भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
उत्तर क्षेत्रीय विद्युत समिति
Northern Regional Power Committee

दिनांक:24 मई, 2025

सेवा में / To,

उ.क्षे.वि.स. एवं टीसीसी के सभी सदस्य एवं विशेष आमंत्रित (संलग्न सूचीनुसार)
Members of NRPC & TCC and Special Invitees (As per List)

विषय: 54 वीं तकनीकी समन्वय समिति (टीसीसी) और 79 वीं उत्तरी क्षेत्रीय विद्युत समिति (एनआरपीसी) बैठक की कार्यसूची।
Subject: Agenda for 54th Technical Co-ordination Committee (TCC) & 79th Northern Regional Power Committee (NRPC) -reg.

महोदय / महोदया,

एनआरपीसी की तकनीकी समन्वय समिति (टीसीसी) की **54 वीं** बैठक और उत्तर क्षेत्रीय विद्युत समिति की **79 वीं** बैठक दिनांक **30.05.2025** को **हाइब्रिड मोड** में प्रातः **11:00 बजे एनआरपीसी सम्मेलन कक्ष**, कटवारिया सराय, नई दिल्ली में आयोजित की जाएगी । बैठक की कार्यसूची संलग्न है ।

कृपया बैठक में भाग लेना सुविधा जनक बनाएं या अपनी ओर से उपयुक्त **प्रतिनिधि(कार्यकारी निदेशक/ मुख्य महाप्रबंधक /मुख्य अभियंता से कम नहीं**) नियुक्त करें। मीटिंग लिंक अलग से साझा किया जाएगा ।

The **54th** meeting of Technical Co-ordination Committee (TCC) of NRPC and **79th** meeting of Northern Regional Power Committee (NRPC) will be held on **30.05.2025** in **hybrid mode** at the **11:00 am in NRPC Conference Hall**, Katwaria Sarai, New Delhi. Agenda for the same is attached.

Kindly make it convenient to attend the same or depute suitable representative (**not lower than Executive Director/ Chief General Manager/ Chief Engineer**) to attend meeting on your behalf. Meeting link shall be shared separately.

भवदीय
Yours faithfully
Signed by Vijay Kumar Singh
Date: 24-05-2025 16:43:03
(V.K. Singh)
सदस्य सचिव
Member Secretary

प्रतिलिपि: एच. राजेश प्रसाद, अध्यक्ष, एनआरपीसी एवं प्रधान सचिव, पीडीडी (jkpdd9@gmail.com)

सत्यमेव जयते

उत्तर क्षेत्रीय विद्युत समिति

NORTHERN REGIONAL POWER COMMITTEE

Agenda of

54th meeting of

Technical Coordination Committee

&

79th meeting of

Northern Regional Power Committee

Date: 30th May 2025

Time: 11:00 AM

Via: Video Conferencing

Contents

Agenda for TCC & NRPC

A.1 Approval of MoM of the 53rd TCC & 78th NRPC meeting

A.1.1 The minutes of the 53rd TCC & 78th NRPC meeting (held on 16.03.2025-17.03.2025) were issued vide letter dtd. 15.04.2025.

In point no. B.7.1 of minutes of 78th NRPC meeting, due to typographical error date of existing contract GEMC-511687739668308 is mentioned as 29.07.2025 instead of 29.07.2024. The same may be read as 29.07.2024.

Decision required from Forum:

Forum may consider to approve the issued MoM with above correction.

A.2 Status of action taken on decisions of 53rd TCC & 78th NRPC meeting (agenda NRPC Secretariat)

A.2.1 Status on decisions of 53rd TCC & 78th NRPC meeting is attached as **Annexure-A.I.**

Decision required from Forum:

Status of action taken may be discussed in meeting.

A.3 Availability certification of force majeure event beyond the control of the transmission licensee for month of October-November 2024 (agenda by NRPC Secretariat)

A.3.1 Following outage of POWERGRID is under consideration:

Sr. no	Line	Outage from	Outage upto	Reason
1	TCR (500MVAR) Kurukshetra	14.10.2024 12:17 Hrs.	15.11.2024 18:00 Hrs.	For replacement of pedestal of reactor coil of Kurukshetra TCR to address the excess overheating issue in the pedestal.

A.3.2 A meeting was held on 22.01.2025 at 11 AM via VC to discuss the request of POWERGRID, NR-1 for consideration of the outages under deemed availability including the above outage. (Relevant extracts of MoM are attached as **Annexure-A.II**).

A.3.3 In the meeting held on 22.01.2025, POWERGRID requested to consider this outage under forced majeure for Reliability improvement. POWERGRID briefed following issues faced by them –

I. **Temperature Rise in Air-cored Reactor Pedestal:**

- During continuous operation, the temperature of the air-cored reactors' support pedestal observed to reach excessive high temperature of around 200˚C.
- Such high temperature is beyond the designed level of long-term operation of the reactor pedestal and support insulators.

II. Crack in MV Isolator (first time design to carry 8KA continuous under normal operation, Make-SDCEM, France) Terminals: -

- Multiple cracks were detected on the MV isolator terminals of the TCR within a short period after the initiation of normal operation.

Limitation of Design:

- TCRs utilize air-cored reactors, and due to their high rating, the size of these reactors is substantial. Upon investigation, it was found that high magnetic flux was causing the pedestal to heat up.
- (-)500MVAr TCR being installed in the MV level, normal operating current of the system is significant (8kA) which causes high tensile strength in the conductors connecting the MV isolator terminals. Such undue stress resulted in multiple cracks in the MV isolator terminals.
- (-)500MVAr TCR being the first of its kind in terms of the capacity in India, the learnings from this project are taken as reference for future upcoming TCR projects worldwide for grid stability.

A.3.4 Further, POWERGRID highlighted Corrective Actions taken as below-

- After thorough review of the matter, OEM decided to replace the existing pedestal with pedestal of a different alloy (SS pedestal from China) to avoid the overheating issues under the high magnetic flux. The temperature is now within the thermal limit of the material.
- Corrective Actions taken for MV Isolator: Upon reviewing the existing arrangement, OEM proposed a different arrangement to minimize the load distribution to the MV Isolator terminals. After the changed arrangement, no crack in any MV isolator terminal is identified till date.

- Accordingly, POWERGRID requested to consider this outage under forced majeure due to recommendation by OEM. In the meeting, it was decided to consider this outage under forced majeure. It was also decided that as outage is of more than one month, it shall be discussed in upcoming NRPC meeting for final decision as per CERC tariff regulation. Accordingly, availability certificate shall be issued.

A.3.5 Further, as per Appendix-IV of CERC (Terms & Conditions of Tariff) Regulation 2024, mentioned below:

6.For the following contingencies, the outage period of transmission elements, as certified by the Member Secretary, RPC, shall be excluded from the total time of the element under the period of consideration for the following contingencies:

i) Outage of elements due to force majeure events beyond the control of the transmission licensee. However, whether the same outage is due to force majeure (not design failure) will be verified by the Member Secretary, RPC. A reasonable restoration time for the element shall be considered by the Member Secretary, RPC, and any additional time taken by the transmission licensee for restoration of the element beyond the reasonable time shall be treated as outage time attributable to the transmission licensee. Member Secretary, RPC may consult the transmission licensee or any expert for estimation of reasonable restoration time. Circuits restored through ERS (Emergency Restoration System) shall be considered as available;

ii)…….

iii) The outage period which can be excluded for the purpose of sub-clause (i) and (ii) of this clause shall be declared as under:

i. Maximum up to one month by the Member Secretary, RPC;

ii. Beyond one month and up to three months after the decision at RPC;

iii. Beyond three months by the Commission for which the transmission license shall approach the Commission along with reasons and steps taken to mitigate the outage and restoration timeline.

A.3.6 In the meeting held on 22.01.2025, it was decided to consider outage under forced majeure. It was also decided that since outage is of more than one-month, final decision shall be taken by NRPC forum.

A.3.7 Accordingly, case is submitted for decision on availability.

Decision required from Forum:

Forum may kindly deliberate.

A.4 Implementation of Revised SHAKTI Policy and LPSC Procedures (agenda NRPC Secretariat)

A.4.1 LPSC Procedures:

A.4.1.1. Ministry of Power has notified Electricity (Late Payment Surcharge and related matters) (Amendment) Rules 2024 on 28th February 2024 (**Annexure-A.III)**.

A.4.1.2. The Rule 9 of the amendment-I to LPS rules provides as under:

Quote"

"(1) A distribution licensee shall intimate its schedule for requisitioning power for each day from each generating company with which it has an agreement for purchase of power at least two hours before the end of the time for placing proposals or bids in the day ahead market for that day, failing which the generating company, shall offer, the un-requisitioned surplus power including the power available against the declared capacity of the unit under shut down, in the power exchange, subject to the limitation of ramping and start up capability as specified by the Appropriate Commission:

Provided that if the power so offered by the generating company is not cleared in Day-Ahead Market, it shall be offered in other market segments, including the Real Time Market, in the power exchange:

Provided further that such offer of power, in the market shall be at a price not exceeding 120 per cent of its energy charge, as determined or adopted by the Appropriate Commission or calculated under the directions, issued by the Central Government, under section 11 of the Act, if applicable, plus applicable transmission charges:

Provided also that if the generating company fails to offer such un-requisitioned surplus power in the power exchange, the un-requisitioned surplus power to the extent not offered in the power exchange up to the declared capacity shall not be considered as available for the payment of fixed charges.

Unquote

A.4.1.3. NLDC, under provisions of rule 9(6) of LPS rules, issued revised procedure to *implement the provisions of the sub-rule (1) of* LPS rules vide letter dated 25th November, 2024 (**Annexure-A.IV)**. The provisions of the sub-rule (1) of LPS rules are being implemented through section-F of the said **procedure** and the same shall **applicable from 1st July, 2025** as the mock trial is extended upto 30.06.2025.

A.4.1.4. Section-F (Clause-7) of the procedure provides as under:

Quote

"*a) This section shall be applicable for all types of generating resources, except energy limited resource such as Hydro Generating Station, Energy Storage System and renewable generators which are covered under must-run rules."*

o) Any such un-requisitioned surplus power to the extent not offered in the power exchange(s) up to the declared capacity shall not be considered as available for the payment of fixed charges by the generator and the concerned RPC shall provide details regarding DC not eligible for fixed cost recovery, i.e., Monthly Non Offered Plant Availability Factor (NOPAFM), in the Regional Energy Account (REA) for the concerned month.

p) While raising the invoice for fixed cost recovery to the beneficiaries, the generating station shall consider the Monthly Non Offered Plant Availability Factor for the transaction month M, in the billing of M+2.

r) Computation of URS quantum not offered and non-recovery of fixed charges thereof as per LPS Rule 9 (1) shall be as below:

$$NOPAFM = 10000 * \sum_{i=1}^{N} \frac{NODC_i}{N\ x\ IC * (100 - Aux_n - Aux_{en})} \%$$

Unquote

A.4.1.5. In this regard, all state/private/central sector generating resources, except energy limited resource such as Hydro Generating Station, Energy Storage System and renewable generators are advised to adher to the LPS rules (Amendment), 2024 and section-F of the procedure issued by NLDC under provisions of these rules.

A.4.2 **Revised SHAKTI policy**:

A.4.2.1. Sub-Clause (ix) of the revised SHAKTI policy states:

"***Allowing Un-requisitioned Surplus in Power Markets****: This will enable sale of power generated through linkage coal in power markets. This will not only deepen power markets by increasing availability of power in power exchanges but will also ensure optimum utilization of generating stations."*

A.4.3 ***Members may take note of the following:***

- ***The provisions of the revised SHAKTI Policy (specifically Sub-Clause ix).***
- ***The extended timeline and final implementation date of Section F of the LPSC procedure.***
- ***In case any Generating Utility faces difficulty in implementing the above directives, they may contact the F&CA Division, CEA, which is the designated Nodal Division for matters related to LPS rules.***

A.5 URTDSM (Unified Real Time Dynamic State Measurement) Phase-I Cyber Security Issues (agenda by POWERGRID)

A.5.1 The URTDSM Phase 1 System was made operational from year 2018-19 onwards. The Contract was awarded in 2014. The AMC of URTDSM phase 1 system is available till Jan 2027. The various systems (IT hardware/Software) were procured in 2015-16 and are about 10 years old and most items have reached technical obsolescence.

A.5.2 The URTDSM phase-II project for replacement of these items is still under DPR stage and will take at least 3 years for implementation. Hence the URTDSM phase 1 system are to be kept functional and secure till Jan 2027 and beyond.

A.5.3 Also, CEA cyber security regulations require certain changes in the URTDSM phase 1 system architecture, which necessitates addition of few cyber security components. Also, the Auditors of cyber security have raised NCs (Non-Conformity) for this deviation. The following are the three measures proposed to resolve these issues.

I) <u>Virtual patching for Servers with Windows 2012 R2 Operating system</u>

a. Support from Microsoft for Windows2012 R2 Operating system has expired on 10th October-2023:

b. M/s GE informed that Win OS (Servers) upgrade is not feasible under current circumstances owing to following reasons:

   i. Some of the current applications will not be supported on new operating systems as GE WAMS application Roadmap is heading for different application suite i.e. GridOS WAMS

   ii. Associated applications of 3rd party tools will also not be supported on new operating systems.

c. In view of above, a system upgrade on existing infra is not feasible in current set-up.

POWERGRID explored the following alternative of Virtual patching to ensure the security of existing Windows Server until Phase-II systems which are in place:

- URTDSM WAMS System is being maintained air-gapped with perimeter protection at Firewall level and available updated Anti-virus patches for system robustness and security.
- Additionally, at HIPS level, option for Virtual patching shall take care of the obsolete Windows Server 2012 OS. Virtual patching protects operating systems and third-party applications from known vulnerabilities and protects legacy systems and end-of-life software that no longer receive updates, ensuring ongoing security and helping organizations meet compliance requirements.
- POWERGRID discussed with the OEM M/s TrendMicro and obtained budgetary quote. The OEM quoted approximately Rs. 1.50 Crores for all 500+ Servers installed in URTDSM System pan India (approximately Rs 30,000/- per Sever for 3 years license support)
- The solution is under PoC in one of the RLDCs. The cost at each control centre is **Rs.4.05 lakhs excluding GST.**

Members to deliberate and concur the proposed solution of virtual patching to address the obsolete Windows Server 2012 OS issue.

Upon concurrence from the RPC, licenses from the OEM shall be procured on Cost sharing basis.

II) <u>PMU Data Streaming through Firewall:</u>

a. There is an observation in Cyber Security Audit to stream the data from PMU to PDC through a Firewall.

b. Also, CEA Cyber Security guidelines 2021 stipulates creating of electronic security perimeter (ESP). This necessitates the requirement of streaming PMU data through firewalls at all control centres.

c. The same requirement was not envisaged in the URTDSM Phase-1 system design. Hence, M/s GE was asked to submit the techno-commercial offer for the segregation.

d. Based on the discussions in SCADA Work Group meeting in some RPCs, it was proposed to use the existing internal firewalls only (by configuring separate VLAN) for PMU data streaming instead of purchasing a new firewall. This solution also needs procurement of an additional 2 LAN switches.

e. Accordingly, based on the quotation given by GE, the cost of the solution for each Control centre is **Rs. 15.35 Lakhs excluding GST** (Services for configuring internal firewall and supply of 2 new LAN switches).

Members may deliberate and concur the above proposal to address the requirement of PMU data streaming through firewall.

III) <u>Retention of logs up to 6 months:</u>

a. There is an observation in Cyber Security Audit to retain security event logs for 6 months (180 days).

b. CEA Cyber Security Guidelines 2021 stipulates System logs need to be maintained for at least 6 months.

c. In URTDSM Phase-1 log retention was envisaged for only 1 month.

d. In view of above, POWERGRID obtained the techno-commercial offer from M/s GE which proposed 6TB additional storage requirement at each LDC to meet the log retention for 6 months.

e. The cost quoted by M/s GE for each Control Centre is **Rs. 19.35 Lakhs excluding GST**.

f. Members may deliberate and concur the proposal to procure the additional storage for Syslogs.

Summary of POWEGRID Agenda for URTDSM Phase-I AMC Issues:

S No	Description of the Issue being faced in URTDSM Phase-I AMC	Solution Proposed by POWERGRID	Tentative Cost in Rs. Lakhs excluding GST	Remarks
1.	**Windows 2012 R2 OS Obsolescence:** Support from Microsoft for Windows2012 R2 Operating system has expired for different Server applications in the URTDSM system. Microsoft declared End-of-Support for the Win2012 R2 OS and system upgrade on existing IT infra is not feasible.	To procure Virtual patching solution (Software License) from the present anti-virus OEM M/s TrendMicro (the solution protects the system from known vulnerable systems and legacy systems from any remote code execution attacks. POWERGRID budgetary of Rs. 1.5 Crores (approx.) for 3 year license support.	**4.05 per LDC**	Budgetary quote from TrendMicro
2.	**PMU Data Streaming through Internal Firewall**: As per feedback from Cyber Security audits conducted on URTDSM system and also as per CEA Cyber Security Guidelines 2021, PMU data is to be streamed through firewall at all control centers.	To stream PMU data through the internal firewall which needs following to be procured: a) 2 LAN switches (Harware) b) Configuration of Internal Firewall (Services)	**15.35 Lakhs per LDC**	Budgetary quote from M/s GE
3.	**Retention of Logs up to 6 months:** As per feedback from Cyber Security audits conducted on URTDSM system and also as per	To procure additional storage of 6TB (Hardware) for each control center to cater to the need of log retention for 6 months. Techno commercial proposal	**19.35 Lakhs per LDC**	Budgetary quote from M/s GE

	CEA Cyber Security Guidelines 2021, security event logs are to be stored for at least 6 months (existing system has provision for only 1 month logs storage)	obtained from GE.		

TOTAL Cost for NR: **Rs. 3.87 Crores for NRLDC and 9 SLDCs of NR**

Members may deliberate and concur the above three proposals for immediate augmentation of the system considering the Cyber Security issues.

Upon concurrence of RPC for cost sharing of this solution, process for award of this work shall be initiated by POWERGRID.

Status of approval in other RPCs:

POWERGRID took up the above three proposals for addressing the Cyber Security requirements for the existing URTDSM Phase-I system on Cost sharing basis in following RPCs/OCCs:

a. 52nd ERPC meeting held on 05.09.2024 – **Approved by Board**
b. 51st WRPC meeting held on 11.01.2025 – **Approved by Board**.
c. 54th SRPC Communication meeting of on 21.01.2025, further this was deliberated in the 54th SRPC meeting on 21.03.2025 – **SRPC Board Approved** Point (1) and (2).
d. 28th NERPC & TCC on 20.02.2025, further this was deliberated in 31st NE TeST meeting on 04.04.2025 & agreed for point (1) and (2). Being put up for approval in the upcoming NERPC Board meeting.
e. Discussed in 78th NRPC on 16-17Mar'25, further discussed in NR TeST Meeting on 24.03.2025 and was agreed by all members.

Decision required from Forum:

Forum may deliberate on above proposal.

A.6 Power supply position of Jammu & Kashmir and related issues (Agenda by NRLDC)

A.6.1 Jammu & Kashmir (J&K) grid being weakly connected from the rest of the grid and due to its isolated location suffers from several issues which are generally not seen in other parts of the country. Moreover, as J&K U/T generation portfolio is mostly hydro generation which is available only during summer and monsoon months and has limited availability during winter months, J&K U/T suffers from number of grid operation related challenges that are prominent in the months from Nov-Feb. Presently, a number of issues are observed during operation of J&K grid. NRLDC has also raised these issues in number of TCC/NRPC meetings previously. Recently, the issues were discussed in 52 TCC and 77 NRPC meetings held in Dec 2024.

A.6.2 Thereafter, a separate physical meeting was convened on 06.02.2025 between officers from all these utilities and NRPC sect. in Jammu which was also graced by the presence of MD, JKPTCL.

A.6.3 In the meeting, number of issues were discussed and actions required were also identified. Some of the important issues which require actions from J&K side are listed below:

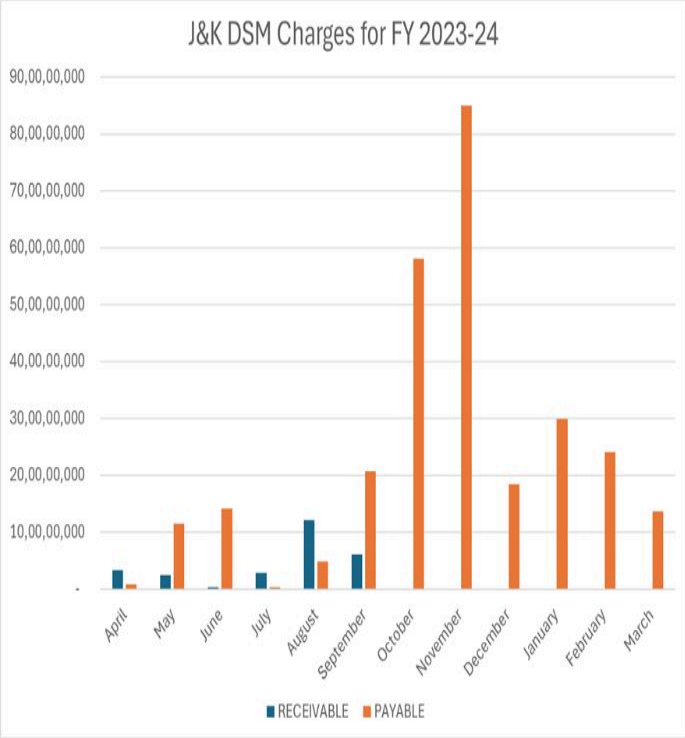
I. Power supply position in J&K:

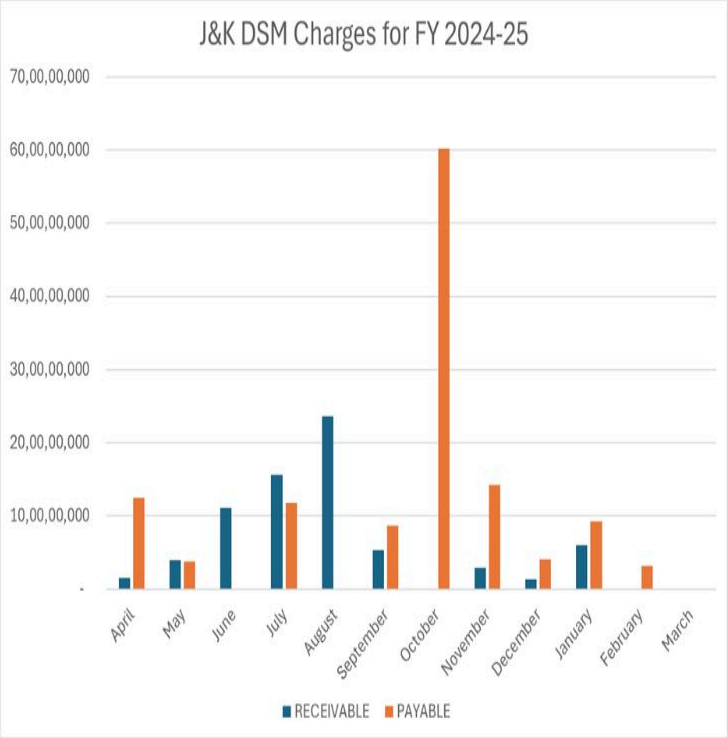
a. It is to be noted that in the past year, there have been power shortages reported in J&K when the states from the rest of the country are able to supply power and not reporting shortages. The reason for shortage in most of the occasions is either due to limited procurement of power from market which may be due to high power demand in the market or barring of J&K from trading in exchange due to payment issues.

b. There has also not been an increase in internal generation in J&K U/T for last 4-5 years, therefore the increased demand had to be met by importing higher power from interstate network.

c. Due to non-availability of internal generation during winter months, J&K imports power from interstate network. From the total imported power, it is seen that the power procurement by J&K from market is approx. 40-50% during lean season. This over dependency on day ahead/ intraday market for purchase of power is indicating that measures for ensuring resource adequacy are required at J&K end.

d. There was also considerably high over drawl by J&K U/T in the month of Oct 2024 as a result of which huge sums were payable by J&K as deviation charges. Similar pattern was observed in 2023-24 as well as 2024-25 wherein DSM charges payable by J&K were highest in the month of Oct-Nov. All India demand is on higher side in October month, therefore prices of power in market also tend to remain high, therefore J&K strategy of relying on market for power procurement may not be appropriate for this scenario.





J&K is requested to take necessary measures for improvement in transmission and distribution system so that power shortages in J&K grid can be avoided and also take measures for resource adequacy minimising dependence on day ahead market and real-time market purchases.

II. Upcoming ISTS network in J&K U/T:

a. Following are upcoming 400kV substations in J&K area:

i. 400/132kV Kishtwar (approved in 2nd NRPCTP held on 01.09.2020)
ii. 400/220kV Siot (approved in 3rd NRPCTP held on 19.2.2021)

b. JKPTCL may take up for timely implementation of intrastate transmission system at these substations in matching timeframe so that J&K can draw power from 400/132kV Kishtwar and 400/220kV Siot S/s in future. It may be noted that in earlier cases such as New Wanpoh substation, it was seen that although 400/220kV ICTs were commissioned along with 220kV line bays, the 220kV lines were not commissioned for number of years, even after availability of 400/220kV ICT for drawl of power.

c. In addition to above, presently, there is severe N-1 non-compliance issue at 400/220kV Amargarh ICTs during winter months. JKPTCL in coordination with Indigrid may expedite commissioning of additional 3rd ICT at 400/220kV

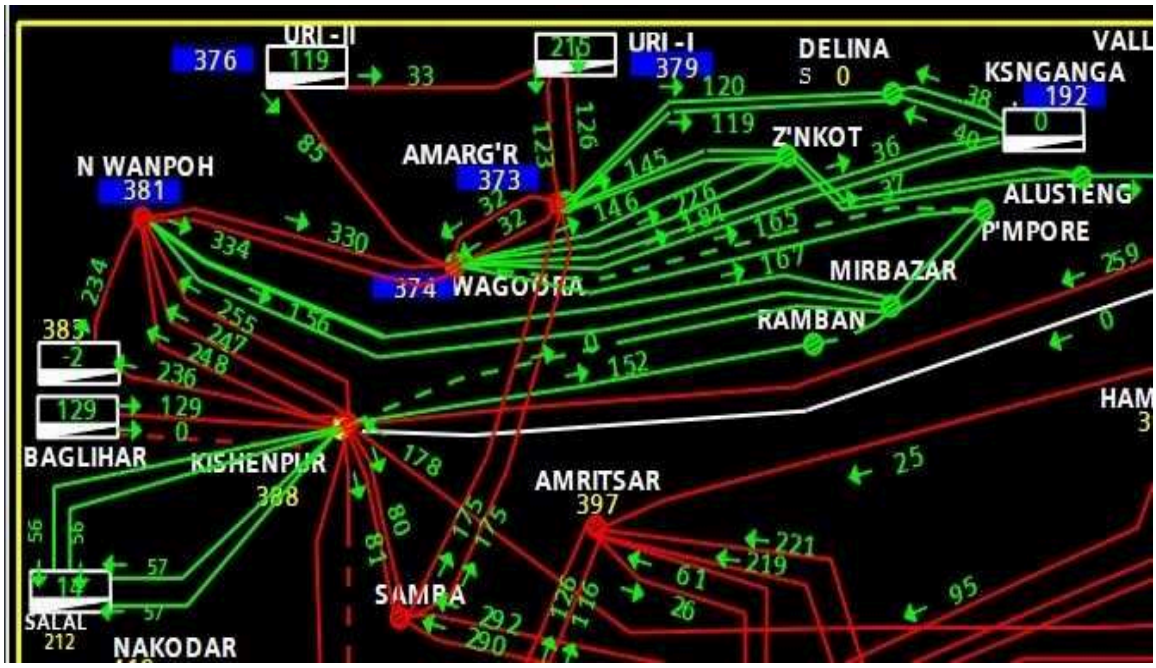
Amargarh which was approved in 16th NR-CMETS held on 28.02.2023 to resolve N-1 non-compliance related issue.

III. Low voltage issues in Kashmir valley area during winter months:

a. Kashmir valley is connected to rest of the grid through 400kV Samba and Kishenpur substations. Connectivity to the valley is mainly through following paths:

i. 400kV Kishenpur-New Wanpoh/Baglihar-Wagoora-Amargarh ckts

ii. 220kV Kishenpur-Ramban-Mirbazar-Pampore ckts



b. Further, power is being imported by J&K from 400kV Moga-Kishenpur D/C lines and 400kV Jalandhar-Samba D/C lines.

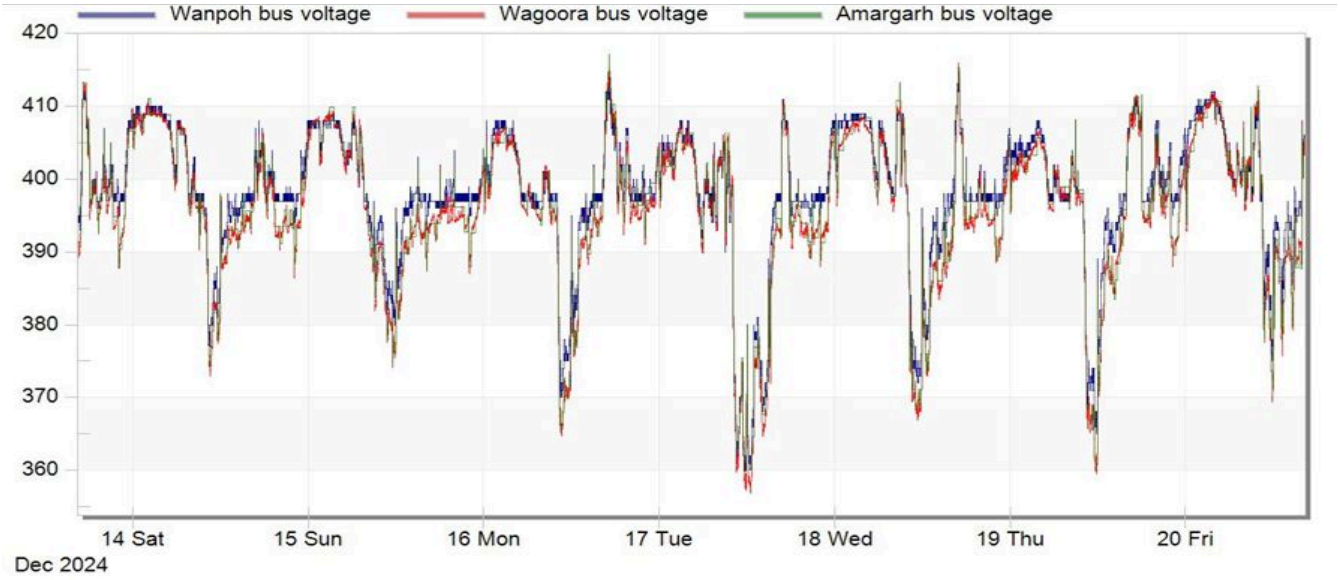
c. It is being noticed that heavy power is being drawn by 400kV lines from Moga to Kishenpur during winter months whereas the power flow on 400kV Jalandhar-Samba is not that high.

d. It has been discussed and suggested on numerous occasions earlier to J&K to plan & expedite commissioning of reactive power devices especially capacitors at lower voltage level to improve the voltage profile in valley area and also avoid large sums payable as reactive energy charges.

e. Low voltage related issues of J&K and Ladakh (UT) has been regularly shared by NRLDC with CEA and CTUIL in Grid-India's quarterly operational feedback report as well. The issue has been continuously raised in NRPC as

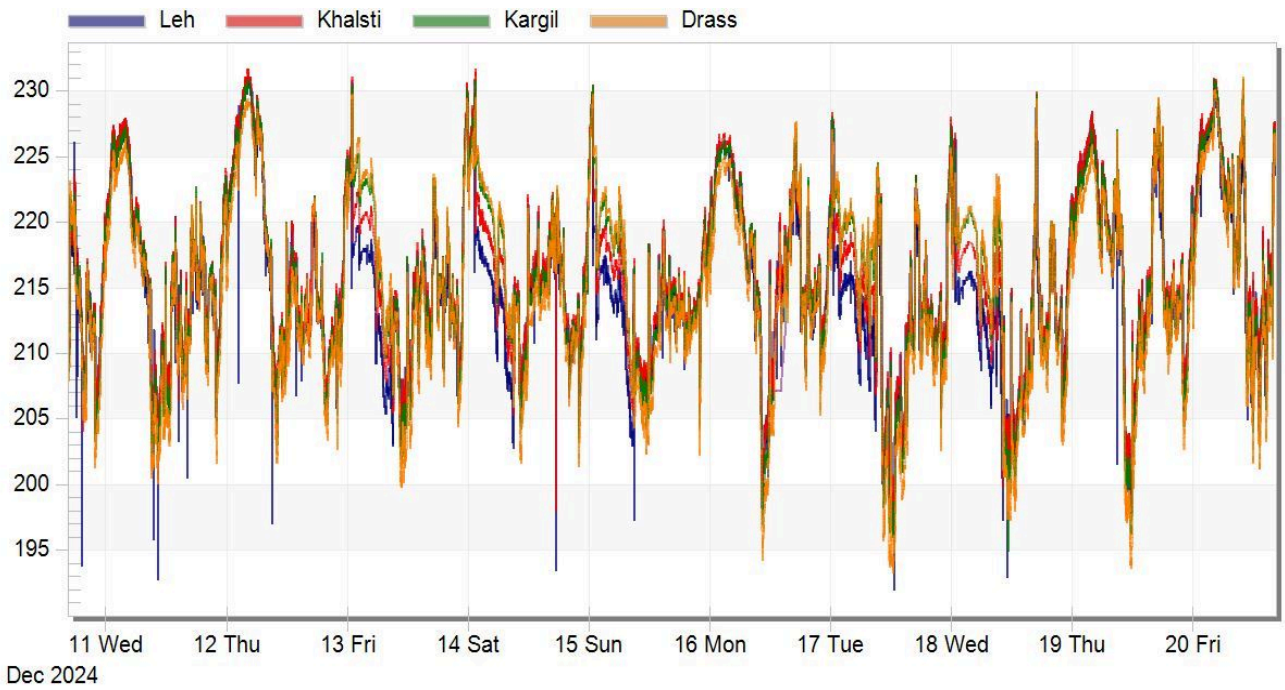
well as OCC meetings still the issues of low voltage persist in J&K especially Kashmir valley.

f. 400kV voltages are reaching 370kV at Amargarh, Wagoora and Wanpoh substations. Even the SVC at New Wanpoh is being fully utilized and no margin is available for dynamic support. Plots of 400kV bus voltages of Amargarh, Wagoora and Wanpoh substations for Dec 2024 are shown below:

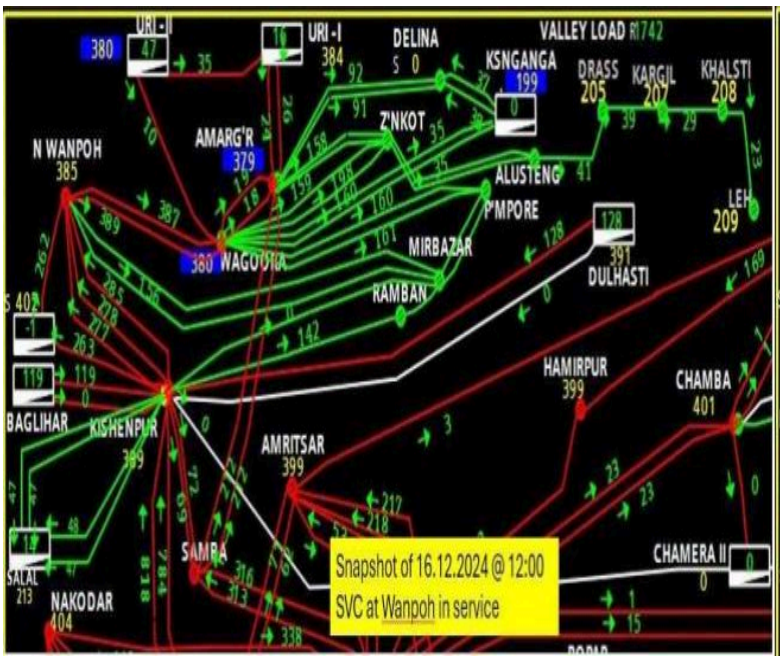


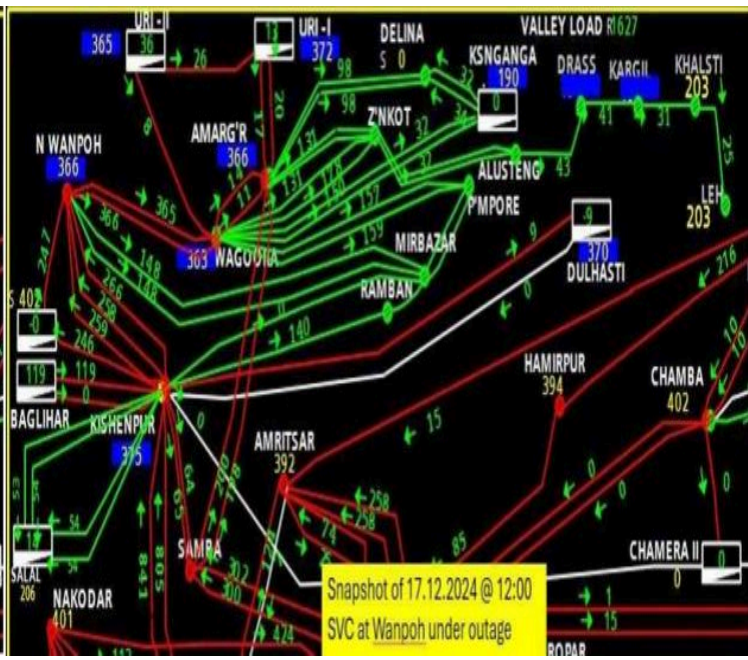
g. Pattern of MW and MVAR drawl by 400/220kV ICTs at ISTS substations such as Amargarh, Wagoora and New Wanpoh suggest, there is urgent requirement of reactive compensation in intrastate network. From the plots, it is clear that the reactive drawl is at least half of the MW drawl of 400/220kV ICTs. This increases % loading of transmission elements and also leads to low voltages in the grid. The power factor at 400/220kV ISTS substations is in range of 0.8-0.9.

h. Further, low voltages are also being observed in Ladakh area also during winter months:

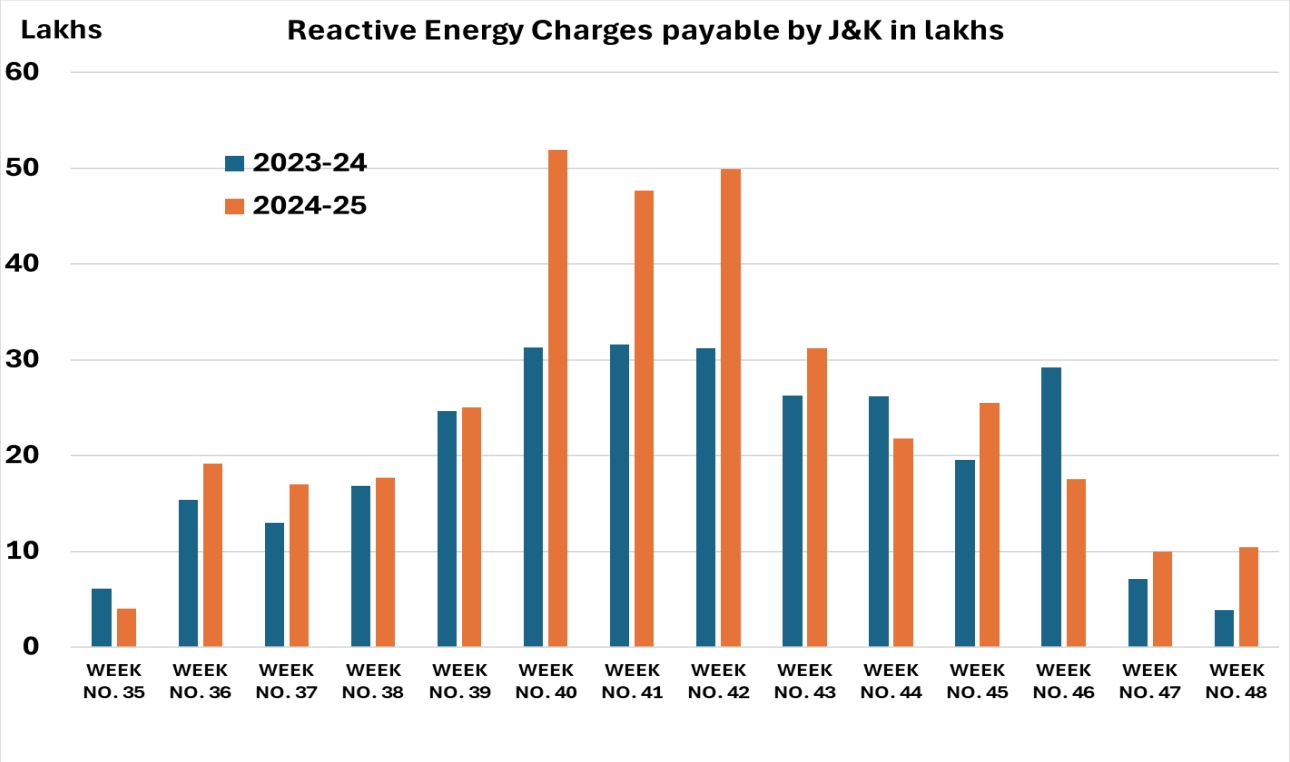


i. On one day SVC at New Wanpoh was under outage and the voltages in Kashmir valley area fell by around 15-20kV at 400kV substations.





j. In addition to the low voltage issued in grid and at consumer end, J&K also has to pay huge sums of money as reactive energy charges. Following is the amount (In Lakhs Rs) of reactive energy charges payable by J&K state in 2024-25 and 2023-24 during week no.35- week no. 48 (Dec-Feb period):



k. Considering that state is already paying huge amount of money as reactive energy charges during every winter season, the commissioning of capacitors at transmission & distribution level may be expedited to improve voltage profile as well as avoid reactive energy charges.

l. In the meeting held on 06.02.2025, it was informed from J&K side that presently no capacitors are available in Kashmir DISCOM although capacitors have been provided by industrial consumers to keep healthy power factor. It was also discussed that TCC/NRPC had recently accorded approval from forum for installation of capacitors by Rajasthan, Uttarakhand DISCOMs. The proposals were then submitted by respective states to PSDF and PSDF also had positive views of providing funds for installation of capacitor banks. PSDF funds were frozen for some time but now PSDF has started according approval for some of the schemes.

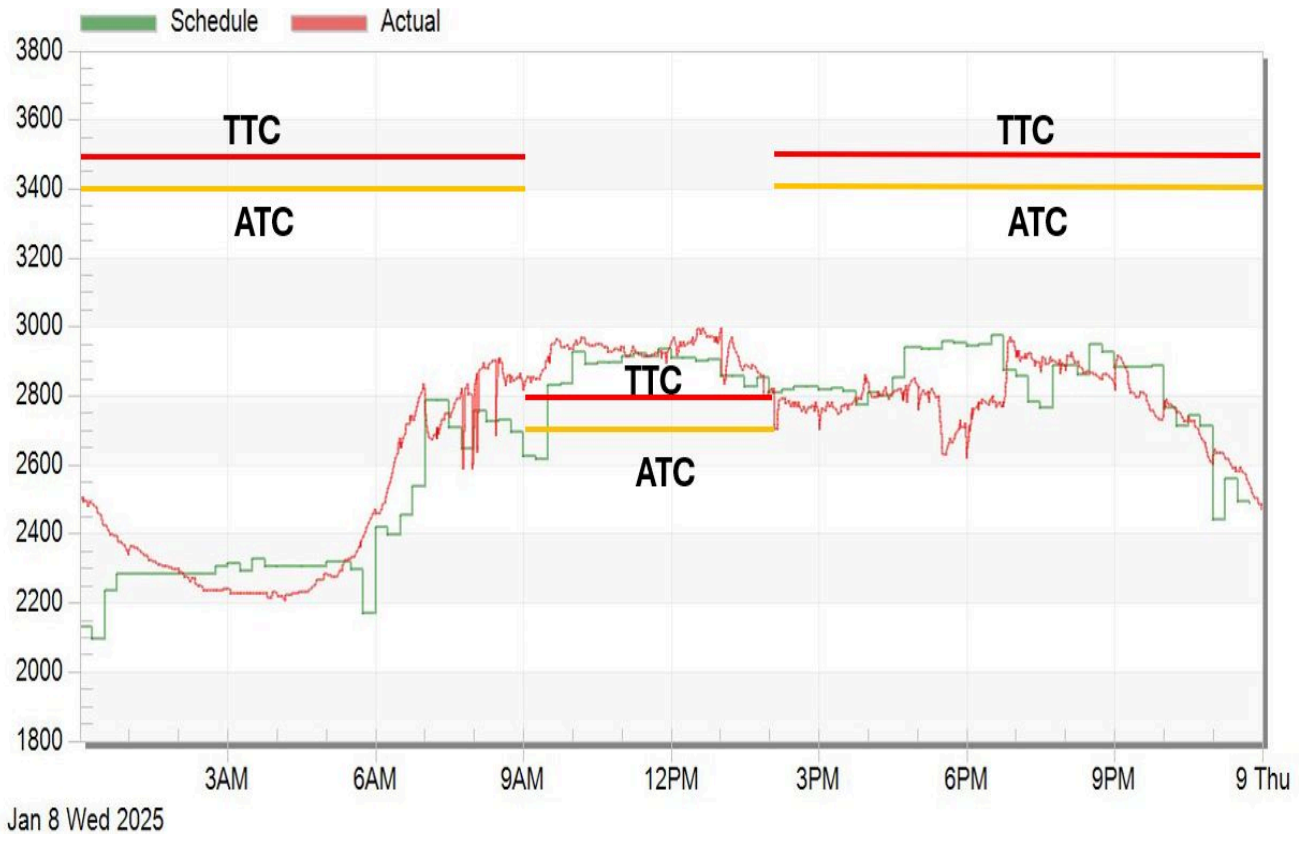
m. It may be noted that as around 700-800MVAr is being drawn by 400/220kV ICTs from Amargarh, Wagoora and New Wanpoh and 300MVAr support is being provided by New Wanpoh SVC, there seems to be requirement of nearly 1000MVAr reactive power compensation (capacitive) in Kashmir valley at transmission and distribution level in next 1-2 years. If proposal is prepared for futuristic scenario, further additional capacity as per requirement may be planned.

IV. Transfer Capability Assessment of J&K control area:

a. CERC vide their order dated 29.09.2023 has granted approval of "'Detailed Procedure for Allocation of Transmission Corridor for Scheduling of General Network Access and Temporary General Network Access under Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022" which requires SLDCs to submit network data as well as PSSE basecases on M-12, M-6, M-1 basis. The monitoring of submission of these data by SLDCs to NRLDC is being done in OCC meetings on monthly basis. It is heartening to see that after obtaining training from NRLDC, officials from J&K SLDC are regularly sharing basecases for all scenarios with NRLDC.

b. J&K SLDC is also sharing (transfer capability limit) ATC/TTC basecase on regular basis as per CERC approved procedure. However, due to low voltages during the daytime, the ATC/TTC figures for day time were recently reviewed and revised figures were communicated to J&K SLDC. Due to low voltages in Kashmir valley area, the transfer capability limits (ATC/TTC) are 2700/2800MW during 09-14hrs and 3400/3500MW for other than 09-14hrs duration.

c. Schedule and Actual violations were observed in real-time during 2025. One such sample is shown below:



d. It may be noted that as of now schedule of state control area is not being restricted to ATC, and sometimes it is crossing the assessed ATC/TTC limits. However, in future as is the case with Punjab which is separate bid area, schedule of J&K state may be restricted upto their ATC/TTC limits upon formation of separate bid area. Accordingly, expeditious actions are required from J&K side to improve the low voltages in Kashmir valley.

