immediately and make necessary adjustments of the bills already raised to APDCL for the period after completion of AEGCL's part of work, i.e. **11-11-2022**.

You are also requested to kindly communicate the adjustments made in this regard to the undersigned as soon as possible.

Enclosed: Letter as referred above.

Thanking you,

Yours faithfully,

CGM (F & A),
AEGCL, Bijulee Bhawan,
Paltanbazar, Ghy-01

Memo No. : AEGCL/HQ/ACCTTS/14-15/65/Part-1/16(a) Dated : 28-08-2023

1. Member Secretary, NERPC, Jowai Road, Umpling, Shillong, Meghalaya-793006.
2. ED, North Eastern Regional Load Despatch Centre (NERLDC), Grid Controller of India Limited (GRID-INDIA), POWERGRID Complex, Dongteih, Lower Nongrah, Lapalang, Shillong-793006, Meghalaya.
3. ED, NERTS, POWERGRID Complex, Dongteih, Lower Nongrah, Lapalang, Shillong-793006, Meghalaya.
4. MD, AEGCL, Bijulee Bhawan, Paltanbazar, Guwahati.
5. CGM (PP&D), AEGCL, Bijulee Bhawan, Paltanbazar.
6. GM (M&PR), AEGCL, Bijulee Bhawan, Paltanbazar.
7. CGM, (Comm & EE), APDCL, Bijulee Bhawan, Paltanbazar.
8. Office Copy.

CGM (F & A),
AEGCL, Bijulee Bhawan,
Paltanbazar, Ghy-01

Annexure-5.1(a)

पूर्वोत्तर क्षेत्र के वित्तीय वर्ष 2023-24 के विचलन बकाया की स्थिति (पिछले साल सहित)							
Deviation Outstanding status of NER for FY-2023-24 (including Last years O/S)							
Bills till Week:	14-08-2023	20-08-2023	तक		आज की तारीख में/As on	04-09-2023	Figs in Lacs
घटक /Constituents	Week no of NER-21 of FY 2023-24				टोटल / TOTAL		O/S PAYABLE >13 WEEKS
	पूल के लिए देय / Payable to Pool	पूल से प्राप्य / Receivable from Pool	भुगतान किया / Paid to Pool	प्राप्त / Received from Pool	O/S Payable to Pool	O/S Receivable from Pool	
अरुणाचल प्रदेश / Ar. Pradesh	24539.48	5895.47	24336.50	5895.47	202.97	0.00	0.00
असम / Assam	64986.97	2736.08	63230.11	2736.08	1756.86	0.00	0.00
मणिपुर / Manipur	5457.10	3346.89	4826.27	3346.89	630.83	0.00	529.48
मेघालय / Meghalaya	6508.16	11116.15	6508.16	11077.20	0.00	38.95	0.00
मिजोरम / Mizoram	6698.63	7654.51	6698.63	7579.52	0.00	74.99	0.00
नगालैंड / Nagaland	8437.60	4114.06	8437.60	4060.75	0.00	53.31	0.00
त्रिपुरा / Tripura	18801.03	12296.84	18679.97	12296.84	121.06	0.00	0.00
लोकतक / Loktak	95.18	1176.38	95.18	1175.51	0.00	0.87	0.00
नीपको / NEEPCo	3828.47	28487.36	3828.47	28384.54	0.00	102.82	0.00
ई आर / ER	356300.21	705380.21	356300.21	696976.28	0.00	8403.93	0.00
ओटीपीसी / OTPC	2925.67	6406.70	2925.67	6401.16	0.00	5.54	0.00
एनटीपीसी / NTPC	10913.90	4463.09	10855.35	4463.09	58.55	0.00	0.00
एन आर / NR	691093.01	357020.73	679199.61	357020.73	11893.40	0.00	0.00
बी.एन.सी / BNC	157.22	423.06	157.22	422.96	0.00	0.10	0.00
टोटल / TOTAL	1200742.62	1150517.53	1186078.95	1141837.02	14663.67	8680.51	