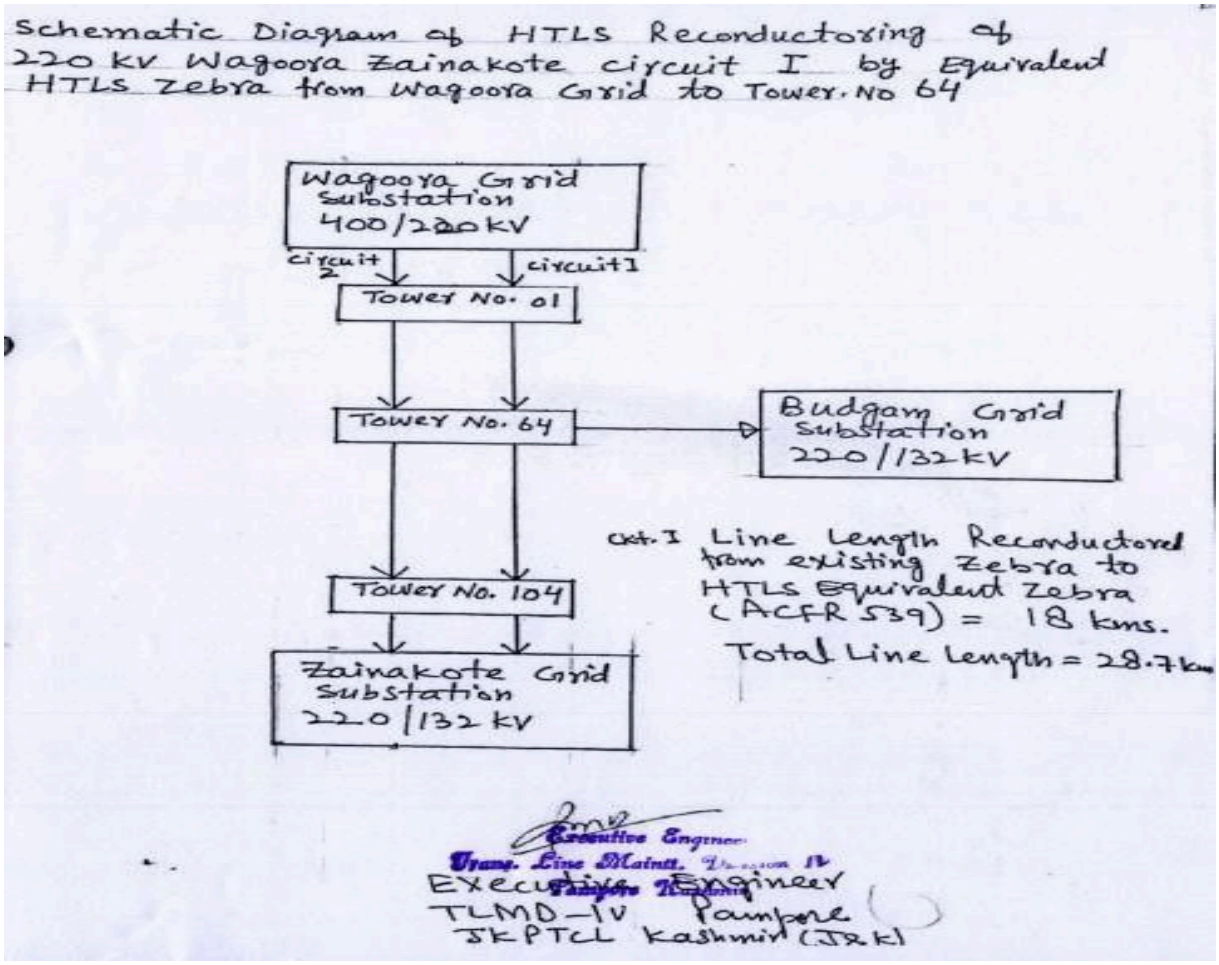
V. Removal of T-point connection of 220kV Wagoora-Ziankote line:

a. In a meeting organized by CEA on 04.10.2023 to deliberate the issue of Charging of 220 kV Wagoora- Zainakote Transmission line after re-conductoring, J&K was asked to remove the tapping of 220kV Wagoora-Ziankote line and NRPC/OCC was asked to follow up the same at RPC level. Extract of MoM of the meeting are quoted below:

"JKPTCL was requested to complete the 2nd D/c line between Wagoora-Zainakote with LILO at Budgam, at the earliest and subsequently remove the tapping of existing circuit at Budgam at the earliest."

"NRPC to be apprised about the issue, so that the same could be deliberated in NRPC/OCC forum so as to ensure that the tapping is removed at the earliest."

b. In 71 NRPC meeting held on 29.01.2024, J&K representative stated that land acquisition is in progress for one pending tower location & it is expected that the line would be charged very soon. MS NRPC stated that the line may also be included in list of follow up agenda of OCC meeting. But due to infrequent participation from J&K in OCC meeting, status is not getting updated.



c. CEA safety standards, 2023, clause 46(4) mentions that:

Quote

(4) There shall not be tapping of another transmission line from the main line for 66 kV and above class of lines:

Provided that during natural calamities, tapping may be allowed to ensure emergency power supply to affected areas till normalcy is restored.

Unquote

d. During the meeting held on 06.02.2025, Chief Engineer, JKPTCL, Kashmir informed that works were stalled due to lack of funds, but funds have been received, and work would be completed shortly. However, NHAI has requested for diversions of some towers of these lines and accordingly the work may get slightly delayed. It was assured that Loop in Loop out works would be carried out shortly and subsequently, the tapping of existing circuit at Budgam would be removed at the earliest in line with decision of CEA meeting.

VI. Single bus scheme at old 220kV substations in J&K:

a. As discussed in earlier meetings convened between NRLDC, NRPC and &K such as on 28.07.2020 & 06.02.2025, most of the 220 kV voltage level stations of PDD-J&K have only one Main and transfer bus scheme instead of double main transfer (DMT) bus arrangement and therefore bus shutdown requires shutdown of entire station which affects reliability of power supply.

b. In the meeting held on 06.02.2025, Chief Engineer, JKPTCL, Jammu stated that in 3 out of 9 new substations recently commissioned in Jammu area, there is Double Main Transfer scheme at 220kV level, however, in old substations due to space constraint new bus bar arrangement is not feasible.

c. MS NRPC and CGM NRLDC requested that to improve reliability of system JKPTCL may explore possibility of providing additional bus bar arrangement at old substations and status may be regularly updated in OCC forum. Further, in case of space constraint, bus sectionaliser option may be explored so that possibility of complete station outage could be avoided.

VII. Telemetry Issues:

a. Reliability and accuracy of SCADA data and its associated communication system is essential for monitoring and coordinating operations of a large electricity grid. It helps in visualization and management of the critical grid element failure/grid incident in real time and minimizes the possibility of any untoward incidences/disturbances.

b. Real-Time data availability from Jammu and Kashmir is very poor. There is zero visibility of data in J&K stations at J&K and NRLDC. With poor monitoring of data, it is very difficult to monitor grid in efficient manner.

c. The matter has been discussed in various TCC and TeST Meetings but there is no improvement of the same.

d. During the meeting held on 06.02.2025, JKPTCL representative informed that recently on 09.01.2025, MOP has sanctioned some amount to J&K.

e. POWERGRID representative informed that after receipt of payment from J&K, 500kM OPGW laying that is pending, would be taken up. 76 RTUs in J&K are also to be replaced. POWERGRID has written letter on 15.01.2025 to J&K, citing immediate payments be done, so that all works are started. It was also mentioned that RTU commissioning work as well as OPGW laying need to be carried out in synch with each other so that both works are completed by July 2026.

f. J&K may make balance payments to POWERGRID and POWERGRID may ensure that works for OPGW as well as RTU commissioning is carried out simultaneously so that telemetry is available at J&K SLDC and NRLDC by July 2026.

g. The agenda was also listed for discussion in 27th TEST meeting held on 21.04.2025, but could not be discussed in detail due to non-availability of representative from J&K side.

VIII. Workforce adequacy in J&K SLDC control room:

a. MoP vide communication dated 30.10.2024 had circulated Workforce Adequacy Guidelines for Load Dispatch Centres and Guidelines for deputation of Workspace from SLDCs to Grid-India for fixed terms.

   i. Workforce Adequacy Guidelines for Load Dispatch Centers will serve as a Bench-Mark for enhancing the Load Despatch Centres to ensure that LDCs are equipped with sufficient skilled manpower resources.

   ii. Guidelines for Load Dispatch Centers and Guidelines for deputation of Workspace from SLDCs to Grid focus on fostering collaboration and knowledge sharing among various SLDCs

b. The Guideline proposes the following allocation

LDCs - Workforce Staffing Norms						
SN	**Function**	**NLDC**	**RLDC**	**Large SLDC**	**Medium SLDC**	**Emerging SLDC**
System Operation						
1	System Operation - Operational Planning	18	18	18	16	9
2	Real Time Grid Operation (For SO only)	31	31	31	26	18
3	Post-Despatch	10	10	10	10	4
Sub -Total (SO)		**59**	**59**	**59**	**52**	**31**
Market Operation						
4	Open Access Administration	5	4	4	1	1
5	Market Coordination	4	4	4	3	1
6	Inter-face Energy Metering, Accounting and Settlement	10	8	8	4	1

7	Regulatory Affairs, Market Operation Planning and Coordination	7	5	5	1	1
Subtotal - MO		**26**	**21**	**21**	**9**	**4**
Logistics						
8	Logistics _Operation technology	15	14	14	8	3
9	IT Logistics	9	9	9	6	3
10	Communication Logistics	4	4	4	2	2
Subtotal - Logistics		**28**	**27**	**27**	**16**	**8**
REMC						
11	REMC Logistics	3	3	3	2	1
Cyber Security						
12	**Cyber Security**	**17**	**8**	**14**	**13**	**10**
Support Functions						
13	Contract Services	3	3	3	2	2
14	Finance and Accounts	9	9	9	5	3
15	HR & Admin	8	8	8	4	3
Subtotal -Support Functions		**20**	**20**	**20**	**11**	**8**
Grand-Total		**153**	**138**	**144**	**103**	**62**

c. J&K SLDC falls under medium SLDC category.

d. IEGC 2023 has also mandated all utilities including LDCs to perform new tasks. It has come out of discussion that with the present manpower in LDCs, it is challenging to perform all the tasks mentioned in the IEGC 2023 within the timelines provided. This point also emerged during discussion between various RLDCs/NLDC and CERC in the matter related to CERC order 9/SM/2024 dated 07.10.2024.

e. It may be noted that several reminders dated 09.04.2025, 16.04.2025, 22.04.2025 & 09.05.2025 have been sent from NRLDC side to all states in this regard.

f. Based on the guidelines issued by MoP, it is suggested that J&K SLDC ensures sufficient manpower in their control centers so that all tasks are completed in time bound manner.

g. In the meeting held on 06.02.2025, all members discussed that unavailability of skilled officers at J&K SLDC is major cause of concern.

IX. Baglihar peaking support and reactive power support:

a. Baglihar Hydropower Plant (Stage-I: 3x150 MW and Stage-II: 3x150 MW) is operating at approximately 120 MW round the clock (RTC) and occasionally ramping up to 250 MW during evening peak hours.

b. The scheduling methodology followed for ISGS Hydro plants during lean hydro period, which aims to optimize maximum generation during high-demand periods, specifically within the designated peak hours of 06:30 to 08:00 in the morning and 17:45 to 19:15 in the evening.

c. NRLDC conducted special meeting on 18.12.2024 to discuss the issue with participants from NRLDC, JKSPDC, Baglihar HEP, and SLDC-JK.

d. During the meeting, Baglihar HEP representative explained that the issue had already been brought to the attention of the OEM, who clarified that the machines are not designed to handle frequent switching on and off or cyclical load changes. Such operations could result in problems like machine vibration, increased wear and tear, and operational challenges when running at low loads.

e. It is to be noted that J&K is purchasing power heavily from the market during winter months. The prices in market are not same for all time blocks. Accordingly, if J&K can get higher power from Baglihar HEP when prices in market are higher and J&K demand is also on higher side, then it will also help to avoid purchasing power from market during high prices and provide financial benefit to the state. J&K can also sell power in market during high prices if additional peaking support is received from Baglihar HEP.

f. During meeting held on 06.02.2025, Baglihar HEP representative informed that:

   i. OEM has given written reply that machine cannot be operated with frequent on and off.

   ii. DPR was checked, wherein it has been mentioned that plant has not been designed for frequent on and off of the machine.

   iii. OEM has been asked to carry out study and provide recommendation for measures to be taken if frequent on and off of Baglihar machines are to be done.

g. MD JKPTCL asked JKSPDCL to take up the matter with OEM and discuss the matter with SLDC, NRLDC, NRPC and NHPC.

h. It was categorically explained by other members to JKSPDCL that all hydro machines are designed for frequent on/off operations and there has not been any issue at any of hydro stations.

i. JKSPDCL was asked to take up with OEM and take measures to provide peaking support from Baglihar HEP.

j. MS NRPC asked JKSPDCL to bring agenda from their side in next TCC/NRPC meeting. It was also mentioned that JKSPDCL may ask their OEM to be present in next TCC/NRPC meeting. Thereafter, if required a committee may be setup to further investigate the matter as per directions of NRPC forum.

X. Bus coupler issue at Baglihar HEP

a. Further, during the meeting held on 06.02.2025, Baglihar HEP representative had informed that bus couplers for both Stage-I and Stage-II are under prolonged outage. For bus coupler of Stage-I there is some issue with earth switch, for which LOA has been placed to M/S GE and work is expected to be completed by Nov 2025. For bus coupler of Stage-II, there is flashover, and same is under outage and OEM visit from Hyosung has been planned to attend the same as flashover was observed when it was again tried to be closed.

b. Further, based on the present scenario, it may be noted that 400kV New Wanpoh(PG)- Baglihar(JK) Ckt and 400kV Baglihar(JK)- Kishenpur(PG) Ckt-3 are under outage since 10.03.2025. Due to outage of 400kV Baglihar – New Wanpoh Line and 400kV Baglihar – Kishenpur Ckt-3, Baglihar stage-2 has been interconnected with Baglihar stage-1 through the 400kV Bus interconnector. After interconnection of stage-1 & stage-2, the complete generation of Baglihar stage-1 (450MW) & Baglihar stage-2 (450MW) is being evacuated through 400kV Baglihar Kishenpur Ckt-1 & 2. However, it has been noticed that generating units of Baglihar stage-1 are connected to one Bus and generating units of Baglihar stage-2 are connected to another Bus and the Bus Coupler has been kept open at Baglihar HEP. It is expected that in event of fault in one Bus or one transmission line, generation loss may occur at Baglihar HEP.

c. In the coming days, hydro generation at Baglihar would be at peak. Therefore, 400kV Baglihar - New Wanpoh Line and 400kV Baglihar - Kishenpur Ckt-3 are required to be restored at the earliest for safe evacuation of generation of Baglihar stage-1 & 2.

JKSPCDL may update on the actions being taken at their end.

XI. Non submission of Disturbance recorder (DR), Event logger (EL) and tripping reports of Tripping events:

a. It is to be noted that as per the IEGC provision under clause 37.2 (c), tripping report along with DR/EL has to be furnished within 24 hrs of the occurrence of the event and detail report of the event is to be submitted within a week of event. However, no DR/EL & tripping report of any have been received from J&K control area for any of the grid event till date. Field data is very much important for complete analysis of the grid events.

b. NRLDC/NRPC can suggest measures only if DR/EL data is shared with NRLDC and NRPC. DR/EL and protection related issues are discussed in protection subcommittee meetings and J&K would benefit by sharing DR/EL data with NRLDC/NRPC.

c. It is requested that DR/EL of all the trippings shall be uploaded on Web Based Tripping Monitoring System "https://postda.nrldc.in/Account/Login.aspx" within 24 hours of the events as per IEGC clause 37.2(c) and clause 15.3 of CEA grid standard.

J&K representatives are requested to share actions taken at their end on each of the above highlighted issues. Members may please discuss.

A.7 Expediting Islanding scheme testing and implementation (Agenda by NRLDC)

A.7.1 Presently, 5 number of islanding schemes have been implemented in Northern region. However, the 231 OCC meeting convened on 14.05.2025, PSTCL representative informed that RSD-Pathankote islanding scheme is presently out of service due to some control room extension works.

A.7.2 Accordingly, following islanding schemes are operational in Northern region.

i. NAPP Islanding Scheme (Uttar Pradesh)
ii. RAPP Islanding Scheme (Rajasthan)
iii. Bawana Islanding Scheme (Delhi)
iv. Unchahar Islanding Scheme(Uttar Pradesh)*

*Integration of SCADA telemetry of one station is pending

A.7.3 As per Indian Electricity Grid Code 2023 clause 29.11,

Quote

"(11) Mock drill of the islanding schemes shall be carried out annually by the respective RLDCs in coordination with the concerned SLDCs and other users involved in the islanding scheme. In case mock drill with field testing is not possible to be carried out for a particular scheme, simulation testing shall be carried out by the respective RLDC."

Unquote

A.7.4 Accordingly, a SOP was prepared from NRLDC side and discussed in 222 and 223 OCC meetings of NRPC. The SOP was accordingly approved and SLDCs were asked to carry out testing of islanding schemes as:

i. Physical Testing of UFR relays part of islanding scheme

ii. Provide updated islanding base cases for different load-generation balance scenarios (Summer: Peak/Off-peak and Winter: Peak/Off-peak) along with dynamic data of the generators in the island for conducting dynamic simulation studies

iii. Creating Islanding SCADA displays at SLDC control centers for monitoring in real-time.

A.7.5 Accordingly, the progress of above testing is being reviewed in monthly OCC meeting of NRPC. Following is present status of various actions taken for testing of islanding schemes:

Current Status

Scheme	UFR testing done	Basecase shared	SCADA display made
NAPP Islanding scheme (UP)	Yes	Yes	Yes*
RAPP Islanding scheme (Raj)	Yes	Yes	No
Bawana Islanding scheme (Delhi)	No	Yes	Yes

A.7.6 Further, a meeting was also convened under MS, NRPC on 10.05.2025 to discuss testing of islanding schemes. In the meeting MS NRPC advised SLDCs to take actions to maintain load-generation balance of Island system so as to ensure safe islanding in case of requirement.

A.7.7 Accordingly, SLDCs are advised to maintain the island load at approximately 90% of the respective island generation. Based on current generation figures:

i. NAPP: Generation ~190 MW → Target Load ≤ 170 MW
ii. RAPP: Generation ~350 MW → Target Load ≤ 315 MW
iii. Bawana: Generation ~300 MW → Target Load ≤ 270 MW

A.7.8 The Lucknow-Unchahar islanding scheme was submitted as operational; however, some SCADA integration work is still pending. UP SLDC/UPPTCL/NTPC are requested to carry out mock test of this scheme as well and ensure that the island load is maintained at approximately 90% of the island generation for enhancing probability of island survival.

A.7.9 Further, six number of islanding schemes are under implementation stage in Northern region. It is to be noted that these schemes were approved from TCC/NRPC side at least 2-3 years ago, however, their implementation is still pending.

S. No.	Scheme Name	Approval
1	Lalitpur-Agra Islanding Scheme (UP)	71st NRPC meeting held on 29.01.2024
2	Jodhpur- Rajwest- Barmer Islanding Scheme (Rajasthan)	60th NRPC meeting held on 30.11.2022
3	Suratgarh Islanding Scheme (Rajasthan)	
4	Patiala-Rajpura Islanding Scheme (Punjab)	
5	Kullu-Manali-Mandi Islanding Scheme (HP)	
6	Shimla-Solan Islanding Scheme (HP)	

A.7.10 Concerned state utilities are also requested to expedite implementation of above islanding schemes.

Decision required from Forum:

Members may please discuss and advise the concerned for urgent action.

A.8 Mock black-start testing of capable generating units (Agenda by NRLDC)

A.8.1 Early System restoration during partial and complete blackout is extremely important for grid resiliency. As per part of this resiliency, the mock testing has been mandated by Indian Electricity Grid Code (IEGC-2023) Clause 34.3 as quoted below:

Quote

"Detailed procedures for restoration post partial and total blackout of each user system within a region shall be prepared by the concerned user in coordination with the concerned SLDC, RLDC or NLDC, as the case may be. The concerned user shall review the procedure every year and update the same. The user shall carry out a mock trial run of the procedure for different sub-systems including black-start of generating units along with grid forming capability of inverter based generating station and VSC based HVDC black-start support at least once a year under intimation to the concerned SLDC and RLDC. Diesel generator sets and other standalone auxiliary supply source to be used for black start shall be tested on a weekly basis and the user shall send the test reports to the concerned SLDC, RLDC and NLDC on a quarterly basis."

Unquote

A.8.2 Communications have already been sent to constituents through NRLDC letter dated 24.04.2024 & 24.02.2025 for conducting mock black start exercise of hydro/gas generating stations and black start facilities in their control area. Continuous follow up is also being done in OCC & PSC meetings since May 2024. Mock black start exercise has been conducted at some of the ISGS and state controlled generating stations however it is yet to be conducted at other black start capable generating stations. List of the black start capable generating stations along with the status of mock black start exercise is attached as **Annexure-A.V.**

A.8.3 Regional entity generating stations and SLDCs are requested to conduct the dead bus charging / mock black start exercise of generating stations / sub-systems in their respective control areas and share the report of the same. The generating stations where mock black start exercise has not been conducted since Jan 2024, are requested to conduct the mock drill at the earliest. Constituents are also requested to share the test report of diesel generators / auxiliary supply on a quarterly basis.

Decision required from Forum:

Members may please discuss and advise the concerned for requested actions.

A.9 Actions taken based on committee recommendation report on 17th June load loss event (Agenda by NRLDC)

A.9.1 On 17th June 2024, a grid event occurred at 13:53 hours in the Northern Region, leading to a substantial load reduction of approximately 16.5 GW. This event started with the tripping of both bipoles of the +/-800 kV HVDC Champa (WR) – Kurukshetra (NR) link, which was transferring 4500 MW of power from the Western Region (WR) to the Northern Region (NR). The tripping of this HVDC link triggered a series of events. There

was a sudden voltage drop across the stations in the Northern region which resulted in a significant load drop of around 16.5 GW in the Northern region. There was simultaneous reduction of around 2800 MW of RE-based generation in the Rajasthan RE complex. There was also tripping of conventional generating units leading to a generation loss of 3909 MW at the all India level. The significantly higher load loss resulted in the rise in frequency of the Indian power system from 50.03 Hz to 50.68 Hz. The load drop resulted in a rise in the voltages of stations in the Northern region. This high voltage resulted in the tripping of 18 nos. of EHVAC lines in the Northern Region on over-voltage protection. The power system was normalised after the revival of all the poles of HVDC Champa-Kurukshetra by 15:51 Hrs.

A.9.2 A Committee under the Chairmanship of Member (GO&D), CEA with members from CEA, IIT-Delhi, NRPC, NLDC, NRLDC, POWERGRID, SLDC Delhi & DISCOMs was set up to analyse the above-mentioned issues during which about 16.5 GW of consumer load in Northern Region got interrupted for a brief period.

A.9.3 The committee recommended the following remedial measures for avoiding the recurrence of such grid event for which actions taken are yet to be received from utilities:

i. **Reactive Power Management (Dynamic/Static) by STU and DISCOMs:** In order to maintain voltage stability, reactive power support is desired from all grid connected utilities without leaning over each other so as to ensure minimum reactive exchange at different voltage levels.

ii. **Planning for dynamic reactive power sources near load centers based on load composition:** Adequate static/dynamic reactive devices may be planned at the distribution level near loads so that there is minimum drawl from reactive sources at the transmission (STU) level. The dynamic reactive power sources shall be commissioned near load centre stations based on the composition and quantum of individual load type.

iii. **Enhance reliability of HVDC Link: Committee recommended POWERGRID to the followings**

   a. Review of protection schemes to avoid frequent outages.
   b. Review of transmission line design including cross arms, jumpers, etc.
   c. Design of filter switching logic to support system voltage.

A.9.4 The above agenda point was also discussed in 75th NRPC Meeting held on 28 August 2024 through online mode. Forum acknowledged the sensitivity of event and directed the concerned to take appropriate actions based on the recommendations of Committee.

A.9.5 Thereafter, the actions that were to be taken from states/POWERGRID side were reiterated from NRLDC side in 53rd TCC and 78th NRPC Meetings held in March 2025.

A.9.6 The agenda was also discussed in 229, 230 and 231 OCC meetings held recently, wherein NRLDC representative requested STUs/SLDCs/POWERGRID to provide update on the actions taken at their end based on committee recommendations.

A.9.7 During OCC meeting discussions, MS NRPC asked POWERGRID representative to share action taken report on the issues that were attended in HVDC Champa-Kurukshetra poles.

A.9.8 MS NRPC stated that NRPC had also formed a committee to review overvoltage settings as per committee recommendation of 17th June event. The overvoltage settings implementation is being taken up in protection subcommittee meeting and utilities are being asked to implement the approved settings at the earliest.

A.9.9 OCC forum discussed that it seems that actions on other recommendations listed at s.no. (i) & (ii) have not been taken from STU/SLDC side. In this case, there is likelihood of low voltages in the grid again during summer 2025.

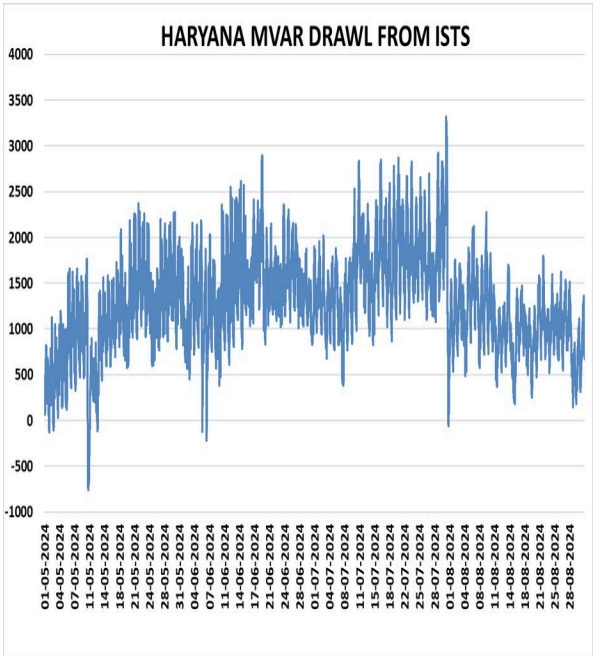
A.9.10 In case no major capacitor banks are added before summer, and as NR load is projected to rise to 98GW during this summer season, therefore there is high probability of low voltages during upcoming summer season.

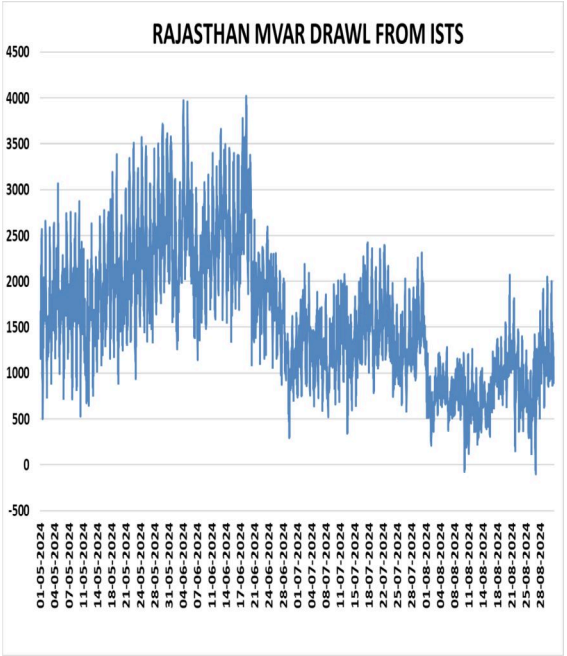
A.9.11 Two incidents of multiple pole tripping of HVDC Champa-Kurukshetra in March 2025 due to issues in protection, control and communication system. POWERGRID was requested to rectify the issues to avoid unwanted tripping due to maloperation of protection, control and communication system.

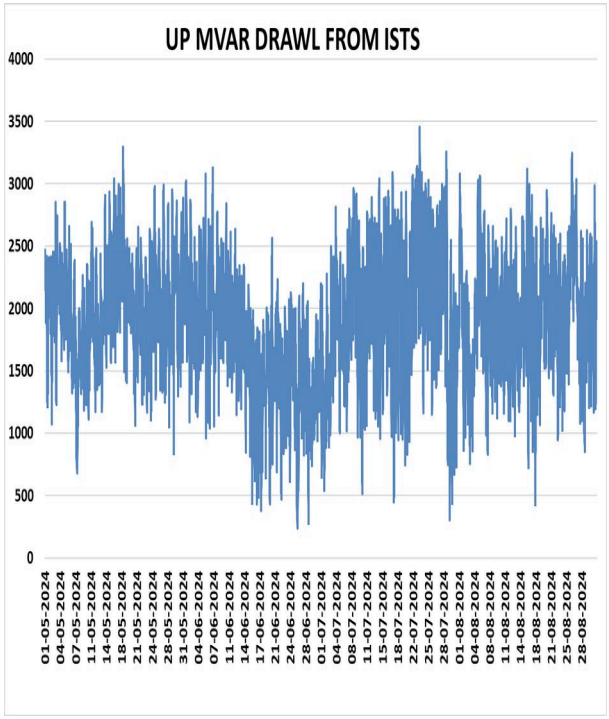
A.9.12 OCC asked all STUs and SLDC to ensure maximum reactive power support at underlying network to minimize low voltage issues during summer season.

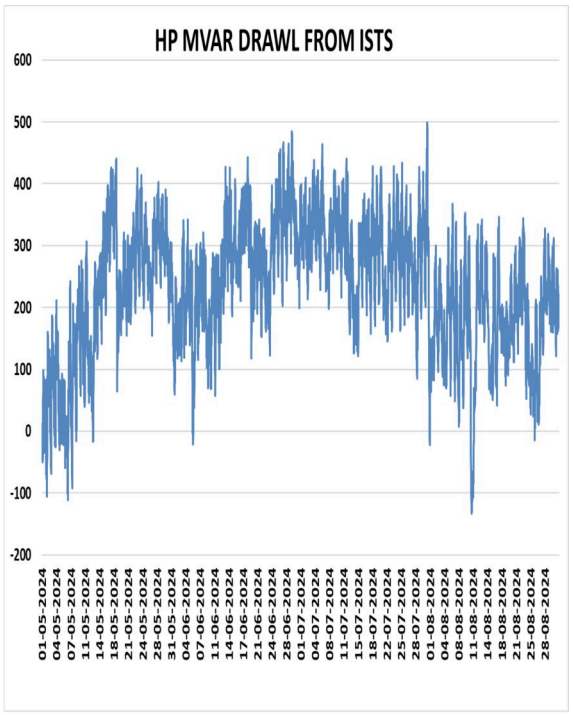
A.9.13 It is well known that during summer months, reactive power requirement by load also increases due to increased cooling and pumping requirement. Due to lack of sufficient compensation at distribution and transmission level, huge reactive power is being drawn from ISTS network. Due to this high reactive power requirement during day-time and high loading of existing transmission lines from RE complex, low voltages are seen in the grid during afternoon time. Sample snapshot of low voltage observed in the grid during summer 2024 is shown below:

A.9.14 Reactive power drawl by states (based on SCADA data available at NRLDC) during May-Jul months is shown below where it can be clearly seen that there is huge MVAR drawl by some of the states such as Haryana, Rajasthan, HP and UP during these months. These huge MVAR drawl leads to low voltages in the grid especially during the day-time as there is high agricultural as well as cooling load requirement during this time.









A.9.15 In view of no progress being reported in OCC meetings, concerned members are once again requested to provide update on the actions taken at their end for s.no. (i) & (ii) of committee recommendations.

Decision required from Forum:

Forum may deliberate on above proposal.

A.10 Line outages in Rajasthan State control area (Agenda by NRLDC)

A.10.1 Planned outage of 400 KV Bhadla-Merta and 400 KV Bhadla-Jodhpur was also facilitated on Rajasthan request for the work of Shifting / Height raising work for Jodhpur Ring Road project of NHAI. SLDC Rajasthan had agreed to revive these transmission lines from Bhadla (Raj) after availing only 01 day of continuous shutdown on 04.05.2025 the shutdown was extended citing bad weather condition and the lines were revived on 09.05.2025.

A.10.2 Moreover, multiple EHVAC transmission line outages were under outage in the Rajasthan Control Area in the first week of May 2025. Tower collapse of 400 KV Jaisalmer-Barmer (RS) D/C line and 400 KV Bhinmal (PG)-Barmer (RS) (RS) D/C line have also been reported. The transmission lines under outage in Rajasthan Control Area are major RE generation evacuating and load serving lines. The outage of a large no of EHV transmission lines is a matter of serious concern in view of grid security.

Sl. No.	Transmission Line	Outage Date	Outage Time	Reason for Outage

1	400 kV Jaisalmer-Barmer Ckt-1	01-05-2025	21:05	Tower Collapse at 12 locations
2	400 kV Jaisalmer-Barmer Ckt-2	01-05-2025	21:05	Tower Collapse at 12 locations
3	400 kV Bhinmal-Barmer Ckt-1	05-05-2025	04:14	Tower Loc. no. 101 (DA+9) collapsed.
4	400 kV Bhinmal-Barmer Ckt-2	05-05-2025	04:14	Tower Loc. no. 101 (DA+9) collapsed.

A.10.3 It is to be noted that prolonged outage of these lines, RE generation had to be restricted and was curtailment on few occasions. Following was the amount of RE curtailment done in May 2025 due to line outages in Rajasthan.

S. No.	Date	Maximum Intrastate RE curtailment (MW)
1	06.05.2025	450
2	07.05.2025	410
3	08.05.2025	205
4	09.05.2025	185

A.10.4 In addition to this, due to outage of lines listed in the table above, the inter-connection of Bhinmal (POWERGRID) station at 400 kV level was lost and as an interim measure, the bypass arrangement of 400 kV Kankroli-Zerda line at Bhinmal had to be removed by NRLDC/WRLDC/NLDC.

A.10.5 The list of 400 kV lines in Rajasthan that remained under prolonged outage due to tower collapse in the last five years is enclosed as **Annexure-A.VI**. It can be clearly seen that in several cases, the restoration time of these transmission elements is beyond 30 days stipulated in CERC Standard of Performance Regulations for plain terrain.

A.10.6 RRVPNL is requested to take following measures for safe evacuation of RE generation and reliable grid operation:

i. Expedite restoration of transmission lines under forced outages where tower collapse/damages have not been reported.
ii. Adequate patrolling team and maintenance team to be deployed for quick restoration works.
iii. Revival of EHV transmission lines on ERS towers to be explored for safe evacuation of RE generation and for facilitating any planned/emergency shutdown in the complex.
iv. Periodic review of operation and maintenance of the transmission system is required to avoid the repeated tripping.

v. Carry out load shifting, RE optimization for preventing any cascade tripping of remaining transmission elements.

Decision required from Forum:

Members may please discuss & advise RRVPNL to adopt suitable measures.

A.11 Non-Payment of Legacy Due (Agenda by NRLDC)

A.11.1 Hon'ble CERC has approved "Detailed Procedure for recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Account" (effective from 15.10.2024) for recovering the deficit in the pool for the period prior to 16.09.24 (Legacy dues). In line with the approved procedure, NLDC had published statement namely "Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for period prior 16.09.2024 (Legacy Dues)" dated 11.11.2024, specifying the All-India deficit of Deviation and Ancillary Services Pool Accounts and per instalment amount to be paid by the drawee DICs.

A.11.2 According to the approved procedure, total deficit would be recovered in 20 instalments.

A.11.3 NLDC vide letter dated 03.03.2025, revised the total instalment for NLDC Statement for Legacy Dues dated 11.11.2024 and Instalment no 17 is partially adjusted / reduced and instalment no 18,19 & 20 are fully adjusted / reduced (waive off) due to revised assessment of the respective regional deviation and ancillary pool account.

A.11.4 Due date of 17th instalment already over. Consolidated status of legacy due recovery is tabulated below:

Sr. No.	DIC	Total Pending Due (17 Instalments)	Amount per Instalment	Amount to be recovered till 15-05-2025 (17th Instalments)	No. of Instalments paid till date (out of 17)	Total Amount Recovered so far	Amount Pending
1	UP	2,21,54,28,122	13,42,68,371	2,21,54,28,122	**0**	-	**2,21,54,28,122**
2	Haryana	1,37,90,93,447	8,35,81,421	1,37,90,93,447	17	1,37,90,93,447	-
3	Rajasthan	1,21,56,20,687	7,36,73,981	1,21,56,20,687	17	1,21,56,20,687	-
4	Punjab	1,21,13,14,764	7,34,13,016	1,21,13,14,764	17	1,21,13,14,764	-
5	Delhi	1,06,75,69,074	6,47,01,156	1,06,75,69,074	17	1,06,75,69,074	-

6	J&K	45,37,33,599	2,74,99,006	45,37,33,599	**0**	-	**45,37,33,599**
7	Uttarakhand	32,29,38,743	1,95,72,045	32,29,38,743	17	32,29,38,743	-
8	Himachal Pradesh	22,39,41,630	1,35,72,220	22,39,41,630	17	22,39,41,630	-
9	Chandigarh	7,02,86,255	42,59,773	7,02,86,255	17	7,02,86,255	-
10	Railway	3,75,94,937	22,78,481	3,75,94,937	17	3,75,94,937	-
11	POWERGRID HVDC	18,27,887	1,10,781	18,27,887	17	18,27,887	-
12	NFL	4,38,999	26,606	4,38,999	17	4,38,999	-
Total		**8,19,97,88,141**	**49,69,56,857**	**8,19,97,88,141**		**5,53,06,26,420**	**2,66,91,61,721**

A.11.5 From the above table, Uttar Pradesh and Jammu & Kashmir is not paying any instalments. In this regard, NRLDC has already written letters to Uttar Pradesh and J&K. Copy of all these communications is attached as **Annexure-A.VII.**

A.11.6 As per the procedure, If payments by the drawee DICs are delayed beyond ten (10) days from the instalment due date, the drawee DICs shall be liable to pay simple interest @ 0.04% for each day of delay from the 11th day onwards, and the interest statement for the same will be published by respective RPCs.

A.11.7 It is once again requested to Uttar Pradesh and J&K to kindly expedite the payment of legacy dues.

Decision required from Forum:

Forum may deliberate on above proposal.

A.12 Non-Payment of of Pool Deficit Recovery charges against NLDC statement dated 13/01/2025 (Agenda by NRLDC)

A.12.1 Hon'ble CERC has approved "Detailed Procedure for recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Account" (effective from 15.10.2024) for recovering the deficit in the pool from 16.09.24 onwards till 31.03.2026. According to the procedure, NLDC shall publish the deficit recovery statement of Net shortfall Recovery only when the cumulative shortfall amount exceeds Rs. 100(Hundred) crores in the assessment period.

A.12.2 In line with the approved procedure, NLDC had published first statement (Bill-01) namely "Net Deviation & Ancillary Services Pool Account, Pool Deficit Recovery Statement dated 13.01.2025 for the duration of 16.09.2024 to 22.12.2024. NRLDC has already communicated to all the DICs and according to the procedure payment to be done within 10 days otherwise there is simple interest liability of 0.04% per day. DIC wise details of the payment status are tabulated below:

Sr. No.	DIC	Pool Deficit Recovery for period 16.09.2024 to 22.12.2024	Amount Collected	Amount Pending
		Bill-01 dated 13/01/2025		
1	UP	17,83,89,832	-	17,83,89,832
2	Haryana	10,80,12,969	10,80,12,969	-
3	Rajasthan	8,73,40,336	8,73,40,336	-
4	Punjab	10,02,86,228	10,02,86,228	-
5	Delhi	8,28,27,277	8,28,27,277	-
6	J&K	2,92,27,885	-	2,92,27,885
7	Uttrakhand	2,26,53,683	2,26,53,683	-
8	Himachal Pradesh	1,30,37,356	1,30,37,356	-
9	Chandigarh	53,59,428	53,59,428	-
10	Railway	28,09,384	28,09,384	-
11	POWERGRID HVDC	1,42,669	1,42,669	-
12	NFL	33,916	33,916	-
Total		**63,01,20,963**	**42,25,03,246**	**20,76,17,717**

A.12.3 The payments are yet to be received from Uttar Pradesh and J&K. Uttar Pradesh is the major defaulters as it contributing almost 28% of the total recovery charges.

A.12.4 It is requested to Uttar Pradesh and J&K to kindly expedite the payment.

Decision required from Forum:

Forum may deliberate on above proposal.

A.13 Non-Payment of Deviation & Reactive Energy Charges by J&K (Agenda by NRLDC)

A.13.1. NRLDC is operating and maintaining the "Northern Region Pool Account" for deviation charges, Reactive Energy Charges and Congestion Charges in accordance with provisions under various CERC Regulations. As per Regulations the payment to the statutory pool account have high priority and the concerned utilities are required to pay the indicated amounts within 10 days of issue of weekly energy account by NRPC secretariat. In this regard, the payment of deviation charges and Reactive energy charges of J&K is long pending. Last payment received from JKPCL in the pool account was on 09.02.2024. Total outstanding dues of J&K are as follows:

i. **DSM Charges: ₹ 100,98,04,922/-**
ii. **Reactive Energy Charges: ₹ 78,28,585/-**
iii. **Total Outstanding of J&K: ₹ 150,05,94,991.00**

A.13.2. It is to be noted that Non-receipt of payment from J&K leads to non-payment to the receivable entities of Northern Region.

A.13.3. In this regard, NRLDC has already sent various communications to J&K. This agenda was also raised in Special meeting with J&K on 06 Feb 2025 but there is no update about the payment. J&K representative kindly update the status and share the firm commitment date of the payment.

Decision required from Forum:

Member may like to discuss.

A.14 Expediting commissioning of 500MVA ICT-4 at Allahabad(PG) by POWERGRID (Agenda by NRLDC)

A.14.1. Northern Region demand is in rising trend with the onset of peak summer season and maximum demand met is hovering around 80-83 GW for the past few days. Uttar Pradesh demand has also been rising rapidly and reached the season's high of ~ 30 GW on 20.05.2025. Uttar Pradesh demand is further forecasted to reach ~ 33 GW in June 2025.

A.14.2. During high drawl by UP state control area, constraints are seen at various 400/220kV ICTs. N-1 non-compliance of ICT loading at Allahabad PG has already been flagged at various forums. To address this, new 500MVA ICT-4 was approved in 20th NR CMETS held on 30.06.2023. Since the ICT commissioning was expected to take time, SPS was approved by NRPC and implemented as interim measure to avoid complete load loss/cascade tripping in the area.

A.14.3. In view of importance of 500MVA ICT-4 at Allahabad(PG), NRLDC has been continuously raising the issue in various TCC/NRPC and other meetings also. The previous discussions and timelines provided by POWERGRID for commissioning of 500MVA ICT-4 at Allahabad(PG) are mentioned below:

a. 50th TCC & 74th NRPC Meeting (28-29 June 2024): Timeline of Feb 2025 given by POWERGRID

b. Meeting held on 9 July 2024 under MS NRPC for shifting of Rihand-III to NR: Timeline of Feb 2025 given by POWERGRID

c. 52nd TCC & 77th NRPC Meeting (27-28 December 2024): POWERGRID had requested for diversion of 500MVA spare ICT from Lucknow to Allahabad in view of Kumbh Mela. The shifting proposal was agreed and POWERGRID was asked by GRID-INDIA and UPPTCL to expedite commissioning of 500MVA ICT-IV before summer 2025 in view of high demand of UP state during summer 2025.

d. 53rd TCC & 78th NRPC Meeting (16-17 March 2025): Timeline of commissioning was given as before summer 2025 by POWERGRID

A.14.4. However, as per recent discussion held in 231 OCC meeting on 14.05.2025, it emerged that works for new ICT-4 at Allahabad(PG) are in progress, however new ICT will take few more months for commissioning.

A.14.5. Presently, 400/220kV Allahabad ICTs loading has reached maximum level of 300 MW each on ICT-1 & 2 and 283 MW on ICT-3 on 20.05.2025 and it was a near miss for the SPS operation which would have led to outage of 220 KV Allahabad-Rewa Road Line-I & II

A.14.6. Further, in the 53rd TCC and 78th NRPC meetings, approval was granted by forum for shifting of NTPC Rihand stage-III generating station to the Northern Region based on requirement during high demand season during summer/monsoon 2025 & 2026 upon discussion in OCC forum/separate meeting by NRPC. Accordingly, a meeting was convened under MS NRPC on 22.05.2025, and the shifting exercise is proposed to be carried out in last week of May 2025. The transfer capability i.e. NR import would then be enhanced by about 2600 MW and would benefit all the Northern Region states in

scheduling power from other regions to meet higher demand in Summer. However, as already deliberated in previous meetings the loading on Allahabad PG 315 MVA ICTs would increase further by 30 MW on each ICT after shifting of NTPC Rihand stage-III to Northern Region.

A.14.7. In view of the above it is suggested that POWERGRID takes intensive measures to commission the 500 MVA ICT at the earliest for keeping the Allahabad ICT loading within safe limits.

Decision required from Forum

Members may please discuss.

A.15 Presentation on Monetization of Transmission Assets- Capital recycling of robust Grid (agenda by CEA)

A.15.1. E&C, CEA vide letter dated 24.02.2025 (enclosed as **Annexure-A.VIII**) has mentioned that Guiding Principles for Monetization of Transmission Assets in the Public Sector through Acquire Own Maintain Transfer (AOMT) based Public Private Partnership model issued by the Ministry of Power on 3 October, 2022.

A.15.2. Monetization of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed to new projects, thus fast-tracking new infrastructure creation. India has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as Infrastructure Investment Trusts (InvlTs) and PPP based models [Toll Operate Transfer (TOT), Operation, Management and Development Agreement (OMDA) etc.] to monetize assets such as toll roads, transmission assets, pipelines and telecom.

A.15.3. A one day "Workshop on Monetization of Transmission Assets" was organised by Central Electricity Authority in collaboration with PFCCL, PGInvIT and NIIF on 06.12.2024 at NRPC Conference Room, Katwaria Sarai, New Delhi-110016. The workshop was a huge success and was attended by senior level participants from more than 20 State/UTs and representatives of Central Ministries/Departments. The workshop focused on key strategies for unlocking value in brownfield transmission assets. E&C wing, CEA has shared the outcome document highlighting the focus area of discussion and way forward (**Annexure-A.IX**)

A.15.4. E&C wing, CEA has submitted that in order to take forward the engagement with the states, a presentation will be delivered in the meeting.

Decision required from Forum:

Members may please deliberate.

Agenda for NRPC

B.1 Status of Expenditure incurred during Quarter-4 of FY 2024- 25 from NRPC Fund (agenda by NRPC Secretariat)

B.1.1 As per the Standard Operating Procedure (SOP) for budgeting and expenditure of RPCs in pursuance to the MoP letter dated 23.02.2006, NRPC has finalized its annual Internal Budget for FY 2024-25 and got it approved by Forum in 72nd NRPC meeting held on 30.03.2024. In line with the budget finalized, status of actual expenditure incurred (INR 1,81,91,118) during Quarter-1 of FY 2024-25 was apprised in 75th NRPC meeting held on 28.08.2024, status of actual expenditure incurred (INR 1,54,03,071) during Quarter-2 of FY 2024-25 was apprised in 76th NRPC meeting held on 25.10.2024 and status of actual expenditure incurred (INR 1,45,53,289) during Quarter-3 of FY 2024-25 was apprised in 78th NRPC meeting held on 17.03.2025.