Annexure-5.2

REACTIVE POOL ACCOUNT DETAILS : 2023-24										Upto Week - 21		As on	04.09.2023
										All figures in ₹			
		Till Previous FY		CURRENT FY				Reactive Bill settlement status		Interest Bill settlement status		Reactive+Interest Settlement	
Sl. No	States	Outstanding Payable to Pool (upto FY 22-23)	Outstanding Receivable from Pool (upto FY 22-23)	Payable to pool (2023-24)	Paid to pool (2023-24)	Receivable from pool (2023-24)	Received from pool (2023-24)	Outstanding Payable to Pool (upto FY 23-24)	Outstanding Receivable from Pool (upto FY 23-24)	O/S Reactive interest Payable till Wk-50 FY 21-22	O/S Reactive int. Receivable till Wk-50 FY 21-22	Net Outstanding Payable to Pool (upto FY 23-24)	Net Outstanding Receivable from Pool (upto FY 23-24)
0	0	1	2	3	4	5	6	1	2	7	8	9	10
1	Ar. Pradesh	307993	0	618908	699705	629	629	227196	0	0	23988	203208	0
2	Assam	0	10766193	76023	76023	390848	5137797	0	6019243	0	385508	0	6404752
3	Manipur	578645	699	281152	6234	5536	6234	853563	0	43636	0	897198	0
4	Meghalaya	4134156	44395	3741	4137897	899563	619141	0	324818	0	0	0	324818
5	Mizoram	1947862	0	226660	1151808	0	0	1022714	0	91907	0	1114621	0
6	Nagaland	54619	246	96423	1685	1438	1685	149357	0	0	10222	139135	0
7	Tripura	0	683689	5896	5896	10789	313762	0	380716	0	9978	0	390694
8	PSDF	0	-4471947	0	0	0	0	0	-4471947	0	-294154	0	-4766101
	TOTAL	7023274	7023274	1308803	6079248	1308803	6079248	2252829	2252829	135543	135542	2354162	2354163

Annexure-5.3

अपूर्ण डीएसएम सुलह की स्थिति / Pending DSM Reconciliation Status						
				Last Signed		
SI No.	Constituents	Period Pending	Total Pending	Qr. No.	FY	Date
1	Ar. Pradesh	Up to date	0	1	23-24	07-08-2023
2	Assam	Up to date	0	1	23-24	01-08-2023
3	Manipur	Up to date	0	1	23-24	24-08-2023
4	Meghalaya	Up to date	0	1	23-24	01-08-2023
5	Mizoram	Up to date	0	1	23-24	22-08-2023
6	Nagaland	Up to date	0	1	23-24	07-08-2023
7	Tripura	Up to date	0	1	23-24	03-08-2023
8	BNC	Up to date	0	1	23-24	09-08-2023
9	Loktak	22-23(Q4) & 23-24(Q1)	2	3	22-23	06-02-2023
10	NEEPCo	Up to date	0	1	23-24	28-07-2023
11	OTPC	22-23(Q4) & 23-24(Q1)	2	3	22-23	20-02-2023
12	NTPC	Up to date	0	1	23-24	19-07-2023
			4			
अपूर्ण रिएक्टिव सुलह की स्थिति / Pending Reactive Reconciliation Status						
				Last Signed		
SI No.	Constituents	Period Pending	Total Pending	Qr. No.	FY	Date
1	Ar. Pradesh	Up to date	0	1	23-24	07-08-2023
2	Assam	Up to date	0	1	23-24	01-08-2023
3	Manipur	22-23(Q1,Q2,Q3,Q4) & 23-24(Q1)	5	4	21-22	02-06-2022
4	Meghalaya	Up to date	0	1	23-24	01-08-2023
5	Mizoram	23-24(Q1)	1	4	22-23	08-05-2023
6	Nagaland	Up to date	0	1	23-24	07-08-2023
7	Tripura	Up to date	0	1	23-24	03-08-2023
			6			

Annexure-5.4**2023-24 : Letter of Credit (LC) Amount against DSM charges****Figures in ₹ (Rs.)**

Constituents	FY 22-23 DSM liability [DSM charges + Addl. DSM]	Average weekly DSM liability [A/52]	LC Amount [110% of B]	LC amt. (in Lakhs)
	A	B	C	D
ARUNACHAL PRADESH	325151314	6252910	6878201	68.78
ASSAM	476070392	9155200	10070720	100.71
MANIPUR	91188573	1753626	1928989	19.29
MEGHALAYA	69053674	1327955	1460751	14.61
MIZORAM	8313272	159871	175858	1.76
NAGALAND	13123110	252368	277604	2.78
TRIPURA	144372915	2776402	3054042	30.54

Annexure-5.5

Reconciliation statement is presently issued quarterly covering periods (i) Apr to Jun, (ii) July to September, (iii) October to December and (iv) January to March. The reconciliation statement for the period Apr to Jun (Q1) of FY 2023-24 has been issued in Jul 2023.

The status of signing reconciliation statements by NER users is as below:

शुल्क और प्रभार सुलह की स्थिति /Status of Fees & Charges Reconciliation

	सुलह की अवधि/Period of Reconciliation	टिप्पणियां/Re marks
अरुणाचल प्रदेश / Ar. Pradesh	Apr-23 to Jun-23	Signed
असम / Assam	Apr-23 to Jun-23	
मणिपुर / Manipur	Apr-23 to Jun-23	
मेघालय / Meghalaya	Apr-23 to Jun-23	Signed
मिजोरम / Mizoram	Apr-23 to Jun-23	
नगालैंड / Nagaland	Apr-23 to Jun-23	
त्रिपुरा / Tripura	Apr-23 to Jun-23	
उपक्षेपाग्र/NERTS(PG)	Apr-23 to Jun-23	Signed
नीपको / NEEPCo	Apr-23 to Jun-23	
लोकतक / Loktak	Apr-23 to Jun-23	
एनईटीसीएल/NETCL	Apr-23 to Jun-23	
ओटीपीसी / OTPC	Apr-23 to Jun-23	
ईएनआईसीएल/ENICL	Apr-23 to Jun-23	
एनटीपीसी / NTPC	Apr-23 to Jun-23	
बी.एन.सी/BNC	Apr-23 to Jun-23	Signed
केएमटीएल / KMTL	Apr-23 to Jun-23	Signed
एनईआर- II टीएल/NER-II TL	Apr-23 to Jun-23	



ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

GRID CONTROLLER OF INDIA LIMITED

(A Government of India Enterprise)

[Formerly Power System Operation Corporation Limited (POSOCO)]

उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र / North Eastern Regional Load Despatch Centre

कार्यालय : पावर हाउस, एसएलडीसी के पास, डाक- काहिलीपारा, गुवाहाटी - 781019 (असम)

Office : Power House, Adjacent to SLDC, PO- Kahilipara, Guwahati-781019 (Assam)

CIN : U40105DL2009GOI188682, वेबसाइट/Website: www.nerlde.in, ई-मेल/E-mail: nerldemo@grid-india.in

संदर्भ/Ref: उपक्षेत्रीय (NERLDC)/एम.ओ(MO)/DSM OS/23-24/ 208

दिनांक/Date: 01.09.2023

प्रति/(To),

एम.डी./MD, एम.एस.पी.डी.सी.एल./MSPDCL

तीसरी मंजिल/3rd Floor

नई निदेशालय भवन/New Directorate Building

दूसरी एम.आर. गेट के पास/Near second M.R. Gate

इम्फाल-दीमापुर सड़क/Imphal- Dimapur Road

इम्फाल/Imphal-795001

मणिपुर/Manipur

विषय/Sub: Outstanding Payable towards Deviation Charges

संदर्भ/Ref. :

1. NERLDC letter no. NERLDC/MO/DSM OS/22-23/360 dtd. 27.12.2022 (Copy attached)
2. NERLDC letter no. NERLDC/MO/DSM OS/22-23/407 dtd. 31.01.2023 (Copy attached)
3. NERLDC letter no. NERLDC/MO/DSM OS/22-23/454 dtd. 28.02.2023 (Copy attached)
4. NERLDC letter no. NERLDC/MO/DSM OS/22-23/488 dtd. 30.03.2023 (Copy attached)
5. NERLDC letter no. NERLDC/MO/DSM OS/23-24/40 dtd. 28.04.2023 (Copy attached)
6. NERLDC letter no. NERLDC/MO/DSM OS/23-24/95 dtd. 01.06.2023 (Copy attached)
7. NERLDC letter no. NERLDC/MO/DSM OS/23-24/145 dtd. 05.07.2023 (Copy attached)
8. NERLDC letter no. NERLDC/MO/DSM OS/23-24/171 dtd. 31.07.2023 (Copy attached)
9. Qtr-1 FY 2023-24 Manipur DSM Reconciliation (Copy attached)
10. Extract from 48th CCM MoM dtd. 04.05.2023 (Copy attached)

महोदय/Sir,

Weekly DSM statements had been issued by NERPC upto Week-21 (14-08-2023 to 20-08-2023) of FY 2023-24 and as on date, Manipur Outstanding Principal Payable to DSM Pool A/c is ₹ 6,30,82,693/- (Rupees Six Crore Thirty Lakh Eighty Two Thousand Six Hundred Ninety Three Only). DSM Interest statements had been issued by NERLDC upto 1st half of FY 2022-23. As on date, Manipur Outstanding Interest Payable to DSM Pool A/c is ₹ 8,61,831/- (Rupees Eight Lakh Sixty One Thousand Eight Hundred Thirty One Only). Hence, Net Outstanding Payable to DSM Pool A/c is ₹ 6,39,44,524/- (Rupees Six Crore Thirty Nine Lakh Forty Four Thousand Five Hundred Twenty Four Only).

The matter has been regularly followed-up with concerned officials of Manipur and also discussed in CCM forum. The copies of CCM extracts are enclosed for ready reference.

It is constrained to mention that in case of non-compliance of payment schedule prescribed vide clause 10.1 of CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2022 by the Regional Entities, RLDC shall enforce denial of Open Access as per Cl. No. 25(A) of CERC (Open

पंजीकृत कार्यालय: बी-9, प्रथम तल, कुतुब इन्स्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली -110016

Registered Office : B-9, First Floor, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016

Website: www.grid-india.in

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Access in Inter-State Transmission) Regulations, 2008 and also in line with CERC order dated 02.09.2015 in Petition No: 142/MP/2012 with I.A. 7/2013.

In case of Manipur, DSM Principal outstanding amount greater than 90 days (13 Weeks) is ₹ 5,29,47,597/- as on date and interest for the non-payment get accrued on daily basis. If the situation continues, this may compel NERLDC to enforce **denial of short-term open access at any instant**. In order to avert such situation, it is very urgent and essential for Manipur to immediately clear the outstanding DSM payment dues mentioned above.