B.1.2 Further, Status of actual expenditure incurred during Quarter-4 of FY 2024-25 (All figures in Rs.) is as follows:

Account Head	**Budget Estimate for FY 2024-25**	**Remarks/ Booking of Expenditure during Q4/FY 2024-25**	**Total Expenditure during Q4/FY 2024 25**	**Total Expenditure FY 2024-25**
Salary	1,75,00,000	Salary bills	26,57,433	1,62,69,354
Rewards	55,264	Bonus for Group-C Employees	0	55,264
Allowances	1,43,00,000	HRA, DA etc	20,25,642	1,20,77,005
LTC	5,17,000	LTC	74,889	5,05,832
Medical Treatment	10,00,000	Cost of Medical Treatments	16,888	11,40,005
Training	5,00,000	Training Expenses of NRPC Officials	2,82,840	6,94,596
DTE	15,00,000	Domestic tour expense	6,34,431	15,81,251
OE	1,00,00,000	Office expenditure-Recurring expenses of salary of contractual staff, AMC and other bills.	43,45,320	1,47,10,429

RRT	4,00,000	Rent rate and Taxes-One time expense of property tax.	0	1,70,534
Digital Equipment	5,00,000	Digital equipment (cartridges, Hard Disks, pen drive etc.)	2,23,062	12,69,899
Repair and Maintenance	1,50,00,000	ARMO, Civil & Electrical works in NRPC Complex through CPWD, AMC of IT Maintenance.	49,76,956	61,37,983
Other Revenue Exp.	7,00,000	Hospitality and other similar bills (Mobile, Newspaper Bills etc)	1,05,350	3,85,371
Machinery and Equipment	15,00,000	Machinery and equipment like lift etc.	0	34,11,082
IT & Computer Applications etc	3,00,000	Cyber Security and Hybrid VC projects and other related works.	5,41,756	6,79,170
Furniture and fixtures	15,00,000		23,97,089	28,40,311
NRPC Reimbursement FY 2023-24 (Salary and allowances expenses from 01/01/2024 to 29/02/2024)			0	43,73,128
Total	**6,85,00,000**		**1,82,81,656**	**6,63,01,214**

B.1.3 Total Expenditure incurred for FY 2024-25 is Rs. 6,63,01,214.

Decision required from Forum:

Submitted for information of NRPC members.

B.2 Bank Interest earned in the "NRPC Fund" account (agenda by NRPC Secretariat)

B.2.1 Central Electricity Authority, Ministry of Power had issued the Standard Operating Procedure (SOP) for budgeting and expenditure of RPCs in pursuance to the MoP letter dated

23.02.2006 in which it was directed that activities of RPCs will be fully financed by constituent members. SOP was deliberated and adopted in the 66th NRPC meeting held on 30.05.2023.

B.2.2 As per the above SOP, there is a separate bank account in the name of "NRPC Fund" in a nationalized bank.

B.2.3 As appreciable amount always remains in the "NRPC Fund". As per the observations of Audit Team, the Multi Option Deposit Scheme (MODS) was enabled so that optimum interest would be earned. As on 31.03.2025, a total of Rs 5,75,426/- & Rs 25,65,730 /- have been earned as interest in FY 2023-24 & FY2024-25 respectively.

B.2.4 The interest earned in NRPC Fund is taxable and TDS is being deducted by the bank. The annual return for interest income in NRPC Fund shall be filed as per Income Tax rule.

B.2.5 It is proposed that the interest earned in "NRPC Fund" may be retained in the same fund & an appropriate adjustment may be made in the annual budget prepared for the subsequent year at present and also in future.

Decision required from Forum:

NRPC members may kindly approve.

B.3 Imprest fund under head 'NRPC Guest House Charges' for upkeep of NRPC guest house (Agenda by NRPC Secretariat)

B.3.1 In 51st TCC & 76th NRPC Meeting (25th October, 2024) (extract of relevant portion attached), NRPC Board/Forum approved the proposal to open a new bank account in name of 'NRPC Guest House Charges'.

B.3.2 After deliberation, followings were decided in the said meeting:

*i) Forum approved the proposal to open a new bank account in name of '**NRPC Guest House Charges'**.*

ii) Guests may be facilitated with UPI payments for guest house charges.

iii) 50% of collected charges (monthly basis) may be deposited to Government Exchequer and remaining 50% may be kept retained in bank account of 'NRPC Guest House Charges'.

iv) Fund available in 'NRPC Guest House Charges' may be used for upkeep of guest house. In case of non-availability of fund in 'NRPC Guest House Charges', expenses may be incurred from NRPC Fund also.

v) The above-approved proposals shall be effective from 01.11.2024.

B.3.3 In this regard, it is intimated that above bank account is functional now and guest are making payment through UPI, minimizing the cash handling for guest house charges. To meet day to day expenses pertaining to minor maintenance, consumables, and other incidental requirements, the Member Secretary, NRPC, has sanctioned an imprest fund of ₹10,000

under the budget head "NRPC Guest House Charges." This fund is intended to cover routine upkeep and day-to-day operational contingencies of the NRPC Guest House. The imprest fund shall be withdrawn by DDO, NRPC and hand over to Services Circle of NRPC, looking after day to day works of NRPC Guest House.

Decision required from Forum:

NRPC members may kindly note that an imprest of ₹10,000 under the head "NRPC Guest House Charges has been created. This imprest fund is intended to cover routine upkeep and day-to-day operational contingencies of the NRPC Guest House.

Forum may like to approve the above proposal of NRPC Secretariate.

B.4 Foreclosure of Contract No. GEMC-511687711249042 Dated 3rd July 2025 for hiring of Electric Vehicle on wet lease (agenda by NRPC Secretariat)

B.4.1 Earlier NRPC Forum approved the proposal for hiring of one EV Vehicle for official use of Member Secretary, NRPC as per the entitlement of GoI. Accordingly, Electric Vehicle (1 No. Tata Nexon EV, Registration No. DL12GD4577) was hired on wet lease from GENSOL EV LEASE PRIVATE LIMITED through GeM as per Contract no. GEMC-511687711249042 Dated 3rd July 2025 from 01-08-2024 to 01-08-2029 at a value of Rs 48,49,500/- for 5 years.

B.4.2 Subsequently, a letter (no. Ref No.: NRPC/GEVL/EV/0205) dated 02.05.2025 (letter attached at **Annexure-B.I**) from GENSOL EV LEASE PRIVATE LIMITED has been received with request of foreclosure of Contract No. GEMC-511687711249042 Dated 3rd July 2025 and conveying that the company is unable to continue the services under this contract due to their financial situation. The Electric Vehicle is currently hypothecated with IDFC Bank Limited. Following options are suggested in the letter:

A. Option 1 – Buyback by NRPC: NRPC may kindly consider buying back the vehicle directly from IDFC Bank by settling the outstanding book value, after adjusting the principal and interest amounts paid till date.

B. Option 2 – Refinancing by NRPC: NRPC may opt to refinance the vehicle from IDFC Bank based on the outstanding book value, and subsequently take over the repayment through monthly EMIs directly to the bank.

C. Option 3 – Return of Vehicle: NRPC may return the vehicle, allowing IDFC Bank to repossess and liquidate the asset in the open market to recover the remaining dues.

Decision required from Forum:

It is proposed that the above vehicle may be returned to the Service Provider as company has become bankrupt and the present contract may be foreclosed. Further, a new EV vehicle for official use of Member Secretary, NRPC may be hired through GeM as per earlier approval of NRPC Forum.

Members may kindly deliberate and decide.

B.5 Incoming and Outgoing members of NRPC/TCC Forum (agenda by NRPC Secretariat)

B.5.1 The list of incoming and outgoing members of NRPC is enclosed as given below:

Sl. No.	Particulars	Outgoing Member	Incoming Member
1	NRPC, Chairman	Shri Rajiv Sood Managing Director, HPPTCL	Shri H Rajesh Prasad Principal Secretary to Government Power Development Department, J&K
2	TCC, Chairperson	Shri Manoj Upreti Director (Operations), HPSEBL	Smt. Roheela Wani Managing Director, JKPTCL
3	Haryana Discom	Uttar Haryana Bijli Vitran Nigam Limited	Dakshin Haryana Bijli Vitran Nigam Limited
4	Rajasthan Discom	Jodhpur Vidyut Vitran Nigam Limited	Ajmer Vidyut Vitran Nigam Limited
5	Uttar Pradesh Discom	Paschimanchal Vidyut Vitaran Nigam Limited	Purvanchal Vidyut Vitaran Nigam Limited
6	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)	TATA POWER RENEWABLE	Transition Cleantech Services Private Limited
7	Private Distribution Company in region (alphabetical rotational	Noida Power Company Limited	Tata Power Delhi Distribution Limited

	basis)		
8	Private transmission licensee (nominated by central govt.)	Fatehgarh Bhadla Transmission Limited	Gurgaon Palwal Transmission Limited
9	Electricity Trader (nominated by central govt.)	NTPC Vidyut Vyapar Nigam Limited	Power Trading Corporation of India Limited

NRPC Forum acknowledge the contributions of the outgoing members with deep gratitude and welcome all the new Members in TCC/NRPC Forum.

B.6 Overhaul and AMC of Existing Energy Accounting Software of NRPC for year 2025-27 (agenda by NRPC Secretariat)

B.6.1 **Need and Justification**

The existing Energy Accounting Software currently used at NRPC was developed over a decade ago and has seen incremental updates under AMC arrangements to incorporate changes in CERC regulations. Over time, this approach has led to several structural and operational issues that now pose a serious risk to energy accounting and maintainability:

- **Code Entanglement and Legacy Logic:** The current energy accounting software has evolved over more than a decade through incremental updates, resulting in a highly entangled codebase. Due to the absence of abstraction layers and modular design, new logic often has to be force-fitted into existing structures, making debugging and even minor revisions time-consuming and error-prone. This has led to repeated patchwork fixes and growing technical debt, severely limiting agility in responding to regulatory changes.
- **Lack of Modularity:** Modules like REA, DSM, and RTDA rely on outdated hardcoded values (e.g., normative PLF at 85%) that no longer align with current regulations. Any code update often requires similar changes at multiple locations, increasing the risk of inconsistency and errors. This non-modular structure hinders timely updates and complicates routine account revisions.
- **Reactive Energy Computation Bottlenecks:** Reactive energy accounting is handled entirely through complex stored procedures, resulting in inefficient processing, high lead times, and limited flexibility for revisions.
- **Non-Integrated Support Modules:** The Interest and Pool Status applications operate independently of the core ABT-based modules. This siloed architecture necessitates extensive manual intervention and is a key reason why interest accounts have not been issued in the past three years.
- **Inadequate Handling of Emerging Entities:** The system lacks adaptable data structures to accommodate evolving regulatory constructs such as QCAs, which are now integral to scheduling and metering frameworks.

- **UAS Timeline and Need for Interim Continuity:** While the Unified Accounting Software (UAS) is under development, its full transition—including tendering, development, parallel run, and validation—is expected to take 2 to 2.5 years. Until then, the legacy system must continue to operate reliably and remain compliant with evolving regulatory requirements.

B.6.2 **Proposal (2-Year AMC with Overhaul Component)**

The contract should cover both the overhaul (one-time) and maintenance (ongoing AMC) functions under a single Scope of Works–based agreement.

- Two (2) full-time Resident Engineers to be deployed during the first year, responsible for executing both overhaul and regular maintenance activities, with the following qualifications:
- From the second year onward, a reduced deployment of one (1) Resident Engineer may be retained to provide ongoing L1/L2/L3 support, including incorporation of regulatory changes and bug resolution.
- A dedicated Development and Testing server should be procured and commissioned, having minimum 12-core CPU, 32 GB ECC RAM, and sufficient storage, with licensed Windows Server and SQL Server Standard Edition, to replicate the production environment and facilitate safe, parallel testing.

B.6.3 **Cost-Estimates:**

Cost-Estimates for Overhaul and AMC of Existing Energy Accounting Software of NRPC for year 2025-27 including cost of Resident Engineers and Server along with OS and DB licenses are worked out to be ₹ 39,73,000/-

Decision required from Forum:

Members may kindly deliberate and decide.

B.7 Hosting of next Physical Meeting of TCC/NRPC Forum (agenda by NRPC Secretariat).

B.7.1 As discussed in the 78th NRPC meeting, the next physical meeting of TCC/NRPC shall be jointly hosted by *MEIL Anapara Energy Ltd & Prayagraj Power Generation Company Ltd(PPGCL). The date & venue shall be finalized by NRPC Secretariate in consultation with Chairperson, NRPC.*

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NRPC Members for FY 2025-26

S. No.	NRPC Member	Category	Nominated/ Notified/Delegated Member	E-mail
1	Member (GO&D), CEA	Member (Grid Operation & Distribution), Central Electricity Authority (CEA)	Member (GO&D), CEA	member.god@cea.nic.in
2	NLDC	National Load Despatch Centre	Director (System Operation)	rk.porwal@grid-india.in
3	NRLDC	Northern Regional Load Despatch Centre	Executive Director	mkagarwal@grid-india.in
4	CTUIL	Central Transmission Utility	Chief Operating Officer	ashok@powergrid.in
5	PGCIL	Central Government owned Transmission Company	Director (Operations)	naveensrivastava@powergrid.in
6	NTPC	Central Generating Company	Director (Finance)	jaikumar@ntpc.co.in
7	BBMB		Chairman	cman@bbmb.nic.in
8	THDC		CGM (EM-Design)	rrsemwal@thdc.co.in
9	SJVN		CMD	sectt.cmd@sjvn.nic.in
10	NHPC		Director (Technical)	sadhikari@nhpc.nic.in
11	NPCIL		Director (Finance)	df@npcil.co.in
12	Delhi SLDC	State Load Despatch Centre	General Manager	gmsldc@delhisldc.org
13	Haryana SLDC		Chief Engineer (SO&C)	cesocomml@hvpn.org.in
14	Rajasthan SLDC		Chief Engineer (LD)	ce.ld@rvpn.co.in
15	Uttar Pradesh SLDC		Director	directorsldc@upsldc.org
16	Uttarakhand SLDC		Chief Engineer	anupam_singh@ptcul.org
17	Punjab SLDC		Chief Engineer	ce-sldc@punjabsldc.org
18	Himachal Pradesh SLDC		Managing Director	mdhpsldc@gmail.com
19	DTL	State Transmission Utility	CMD	cmd@dtl.gov.in
20	HVPNL		Managing Director	md@hvpn.org.in
21	RRVPNL		CMD	cmd.rvpn@rvpn.co.in
22	UPPTCL		Managing Director	md@upptcl.org
23	PTCUL		Managing Director	md@ptcul.org
24	PSTCL		CMD	cmd@pstcl.org
25	HPPTCL		Managing Director	md.tcl@hpmail.in
26	IPGCL	State Generating Company	Managing Director	md.ipgpp@nic.in
27	HPGCL		Managing Director	md@hpgcl.org.in
28	RRVUNL		CMD	cmd@rrvun.com
29	UPRVUNL		Director (Technical)	director.technical@uprvunl.org
30	UJVNL		Managing Director	mdujvnl@ujvnl.com
31	HPPCL		Managing Director	md@hppcl.in
32	PSPCL	State Generating Company & State owned Distribution Company	CMD	cmd-pspcl@pspcl.in
33	DHBVN	State owned Distribution Company (alphabetical rotational basis/nominated by state govt.)	Managing Director	md@dhbvn.org.in
34	Ajmer Vidyut Vitran Nigam Ltd.		Managing Director	MD.AVVNL@RAJASTHAN.GOV.IN
35	Purvanchal Vidyut Vitaran Nigam Ltd.		Managing Director	nomination awaited(md@puvvnl.in)
36	UPCL		Managing Director	md@upcl.org
37	HPSEB		Managing Director	md@hpseb.in
38	Prayagraj Power Generation Co. Ltd.	IPP having more than 1000 MW installed capacity	Head (Commercial & Regulatory)	sanjay.bhargava@tatapower.com
39	Aravali Power Company Pvt. Ltd		CEO	brahmajig@ntpc.co.in
40	Apraava Energy Private Limited		CEO	niraj.gupta@apraava.com
41	Talwandi Sabo Power Ltd.		COO	Vibhav.Agarwal@vedanta.co.in
42	Nabha Power Limited		CEO	sk.narang@larsentoubro.com
43	MEIL Anpara Energy Ltd		COO & WTD, Executive Director	anandkumar.singh@meilanparapower.com arun.tholia@meilanparapower.com
44	Rosa Power Supply Company Ltd		Station Director	Hirday.tomar@relianceada.com
45	Lalitpur Power Generation Company Ltd		Managing Director	vksbankoti@bajajenergy.com
46	MEJA Urja Nigam Ltd.		CEO	hopmeja@ntpc.co.in
47	Adani Power Rajasthan Limited		Head, Thermal, O&M	Kanti.Biswas@adani.com
48	JSW Energy Ltd. (KWHEP)		Head Regulatory & Power Sales	jyotiprakash.panda@jsw.in
49	Transition Cleantech Services Private Limited	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)		nomination awaited(pkanaujia@evrenenergy.com)
50	UT of J&K	From each of the Union Territories in the region, a representative nominated by the administration of the Union Territory concerned out of the entities engaged in generation/ transmission/ distribution of electricity in the Union Territory.	Chief Engineer, JKSPDCL/JKPDD	cejkpcl2@gmail.com/sojpdd@gmail.com
51	UT of Ladakh		Chief Engineer, LPDD	cepdladakh@gmail.com
52	UT of Chandigarh		Executive Engineer, EWEDC	elop2-chd@nic.in
53	NVVN	Nodal Agency appointed by the Government of India for coordinating cross-border power transactions	NVVN and PTC are two nodal agencies in Northern Region. Since PTC is already a member in this year for trader category, it is listed at serial no. 56.	ceonvvn@ntpc.co.in
54	TPDDL	Private Distribution Company in region (alphabetical rotational basis)	Head-Commercial	nomination awaited(ceo.office@tatapower-ddl.cpm)
55	Gurgaon Palwal Transmission Limited	Private transmission licensee (nominated by central govt.)	AVP-O&M	nomination awaited (harsh.shah@indigrid.com)
56	PTC	Electricity Trader (nominated by central govt.)	CEO	cmd@ptcindia.com
57	ReNew Power Private Limited	RE Generating Company having more than 1000 MW installed capacity	CEO	sumant@renew.com
58	NTPC Green Energy Limited		CEO	rajivgupta@ntpc.co.in
59	Azure Power India Pvt. Limited		CEO	sunil.gupta@azurepower.com
60	Avaada Energy Private Limited		CEO	kishor.nair@avaada.com
61	Adani Green Energy Limited		COO	chaitanya.sahoo@adani.com

List of addressee (via mail)

TCC Members for FY 2025-26

S. No.	TCC Member	Category	Nominated/ Notified/Delegated Member	E-mail
1	Managing Director, JKPTCL	Chairperson, TCC	Smt. Roheela Wani Managing Director, JKPTCL	mdjkptcl1@gmail.com
2	Member (GO&D), CEA	Member (Grid Operation & Distribution), Central Electricity Authority (CEA)		cegm-cea@gov.in
3	NLDC	National Load Despatch Centre		susha@grid-india.in
4	NRLDC	Northern Regional Load Despatch Centre	Executive Director	mkagarwal@grid-india.in
5	CTUIL	Central Transmission Utility	Chief Operating Officer	ashok@powergrid.in
6	PGCIL	Central Government owned Transmission Company	ED, NR-I	aloksharma99@powergrid.in
7	NTPC	Central Generating Company	Regional ED, NR	rednr@ntpc.co.in
8	BBMB		Member (Power)	mp@bbmb.nic.in
9	THDC		GM (EMD)	neerajverma@thdc.co.in
10	SJVN		Director (Projects)	de.sectt@sjvn.nic.in
11	NHPC		ED (O&M)	hod-om-co@nhpc.nic.in
12	NPCIL		Outstanding Scientist & ED (commercial)	nrchoudhary@npcil.co.in
13	Delhi SLDC	State Load Despatch Centre		nomination awaited
14	Haryana SLDC		Chief Engineer/SO & Comml.	cesocomml@hvpn.org.in
15	Rajasthan SLDC			nomination awaited
16	Uttar Pradesh SLDC		Chief Engineer (PSO)/Chief Engineer (C&S)	cepso@upsldc.org
17	Uttarakhand SLDC			nomination awaited
18	Punjab SLDC		Chief Engineer	ce-sldc@pstcl.org
19	Himachal Pradesh SLDC			nomination awaited
20	DTL	State Transmission Utility	Director (Operation)	dir.opr@dtl.gov.in
21	HVPNL		Director (Projects)	directorprojects@hvpn.org.in
22	RRVPNL		Chief Engineer (PP&D)	ce.ppm@rvpn.co.in
23	UPPTCL		Director (Planning & Commercial)	director_comm@upptcl.org
24	PTCUL		Chief Engineer	ce_oandmk@ptcul.org
25	PSTCL		Director / Technical	dir-tech@pstcl.org
26	HPPTCL		GM (C&D)	gmcd.tcl@hpmail.in
27	IPGCL	State Generating Company	Director(Tech.)	corporate.ppcl@gmail.com
28	HPGCL		Director/Technical	dirtech@hpgcl.org.in
29	RRVUNL		Dy. Chief Engineer	dyce.elect.katpp@rrvun.com
30	UPRVUNL		Director (Technical)	director.technical@uprvunl.org
31	UJVNL		General Manager	kkjaiswal99@gmail.com
32	HPPCL		Director (Electrical) General	dir_elect@hppcl.in gm_elect@hppcl.in
33	PSPCL	State Generating Company & State owned Distribution Company		nomination awaited
34	DHBVN	State owned Distribution Company (alphabetical rotational basis/nominated by state govt.)		directoroperations@dhbvn.org.in
35	Ajmer Vidyut Vitran Nigam Ltd.		Director (Tech.), AVVNL, Ajmer	DT.AVVNL@RAJASTHAN.GOV.IN
36	Purvanchal Vidyut Vitaran Nigam Ltd.			nomination awaited
37	UPCL		Director (P)	dpupcl29@gmail.com
38	HPSEB			nomination awaited
39	Prayagraj Power Generation Co. Ltd.	IPP having more than 1000 MW installed capacity	Head – Commercial & Regulatory	Sanjay.bhargava@tatapower.com
40	Aravali Power Company Pvt. Ltd		CEO	brahmajig@ntpc.co.in
41	Apraava Energy Private Limited			nomination awaited
42	Talwandi Sabo Power Ltd.		Dy. Head O&M	ravinder.thakur@vedanta.co.in
43	Nabha Power Limited			nomination awaited
44	MEIL Anpara Energy Ltd		COO & WTD, Executive Director	anandkumar.singh@meilanparapower.com arun.tholia@meilanparapower.com
45	Rosa Power Supply Company Ltd		VP-Technical Services	Niranjan.Jena@relianceada.com
46	Lalitpur Power Generation Company Ltd		GM Electrical	aupadhyay.ltp@lpgcl.com
47	MEJA Urja Nigam Ltd.		GM (O&M)	piyushkumar@ntpc.co.in
48	Adani Power Rajasthan Limited		AVP	Manoj.taunk@adani.com
49	JSW Energy Ltd. (KWHEP)		Head of Plant	kaushik.maulik@jsw.in
50	Transition Cleantech Services Private Limited	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)		nomination awaited
51	UT of J&K	From each of the Union Territories in the region, a representative nominated by the administration of the Union Territory concerned out of the entities engaged in generation/ transmission/		nomination awaited
52	UT of Ladakh			nomination awaited
53	UT of Chandigarh			nomination awaited
54	NVVN	Nodal Agency appointed by the Government of India for coordinating cross-border power transactions		nomination awaited
55	TPDDL	Private Distribution Company in region (alphabetical rotational basis)		nomination awaited
56	Gurgaon Palwal Transmission Limited	Private transmission licensee (nominated by central govt.)		nomination awaited
57	PTC	Electricity Trader (nominated by central govt.)		bikramsingh@ptcindia.com
58	ReNew Power Private Limited	RE Generating Company having more than 1000 MW installed capacity		nomination awaited
59	NTPC Green Energy Limited			nomination awaited
60	Azure Power India Pvt. Limited			nomination awaited
61	Avaada Energy Private Limited			nomination awaited
62	Adani Green Energy Limited			nomination awaited

Special Invitees:

1. Smt. Rishika Saran, Member Secretary, NPC, Sewa Bhawan, R. K. Puram, New Delhi-66 [Email-cenpc-cea@gov.in]
2. Shri Deepak Kumar, Member Secretary, WRPC, Plot No- F-3, MIDC Area, Marol, Opp. SEEPZ, Central Road, Andheri (East), Mumbai-40093. [email: ms-wrpc@nic.in]
3. Shri Asit Singh, Member Secretary, SRPC, No.29, Race Course Cross Road, Bengaluru-560009. [Email: mssrpc-ka@nic.in]
4. Shri N.S. Mondal, Member Secretary, ERPC,14,Golf Club Road, ERPC Building, Tollygunje,Kolkata-700033.[Email: mserpc-power@nic.in]
5. Shri K B Jagtap, Member Secretary, NERPC, NERPC Complex, Dong Parmaw, Lapalang, Shillong-793006. [Email: ms-nerpc@gov.in]
6. Shri Brieflee Lyngkhoi, Chief Engineer, GM Division, CEA, Sewa Bhawan, R.K. Puram, New Delhi-66 [Email: cegm-cea@gov.in]

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Status of action taken on decision 53rd TCC & 78th NRPC meeting

S.N.	Agenda	Decision of 53rd TCC & 78th NRPC	Status of action taken
A.19	Methodology for declaration of Intrastate Transmission lines as ISTS under Regulation 93 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 (agenda by HPPTCL)	Forum asked NRPC Secretariat to take up with CEA to expedite the finalization of guidelines for approval process of existing intra-state transmission lines carrying inter-state power.	As directed by NRPC forum, NRPC Sectt. has taken up matter with Chairperson CEA.
A.31	Augmentation of 2 No. 100 MVA, 220/66kV transformers at 220kV Substation (BBMB) Jalandhar to 160 MVA (agenda by PSTCL)	Forum decided that a committee under chairmanship of SE (O), operation along with members from CEA (PSPA), CTUIL, NRLDC, BBMB, PSTCL, Haryana may be constituted and committee will submit its recommendation in one month.	On the cited matter, a committee has been formulated and its first meeting is scheduled on 03rd June 2025.
A.32	LILO of 220kV Jalandhar- Jamalpur line (D/C) at 220kV Goraya (agenda by PSTCL)	Forum decided that a committee under chairmanship of SE (O), operation along with members from CEA (PSPA), CTUIL, NRLDC, BBMB, PSTCL, Haryana may be constituted and committee will submit its recommendation in one month.	On the cited matter, a committee has been formulated and its first meeting is scheduled on 03rd June 2025.

Annexure-A.II

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
उत्तर क्षेत्रीय विद्युत समिति
Northern Regional Power Committee

दिनांकः08.04.2025

विषय: Discussion on request of POWERGRID, NR-1 for consideration of outages under deemed availability-MoM

महोदय,

Please find attached minutes of meeting held on 22.01.2025 at 11 AM via VC for decision on following cases:

a) Shutdown for DC-CT modification work and software upgradation at HVDC Champa and Kurukshetra Terminals.
b) Outage of TCR at Kurukshetra for Reliability improvement.
c) Outage in month of August 2024 for power line crossing & OPGW diamond formation for upcoming new Transmission line projects.
d) Outage of 400 KV Bhiwadi – Hisar Ckt 02 & 03 (approved in OCC 224) for NCRTC diversion work in November -December 2024.
e) Shutdown of 765 kV Bus reactor at Bikaner S/s for augmentation.
f) Planned Outages due to retrofitment of relays.

This issues with approval of MS, NRPC.

भवदीय

Signed by Dharmendra Kumar Meena
Date: 08-04-2025 13:42:26

(डी॰ के॰ मीणा)
निदेशक (संरक्षण)

सेवा में,
As per list attached

POWERGRID was instructed by committee for ensuring reliability of Champa-Kurukshetra.

23. MS, NRPC stated that DC-CT modification and software upgradation has improved reliability of HVDC Champa-Kurukshetra.
24. EE (P), NRPC stated that POWERGRID has informed in presentation that DC-CT issue has arised as the system operated at full load for an extended duration in year 2024. In this regard, POWERGRID may apprise that whether it was tested at full load while commissioning.
25. POWERGRID apprised that full load testing was completed while commissioning. Reports are attached as **Annexure-II.**
26. POWERGRID highlighted that shutdown was managed optimally. To minimize the outage plan POWERGRID deployed two additional teams/groups by taking support from nearby HVDC station and carried out the work in Night hours also during shutdown.
27. MS, NRPC requested other members to submit their view on the issue faced by POWERGRID.
28. ADANI stated that HVDC vendors are limited and, in such issues, efforts of POWERGRID is appreciated.
29. INDIGRID stated that they have no HVDC assets.
30. MS, NRPC stated that DC-CT modification and associated software upgradation has been done as per OEM recommendation. Accordingly, it is beyond control of licensee and it may be considered as forced majeure (not design failure). However, software upgradation done before DC-CT modification is a routine nature of work and it may not be considered under forced majeure.

Decision:

Outages attached as **Annexure-III** shall be considered as forced majeure (not design failure) as it was beyond control of licensee.

b) Outage of TCR at Kurukshetra for Reliability improvement

31. POWERGRID highlighted that ±800kV, 6000MW HVDC Link of Champa-Kurukshetra is a critical link for the interconnection of Western Region (WR) and Northern Region (NR) grid. To address high voltage issues in Kurukshetra during

winters, a (-)500 MVAR TCR was installed and commissioned in December'2023. This is the first TCR installation of this capacity in India.

32. POWERGRID apprised following issues faced by them:

i) Temperature Rise in Air-cored Reactor Pedestal: -

- During continuous operation, the temperature of the air-cored reactors' support pedestal observed to reach excessive high temperature of around 200˚C.
- Such high temperature is beyond the designed level of long-term operation of the reactor pedestal and support insulators.

ii) Crack in MV Isolator (first time design to carry 8KA continuous under normal operation, Make-SDCEM, France) Terminals: -

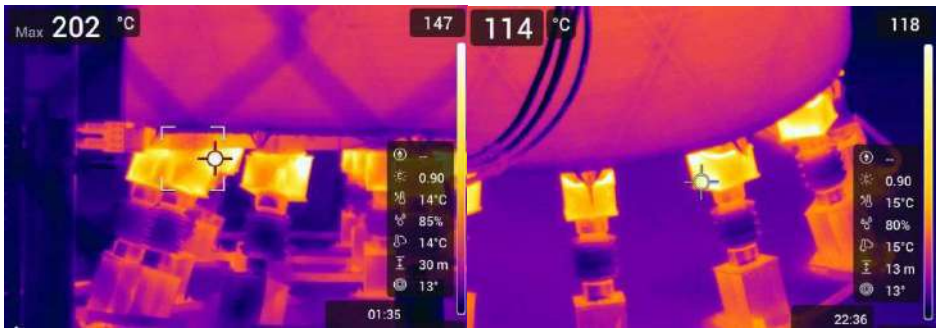
- Multiple cracks were detected on the MV isolator terminals of the TCR within a short period after the initiation of normal operation.

Limitation of Design:

- TCRs utilize air-cored reactors, and due to their high rating, the size of these reactors is substantial. Upon investigation, it was found that high magnetic flux was causing the pedestal to heat up.
- (-)500MVAr TCR being installed in the MV level, normal operating current of the system is significant (8kA) which causes high tensile strength in the conductors connecting the MV isolator terminals. Such undue stress resulted in multiple cracks in the MV isolator terminals.
- (-)500MVAr TCR being the first of its kind in terms of the capacity in India, the learnings from this project are taken as reference for future upcoming TCR projects worldwide for grid stability.

33. POWERGRID highlighted Corrective Actions Taken:

- After thorough review of the matter, OEM decided to replace the existing pedestal with pedestal of a different alloy (SS pedestal from China) to avoid the overheating issues under the high magnetic flux. The photograph of thermo-vision scanning before and after the replacement is shown below:



Old Pedestal **New Pedestal**

- The temperature is now within the thermal limit of the material.

34. Corrective Actions taken for MV Isolator:
    - Upon reviewing the existing arrangement, OEM proposed a different arrangement to minimize the load distribution to the MV Isolator terminals. After the changed arrangement, no crack in any MV isolator terminal is identified till date.

	
Old arrangement	New arrangement

35. POWERGRID pleaded following:
    - While TCR technology is unique in India, operational challenges were expected with such a large-scale installation.
    - The shutdowns in October and November 2024 were necessary to implement these critical modifications and ensure the long-term reliable operation of the TCR.
    - The implemented solutions have addressed the initial design limitations and improved the overall system reliability.

36. Accordingly, POWERGRID requested to consider following outage under forced majeure due to recommendation by OEM:

S.No	Element	From	To	Remarks
1	TCR (500MVAR)	14.10.2024 12:17 hrs	15.11.2024 18:00 hrs	For replacement of pedestal of reactor coil of Kurukshetra TCR to address the excessive overheating issue in the pedestal.

37. SE (Protection), NRPC asked POWERGRID to apprise permissible limit for temperature rise.
38. POWERGRID apprised that as per Technical Specification of TCR, 155 degree C is hottest spot temperature. Same is attached as **Annexure-IV.**
39. MS, NRPC asked other members to provide view.
40. ADANI and INDIGRID stated that they have no TCR of this rating.
41. MS, NRPC stated that considering necessary changes recommended by OEM for reliability of HVDC, the above outages for replacement of pedestal of reactor coil of Kurukshetra TCR may be considered as forced majeure. It was beyond control of licensee.
42. SE, NRPC stated that as duration of outage is more than one month, it requires approval of NRPC forum also as per CERC Tariff regulation, 2024.

Decision:

i. It was decided to consider following outage under forced majeure:

S.No	Element	From	To	Remarks
1	TCR (500MVAR)	14.10.2024 12:17 hrs	15.11.2024 18:00 hrs	For replacement of pedestal of reactor coil of Kurukshetra TCR to address the excessive overheating issue in the pedestal.

ii. It was also decided that as outage is of more than one month, it shall be discussed in upcoming NRPC meeting for final decision as per CERC tariff regulation. Accordingly, availability certificate shall be issued.

c) Outage in month of August 2024 for power line crossing & OPGW diamond formation for upcoming new Transmission line projects.

Customer Name: POWERGRID
Project Name: TCR System (-) 500 MVAR (3 X33.3% Configuration) comprises of 1 phase Coupling Transformer (3 main + 1 hot standby configuration) including associated equipment's/ System & all associated civil works etc. at 400 kV Kurukshetra under Implementation of 500 MVAr Thyristor Controlled Reactor at Kurukshetra 400 kV Bus
Internal Proj No: **TCR, KUR**
Internal Doc No: N.A
Revision: E

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उपक्रम)
POWER GRID CORPORATION OF INDIA LIMITED.
[A GOVERNMENT OF INDIA ENTERPRISE]

पावरग्रिड

Grid Solutions

TCR Reactors – Quality Control (ITP, assessment)

Created By:	Anupam S	**Approved By:**	A UPADHYAY
Template No:	FT410-5600	**Approved Date:**	23.01.2021
Consortium Doc No:		**Revision no:**	**E**
Department:	Project Engineering		
Power Grid Document Number:	**TCR-KUR-MVL-PET-20095-PP**		

GE GRID SOLUTIONS Oy (Ltd.)

CONFIDENTIAL

SCHEDULE OF REVISIONS

REV IND.	PURPOSES OF THE MODIFICATION
A	Original issue
B	Revised as per customer comment
C	Revised as per customer comment
D	Revised as per customer comment
E	"Verification of seismic requirement" and "Inrush current performance" included in list of type tests and deleted from routine test.

REFERENCES

[1] *TCR-KUR-MVL-PET-10001-RR* - *Main Basic Information Report (MBIR).*

[2] *TCR-KUR-MVL-PET-20087-TS* - *TCR Reactor – Equipment Specification.*

[3] *TCR-KUR-MVL-PET-20094-GA* - *TCR Reactor – Equipment Drawings.*

[4] *IEC 60076* - *All Applicable Parts*

No. of Page : 3 nos.

TCR Reactor – RPC 035/2020, Rev. 07

Inspection and Test Plan

Sl. No.	Descriptions	Reference document	Acceptance criteria	Place of Inspection (Inhouse /third Party lab)	Remarks
1.0	**Type Tests**				
1.1	Temperature rise test.	IEC 60076-06, IEC 60076-11.	As per, Class F (155^{0}C)	Carried on third party lab	As per clause 7.8.14 of IEC 60076-6.
1.2	Measurement of vibration for liquid immersed reactors	IEC 60076-06	As per IEC		Not applicable for dry type reactor.
1.3	Measurement of acoustic sound level	IEC 60076-06 IEC 60076-10	As per TCR GA drawing " TCR-KUR-MVL-PET-20094-GA, Rev. B".	Carried on third party lab	As per clause 7.8.12 of IEC 60076-6.
1.4	Dielectric test	-	-	-	Not applicable as per IEC 60076-6.
1.5	Measurement of variation of inductance and resistance with frequency (DC to 3	IEC 60076-06, section 9.10.5	Variation - -3 %/0 % of the rated inductance value, @rated harmonic frequency	GE Grid Brasil Av. Nossa Senhora da Piedade, 1021 Itajuba-MG Brazil	

Sl. No.	Descriptions	Reference document	Acceptance criteria	Place of Inspection (Inhouse /third Party lab)	Remarks
	kHz)				
1.6	Lightning impulse test, Dry	IEC 60076-3, IEC 60076-4 IEC 60076-6	No insulation failure		In lieu of wet LI test to be performed which has more stringent requirement. Dry LI test report of support insulator to be submitted.
1.7	Lightning impulse test, Wet	IEC 60076-3, IEC 60076-4 IEC 60076-6	No insulation failure	-	To be performed as per IEC Clause 7.8.10 , IEC 60076-6. Wet LI test report of insulator to be submitted.
1.8	Verification of seismic requirement	IEEE Std 693-2005			Calculation report to be submitted.
1.9	Inrush current performance	IEC 60076-6			Calculation report to be submitted.

Inspection and Test Plan													
Sl. No	**Component/ Operations & Description of test**	**Type of Check**	**Quantum of check/ Sampling**	**Reference Document of Testing**	**Acceptance Norms**	**Format of Record**	**Applicable Codes**						**Remarks**
							1	**2**	**3**	**4**	**5**	**6**	
2.0	**Routine Test List**												
2.1	List of routine test	**-**	-	-	-	-	-						Refer RPC 035/2020, Rev 07

ATTACHMENTS:-

RPC 035/2020, Rev 07

INSPECTION AND TEST PLAN (ITP)

Number : **RPC 035/2020**

CUSTOMER **Grid Solutions Oy (Ltd) / Power Grid Corporation of India Limited**

REV. **7**

YOUR REF. : **SVC KURUKSHETRA**

Date : **December 22, 2020**

EQUIPMENT **DRY TYPE AIR CORE THYRISTOR CONTROLLED REACTOR**

PAGE **01/01**

OUR REF.	QTY	TYPE	ROUTINE TESTS	REGISTER	QUANTITY TO BE TESTED	DOCUMENT REFERENCE
275404.10	9	XSTM - 2x17.19 mH / 3111 A	**Routine Tests**			**IEC 60076-6**
275404.40	1	XSTM - 2x17.19 mH / 3111 A	Measurement of Winding Resistance	Q	10 units	IEC 60076-1
			Measurement of Reactance (Inductance) @ 50 Hz	Q	10 units	IEC 60076-6 - clause 7.8.5.2
			Measurement of Loss and Quality Factor @ 50 Hz	Q	10 units	IEC 60076-6 - clause 7.8.6.2
			Turn-to-Turn Overvoltage Test	Q	10 units	IEC 60076-6 - clause 7.8.10.4 & Annex E
			Visual and Dimensional Check	V	10 units	Dimensional Drawing
275404.10	1	XSTM - 2x17.19 mH / 3111 A	**Type Tests**			
			Measurement of variation of inductance and resistance with frequency	Q	1 unit	IEC 60076-6 - clause 9.10.5.
			Wet Lightning impulse test	Q	1 unit	IEC 60076-6 - clause 7.8.10
			Temperature rise test *(carried out on external laboratory)* *The test will be performed on both coils connected in series.*	Q	1 unit	IEC 60076-6 - clause 7.8.14 IEC 60076-11 - Class F (155 °C)
			Measurement of acoustic sound level *(carried out on external laboratory)* *The test will be performed on both coils connected in series.*	Q	1 unit	IEC 60076-6 - clause 7.8.12 IEC 60076-10

ISSUED BY	MRM	REGISTER Q - Quality Register to be supplied to the customer
APPROVED BY	BRF	R - Internal register available to the customer
INSPECTION PLACE	GE Grid Brasil 1021 Nossa Senhora da Piedade Avenue 37504-358 Itajuba / MG / Brazil	V - Verification without register issuance S - Certificate or Report by the sub-supplier
RESPONSIBLE	Bruno Fonseca <bruno.fonseca@ge.com>	INSPECTION W - Witnessed by Customer

AS BUILT
Date : 05/07/2024 Name: MANOJ THAKUR

Customer Name:	POWERGRID
Project Name:	TCR System (-) 500 MVAR (3 X33.3% Configuration) comprises of 1 phase Coupling Transformer (3 main + 1 hot standby configuration) including associated equipment's/ System & all associated civil works etc. at 400 kV Kurukshetra under Implementation of 500 MVAr Thyristor Controlled Reactor at Kurukshetra 400 kV Bus
Internal Proj No:	**TCR, KUR**
Internal Doc No:	N.A
Revision:	**A**

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उपक्रम)
POWER GRID CORPORATION OF INDIA LIMITED.
[A Government of India Enterprise]

पावरग्रिड

Grid Solutions

TCR Reactors – Type Test Assessment

Created By: AIB		**Approved By:**	PET
Template No: FT410-5600		**Approved Date:**	10.12.2021
Consortium Doc No:	N/A	**Revision no:**	**A**
Department:	Project Engineering		
Power Grid Document Number:	**TCR-KUR-MVL-PET-50010-TD**		

GE GRID SOLUTIONS Oy (Ltd.)

CONFIDENTIAL

SCHEDULE OF REVISIONS

REV IND.	PURPOSES OF THE MODIFICATION
A	Original issue

REFERENCES

[1] *TCR-KUR-MVL-PET-10001-RR* - *Main Basic Information Report (MBIR).*

[2] *TCR-KUR-MVL-PET-20087-TS* - *TCR Reactor – Equipment Specification.*

[3] *TCR-KUR-MVL-PET-20094-GA* - *TCR Reactor – Equipment Drawings.*

[4] *TCR-KUR-MVL-PET-20095-* - *TCR – Quality control (ITP, assessment)*

[5] *IEC 60076* - *All Applicable Parts*

No. of Page : 3 nos.
Type Test reports
TCR Reactor

Sl. No.	Descriptions	Reference document	Acceptance criteria	Remarks
1.0	**Type Tests**			
1.1	Temperature rise test.	IEC 60076-06, IEC 60076-11.	As per, Class F (155^{0}C)	Test reports No. **LTI-Dry Reactor-I**, Date **03.12.2021** attached.
1.2	Measurement of acoustic sound level	IEC 60076-06 IEC 60076-10	As per TCR GA drawing " TCR-KUR-MVL-PET-20094-GA, Rev. B".	Test reports No. **LTI-Dry Reactor-I**, Date **03.12.2021** attached. "Grid noise map" to support noise values at boundary also attached in annexure-I.
1.3	Measurement of variation of inductance and resistance with frequency (DC to 3 kHz)	IEC 60076-06, section 9.10.5	Variation - -3 %/0 % of the rated inductance value, @rated harmonic frequency	Please refer enclosed test report no. **146/2021**, Date: **12.02.2021**
1.4	Lightning impulse test, Wet	IEC 60076-3, IEC 60076-4 IEC 60076-6	No insulation failure	Please refer enclosed test report no. **EAL/EM-14923/2021-R2,** Date: **16.03.2021**
1.5	Verification of seismic requirement	IEEE Std 693-2005		Please refer enclosed calculation report no. **CTC-275404-10/ 20/30/70, Dated 13.04.2021**
1.6	Inrush current performance	IEC 60076-6	-	Please refer enclosed calculation report no. **CTC-275404**

ULTRA HIGH VOLTAGE TEST LABORATORY

TEST REPORT

We are certified
to
ISO 9001 : 2015 QMS
ISO 14001 : 2015 EMS
BS 18001 : 2007 OHSAS
by
BUREAU VERITAS CERTIFICATION

Discipline : Electrical

Group : Inductors and transformers

Customer	:	POWER GRID CORPORATION OF INDIA-KURUKSHETRA
Purchase Order No.	:	CC-CS/857-NR2/HVDC-3827/3/G2/R/CA-I/8821;CA-II/8822;CA-III/8823, Dated: 22/02/2019
Work Order No.	:	GOP0-177
Report No.	:	LTI-Dry Reactor-1
Rating	:	86 MVAr, 30 kV(GE-AIB_Brazil)
Date of Receipt Of sample, Sample Condition and Group	:	21/8/2021 ,Good Condition Reactor
Start date of Testing :		9 & 10-11-2021
Date of Issue of Test Report		3/12/2021
Method Statement	:	As Per IEC: 60076-2 & 60076-10

Prepared by:
Test-Engineer
MOHD. HASSAN KHAN

Checked & Approved by :
Name: Zubair Alam
Technical-Manager

Witnessed by:

GE T&D India Limited, UHV TEST LAB, LARGE TRANSFORMER INDIA (LTI)
MILESTONE 87, Halol Highway, Village Kotambi, Post Office: Jarod, Vadodara - 391510, Gujarat, (INDIA) Tel. No. +91 2668 661000 Fax No. +91 2668 661201

LTI VADODARA

INDEX

Prepared By:	Verified and Approved By:	Witnessed By:

DRY TYPE REACTOR TEST REPORT

LTT VADODARA

Customer				POWERGRID			W.NO		GOP0177					
1.TEMPRATURE MEASUREMENT BY FIBEROPTICS														
	Surfaces of Reactor								Ambient Temperature				Voltage	Current
TIME	TC01	TC02	TC03	TC04	TC05	TC06	TC07	TC08	TC9	TC10	TC11	TC12	kV	A
0	42.5	38.3	36.6	40.6	41.1	37.0	37.7	41.1	33.7	35.1	33.9	33.9	32.820	3107.3
5	43.5	38.8	36.9	41.3	42.2	37.7	38.0	42.7	34.0	38.0	34.3	35.0		
10	45.0	39.8	37.5	43.2	43.6	38.6	38.6	45.2	34.7	40.5	35.0	36.8		
15	47.0	40.8	38.3	44.9	45.3	39.6	39.7	47.8	34.9	41.6	36.1	37.2		
20	49.1	41.8	39.1	46.8	47.0	40.6	40.7	50.2	35.0	41.6	37.0	37.7		
25	51.2	43.2	40.0	48.6	49.0	41.9	41.8	52.4	35.1	41.5	37.5	37.9		
30	53.8	44.6	41.3	50.2	50.8	43.3	43.3	54.5	35.4	42.5	37.4	39.3	32.82	3103.2
35	56.2	46.4	42.4	51.8	52.7	45.0	44.6	56.4	35.4	44.0	37.1	40.2		
40	58.6	48.0	43.7	53.2	54.6	46.5	46.2	58.2	35.5	43.6	37.0	40.6		
45	60.6	49.8	44.9	54.6	56.3	48.3	47.6	59.9	35.9	43.9	37.2	40.3		
50	62.7	51.5	46.0	55.9	58.1	50.2	49.1	61.4	36.4	44.2	37.0	40.6		
55	65.0	53.3	47.4	57.3	59.7	51.9	50.5	62.7	36.8	44.2	37.0	40.7		
60	67.1	55.1	48.4	58.6	61.4	53.8	51.9	63.9	36.7	43.8	37.5	41.0	32.82	3110.3
65	68.9	56.7	49.5	59.8	62.7	55.4	53.0	65.3	36.6	42.9	37.8	40.9		
70	70.7	58.4	50.7	61.2	64.1	57.3	54.3	66.3	36.8	43.0	38.0	40.7		
75	72.3	59.9	51.6	62.0	65.4	59.0	55.5	67.5	36.7	42.8	37.8	40.7		
80	74.1	61.5	52.7	62.9	66.8	60.7	56.4	68.6	36.4	42.2	38.0	40.8		
85	75.3	62.9	53.6	64.2	67.8	62.4	57.7	69.1	35.9	42.1	37.7	40.8		
90	76.6	64.4	54.4	65.0	69.1	63.8	58.6	70.2	35.7	41.9	37.8	40.7	32.80	3111.7
95	77.8	65.7	55.1	65.8	70.0	65.4	59.5	70.9	35.7	41.7	37.9	40.9		
100	79.1	67.1	56.0	66.5	70.9	66.7	60.5	71.6	35.6	41.7	37.9	41.1		
105	80.3	68.3	56.7	67.5	71.9	68.3	61.3	72.1	35.5	41.7	37.9	41.2		
110	81.2	69.4	57.3	68.2	72.7	69.4	62.0	72.9	35.6	41.6	37.7	40.9		
115	81.9	70.7	57.9	69.0	73.4	70.8	62.7	72.8	35.9	39.8	37.4	40.2		
120	81.8	71.6	58.3	67.7	73.4	71.9	63.4	71.2	36.4	38.6	36.7	39.5	32.89	3115.80
125	82.2	72.2	58.7	67.3	73.6	72.8	63.6	71.3	36.5	39.8	37.0	39.4		
130	82.7	73.0	59.2	67.4	73.8	73.7	63.9	71.8	37.1	41.6	37.3	40.2		
135	83.4	73.7	59.4	68.3	74.1	74.4	64.2	72.4	37.4	42.2	37.4	40.6		
140	84.3	74.3	59.8	68.9	74.7	75.1	64.5	73.4	37.7	42.9	37.5	40.8		
145	85.0	75.0	60.2	69.4	75.2	75.7	64.9	74.0	37.9	42.0	37.5	41.1		
150	85.8	75.9	60.5	70.1	75.8	76.4	65.3	74.4	38.0	42.2	37.8	41.2	32.86	3119.30
155	86.4	76.6	60.9	70.6	76.2	77.3	65.8	75.0	38.1	42.4	38.0	41.5		
160	87.2	77.3	61.4	71.0	76.7	77.9	66.4	75.4	38.2	41.8	37.8	41.0		
165	87.9	78.0	61.9	71.2	77.2	78.6	66.9	76.1	38.1	41.2	37.8	40.8		
Prepared By:				Verified and Approved By:					Witnessed By:					

DRY TYPE REACTOR TEST REPORT

LTI VADODARA

	Customer			POWERGRID					W.NO			GOP0177		
	Surfaces of Reactor								Ambient Temperature				Voltage	Current
170	88.3	78.8	62.2	71.8	77.9	79.3	67.4	76.5	38.0	41.3	37.8	40.8		
175	88.7	79.5	62.6	72.1	78.3	80.1	67.8	76.8	38.0	41.5	37.7	40.9		
180	89.1	80.1	63.0	72.4	78.7	80.7	68.2	77.1	38.2	41.1	37.8	40.6	32.90	3111.20
185	89.6	80.6	63.3	73.2	79.1	81.3	68.6	77.4	38.2	41.5	37.6	41.0		
190	90.3	81.2	63.6	73.4	79.6	81.9	69.2	77.5	38.4	41.8	37.8	40.5		
195	90.9	81.9	63.9	73.7	79.9	82.7	69.5	77.8	38.2	41.8	38.0	41.1		
200	91.4	82.4	64.2	74.0	80.1	83.2	69.8	78.2	38.2	42.0	37.9	41.3		
205	91.7	82.9	64.7	74.1	80.5	83.7	70.1	78.4	38.2	43.0	37.8	41.5		
210	92.1	83.4	65.1	74.6	80.7	84.2	70.4	78.5	38.2	43.1	37.6	41.6	32.89	3111.50
215	92.4	83.8	65.4	74.9	80.8	84.7	70.7	79.1	38.3	43.9	37.3	41.5		
220	92.8	84.4	65.7	75.0	80.9	85.3	70.9	79.3	38.2	44.2	37.3	41.3		
225	93.1	84.8	65.9	75.1	81.1	85.8	71.2	79.5	38.1	43.6	37.5	41.4		
230	93.5	85.2	66.0	75.5	81.3	86.2	71.4	79.7	38.2	44.3	37.9	41.2		
235	93.8	85.6	66.2	75.5	81.5	86.6	71.7	79.7	38.0	42.8	37.7	41.2		
240	93.9	85.8	66.4	75.9	81.7	86.9	72.0	79.8	37.9	42.8	38.0	40.9	32.89	3112.00
245	94.1	86.1	66.5	75.8	81.9	87.3	72.2	80.0	38.0	42.1	37.9	40.9		
250	94.4	86.4	66.6	75.7	81.9	87.6	72.5	80.2	37.8	41.9	38.1	41.2		
255	94.6	86.6	66.7	76.1	81.8	88.0	72.7	80.3	37.8	42.0	38.4	41.2		
260	94.8	87.0	66.8	76.0	82.0	88.4	72.8	80.3	37.9	42.5	38.1	41.4		
265	94.9	87.3	67.0	76.2	82.1	88.7	73.0	80.4	37.9	42.5	38.1	41.2		
270	95.0	87.6	67.1	76.6	82.2	88.9	73.1	80.5	38.0	42.9	37.9	41.5	32.89	3113.40
275	95.2	87.8	67.2	76.4	82.3	89.2	73.3	80.5	38.0	42.9	37.9	41.6		
280	95.3	88.0	67.3	76.6	82.4	89.4	73.4	80.6	38.1	42.6	37.6	41.8		
285	95.5	88.2	67.3	76.4	82.5	89.6	73.5	80.7	38.1	43.0	38.1	41.8		
290	95.8	88.4	67.5	76.6	82.6	89.9	73.7	80.7	38.0	43.3	38.3	41.6		
295	96.1	88.5	67.3	75.9	82.7	90.1	73.8	80.7	37.9	43.0	37.7	41.5		
300	96.2	88.7	67.6	76.1	82.7	90.2	73.9	80.8	37.9	42.5	37.7	41.3	32.89	3113.00
305	96.4	88.9	67.7	75.9	82.7	90.4	74.0	81.1	37.8	41.9	37.9	41.2		
310	96.5	89.1	67.8	75.5	82.4	90.6	74.2	81.1	37.8	40.9	37.8	40.5		
315	96.6	89.3	67.9	75.3	82.5	90.9	74.3	80.9	37.8	40.1	37.6	40.5		
320	96.6	89.5	68.0	75.4	82.4	91.1	74.4	81.0	37.8	40.3	37.6	40.7		
325	96.8	89.6	68.1	75.1	82.5	91.2	74.4	81.0	37.7	40.2	37.6	40.4		
330	96.8	89.9	68.3	75.5	82.7	91.4	74.5	80.9	37.7	41.3	37.6	40.3	32.92	3112.30
335	96.9	90.2	68.4	75.9	82.8	91.5	74.6	80.9	37.9	40.7	37.8	41.0		
340	96.8	90.3	68.4	76.3	82.8	91.6	74.6	80.8	37.8	40.1	37.6	41.2		
345	96.8	90.4	68.4	76.3	82.9	91.7	74.6	80.7	37.8	39.8	37.3	41.5		
350	96.6	90.5	68.4	76.4	82.8	91.8	74.7	80.8	37.8	40.1	37.3	41.1		
355	96.6	90.5	68.5	76.3	82.9	91.8	74.8	80.8	37.8	40.0	37.4	41.1		
360	96.6	90.5	68.5	76.6	82.9	91.9	74.7	80.8	37.8	39.5	37.5	41.5	32.92	3119.40

Prepared By: Harsan

Verified and Approved By:

Witnessed By:

DRY TYPE REACTOR TEST REPORT

LTI VADODARA

Customer				POWERGRID					W.NO				GOP0177	
	Surfaces of Reactor								Ambient Temperature				Voltage	Current
365	96.4	90.5	68.5	76.8	82.9	91.9	74.7	80.8	37.6	39.5	37.3	41.3		
370	96.5	90.6	68.6	76.7	83.0	92.0	74.7	80.8	37.8	39.9	37.4	41.2		
375	96.6	90.6	68.6	76.5	83.0	92.0	74.7	80.8	37.8	39.5	37.5	41.3		
380	96.5	90.6	68.6	76.9	83.3	92.1	74.7	80.8	37.8	40.2	37.2	41.4		
385	96.5	90.6	68.7	76.7	83.5	92.1	74.7	80.7	37.8	40.6	37.1	41.7		
390	96.4	90.7	68.7	76.9	83.5	92.2	74.7	80.9	37.7	41.3	37.5	41.3	32.90	3112.50
395	96.5	90.7	68.7	76.6	83.4	92.2	74.9	80.9	37.6	41.3	37.8	41.5		
400	96.6	90.8	68.7	76.4	83.4	92.3	75.0	80.9	37.8	41.7	38.1	41.5		
405	96.6	90.9	68.7	76.6	83.5	92.4	75.1	80.7	37.8	41.1	37.8	41.4		
410	96.5	90.9	68.7	76.7	83.3	92.4	75.1	80.8	37.8	40.7	37.5	41.2		
415	96.2	91.0	68.7	76.9	83.4	92.4	75.1	80.7	37.9	40.7	37.5	41.0		
420	96.2	91.0	68.8	76.8	83.2	92.4	75.1	80.8	37.8	40.1	37.6	40.9	32.93	3113.50
425	96.3	90.9	68.7	76.4	83.1	92.4	75.1	80.9	37.7	39.5	37.5	41.0		
430	96.4	90.9	68.6	76.3	82.8	92.5	75.1	80.9	37.7	39.3	37.3	41.1		
435	96.4	90.8	68.5	76.1	82.9	92.5	75.1	80.8	37.8	39.5	37.3	41.0		
440	96.3	90.9	68.6	75.7	82.9	92.5	75.2	80.7	37.9	41.0	37.2	40.7		
445	96.4	90.9	68.6	75.2	83.0	92.5	75.2	80.6	38.0	40.9	37.1	40.7		
450	96.3	91.0	68.7	75.6	83.1	92.5	75.2	80.6	37.9	40.8	37.1	40.5	32.83	3111.20
455	96.4	91.0	68.8	76.6	83.1	92.5	75.2	80.4	38.2	41.2	36.8	40.7		
460	96.3	91.0	68.7	76.6	83.1	92.5	75.2	80.4	38.4	41.7	36.3	40.6		
465	96.1	91.1	68.7	76.6	82.8	92.5	75.2	80.3	39.0	41.8	36.2	40.2		
470	96.0	91.1	68.7	76.5	82.8	92.5	75.1	80.2	39.3	41.7	35.1	40.2		
475	96.0	91.0	68.6	76.5	82.8	92.5	75.1	80.2	39.0	41.4	35.9	40.2		
480	96.0	90.9	68.5	75.9	82.7	92.5	75.0	80.2	38.5	41.7	36.2	40.2	32.85	3112.80
485	95.9	90.8	68.4	75.8	82.7	92.4	74.8	80.2	38.4	41.9	36.3	40.3		
490	95.9	90.8	68.3	75.6	82.7	92.4	74.9	80.3	38.5	41.9	36.1	39.9		
495	95.9	90.7	68.2	75.5	82.7	92.4	74.9	80.3	38.6	42.3	36.3	40.0		
500	95.9	90.7	68.3	75.5	82.7	92.4	74.9	80.3	38.7	43.8	36.6	40.0		
505	95.9	90.7	68.2	75.0	82.5	92.4	75.0	80.5	38.5	42.7	37.1	39.8		
510	95.9	90.7	68.2	75.1	82.4	92.4	75.1	80.3	38.5	42.5	37.0	39.7	32.93	3118.50
515	96.0	90.7	68.3	75.0	82.4	92.4	75.0	80.4	38.3	42.1	37.2	39.9		
520	95.9	90.7	68.3	74.8	82.3	92.4	75.1	80.4	38.4	41.4	37.3	40.2		
525	96.0	90.7	68.3	75.0	82.4	92.4	75.1	80.3	38.4	41.8	37.4	40.2		
530	96.0	90.6	68.3	74.7	82.4	92.4	75.1	80.3	38.2	41.4	37.5	40.6		
535	95.8	90.5	68.3	74.7	82.3	92.4	75.1	80.5	38.1	41.7	37.5	39.9		
540	95.6	90.6	68.3	75.0	82.2	92.4	75.1	80.4	38.2	41.7	37.7	39.7	32.85	3112.90
Prepared By:				Verified and Approved By:					Witnessed By:					

Customer	POWERGRID	W. No.	GOP0177

2. TEMPERATURE RISE TEST CALCULATION

GENERAL DATA:

OC / Nr.: 275404 0070 003
Tipo: XSFR - 34.378 mH / 2821.3 A
Cliente: SVC Kurukshetra

RATED VALUES:

L_N:	34.38	mH
I_T:	2821.3	A
Z_N:	10.8002	Ω
U_N:	30.4705	kV
P_N:	85966.5	kVar

INITIAL COLD RESISTANCE:

R_1:	13.919	mΩ
T_1:	32.7	°C
T:	225.0	

DC RESIST. AFTER SHUTDOWN:

R_0:	17.4160	mΩ
T_0:	39.3	°C

FINAL TEMPERATURE

T_2:	97.47	°C
ΔT:	58.14	°C
T_{REF}:	50.0	°C
k:	1.0404	
ΔT_{REF}:	60.49	°C

DC Resistance measurement after Shutdown

Rdc (mΩ)	t(s)	t measured
17.3580	120	2.00
17.3180	180	3.00
17.2790	240	4.00
17.2400	300	5.00
17.2010	360	6.00
17.1450	420	7.00
17.1260	480	8.00
17.0890	540	9.00
17.0530	600	10.00
17.0180	660	11.00
16.9820	720	12.00
16.9480	780	13.00
16.9130	840	14.00
16.8790	900	15.00
16.8300	960	16.00
16.8130	1020	17.00
16.7800	1080	18.00
16.7480	1140	19.00
16.7170	1200	20.00
16.6850	1260	21.00

FORMULARY

$$T_2 = \left(\left(\frac{R_0}{R_1}\right) \times (T + T_1)\right) - T$$

$$\Delta T = T_2 - T_0$$

$$k = \frac{(T + T_{REF})}{(T + T_0)}$$

$$\Delta T_{dc} = \Delta T \times k$$

Frequency of the test (Hz)

50

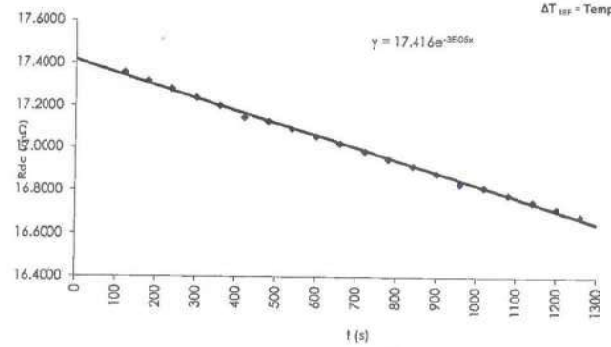
In= 2821
It= 3111

Determination of hot-spot temperature rise:

Temperature on Hot-Spot:	97.47 °C
Hot-spot temperature rise:	58.14 °C
Hot-spot temperature rise corrected to 50°C with 3111 A :	60.49 °C

L_N = Rated Inductance
I_T = Test Current
Z_N = Rated Impedance
U_T = Voltage across Reactor
P_N = Rated Reactive Power

R_1 = Cold resistance (Ambient Temperature).
T_1 = Temperature corresponding to cold resistance R_1.
T = Temperature constant for aluminum (225).
R_0 = Hot resistance. (Curve)
T_0 = Ambient temperature corresponding to hot resistance.
T_2 = Average measured winding temperature corresponding to hot resistance
ΔT = Average temperature rise
k = Correction Factor of temperature
ΔT_{REF} = Temperature Rise with correction at T_{REF}



Prepared By:	Verified and Approved By:	Witnessed By:

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उपक्रम)
POWER GRID CORPORATION OF INDIA LIMITED.
[A Government of India Enterprise]

पावरग्रिड

Grid Solutions

TCR Branch Reactor – Technical Specification

Created By:	Anupam Srivastav	**Approved By:**	Janne Kangas
Template No:	n.a.	**Approved Date:**	21.06.2019
Consortium Doc No:	TCR-KUR-MVL-PET-20087-RR	**Revision No:**	B
Department:	Project Engineering		
Power Grid Document Number:	**TCR-KUR-MVL-PET-20087-TS**		

GE GRID SOLUTIONS Oy (Ltd.)

CONFIDENTIAL

SCHEDULE OF REVISIONS

REV IND.	STATUS	AUTHOR	PURPOSES OF THE MODIFICATION
A	For Approval	Anupam Srivastav	Original issue
B	For Approval	Anupam Srivastav	Revised as per customer comment

REFERENCES

[1] *TCR-KUR-MVL-PET-10001-R - Main Basic Information Report (MBIR)*

[2] *CUSTOMER SPECIFICATION - Section – General Technical Requirements (GTR)*

[3] *CUSTOMER SPECIFICATION - Section – TCR*

[4] CUSTOMER SPECIFICATION – *Section Project*

[5] *CUSTOMER AMENDMENTS* - Amendment *No. 1, Annexure & Clarification no. 1*

[6] *CUSTOMER AMENDMENTS - Amendment No. 1 & Annexure*

[7] *CUSTOMER AMENDMENTS – Mandatory Spares – Annexure-I, Rev-01*

TABLE OF CONTENTS

1 INTRODUCTION

This specification covers the requirement for TCR branch AC reactors, which are controlled by thyristors and absorb reactive MVAR to the system. These reactors are placed before and after thyristor.

2 STANDARDS

The TCR reactors shall be designed, manufactured and tested to all applicable IEC and IEEE standards described

IEC 60060	High Voltage Test Techniques
IEC 60071	Insulation Coordination
IEC 60076-1	Power Transformers – Part 1 - General
IEC 60076-6	Power Transformers – Part 6 - Reactors
IEC 60076-10	Power Transformers – Part 10 – Determination of sound level.
IEC 60605-7	Compliance Test Plans for Failure Rate and MTBF assuming constant Failure Rate
IEC 60085	Electrical Insulation – Thermal Evaluation & Designation
IEC 60507	Artificial Pollution Tests on HV Insulators to be used on AC Systems
IEC 60168	Tests on Indoor and Outdoor Post Insulators of Ceramic Material or Glass for Systems with Nominal Voltages greater than 1000 V
IEC 60815-1	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions: Definitions, information and general principles
IEC 60815-2	Selection and dimensioning of high-voltage insulators intended for use in polluted conditions: Ceramic and glass insulators for AC systems
IEC 60815-3	Selection and Dimensioning of HV Insulators intended for use in Polluted Conditions.
NEMA 107	Methods of Measurement of RIV of HV Apparatus
NEMA CC-1	Electrical Connectors for Substations
IEEE C57.16	IEEE Standard requirements, terminology, test code FOR Dry-Type-Air Core-Series-Connected Reactors.

IEC CISPR 18-2(2010)	Radio Interference Characteristic of overhead power lines and high-voltage equipment.
NFT 30-049	Paints and varnishes – Cladding paints – Accelerated ageing test
ASTM D 968	Standard Test Methods for Abrasion Resistance of Organic Coating by Falling Abrasive
NF EN ISO 4624	Paint and Varnishes – Pull-off Test for Adhesion

3 ENVIROMENTAL

The reactor shall be able to meet its declared rating and performcnace over the specified environmental condiction identified in related document [1].

4 REACTOR DATA

Sl. No.	Description	Unit	Value/Qty.
4.1	**General Data**		
1.	No. of reactor required (1-Φ) (including spares)	Set	9+1(Spare)
2.	No. of Phase per reactor	-	1-Φ
3.	Type	-	Air core, Dry Type, 2 stacked coil
4.	Rated Frequency	Hz	50
5.	Type of cooling	-	Natural Air cooled
6.	Auxiliary supply voltages AC DC	 V V	 NA NA
7.	Reactor arrangement (1-Φ)		Refer **Figure 1**
8.	Reactor arrangement (3-Φ)		Refer **Figure 2**
9.	Fault Level	-	47.37 kA for 1 sec.
10.	Seismic acceleration		0.3g horizontal
11.	Inrush current		Manufacturer to specify
4.2	**Reactor Data**		
1.	Rated Voltage	kV	30
2.a	Maximum operating continuous Voltage (@1.1 pu)	kV	33
2.b	Temporary Voltage for 10 sec. (@1.45 pu)	kV	36.04
2.c	Temporary Voltage for 1 Sec. (@1.62 pu)	kV	41.09
2.d	Temporary Voltage for .10 Sec. (@ 1.76 pu)	kV	45.23
2.e	Temporary Voltage for .06 Sec. (@ 1.99 pu)	kV	52.12
3.	Minimum operating continuous Voltage	kV	20.79
4.a	Rated continuous current (@ 1.1 pu)	A_{rms}	2821.3

4.b	Temporary current for 10 sec. (@1.45 pu)	A	3337.2
4.c	Temporary current for 01 Sec. (@1.62 pu)	A	3805.0
4.d	Temporary current for 0.10 Sec. (@ 1.76 pu)	A	4187.7
4.e	Temporary current for 0.06 Sec. (@ 1.99 pu)	A	4825.6
5.	Reactive MVAR Rating (3-Φ Bank) @ 23kV secondary voltage	MVAR	192
6.	Inductance of single unit (Top unit/Bottom unit)	mH	17.189/17.189
7.	Mutual Reactance	-	Manufacturer to specify
8.	Magnetic Charateristic	-	Linear
9.	Reactance	-	Fixed
10.	Basic Insulation Level	kV_p	170
11.	Insulation Class		Type "**F**"
12.	Hottest Spot temperature	^0C	Less Than 155
13.	Maximum winding temperature	^0C	Less than 135
14.	Total Mass		Manufacturer to specify
15.	Transportation Mass		Manufacturer to specify
16.	Magnetic clearances (mc_1/mc_2)	Mm	Manufacturer to specify
17.	Audible Noise Level *As a function of distance from Reactor surface		TBA*
18.	Frequency Range	Hz	47.5-52.5
19.	Frequency Range (For performance guarantee)	Hz	48.5-50.5
4.3	**Support Insulator**		
1.	Voltage Level	kV	36
2.	Cantilever Strength	kN	Manufacturer to specify
3.	Creepage distance	mm/kV	31
4.	Basic insulation Level	kV	170
5.	Quantity	Set	Manufacturer to specify
	*Manufacturer to specify quantity considering spares as well.		
6.	Spare quantity	-	5 Nos. of each type.
4.4	**Availability & reliability**		
1.	Mean Time Between Failure (MTBF)	Hrs	87,60,000
2.	Mean Time to Repair (MTTR)	Hrs	32
	(Refer Clause 1.9 of [2])		
4.5	**Spares**		
1.	Scheduled maintenance interval		To be recommended by manufacturer
2.	Spare List		Refer[7]
4.6	**Loss capitalisation**		
1.	Q-Factor		460
2.	Liquidated Damages for Guaranteed Losses	Per kW	INR 2,75,970.00
3.	Ambient Temperature	^0C	20

5 CONSTRUCTION DETAILS

The salient points related to construction details are listed here as under

- The reactor shall be without tapings.
- The reactor shall be designed to withstand thermal dynamic shocks and mechanical shocks while in service and during erection.
- All terminals shall be silver plates/tin plated.
- Lifting lugs shall be provided for handling of the reactor.
- The reactor shall be vertically mounted.
- The reactor shall be weatherproof synthetic resin and fibreglass for encapsulation.

6 ACCESSORIES

Supplier to include all standard accessories required for smooth and trouble-free operation of equipment.

7 HANDLING

It is important to achieve fast and effective removal and replacement of a complete reactor. The manufacturer shall propose the method of handling to be adopted considering the space restrictions as indicated in the associated data specification and shall indicate the replacement time.

8 WEIGHT & DIMENSIONS

The manufacturer should provide detailed dimensioned drawings and weight distributions to enable the compilation of layout and civil design to proceed. The manufacturer should define his proposed means of transport of the valve reactors to site and any special tools or vehicles required for this purpose.

9 RATING PLATES

Each reactor shall have rating plates with at least the indication foreseen by IEC 60076 - 6 and relevant clause of [1].

10 TESTING

All test to be carried out to the requirements of applicable latest IEC standards.

Table 1: List of Type Test

Sl. No.	Test particulars

A	**Type Test**
1.	Temperature rise test
2.	Measurement of Vibration for liquid-immersed reactors.
3.	Measurement of acoustic sound level
4.	Dielectric test
5.	Measurement of variation of inductance and resistance with frequency
6.	Lighting impulse test, wet

Table 2: List of Routine Test

Sl. No.	**Test particulars**
A	**Type Test**
1.	Measurement of winding resistance
2.	Measurement of reactance
3.	Measurement of loss at ambient temperature
4.	Dielectric test
5.	measurement of insulation resistance and/or capacitance and dissipation factor (tan δ) of the winding insulation to earth for liquid-immersed reactors. (These are reference values for comparison with later measurements in the field. No limitations for the values are given here.)
6.	Measurement of Q-factor
7.	Lightning impulse test, dry
8.	Verification of seismic requirement
9.	Inrush current performance

11 CURRENT SPECTRA

Current spectra for Reactor rating and Noise study cases are given in Appendix 2

12 CONNECTORS AND TERMINALS

The terminals shall be suitable for the electrical and mechanical duty imposed by the connection of conductors rated to carry continuous and fault currents. Any restrictions on weight of conductors or forces on terminals shall be declared by the supplier.

Terminals shall be suitable for connectors which is intimated to supplier at later stage.

Appendix 1 : Reactor Arrangement

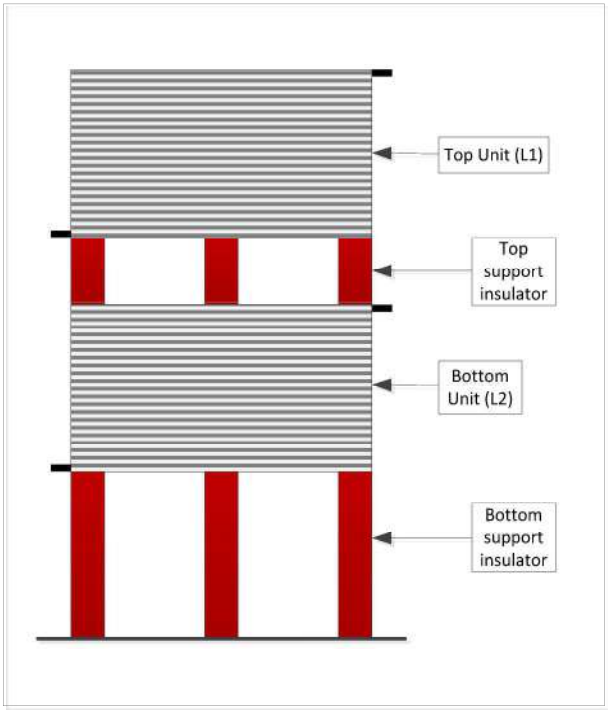


Figure 1: One unit 1-Φ TCR reactor arrangement

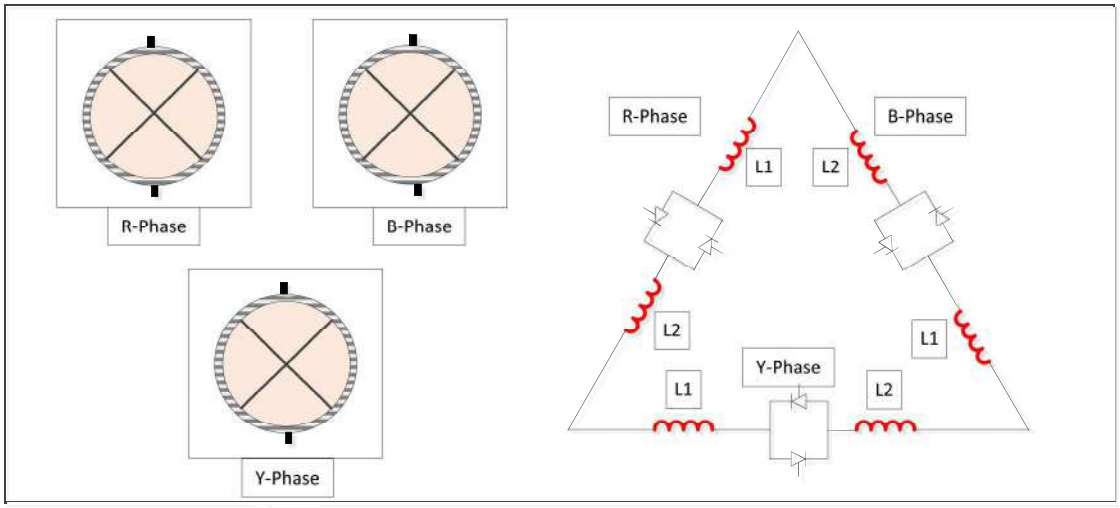


Figure 2: 3-Φ TCR reactor arrangement

Appendix 2 : Current Spectra for rating and audible noise

- Current Spectra for Reactor rating (As per AC Filter Design Report, Appendix-III)

TCR		
Frequency		Current
50	Hz	3062.26
100	Hz	0
150	Hz	444.8
200	Hz	0
250	Hz	162.5
300	Hz	0
350	Hz	83.3
400	Hz	0
450	Hz	52.1
500	Hz	0
550	Hz	35.4
600	Hz	0
650	Hz	25
700	Hz	0
750	Hz	19.8
800	Hz	0
850	Hz	15.6
900	Hz	0
950	Hz	12.5
1000	Hz	0
1050	Hz	9.4
1100	Hz	0
1150	Hz	8.3
1200	Hz	0
1250	Hz	0
1300	Hz	0
1350	Hz	0
1400	Hz	0
1450	Hz	0

1500	Hz	0
1550	Hz	0
1600	Hz	0
1650	Hz	0
1700	Hz	0
1750	Hz	0
1800	Hz	0
1850	Hz	0
1900	Hz	0
1950	Hz	0
2000	Hz	0
2050	Hz	0
2100	Hz	0
2150	Hz	0
2200	Hz	0
2250	Hz	0
2300	Hz	0
2350	Hz	0
2400	Hz	0
2450	Hz	0
2500	Hz	0
2550	Hz	0
2600	Hz	0
2650	Hz	0
2700	Hz	0
2750	Hz	0
2800	Hz	0
2850	Hz	0
2900	Hz	0
2950	Hz	0
3000	Hz	0
3050	Hz	0
3100	Hz	0

- Component current spectrums for noise study

CASE-I: Max. individual TCR Current

SVC Output : (-)201.67 MVAR
Case description : Max. individual TCR current @P_{uck}=1.1pu

Frequency		TCR1	TCR2	TCR3
n	fn	in delta	in delta	in delta
1	(50Hz)	2822.29	78.66	0.00
2	(100Hz)	0.000	0.000	0.000
3	(150Hz)	0.000	-69.078	0.000
4	(200Hz)	0.000	0.000	0.000
5	(250Hz)	0.000	51.602	0.000
6	(300Hz)	0.000	0.000	0.000
7	(350Hz)	0.000	-31.309	0.000
8	(400Hz)	0.000	0.000	0.000
9	(450Hz)	0.000	12.975	0.000
10	(500Hz)	0.000	0.000	0.000
11	(550Hz)	0.000	-0.088	0.000
12	(600Hz)	0.000	0.000	0.000
13	(650Hz)	0.000	-6.070	0.000
14	(700Hz)	0.000	0.000	0.000
15	(750Hz)	0.000	6.452	0.000
16	(800Hz)	0.000	0.000	0.000
17	(850Hz)	0.000	-3.474	0.000
18	(900Hz)	0.000	0.000	0.000
19	(950Hz)	0.000	-0.147	0.000
20	(1000Hz)	0.000	0.000	0.000
21	(1050Hz)	0.000	2.439	0.000
22	(1100Hz)	0.000	0.000	0.000
23	(1150Hz)	0.000	-2.710	0.000
24	(1200Hz)	0.000	0.000	0.000
25	(1250Hz)	0.000	1.445	0.000
26	(1300Hz)	0.000	0.000	0.000
27	(1350Hz)	0.000	0.258	0.000
28	(1400Hz)	0.000	0.000	0.000
29	(1450Hz)	0.000	-1.381	0.000
30	(1500Hz)	0.000	0.000	0.000
31	(1550Hz)	0.000	1.467	0.000
32	(1600Hz)	0.000	0.000	0.000
33	(1650Hz)	0.000	-0.713	0.000
34	(1700Hz)	0.000	0.000	0.000
35	(1750Hz)	0.000	-0.280	0.000
36	(1800Hz)	0.000	0.000	0.000

37	(1850Hz)	0.000	0.911	0.000
38	(1900Hz)	0.000	0.000	0.000
39	(1950Hz)	0.000	-0.899	0.000
40	(2000Hz)	0.000	0.000	0.000
41	(2050Hz)	0.000	0.375	0.000
42	(2100Hz)	0.000	0.000	0.000
43	(2150Hz)	0.000	0.272	0.000
44	(2200Hz)	0.000	0.000	0.000
45	(2250Hz)	0.000	-0.652	0.000
46	(2300Hz)	0.000	0.000	0.000
47	(2350Hz)	0.000	0.591	0.000
48	(2400Hz)	0.000	0.000	0.000
49	(2450Hz)	0.000	-0.339	0.000
50	(2500Hz)	0.000	0.000	0.000
51	(2550Hz)	0.000	-0.441	0.000
52	(2600Hz)	0.000	0.000	0.000
53	(2650Hz)	0.000	0.849	0.000
54	(2700Hz)	0.000	0.000	0.000
55	(2750Hz)	0.000	-0.701	0.000
56	(2800Hz)	0.000	0.000	0.000
57	(2850Hz)	0.000	0.160	0.000
58	(2900Hz)	0.000	0.000	0.000
59	(2950Hz)	0.000	0.405	0.000
60	(3000Hz)	0.000	0.000	0.000
61	(3050Hz)	0.000	-0.658	0.000
62	(3100Hz)	0.000	0.000	0.000

CASE-I: Max. Inductive Power

SVC Output : (-)500 MVAR
Case description : Max. inductive power @U_{pcc}=1.0pu

Frequency		TCR1	TCR2	TCR3
n	fn	in delta	in delta	in delta
1	(50Hz)	2139.64	2139.64	1932.63
2	(100Hz)	0.000	0.000	0.000
3	(150Hz)	0.000	0.000	-68.448
4	(200Hz)	0.000	0.000	0.000
5	(250Hz)	0.000	0.000	-40.435
6	(300Hz)	0.000	0.000	0.000
7	(350Hz)	0.000	0.000	-28.211
8	(400Hz)	0.000	0.000	0.000
9	(450Hz)	0.000	0.000	-21.257
10	(500Hz)	0.000	0.000	0.000
11	(550Hz)	0.000	0.000	-16.707
12	(600Hz)	0.000	0.000	0.000
13	(650Hz)	0.000	0.000	-13.459
14	(700Hz)	0.000	0.000	0.000
15	(750Hz)	0.000	0.000	-10.999
16	(800Hz)	0.000	0.000	0.000
17	(850Hz)	0.000	0.000	-9.059
18	(900Hz)	0.000	0.000	0.000
19	(950Hz)	0.000	0.000	-7.481
20	(1000Hz)	0.000	0.000	0.000
21	(1050Hz)	0.000	0.000	-6.170
22	(1100Hz)	0.000	0.000	0.000
23	(1150Hz)	0.000	0.000	-5.063
24	(1200Hz)	0.000	0.000	0.000
25	(1250Hz)	0.000	0.000	-4.118
26	(1300Hz)	0.000	0.000	0.000
27	(1350Hz)	0.000	0.000	-3.305
28	(1400Hz)	0.000	0.000	0.000
29	(1450Hz)	0.000	0.000	-2.604
30	(1500Hz)	0.000	0.000	0.000
31	(1550Hz)	0.000	0.000	-1.997
32	(1600Hz)	0.000	0.000	0.000
33	(1650Hz)	0.000	0.000	-1.473
34	(1700Hz)	0.000	0.000	0.000
35	(1750Hz)	0.000	0.000	-1.023

36	(1800Hz)	0.000	0.000	0.000
37	(1850Hz)	0.000	0.000	-0.637
38	(1900Hz)	0.000	0.000	0.000
39	(1950Hz)	0.000	0.000	-0.310
40	(2000Hz)	0.000	0.000	0.000
41	(2050Hz)	0.000	0.000	-0.035
42	(2100Hz)	0.000	0.000	0.000
43	(2150Hz)	0.000	0.000	0.191
44	(2200Hz)	0.000	0.000	0.000
45	(2250Hz)	0.000	0.000	0.374
46	(2300Hz)	0.000	0.000	0.000
47	(2350Hz)	0.000	0.000	0.518
48	(2400Hz)	0.000	0.000	0.000
49	(2450Hz)	0.000	0.000	1.086
50	(2500Hz)	0.000	0.000	0.000
51	(2550Hz)	0.000	0.000	1.219
52	(2600Hz)	0.000	0.000	0.000
53	(2650Hz)	0.000	0.000	1.304
54	(2700Hz)	0.000	0.000	0.000
55	(2750Hz)	0.000	0.000	1.345
56	(2800Hz)	0.000	0.000	0.000
57	(2850Hz)	0.000	0.000	1.348
58	(2900Hz)	0.000	0.000	0.000
59	(2950Hz)	0.000	0.000	1.318
60	(3000Hz)	0.000	0.000	0.000
61	(3050Hz)	0.000	0.000	1.261
62	(3100Hz)	0.000	0.000	0.000

Appendix 3 : Spare List for TCR Bank

XVII.	**TCR bank**		
a)	Air core Reactor Coil	One no. of each type & rating	
b)	Support insulators	05 nos. of each type	

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

सी.जी.-डी.एल.-अ.-29022024-252482
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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)
PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 135] नई दिल्ली, बृहस्पतिवार, फरवरी 29, 2024/फाल्गुन 10, 1945
No. 135] NEW DELHI, THURSDAY, FEBRUARY 29, 2024/PHALGUNA 10, 1945

विद्युत मंत्रालय

अधिसूचना

नई दिल्ली, 28 फरवरी, 2024

सा.का.नि. 146(अ).—केंद्रीय सरकार, विद्युत अधिनियम, 2003 (2003 का 36) की धारा 176 की उप-धारा (1) द्वारा प्रदत्त अधिकारों का प्रयोग करते हुए, विद्युत (विलंब भुगतान अधिभार और संबंधित मामले) नियम, 2022 का संशोधन करने के लिए निम्नलिखित नियम बनाती है, अर्थात:-

1. (1) इन नियमों का संक्षिप्त नाम विद्युत (विलंब भुगतान अधिभार और संबंधित मामले) (संशोधन) नियम, 2024 है।

(2) ये राजपत्र में इनके प्रकाशन की तारीख से प्रवृत्त होंगे।

2. विद्युत (विलंब भुगतान अधिभार और संबंधित मामले) नियम, 2022 (जिसे इसके पश्चात उक्त नियम कहा गया है) के, नियम 7 में, खंड (1) से (6) तथा स्पष्टीकरण के स्थान पर, निम्नलिखित खंड तथा स्पष्टीकरण रखे जाएंगे, अर्थात्: -

"(क) अल्पकालिक संविदाओं या पावर एक्सचेंज के माध्यम से विद्युत के क्रय और विक्रय के लिए, किसी भी पूर्व अनुमोदित पहुंच सहित, पहुंच को पूरी तरह से विनियमित किया जाएगा:

परंतु यह कि राष्ट्रीय भार प्रेषण केंद्र, ग्रिड सुरक्षा के लिए असाधारण परिस्थितियों में, कारणों को लिखित रूप में अभिलिखित करने के पश्चात्, इन नियमों के अधीन पहुंच के विनियमन का अस्थायी रूप से पुनरीक्षण कर सकता है;

(ख) पहुंच के विनियमन के प्रारंभ के एक माह पश्चात्, या यदि शोध्य राशि साढ़े तीन माह तक असंदत्त रहती है, तो पहले से ही मौजूद पहुंच के विनियमन के अतिरिक्त, अल्पकालिक संविदाओं से भिन्न अन्य संविदाओं के माध्यम से विद्युत के क्रय और विक्रय के लिए पहुंच को दस प्रतिशत तक विनियमित किया जाएगा।

(ग) अल्पकालिक संविदाओं से भिन्न संविदाओं के माध्यम से विद्युत के क्रय और विक्रय के लिए पहुंच को ऐसी रीति से कम किया या वापस लिया जाएगा कि आहरण या अंत:क्षेपण शेड्यूल में कमी की मात्रा व्यतिक्रम के प्रत्येक माह के लिए उत्तरोत्तर दस प्रतिशत बढ़ जाए;

(घ) बकाया शोध्यों के संदाय पर, इस नियम के अधीन पहुंच का विनियमन समाप्त हो जाएगा, और संदाय करने के दिन को छोड़कर, शीघ्रातिशीघ्र, परंतु एक दिन के अपश्चात्, इसे प्रत्यावर्तित किया जाएगा;

(ङ) राष्ट्रीय भार प्रेषण केंद्र इन नियमों के अनुसार पहुंच के विनियमन को लागू करने के लिए विस्तृत प्रक्रिया जारी करेगा;

(च) आहरण शेड्यूल में इस तरह की कमी के मामले में, उत्पादन स्टेशन में अपने मूल हिस्से के लिए क्षमता प्रभारों के संदाय के साथ-साथ अंतर-राज्यीय पारेषण प्रभारों के भुगतान का दायित्व भी विनियमित इकाईयों के पास रहेगा;

स्पष्टीकरण: इस नियम के प्रयोजनों के लिए, यह स्पष्ट किया जाता है कि:-

(i) अभिव्यक्ति "अल्पकालिक संविदा" से एक वर्ष तक की अवधि के लिए विद्युत के क्रय या विक्रय की संविदा अभिप्रेत है;

(ii) 'पहुंच' पद से अंतर-राज्यीय पारेषण प्रणाली तक खुली पहुंच अभिप्रेत है।

3. उक्त नियमों के नियम 9 में,

(क) उप-नियम (1) के स्थान पर, निम्नलिखित उप नियम रखा जाएगा अर्थात्-

“(1) एक वितरण अनुज्ञप्तिधारी प्रत्येक उत्पादन कंपनी से, जिसके साथ उसने विद्युत क्रय का करार किया है, प्रत्येक दिन के लिए विद्युत की अध्यपेक्षा के लिए, अपने कार्यक्रम की सूचना उस दिन के लिए डे अहेड मार्किट में प्रस्ताव या बोली लगाने के लिए समय समाप्त होने से कम से कम दो घंटे पहले देगा, ऐसा न करने पर उत्पादन कंपनी, समुचित आयोग द्वारा यथा निर्दिष्ट रैंपिंग और स्टार्ट-अप क्षमता की सीमा के अध्यधीन, पावर एक्स्चेंज में शट-डाउन के अधीन इकाई की घोषित क्षमता की तुलना में उपलब्ध विद्युत सहित गैर- अध्यपेक्षित अधिशेष विद्युत का प्रस्ताव करेगी:

परंतु यह कि यदि उत्पादन कंपनी द्वारा इस प्रकार प्रस्तावित की गई विद्युत को डे-अहेड मार्केट में मंजूरी नहीं दी जाती है, तो इसके लिए पावर एक्सचेंज में रियल टाइम मार्केट सहित अन्य बाजार क्षेत्रों में प्रस्ताव दिया जाएगा:

परंतु यह और कि बाजार में विद्युत का ऐसा प्रस्ताव समुचित आयोग द्वारा यथानिर्धारित या अंगीकृत या अधिनियम की धारा 11 के अधीन केंद्र सरकार द्वारा जारी निदेशों के अधीन परिकलित, यदि लागू है, ऊर्जा प्रभार के 120% के साथ प्रयोज्य पारेषण प्रभारों से अधिक कीमत पर नहीं होगी:

परंतु यह भी कि यदि उत्पादन कंपनी, पावर एक्सचेंज में ऐसी गैर-अध्यपेक्षित अधिशेष विद्युत का प्रस्ताव करने में असफल रहती है, तो घोषित क्षमता तक पावर एक्सचेंज में प्रस्ताव न की गई सीमा तक गैर-अध्यपेक्षित अधिशेष विद्युत नियत प्रभारों के संदाय के लिए उपलब्ध नहीं मानी जाएगी”

(ख) उप-नियम (5) के पश्चात, निम्नलिखित उप-नियम अंत:स्थापित किया जाएगा, अर्थात्:

"(6) विद्युत (विलंब भुगतान अधिभार और संबंधित मामले) (संशोधन) नियम, 2024 के प्रारंभ होने के पंद्रह दिनों के भीतर, राष्ट्रीय भार प्रेषण केन्द्र, इस नियम के उप-नियम (1) के उपबंधों को कार्यान्वित करने के लिए एक विस्तृत प्रक्रिया जारी करेगा।"

[फा. सं. 23/22/2019-आर एंड आर]

श्रीकांत नागुलापल्ली, अपर सचिव

टिप्पण: मूल नियम भारत के राजपत्र, भाग-II, खंड 3, उप-खंड (i) में सा.का.नि. संख्यांक 416 (अ) तारीख 3 जून, 2022 द्वारा प्रकाशित किए गए थे।

MINISTRY OF POWER

NOTIFICATION

New Delhi, the 28th February, 2024

G.S.R. 146(E).—In exercise of the powers conferred by sub-section (1) of section 176 of the Electricity Act, 2003 (36 of 2003), the Central Government hereby makes the following rules to amend the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022, namely:-

1. (1) These rules may be called the Electricity (Late Payment Surcharge and Related Matters) (Amendment) Rules, 2024.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 (hereinafter referred to as the said Rules), in rule 7, for clauses (1) to (6) and explanation, the following clauses and explanation shall be substituted, namely:-

"(a) access, including any previously approved access, for the sale and purchase of electricity through short-term contracts or power exchange, shall be regulated entirely:

Provided that the National Load Despatch Centre may, in exceptional circumstances for grid security, temporarily review the regulation of access under these rules, after recording the reasons, in writing;

(b) one month after the commencement of regulation of access or if the dues remain unpaid for three and a half months, access for sale and purchase of electricity through contracts other than the short-term contracts shall be regulated by ten per cent, in addition to the regulation of access already in place;

(c) the reduction or withdrawal of access for sale and purchase of electricity through the contracts other than the short-term contracts shall be in such manner that the quantum of reduction in drawl or injection schedule increases progressively by ten per cent for each month of default;

(d) on payment of outstanding dues, the regulation of access under this rule shall end, and it shall be restored at the earliest, but not later than one day, excluding the day on which payment is made;

(e) the National Load Despatch Centre shall issue the detailed procedure to implement the regulation of access according to these rules;

(f) in case of such reduction of drawl schedule, the liability for payment of capacity charges for its original share in the generating station as also the inter-state transmission charges shall remain with the regulated entity.