Details on Outstanding payable towards Deviation Charges are briefed in the table below: (Fig. in ₹)

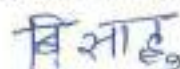
DSM Principal:				
Period	Payable (A)	Receivable (B)	Paid (C)	Net Outstanding Payable(+) /Receivable(-) [D={A-B}-C]
Upto Qtr-1 FY 23-24 Reconciliation	80485031	19598594		60886437
Wk-13(19-06-23 to 25-06-23)	0	1248176		-1248176
Wk-14(26-06-23 to 02-07-23)	272618	0		272618
Wk-15(03-07-23 to 09-07-23) (R1)	1372640	0		1372640
Wk-16(10-07-23 to 16-07-23) (R2)	4545033	0		4545033
Wk-17(17-07-23 to 23-07-23) (R1)	1406014	0		1406014
Wk-18(24-07-23 to 30-07-23)	0	49848		-49848
Wk-19(31-07-23 to 06-08-23) (R1)	0	2449088		-2449088
Wk-20(07-08-23 to 13-08-23)		1210899		-1210899
Wk-21(14-08-23 to 20-08-23)		442038		-442038
			Total Outstanding DSM Principal Payable	63082693
DSM Interest:				
Period	Payable (A)	Receivable (B)	Paid (C)	Net Outstanding Payable(+) /Receivable(-) [D={A-B}-C]
Wk-52 of FY 21-22 to Wk-25 of FY 22-23	861831	0		861831
			Total Outstanding DSM Interest Payable	861831

In view of the above, NERLDC request you kindly to look into the matter on urgent basis and facilitate for immediate clearing of outstanding DSM payment dues.

धन्यवाद के सहित / Thanking you,

संलग्नक: उपरोक्त अनुसार / Encl: As Above

भवदीय/Yours faithfully,



(बिश्वाजीत साहु)/(Biswajit Sahu)

व: महाप्रबंधक(एम.ओ.)/Sr. General Manager(MO)

Copy To: 1. Member Secretary, NERPC, Shillong
2. Director(MO), Grid-India, Delhi
3. CGM(FC), NERLDC, Shillong

3.	400/132/33 kV, 200 MVA, 3-Phase Transformer	2	1	2 Nos units at Silchar SS. Spare shall be positioned at Silchar SS.
4.	400/220/33 kV, 315 MVA, 3-Phase Transformer	1 no In Service & 2 nos. to be installed	1	1 no. in service at Misa. 1 no each will be installed at Balipara & Bongaigaon
5.	400 kV 80 MVAR Reactor	3	1	2 Nos units at Bongaigaon & 1 No unit at Balipara SS. Spare shall be positioned at Bongaigaon SS.
6.	400 kV 63 MVAR Reactor	18	1	1 no. Spare already available

Deliberation in the meeting

All constituents agreed to the above proposal and requested NERPC to put up the above proposal in the next TCC/RPC for approval.

Meanwhile, Assam requested NERPC to take the matter to RPC meeting for proving 100MVA 220/132kV Regional spare transformer at Dimpur SS for necessary installation at Samaguri SS on returnable basis.

The Sub-committee noted as above.

Action: NERPC

D.13 Preventive shifting of 400kV towers of 400kV Balipara-Ranganadi #1&2 line along the river Dikrong with pile foundation to avoid threat of collapse of line in every year:

During 110th OCC Meeting DGM (AM), NERTS informed that the river course of Dikrong River where the discharge of Ranganadi Generation is done changes frequently due to lower bed depth and higher scouring depth. As a result, every year one to two towers become endangered due to erosion of soil on account of wayward river course change. Action is required to be taken for preventive shifting of balance 10 nos. of 400kV towers along the river to pile and book the same under PoC Mechanism.

After detailed deliberation, the sub-committee agreed and asked POWERGRID to provide details for necessary approval of RPC. Accordingly the detail provided is given below:

1. Recently, the Tower Loc. No. 41 (DA+0) of the 400kV D/C Ranganadi - Balipara Transmission line became vulnerable due to erosion of river Dikrong as a result of sudden flash flood. Initially, prior to flash flood the tower was at a distance of about 250 Mtrs from Dikrong river bank until the first week of June'15. However, sudden flash flood in the river Dikrong started eroding the bank towards the tower location and by 10th of June'15, the river had eroded approx. 200 meters of the river bank near Loc. No. 41 reducing the clearance w.r.t. river to 50 meter approx. It was at this stage that temporary bank protection measures in the form of bamboo porcupine packed with sand filled gunny bags has been taken up by site. The river has been found to have changed its course substantially towards the tower Loc. No. 41 with siltation on the opposite bank. As a result of high current & rapid pace of erosion the clearance between the river & the tower has been reduced to 25 Mtr only as on date. Considering this criticality, one of the circuits has already been shifted on ERS as immediate preventive measure. Now, in order to prevent collapse of tower the location is to be shifted to Pile Foundation as a permanent measure.