Explanation. - For the purposes of this rule, it is hereby clarified that, -

(i) the expression "short - term contract" means the contract for sale or purchase of electricity for a period up to one year;

(ii) the term "access" means the open access to Inter-State Transmission System."

3. In said rules, in rule 9,-

(a) for sub-rule (1), the following sub-rule shall be substituted, namely:-

"(1) A distribution licensee shall intimate its schedule for requisitioning power for each day from each generating company with which it has an agreement for purchase of power at least two hours before the end of the time for placing proposals or bids in the day ahead market for that day, failing which the generating company, shall offer, the un- requisitioned surplus power including the power available against the declared capacity of the unit under shut down, in the power exchange, subject to the limitation of ramping and start up capability as specified by the Appropriate Commission:

Provided that if the power so offered by the generating company is not cleared in Day-Ahead Market, it shall be offered in other market segments, including the Real Time Market, in the power exchange:

Provided further that such offer of power, in the market shall be at a price not exceeding 120 per cent of its energy charge, as determined or adopted by the Appropriate Commission or calculated under the directions, issued by the Central Government, under section 11 of the Act, if applicable, plus applicable transmission charges:

Provided also that if the generating company fails to offer such un-requisitioned surplus power in the power exchange, the un-requisitioned surplus power to the extent not offered in the power exchange up to the declared capacity shall not be considered as available for the payment of fixed charges."

(b) after sub-rule (5), the following sub- rule shall be inserted, namely:-

"(6) Within fifteen days of commencement of the Electricity (Late Payment Surcharge and Related Matters) (Amendment) Rules, 2024, the National Load Despatch Centre shall issue a detailed procedure to implement the provisions of the sub-rule (1) of this rule."

[F. No. 23/22/2019-R&R]

SRIKANT NAGULAPALLI, Addl. Secy.

Note: The principal rules were published in the Gazette of India, Part II, Section 3, Sub-section (i), *vide* number G.S.R 416 (E), dated the 3rd June 2022.

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ग्रिड-इंडिया GRID-INDIA

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)]
राष्ट्रीय भार प्रेषण केन्द्र / National Load Despatch Centre

कार्यालय : बी-9, प्रथम एवं द्वितीय तल, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली - 110016
Office : 1st and 2nd Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016
CIN : U40105DL2009GOI188682, Website : www.grid-india.in, E-mail : gridindiacc@grid-india.in, Tel.: 011- 42785855

ग्रिड-इंडिया/2024/जून

दिनांक: 25th November 2024

सेवा में,

All stakeholders

विषय: Revised Procedure for Implementation of LPSC Rules 2022 and amendment thereof

संदर्भ: Late Payment Surcharge Rules (Amendment) 2024 and CEA Office Memorandum (File No- CEA-EC-11-19(47)/1/2024-FCA Division/827) dated 05.11.2024.

महोदय/ महोदया,

In compliance with Electricity (Late Payment Surcharge and Related Matters) (Amendment) Rules, 2024, a procedure was prepared for the implementation of LPSC Rules 2022 and its amendment after stakeholder consultation. The LPSC Procedure except Section F (Sale of Power not requested by a Distribution Licensee) was made effective from 3rd June 2024. For implementation of Section F of the LPSC Procedure, a mock trial was decided to be done by all stakeholders to identify implementation difficulties.

During the mock run period, several review meetings have been held under Chairmanship of Chairperson, CEA to discuss the implementation difficulties highlighted by stakeholders and suitable deliberation have been made. Based on the implementation difficulties highlighted by stakeholders, the LPSC Procedure have been reviewed and modifications made were agreed in the review meeting held at CEA on 16th October 2024 as per CEA Office Memorandum (File No- CEA-EC-11-19(47)/1/2024-FCA Division/827) dated 05.11.2024. Accordingly, the revised LPSC Procedure is enclosed herewith as Annexure.

As per CEA Office Memorandum (File No- CEA-EC-11-19(47)/1/2024-FCA Division/827) dated 05.11.2024, the mock run for implementation of Section F of the LPSC Procedure has been extended up to 31st December 2024 and this section will now be applicable from 1st January 2025.

The revised procedure is also available on Grid-India website with the following link: https://posoco.in/en/market/payment-security-mechanism/ .

धन्यवाद,

भवदीय

25/11/24

(S Usha)
Head of NLDC

प्रतिलिपि:

1) Chairperson, CEA
2) Member (E&C) / Member (GO), CEA
3) Chief Engineer, (R&R), MOP
4) Secretary, CERC
5) CMD, Grid-India
6) Member Secretary, NRPC / WRPC / SRPC / ERPC / NERPC
7) Director (SO), Grid-India
8) Director (MO), Grid-India
9) Head of RLDCs- NRLDC / WRLDC / SRLDC / ERLDC / NERLDC
10) Heads of all SLDCs- through concerned RLDC

Procedure for

Implementation of

Electricity (Late Payment Surcharge and related matters) Rules 2022 and amendment thereof

in

compliance

of

Ministry of Power, Government of India

Electricity (Late Payment Surcharge and related matters) Rules 2022, and amendment thereof

Grid Controller of India Limited

National Load Despatch Centre

November 2024

Document Name:	Procedure for Implementation of Electricity (Late Payment Surcharge and related matters) Rules 2022 and amendment thereof
Document Creation Date:	25 November 2024

Version History

Serial Number	Description of Change	Date of Change	Revision No.
1.	Draft version for stakeholder consultation	26 April 2024	0.0
2.	Final version	03 June 2024	1.0
3.	Feedback received during mock run period	25 November 2024	1.1

Table of Contents

1. Outline and Scope:

a) Ministry of Power has notified Electricity (Late Payment Surcharge and related matters) Rules 2022 on 3rdJune 2022 and 1st Amendment on 28th February 2024. As per Clause 7(e) and 9(6) of the Rule, a detailed procedure is to be formulated by National Load Despatch Centre, to implement regulation of access to the defaulting entities and sale of un-requisitioned surplus power in the Power Market.

b) All the interstate and intrastate generating stations (except State owned generating stations), Electricity Trading Licensees, Interstate Transmission Licensees, Distribution Licensee or other user of Transmission system shall be covered under this procedure.

Provided that Section F shall be applicable to the State-owned generating stations also.

c) The Payment Security Mechanism (PSM) may be implemented for the State owned Generating Stations as decided by the respective State Governments.

2. Section A: General- Applicable for both intra-state and inter-state generators

a) Payment Security Mechanism (PSM) means Letter of Credit (LC) or Letter of Credit backed by Escrow account as per the agreement.

Provided that advance payment shall constitute payment security if there are no outstanding dues.

Provided further that the payment security may be for a shorter duration or lower capacity in case of generating company if there are no outstanding dues.

b) Power will be scheduled for despatch only after an intimation is given by the regulating entity to the appropriate Load Despatch Centre (LDC) that the Letter of Credit (LC) or Letter of Credit backed by Escrow Account as per the agreement for desired quantum of power with respect to the generating stations has been opened. The intimation shall be provided through the Payment Security Administration (PSA) portal (https://psa.posoco.in) on a day ahead basis for scheduling of power for the next day.

c) In case of difficulty in opening of LC, Distribution Company may also pay in advance for the equivalent quantum of power to be scheduled from the generating station and inform the same to the respective generating station. In such a case also generating station shall intimate respective LDC through PSA portal to schedule the power to the Distribution

Company only if there are no outstanding dues. The quantum of power so scheduled shall be limited to the quantum for which the advance payment has been made.

d) In case of non-maintenance of adequate PSM, the power supply from the generating station shall be regulated by the generating station to the concerned defaulting entity. During the period of the default, the defaulting entity shall continue to be liable for the payment of fixed charges or capacity charges as applicable under the agreement.

e) The generating company, trading licensee, transmission licensee or distribution licensee or other user of transmission system shall inform the appropriate LDC as soon as PSM has been put in place. The power supply to the Distribution licensee or other user of transmission system, for which PSM has been put in place shall be restored (to the extent of regulated power not sold in the market) at the earliest but not later than one day.

f) The Rule 6(3) of Late Payment Surcharge and Related Matters Rules 2022 states that

"*The supply of power shall only be made if an adequate payment security mechanism is maintained or in the absence thereof, advance payment is made:*

Provided that in case the generating company supplies power without the Payment Security Mechanism or without advance payment, it shall lose the right to collect the late payment surcharge from the distribution licensee:

Provided further that in case of non-payment of outstanding dues by the default trigger date, the obligation of the generating company to supply power shall be reduced to Seventy-five per cent of the contracted power to distribution licensee and balance Twenty-five per cent of contracted power may be sold by the generating company through the Power Exchanges.

Provided also that if the distribution licensee does not establish Payment Security Mechanism or continues to default in payment of outstanding dues for a period of thirty days then the generating company shall be entitled to sell 100 per. cent of the contracted power through Power Exchanges."

The action as stated above shall be taken by the concerned generating company with a written intimation to the procurer and the appropriate LDC, as the case may be. The generator shall enter the regulated quantum (in percentage of the contract quantum) in the PSA portal for the above case.

g) Generators, Transmission Licensees, Trading Licensees and Distribution Licensees shall regularly update the billing and payment status (including EMI related details), as the case may be on the PRAAPTI portal. Defaulting entity is liable to be debarred from obtaining access for sale and purchase of electricity through Power Exchange(s) or through short-term contracts, in case outstanding dues is more than two and half months overdue from the date of presentation of monthly bill as per the status made available by PRAAPTI.

Provided that the curtailment shall also be applicable on any existing access for sale and purchase of electricity through Power Exchange(s) or through short term contracts.

h) Defaulting entity is liable to be debarred for obtaining access for sale and purchase of electricity through Power Exchange(s) or through short-term contracts, in case of default in the payment of instalments after the due date of the equated monthly instalment as per the status made available by PRAAPTI / PFCCL.

i) Defaulting entity shall also be liable to be debarred from obtaining access for sale and purchase of electricity through Power Exchange(s) or through short-term contracts, in case a Distribution licensee has not rescheduled the arrear amount as per Rule 5(5) and until such amount is fully paid along with Late Payment Surcharge.

j) If, even one month after the commencement of regulation or if the dues have remained unpaid for three and a half months, apart from the regulation of short-term contracts and power exchange in its entirety, including the applicable Late Payment Surcharge, access for sale and purchase of electricity from contracts other than short term contracts shall be regulated by Ten per cent.

k) Reduction or withdrawal in access for sale and purchase of electricity from contracts other than short term contracts shall be in such a manner that the quantum of reduction in drawl or injection schedule increases progressively by ten percent for each month of default.

l) On payment of outstanding dues, along with Late Payment Surcharge, the regulation of access for sale and purchase of electricity from all the contracts shall end and shall be restored (to the extent of regulated power not sold in the market) at the earliest, but not later than one day, excluding the day on which payment is made as per the 'Statement of Trigger' on PRAAPTI portal.

m) The NLDC, RLDCs and/or SLDCs under exceptional circumstances for grid security requirements, may temporarily review the regulation of access under the LPSC Rules 2022 and it shall record the reasons for doing so, in writing.

n) The generating station and the Distribution licensee or drawee entity shall adhere to the schedules and shall avoid deviations so as to ensure secure grid operation.

o) During this period of non-scheduling of power supply, the generating station shall continue to provide scheduling related information as per the Grid Code every day on a day ahead basis.

3. Section B: Information exchange with Payment Security Mechanism portal

a) All the generating stations both Inter-State and Intra-State, except State owned generating stations, shall provide the status of PSM or advance payment for purchase of electricity latest by 6 am or as per timelines aligned with Indian Electricity Grid Code in the Payment Security Mechanism (PSM) Portal of NLDC every day on a day ahead basis.

b) Transmission Licensee and Trading Licensee shall inform NLDC about non-maintenance of PSM or default in payment of equated monthly instalment or default in payment of outstanding dues by the defaulting entity. A request for regulating power supply from identified generating station shall be submitted by the Transmission Licensee/Trading Licensee, 7 days in advance (from the date of commencement of proposed regulation).

c) In case of non-maintenance of PSM, Generating Companies, Electricity Trading Licensees and Transmission Licensees shall regulate power supply to the defaulting entity in accordance with these rules. In this regard, the concerned generator shall provide the information to NLDC/RLDC/SLDC regarding following action taken by it.

i. Payment default issue (either non-availability of LC or advance payment) has been taken up with the appropriate LDCs for non-scheduling.

ii. Encashment of LC done, or LC encashment process initiated as per PPA by the generator.

or

LC has not been opened or advance payment has not been done by the procurer, provided if there are no outstanding dues.

iii. Actions for third party sale have been initiated by the generator as per PPA, if any.

d) The concerned intra-state and inter-state generator and electricity trading licensee shall be allowed to sell regulated power in the Power Market.

4. Section C: For Interstate generators

By 6.30 am RLDCs for interstate generating stations shall publish on the website, a list of defaulting entities of their respective region along with details of corresponding quantum of regulated power. On receipt of such information from PSA portal, RLDCs/SLDCs shall restrict the schedules of the concerned defaulting entity.

5. Section D: For Intrastate generators

a) SLDCs shall validate the contracts entered by intra-State generators on PSA portal within 15 days of entry. Failing which these will be taken as valid contracts and intra state generators shall be monitored for PSM with a notification to respective SLDC in this regard.

b) By 6.30 am, lists of defaulting entities shall be generated and it will be sent to respective SLDCs from the portal for non-scheduling by SLDCs, every day on a day ahead basis.

6. Section E: Supply obligation of the generating company

In case a generating company fails to offer the contracted power as per the agreement to a distribution licensee or other user of transmission system and it sells the contracted power without taking consent from the distribution licensee or other user of transmission system, to any other party, except in case of power supply regulation under Section A of this procedure or as per provisions of IEGC, then the said generating company, on a complaint to this effect by the distribution licensee or other user of transmission system/procurer to the LDC concerned, shall be debarred from participating in Power Exchanges and on the Discovery of Efficient Electricity Pricing (DEEP) portal. It shall also be debarred from scheduling of any new short-term contracts for the said quantum from that generating station for a period of three months from the date on which the default has been taken cognizance by the concerned LDC. Accordingly, the following process for restriction of sale of power from the generating station shall be followed.

i. All Information received up to 17:30 hours of a day (D) shall be processed on next day (D+1). If information is received from the procurer after 17:30 hours of a day (D), the same shall be consider as received on next day (D+1).

ii. On receipt of the information as above in para (i), the concern RLDC shall examine the case by the next day (D+1) and inform the concerned Generator/Seller/ Trader seeking their response along with a copy to NLDC, procurer and concerned RLDC/SLDC (generator/seller control area)/ Trader.

iii. The Generator/Seller/ Trader, as the case may shall respond to the queries of RLDC within 1 day (D+2) of receipt of such information with a copy to the procurer.

iv. In case no response is received from the generator/seller/trader, the information received from the procurer shall be considered as final.

v. Based on the information received, the concerned generator shall be debarred from participating in Power Exchanges, DEEP portal, and from scheduling of any new short-term contracts for the said quantum for a period of three months from the date on which the default has been taken cognizance (D+3) by the concerned LDC.

vi. The period of debarment shall increase to six months in case of second default and it shall be one year for each successive default.

vii. RLDC/SLDC shall maintain the details of debarred generator/seller under their respective jurisdiction.

7. Section F: Sale of power not requisitioned by a Distribution Licensee:

a) This section shall be applicable for all types of generating resources, except energy limited resource such as Hydro Generating Station, Energy Storage System and renewable generators which are covered under must-run rules. The scheduling of hydro stations shall be made based on the instructions of SLDC/RLDC, as the case may be.

b) Distribution licensees shall intimate its schedule for requisitioning power for each day from each generating company with which it has an agreement for purchase of power latest by two hours before the closing of the Power Exchange bidding window for Day Ahead Market.

c) Generating companies shall offer the un- requisitioned surplus power, including the power available against the declared capacity of the unit under shut down (i.e., DC on bar and DC off bar), in the Power Exchange(s), subject to technical limitations such as ramping and start up capability, etc. as specified by the Central Commission.

d) Generating companies shall offer such un-requisitioned surplus power to Day Ahead Market first and if power is not cleared or is partially cleared in Day Ahead Market, it shall be offered in other market segments including Real Time Market.

Provided that generating companies shall offer any such un-requisitioned surplus power arising due to surrender of power by the beneficiaries, in other market segments including Real Time Market after the closure of Day Ahead Market session.

e) In case generating companies are offering power any such un-requisitioned surplus power arising due to surrender of power by the beneficiaries in the market, there is no requirement of obtaining clearance/consent from the beneficiaries by the generating company.

f) The STU connected generating station shall offer any such un-requisitioned surplus power, considering the state transmission loss.

g) Generating stations shall ensure that the bids for the power offered for sale does not exceed 120% of its energy charge as determined or adopted by the Appropriate Commission or calculated under the directions issued by Central Government under section 11 of the Electricity Act plus applicable transmission charges. Any change in the benchmark Energy Charge Rate (ECR) shall be applicable prospectively from the date of notification.

h) In case it is found any generator has offered sale price, excluding transmission charges, if any more than 120% of energy charge for any time block(s), then the same quantum, whether cleared or uncleared in the market shall be considered as deemed not offered and the same shall not be eligible for fixed cost recovery by the generator.

i) The generating stations shall provide energy charges for the concerned month to the concerned RPCs and SLDCs for interstate and intrastate generators respectively on a monthly basis latest by 1st day of the month for the transactions of previous month.

j) The generating station shall provide the energy charges in National Open Access Registry (NOAR) by 2nd day of the month for the transactions of previous month. To begin with, the present rates as available shall be provided by RPCs to the NLDC for daily basis monitoring.

k) NLDC and SLDCs shall compile the energy charges of all the interstate and intrastate generating station respectively, selling power under Section 62 and Section 63 of the Electricity Act and provide it to all Power Exchanges by 3rd day of the month for the transactions of previous month. To begin with, the present rates as available shall be provided to the Power Exchanges for daily basis monitoring.

l) The Power Exchanges shall provide generator wise, block wise, market segment wise quantum offered for up to 120% and above 120% of energy charge separately as per Format A, on the exchange platform, by 4thday of the month for the transactions of previous month to NLDC and SLDCs for inter-state and intra-state generators respectively. A similar report shall also be provided on a daily basis also to NLDC and SLDCs.

m) The Power Exchanges shall ensure preparation of the reports from the system without any manual intervention. Power Exchanges shall also ensure that confidentiality of the bids is maintained in the process.

n) RLDCs shall provide the information for monitoring of sale of power by the generating stations, as per Format B, to the concerned RPCs by 6th day of the month, for the previous month.

o) Any such un-requisitioned surplus power to the extent not offered in the power exchange(s) up to the declared capacity shall not be considered as available for the payment of fixed charges by the generator and the concerned RPC shall provide details regarding DC not eligible for fixed cost recovery, i.e., Monthly Non Offered Plant Availability Factor (NOPAFM), in the Regional Energy Account (REA) for the concerned month.

p) While raising the invoice for fixed cost recovery to the beneficiaries, the generating station shall consider the Monthly Non Offered Plant Availability Factor for the transaction month M, in the billing of M+2.

q) The schedule (both UP and DOWN) quantum under Security Constraint Economic Despatch (SCED), Security Constraint Unit Commitment (SCUC) and Ancillary Service mechanisms shall be considered for calculation of available DC as per Rule 9.

r) Computation of URS quantum not offered and non-recovery of fixed charges thereof as per LPS Rule 9 (1) shall be as below:

$$NOPAFM = 10000 * \sum_{i=1}^{N} \frac{NODC_i}{N\ x\ IC * (100 - Aux_n - Aux_{en})} \%$$

Where,

NOPAFM= Monthly Non Offered Plant Availability Factor

$NODC_i$= Average Non Offered Quantum (in ex-bus MW), for the i^{th} day of the month, as per LPS Rules/Procedure, including the offered quantum above 120% of energy charge of the respective generator and considering ramping constraint

N = Number of days during the month.

AUX_n = Normative auxiliary energy consumption as a percentage of gross energy generation;

AUX_{en}= Normative auxiliary energy consumption for emission control system as a percentage of gross energy generation, wherever applicable

IC = Installed Capacity (in MW) of the generating station

Note:

1) The quantum offered above 120% of energy charge of the respective generator shall not be considered as available for the payment of fixed charges.
2) The ineligible fixed charges due to non-offered URS would be computed by the generator as below:
3) Ineligible fixed charges for the month = (AFC /12) x (NOPAFM /NAPAF)
   AFC = Annual Fixed Cost; NAPAF= Normative Annual Plant Availability Factor
4) There will be no bifurcation with respect to peak and off peak capacity charges and it shall be settled on monthly basis and cumulative PAFM shall not have any bearing on this.
5) The URS quantum not offered, which is ineligible for recovery of fixed charge for the month shall be shown separately in the REA/SEA of the respective RPC/SLDC, as the case may be.

6) The generator shall not raise the quantum of ineligible fixed charges in the monthly bill to the beneficiaries.
7) In case generator cannot place the URS quantum in the Power Exchange due to any technical glitch in the NOAR or Power Exchange software, the same bid shall be considered as deemed offered for computation of fixed charges of the generator.

8. Section G: Indemnifying Load Despatch Centres

The National Load Despatch Centre or Regional Load Despatch Centre or State Load Despatch Centre or the Regional Power Committee, as the case may be shall be indemnified against any consequences or liability, including the cost of litigation that arise on account of action taken under these Rules by the Distribution Licensees, Generating companies, Transmission Licensees and Trading Licensees.

Format A: Data Submission by Power Exchange

Date	Time Block	Quantum offered for up to 120% of energy charge in IDAM (MW)	Quantum offered above 120% of energy charge in IDAM (MW)	Quantum offered for up to 120% of energy charge in RTM (MW)	Quantum offered above 120% of energy charge in RTM (MW)
	1				
	2				
	3				
	4				

	96				

Format B: Computation by concerned NLDC/RLDC/SLDC

Name of the Generator:

IDAM Computation										
Time Block	Date	Declared Capacity at 06 am on D-1	Schedule at 10 am on D-1	Un-Requisitioned Surplus at 10 am on D-1	Quantum to be offered in IDAM considering ramp constraints	Quantum offered in IDAM	URS power not offered in IDAM	Energy Cost	URS offered above 120% of energy charge	Total non-offered quantum for ineligible fixed charge
		(MW)	(MW)	(MW)	(MW)	(MW)	(MW)	(₹ per kWh)	(MW)	(MW)
		A	B	C = A-B	D	E	F = D-E	G	H	I=F+H
Source of information ------>		Scheduling Software of RLDC/SLDC	Scheduling Software of RLDC/SLDC	Scheduling Software of RLDC/SLDC	Scheduling Software of RLDC/SLDC	Power Exchange	Calculation (only positive values)	NLDC/SLDC	Power Exchange	Calculation
1										
2										
3										
4										

96										

RTM Computation												
Time Block	**Date**	**Declared Capacity at Gate Closure (MW)**	**Schedule at Gate Closure (MW)**	**Un-Requisitioned Surplus at Gate Closure (MW)**	**Quantum to be offered in RTM considering ramp and RSD constraints (MW)**	**Quantum offered in RTM (MW)**	**URS power not offered in RTM (MW)**	**SCED, SCUC, TRAS schedule (MW)**	**Energy Cost (₹ per kWh)**	**URS offered above 120% of energy charge (MW)**	**Total non-offered quantum for ineligible fixed charge (MW)**	**Non offered quantum ineligible for fixed charge for the block (MW)**
		K	**L**	**M = K-L**	**N**	**O**	**P=N-O**	**Q**	**R**	**S**	**T=P+S**	**U= Maximum (I, T)**
Source of information ---------->		**Scheduling Software of RLDC/SLDC**	**Scheduling Software of RLDC/SLDC**	**Scheduling Software of RLDC/SLDC**	**Scheduling Software of RLDC/SLDC**	**Power Exchange**	**Calculation (only positive values)**	**Scheduling Software of RLDC/SLDC**	**NLDC/ SLDC**	**Power Exchange**	**Calculation**	**Calculation**
1												
2												
3												
4												

96												

List of Black start capable generating stations and Mock Drill status(conducted during uring Jan, 2024-Apr, 2025)

Northern Region

S.No.	Power Station	Sector	Ownership	Fuel Type	Black Start Source	Capacity of Black Start Source	Date of last mock drill	Remarks
1	Anta GPS	Central	NTPC	Gas	DG Set	2.968 MW	29-02-2024	
2	Faridabad GPS	Central	NTPC	Gas	DG Set	3.3 MW / 4.125 MVA	25-11-2024	
3	Koldam HEP	Central	NTPC	Hydro	DG Set	2X1250 KVA	14-03-2024	
4	Bairasuil	Central	NHPC	Hydro	DG Set	2X1010 KVA	14-12-2024	
5	Salal Stage-I	Central	NHPC	Hydro	DG Set	2X875 KVA	16-12-2024	
6	Salal Stage-II	Central	NHPC	Hydro	DG Set	3X1020 KVA	16-12-2024	
7	Tanakpur HPS	Central	NHPC	Hydro	DG Set	2X625 KVA & 1X312.5 KVA	19-12-2024	
8	Chamera HPS-I	Central	NHPC	Hydro	DG Set	1X1010 KVA & 2x1000 KVA	12-12-2024	
9	Dhauliganga	Central	NHPC	Hydro	DG Set	2x625 KVA	13-12-2024	
10	Kishanganga	Central	NHPC	Hydro	DG Set	2x1010 KVA	09-11-2024	
11	Parbati-2	Central	NHPC	Hydro	DG Set	2x1000 KVA	26.03.2025	
12	Parbati-3	Central	NHPC	Hydro	DG Set	2x1010 KVA	17.05.2025	
13	Sewa-II	Central	NHPC	Hydro	DG Set	2x500 KVA	16.05.2025	
14	Nathpa-Jhakri	Central	SJVNL	Hydro	DG Set	2*750kVA	08-12-2024	
15	Rampur	Central	SJVNL	Hydro	DG Set	2*1010kVA	08-12-2024	
16	Tehri	Central	THDC	Hydro	DG Set	2*1000kVA	13-11-2024	
17	Koteshwar	Central	THDC	Hydro	DG Set	2*1010kVA	27-11-2024	
18	I.P. Gas Turbine (IPGCL G.T.)	State	IPPGCL/Delhi Gencos	Gas	DG Set	500kVA	10-04-2024	
19	Ranjit Sagar (Thein Dam)	State	Punjab	Hydro	DG Set	2*500kVA	07-05-2024	
20	Rihand (H) or Pipri	State	Uttar Pradesh	Hydro	DG Set	2*320kVA	16-02-2024	
21	Obra(H)	State	Uttar Pradesh	Hydro	DG Set	1*320kVA & 1*250kVA	16-02-2024	
22	Bhakra (L)	Central	BBMB	Hydro			08-11-2024	
23	Bhakra (**R**)	Central	BBMB	Hydro	DG Set	500kVA	08-11-2024	
24	Mahi Bajaj Sagar I	State	Rajasthan	Hydro	DG Set	200kVA	20.03.2025	Black start procedure through DG Set is available at Mahi PH-I and Mahi PHII subject to the condition of availability of water and permission by Water Resource Department, Banswara for the operation of units.
25	Mahi Bajaj Sagar II	State	Rajasthan	Hydro	DG Set	2*200kVA	21.03.2025	
26	Ramgarh GPS	State	Rajasthan	Gas	DG Set	625kVA	11.05.2025	

List of Generating Stations which have not conducted Mock Drill during Jan, 2024-Apr, 2025

Northern Region

S.No.	Power Station	Sector	Ownership	Fuel Type	Black Start Source	Capacity of Black Start Source	Date of last mock drill	Remarks (Reason for not conducting Mock drill)
1	Dadri GPS	Central	NTPC	Gas	DG Set	2.4 MW	15-12-2023	
2	Auraiya GPS	Central	NTPC	Gas	DG Set	2900 kVA	Not conducted	Because of railway line connection
3	Chamera HPS-II	Central	NHPC	Hydro	DG Set	2x1250 KVA	02-12-2022	
4	Chamera HPS-III	Central	NHPC	Hydro	DG Set	2x725 KVA	04-12-2017	Evacuating line was not available
5	URI-I	Central	NHPC	Hydro	DG Set	2x1000 KVA	20-12-2016	Readiness from J&K for availbility of load not received
6	URI-II	Central	NHPC	Hydro	DG Set	2x1010 KVA	20-12-2016	
7	Pong	Central	BBMB	Hydro	DG Set	500kVA, 380kVA	08-06-2014	
8	AD Hydro	IPP	AD Hydro Power Ltd.	Hydro	DG Set	750 kVA	27-01-2023	
9	Budhil	IPP	Greenco	Hydro	DG Set	2*800kVA	Not conducted	
10	Malana-II	IPP	Everest Power Company Ltd.	Hydro	DG Set	725kVA	27-01-2023	
11	Vishnu Prayag IPP	IPP	Jaiprakash power Venture Ltd. (UP)	Hydro			Not conducted	Due to unavailability of load. Unit is at 400kV level.
12	Alaknanda IPP	IPP	GVK (UP)	Hydro			Not conducted	Due to unavailability of load. Unit is at 400kV level.
13	Baghlihar-I	State	Jammu & Kashmir	Hydro			Not conducted	No update received from SLDC-J&K
14	Baghlihar-II	State	Jammu & Kashmir	Hydro			Not conducted	No update received from SLDC-J&K
15	Lower Jhelum	State	Jammu & Kashmir	Hydro			20-12-2016	No update received from SLDC-J&K
16	Upper Sindh	State	Jammu & Kashmir	Hydro			20-12-2016	No update received from SLDC-J&K
17	Rana Pratap Sagar(RPS)	State	Rajasthan	Hydro	DG Set	250kVA	16-01-2011	All 4 Units got submerged in 2019. Units were restored in phases. Last unit revived in March 2025. Remainig 3 units revived by 2022 however, AVR systme is not there. Mock testing of 4th unit may be performed during 2025-26.
18	Khara HEP	State	Uttar Pradesh	Hydro			Not conducted	Due to unavailability of nearby load
19	Matatila	State	Uttar Pradesh	Hydro	DG Set	2*190kVA	Not conducted	Due to unavailability of nearby load
20	Khodri	State	Uttrakhand	Hydro	DG Set	2*500kVA	Not conducted	Due to issue in governing system(old units, R&M work is proposed).
21	Chibro	State	Uttrakhand	Hydro	DG Set	2*500kVA	Not conducted	
22	Singoli Bhatwari	IPP	L&T	Hydro	DG set	2*500kVA	Not conducted	Due to non availability of load
23	Karcham Wangtoo	IPP	JSW	Hydro	DG Set	2*1500kVA	29-12-2021	Scheduled in 2024-25, however couldn't performed due to SCADA upgradation work at Station.
24	Baspa	IPP	JSW	Hydro	DG Set	2*625kVA	29-12-2021	

Annexure – 1: List of Tower Collapses of 400 kV RRVPNL Transmission Lines in the Last 5 Years

Sl No.	Element Name	Outage Date	Revival Date	Total Number of Days Under Outage
1.	400 kV Jaisalmer (RS) -Barmer (RS) Ckt-1	12-05-19	08-03-21	667
		14-07-22	08-09-22	57
		30-05-23	11-07-23	43
		01-05-25	Not Revived	Presently Under Outage
2.	400 kV Jaisalmer (RS) -Barmer (RS) Ckt-2	12-05-19	08-03-21	667
		14-07-22	08-09-22	57
		30-05-23	11-07-23	43
		01-05-25	Not Revived	Presently Under Outage
3.	400 KV Hindaun(RS)-Chhabra (RS) Ckt-1	05-05-20	13-05-20	9
		03-10-22	04-10-22	2
4.	400 kV Akal (RS) -Ramgarh (RS) -2	23-06-20	01-10-20	101
5.	400 KV Akal (RS) -Kankani (RS) - 1	02-06-21	27-09-21	118
6.	400 kV Bikaner(RS)-Deedwana (RS) Ckt-1	21-06-22	02-07-22	12
7.	400 kV Bhadla (RS) - Merta (RS) Ckt-1	25-05-2023	13-06-2023	20
		05-07-2024	26-07-2024	22
8.	400 kV Bhadla-Merta (RS) Ckt-1	08-07-2023	05-08-2023	29
9.	400 kV Bhadla-Jodhpur (RS) Ckt-1	25-05-2023	05-08-2023	73
		05-07-2024	05-09-2024	63
10.	400 kV Akal-Jodhpur (RS) ckt-1	05-06-2023	15-07-2023	41
11.	400 kV Barmer - Bhinmal (RS) Ckt-2	05-05-2025	Not Revived	Presently Under Outage
12.	400 kV Barmer - Bhinmal (RS) Ckt-1	05-05-2025	Not Revived	Presently Under Outage

ग्रिड-इंडिया GRID-INDIA
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 क्षेत्रीय भार प्रेषण केंद्र / Northern Regional Load Despatch Centre
कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016
Office : 18-A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110016
CIN : U40105DL2009GOI188682, Website : www.nrldc.in, E-mail : nrldc@grid-india.in, Tel: 011 26519406, 26523869, Fax: 011 26852747

Ref. No. NRLDC/ MO/Legacy dues/ 733 Date:02nd May 2025

To
The Chief Engineer (C&S)
UP SLDC Ltd,
UP SLDC Complex, Vibhuti Khand,
Gomti Nagar, Lucknow- 226010

Sub: Payment of deviation and ancillary services pool account deficit recovery dues - Reg.

Ref: 1) Our letter NRLDC/MO/DSM/-2024/538 dated 11/11/2024
2) Your letter 4103/CE(CS)/DSM dated 21/11/2024
3) Our Letter NRLDC/MO/Legacy dues dated 04/12/2024
4) Your letter 4309/CE(CS)/DSM(Settlement for Legacy Dues) dated 06/12/2024
5) Our Letter NRLDC/MO/Legacy dues /577 dated 19/12/2024
6) Our Letter NRLDC/MO/Legacy dues/579 dated 20/12/2024
7) Your letter 17 DIR(SLDC)/CE(CS)/SE/(EA)/EE(DSM) dated 02/01/2025
8) Our Letter NRLDC/MO/Legacy dues /598 dated 14/01/2025
9) Our Letter NRLDC/MO/Legacy dues /606 dated 22/01/2025
10) Our Letter NRLDC/MO/Legacy dues /641 dated 14/02/2025
11) Our Letter NRLDC/MO/Legacy dues /668 dated 19/03/2025
12) Our Letter NRLDC/MO/Legacy dues /700 dated 16/04/2025
13) Your letter 2379/CE(C&S)/EE/DSM Pool AC/ dated 16/4/2025

Sir,

This has reference to your letter dated 06/12/2024 regarding payment of deviation and ancillary services pool account deficit recovery for the period prior to 16/09/2024 (Statement of legacy dues). It is to state that the deficit payment statement "Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for period prior 16.09.2024" was issued in line with the Deviation Settlement Mechanism Regulations, 2024 and CERC approved procedure vide order No. L-1/260/2021/CERC dated 15th October 2024.

Kindly refer the clause 43 of IEGC 2023 "*The SLDCs shall be responsible for optimum scheduling and despatch of electricity, monitoring of real time grid operations and management of the reserves including energy storage systems and demand response within its State control area, supervision and control over the intra-State transmission system, processing of interface energy meter data and coordinating the accounting and the settlement of State pool account, as may be specified by the appropriate State Commission.*"

The UP SLDC is responsible for scheduling and despatch of electricity within the state, Energy Accounting and DSM settlement etc in control area of Uttar Pradesh state.

In this regard kindly refer our letter dated 19/12/2024, whereas it was communicated that as the SLDC being apex body of the state is responsible for the payments related deviation and

ancillary services pool account as per the principal regulations. The responsibility of payments of legacy dues which also pertains to the dues related to deviation and ancillary services pool account is that of statutory body of the state in line with the principal regulations.

All the payments related to deviation charges, reactive charges and congestion charges of Uttar Pradesh state is being paid/received by UP SLDC as the UP SLDC is the member of regional pool account. The pool deficit recovery also pertains to deficit in deviation and ancillary services pool account. Hence, it is requested to expedite the process of collection from drawee DICs and accordingly settle of the amount mentioned in the legacy dues statement.

The total outstanding payment towards pool deficit recovery dues is detailed below:

Sl. No.	Description	Principal (in ₹)	Remarks
1	Pool Deficit Recovery Charges (Legacy Dues)	221,54,28,122	16 nos Instalment (1th to 16th) of ₹ 13,42,68,371each and revised 17th of ₹ 6,71,34,186 are pending.
2	Pool Deficit Recovery Charges (As per NLDC statement dated 13/01/2025)	17,83,89,832	
	Total Outstanding	**239,38,17,954**	

In view of above, It is kindly request your kind office to take necessary action and facilitate the settlement of the outstanding dues amounting to **₹239,38,17,954/- (Rupees Two Hundred Thirty-Nine Crore Thirty-Eight Lakh Seventeen Thousand Nine Hundred and Fifty-Four only)** towards pool deficit recovery charges at the earliest. Timely settlement will avoid any additional interest liability due to delayed payments.

धन्यवाद,

आपका आभारी,

(शेख शदरुद्दीन)
वरि. महाप्रबंधक (मा. ओ.), उ.क्षे.भा.प्रे.के.

Copy for kind information:

1. Secretary, CERC, New Delhi
2. Member Secretary, NRPC, New Delhi
3. Chairman and Managing Director, Grid-India
4. Director (System Operation), Grid-India
5. Executive Director, NLDC/NRLDC
6. Director, UP SLDC, UP SLDC Complex, Vibhuti Khand,
7. Gomti Nagar, Lucknow- 226010

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)]

केन्द्रीय कार्यालय : 61, आई एफ सी आई टावर, 8वां और 9वां तल, नेहरु प्लेस, नई दिल्ली -110019
Corporate Office : 61, IFCI Tower, 8th & 9th Floor, Nehru Place, New Delhi - 110019
CIN : U40105DL2009GOI188682, Website : www.grid-india.in, E-mail : gridindiacc@grid-india.in, Tel.: 011- 40234672

NLDC/MO/DSM/2025/ **Date: 28th March'2025**

To,

The Chairman,
UTTAR PRADESH POWER CORPORATION LTD.,
7th Floor, Shakti Bhawan, 14- Ashok Marg,
Lucknow-226001

Subject: Regarding payment of instalments for NLDC Statement of Legacy Dues dated 11.11.24 and NLDC Statement dated 13.01.2025

Ref: 1. Hon'ble CERC order no. No. L-1/260/2021/CERC dated 15.10.2024
2. CERC: Order in Petition No. 01/SM/2025 dated 08.01.2025

Dear Sir,

As you are aware, in recent past India has witnessed persistent high demand for electricity (touching an all-time highest figure of 250 GW on 30th May 2024), in the backdrop of prolonged heat waves and prevailing nationwide election campaigns. To ensure grid stability as well as uninterrupted and reliable power supply, Grid-India deployed generation resources (including Gas based generation) available at national level under Tertiary Reserve Ancillary Services (TRAS) and Central Government directions issued under Section 11 of the Electricity Act (**Annexure-1**). Such timely actions ensured reliable & uninterrupted power supply across country despite the uncertainties imposed by variable renewable generation as well as incidence of very high demands due to unpredictable weather year.

However, deployment of such high-cost generation resources for grid reliability has depleted Deviation and Ancillary Service Pool Account leading to a situation where, the services of the generators remain unpaid for a prolonged period. It may be appreciated that, contribution from such generators will also be required for upcoming peak demand seasons. Ensuring timely payment of outstanding dues is imperative for making critical generation resources (including Gas based generation) readily available for grid reliability services.

In compliance with provisions of CERC approved "Detailed Procedure for recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Account", NLDC had issued Legacy Dues statement vide communication dated 11th November 2024 (revised on 3rd March 2025) which was shared with the regional entity drawl DICs on the same day by the respective RLDCs. (Copy enclosed as **Annexure-2**).

...2

पंजीकृत कार्यालय : प्रथम तल, बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली - 110016
Registered Office : First Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016

Some of the beneficiaries have raised concerns/query on the statement on past dues which were apprised to the Honourable Commission. Accordingly, through an order in Petition No. 01/SM/2025 dated 08th January 2025, clarification and direction was given by CERC to the beneficiaries for timely payment of the legacy dues.

Further, NLDC has published "Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for deficit in pool upto week ending 22.12.2024 for statements from period 16.09.2024" dated 13th January'2025 **(Annexure-3).** The due date of payment was 23rd January 2025.

It is brought to your kind attention that **no payments have been received from your organisation** for both statements dated 11th November 2024 and 13th January'2025. The details of payment yet to be received are as under:

S. No.	Head	Instalment No.	Total amount Due
1	Statement of Legacy Dues dated 11.11.2024 & 03.03.2025	1 to 17	Rs. 2,21,54,28,122
2	Statement for deficit in pool up to week ending 22.12.2024 dated 13.01.2025	-	Rs. 17,83,89,832

Accordingly, your kind intervention is solicited to ensure compliance of directions from Hon'ble CERC and expedite payment into the respective Regional Deviation and Ancillary Services Pool account as per the enclosed statements.

Thanking you,
Yours sincerely,

(S. C. Saxena)
Director (MO), Grid-India

Enclosures:

1. Annexure-1: Directions from GoI dated 12.04.24 under Sec-11 of the Electricity Act
2. Annexure-2: NLDC Communication dated 11.11.24 on statement of Legacy Dues.
3. Annexure-3: NLDC Communication dated 13.01.25 on statement of Deficit Recovery.

Copy for kind information:

1. Secretary, CERC
2. Chairman and Manging Director – Grid-India
3. Director (SO), Grid-India
4. Heads of RLDCs

Annexure-1

No. 23/05/2024-R&R
Government of India
Ministry of Power
***

Shram Shakti Bhawan, Rafi Marg,
New Delhi, 12th April, 2024

ORDER

Subject: Directions to Gas Based Generating Stations (GBSs) under Section 11 of the Electricity Act, 2003 – regarding.

India's electricity demand is rapidly rising, driven by economic growth, particularly during hot weather and high demand periods. Also, the Indian Meteorological Department (IMD) has predicted above-normal maximum temperatures over most parts of the country during the 2024 hot weather season (till June' 2024).

2. It is essential in the public interest to ensure that the demand is met. Presently, 85% of demand during non-solar hours is being met through coal & lignite generation. A significant portion of the gas-based generation capacity is currently unutilized primarily due to commercial considerations. It is necessary to ensure that the operational capacity of the Gas-Based Generating Stations (GBSs) is utilized during the crunch period to optimise the availability of power during ensuing high demand period. Direction under Section – 11, has been given to Imported Coal-Based Generating Stations (ICBs) to ensure that they are running, and their capacity is on bar, vide order dtd. 20thFebruary, 2023, which has been extended till 30thJune, 2024 vide order dated 23rd October, 2023. Based on the current supply and demand scenario, the expected rise in demand in the near future, and ensuring continuous supply of electricity in the public interest while maintaining the grid security, Central Government, after careful consideration, hereby issue the following directions under Section 11 of the Electricity Act, 2003, to ensure maximum generation from GBSs.

3. Requisition of power

a) Based on the monthly demand assessment, GRID-INDIA will inform the Gas-based Generating Stations about the expected high demand and stress days in advance so that the Gencos can arrange for the natural gas as required. GRID-

INDIA shall notify to the GBSs the number of days they are required to generate during a week, at least fourteen (14) days in advance. The GBSs notified and scheduled by GRID-INDIA on D-1 basis shall be guaranteed for dispatch at a minimum of 50% capacity round-the-clock during the designated high-demand period.

b) GBSs shall first offer their power to the PPA holders as per the terms and conditions of the PPA. In cases where a GBS has PPAs with multiple Distribution Licensees, if one of the Distribution Licensee fails to schedule any portion of the power as per its PPA, the unutilized power will first be offered to other PPA holders. If the power is not scheduled by any of the PPA holders, any other Distribution Licensee may schedule such capacity. If no Distribution Licensee schedules the power, the GBS shall then offer such power in the power market. Any surplus capacity shall be made available to GRID-INDIA to provide grid support.

4. Tariff

a) GBSs holding PPAs with Distribution Licensees shall offer their capacity on the basis of the Energy Charge Rate (ECR) determined by the Appropriate Commission.

b) GBSs not tied to PPAs must offer their capacity on the basis of the benchmark ECR determined by the following Committee, unless there is a mutually agreed price:

i. Chairperson (CEA).....Chairman
ii. Member (E&C), CEA.....Member
iii. Joint Secretary (Thermal & OM), MoP.....Member
iv. ED (Marketing), GAIL.....Member
v. Chief Engineer (F & CA), CEA.....Member Convener

The Committee may co-opt additional members as necessary. The Committee's responsibility shall be to ensure that the benchmark rates for procured power cover all prudent costs incurred by GBSs, including natural gas price, transportation costs, boil-off charges, LC charges, customs duties, insurance, re-gasification charges, VAT/local taxes etc. The benchmark rates shall be reviewed every 15 days, taking into consideration the change in the price of natural gas, transport

costs etc. The Committee may also make recommendations for effective implementation of these directions.

c) The GBSs shall offer the power in the power exchanges/other market segments or for dispatch by GRID-INDIA for grid support at a rate not more than hundred and twenty percent of the ECR plus intra-state transmission charges as applicable. In case of the GBSs with PPAs, the realization above the ECR shall first go to meet the fixed costs. Therefore, the PPA holders shall not be required to pay the fixed costs for the power sold in the market or dispatched for grid support. In other cases, the liability for payment of fixed cost shall remain with the PPA holder(s) as per the PPA.

d) If the GBSs are scheduled for grid support, they shall be compensated at the offer price.

5. Miscellaneous

a) The Payment Security Mechanism prescribed under the Late Payment Surcharge Rules, 2022 shall apply. Payments will be made on a weekly basis by the procurer. Rebate will be admissible in accordance with CERC norms or as stipulated in the PPA, whichever is higher.

b) Payment for the power dispatched by GRID-INDIA shall be paid from the statutory pool as per CERC regulations.

c) The GBSs shall operate as per these directions, notwithstanding any prior outstanding dues of the generating company. Such outstanding dues shall be dealt with separately.

6. The above provisions shall apply not withstanding any provisions to the contrary in any PPA or any other agreement.

7. The Generator shall submit a weekly report to GRID-INDIA for the generation and sale of power from the GBSs.

8. GRID-INDIA shall notify the detailed procedure for implementing these directions within seven (7) days of issue of these directions.

9. This Order shall remain valid for generation and supply of power from 01.05.2024 to 30.06.2024.

(Manish Mishra)
Director

To,

All Gas Based Generating Companies
(As per list attached)

Copy to:

1. The Chairperson, CEA
2. Secretary, CERC/FOR, New Delhi.
3. Secretary (Energy/Power), All State Governments/UTs.
4. CMD/MD of the Distribution Companies
5. All State Electricity Regulatory Commission.
6. CMD, GRID-INDIA, New Delhi
7. Executive Director (Marketing), GAIL

Copy for information to:

PS to Hon'ble Minister of Power & NRE,
APS to Hon'ble MoSP,
Sr. PPS to Secretary (Power),
All Additional Secretaries/Joint Secretaries/EA/CE, Ministry of Power
All Directors/Deputy Secretaries, Ministry of Power

List of Gas Based Generating Stations

List of Gas based generating stations having PPAs			
Sl. No.	**Plant Name**	**Utility**	**State**
Central sector			
1	FARIDABAD CCPP	NTPC	HARYANA
2	ANTA CCPP	NTPC	RAJASTHAN
3	AURAIYA CCPP	NTPC	UTTAR PRADESH
4	DADRI CCPP	NTPC	UTTAR PRADESH
5	GANDHAR (JHANORE) CCPP	NTPC	GUJARAT
6	KAWAS CCPP	NTPC	GUJARAT
7	RATNAGIRI CCPP	RGPPL	MAHARASHTRA
State sector			
8	I.P. CCPP	IPGCL	DELHI
9	PRAGATI CCGT-III	Pragati Power Corp. Ltd.	DELHI
10	PRAGATI CCPP	Pragati Power Corp. Ltd.	DELHI
11	DHOLPUR CCPP	RRVUNL	RAJASTHAN
12	PIPAVAV CCPP	GPPC (GSPC-Pipavav Power Comp. Ltd.)	GUJARAT
13	DHUVARAN CCPP (STAGE II and III)	GSECL	GUJARAT
14	HAZIRA CCPP	GSEG	GUJARAT
15	HAZIRA CCPP EXT	GSEG	GUJARAT
16	UTRAN CCPP	GSECL	GUJARAT
17	URAN CCPP	MAHAGENCO	MAHARASHTRA
18	GODAVARI (JEGURUPADU)	APEPDCL	ANDHRA PRADESH
IPP			
19	GAMA CCPP	Gama Infraprop Pvt. Ltd.	UTTARAKHAND
20	SRAVANTHI CCPP	Sravanthi Energy Pvt. Ltd.	UTTARAKHAND
21	TROMBAY CCPP	Tata Power Comp. Ltd.	MAHARASHTRA
22	SUGEN CCPP	Torrent Power Ltd.	GUJARAT

23	UNOSUGEN CCPP	Torrent Power Ltd.	GUJARAT
List of Gas based generating stations having no-PPAs			
1	DGEN Mega CCPP	Torrent Power Ltd.	GUJARAT
2	KONDAPALLI EXTN CCPP	LANCO Kondapalli Power Pvt. Ltd.	ANDHRA PRADESH
3	DHUVARAN CCPP (STAGE I)	GSECL	GUJARAT

ग्रिड-इंडिया GRID-INDIA
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)]
राष्ट्रीय भार प्रेषण केन्द्र / National Load Despatch Centre
कार्यालय : बी-9, प्रथम एवं द्वितीय तल, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली - 110016
Office : 1st and 2nd Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016
CIN : U40105DL2009GOI188682, Website : www.grid-india.in, E-mail : gridindiacc@grid-india.in, Tel.: 011- 42785855

Ref: NLDC/MO/DSM-2024/ 170

11th November'2024

To

Heads of RLDCs

Subject: Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for period prior 16.09.2024 (Statement for Legacy Dues)

Sir,

The CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2024 came into effect from 16.09.2024. In compliance of the Regulation No. 9(7), NLDC has prepared a procedure for Recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Accounts which has been approved by the Hon'ble Commission on 15.10.2024.

The procedure also incorporates methodology for recovery of legacy dues with reference to the Deviation and Ancillary Service pool accounts for the period prior to 16.09.2024... Relevant extracts from the procedure are quoted below:

Quote

"9(2) NLDC shall publish the net deficit recovery statement for the period prior to 16.09.24 as per Format_ Net shortfall Recovery_ Legacy Dues. The net shortfall shall be recovered in equal instalments on a weekly basis in such a way that the total shortfall for the period prior to 16.09.2024 shall be recovered by the end of the financial year 2024-25."

Unquote

In line with the detailed procedure, the statement for legacy dues namely, "*NLDC: Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for period prior 16.09.2024*" has been prepared and enclosed as Annexure-1. The instalment details and due date of payment for each instalment is enclosed as Annexure-2.

As mentioned in the procedure, apportionment of legacy dues amongst the drawee DICs has been made in the ratio of [50% in proportion to their drawal at the ISTS periphery] and [50% in proportion to their GNA].

Accordingly, details of average GNA value and GNA for the period Oct'23 to Sept'24 as per notification of Transmission charges payable by DICs is enclosed as Annexure-3 and Annexure-4 respectively. Details of Drawl (excluding injection) for Drawee DICs for the period 16.09.2023 to 15.09.2024 is enclosed as Annexure-5.

Details of legacy dues shortfall in the Deviation and Ancillary Service pool accounts is enclosed as Annexure-6.

You are kindly requested to intimate this to all the concerned DSM pool members and convey the Drawee DICs to pay the amount in time as mentioned in Annexure-2. If payments by the drawee DICs are delayed beyond ten (10) days from the instalment date, the drawee DICs shall be liable to pay simple interest @ 0.04% for each day of delay.

पंजीकृत कार्यालय : प्रथम तल, बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली - 110016
Registered Office : First Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016

Further, it may be conveyed that the Drawee DICs shall not net off amounts pertaining to legacy dues instalments with any other statements pertaining to the Deviation and Ancillary Services pool or any such other amounts.

Thanking You,
Sincerely yours,

(S Usha)
CGM I/C, NLDC

Enclosed within:

1. Annexure-1: NLDC Statement for Legacy Dues dated 11.11.2024
2. Annexure-2: Instalment details and due date of payment
3. Annexure-3: Details of average GNA value for the period Oct'23 to Sept'24
4. Annexure-4: Details of GNA for the period Oct'23 to Sept'24
5. Annexure-5: Details of Drawl (excluding injection) for the period 16.09.2023 to 15.09.2024
6. Annexure-6: Details of legacy dues shortfall in the Deviation and Ancillary Service pool accounts

Copy for kind information:

1. CMD, Grid-India
2. Director (SO), Grid-India
3. Director (MO), Grid-India

Annexure-1

NLDC: Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for period prior 16.09.2024 (Legacy Dues)

Date: 11-11-2024

Net shortfall Amount in all regional Deviation & Ancillary Services Pool Accounts prior to 16.09.2024 (Rs) (A)	31,42,05,43,772.00
50% Recovery in proportion to the drawl at the ISTS periphery (Rs) (B):	15,71,02,71,886.00
50% Recovery in proportion to the GNA (Rs) (C):	15,71,02,71,886.00
Period considered for Actual drawl at the ISTS periphery:	16.09.2023 to 15.09.2024
Period considered for averaging GNA from notification of Transmission charges payable by DICs:	Oct'23 to Sept'24
Number of instalments to be divided into (D):	20

S. No.	State/Drawee DIC	Region	Actual Drawl (MU) (E)	Average GNA (MW) (F)	50% in proportion to Actual Drawl (Rs.) ($G = B * E_i / \sum E$)	50% in proportion to average GNA (Rs.) ($H = C * F_i / \sum F$)	Total Recovery (Rs.) (I = G + H)	Per Instalment Amount (Rs.) (J = I / D)
1	GUJARAT	WR	58,152.47	11,741.34	1,17,17,14,325.00	1,55,79,73,409.00	**2,72,96,87,734.00**	13,64,84,387.00
2	UP	NR	65,361.14	10,312.70	1,31,69,61,788.00	1,36,84,05,625.00	**2,68,53,67,413.00**	13,42,68,371.00
3	MAHARASHTRA	WR	69,520.16	9,624.22	1,40,07,61,934.00	1,27,70,49,737.00	**2,67,78,11,671.00**	13,38,90,584.00
4	TAMIL NADU	SR	68,419.22	9,177.00	1,37,85,79,117.00	1,21,77,07,601.00	**2,59,62,86,718.00**	12,98,14,336.00
5	MP	WR	55,606.23	10,318.31	1,12,04,10,046.00	1,36,91,49,895.00	**2,48,95,59,941.00**	12,44,77,997.00
6	TELANGANA	SR	43,947.65	6,140.00	88,55,01,365.00	81,47,24,275.00	**1,70,02,25,640.00**	8,50,11,282.00
7	HARYANA	NR	47,283.10	5,418.00	95,27,07,225.00	71,89,21,193.00	**1,67,16,28,418.00**	8,35,81,421.00
8	RAJASTHAN	NR	35,212.05	5,757.67	70,94,87,628.00	76,39,91,988.00	**1,47,34,79,616.00**	7,36,73,981.00
9	PUNJAB	NR	36,649.98	5,499.98	73,84,60,579.00	72,97,99,735.00	**1,46,82,60,314.00**	7,34,13,016.00
10	BIHAR	ER	39,577.89	5,043.00	79,74,55,041.00	66,91,61,974.00	**1,46,66,17,015.00**	7,33,30,851.00
11	KARNATAKA	SR	34,511.91	4,978.06	69,53,80,588.00	66,05,44,783.00	**1,35,59,25,371.00**	6,77,96,269.00
12	DELHI	NR	32,546.43	4,810.00	65,57,78,205.00	63,82,44,913.00	**1,29,40,23,118.00**	6,47,01,156.00
13	ANDHRA PRADESH	SR	26,602.44	4,516.00	53,60,12,724.00	59,92,33,685.00	**1,13,52,46,409.00**	5,67,62,320.00
14	WB	ER	20,235.61	3,528.00	40,77,27,281.00	46,81,34,730.00	**87,58,62,011.00**	4,37,93,101.00
15	CSEB	WR	20,263.40	3,453.00	40,82,87,390.00	45,81,82,887.00	**86,64,70,277.00**	4,33,23,514.00
16	KERALA	SR	23,666.08	2,679.00	47,68,47,918.00	35,54,79,859.00	**83,23,27,777.00**	4,16,16,389.00
17	ODISHA	ER	14,290.61	2,157.75	28,79,41,469.00	28,63,14,545.00	**57,42,56,014.00**	2,87,12,801.00
18	JK & LADAKH	NR	14,276.12	1,977.00	28,76,49,510.00	26,23,30,601.00	**54,99,80,111.00**	2,74,99,006.00
19	Assam	NER	10,386.87	1,714.50	20,92,85,104.00	22,74,99,148.00	**43,67,84,252.00**	2,18,39,213.00
20	UTTARAKHAND	NR	10,194.44	1,402.00	20,54,07,764.00	18,60,33,133.00	**39,14,40,897.00**	1,95,72,045.00
21	JHARKHAND	ER	10,170.88	1,345.00	20,49,33,010.00	17,84,69,731.00	**38,34,02,741.00**	1,91,70,137.00
22	DNH&DD	WR	10,571.98	1,166.00	21,30,14,777.00	15,47,17,998.00	**36,77,32,775.00**	1,83,86,639.00
23	HIMACHAL	NR	6,002.52	1,134.21	12,09,44,873.00	15,04,99,522.00	**27,14,44,395.00**	1,35,72,220.00
24	GOA_WR	WR	4,202.35	503.00	8,46,73,175.00	6,67,43,699.00	**15,14,16,874.00**	75,70,844.00
25	PONDICHERRY	SR	3,340.19	540.00	6,73,01,489.00	7,16,53,275.00	**13,89,54,764.00**	69,47,738.00
26	AMNSIL_WR	WR	2,964.62	563.00	5,97,34,228.00	7,47,05,174.00	**13,44,39,402.00**	67,21,970.00
27	DVC	ER	-	956.00	-	12,68,52,835.00	**12,68,52,835.00**	63,42,642.00
28	BALCO_LOAD_WR	WR	4,567.10	-	9,20,22,538.00	-	**9,20,22,538.00**	46,01,127.00
29	CHANDIGARH	NR	1,976.03	342.00	3,98,15,045.00	4,53,80,408.00	**8,51,95,453.00**	42,59,773.00
30	Tripura	NER	1,655.82	311.00	3,33,63,139.00	4,12,66,979.00	**7,46,30,118.00**	37,31,506.00
31	Meghalaya	NER	1,107.30	238.00	2,23,11,022.00	3,15,80,518.00	**5,38,91,540.00**	26,94,577.00
32	Manipur	NER	1,017.40	204.00	2,04,99,580.00	2,70,69,015.00	**4,75,68,595.00**	23,78,430.00
33	Railways-NR-ISTS-UP	NR	1,405.52	130.00	2,83,19,753.00	1,72,49,863.00	**4,55,69,616.00**	22,78,481.00
34	Arunachal	NER	967.68	179.50	1,94,97,860.00	2,38,18,079.00	**4,33,15,939.00**	21,65,797.00
35	Nagaland	NER	864.74	139.50	1,74,23,672.00	1,85,10,429.00	**3,59,34,101.00**	17,96,705.00
36	GOA_SR	SR	911.54	102.50	1,83,66,636.00	1,36,00,853.00	**3,19,67,489.00**	15,98,374.00
37	Mizoram	NER	452.40	137.61	91,15,343.00	1,82,59,790.00	**2,73,75,133.00**	13,68,757.00
38	SIKKIM	ER	540.69	111.00	1,08,94,348.00	1,47,28,729.00	**2,56,23,077.00**	12,81,154.00
39	ECR	ER	51.52	20.00	10,38,057.00	26,53,825.00	**36,91,882.00**	1,84,594.00
40	PG-HVDC-NR	NR	57.28	8.00	11,54,098.00	10,61,530.00	**22,15,628.00**	1,10,781.00
41	HVDCSR	SR	48.28	6.14	9,72,810.00	8,14,393.00	**17,87,203.00**	89,360.00
42	PG_HVDC_WR	WR	40.70	5.00	8,20,087.00	6,63,456.00	**14,83,543.00**	74,177.00
43	BARC	WR	37.65	5.00	7,58,548.00	6,63,456.00	**14,22,004.00**	71,100.00
44	NFF	NR	26.41	-	5,32,116.00	-	**5,32,116.00**	26,606.00
45	HVDC_BNC	NER	8.08	1.20	1,62,783.00	1,59,230.00	**3,22,013.00**	16,101.00
46	HVDC_APD	ER	5.95	1.20	1,19,797.00	1,59,230.00	**2,79,027.00**	13,951.00
47	HVDC_SASARAM	ER	6.26	0.80	1,26,101.00	1,06,153.00	**2,32,254.00**	11,613.00
	Total		**7,79,704.69**	**1,18,397.20**	**15,71,02,71,886.00**	**15,71,02,71,886.00**	31,42,05,43,772.00	**1,57,10,27,194.00**

Note:

1. Prepared in compliance with the CERC DSM Regulations, 2024 (w.e.f. 16.09.2024) & CERC approved "Detailed Procedure for recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Account" (w.e.f. 15.10.2024) available at https://cercind.gov.in/Regulations/Approved-Procedure-deficit-DSM-Pool.pdf

2. Instalment details and due date of payment for each instalment is enclosed as Annexure-2.

3. Instalments not to be net off with any other statement pertaining to the DSM pool or any such other amounts.

4. Details of average GNA value and GNA over Oct'23 to Sept'24 as per notification of Transmission charges payable by DICs is enclosed as Annexure-3 & Annexure-4 respectively.

5. Details of Drawl (excluding injection) for Drawee DICs for the period 16.09.2023 to 15.09.2024 is enclosed as Annexure-5.

6. Details of legacy dues shortfall (A) region-wise is enclosed as Annexure-6.

7. GNA of GOA have been divided between GOA_WR & GOA_SR based on GNA Inside Region & GNA Outside Region respectively as per details available on CTU website (https://ctuil.in/gna2022updates) as the same is used for RLDC Fees & Charges calculations.

8. PG_HVDC_ER's 2 MW GNA is combinedly used by HVDC_APD & HVDC_SASARAM, the same is bifurcated into 1.2 MW & 0.8 MW GNA respectively, as the same ratio of 60:40 is used for RLDC Fees & Charges calculations for both HVDCs.

(S. Usha)
Chief General Manager
NLDC

Annexure-2

Instalment date and due date of payment by Drawee DICs		
Instalment Number	Instalment Date	Due date of payment by Drawee DICs
1	11-11-2024	21-11-2024
2	18-11-2024	28-11-2024
3	25-11-2024	05-12-2024
4	02-12-2024	12-12-2024
5	09-12-2024	19-12-2024
6	16-12-2024	26-12-2024
7	23-12-2024	02-01-2025
8	30-12-2024	09-01-2025
9	06-01-2025	16-01-2025
10	13-01-2025	23-01-2025
11	20-01-2025	30-01-2025
12	27-01-2025	06-02-2025
13	03-02-2025	13-02-2025
14	10-02-2025	20-02-2025
15	17-02-2025	27-02-2025
16	24-02-2025	06-03-2025
17	03-03-2025	13-03-2025
18	10-03-2025	20-03-2025
19	17-03-2025	27-03-2025
20	24-03-2025	03-04-2025

Annexure-3

Details of average GNA value over Oct'23 to Sept'24 as per notification of Transmission charges payable by DICs			
S. No.	**Drawee DIC**	**Region**	**Average GNA over Oct'23 to Sept'24**
1	Delhi	NR	4810.00
2	UP	NR	10312.70
3	PUNJAB	NR	5499.98
4	Haryana	NR	5418.00
5	Chandigarh	NR	342.00
6	Rajasthan	NR	5757.67
7	HIMACHAL	NR	1134.21
8	JK & LADAKH	NR	1977.00
9	Uttarakhand	NR	1402.00
10	Railways-NR-ISTS-UP	NR	130.00
11	PG-HVDC-NR	NR	8.00
12	Gujarat	WR	11741.34
13	MP	WR	10318.31
14	Maharashtra	WR	9624.22
15	CSEB	WR	3453.00
16	GOA_WR	WR	503.00
17	DNH&DD	WR	1166.00
18	AMNSIL_WR	WR	563.00
19	PG_HVDC_WR	WR	5.00
20	BARC	WR	5.00
21	Andhra Pradesh	SR	4516.00
22	Telangana	SR	6140.00
23	Tamil Nadu	SR	9177.00
24	Kerala	SR	2679.00
25	Karnataka	SR	4978.06
26	Pondicherry	SR	540.00
27	HVDCSR	SR	6.14
28	GOA_SR	SR	102.50
29	WB	ER	3528.00
30	Odisha	ER	2157.75
31	Bihar	ER	5043.00
32	Jharkhand	ER	1345.00
33	Sikkim	ER	111.00
34	DVC	ER	956.00
35	ECR	ER	20.00
36	PG_HVDC_ER	ER	2.00
37	Arunachal	NER	179.50
38	Assam	NER	1714.50
39	Manipur	NER	204.00
40	Meghalaya	NER	238.00
41	Mizoram	NER	137.61
42	Nagaland	NER	139.50
43	Tripura	NER	311.00
44	HVDC_BNC	NER	1.20
	Total		**118397.20**

Details of GNA over Oct'23 to Sept'24 as per notification of Transmission charges payable by DICs

S. No.	Drawee DIC	Region	Oct-23			Nov-23			Dec-23			Jan-24			Feb-24			Mar-24			Apr-24			May-24			Jun-24			Jul-24			Aug-24			Sep-24			Average GNA value
			GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	
1	Delhi	NR	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810.00
2	UP	NR	9779	386	10165	9779	386	10165	9779	386	10165	9953	386	10339	9953	386	10339	9953	386	10339	9953	386	10339	9953	386	10339	9953	386	10339	9959.45161	386	10345.4516	10053	386	10439	10053	386	10439	10312.70
3	PUNJAB	NR	5497		5497	5497		5497	5497		5497	5497		5497	5497		5497	5497		5497	5497		5497	5497		5497	5497		5497	5502.80645		5502.80645	5512		5512	5512		5512	5499.98
4	Haryana	NR	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5418.00
5	Chandigarh	NR	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342.00
6	Rajasthan	NR	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5721	66	5787	5757.67
7	HIMACHAL	NR	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1180.5		1180.5	1134.21
8	JK & LADAKH	NR	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977.00
9	Uttarakhand	NR	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402.00
10	Railways-NR-ISTS-UP	NR	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130.00
11	PG-HVDC-NR	NR	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8.00
12	Gujarat	WR	10704.47	122	10826.47	10704.47	122	10826.47	10704.47	122	10826.47	10704.47	122	10826.47	10704.47	122	10826.47	10756.0829	122	10878.0829	12209.2	122	12331.2	12511.17	122	12633.17	12597.8367	122	12719.8367	12611.17	122	12733.17	12611.17	122	12733.17	12613.17	122	12735.17	11741.34
13	MP	WR	7361		7361	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.2		10587.2	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10318.31
14	Maharashtra	WR	9348.78	236	9584.78	9348.78	236	9584.78	9348.78	236	9584.78	9348.78	236	9584.78	9355.05586	236	9631.05586	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9624.22
15	CSEB	WR	2280	260	2540	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3453.00
16	GOA_WR	WR	453		453	453		453	453		453	453		453	453		453	453		453	553		553	553		553	553		553	553		553	553		553	553		553	503.00
17	DNH&DD	WR	1126		1126	1126		1126	1126		1126	1126		1126	1126		1126	1126		1126	1206		1206	1206		1206	1206		1206	1206		1206	1206		1206	1206		1206	1166.00
18	AMNSIL_WR	WR	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563		563	560.00
19	PG_HVDC_WR	WR	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5.00
20	BARC	WR	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5.00
21	Andhra Pradesh	SR	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4516.00
22	Telangana	SR	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	6140.00
23	Tamil Nadu	SR	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	9177.00
24	Kerala	SR	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679.00
25	Karnataka	SR	4376		4376	4376		4376	4376		4376	4376		4376	4876		4876	4876		4876	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	4978.06
26	Pondicherry	SR	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540.00
27	HVDCSR	SR	6		6	6.19		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.14
28	GOA_SR	SR	95		95	95		95	95		95	95		95	95		95	95		95	110		110	110		110	110		110	110		110	110		110	110		110	102.50
29	WB	ER	3516		3516	3516		3516	3516		3516	3516		3516	3516		3516	3516		3516	3540		3540	3540		3540	3540		3540	3540		3540	3540		3540	3540		3540	3528.00
30	Odisha	ER	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2166		2166	2157.75
31	Bihar	ER	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	5043.00
32	Jharkhand	ER	1110		1110	1110		1110	1110		1110	1110		1110	1110		1110	1110		1110	1580		1580	1580		1580	1580		1580	1580		1580	1580		1580	1580		1580	1345.00
33	Sikkim	ER	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111.00
34	DVC	ER	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956.00
35	ECR	ER	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20.00
36	PG_HVDC_ER	ER	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2.00
37	Arunachal	NER	117	17	134	117	17	134	117	17	134	117	17	134	117	17	134	117	17	134	208	17	225	208	17	225	208	17	225	208	17	225	208	17	225	208	17	225	179.50
38	Assam	NER	1396	133	1529	1396	133	1529	1396	133	1529	1396	133	1529	1396	133	1529	1396	133	1529	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1714.50
39	Manipur	NER	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	204.00
40	Meghalaya	NER	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238.00
41	Mizoram	NER	95		95	116.333333		116.333333	135		135	135		135	135		135	135		135	150		150	150		150	150		150	150		150	150		150	150		150	137.01
42	Nagaland	NER	128	6	134	128	6	134	128	6	134	128	6	134	128	6	134	128	6	134	139	6	145	139	6	145	139	6	145	139	6	145	139	6	145	139	6	145	139.50
43	Tripura	NER	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311.00
44	HVDC_BNC	NER	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.20
			109396.5	2792	112188.5	113640.093	2792	116432.093	113658.8	2792	116450.8	113832.8	2792	116624.8	114379.036	2792	117171.036	114445.373	2792	117237.373	117613	2792	120405	117914.9	2792	120706.9	118001.577	2792	120793.577	118027.168	2792	120819.168	118129.9	2792	120921.9	118223.4	2792	121015.4	118397.20

Annexure-5

Details of Drawl (excluding injection) for Drawee DICs for the period 16.09.2023 to 15.09.2024 (in MU)

S. No.	State/DIC		Region	16 to 30 Sept'23	Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	Mar'24	Apr'24	May'24	June'24	July'24	Aug'24	1 to 15 Sept'24	Total Drawl
1	BIHAR		ER	1907.113	3213.403	2364.883	2413.131	2689.828	2231.921	2593.846	3530.858	3852.552	4228.182	4343.482	4081.994	2126.698	39577.891
2	JHARKHAND		ER	421.921	740.465	692.282	739.419	739.253	646.143	744.485	920.595	996.790	1095.832	998.016	930.305	505.369	10170.876
3	DVC		ER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	ODISHA		ER	745.508	1098.896	810.657	1004.203	513.409	602.950	1527.596	1491.286	1656.349	1620.038	1190.434	1337.901	691.380	14290.606
5	WB		ER	988.441	1541.186	503.195	586.495	691.880	536.783	900.563	2754.226	2337.120	2884.366	2680.199	2419.972	1411.182	20235.606
6	SIKKIM		ER	17.768	29.447	38.496	51.792	60.512	57.020	53.879	46.615	48.644	41.479	39.235	37.257	18.546	540.689
7	HVDC_SASARAM		ER	0.295	0.571	0.512	0.519	0.486	0.470	0.522	0.570	0.312	0.431	0.635	0.625	0.312	6.258
8	HVDC_APD		ER	0.353	0.651	0.395	0.335	0.355	0.306	0.349	0.362	0.402	0.550	0.756	0.761	0.371	5.946
9	ECR		ER	2.455	4.912	3.520	3.782	3.681	4.123	4.082	3.890	4.350	4.961	5.084	4.328	2.351	51.519
10	Arunachal		NER	40.605	76.037	75.423	86.687	91.011	86.752	86.661	76.880	78.546	76.891	74.267	76.628	41.296	967.684
11	Assam		NER	546.521	854.513	654.846	652.180	691.746	659.600	719.778	814.476	921.790	954.180	1140.454	1178.429	598.357	10386.872
12	Manipur		NER	39.546	81.678	80.213	95.523	96.936	86.290	86.216	74.621	73.865	82.809	88.418	87.397	43.888	1017.399
13	Meghalaya		NER	19.603	85.057	136.230	152.292	151.147	152.470	156.901	122.573	75.557	9.793	6.208	19.281	20.188	1107.302
14	Mizoram		NER	18.557	32.144	44.835	50.697	48.989	46.609	46.186	49.396	45.336	31.874	16.860	14.653	6.263	452.397
15	Nagaland		NER	35.939	71.131	62.586	68.903	67.492	65.861	67.546	65.746	78.963	80.033	83.706	79.238	37.595	864.741
16	Tripura		NER	84.994	150.979	103.664	97.253	90.930	97.643	126.861	179.230	157.340	159.610	177.751	145.726	83.841	1655.821
17	HVDC_BNC		NER	0.406	0.722	0.594	0.576	0.541	0.519	0.610	0.636	0.723	0.737	0.825	0.781	0.409	8.079
18	UP		NR	3134.068	4560.831	3262.636	3311.924	3796.875	2343.801	2796.229	5017.601	8156.349	9175.274	8271.990	7959.339	3574.222	65361.140
19	HARYANA		NR	2202.239	3483.785	2735.968	2867.486	2968.583	2792.344	3120.295	2857.142	4823.537	5700.333	6199.475	5290.289	2241.522	47283.096
20	HIMACHAL		NR	141.298	584.956	712.763	914.978	1004.948	908.401	692.837	509.948	194.794	138.039	70.981	103.228	25.352	6002.524
21	DELHI		NR	1611.218	2302.651	1821.713	1899.580	2310.826	1844.847	1950.359	2529.266	3449.433	3798.582	3883.200	3533.996	1610.763	32546.435
22	UTTARAKHAND		NR	369.034	833.230	818.772	912.714	1067.375	913.096	788.146	741.519	930.605	926.101	805.862	747.910	340.073	10194.438
23	RAJASTHAN		NR	1211.644	2661.861	3356.071	3566.896	3816.758	3042.407	2273.674	1801.504	3602.561	3427.345	3233.766	2088.143	1129.415	35212.047
24	PUNJAB		NR	1873.296	2079.874	1341.719	1383.755	1805.132	1832.112	1801.242	1343.186	3386.243	4964.360	6353.656	5916.164	2569.243	36649.982
25	CHANDIGARH		NR	89.016	129.646	103.546	120.554	161.174	118.830	111.544	133.089	211.732	240.937	242.710	216.976	96.276	1976.031
26	JK & LADAKH		NR	407.273	1177.310	1403.485	1672.251	1871.226	1558.963	1453.978	1123.882	887.269	815.688	792.784	723.303	388.704	14276.116
27	NFF	DRAWAL OF NFL AT BHAKRA	NR	1.092	1.803	1.673	2.072	2.326	2.055	2.182	2.295	2.586	2.472	2.054	2.558	1.240	26.409
28	Railways-NR-ISTS-UP		NR	51.588	109.186	111.223	106.108	103.901	104.187	117.289	118.674	131.526	127.193	133.276	127.253	64.112	1405.516
29	PG-HVDC-NR	sum of below rows	NR	2.746	4.306	3.744	3.246	3.542	3.558	4.268	4.714	5.884	6.138	5.724	5.672	3.736	57.278
30	AUXILURY CONSUMPTION OF HVDC RIHAND		NR	0.206	0.360	0.321	0.318	0.317	0.320	0.424	0.465	0.535	0.563	0.537	0.459	0.226	5.052
31	AUXILURY CONSUMPTION OF HVDC DADRI		NR	0.272	0.467	0.389	0.375	0.360	0.368	0.488	0.546	0.656	0.680	0.581	0.490	1.325	6.997
32	AUXILURY CONSUMPTION OF HVDC AGRA		NR	0.799	1.369	1.030	1.063	1.032	0.918	1.004	0.971	1.215	1.224	1.687	1.679	0.887	14.877
33	AUXILURY CONSUMPTION OF HVDC Ballia		NR	0.287	0.413	0.464	0.483	0.449	0.489	0.512	0.530	0.581	0.578	0.253	0.538	0.247	5.825
34	AUXILURY CONSUMPTION OF HVDC Bhiwadi		NR	0.281	0.489	0.433	0.332	0.312	0.349	0.438	0.488	0.668	0.686	0.622	0.597	0.270	5.964
35	AUXILURY CONSUMPTION OF HVDC Kurukshetra		NR	0.901	1.209	1.106	0.675	1.072	1.114	1.402	1.715	2.229	2.407	2.044	1.908	0.780	18.563
36	ANDHRA PRADESH		SR	1447.323	3314.666	2684.606	2106.756	2362.417	2480.850	2632.917	2421.367	2100.939	1472.945	1021.518	1970.031	606.110	26602.444
37	TELANGANA		SR	1917.267	4213.214	2998.193	2977.290	3708.646	4087.874	5207.401	3623.248	2488.021	2899.267	4191.999	4339.411	1295.820	43947.652
38	KARNATAKA		SR	1143.993	3037.461	3006.015	3327.813	3526.837	3989.348	4910.693	4416.448	3141.571	1531.345	629.110	1085.612	765.665	34511.911
39	KERALA		SR	969.099	1892.607	1990.296	2098.725	2066.991	2097.714	2498.201	2559.286	2247.374	1635.718	1396.364	1432.435	781.269	23666.080
40	TAMIL NADU		SR	2226.247	6118.831	5025.805	5225.931	5362.932	5349.658	7300.376	7962.440	6845.423	4918.238	4622.411	5188.680	2272.251	68419.223
41	PONDICHERRY		SR	136.820	285.885	244.002	243.568	240.784	255.234	283.178	303.412	314.876	293.354	297.779	295.650	145.648	3340.190
42	GOA_SR		SR	32.984	68.654	67.326	60.783	59.879	64.708	71.266	112.358	126.665	98.878	53.821	62.958	31.259	911.541
43	HVDCSR		SR	2.049	4.335	3.904	3.794	3.419	3.840	4.627	4.636	4.358	3.885	3.929	3.905	1.599	48.281
44	CSEB		WR	677.708	1570.536	998.705	1016.594	1392.053	1615.718	2032.842	2220.784	1858.170	1793.622	2107.706	1970.526	1008.441	20263.404
45	GUJARAT		WR	2468.374	5435.694	5172.366	5106.620	4418.325	4412.568	5493.024	5086.884	4667.821	4597.315	4269.377	4409.586	2614.519	58152.472
46	MP		WR	1715.306	5186.345	5613.236	5232.273	5791.603	5282.676	4214.918	4179.929	4790.576	4196.347	4040.108	3594.692	1768.218	55606.228
47	MAHARASHTRA		WR	2935.629	7258.024	6461.605	5456.412	5411.833	5264.509	6298.936	6167.187	6060.013	5471.299	4725.564	5485.216	2523.935	69520.162
48	GOA_WR		WR	154.717	363.872	347.497	354.258	343.759	341.676	378.185	361.035	371.926	321.186	346.179	354.305	163.758	4202.351
49	DNH&DD		WR	435.610	896.934	799.648	881.327	881.558	843.969	867.776	865.540	923.499	907.581	923.635	899.303	445.594	10571.976
50	BALCO_LOAD_WR		WR	186.326	385.475	372.993	385.562	385.942	361.249	386.002	374.264	386.825	375.195	389.765	388.495	189.008	4567.101
51	PG_HVDC_WR		WR	1.799	3.200	2.785	2.440	2.709	3.014	3.768	4.058	4.182	3.934	3.676	3.519	1.618	40.701
52	AMNSIL_WR		WR	128.355	242.254	267.720	288.622	278.257	257.648	277.930	203.846	236.129	202.329	185.679	256.131	139.725	2964.625
53	BARC		WR	1.482	3.132	2.806	2.914	2.722	2.641	3.081	3.195	3.681	3.486	3.520	3.343	1.644	37.647

Annexure-6

All amounts in Rs.

Total shortfall amount payable to the regional entities excluding IR on Accrual Basis for RPCs statements period prior 16.09.2024					
Region	**DSM Charges (A)**	**AS-SCUC (as per Format SCUC_BB & SCUC_CC) (B)**	**Reactive Charges (C)**	**Congestion charge (D)**	**Net (E= A+B+C+D)**
NR	-96,41,70,896.00	-8,35,64,62,646.00	-13,40,37,277.00	-	**-9,45,46,70,819.00**
WR	-1,77,60,25,862.00	-17,03,44,17,588.00	-1,31,73,58,687.00	-1,12,67,354.00	**-20,13,90,69,491.00**
SR	-32,97,61,737.00	-3,96,80,00,393.00	-	-	**-4,29,77,62,130.00**
ER	2,52,27,58,913.00		7,19,761.00	-	**2,52,34,78,674.00**
NER	-5,25,20,006.00	-	-	-	**-5,25,20,006.00**
Total	**-59,97,19,588.00**	**-29,35,88,80,627.00**	**-1,45,06,76,203.00**	**-1,12,67,354.00**	**-31,42,05,43,772.00**

Recievable (+) in / Payable (-) from the pool account

ग्रिड-इंडिया
GRID-INDIA

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)]
राष्ट्रीय भार प्रेषण केन्द्र / National Load Despatch Centre

आज़ादी का अमृत महोत्सव

कार्यालय : बी-9, प्रथम एवं द्वितीय तल, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली - 110016
Office : 1st and 2nd Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016
CIN : U40105DL2009GOI188682, Website : www.grid-india.in, E-mail : gridindiacc@grid-india.in, Tel.: 011- 42785855

NLDC/DSM/Deficit Recovery/2025/ **Date: 13th January'2025**

To
As per distribution list

Subject: Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for the period from 16.09.24 to-22.12.24

Ref: 1. CERC: Order No. L-1/260/2021/CERC dated 15th October 2024.

2. CERC: Order in Petition No. 01/SM/2025 dated 08.01.2025

Dear Sir,

In compliance with provisions of CERC approved "Detailed Procedure for recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Account", please find attached the "Net Deviation & Ancillary Services Pool Account Deficit Recovery statement" issued by NLDC for the period from 16.09.24 to 22.12.24.

The Statement is enclosed as Annexure-1 along with the detail of calculation.

Accordingly, the constituents/SLDCs are requested to make payments in their respective regional Deviation and Ancillary Service Pool Account within ten (10) days from the date of issue of the statement by NLDC. In case of delay/default the defaulting constituents shall be liable to pay simple interest @ 0.04 % for each day of delay.

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Thanking you,

Sincerely yours,

13/1/25

(S. Usha)
Executive Director(NLDC)

Enclosures: As above

Annexure-1

NLDC: Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for deficit in pool upto week ending 22.12.2024 for statements from period 16.09.2024

Date: 13-01-2025

Net shortfall Amount in all regional Deviation & Ancillary Services Pool Accounts upto week ending 22.12.2024 for statements from period 16.09.2024 (Rs) (A)	1,90,65,78,848
50% Recovery in proportion to the drawl at the ISTS periphery (Rs) (B):	95,32,89,424
50% Recovery in proportion to the GNA (Rs) (C):	95,32,89,424
Period considered for Actual drawl at the ISTS periphery (D):	01.04.2024 to 29.09.2024 14.10.2024 to 20.10.2024 21.10.2024 to 27.10.2024 28.10.2024 to 03.11.2024 11.11.2024 to 17.11.2024 18.11.2024 to 24.11.2024 16.12.2024 to 22.12.2024
Period considered for averaging GNA from notification of Transmission charges payable by DICs:	April'24 to Nov'24

S. No.	State/Drawee DIC	Region	Actual Drawl (MU) (E)	Average GNA (MW) (F)	50% in proportion to Actual Drawl (Rs.) ($G = B * E_i / \sum E$)	50% in proportion to average GNA (Rs.) ($H = C * F_i / \sum F$)	Total Recovery (Rs.) ($I = G + H$)
1	UP	NR	50,743.27	10,389.81	9,67,77,366	8,16,12,466	**17,83,89,832**
2	GUJARAT	WR	36,213.48	12,670.46	6,90,66,213	9,95,27,089	**16,85,93,302**
3	MAHARASHTRA	WR	42,082.93	9,645.78	8,02,60,397	7,57,68,103	**15,60,28,500**
4	TAMIL NADU	SR	41,824.88	9,177.00	7,97,68,258	7,20,85,812	**15,18,54,070**
5	MP	WR	31,706.36	10,587.16	6,04,70,254	8,31,62,692	**14,36,32,946**
6	HARYANA	NR	34,319.65	5,418.00	6,54,54,298	4,25,58,671	**10,80,12,969**
7	PUNJAB	NR	29,909.03	5,505.23	5,70,42,393	4,32,43,835	**10,02,86,228**
8	TELANGANA	SR	24,668.84	6,140.00	4,70,48,317	4,82,30,019	**9,52,78,336**
9	BIHAR	ER	27,885.82	5,043.00	5,31,83,733	3,96,13,027	**9,27,96,760**
10	RAJASTHAN	NR	22,042.96	5,767.00	4,20,40,251	4,53,00,085	**8,73,40,336**
11	DELHI	NR	23,618.17	4,810.00	4,50,44,477	3,77,82,800	**8,28,27,277**
12	KARNATAKA	SR	15,763.26	5,413.45	3,00,63,631	4,25,22,931	**7,25,86,562**
13	ANDHRA PRADESH	SR	12,918.97	4,516.00	2,46,39,008	3,54,73,415	**6,01,12,423**
14	WB	ER	16,619.95	3,552.50	3,16,97,498	2,79,05,072	**5,96,02,570**
15	CSEB	WR	13,969.79	3,536.00	2,66,43,139	2,77,75,464	**5,44,18,603**
16	KERALA	SR	13,488.40	2,679.00	2,57,25,017	2,10,43,684	**4,67,68,701**
17	ODISHA	ER	9,562.70	2,160.38	1,82,37,939	1,69,69,858	**3,52,07,797**
18	JK & LADAKH	NR	7,182.51	1,977.00	1,36,98,447	1,55,29,438	**2,92,27,885**
19	Assam	NER	7,178.02	1,900.00	1,36,89,900	1,49,24,599	**2,86,14,499**
20	JHARKHAND	ER	6,978.86	1,580.00	1,33,10,049	1,24,10,982	**2,57,21,031**
21	UTTARAKHAND	NR	6,103.67	1,402.00	1,16,40,900	1,10,12,783	**2,26,53,683**
22	DNH&DD	WR	6,639.71	1,206.00	1,26,63,232	94,73,193	**2,21,36,425**
23	HIMACHAL	NR	2,103.82	1,148.94	40,12,392	90,24,964	**1,30,37,356**
24	GOA_WR	WR	2,575.25	553.00	49,11,502	43,43,844	**92,55,346**
25	PONDICHERRY	SR	2,158.31	540.00	41,16,327	42,41,728	**83,58,055**
26	AMNSIL_WR	WR	1,666.28	563.00	31,77,922	44,22,394	**76,00,316**
27	DVC	ER	-	956.00	-	75,09,430	**75,09,430**
28	BALCO_LOAD_WR	WR	2,810.92	-	53,60,970	-	**53,60,970**
29	CHANDIGARH	NR	1,401.53	342.00	26,73,000	26,86,428	**53,59,428**
30	Tripura	NER	1,213.03	311.00	23,13,492	24,42,921	**47,56,413**
31	Reliance Industries	WR	15.30	500.00	29,189	39,27,526	**39,56,715**
32	Arunachal	NER	564.03	225.00	10,75,719	17,67,387	**28,43,106**
33	Railways-NR-ISTS-UP	NR	937.62	130.00	17,88,227	10,21,157	**28,09,384**
34	Manipur	NER	616.51	204.00	11,75,809	16,02,431	**27,78,240**
35	Meghalaya	NER	464.81	238.00	8,86,484	18,69,502	**27,55,986**
36	Nagaland	NER	556.94	145.00	10,62,190	11,38,983	**22,01,173**
37	GOA_SR	SR	615.05	120.00	11,73,025	9,42,606	**21,15,631**
38	Mizoram	NER	218.80	150.00	4,17,295	11,78,258	**15,95,553**
39	SIKKIM	ER	311.72	111.00	5,94,517	8,71,911	**14,66,428**
40	ECR	ER	33.28	20.00	63,469	1,57,101	**2,20,570**
41	PG-HVDC-NR	NR	41.86	8.00	79,829	62,840	**1,42,669**
42	HVDCSR	SR	29.22	6.15	55,724	48,309	**1,04,033**
43	PG_HVDC_WR	WR	26.64	5.00	50,803	39,275	**90,078**
44	BARC	WR	24.70	5.00	47,100	39,275	**86,375**
45	NFF	NR	17.78	-	33,916	-	**33,916**
46	HVDC_BNC	NER	5.36	1.20	10,223	9,426	**19,649**
47	HVDC_APD	ER	4.21	1.20	8,034	9,426	**17,460**
48	HVDC_SASARAM	ER	3.96	0.80	7,549	6,284	**13,833**
	Total		**4,99,838.15**	**1,21,360.04**	**95,32,89,424**	**95,32,89,424**	**1,90,65,78,848**

Note:

1. Prepared in compliance with the CERC DSM Regulations, 2024 & CERC approved "Detailed Procedure for recovery of charges in case of deficit in the Deviation and Ancillary Service Pool Account" (w.e.f. 15.10.2024) available at https://cercind.gov.in/Regulations/Approved-Procedure-deficit-DSM-Pool.pdf
2. Details of weekly surplus/deficit in pool (A) upto week ending 22.12.2024 is enclosed as Annexure-2.
3. Amounts not to be net off with any other statement pertaining to the DSM pool or any such other amounts.
4. Details of average GNA value & GNA over April'24 to Nov'24 as per notification of Transmission charges payable by DICs are enclosed as Annexure-3 & Annexure-4 respectively.
5. Details of Drawl (excluding injection) for Drawee DICs for period mentioned in (D) are enclosed as Annexure-5.
6. GNA of GOA have been divided between GOA_WR & GOA_SR based on GNA Inside Region & GNA Outside Region respectively as per details available on CTU website (https://ctuil.in/gna2022updates) as the same is used for RLDC Fees & Charges calculations.
7. PG_HVDC_ER's 2 MW GNA is combinedly used by HVDC_APD & HVDC_SASARAM, the same is bifurcated into 1.2 MW & 0.8 MW GNA respectively, as the same ratio of 60:40 is used for RLDC Fees & Charges calculations for both HVDCs.

13/1/25

(S. Usha)
Executive Director
NLDC

Annexure - 2

Recievable (+) in / Payable (-) from the pool account

All amounts in Rs.