2. It is to be mentioned that the course of Dikrong River where discharge of Ranganadi Generation is done, changes every year during Monsoon due to Lower River bed depth and higher scouring depth. In fact, every year / alternate year one or two towers become vulnerable and till now, we have already shifted Location No. 42, 43 and 44 to pile. Further, at present, Location No. 45, 58 & 66 is under shifting to pile.

3. Considering unpredictable river course change of Dikrong and importance of 400kV D/C Ranganadi - Balipara Transmission line being sole evacuation path of Ranganadi Generation as well as power supply path to Arunachal Pradesh, it is essential to shift all the balance 10 nos. of 400kV towers along the River Dikrong to Pile foundation as preventive measure. The balance Locations are 39B, 40, 41, 46, 47, 48, 49, 59, 65 & 67. This is in addition to locations 45, 58 & 66 for which construction of pile foundation is in progress.



Deliberation in the meeting

All constituents agreed to the above proposal of POWERGRID and requested them to prepare the consolidated list of endangered towers so that the same can be placed in the next TCC/RPC for approval.

Action: NERTS, POWERGRID.

D.14 Approval of Transmission tariff for ATS "Asset -I: HVDC portion and combined Asset-II, AC portion under North East-Northern/Western Inter connector Project in NE-Western/Northern Region:

Assam informed that all members are aware that the transmission system associated with North East-Northern/Western Interconnector-I Project was conceived connecting the NE Region directly through HVDC network with Northern and Western Region with the aim of evacuation of surplus power from Subansiri Lower HEP and Kameng HEP. Already power from these two projects has been allocated by MOP to NER, North and Western regions. So far need of the NER is concerned the region does not have the requirement of such costly HVDC network. As per original arrangement the investment cost of NER portion transmission network up to Bishwanath Chariali is to be shared by all Beneficiaries of NER as well as outside NER who avails share from these Generating projects and that for the rest portion from Bishwanath Chariali to Agra is to be shared by Northern and Western Regions on 50:50 basis.

Of late the hearing of transmission tariff petition of Power grid on this network is over and the tariff under POC mechanism is to be finalized by CERC. AS per original

A.9 : PREVENTIVE SHIFTING OF 400KV BALIPARA-RANGANADI #1&2 LINE ALONG THE RIVER DIKRONG WITH PILE FOUNDATION TO AVOID THREAT OF COLLAPSE OF LINE EVERY YEAR - AGENDA REF. IYEM NO. B.6

The river course of Dikrong River where the discharge of Ranganadi Generation is done changes frequently due to lower bed depth and higher scouring depth. As a result, every year one to two towers become endangered due to erosion of soil on account of wayward river course change. Meanwhile, 3 nos. of 400kV towers has already been shifted to pile and 3 nos. are under shifting. Considering the critically of 400kV Balipara-Ranganadi D/C Line for evacuation of 405MW Ranganadi HEP Generation and extending power supply to Arunachal Pradesh, the requirement of preventive shifting of balance 11 nos. of 400kV towers along the river to pile was discussed in OCC & PCC meetings of NERPC and the members agreed for preventive shifting of balance (11 Nos) 400 kV towers under PoC Mechanism. The tentative expenditure for shifting of 11 nos. of 400kV Towers will be around Rs. 22.00 Crores.

Placed for approval of TCC/NERPC.

Deliberation of the TCC

TCC recommended for approval of NERPC

Deliberation of the RPC

The RPC noted and approved the recommendation of TCC.

A.10 : UP-GRADATION OF 132 KV HALFLONG, 132 KV JIRIBAM, 132 KV KUMARGHAT AND 132 KV AIZAWL SUB-STATION ON COMPLETION OF 25 YEARS AGE AND CAPITALIZATION DURING TARIFF BLOCK (2014-19) - AGREDA REF. ITEM NO. B.7

The up-gradation of Haflong, Jiribam, Kumarghat and Aizawl sub stations on completion of 25 Years from AIS to GIS/Hybrid was discussed during 96th OCC & 20th PCC meeting with incorporation of Double Bus Bar Arrangement, Bus Bar Protection and LBB Scheme in SAS configuration to enhance reliability / continuity of power supply. The job is proposed to be carried out by POWERGRID and capitalize the same. The Sub-committee agreed to the proposal and requested POWERGRID to approach CERC for necessary Capitalization. The tentative expenditure will be around Rs. 30.00 Crores.

BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING**1. PREVENTIVE SHIFTING OF LOCATION NO 305 AT 400KV TOWER OF 400KV BALIPARA - BONGAIGAON #1&2 [TWIN MOOSE] ALONG THE RIVER NONOI TO PILE FOUNDATION TO AVOID THREAT OF COLLAPSE OF LINE:**

The tower Loc. No. **305** of the **400kV D/C Balipara-Bongaigaon ckt 1&2** Transmission line became vulnerable due to erosion of river **Nonoi** due to change of river coarse.