Net Deficit(-) / Surplus(+) from all accounts on accural basis for the week										
Week No.	From	To	NR	WR	SR	ER	NER	Net Deficit(-) / Surplus(+) (Rs.)	PX Congestion Revenue transferred to DSM Pool	Upto the week status
25	16-09-2024	22-09-2024	-9,55,44,336	-12,90,18,120	26,74,79,588	8,26,07,127	8,47,66,056	21,02,90,315	1,41,83,31,304	**1,62,86,21,619**
26	23-09-2024	29-09-2024	-13,61,09,105	-78,81,84,172	35,72,95,544	18,09,48,536	90,43,064	-37,70,06,133		**1,25,16,15,486**
27	30-09-2024	06-10-2024	-39,51,61,079	-71,73,07,351	49,47,08,265	14,52,91,315	1,26,49,046	-45,98,19,804		**79,17,95,683**
28	07-10-2024	13-10-2024	9,60,64,666	-54,42,55,558	-22,44,22,773	-91,07,452	-1,72,94,066	-69,90,15,183		**9,27,80,500**
29	14-10-2024	20-10-2024	21,43,27,779	-8,19,93,535	-26,43,48,529	4,16,49,078	-26,09,270	-9,29,74,477		**-1,93,978**
30	21-10-2024	27-10-2024	4,06,24,788	-1,93,97,224	-31,96,27,212	6,36,37,256	45,13,745	-23,02,48,647		**-23,04,42,625**
31	28-10-2024	03-11-2024	-6,10,68,225	-2,27,87,459	-3,48,91,115	6,83,04,217	-53,55,527	-5,57,98,109		**-28,62,40,734**
32	04-11-2024	10-11-2024	-18,74,50,659	14,31,02,267	23,67,35,646	-2,77,44,950	53,92,900	17,00,35,204		**-11,62,05,530**
33	11-11-2024	17-11-2024	-14,45,32,880	-13,44,40,262	10,50,38,087	-7,32,31,972	5,44,619	-24,66,22,408		**-36,28,27,938**
1 to 26	01-04-2024	29-09-2024	-1,90,78,27,169	0	0	0	0	-1,90,78,27,169		**-2,27,06,55,107**
34	18-11-2024	24-11-2024	-35,94,19,534	-1,33,33,944	13,09,99,729	3,30,07,653	2,89,24,989	-17,98,21,107		**-2,45,04,76,214**
35	25-11-2024	01-12-2024	-7,80,32,388	5,97,33,834	29,76,30,878	6,32,98,524	2,67,53,962	36,93,84,810		**-2,08,10,91,404**
36	02-12-2024	08-12-2024	-20,36,97,958	13,72,62,884	4,48,45,554	16,06,05,132	1,86,93,491	15,77,09,103		**-1,92,33,82,301**
37	09-12-2024	15-12-2024	10,95,96,716	-21,87,73,391	36,91,77,371	18,92,00,289	1,79,46,746	46,71,47,731	1,60,55,241	**-1,44,01,79,329**
38	16-12-2024	22-12-2024	-11,33,06,033	-1,33,23,18,358	86,66,65,578	9,89,39,339	1,36,19,955	-46,63,99,519		**-1,90,65,78,848**

Statement wise break-up for Pool (on all India basis)						
Week No.	From	To	DSM	AS+SCUC	Reactive	Congestion charge
25	16-09-2024	22-09-2024	1,29,05,91,267	-1,01,25,15,414	-6,77,85,538	0
26	23-09-2024	29-09-2024	1,47,32,66,869	-1,78,06,14,856	-6,96,58,146	0
27	30-09-2024	06-10-2024	65,45,48,152	-1,03,72,92,297	-7,70,75,659	0
28	07-10-2024	13-10-2024	49,27,23,652	-1,10,75,47,310	-8,41,91,525	0
29	14-10-2024	20-10-2024	71,35,85,222	-73,84,16,546	-6,81,43,153	0
30	21-10-2024	27-10-2024	41,24,53,628	-58,50,86,583	-5,76,15,692	0
31	28-10-2024	03-11-2024	72,80,11,998	-72,19,33,783	-6,18,76,324	0
32	04-11-2024	10-11-2024	55,28,48,736	-33,75,31,691	-4,52,81,841	0
33	11-11-2024	17-11-2024	72,69,46,069	-91,90,08,741	-5,45,59,736	0
1 to 26	01-04-2024	29-09-2024	0	-1,90,78,27,169	0	0
34	18-11-2024	24-11-2024	66,75,36,194	-79,01,19,575	-5,72,37,726	0
35	25-11-2024	01-12-2024	71,11,41,614	-28,40,90,246	-5,76,66,558	0
36	02-12-2024	08-12-2024	23,88,72,766	-1,07,77,471	-7,03,86,193	0
37	09-12-2024	15-12-2024	41,42,93,084	10,78,32,547	-5,49,77,900	0
38	16-12-2024	22-12-2024	1,52,68,66,290	-1,94,37,13,800	-4,95,52,009	0

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Annexure-3

Details of average GNA value over April'24 to Nov'24 as per notification of Transmission charges payable by DICs			
S. No.	**Drawee DIC**	**Region**	**Average GNA value**
1	Delhi	NR	4810.00
2	UP	NR	10389.81
3	PUNJAB	NR	5505.23
4	Haryana	NR	5418.00
5	Chandigarh	NR	342.00
6	Rajasthan	NR	5767.00
7	HIMACHAL	NR	1148.94
8	JK & LADAKH	NR	1977.00
9	Uttarakhand	NR	1402.00
10	Railways-NR-ISTS-UP	NR	130.00
11	PG-HVDC-NR	NR	8.00
12	Gujarat	WR	12670.46
13	MP	WR	10587.16
14	Maharashtra	WR	9645.78
15	CSEB	WR	3536.00
16	GOA_WR	WR	553.00
17	DNH&DD	WR	1206.00
18	AMNSIL_WR	WR	563.00
19	PG_HVDC_WR	WR	5.00
20	BARC	WR	5.00
21	Reliance Industries	WR	500.00
22	Andhra Pradesh	SR	4516.00
23	Telangana	SR	6140.00
24	Tamil Nadu	SR	9177.00
25	Kerala	SR	2679.00
26	Karnataka	SR	5413.45
27	Pondicherry	SR	540.00
28	HVDCSR	SR	6.15
29	GOA_SR	SR	120.00
30	WB	ER	3552.50
31	Odisha	ER	2160.38
32	Bihar	ER	5043.00
33	Jharkhand	ER	1580.00
34	Sikkim	ER	111.00
35	DVC	ER	956.00
36	ECR	ER	20.00
37	PG_HVDC_ER	ER	2.00
38	Arunachal	NER	225.00
39	Assam	NER	1900.00
40	Manipur	NER	204.00
41	Meghalaya	NER	238.00
42	Mizoram	NER	150.00
43	Nagaland	NER	145.00
44	Tripura	NER	311.00
45	HVDC_BNC	NER	1.20
	Total		**121360.04**

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Annexure-4

Details of GNA over April'24 to Nov'24 as per notification of Transmission charges payable by DICs

. No.	Drawee DIC	Region	Apr-24			May-24			Jun-24			Jul-24			Aug-24			Sep-24			Oct-24			Nov-24			Average GNA value
			GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	GNA + GNA-RE (MW) (A)	GNAd (MW) (B)	Total GNA (C = A + B)	
1	Delhi	NR	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810		4810	4810.00
2	UP	NR	9953	386	10339	9953	386	10339	9953	386	10339	9959.45161	386	10345.4516	10053	386	10439	10053	386	10439	10053	386	10439	10053	386	10439	10389.81
3	PUNJAB	NR	5497		5497	5497		5497	5497		5497	5502.80645		5502.80645	5512		5512	5512		5512	5512		5512	5512		5512	5505.23
4	Haryana	NR	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5143	275	5418	5418.00
5	Chandigarh	NR	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342		342	342.00
6	Rajasthan	NR	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5689	66	5755	5721	66	5787	5721	66	5787	5721	66	5787	5767.00
7	HIMACHAL	NR	1130		1130	1130		1130	1130		1130	1130		1130	1130		1130	1180.5		1180.5	1180.5		1180.5	1180.5		1180.5	1148.94
8	JK & LADAKH	NR	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977		1977	1977.00
9	Uttarakhand	NR	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402		1402	1402.00
10	Railways-NR-ISTS-UP	NR	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130		130	130.00
11	PG-HVDC-NR	NR	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8		8	8.00
12	Gujarat	WR	12209.2	122	12331.2	12511.17	122	12633.17	12597.8367	122	12719.8367	12611.17	122	12733.17	12611.17	122	12733.17	12613.17	122	12735.17	12616.2668	122	12738.2668	12617.7033	122	12739.7033	12670.46
13	MP	WR	10587.2		10587.2	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16		10587.16	10587.16
14	Maharashtra	WR	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9409.78	236	9645.78	9645.78
15	CSEB	WR	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3276	260	3536	3536.00
16	GOA_WR	WR	553		553	553		553	553		553	553		553	553		553	553		553	553		553	553		553	553.00
17	DNH&DD	WR	1206		1206	1206		1206	1206		1206	1206		1206	1206		1206	1206		1206	1206		1206	1206		1206	1206.00
18	AMNSIL_WR	WR	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563		563	563.00
19	PG_HVDC_WR	WR	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5.00
20	BARC	WR	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5		5	5.00
21	Reliance Industries	WR																			500		500	500		500	500.00
22	Andhra Pradesh	SR	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4199	317	4516	4516.00
23	Telangana	SR	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	5801	339	6140	6140.00
24	Tamil Nadu	SR	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	8765	412	9177	9177.00
25	Kerala	SR	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679		2679	2679.00
26	Karnataka	SR	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45		5413.45	5413.45
27	Pondicherry	SR	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540		540	540.00
28	HVDCSR	SR	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15		6.15	6.15
29	GOA_SR	SR	120		120	120		120	120		120	120		120	120		120	120		120	120		120	120		120	120.00
30	WB	ER	3540		3540	3540		3540	3540		3540	3540		3540	3540		3540	3540		3540	3640		3640	3540		3540	3552.50
31	Odisha	ER	2157		2157	2157		2157	2157		2157	2157		2157	2157		2157	2166		2166	2166		2166	2166		2166	2160.38
32	Bihar	ER	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	4847	196	5043	5043.00
33	Jharkhand	ER	1580		1580	1580		1580	1580		1580	1580		1580	1580		1580	1580		1580	1580		1580	1580		1580	1580.00
34	Sikkim	ER	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111		111	111.00
35	DVC	ER	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956		956	956.00
36	ECR	ER	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20		20	20.00
37	PG_HVDC_ER	ER	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2		2	2.00
38	Arunachal	NER	208	17	225	208	17	225	208	17	225	208	17	225	208	17	225	208	17	225	208	17	225	208	17	225	225.00
39	Assam	NER	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1767	133	1900	1900.00
40	Manipur	NER	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	177	27	204	204.00
41	Meghalaya	NER	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238		238	238.00
42	Mizoram	NER	150		150	150		150	150		150	150		150	150		150	150		150	150		150	150		150	150.00
43	Nagaland	NER	139	6	145	139	6	145	139	6	145	139	6	145	139	6	145	139	6	145	139	6	145	139	6	145	145.00
44	Tripura	NER	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311		311	311.00
45	HVDC_BNC	NER	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.2		1.2	1.20
			117623	2792	120415	117924.9	2792	120716.9	118011.577	2792	120803.577	118037.168	2792	120829.168	118139.9	2792	120931.9	118233.4	2792	121025.4	118836.507	2792	121628.507	118737.943	2792	121529.943	121360.04

Annexure-5

Details of Drawl (excluding injection) for Drawee DICs (in MU)

S. No.	State/DIC		Region	Apr'24	May'24	June'24	July'24	Aug'24	1 to 15 Sept'24	16 to 22 Sept'24	23 to 29 Sept'24	14 to 20 Oct'24	21 to 27 Oct'24	28 Oct'24 to 3 Nov'24	11 to 17 Nov'24	18 to 24 Nov'24	16 to 22 Dec'24	Total Drawl
1	BIHAR		ER	3530.858	3852.552	4228.182	4343.482	4081.994	2126.698	920.945	806.805	846.839	729.576	770.693	576.045	508.367	562.785	**27885.821**
2	JHARKHAND		ER	920.595	996.790	1095.832	998.016	930.305	505.369	202.950	210.957	215.056	181.142	194.851	171.592	168.739	186.863	**6978.857**
3	DVC		ER	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**
4	ODISHA		ER	1491.286	1656.349	1620.038	1190.434	1337.991	691.380	173.217	147.763	269.947	214.999	283.881	190.396	161.633	122.564	**9562.697**
5	WB		ER	2754.226	2337.120	2884.366	2680.199	2419.972	1411.182	516.164	456.639	313.974	217.443	330.351	158.389	87.280	52.642	**16619.946**
6	SIKKIM		ER	46.615	48.644	41.479	39.235	37.257	18.546	9.133	9.158	9.179	9.929	7.928	10.751	11.204	12.067	**311.723**
7	HVDC_SASARAM		ER	0.570	0.312	0.431	0.635	0.625	0.312	0.134	0.134	0.134	0.134	0.134	0.134	0.133	0.134	**3.958**
8	HVDC_APD		ER	0.362	0.402	0.550	0.756	0.761	0.371	0.164	0.143	0.135	0.131	0.136	0.121	0.113	0.067	**4.213**
9	ECR		ER	3.890	4.350	4.961	5.084	4.328	2.351	0.794	1.007	0.994	1.033	1.043	1.065	1.047	1.333	**33.279**
10	Arunachal		NER	76.880	78.546	76.891	74.267	76.628	41.296	21.095	16.620	15.612	15.874	15.837	16.914	17.292	20.280	**564.031**
11	Assam		NER	814.476	921.790	954.180	1140.454	1178.429	598.357	313.523	248.790	192.529	186.747	176.932	161.137	150.116	140.563	**7178.024**
12	Manipur		NER	74.621	73.865	82.809	88.418	87.397	43.868	20.563	19.951	19.479	19.978	20.130	20.365	19.828	25.220	**616.512**
13	Meghalaya		NER	122.573	75.557	9.793	6.208	19.281	20.188	11.214	11.935	20.341	26.674	31.576	33.942	37.468	38.059	**464.810**
14	Mizoram		NER	49.396	45.336	31.874	16.860	14.653	6.263	3.603	6.095	3.070	3.684	5.681	10.073	11.090	11.124	**218.800**
15	Nagaland		NER	65.746	78.963	80.033	83.706	79.238	37.595	19.837	17.866	15.775	15.093	15.778	15.353	15.003	16.951	**556.938**
16	Tripura		NER	179.230	157.340	159.610	177.751	145.726	83.841	42.417	38.089	42.043	46.714	46.901	37.736	33.691	21.946	**1213.033**
17	HVDC_BNC		NER	0.636	0.723	0.737	0.825	0.781	0.405	0.201	0.182	0.163	0.153	0.168	0.139	0.132	0.112	**5.360**
18	UP		NR	5017.601	8156.349	9175.274	8271.990	7959.339	3574.222	1361.679	1397.023	1186.161	1005.581	1089.581	918.028	824.166	726.354	**50743.268**
19	HARYANA		NR	2857.142	4823.537	5700.333	6199.475	5290.289	2241.522	1100.852	1237.103	962.983	980.962	751.176	711.754	712.499	750.619	**34319.646**
20	HIMACHAL		NR	509.948	194.794	138.039	70.981	103.228	25.352	28.856	52.958	137.199	149.510	108.342	169.755	185.603	229.252	**2103.817**
21	DELHI		NR	2529.266	3449.433	3798.582	3883.200	3533.996	1610.763	740.235	793.501	624.809	621.355	534.388	502.118	475.477	521.642	**23618.166**
22	UTTARAKHAND		NR	741.519	930.605	926.101	805.862	747.910	340.073	139.086	170.528	222.209	223.042	176.887	222.938	222.561	240.356	**6103.672**
23	RAJASTHAN		NR	1801.504	3602.561	3427.345	3233.766	2888.143	1129.415	730.279	942.893	907.754	925.672	810.301	844.132	809.643	789.552	**22042.961**
24	PUNJAB		NR	1343.186	3386.243	4964.369	6353.656	5916.164	2569.243	1104.717	1181.419	641.299	595.654	495.436	463.024	438.592	456.038	**29909.032**
25	CHANDIGARH		NR	133.089	211.732	240.937	242.710	216.976	96.276	43.065	45.947	31.881	30.525	26.918	25.990	25.231	30.355	**1401.534**
26	UT A LADAKH		NR	1123.882	887.269	815.688	792.784	723.393	388.704	235.575	251.425	275.775	294.978	294.269	330.009	354.127	414.717	**7182.505**
27	NFF	NTL DRAWAL AT BHAKRA	NR	2.295	2.586	2.472	2.054	2.558	1.240	0.588	0.610	0.559	0.555	0.533	0.480	0.591	0.660	**17.783**
28	Railways-NR-ISTS-UP		NR	118.674	131.526	127.193	133.276	127.253	64.112	28.446	29.032	29.191	30.100	30.756	30.282	29.748	28.931	**937.621**
29	PG-HVDC-NR	sum of below rows	NR	4.714	5.884	6.136	5.724	5.672	3.736	1.819	1.844	1.401	1.362	1.005	0.996	0.841	0.761	**41.857**
30	AUXILURY CONSUMPTION OF HVDC RIHAND		NR	0.465	0.535	0.563	0.537	0.459	0.226	0.107	0.103	0.101	0.101	0.000	0.076	0.079	0.075	**3.428**
31	AUXILURY CONSUMPTION OF HVDC DADRI		NR	0.546	0.656	0.680	0.581	0.490	1.325	0.693	0.661	0.364	0.367	0.123	0.083	0.092	0.086	**6.748**
32	AUXILURY CONSUMPTION OF HVDC AGRA		NR	0.971	1.215	1.224	1.687	1.679	0.887	0.398	0.425	0.357	0.340	0.353	0.351	0.315	0.267	**10.468**
33	AUXILURY CONSUMPTION OF HVDC Balia		NR	0.530	0.581	0.578	0.253	0.538	0.247	0.122	0.125	0.070	0.062	0.060	0.041	0.000	0.000	**3.207**
34	AUXILURY CONSUMPTION OF HVDC Bhiwadi		NR	0.488	0.668	0.686	0.622	0.597	0.270	0.128	0.135	0.127	0.129	0.131	0.120	0.104	0.100	**4.304**
35	AUXILURY CONSUMPTION OF HVDC Kurukshetra		NR	1.715	2.229	2.407	2.044	1.908	0.760	0.371	0.396	0.381	0.364	0.338	0.284	0.251	0.233	**13.701**
36	ANDHRA PRADESH		SR	2421.367	2100.939	1472.945	1021.518	1970.031	606.110	573.918	422.760	314.287	322.782	523.065	401.982	370.147	397.176	**12918.968**
37	TELANGANA		SR	3623.248	2488.021	2899.267	4191.999	4339.411	1295.820	953.369	662.140	560.596	576.172	571.837	711.913	696.888	1098.157	**24668.839**
38	KARNATAKA		SR	4416.448	3141.571	1531.345	629.110	1085.612	765.665	721.114	415.279	471.434	384.769	564.103	590.654	532.888	513.269	**15763.261**
39	KERALA		SR	2559.286	2247.374	1635.718	1396.364	1432.435	781.269	366.724	389.213	428.020	431.312	438.090	459.441	470.783	452.365	**13488.395**
40	TAMIL NADU		SR	7962.440	6845.423	4918.238	4622.411	5188.680	2272.251	1154.108	1224.994	1218.188	1323.814	1144.004	1347.938	1279.415	1322.978	**41824.883**
41	PONDICHERRY		SR	303.412	314.876	293.354	297.779	295.650	145.648	70.871	69.729	62.085	64.177	60.045	61.702	60.123	58.863	**2158.313**
42	GOA_SR		SR	112.358	126.665	98.878	53.821	62.958	31.259	15.425	15.916	16.323	17.202	15.150	16.875	16.236	15.966	**615.052**
43	HVDCSR		SR	4.636	4.358	3.885	3.929	3.905	1.599	0.717	0.780	0.897	0.910	0.950	0.993	0.898	0.849	**29.218**
44	CSEB		WR	2220.784	1858.170	1793.622	2107.706	1970.526	1008.441	460.832	465.111	539.076	425.185	277.110	270.808	282.121	290.304	**13960.794**
45	GUJARAT		WR	5086.884	4667.821	4597.315	4269.377	4409.586	2614.519	1298.757	1166.258	1276.910	1349.367	1256.861	1453.333	1407.879	1358.613	**36213.481**
46	MP		WR	4179.929	4790.576	4196.347	4040.108	3594.692	1768.218	713.797	891.042	971.167	1022.504	1154.346	1378.742	1415.343	1489.551	**31706.362**
47	MAHARASHTRA		WR	6167.187	6060.013	5471.299	4725.564	5485.216	2523.935	1252.401	1154.995	1533.883	1527.956	1571.526	1657.655	1486.071	1465.226	**42082.926**
48	GOA_WR		WR	361.035	371.926	321.196	346.179	354.305	163.758	81.259	82.291	85.973	86.198	81.940	84.820	79.388	74.991	**2575.248**
49	DNH&DD		WR	865.540	923.499	907.581	923.635	899.303	445.594	211.716	213.849	218.740	220.653	178.993	210.527	210.882	209.197	**6639.711**
50	BALCO_LOAD_WR		WR	374.264	386.825	375.195	389.765	388.495	189.096	88.188	88.309	88.471	88.675	88.285	88.462	88.580	88.375	**2810.917**
51	PG_HVDC_WR		WR	4.658	4.182	3.934	3.676	3.519	1.618	0.778	0.787	0.791	0.729	0.713	0.633	0.546	0.673	**26.638**
52	AMNSIL_WR		WR	203.846	236.129	202.329	185.679	256.131	139.725	48.925	21.947	59.156	63.300	65.165	60.570	63.758	59.621	**1666.280**
53	BARC		WR	3.195	3.681	3.486	3.520	3.343	1.644	0.745	0.798	0.662	0.724	0.790	0.725	0.719	0.665	**24.696**
54	Reliance Industries		WR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.108	0.022	15.175	**15.305**

13/1/25

ग्रिड-इंडिया GRID-INDIA 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 क्षेत्रीय भार प्रेषण केन्द्र / Northern Regional Load Despatch Centre
कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016
Office : 18-A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110016
CIN : U40105DL2009GOI188682, Website : www.nrldc.in, E-mail : nrldc@grid-india.in, Tel: 011 26519406, 26523869, Fax: 011 26852747

Ref. No. NRLDC/ MO/Legacy dues/ 700 Date :16th April 2025

To
The Director,
UP SLDC Ltd,
UP SLDC Complex, Vibhuti Khand,
Gomti Nagar, Lucknow- 226010

Sub: Payment of deviation and ancillary services pool account deficit recovery - Reg.

Ref: 1) Our letter NRLDC/MO/DSM/-2024/538 dated 11/11/2024
2) Your letter 4103/CE(CS)/DSM dated 21/11/2024
3) Our Letter NRLDC/MO/Legacy dues dated 04/12/2024
4) Your letter 4309/CE(CS)/DSM(Settlement for Legacy Dues) dated 06/12/2024
5) Our Letter NRLDC/MO/Legacy dues /577 dated 19/12/2024
6) Our Letter NRLDC/MO/Legacy dues/579 dated 20/12/2024
7) Your letter 17 DIR(SLDC)/CE(CS)/SE/(EA)/EE(DSM) dated 02/01/2025
8) Our Letter NRLDC/MO/Legacy dues /598 dated 14/01/2025
9) Our Letter NRLDC/MO/Legacy dues /606 dated 22/01/2025
10) Our Letter NRLDC/MO/Legacy dues /641 dated 14/02/2025
11) Our Letter NRLDC/MO/Legacy dues /668 dated 19/03/2025

Sir,

This has reference to NLDC letter dated 11/11/2024 & 13/01/2025 regarding payment of deviation and ancillary services pool account deficit recovery for the period prior to 16/09/2024 (Statement of legacy dues) and for period 16.09.2024 to 22.12.2024. It is to state that the deficit payment statement "***Net Deviation & Ancillary Services Pool Account Deficit Recovery Statements***" were issued in line with the Deviation Settlement Mechanism Regulations, 2024, ***CERC approved procedure vide order No. L-1/260/2021/CERC dated 15th October 2024*** and CERC **Suo-Moto order no. 01/SM/2025 dated 08/01/2024**.

In this context it is noted that payment for all seventeen (17) instalments towards pool deficit recovery of legacy dues as well as the payment of pool deficit recovery as per NLDC statement dated 13/01/2025 are still pending from the State of Uttar Pradesh.

The non-receipt of these payments has resulted in delays in disbursing funds to the entitled beneficiary entities from the pool. Despite multiple communications from our end, UP SLDC has yet to clear the outstanding dues.

Cont…

The total outstanding payment towards pool deficit recovery dues is detailed below:

Sl. No.	Description	Principal (in ₹)	Remarks
1	Pool Deficit Recovery Charges (Legacy Dues)	221,54,28,122	16 nos Instalment (1th to 16th) of ₹ 13,42,68,371each and revised 17th of ₹ 6,71,34,186 are pending.
2	Pool Deficit Recovery Charges (As per NLDC statement dated 13/01/2025)	17,83,89,832	
	Total Outstanding	**239,38,17,954**	

UP SLDC, as a member of the regional pool account, serves as the *Nodal Entity* for all payments related to deviation charges, reactive energy charges, and congestion charges for the State of Uttar Pradesh.

In view of above, It is kindly request your kind office to take necessary action and facilitate the settlement of the outstanding dues amounting to **₹239,38,17,954/- (Rupees Two Hundred Thirty-Nine Crore Thirty-Eight Lakh Seventeen Thousand Nine Hundred and Fifty-Four only)** towards pool deficit recovery charges at the earliest. Timely settlement will avoid any additional interest liability due to delayed payments.

धन्यवाद,

आपका आभारी,

शेख शदरुद्दीन
मुख्य महाप्रबंधक (मा. ओ.), उ.क्षे.भा.प्रे.के.

Copy for kind information:

1. Secretary, CERC, New Delhi
2. Member Secretary, NRPC, New Delhi
3. Chairman and Managing Director, Grid-India
4. Director (Market Operation), Grid-India
5. Executive Director, NRLDC
6. Executive Director, NLDC

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
भारत सरकार का उद्यम
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
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उत्तर क्षेत्रीय भार प्रेषण केन्द्र / Northern Regional Load Despatch Centre
कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016
Office : 18-A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110016
CIN : U40105DL2009GOI188682, Website : www.nrldc.in, E-mail : nrldc@grid-india.in, Tel: 011 26519406, 26523869, Fax 011 26852747

Ref. No. NRLDC/ MO/Legacy dues/ 666 Date :19th March 2025

To
The Director,
UP SLDC Ltd,
UP SLDC Complex, Vibhuti Khand,
Gomti Nagar, Lucknow- 226010

Sub: Payment of deviation and ancillary services pool account deficit recovery - Reg.

Ref: 1) Our letter NRLDC/MO/DSM/-2024/538 dated 11/11/2024
2) Your letter 4103/CE(CS)/DSM dated 21/11/2024
3) Our Letter NRLDC/MO/Legacy dues dated 04/12/2024
4) Your letter 4309/CE(CS)/DSM(Settlement for Legacy Dues) dated 06/12/2024
5) Our Letter NRLDC/MO/Legacy dues /577 dated 19/12/2024
6) Our Letter NRLDC/MO/Legacy dues/579 dated 20/12/2024
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8) Our Letter NRLDC/MO/Legacy dues /598 dated 14/01/2025
9) Our Letter NRLDC/MO/Legacy dues /606 dated 22/01/2025
10) Our Letter NRLDC/MO/Legacy dues /641 dated 14/02/2025

Sir,

This has reference to our letter dated 11/11/2024 & 13/01/2025 regarding payment of deviation and ancillary services pool account deficit recovery for the period prior to 16/09/2024 (Statement of legacy dues) and for period 16.09.2024 to 22.12.2024. It is to state that the deficit payment statement "***Net Deviation & Ancillary Services Pool Account Deficit Recovery Statements***" were issued in line with the Deviation Settlement Mechanism Regulations, 2024, ***CERC approved procedure vide order No. L-1/260/2021/CERC dated 15th October 2024*** and CERC **Suo-Moto order no. 01/SM/2025 dated 08/01/2024**..

In this context it is noted that payment for all seventeen (17) instalments (instalment no 1 to 17) and payment of pool deficit recovery as per NLDC statement dated 13/01/2025 are yet to be received from UP state.

Due to non-receipt of the payment from UP, the payments to the receivable entities from the pool are also getting delayed. Despite multiple communications in this regard from our side, UP SLDC has not cleared the outstanding payable amount.
Total outstanding payment of pool deficit recovery dues is given as below:

Sl. No.	Description	Principal (in ₹)	Remarks
1	Pool Deficit Recovery Charges (Legacy Dues)	221,54,28,122	16 nos Instalment (1th to 16th) of ₹ 13,42,68,371each and revised 17th of ₹ 6,71,34,186 are pending
2	Pool Deficit Recovery Charges (As per NLDC statement dated 13/01/2025)	17,83,89,832	
	Total Outstanding	**239,38,17,954**	

UP SLDC, being the member of regional pool account is the "Nodal Entity" for all payments related to deviation charges, reactive charges and congestion charges of State of Uttar Pradesh, It is therefore request your kind office to look into the matter and facilitate the settlement of the outstanding dues of **₹ 239,38,17,954/- (Rupees Two Hundred Thirty Nine Crore Thirty Eight Lakhs Seveenteen Thousand Nine Hundred and Fifty Four only)** against the pool deficit recovery charges at the earliest to avoid any further interest liability on delayed payments.

धन्यवाद,

आपका आभारी,

शेख शदरुद्दीन
मुख्य महाप्रबंधक (मा. ओ.), उ.क्षे.भा.प्रे.के.

Copy for kind information:

1. Secretary, CERC, New Delhi
2. Chairman and Managing Director, Grid-India
3. Director (Market Operation), Grid-India
4. Member Secretary, NRPC,
5. Executive Director, NRLDC
6. Executive Director, NLDC

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
भारत सरकार का उद्यम
GRID CONTROLLER OF INDIA LIMITED
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उत्तर क्षेत्रीय भार प्रेषण केन्द्र / Northern Regional Load Despatch Centre
कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016
Office : 18-A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110016
CIN : U40105DL2009GOI188682, Website : www.nrldc.in, E-mail : nrldc@grid-india.in, Tel: 011 26519406, 26523869, Fax: 011 26852747

Ref. No. NRLDC/ MO/Outstanding/ 699 Date:16th April 2025

To
The Managing Director
JKPCL, SLDC Building,
Ist Floor Gladni Grid Station,
Nanval Bala, Jammu-180 004

Sub: Release of outstanding payment against NR Statutory Pool Accounts - Reg.

Ref: 1) NRLDC Letter Ref No. 1) NRLDC/ MO/Pool/03-10 Dt: 02/01/2024, to CE (SLDC), JKPCL
2) NRLDC/ MO/Pool/56-63 Dt: 24/01/2024, to CE (SLDC), JKPCL
3) NRLDC/ MO/Outstanding /89-96 Dt: 13/02/2024, to CE (SLDC), JKPCL
4) NRLDC/ MO/Outstanding /31-139 Dt: 02/04/2024, to CE (SLDC), JKPCL
5)NRLDC/ MO/Outstanding /183-191 Dt: 03/05/2024, to CE (SLDC), JKPCL
6) NRLDC/ MO/Outstanding /210-216 Dt: 20/05/2024, to MD, JKPCL
7) NRLDC/ MO/Outstanding /394-401 Dt: 01/07/2024, to CE (SLDC), JKPCL
8)) NRLDC/ MO/Outstanding /430-438 Dt: 05/08/2024, to CE (SLDC), JKPCL
9) NRLDC/ MO/Outstanding / Dt: 10/10/2024, to CE (SLDC), JKPCL
10) NRLDC/ MO/Outstanding /523-531 Dt: 30/10/2024, to CE (SLDC), JKPCL
11) NRLDC/ MO/Outstanding /564-573 Dt: 12/12/2024, to CE (SLDC), JKPCL
12) NRLDC/ MO/Outstanding /578 Dt: 20/12/2024, to MD, JKPCL
13) NRLDC/ MO/Outstanding /597 Dt: 14/01/2024, to CE (SLDC), JKPCL
14) NRLDC/ MO/Outstanding /640 Dt: 14/02/2024, to CE (SLDC), JKPCL
15) NRLDC/ MO/Outstanding /669 Dt: 19/03/2024, to MD, JKPCL

Sir,

As you are aware, NRLDC is operating and maintaining the "Northern Regional Pool Account" for Deviation charges, Reactive Energy Charges and Congestion Charges in accordance with provisions under various CERC Regulations. As per Regulations the payment to the statutory pool account have **high priority** and the concerned utilities are required to pay the indicated amounts within ten days of issue of the weekly energy account by NRPC Secretariat.

Further, kindly refer to the NLDC letter dated 11/11/2024 & 13/01/2025 regarding payment of Net Deviation & Ancillary Services Pool Account Deficit Recovery for period prior 16.09.2024 (Statement of legacy dues) and for period 16.09.2024 to 22.12.2024. It is to state that the deficit payment statement "Net Deviation & Ancillary Services Pool Account Deficit Recovery Statements" were issued in line with the Deviation Settlement Mechanism Regulations, 2024, **CERC approved procedure vide order No. L-1/260/2021/CERC** dated 15th October 2024 and CERC **Suo-Moto order no. 01/SM/2025 dated 08/01/2024**.

In this context it is noted that payment for all seventeen (17) instalments towards pool deficit recovery of legacy dues as well as the payment of pool deficit recovery as per NLDC statement dated 13/01/2025 are still pending from the Jammu and Kashmir.

The last payment received in pool accounts from JKPCL was on 09/02/2024. Now, the outstanding against statuary pool accounts payments as on date (Considering Week 51 of FY 2024-25) by JKPCL is as briefed here under.

All figures in Rs.

Sl. No.	Description	Principal (in ₹)	Remarks
1	Deviation Charges	109,74,21,912	Detailed reconciliation statement is attached at Annex-I
2	Reactive Energy Charges	1,30,23,031	
3	Pool Deficit Recovery Charges (Legacy Dues)	45,37,33,599	16 nos Instalment (1th to 16th) of ₹ 2,74,99,006 each and revised 17th of ₹ 1,37,49,503 are pending
4	Pool Deficit Recovery Charges	2,92,27,885	As per NLDC statement dated 13/01/2025
	Total Outstanding	**159,34,06,427**	

Due to the non-receipt of payment from JKPCL, disbursements to the entitled entities from the pool are being adversely affected. Despite multiple communications from our end, JKPCL has yet to clear the outstanding dues.

In view of the above, It is kindly request your esteemed office to look into the matter and facilitate the settlement of the outstanding amount of **₹159,34,06,427/- (Rupees One Hundred Fifty-Nine Crore Thirty-Four Lakh Six Thousand Four Hundred and Twenty-Seven only)** towards Deviation Charges, Reactive Energy Charges, and Pool Deficit Recovery Charges at the earliest. Timely settlement will avoid further accumulation of the principal deviation charges and interest on delayed payments.

It is also requested that payments to the Statutory Pool Accounts be made regularly in accordance with the applicable regulations, to prevent any additional interest liabilities due to delayed remittances.

धन्यवाद,

आपका आभारी,

शेख शदरुद्दीन
मुख्य महाप्रबंधक (मा. ओ.), उ.क्षे.भा.प्रे.के.

Copy for kind information:

1. Secretary (Power), Ministry of Power, New Delhi
2. Secretary, CERC, 3rd & 4th Floor, Chanderlok Building, 36, Janpath, New Delhi- 110001
3. Principal Secretary to Government Power Development Department J&K, Civil Secretariat Jammu, UT Jammu and Kashmir-180001
4. Member Secretary, NRPC, New Delhi
5. CMD, GRID-INDIA, CC, 8th/9th floor, IFCI Tower, 61, Nehru Place, New Delhi
6. Director (Market Operation), 8th/9th floor, IFCI Tower, 61, Nehru Place, New Delhi
7. Executive Director, NRLDC/NLDC, New Delhi

Statement of Deviation Account of JAMMU AND KASHMIR

From 01-02-2024 To 19-03-2025

Sr. No.	A/C ISSUE/ TRANSACTION	DESCRIPTOR OF TRANSACTION IN DEVIATION POOL ACCOUNT	DUE/ PAYMENT DATE	AMOUNT PAYABLE TO POOL (Rs)(A)	AMOUNT RECEIVABLE FROM POOL (Rs) (B)	AMOUNT PAID TO POOL (Rs)(C)	AMOUNT DISBURSED FROM POOL (Rs)(D)	BALANCE AMOUNT (Rs)
		OPENING BALANCE		49,86,30,632				49,86,30,632
1	02-02-2024	For Week:43(15-01-2024/21-01-2024)	09-02-2024	8,90,28,996				58,76,59,628
2	09-02-2024	PAID	09-02-2024			20,22,44,280		38,54,15,348
3	08-02-2024	For Week:44(22-01-2024/28-01-2024)	15-02-2024	12,08,86,804				50,63,02,152
4	16-02-2024	For Week:45(29-01-2024/04-02-2024)	23-02-2024	3,10,04,355				53,73,06,507
5	23-02-2024	For Week:46(05-02-2024/11-02-2024)	01-03-2024	4,46,31,017				58,19,37,524
6	01-03-2024	For Week:47(12-02-2024/18-02-2024)	08-03-2024	1,19,29,624				59,38,67,148
7	08-03-2024	For Week:48(19-02-2024/25-02-2024)	15-03-2024	3,22,92,553				62,61,59,701
8	15-03-2024	For Week:49(26-02-2024/03-03-2024)	22-03-2024	3,64,45,294				66,26,04,995
9	21-03-2024	For Week:50(04-03-2024/10-03-2024)	28-03-2024	1,10,76,016				67,36,81,011
10	27-03-2024	For Week:51(11-03-2024/17-03-2024)	03-04-2024	2,08,33,623				69,45,14,634
11	03-04-2024	For Week:52(18-03-2024/24-03-2024)	10-04-2024	1,89,69,966				71,34,84,600
12	10-04-2024	For Week :53(25-03-2024/31-03-2024)	17-04-2024		1,50,65,122			69,84,19,478
13	19-04-2024	For Week:1(01-04-2024/07-04-2024)	26-04-2024	8,49,57,549				78,33,77,027
14	26-04-2024	For Week:2(08-04-2024/14-04-2024)	03-05-2024	93,64,256				79,27,41,283
15	03-05-2024	For Week:3(15-04-2024/21-04-2024)	10-05-2024	1,36,52,699				80,63,93,982
16	09-05-2024	For Week:4(22-04-2024/28-04-2024)	16-05-2024	1,50,98,973				82,14,92,955
17	16-05-2024	For Week :5(29-04-2024/05-05-2024)	23-05-2024		1,45,56,512			80,69,36,443
18	22-05-2024	For Week :6(06-05-2024/12-05-2024)	29-05-2024		2,51,19,691			78,18,16,752
19	30-05-2024	For Week :7(13-05-2024/19-05-2024)	06-06-2024		2,51,94,190			75,66,22,562
20	06-06-2024	For Week :8(20-05-2024/26-05-2024)	13-06-2024		4,22,48,745			71,43,73,817
21	14-06-2024	For Week :9(27-05-2024/02-06-2024)	21-06-2024		3,87,54,181			67,56,19,636
22	20-06-2024	For Week :10(03-06-2024/09-06-2024)	27-06-2024		53,62,640			67,02,56,996
23	27-06-2024	For Week:11(10-06-2024/16-06-2024)	04-07-2024	11,52,91,398				78,55,48,394
24	05-07-2024	For Week:12(17-06-2024/23-06-2024)	12-07-2024	25,61,107				78,81,09,501
25	12-07-2024	For Week :13(24-06-2024/30-06-2024)	19-07-2024		7,53,08,295			71,28,01,206
26	19-07-2024	For Week :14(01-07-2024/07-07-2024)	26-07-2024		8,09,70,139			63,18,31,067

Sr. No.	A/C ISSUE/ TRANSACTION	DESCRIPTOR OF TRANSACTION IN DEVIATION POOL ACCOUNT	DUE/ PAYMENT DATE	AMOUNT PAYABLE TO POOL (Rs)(A)	AMOUNT RECEIVABLE FROM POOL (Rs) (B)	AMOUNT PAID TO POOL (Rs)(C)	AMOUNT DISBURSED FROM POOL (Rs)(D)	BALANCE AMOUNT (Rs)
27	25-07-2024	For Week :15(08-07-2024/14-07-2024)	01-08-2024		10,41,96,483			52,76,34,584
28	01-08-2024	For Week :16(15-07-2024/21-07-2024)	08-08-2024		8,11,92,094			44,64,42,490
29	09-08-2024	For Week :17(22-07-2024/28-07-2024)	16-08-2024		1,24,88,253			43,39,54,237
30	16-08-2024	For Week :18(29-07-2024/04-08-2024)	23-08-2024		3,87,97,325			39,51,56,912
31	27-08-2024	For Week :19(05-08-2024/11-08-2024)	03-09-2024		2,04,24,755			37,47,32,157
32	30-08-2024	For Week :20(12-08-2024/18-08-2024)	06-09-2024		2,39,11,048			35,08,21,109
33	06-09-2024	For Week:21(19-08-2024/25-08-2024)	13-09-2024	8,30,39,429				43,38,60,538
34	17-09-2024	For Week :22(26-08-2024/01-09-2024)	24-09-2024		88,21,819			42,50,38,719
35	19-09-2024	For Week:23(02-09-2024/08-09-2024)	26-09-2024	38,72,580				42,89,11,299
36	26-09-2024	For Week:24(09-09-2024/15-09-2024)	03-10-2024	22,26,891				43,11,38,190
37	07-10-2024	For Week:25(16-09-2024/22-09-2024)	17-10-2024	10,06,67,680				53,18,05,870
38	10-10-2024	For Week:26(23-09-2024/29-09-2024)	20-10-2024	30,85,11,126				84,03,16,996
39	17-10-2024	For Week:27(30-09-2024/06-10-2024)	27-10-2024	19,11,45,390				1,03,14,62,386
40	24-10-2024	For Week:28(07-10-2024/13-10-2024)	03-11-2024	9,31,80,369				1,12,46,42,755
41	30-10-2024	For Week:29(14-10-2024/20-10-2024)	09-11-2024	2,65,93,750				1,15,12,36,505
42	07-11-2024	For Week :30(21-10-2024/27-10-2024)	17-11-2024		1,60,79,818			1,13,51,56,687
43	13-11-2024	For Week:31(28-10-2024/03-11-2024)	23-11-2024	2,26,37,138				1,15,77,93,825
44	20-11-2024	For Week :32(04-11-2024/10-11-2024)	30-11-2024		1,30,71,150			1,14,47,22,675
45	28-11-2024	For Week :33(11-11-2024/17-11-2024)	08-12-2024		1,37,48,727			1,13,09,73,948
46	05-12-2024	For Week :34(18-11-2024/24-11-2024)	15-12-2024	1,38,84,577				1,14,48,58,525
47	11-12-2024	For Week :35(25-11-2024/01-12-2024)	21-12-2024	1,67,55,030				1,16,16,13,555
26	20-12-2024	For Week:36(02-12-2024/08-12-2024)	30-12-2024	1,02,29,444				1,17,18,42,999
27	24-12-2024	For Week:37(09-12-2024/15-12-2024)	03-01-2025	3,13,66,479				1,20,32,09,478
28	03-01-2025	For Week:38(16-12-2024/22-12-2024)	13-01-2025	6,14,77,136				1,26,46,86,614
29	10-01-2025	For Week :39(23-12-2024/29-12-2024)	20-01-2025		41,08,275			1,26,05,78,339
30	16-01-2025	For Week :40(30-12-2024/05-01-2025)	26-01-2025		5,64,30,127			1,20,41,48,212
31	23-01-2025	For Week:41(06-01-2025/12-01-2025)	02-02-2025	3,19,46,934				1,23,60,95,146
32	29-01-2025	For Week :42(13-01-2025/19-01-2025)	08-02-2025		68,46,765			1,22,92,48,381
33	06-02-2025	For Week :43(20-01-2025/26-01-2025)	16-02-2025		2,74,80,062			1,20,17,68,319

Sr. No.	A/C ISSUE/ TRANSACTION	DESCRIPTOR OF TRANSACTION IN DEVIATION POOL ACCOUNT	DUE/ PAYMENT DATE	AMOUNT PAYABLE TO POOL (Rs)(A)	AMOUNT RECEIVABLE FROM POOL (Rs) (B)	AMOUNT PAID TO POOL (Rs)(C)	AMOUNT DISBURSED FROM POOL (Rs)(D)	BALANCE AMOUNT (Rs)
34	13-02-2025	For Week :44(27-01-2025/02-02-2025)	23-02-2025		3,48,47,944			1,16,69,20,375
35	20-02-2025	For Week :45(03-02-2025/09-02-2025)	02-03-2025		93,55,887			1,15,75,64,488
36	28-02-2025	For Week :46(10-02-2025/16-02-2025)	10-03-2025		1,69,25,332			1,14,06,39,156
37	06-03-2025	For Week :47(17-02-2025/23-02-2025)	16-03-2025		1,68,31,406			1,12,38,07,750
12	13-03-2025	For Week :48(24-02-2025/02-03-2025)	23-03-2025		2,07,59,652			1,10,30,48,098
13	20-03-2025	For Week:49(03-03-2025/09-03-2025)	30-03-2025	3,27,22,674				1,13,57,70,772
14	28-03-2025	For Week :50(10-03-2025/16-03-2025)	07-04-2025		3,09,32,988			1,10,48,37,784
15	03-04-2025	For Week :51(17-03-2025/23-03-2025)	13-04-2025		74,15,872			1,09,74,21,912
Total				**2,18,69,11,489**	**88,72,45,297**	**20,22,44,280**	**-**	**1,09,74,21,912**

Total Outstanding dues against Pool Deficit Recovery	**45,37,33,599**
Pool Deficit Recovery Charges (As per NLDC statement dated 13/01/2025)	**2,92,27,885**
Total Outstanding charges of Deviation Charges:	**1,09,74,21,912**
Total Outstanding charges of Reactive Energy Charges:	**1,30,23,031**
Total Outstanding charges of Jammu & Kashmir:	**1,59,34,06,427**

ग्रिड-इंडिया GRID-INDIA
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 क्षेत्रीय भार प्रेषण केन्द्र / Northern Regional Load Despatch Centre
कार्यालय : 18-ए, शहीद जीत सिंह सनसनवाल मार्ग, कटवारिया सराय, नई दिल्ली-110016
Office : 18-A, Shaheed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi-110016
CIN : U40105DL2009GOI188682, Website : www.nrldc.in, E-mail : nrldc@grid-india.in, Tel.: 011 26519406, 26523869, Fax 011 26852747

Ref. No. NRLDC/ MO/Outstanding/ 669 Date:19th March 2025

To

The Managing Director
JKPCL, SLDC Building,
Ist Floor Gladni Grid Station,
Nanval Bala, Jammu-180 004

Sub: Release of outstanding payment against NR Statutory Pool Accounts - Reg.

Ref: 1) NRLDC Letter Ref No. 1) NRLDC/ MO/Pool/03-10 Dt: 02/01/2024, to CE (SLDC), JKPCL
2) NRLDC/ MO/Pool/56-63 Dt: 24/01/2024, to CE (SLDC), JKPCL
3) NRLDC/ MO/Outstanding /89-96 Dt: 13/02/2024, to CE (SLDC), JKPCL
4) NRLDC/ MO/Outstanding /31-139 Dt: 02/04/2024, to CE (SLDC), JKPCL
5)NRLDC/ MO/Outstanding /183-191 Dt: 03/05/2024, to CE (SLDC), JKPCL
6) NRLDC/ MO/Outstanding /210-216 Dt: 20/05/2024, to MD, JKPCL
7) NRLDC/ MO/Outstanding /394-401 Dt: 01/07/2024, to CE (SLDC), JKPCL
8)) NRLDC/ MO/Outstanding /430-438 Dt: 05/08/2024, to CE (SLDC), JKPCL
9) NRLDC/ MO/Outstanding / Dt: 10/10/2024, to CE (SLDC), JKPCL
10) NRLDC/ MO/Outstanding /523-531 Dt: 30/10/2024, to CE (SLDC), JKPCL
11) NRLDC/ MO/Outstanding /564-573 Dt: 12/12/2024, to CE (SLDC), JKPCL
12) NRLDC/ MO/Outstanding /578 Dt: 20/12/2024, to MD, JKPCL
13) NRLDC/ MO/Outstanding /597 Dt: 14/01/2024, to CE (SLDC), JKPCL
14) NRLDC/ MO/Outstanding /640 Dt: 14/02/2024, to CE (SLDC), JKPCL

Sir,

As you are aware, NRLDC is operating and maintaining the "Northern Regional Pool Account" for Deviation charges, Reactive Energy Charges and Congestion Charges in accordance with provisions under various CERC Regulations. As per Regulations the payment to the statutory pool account have **high priority** and the concerned utilities are required to pay the indicated amounts within ten days of issue of the weekly energy account by NRPC Secretariat.

Further, kindly refer to the our letter dated 11/11/2024 & 13/01/2025 regarding payment of Net Deviation & Ancillary Services Pool Account Deficit Recovery for period prior 16.09.2024 (Statement of legacy dues) and for period 16.09.2024 to 22.12.2024. It is to state that the deficit payment statement "Net Deviation & Ancillary Services Pool Account Deficit Recovery Statements" were issued in line with the Deviation Settlement Mechanism Regulations, 2024, **CERC approved procedure vide order No. L-1/260/2021/CERC** dated 15th October 2024 and CERC **Suo-Moto order no. 01/SM/2025 dated 08/01/2024**.

In this context it is noted that payment for all seventeen (17) instalments (instalment no 1 to 17) are yet to be received from Jammu and Kashmir.

Cont...

The last payment received in pool accounts from JKPCL was on 09/02/2024. Now, the outstanding against statuary pool accounts payments as on date (Considering Week 47 of FY 2024-25) by JKPCL is as briefed here under.

All figures in Rs.

Sl. No.	Description	Principal (in ₹)	Remarks
1	Deviation Charges	112,38,07,750	Detailed reconciliation statement is attached at Annex-I
2	Pool Deficit Recovery Charges (Legacy Dues)	45,37,33,599	16 nos Instalment (1th to 16th) of ₹ 2,74,99,006 each and revised 17th of ₹ 1,37,49,503 are pending
3	Pool Deficit Recovery Charges	2,92,27,885	As per NLDC statement dated 13/01/2025
	Total Outstanding	**160,67,69,234**	

Due to non-receipt of the payment from JKPCL, the payments to the receivable entities from the pool are also getting delayed. Despite multiple communications in this regard from our side, JKPCL has not cleared the outstanding payable amount.

It is therefore request your kind office to look into the matter and facilitate the settlement of the outstanding dues of ₹ **160,67,69,234/- (Rupees One Hundred Sixty Crore Sixty Seven Lakhs Sixty Nine Thousand Two Hundred and Thirty Four only)** against the deviation charges and pool deficit recovery charges at the earliest to avoid further accumulation of payable principal amount of deviation charges and the interest on delayed deviation account payments.

It is also requested to regularly make payments to Statutory Pool Accounts as per the Regulations to avoid any further interest liability on delayed payments.