Initially, prior to change of river coarse the tower was at about **40-45 M** from **Nonoi** riverbank until the **May'2021**. However, sudden flash flood in the river **Nonoi** eroding the bank towards the tower location and by **June'2021**, the river had eroded approx. **20 m** of the riverbank near Loc. No. 305 reducing the clearance w.r.t. river to **20 m** approx.

It was at this stage that bank protection measures in the form of boulder netting with gabion wall has been taken up by site. However, during flash flood in **June 2022**, the boulder gabion wall was washed away completely, and river came at distance of **16 m** away from tower.

Then on emergency basis some PCC porcupine arranged by site. Again, during flash flood in the month of **May 2023** the riverbank started to erode. **Presently the location is around 13 m away from the riverbank.**

The river has been found to have changed its course substantially towards the tower Loc. No. 305 with siltation on the opposite bank. As a result of high current & rapid pace of erosion the clearance between the river & the tower has been reduced to **13 m** only as on date.

It is to be mentioned that the course of **Nonoi** River, changes every year during Monsoon due to lower riverbed depth and higher scouring depth. It is pertinent to mention that the line is very important link to evacuate power from the generation plant of Kameng, Ranganadi, lower subhansiri project and to maintain the stability of the grid through Bongaigaon and Eastern region.

Considering unpredictable river course change of Nonoi and importance of 400kV D/C Balipara - Bongaigaon ckt 1 &2 it is essential to shift the tower along the river Nonoi to pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

2. PREVENTIVE SHIFTING OF LOCATION NO 458 AND 459 OF 400KV TOWER OF 400KV BALIPARA - BONGAIGAON #1&2 ALONG THE RIVER MARA-PAGLADIA WITH PILE FOUNDATION TO AVOID THREAT OF COLLAPSE OF LINE:

The tower Loc. No. 458 of the 400kV D/C Balipara-Bongaigaon ckt 1&2 Transmission line became vulnerable due to erosion of river **Marapagladia** due to change of river coarse.

Initially, prior to change of river coarse the tower was at about **50 m** from **Mara-pagladia** riverbank until the **May'2022**. However, sudden flash flood in the river **Marapagladia** eroding the bank towards the tower location and by **June'2022**, the river had eroded approx. 32 m of the riverbank near Loc. No. 458 reducing the clearance w.r.t. river to **18 m** approx.

It was at this stage that bank protection measures in the form of bamboo porcupine wall have been taken up by site.

Also, during April'23, PSC porcupine protection given by site. But during flash flood in **May'23**, the protection was washed away completely, and river came at distance of **13 m** away from tower. Then on emergency basis some bamboo palisading arranged by site. Presently the location is around 13 meters away from the riverbank.

The river has been found to have changed its course substantially towards the tower Loc. No. 458 with siltation on the opposite bank.

It is to be mentioned that the course of **Mara-pagladia** River, changes every year during Monsoon due to Lower Riverbed depth and higher scouring depth.

It is pertinent to mention that the line is very important link to evacuate power from the generation plant of Kameng, Ranganadi, lower subhansiri project and to maintain the stability of the grid through Bongaigaon and Eastern region.

Considering unpredictable river course change of **Mara-pagladia** and importance of 400kV D/C Balipara - Bongaigaon ckt 1 &2 it is essential to shift the tower location no 458 and 459 crossing the river **Mara-pagladia** to Pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

3. PREVENTIVE SHIFTING OF LOCATION NO 90 OF 400 KV D/C BINAGURI – BONGAIGAON TRANSMISSION LINE ALONG THE ANTHIHARA RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

The Tower Loc. No. 90 of 400 kV D/C Binaguri - Bongaigaon Transmission line became vulnerable due to erosion of river Anthihara due to change of river course and back erosion.

On sudden flash flood in the river in **July'21**, eroding the bank towards the tower location. The distance was around **20 m**.

At this stage that bank protection measures in the form of bamboo palisading with gunny bag and boulder spur have been taken up by site in the month of **July'23**. Presently, the location is **17 m** away from the river.

The river has been found to have changed its course towards the tower. Now, to prevent collapse of tower the location is to be shifted to Pile Foundation as a permanent measure.

It is pertinent to mention that the line is very important inter-regional link to maintain the stability of the grid through Bongaigaon and Eastern region.

Considering unpredictable river course change of Anthihara river and importance of 400 kV D/C Binaguri - Bongaigaon Transmission Line, it is essential to shift the tower location no 90 along the river to Pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

4. PREVENTIVE SHIFTING OF LOCATION NO 123 AND 121 OF 132 KV S/C SALAKATI-GELEPHU LINE ALONG THE RIVER DEOSIRI WITH PILE FOUNDATION TO AVOID THE THREAT OF FURTHER COLLAPSE OF LINE:

The Tower Loc. No. 123 (DA+0) of 132 kV S/C Salakati-Gelephu line became vulnerable due to erosion of river Deosiri due to change of river coarse and bank erosion.

Initially, prior to change of river coarse the tower was at about **60 m** from **Deosiri** riverbank until the **June'2022**. However, sudden flash flood in the river **Deosiri** eroding the bank towards the tower location and by **July'2023**, the river had eroded approx. 57 m of the riverbank near Loc. No. 123, reducing the clearance w.r.t. river to **3 m** approx.

It was at this stage that bank protection measures in the form of bamboo palisading with gunny bag, river diversion through JCB have been taken up by site.

But again, during flash flood at **12.07.2023**, all the protection was washed away completely, and the **tower collapsed on 13.07.2023**. Then on emergency basis, the line was charged through ERS on 18.07.2023.

It is pertinent to mention here that the course of **Deosiri River**, changes every year during Monsoon due to Lower Riverbed depth and higher scouring depth. Also, considering the rate of bank erosion and the nature of the soil, **the location no 121 can also become vulnerable in near future.**

Considering unpredictable river course change of **Deosiri** and importance of 132 kV S/C Salakati-Gelephu Transmission line being very important international link between NER and Bhutan to evacuate power from the generation plant of Bhutan (during monsoon) and to supply power to Gelephu town (during dry season) it is essential to shift the tower locations 123 and 121 along the river Deosiri to Pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

5. PREVENTIVE SHIFTING OF LOCATION NO 174(DD+0) OF 400 KV D/C BNC-RANGANADI LINE ALONG THE CHATRANG RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

The Tower Loc. No. 174 (DD+0) of 400 kV D/C BNC-Ranganadi line became vulnerable due to change of river course and bank erosion.

On sudden flash flood in the river **Chatrang** on **10.08.2022**, eroding the bank towards the tower location, **two legs of the tower got exposed**.

At this stage, immediate bank protection measures in the form of bamboo palisading with gunny bag have been taken up by site. The river has been found to have changed its course substantially towards the tower.

Considering unpredictable river course change of Chatrang and importance of 400 kV D/C BNC-Ranganadi line being sole evacuation path of Ranganadi Generation as well as power supply path to Arunachal Pradesh, it is essential to shift the tower location 176 to Pile foundation as preventive measure



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

6. PREVENTIVE SHIFTING OF LOCATION NO 153,154, 155, 156 OF 132KV PASIGHAT - ROING LINE ALONG THE SIANG RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

During construction time i.e in the year 2016, the above tower locations were at the distance of more than **1km (approx)** from Siang riverbank. Now, the distance is rapidly reducing during monsoon season year after another due to erosion in riverbank. At present, the measured distance in between line to riverbank **300 mtrs only**.

Since the river were at far away, distance from above mentioned tower location and there were villages like Seram, Kongkul and Namsing between our line and the river. The villagers had tried their level best to control the erosion of the riverbank with the help of local administration and concern department of the state. But all their efforts had gone to vein and many people from those villages have been shifted/displaced to the safer place.

The river has been found to have changed its course substantially towards the towers. Now, to prevent collapse of tower those locations are to be shifted to Pile Foundation as a permanent measure.

It is to be mentioned here that the Siang River is the main tributary/ stream of mighty Brahmaputra River. Controlling riverbank erosion during flash flood would be challenging one.

Considering unpredictable river course change of Siang and importance of the said line it is essential to shift the tower locations 153, 154, 155, 156, 157 along the river to Pile foundation as preventive measure. The 132KV Pasighat - Roing Line is feeding power to at least 06 (Six) districts of Arunachal Pradesh and became paramount important and bloodline for the people residing at its downstream. Earlier the line was on the radial supply from Ranganadi Generation Station of NEEPCO via Ziro, Daporijo and Along.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

7. PREVENTIVE SHIFTING OF LOCATION NO 824, 844 OF 400 KV D/C MISA- MARIANI TL ALONG THE MANJHA RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

During continuous heavy rain prevailing since May 2022 in Assam and Arunachal Pradesh, there have been erosion in river bank both front and back side of the tower. Presently, the river bank is minimum **20 m** far from towers. The river was at far away, distance from above mentioned tower locations. But due to change of the river during the flood in the month of July'22, the tower became vulnerable. In that stage temporary protection given by site.

The river has changed its course towards the tower locations. Now, to prevent collapse of tower those locations may be shifted to Pile Foundation as a permanent measure.

Considering unpredictable river course change of Manjha and importance of the said line it is essential to shift the tower locations 824 and 844 along the river to Pile foundation as preventive measure. This line connects 400 KV Misa Substation to 400 KV Mariani Substation feeding power to NER states.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

8. PREVENTIVE SHIFTING OF LOCATION NO 002 OF 220 KV S/C MISA-KOPILI TRANSMISSION LINE ALONG THE KOPILI RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

The tower No 002 of 220 KV S/C Misa Kopli TL is in the Bank of Kopli River just outside premises of Kopli Hydro Electric Power Project of NEEPCO. Earlier the location (002) was protected with boulder sausage work all around the tower and the boulder bed was provided at almost **70-100 m** toward upstream side to protect the bank. It has also been observed that Boulder sausage wall protection exists along the riverbank to the NEEPCO DAM site.

It has been observed that boulder sausage near the tower got damaged by the huge water flow in the Kopli river during the flash flood in the month of April-May'22.

It is also seen that the Kopli river was flowing about 5 meters above the ground level at the tower base during the flash flood and clear evidence of floating rubbish stuck in the tower bracing members could be seen. The bracing of the bottom section of all 4 legs of the towers was found to be bent/deformed which might be caused by hitting high speed floating objects in the river. Besides, the soil at Leg A, C & D are also found to be washed out leaving the chimneys exposed up to 2 m height. The bank protection work provided by NEEPCO also got damaged.

The immediate measure to protect the tower has been taken and some boulder repairing works been carried out departmentally but after 2-3 days the volume of water flowing in river suddenly increased and damaged the protection work. The temporary protection works again started after 1 month. Presently, the tower base has been filled with soil and damaged bracing has also been replaced. Since, the earlier provided boulder-netting wall is completely damaged; repairing of the same will be not effective.

Considering unpredictable river course of Kopli and importance of 220 kv S/C Misa-Kopili Transmission line being the evacuation path of Kopli Generation as well as power supply path to different parts of Assam and Meghalaya, it is essential to shift the tower location 002 to Pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

9. PREVENTIVE SHIFTING OF LOCATION NO 260 OF 400 KV D/C JIGMELING-ALIPURDUAR TRANSMISSION LINE ALONG THE HELL RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

The tower No 260 of 400 KV D/C Jigmeling-Alipurduar TL became vulnerable due to erosion of Hell river due to change of river coarse and bank erosion. On sudden flash flood in the river in **July'22**, the river bank eroded towards the tower location. The distance was around **44 m**. Bank protection measures in the form of bamboo porcupine with tree branches, gunny bag has been taken up by site. Presently, the location is **41 m** away from the river.

The river has been found to have changed its course towards the tower. Now, to prevent collapse of tower the location is to be shifted to Pile Foundation as a permanent measure.

Considering unpredictable river course change of Hell and importance of 400 kV D/C Jigmeling - Alipurduar Transmission line being very important international link between India and Bhutan to evacuate power from the generation plant of Bhutan (during monsoon) and to supply power to Bhutan (during dry season) it is essential to shift the tower locations 260 along the river Hell to Pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

10. PREVENTIVE SHIFTING OF LOCATION NO 126 OF 400 KV D/C BALIPARA-BONGAIGAON CKT 3&4 (QUAD) TRANSMISSION LINE ALONG THE BELSIRI RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

The tower No. 126 of 400 KV D/C Balipara-Bongaigaon Quad TL became vulnerable due to erosion of Belsiri due to change of river course and bank erosion. On sudden flash flood in the river in **2019**, the riverbank eroded towards the tower location. In 2019, Bank protection measures in the form of boulder spur protection has been taken up by site. Also, in 2020 and 2021, bamboo porcupine and bamboo cage protection are given by site. Presently, the location is **40 m** away from the river.

The river has been found to have changed its course towards the tower. Now, to prevent collapse of tower the location is to be shifted to Pile Foundation as a permanent measure.

It is pertinent to mention that the line is very important link to evacuate power from the generation plant of Kameng, Ranganadi, lower subhansiri project and to maintain the stability of the grid through Bongaigaon and Eastern region.

Considering unpredictable river course change of Belsiri and importance of 400kV D/C Balipara - Bongaigaon ckt 3&4 it is essential to shift the tower location no 126 to pile foundation as preventive measure.



BRIEF ON JUSTIFICATION FOR PREVENTIVE SHIFTING

11. PREVENTIVE SHIFTING OF LOCATION NO 276 OF 800 KV BISWANATH CHARIALI-AGRA HVDC TRANSMISSION LINE ALONG THE PASNOI RIVER WITH PILE FOUNDATION TO AVOID THREAT OF FURTHER COLLAPSE OF LINE:

The tower No. 276 of 800 kV BNC-Agra HVDC TL became vulnerable due to erosion of Pasnoi river due to change of river course and bank erosion. On sudden flash flood in the river in **2020**, the riverbank eroded towards the tower location. In 2020, Bank protection measures in the form of bamboo porcupine protection has been taken up by site. In 2021 and 2022 **boulder spur and bamboo palisading with gunny bag protection is given by site.** Presently, the location is **30 m** away from the river.

The river has been found to have changed its course towards the tower. Now, to prevent collapse of tower the location is to be shifted to Pile Foundation as a permanent measure.

It is pertinent to mention that the line is very important link to evacuate power from the generation plant of Kameng, Ranganadi, lower subhansiri project and to maintain the stability of the grid through connecting Eastern region and Northern Region.

Considering unpredictable river course change of Pasnoi and importance of 800 kV Bipolar BNC-Agra HVDC TL, it is essential to shift the tower location no 276 to pile foundation as preventive measure.