धन्यवाद,

आपका आभारी,

शेख शदरुद्दीन
मुख्य महाप्रबंधक (मा. ओ.), उ.क्षे.भा.प्रे.के.

Copy for kind information:

1. Secretary (Power), Ministry of Power, New Delhi
2. Secretary, CERC, 3rd & 4th Floor, Chanderlok Building, 36, Janpath, New Delhi- 110001
3. Principal Secretary, Power Development Department J&K, Lotary building Behind Civil Secretariat, Srinagar, Jammu and Kashmir
4. Member Secretary, NRPC, Katwaria Sarai, New Delhi
5. CMD, GRID-INDIA, CC, 8th/9th floor, IFCI Tower, 61, Nehru Place, New Delhi
6. Director (Market Operation), 8th/9th floor, IFCI Tower, 61, Nehru Place, New Delhi
7. Executive Director, NRLDC, Katwaria Sarai, New Delhi
8. Executive Director, NLDC, Katwaria Sarai, New Delhi

Statement of Deviation Account of JAMMU AND KASHMIR

From 01-02-2024 To 19-03-2025

Sr. No.	A/C ISSUE/ TRANSACTION	DESCRIPTOR OF TRANSACTION IN DEVIATION POOL ACCOUNT	DUE/ PAYMENT DATE	AMOUNT PAYABLE TO POOL (Rs)(A)	AMOUNT RECEIVABLE FROM POOL (Rs) (B)	AMOUNT PAID TO POOL (Rs)(C)	AMOUNT DISBURSED FROM POOL (Rs)(D)	BALANCE AMOUNT (Rs)
		OPENING BALANCE		49,86,30,632				49,86,30,632
1	02-02-2024	For Week:43(15-01-2024/21-01-2024)	09-02-2024	8,90,28,996				58,76,59,628
2	09-02-2024	PAID	09-02-2024			20,22,44,280		38,54,15,348
3	08-02-2024	For Week:44(22-01-2024/28-01-2024)	15-02-2024	12,08,86,804				50,63,02,152
4	16-02-2024	For Week:45(29-01-2024/04-02-2024)	23-02-2024	3,10,04,355				53,73,06,507
5	23-02-2024	For Week:46(05-02-2024/11-02-2024)	01-03-2024	4,46,31,017				58,19,37,524
6	01-03-2024	For Week:47(12-02-2024/18-02-2024)	08-03-2024	1,19,29,624				59,38,67,148
7	08-03-2024	For Week:48(19-02-2024/25-02-2024)	15-03-2024	3,22,92,553				62,61,59,701
8	15-03-2024	For Week:49(26-02-2024/03-03-2024)	22-03-2024	3,64,45,294				66,26,04,995
9	21-03-2024	For Week:50(04-03-2024/10-03-2024)	28-03-2024	1,10,76,016				67,36,81,011
10	27-03-2024	For Week:51(11-03-2024/17-03-2024)	03-04-2024	2,08,33,623				69,45,14,634
11	03-04-2024	For Week:52(18-03-2024/24-03-2024)	10-04-2024	1,89,69,966				71,34,84,600
12	10-04-2024	For Week :53(25-03-2024/31-03-2024)	17-04-2024		1,50,65,122			69,84,19,478
13	19-04-2024	For Week:1(01-04-2024/07-04-2024)	26-04-2024	8,49,57,549				78,33,77,027
14	26-04-2024	For Week:2(08-04-2024/14-04-2024)	03-05-2024	93,64,256				79,27,41,283
15	03-05-2024	For Week:3(15-04-2024/21-04-2024)	10-05-2024	1,36,52,699				80,63,93,982
16	09-05-2024	For Week:4(22-04-2024/28-04-2024)	16-05-2024	1,50,98,973				82,14,92,955
17	16-05-2024	For Week :5(29-04-2024/05-05-2024)	23-05-2024		1,45,56,512			80,69,36,443
18	22-05-2024	For Week :6(06-05-2024/12-05-2024)	29-05-2024		2,51,19,691			78,18,16,752
19	30-05-2024	For Week :7(13-05-2024/19-05-2024)	06-06-2024		2,51,94,190			75,66,22,562
20	06-06-2024	For Week :8(20-05-2024/26-05-2024)	13-06-2024		4,22,48,745			71,43,73,817
21	14-06-2024	For Week :9(27-05-2024/02-06-2024)	21-06-2024		3,87,54,181			67,56,19,636
22	20-06-2024	For Week :10(03-06-2024/09-06-2024)	27-06-2024		53,62,640			67,02,56,996
23	27-06-2024	For Week:11(10-06-2024/16-06-2024)	04-07-2024	11,52,91,398				78,55,48,394
24	05-07-2024	For Week:12(17-06-2024/23-06-2024)	12-07-2024	25,61,107				78,81,09,501
25	12-07-2024	For Week :13(24-06-2024/30-06-2024)	19-07-2024		7,53,08,295			71,28,01,206
26	19-07-2024	For Week :14(01-07-2024/07-07-2024)	26-07-2024		8,09,70,139			63,18,31,067
27	25-07-2024	For Week :15(08-07-2024/14-07-2024)	01-08-2024		10,41,96,483			52,76,34,584
28	01-08-2024	For Week :16(15-07-2024/21-07-2024)	08-08-2024		8,11,92,094			44,64,42,490
29	09-08-2024	For Week :17(22-07-2024/28-07-2024)	16-08-2024		1,24,88,253			43,39,54,237
30	16-08-2024	For Week :18(29-07-2024/04-08-2024)	23-08-2024		3,87,97,325			39,51,56,912
31	27-08-2024	For Week :19(05-08-2024/11-08-2024)	03-09-2024		2,04,24,755			37,47,32,157
32	30-08-2024	For Week :20(12-08-2024/18-08-2024)	06-09-2024		2,39,11,048			35,08,21,109

Sr. No.	A/C ISSUE/ TRANSACTION	DESCRIPTOR OF TRANSACTION IN DEVIATION POOL ACCOUNT	DUE/ PAYMENT DATE	AMOUNT PAYABLE TO POOL (Rs)(A)	AMOUNT RECEIVABLE FROM POOL (Rs) (B)	AMOUNT PAID TO POOL (Rs)(C)	AMOUNT DISBURSED FROM POOL (Rs)(D)	BALANCE AMOUNT (Rs)
33	06-09-2024	For Week:21(19-08-2024/25-08-2024)	13-09-2024	8,30,39,429				43,38,60,538
34	17-09-2024	For Week :22(26-08-2024/01-09-2024)	24-09-2024		88,21,819			42,50,38,719
35	19-09-2024	For Week:23(02-09-2024/08-09-2024)	26-09-2024	38,72,580				42,89,11,299
36	26-09-2024	For Week:24(09-09-2024/15-09-2024)	03-10-2024	22,26,891				43,11,38,190
37	07-10-2024	For Week:25(16-09-2024/22-09-2024)	17-10-2024	10,06,67,680				53,18,05,870
38	10-10-2024	For Week:26(23-09-2024/29-09-2024)	20-10-2024	30,85,11,126				84,03,16,996
39	17-10-2024	For Week:27(30-09-2024/06-10-2024)	27-10-2024	19,11,45,390				1,03,14,62,386
40	24-10-2024	For Week:28(07-10-2024/13-10-2024)	03-11-2024	9,31,80,369				1,12,46,42,755
41	30-10-2024	For Week:29(14-10-2024/20-10-2024)	09-11-2024	2,65,93,750				1,15,12,36,505
42	07-11-2024	For Week :30(21-10-2024/27-10-2024)	17-11-2024		1,60,79,818			1,13,51,56,687
43	13-11-2024	For Week:31(28-10-2024/03-11-2024)	23-11-2024	2,26,37,138				1,15,77,93,825
44	20-11-2024	For Week :32(04-11-2024/10-11-2024)	30-11-2024		1,30,71,150			1,14,47,22,675
45	28-11-2024	For Week :33(11-11-2024/17-11-2024)	08-12-2024		1,37,48,727			1,13,09,73,948
46	05-12-2024	For Week :34(18-11-2024/24-11-2024)	15-12-2024	1,38,84,577				1,14,48,58,525
47	11-12-2024	For Week :35(25-11-2024/01-12-2024)	21-12-2024	1,67,55,030				1,16,16,13,555
26	20-12-2024	For Week:36(02-12-2024/08-12-2024)	30-12-2024	1,02,29,444				1,17,18,42,999
27	24-12-2024	For Week:37(09-12-2024/15-12-2024)	03-01-2025	3,13,66,479				1,20,32,09,478
28	03-01-2025	For Week:38(16-12-2024/22-12-2024)	13-01-2025	6,14,77,136				1,26,46,86,614
29	10-01-2025	For Week :39(23-12-2024/29-12-2024)	20-01-2025		41,08,275			1,26,05,78,339
30	16-01-2025	For Week :40(30-12-2024/05-01-2025)	26-01-2025		5,64,30,127			1,20,41,48,212
31	23-01-2025	For Week:41(06-01-2025/12-01-2025)	02-02-2025	3,19,46,934				1,23,60,95,146
32	29-01-2025	For Week :42(13-01-2025/19-01-2025)	08-02-2025		68,46,765			1,22,92,48,381
33	06-02-2025	For Week :43(20-01-2025/26-01-2025)	16-02-2025		2,74,80,062			1,20,17,68,319
34	13-02-2025	For Week :44(27-01-2025/02-02-2025)	23-02-2025		3,48,47,944			1,16,69,20,375
35	20-02-2025	For Week :45(03-02-2025/09-02-2025)	02-03-2025		93,55,887			1,15,75,64,488
36	28-02-2025	For Week :46(10-02-2025/16-02-2025)	10-03-2025		1,69,25,332			1,14,06,39,156
37	06-03-2025	For Week :47(17-02-2025/23-02-2025)	16-03-2025		1,68,31,406			1,12,38,07,750
Total				2,15,41,88,815	82,81,36,785	20,22,44,280	-	1,12,38,07,750

Total Outstanding dues against Pool Deficit Recovery	45,37,33,599
Pool Deficit Recovery Charges (As per NLDC statement dated 13/01/2025)	2,92,27,885
Total Outstanding charges of Deviation Charges:	1,12,38,07,750
Total Outstanding charges of Jammu & Kashmir:	1,60,67,69,234

Annexure-A.VIII

No. CEA-EC-11-18(12)/1/2023-FCA Division/1170
भारत सरकार /Government of India
विद्युत मंत्रालय/Ministry of Power
केंद्रीय विद्युत प्राधिकरण/Central Electricity Authority
वित्तीय और वाणिज्यिक मूल्यांकन प्रभाग/Financial and Commercial Appraisal Division

Sewa Bhawan,
R K Puram, New Delhi-66
Dated 24.02.2025

To
Member Secretary (NRPC, WRPC, SRPC, ERPC, NERPC)

Subject: Request for Inclusion of "Monetization of Transmission Assets" in Agenda items in RPC Meetings-reg.

Sir,
I am directed to refer the Guiding Principles for Monetization of Transmission Assets in the Public Sector through Acquire Own Maintain Transfer (AOMT) based Public Private Partnership model issued by the Ministry of Power on 3rd October, 2022 (copy enclosed). Monetization of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed to new projects, thus fast-tracking new infrastructure creation. lndia has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as lnfrastructure lnvestment Trusts (lnvlTs) and PPP based models [Toll Operate Transfer (TOT), Operation, Management and Development Agreement (OMDA) etc.l to monetize assets such as toll roads, transmission assets, pipelines and telecom.

2. The States also have a significant potential for monetisation of their transmission assets, so that the much needed capital for creation of transmission assets in the States is available. With growing demands for investment in infrastructure development, monetization of existing assets presents a valuable opportunity to unlock new revenue streams and improve sectoral efficiency. A one day "Workshop on Monetization of Transmission Assets" was organised by Central Electricity Authority in collaboration with PFCCL, PGInvIT and NIIF on 06.12.2024 at NRPC Conference Room, Katwaria Sarai, New Delhi-110016. The workshop was a huge success and was attended by senior level participants from more than 20 State/UTs and representatives of Central Ministries/Departments. The workshop focussed on key strategies for unlocking value in brownfield transmission assets. The key strategies identified for successful monetisation of transmission assets include selection of relative new assets, appropriate size of assets bundle to get investors' interest, pipelines of assets, continuous engagement with regulators in terms of revenue certainty of selected

assets, engaging in comprehensive consultations with investors, putting into place adequate payment security mechanism etc. The outcome document is enclosed.

3. In order to take forward the engagement with the States, Regional Power Committee Forum would be needed. Therefore, it is requested that an agenda item for presentation by CEA on "Monetization of Transmission Assets—Capital recycling for a robust grid" may be kept in the forth coming RPC meeting.

This issues with the Approval of Member (E&C), CEA

Encl: as above

Yours faithfully

Mrityunjay 24/02/25

(Mrityunjay Varshney)
Deputy Director & SA to Member(E&C)

Copy to:

1. Sr PPS/PPS Member (E&C)/Chief Engineer (F&CA), CEA

No.25-10/28/2021-PG
Government of India
Ministry of Power
***

Shram Shakti Bhawan, Rafi Marg,
New Delhi, the 03rd October, 2022

To,

1. The Chief Secretary / Secretary(Energy), All State Governments and UTs
2. The Chairperson, All State Transmission Companies /Utilities

Subject: Guiding Principles for Monetization of Transmission Assets in the Public Sector through Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model – reg.

Sir,

I am directed to convey that the Government of India have been emphasizing the need for quality infrastructure creation, as it results in increased employment opportunities, access to market and materials, improved quality of life and empowerment of vulnerable sections. In order to fast-track quality infrastructure creation, the Government of India have identified asset monetization as an important financing option for creation of infrastructure, as it serves two critical objectives, unlocking value from public investment in infrastructure and tapping private sector flexibility in operations and management of infrastructure.

2. Monetization of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed to new projects, thus fast-tracking new infrastructure creation. India has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as Infrastructure Investment Trusts (InvITs) and PPP based models [Toll Operate Transfer (TOT), Operation, Management and Development Agreement (OMDA) etc.] to monetize assets such as toll roads, transmission assets, pipelines and telecom.

3. In this regard, Power Grid Corporation of India Limited (POWERGRID), a Central Power Sector Enterprise under the Ministry of Power, had monetised more than Rs. 7700 crore in May 2021 by monetizing 5 of their transmission assets through Infrastructure Investment Trust (InvIT).

4 The States also have a significant potential for monetisation of their transmission assets, so that the much needed capital for creation of transmission assets in the States is available. With a view to evolve a common framework and approach for transmission companies desirous of undertaking monetisation of transmission assets, Ministry of Power has developed the "Guiding Principles for Monetization of Transmission Assets in the Public Sector" in consultation with relevant stakeholders. A copy of the same is enclosed.

5. Considering the need to retain a degree of oversight through contractual mechanisms, protection of user interests and maximization of value to the public authority, this document lays down the contours of monetisation of transmission assets through an Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model. The model suggested comprises of a limited period transfer of ownership of a transmission service provider SPV along with a mandatory buy back to the asset owning public sector entity at the end of the transaction period.

Cont/...

6. It is requested that the States may consider the monetisation of transmission assets with the principles suggested in the Guiding Principles.

Encls: As above

Yours faithfully,

(Sanjeev Jain)
Under Secretary to the Govt. of India
Tele: 011- 23730264

Copy to:

1. The Chairperson, Central Electricity Authority, New Delhi
2. CMDs of all CPSEs under administrative control of Ministry of Power
3. CTUIL, Saudamini Plot 2 Sector 29 Gurugram, 122001
4. Vice Chairman, NITI Aayog, NITI Bhawan, Sansad Marg New Delhi 110001
5. In-Charge, NIC Cell, MoP with a request to upload the Draft Guideline on the website of Ministry of Power for wider publicity.

Guiding Principles for Monetization of Transmission assets in the Public Sector through Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model

1. Preamble

1.1 Infrastructure is critically linked to growth and economic performance. The benefits of higher investment in good quality infrastructure manifest in the form of increased employment opportunities, access to market and materials, improved quality of life and empowerment of vulnerable sections. Recognizing the importance of infrastructure, the Government has continued its focus on sustaining and stepping up the pace of infrastructure investment. Monetization is the key to value creation in infrastructure as it serves two critical objectives, unlocking value from public investment in infrastructure and tapping private sector flexibilities in operations and management of infrastructure.

1.2 Infrastructure assets could be appropriately monetized to create greater financial leverage and value for asset owners, be it in public sector or private sector. Monetization of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed in new projects, thus fast-tracking new infrastructure creation. India has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as Infrastructure Investment Trusts (InvITs) and PPP based models (TOT, OMDA etc.) to monetize assets such as toll roads, transmission assets, pipelines and telecom. The Brownfield seasoned transmission assets in particular have demonstrated significant investor appetite from long-term institutional investors owing to underlying asset characteristics and availability-based business model as evidenced by successful InvIT based monetisation for Transmission assets in public as well as private sector.

1.3 The States have a significant potential for Asset Monetization by leveraging brown-field transmission assets and mobilizing much needed proceeds for new infrastructure investment which will have multiplier effects on the respective state economies.

1.4 India's electricity transmission sector is gearing up to face the challenges posed by a changing power demand and energy mix. In order to meet the future load growth and changing generation mix, huge investments are required to strengthen and ramp up the country's transmission system. The electricity transmission sector in India has witnessed an increased participation of both large domestic and institutional investors, owing to the stability of asset class and an availability-based business model. Revenue for electricity transmission is generated from transmission charges under long-term Transmission Service Agreements (TSAs), with a low level of operating risk and an availability-based payment mechanism.

1.5 Over the years, an extensive network of Transmission and Distribution infrastructure has been developed for evacuating power produced by different electricity generating stations and distributing the same to the consumers. These lines have been installed by Generation/ Transmission/ Distribution Utilities including Central Sector Organizations and State/UT Electricity Departments. As on March 31, 2020, India's total transmission line length network stood at around 7,13,400 circuit kms (66 kV

and above voltage)[1]. The country's network is owned and operated by several public sector entities and private companies.

1.6 Sections 61 & 62 of the Electricity Act, 2003, provide for determination of tariff of generation, transmission, wheeling and retail sale of electricity by the Appropriate Commission. Such transmission assets are normally referred to as **Regulated Tariff Mechanism (RTM) assets**. With a view to facilitate competition in this sector through wider participation in providing transmission services and tariff determination through a process of tariff-based bidding, Section 63 of the Electricity Act, 2003 provides for adoption of the tariff determined through transparent process of bidding in accordance with the guidelines issued by the Central Government. Such transmission assets are normally referred to as **Tariff Based Competitive Bidding (TBCB) assets**. While the TBCB assets are housed in a specifically created project level special purpose vehicles (SPVs), the RTM assets are typically housed in the balance sheet of the respective transmission undertakings.

1.7 The National Highways Authority of India (NHAI) has been employing a Toll Operate Transfer (TOT) based model to monetize public funded operational NH projects generating toll revenues. Under the TOT Model, the right of collection and appropriation of toll are assigned for a pre-determined concession period to concessionaires against an upfront consideration. A ToT concession like model however was not found to be commercially most efficient model for monetisation of transmission assets on account of its being a licensed activity and associated tax incidence apart from other regulatory challenges.

1.8 With a view to structure a framework with careful consideration towards the need to retain a degree of oversight through contractual mechanisms, protection of user interests and maximization of value to the public authority, this document lays down the contours of monetisation of transmission assets through an **Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model**. This model comprises of a limited period transfer of ownership of a transmission service provider SPV along with a mandatory buy back at the end of transaction period to the asset owning public sector entity.

1.9 With a view to evolve a common framework and approach for national and state level transmission undertakings desirous of undertaking monetisation of transmission assets, Ministry of Power has developed this document containing the "**Guiding Principles for Monetization of Transmission Assets in the Public Sector**", in consultation with relevant stakeholders (hereinafter referred to as "**the Guiding Principles**"). The specific objectives of these guiding principles are as follows:

- Make available efficient capital for new investment in the transmission sector through upfront payment received from the monetization process.
- Facilitate transparency, consistent approach and efficiency in monetization processes to be undertaken by public sector transmission undertakings.
- Enable proficient project preparation and planning activities under a guiding framework for running credible transaction processes that instill investor confidence.

[1] *Source: All India Electricity Statistics, General Review 2021, CEA, Ministry of Power, GoI*

- Enable sharing of good practices and models for monetisation of infrastructure assets for value maximization and tapping private sector efficiencies.

2. Definitions

2.1. In these guiding principles, unless the context otherwise requires, -

a) AOMT: Acquire, Operate, Maintain and Transfer model of asset monetization wherein the SPV owning the identified transmission assets is bought by the selected Investor Entity with responsibility to operate and maintain these assets for a certain duration of time with associated rights and duties against payment of upfront lumpsum amount.

b) CTUIL: Central Transmission Utility of India Limited notified by the Central Government under Section 38 of the Electricity Act, 2003.

c) Investor Entity: An eligible company or Trust selected through competitive bidding process to take over the SPV of the Sponsoring Transco for specified Transfer Transaction period on AOMT basis

d) Infrastructure Sector: Infrastructure Sector shall mean such sectors notified by Department of Economic Affairs, in its Gazette Notification no. 13/1/2017-INF dated 14th November, 2017 and as amended from time to time

e) Sponsoring Transco: A Transmission Company owned by the Central or State Government seeking to monetize assets under these guiding principles.

f) SPV: A company incorporated under the Companies Act which will hold the identified assets of the Sponsoring Transco and will be taken over by the Investor Entity.

g) STU: State Transmission Utility notified under Section 39 of the Electricity Act, 2003.

h) Transfer Agreement: An Agreement governing the terms and conditions of transfer of assets of a Sponsoring Transco housed in a SPV to private entity for a specified period on BOMT basis

i) TBCB asset: The transmission asset built through tariff based competitive bidding under Section 63 of the Electricity Act, 2003

j) Transmission Service Provider (TSP): Once an Investor Entity takes over the SPV consequent to signing of Transfer Agreement, it shall be referred to as Transmission Service Provider (TSP)

k) Upfront Payment: A lumpsum payment to be paid by the selected bidder to acquire the asset

2.2. Words and expressions used and not defined herein but defined in the Act shall have the meaning respectively assigned to them in the Act.

3. Scope of the Guiding Principles

3.1. The guiding principles are intended to enable implementation of monetization program for identified transmission assets of the State Government owned transmission undertakings and CPSEs/PSUs/other Government Organizations in the Central Sector who may adopt this framework with the approval of the respective competent authority.

3.2. The aforementioned framework has been detailed under this document to delineate the broad principles and an approach for undertaking monetisation transaction for transmission assets.

3.3. The guiding principles detailed in this document are not mandatory and the respective asset owning entities may adopt any other approach and / or model based on necessary due diligence for appropriately structuring transactions, on a case-to-case basis and as necessitated by various respective regulatory and commercial considerations.

4. AOMT transaction structure contours and steps

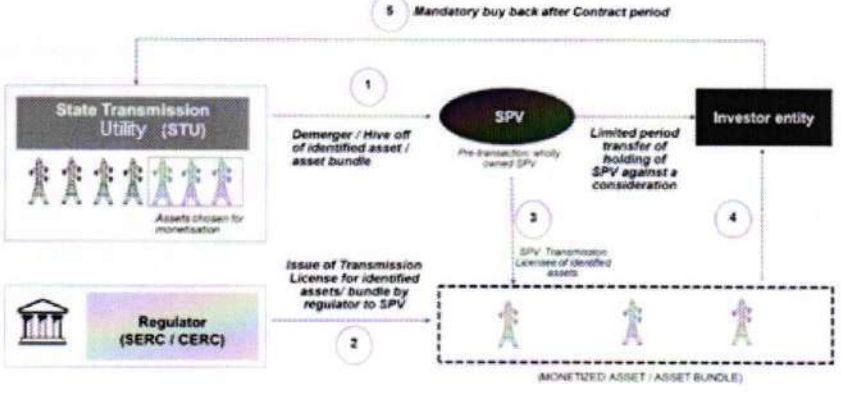
4.1. In order to enable monetisation, selection of de-risked and brown-field assets with a stable and ring-fenced revenue generation profile (or long-term revenue rights) is a *sine qua non*. Hence, as the first step, Sponsoring Transco or Energy Departments (hereinafter referred to as "**Sponsoring Transco**"), may take up monetization of its brown-field transmission assets through the model envisaged under this document by hiving off the transmission assets supposed to be monetised (either individual transmission lines or a bundle of transmission lines and substations) by way of a special demerger under a new specific Special Purpose Vehicle (hereinafter referred to as the "**SPV**"). The nature of such demerger and consequent process requirements will be guided by the constitution of asset owning Transco.

4.2. As the RTM assets are typically housed in the balance sheet of the Sponsoring Transcos / Power Department, a demerger into a SPV is necessitated as a first step towards undertaking monetisation. In case of TBCB assets, since such transmission assets are normally housed in a project specific SPVs, such a demerger may not be essential.

4.3. Under the AOMT model, the entire shareholding of the SPV would be transferred to an Investor Entity, as part of monetization and bought back at a nominal cost of INR 1.00 at the end of a stipulated transaction period. Such transaction period may be

specified in the Transfer Agreement and be coterminous with the residual economic life of the asset. For the stipulated transaction period, the Investor Entity will undertake O&M of the transmission network including the right to earn transmission charges subject to provisions of the Transmission Service Agreement. An indicative transaction structure and the key steps envisaged therein are depicted in the exhibit below.

Exhibit: Transaction structure and steps under AOMT model



Step 1	*Demerger of identified asset (s) into a new SPV*
Step 2	*Issue of transmission license to new SPV*
Step 3	*Wholly owned subsidiary SPV becomes TSP*
Step 4	*Limited period shareholding transfer of SPV to Investor entity*
Step 5	*Mandatory hand back of SPV holding STU*

4.4. The SPV formed under para 4.1 above shall apply to the respective regulatory commission (hereinafter referred to as "**the Regulator**") for grant of separate Transmission License / (s) to operate and maintain the identified assets / asset bundle for a period up to the terminal date envisaged under the Transfer Agreement

4.5. The Investor Entity would be selected through a competitive bidding process to acquire the 100% shareholding of the SPV. As the shareholder of the SPV, it will own, operate and maintain the identified assets during the tenure of the Transfer Agreement

4.6. At the expiry of Transfer Agreement, the SPV along with the rights, title and interest in all the assets held by the SPV shall be mandatorily transferred back to the Sponsoring Transco at a nominal consideration of INR 1.00 and free from any encumbrance and liability.

5. Identification and Book Value of Assets for transfer to SPV

In case of RTM assets, the Sponsoring Transco shall identify assets which can be clearly ring-fenced, have identifiable revenue stream and clear from all litigations, preferably with vintage of upto 10 years from the date of commercial operation for the purpose of monetization. This is recommended in view of better monetization potential and investor attractiveness. The estimated book value of the assets identified for such transfer will preferably be determined or vetted, as the case may be by an independent auditor, space that may be appointed by the Sponsoring Transco. The key

considerations for identification of assets / asset bundle that need to be assessed at this stage by Sponsoring Transcos are as under:

a) Vintage of the asset, availability factor and associated maintenance cost
b) Future capex requirements
c) Need to bring scale in the transaction to attract credible players and investor entities

6. Scheme for Transfer of identified assets of Sponsoring Transco to an SPV

As mentioned earlier, the RTM assets are normally housed in the sponsoring transmission entity's balance sheet or are departmentally held (in case of Energy Departments of certain States and UTs) and are not under separate SPVs (which is the case in TBCB assets). Monetisation for such RTM assets under the envisaged model hence may require a scheme of transfer by way of special demerger. With the amendments effected to Section 47 of the Income Tax Act, 1961 under The Finance Bill, 2021, transfer of capital assets by a PSU to another notified public sector company, Central Government or State Government may not be regarded as transfer subject to approval of scheme and certain requirements there under.

The identification of assets and demerger into separate SPVs shall be made taking into consideration the amount to be monetized over a long term (5 years) and in such a manner that multiple SPVs are created abinitio to reduce the impact of capital gains tax.

State Sector:

In case of RTM assets, the States may, in consultation with the Sponsoring Transco, formulate a scheme of transfer under Part XIII of the Electricity Act, 2003 and as provided in these guiding principles.

Alternatively, the Sponsoring Transco/STU may form an SPV by special demerger with the approval of the State Government and apply for a separate license to it.

Central Sector:

The identified RTM assets on balance sheet of the Sponsoring Transco owned or controlled by the Central Government may be hived off into a new SPV. The Sponsoring Transco may approach Ministry of Power for approval of the scheme so as to enable requisite notification by the Central Government in the Official Gazette.

7. Grant of Transmission License by respective regulatory commission to the SPV

The new SPV thus formed will be a wholly owned subsidiary of the Sponsoring Transco. The SPV shall apply to the respective regulatory commission (CERC or SERC, as the case maybe) for grant of a separate transmission license to operate and maintain the identified assets for a period in consonance with the Transfer Agreement.

8. Tenure of Transfer Agreement

The tenure of the Transfer Agreement shall be decided by the Sponsoring Transco on a case-to-case basis and may normally be coterminous with economic life of the asset in case of RTM assets or residual license period in case of TBCB assets. In case of bundle of assets under RTM that have been commissioned on different dates, the tenure may either be calculated based on effective date of COD, i.e the weighted average date of COD or be limited with the asset which was commissioned earliest.

9. Technical Due Diligence

The Sponsoring Transco will preferably appoint an independent technical consultant for carrying out technical due diligence of the assets. The technical report will preferably include asset profile, and latest line patrolling reports. The Asset Profile must contain relevant data regarding the line i.e. voltage level, line configuration i.e S/C or D/C, specifications of conductor etc. and specifications of the substations or converter stations (in case of HVDC line). The Asset Profile shall give the actual route with route length, type of terrain, maximum altitude, snow zones, wind zones, forest / wildlife infringement, infringement of endangered species habitat, vicinity to civil and defense Airports, major river/sea crossings & coal/ mineral mine areas likely to be encountered and location of substations or converter stations. The report shall also cover the environment, safety, Quality Control, operational and maintenance procedure/standards being followed, the historic availability of the assets, availability of spares parts, security, insurance and the risk analysis.

10. SPV Enterprise Value

The Sponsoring Transco will preferably appoint an independent valuer for carrying out financial valuation of the assets. The valuer shall submit a comprehensive valuation report to the Sponsoring Transco. Asset enterprise valuation will preferably be done based on Discounted Cash Flow ("DCF") method. The Enterprise Value so determined may be reckoned as an undisclosed reserve value for bidding process by the Sponsoring Transco to enable an efficient price discovery of asset[2].

11. Key Agreements and salient features thereof

11.1 *Transfer Agreement*

The Sponsoring Transco may enter into a Transfer Agreement with the Investor Entity. This agreement shall inter-alia cover aspects related to transactions for purchase of shares by the Investor Entity at the beginning of the transaction as well as by the Sponsoring Transco at the end of tenure of Transfer Agreement, besides usual

[2] *There is precedence of this approach as the same has also been adopted by NHAI in case of bidding for TOT based projects and by AAI in case of leasing of brownfield airports through PPP.*

provisions of any agreement such as roles and responsibilities, risk allocation, dispute resolution etc.

11.2 ***Transmission Service Agreement (TSA)***

In case of TBCB assets, the pre-existing TSA shall continue to apply to the SPV, after the latter has been taken over by the Investor Entity. In case of RTM assets, the Sponsoring Transco may enter into a tripartite agreement with the new SPV as well as Investor Entity for assignment of its rights under the existing Transmission Service Agreement/Bulk Power Transmission Agreement to the newly created SPV provided that the terms and conditions of existing Transmission Service Agreement/Bulk Power Transmission Agreement shall not be altered. In case of absence of existing Transmission Service Agreement/Bulk Power Transmission Agreement, the TSP on the date of acquisition of SPV may enter into a Transmission Service Agreement (TSA) with the CTUIL (in case of interstate projects) / the concerned utilities as advised by STU (in case of intra State projects).

11.3 The TSP shall enter into other agreement(s), if required, under Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) or any other agreements mandated through regulations framed by the Appropriate Commission, as amended from time to time, within fifteen (15) days from the date of acquisition of the SPV.

11.4 The TSP shall be responsible for operation and maintenance of all the transmission assets in accordance with best practices and relevant rules and regulations read in conjunction with guidelines thereof issued by the Central Electricity Authority and Appropriate Commission.

11.5 The TSP shall ensure that all the assets are kept free from encumbrances. The equipment shall be maintained with all safety aspects and as per the CEA (Measures related to Electric Safety and Supply), Regulations, 2010 as amended from time to time. The TSP shall maintain data and communication link with the State Load Dispatch Centre (SLDC) or Regional Load Dispatch Centre (RLDC) as the case may be and adhere to its directions for operation of the assets and any shutdown activity for planned maintenance, emergency should be done in concurrence with the SLDC/RPC. On occurrence of any Force Majeure event necessitating the tripping of equipment, the TSP shall inform the SLDC/RLDC immediately and adhere to the instructions received from them.

11.6 The TSP shall ensure the availability of the transmission system to be at least or higher than normative availability (in accordance with TSA in case of TBCB assets or as specified by the Appropriate Commission in case of RTM assets) for the last 3 years of the tenure of the Transfer Agreement, failing which a penalty to be specified in the Transfer Agreement shall be imposed. The Transfer Agreement may mandate

the TSP to provide the required assistance to the Sponsoring Transco for smooth return of ownership.

12. Tariff

In case of TBCB assets, the tariff adopted by the Appropriate Commission, as applicable during the tenure of the Transfer Agreement, shall continue to be collected by the SPV, subject to the provisions of TSA. In case of RTM assets, the Appropriate Commission may specify a premium, which may be provided over and above the prevailing return on long term government securities (5 yr G-Sec) to arrive at the rate of return on equity applicable for the tenure of the Transfer Agreement. This shall be done prior to the process of monetization is undertaken by the Sponsoring Transco. Other parameters for determination of tariff for RTM assets shall be in accordance with the Tariff Regulations specified by the Appropriate Commission from time to time.

13. Bidding and evaluation

13.1. The Investor Entity shall be selected in accordance with these guiding principles, through a fair and transparent bid process which may be undertaken by the Sponsoring Transco with credible and professional transaction advisers.

13.2. The Sponsoring Transco may at its option either adopt a two-stage process featuring separate Request for Qualification (RfQ) and Request for Proposal (RfP) or adopt a single stage two envelope tender process combining the RfP and RfQ processes. The bidding process may preferably be conducted online through electronic medium. If desired, e-reverse auction may be adopted. In this context, while developing bidding documents, Model RfQ and Model RfP for PPP projects notified by the DoE, Ministry of Finance may be relied upon.

13.3. The bid documents so developed shall, interalia, include the technical report submitted by the technical consultant, the Transfer Agreement, the Transmission Service Agreement and minimum qualification criteria to be met by the bidders and any other standard bidding related requirements.

13.4. The technical criterion for eligibility may include companies and Investment Trusts, having experience in development and/or operation & maintenance of infrastructure projects. However, the Sponsoring Transco may opt for specific O&M experience in transmission sector also. The financial criterion may be a pre-specified net-worth in relation to a certain percentage of the estimated book value of assets (may be kept at 25% of such value).

13.5. The bidder may be given an opportunity to inspect the underlying asset base within a prescribed time window and in a manner specified in the bidding documents. Maintenance record of major equipment(s) for past three years or from the COD whichever is earlier, may be allowed to be inspected by the bidders.

13.6. The notice for RfP may be published in accordance with applicable procedures of the respective Sponsoring Transco suitably so as to accord it wide publicity. The bidding may preferably be done by way of International Competitive Bidding (ICB), subject to Government of India orders issued from time to time.

13.7. As is a normal practice in case of PPP projects, the Sponsoring Transco may undertake pre-bid interaction and may preferably provide written responses to pre-bid queries by prospective bidders / participants, and the same may be made available to all the other bidders.

13.8. The bidder quoting the highest Upfront Payment may be selected as Investor Entity.

14. Payment Security Mechanism

Collection and disbursement of transmission charges shall be done in accordance with relevant Regulations of the Appropriate Commission.

The payment security to TSP shall be as per relevant rules issued by the Ministry of Power from time to time.

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Annexure-A.IX

No. CEA-EC-11-18(12)/1/2023-FCA Division

भारत सरकार /Government of India

विद्युत मंत्रालय/Ministry of Power

केंद्रीय विद्युत प्राधिकरण/Central Electricity Authority

वित्तीय और वाणिज्यिक मूल्यांकन प्रभाग/Financial and Commercial Appraisal Division

Sewa Bhawan, R K Puram, New Delhi-66

Dated 01.01.2025

To

1. Chief Secretary of all States/UT
2. Principal Secretary (Energy) of all States/UTs
3. Secretary of all State Regulatory Commissions
4. Secretary, Forum of Regulators
5. Secretary, Central Electricity Regulatory Commissions

Subject: Workshop on Monetisation of Transmission Assets organised by Central Electricity Authority in association with PGInvIT, PFCCL, and National Investment and Infrastructure Fund (NIIF) on 06.12.2024 in New Delhi-Outcome Document

Madam/Sir

You are aware that one day "Workshop on Monetization of Transmission Assets" was organised by Central Electricity Authority in collaboration with PFCCL, PGInvIT and NIIF on 06.12.2024 at NRPC Conference Room Katwaria Sarai, New Delhi-110016. The workshop was attended by senior level participants from more than 20 State/UTs and representatives of Central Ministries/Departments.

2. The workshop focussed on key strategies for unlocking value in brownfield transmission assets. The key strategies identified for successful monetisation of transmission assets include selection of relative new assets, appropriate size of assets bundle to get investors' interest, pipelines of assets, continuous engagement with regulators in terms of revenue certainty of selected assets, engaging in comprehensive consultations with investors, putting into place adequate payment security mechanism etc.

3. An outcome document highlighting the focus areas of discussion and way-forward has been prepared and the same is enclosed for information and necessary action please.

Encl: as above

Yours faithfully

Mrityunjay 01/01/2025

(Mrityunjay Varshney)

Deputy Director (F&CA)

Copy to:

1. Secretary, Ministry of Power, New Delhi
2. Chairperson, CEA/Member (E&C), CEA
3. All Speakers, Panelists and Participants in the Workshop
4. CEO, PFCCL, Gurgaon
5. CEO, PGInvIT, Gurgaon
6. Director, NIIF, New Delhi
7. Director (IT Division), CEA -with a request to upload the same in CEA website

Workshop on Monetization of Transmission Assets -Outcome Document

Held on

06.12.2024

at NRPC Conference Room, New Delhi

Workshop on Monetization of Transmission Assets

-Outcome Document

Background

Central Electricity Authority, in collaboration with National Investment and Infrastructure Fund (NIIF), PFC Consulting Limited (PFCCL), and PGInvIT organized a workshop on monetisation of transmission assets on 6th December 2024, at New Delhi. The workshop was attended by representatives of 24 States/UTs.

This document provides a consolidation of key discussions undertaken by the participants during the workshop. *Annexure I* – presents the key points made by the respective participants, and *Annexure II* – contains list of key speakers, panellists and participants.

[1] Key discussion points:

(i) Private investment in infrastructure

As per CEA's National Electricity Plan 2023-32, about ₹9.16 lakh crore investment would be required for creation of new transmission infrastructure during the period 2023-32, and out of that, more than 30% will be required in intra-state level.

The Government of India as well as in States have been investing heavily in infrastructure. Given other social and economic needs, it may not be feasible for Governments to continue this high level of public financing of infrastructure. As such, there is a need to increase private investment. Monetisation of brownfield assets offers a less risky and more attractive way for private investment.

There is limited experience in monetisation of transmission sector in India but States could adopt learnings from monetisation models in other infrastructure sectors, such as TOT model in highways and experience of monetisation of operating non-metro airports.

(ii) Learnings from International experience

International experience from New South Wales in Australia, Philippines, Oman and other markets indicated the willingness of countries to hand over operations of the entire grid to private companies. The model of monetisation of specific assets or bundle of assets within the publicly operated larger grid as proposed in India, is a prudent approach. Further, acceptability of monetisation would increase if it is preceded by a well-structured and articulated asset recycling program. Like New South Wales, States could consider setting up a ring-fenced fund for a structured recycling program to help overcome public apprehension of monetisation and to leverage funds for new infrastructure investments. Central Government could consider financial incentives to States that recycle proceeds from monetisation to infrastructure investment.

(iii) Models for Asset Monetisation

The two models for asset Monetisation - (i) Structured Financing models (InvIT) and (ii) Direct Contractual Approach (AOMT model) were discussed.

(a) InvIT Monetisation model: intricate but successfully tested

The InvIT model has been successfully implemented by POWERGRID and Sterlite. The model seems somewhat intricate as it involves several participants such as the Sponsor, Trustee, Unit holders, Investment Manager and Project Manager. However, it operates under a robust regulatory framework overseen by SEBI that gives confidence to investors. POWERGRID operational assets developed through tariff based competitive bidding (TBCB) when monetized through the InvIT route offer assured revenues to investors and help in discovery of optimum value.

(b) **AOMT Monetisation model: Requires enablers to boost investor interest**

The guiding principles for Monetisation of Transmission Assets through Acquire, Operate, Maintain and Transfer (AOMT) based Public Private Partnership model issued by Ministry of Power provides a reference point for States. States could modify the proposed structure as needed.

It was discussed that apart from a few TBCB assets, most assets at State level have been developed through Regulated Tariff Mechanism (RTS) and have tariffs that are subject to periodic regulatory determination.

Predictable cash flow through regulatory certainty is important. To provide predictability of cash flow for such RTM assets to be monetised, there should be a pre-agreed regulatory approach for tariff setting for assets that are to be monetized.

Some State representatives requested that Government of India could prepare and share draft model concession agreement.

Moreover, a well laid out pipeline of assets to be monetized helps attract investors as they need to have a line of sight on future opportunities that will help them achieve optimum scale of investments.

(iv) Key consideration of the investors

Investors emphasised the importance of certainty and transparency around bid process and certainty of revenues as the key value drivers. Investors also consider credit quality of state counterparties, track-record for timely payments and well working contracts while doing risk assessment.

The key recommendation from investor consultation include:

i. expected revenues to private investors should be predictable through the monetisation / concession term
ii. robust payment security mechanism – particularly important to establish payment security at State level projects as this shall be a cornerstone for bankability
iii. high quality technical, financial and legal diligence to be undertaken for the stock of assets to be monetised; this information to be made available to investors at bidding stage
iv. Unambiguous allocation of responsibilities between the Sponsoring Transco and private sector entity can assist in reducing scope of disputes
v. quick and smooth transfer of asset, for fast operational turnaround

(v) Key challenges flagged by States

Participating States endorsed the huge financing requirement required for creation of new transmission infrastructure and the need for tapping private capital through different means including monetisation of brown-field transmission assets. Challenges highlighted include unpredictability of tariff (for RTM assets, tariff changes every 5 year), regulatory concurrence, uncertainty on tax implication for RTM assets demerger, re-deployment of

man-power associated with monetized assets. Some of the suggestions given by States include:

i. This issue of revenue certainty for monetisation of RTM assets could be discussed by CEA / MOP with the Forum of Regulators so as to evolve a common approach across the country.
ii. The State Regulators concerned may be on-boarded on the issue of monetisation of transmission assets.
iii. The issue of tax-implication for assets, can be taken up with Ministry of Finance for clarity.
iv. Presently, States have one single Transmission Company. Once multiple transmission licensees are there in a State, there shall be a need for bringing out Regulation by concerned SERC on sharing of transmission charges by different transmission licensees operating in the State as has been done by CERC.

(vi) Developing a credible project structure

It was suggested that certainty around the bid process, high level of preparedness with respect to consultations with regulators, treatment of pre-existing litigations related to the transferred assets, treatment of existing human resource and associated costs that are directly connected to the transferred asset and payment security aspects are critical to encourage private sector participation.

State transmission utilities may consider taking up certain obligations prior to tendering or as a condition precedent to effectiveness to strengthen project's bankability. These include:

- obligations related to ROWs and transfer of land,
- treatment of warranties and defects liability assurances from suppliers,
- license transfer,
- approval for tariff (in case of RTM model) to provide tariff certainty and
- formulation of settlement plan of pre-identified asset specific risks.

(vii) Presumptive taxation on Terminal value:

The guidelines for the AOMT model propose the transfer of the monetized asset back to the Sponsoring Transco at a nominal cost of INR 1.00 at the end of the AOMT term.

However, investors are concerned that unless a waiver is specifically given by tax authorities, a nominal transfer price could still be subject to presumptive taxation. In any case investors should not be liable to pay tax on transfer back of asset.

(viii) Transfer of O&M obligations:

In the case of AOMT, the concessionaire would be responsible for operation and maintenance of the transmission assets. In case of InvIT model, while investors were comfortable with POWERGRID continuing to operate the monetized assets, however at State level, investors may require operation and maintenance to be done by a private third party rather than by the STU who is monetizing the assets. So, O&M obligations may be transferred on a case-to-case basis after evaluating developer's interest and risk appetite.

[2] Way-forward:

Sl No	Plan	Key Stakeholders
1	Developing a process to derive predictable long-term revenues from monetisation of transmission assets that are presently owned by state transmission companies (RTM assets)	Forum of Regulators (FoR)
2	Conceptualisation of a strong payment security mechanism that can support state level transmission assets monetisation	CEA in consultation with MoP, NIIF and selected State Governments
3	Developing a clear view of any incidents of taxes through the monetisation process (at the time of demerger/at the time of concession award / return of asset)	DEA
4	Pilot transmission asset monetisation initiative with willing States	Willing State Govt
5	Preparation of Model Bidding Documents based on experience of monetisation at one State.	CEA with support from BPCs

Annexure I: Highlights of discussion points made by various participants

Central Electricity Authority (CEA)

- Infrastructure is critically linked to growth and economic performance. Based on the National Electricity Plan (Transmission) published by CEA for 2022-32, additional capacity of about 9,45,00 ckm of Inter Sate transmission system and 9,70,00 ckm of Intra state transmission lines would be added in the country during the period 2022-32 and total investment required for creation of new transmission infrastructure is estimated at ₹ 9,16,200 crore. Out of that more than 30% investment will be required in Intra State level, while remaining in the Inter State level.
- Monetisation of assets unlocks their value, eliminates their holding cost and enables scarce public funds to be deployed in new projects, thus fast-tracking new infrastructure creation
- India has developed a solid track record of attracting institutional investment in infrastructure assets utilizing innovative structures such as Infrastructure Investment Trusts (InvITs) and PPP based models (TOT, OMDA etc.) to monetize assets such as toll roads, transmission assets, pipelines and telecom.
- Transmission assets provide a stable cash flow over the concession/licensee period is suitable for monetisation. POWERGRID has already monetised 5 nos of TBCB assets through InvIT route. The States have a significant potential for Asset Monetisation by leveraging brownfield transmission assets and mobilizing much needed proceeds for new infrastructure investment.
- CEA in consultation with few States and NITI Aayog prepared "Guiding Principles for monetisaiton of transmission asset monetisation through Acquire, Operate, Maintain, and Transfer (AOMT) model" and the same was issued by Ministry of Power in 2022.
- The model envisages limited period transfer of assets. The Guiding Principles cover various steps in monetisation process including identification of assets, demerger of assets in a separate SPV (for RTM assets), obtaining license from SERC for the SPV, appointment of technical consultant for carrying out technical due diligence, appointment of independent valuer for carrying out financial valuation, appointment of Bid Process Co-ordinators for carrying out bidding process, preparation of transfer

agreement with buyer, preparation of transmission service agreement, tenure of transfer agreement, tariff of the monetised assets, bidding and evaluation, need for Payment Security Mechanism etc.

- Issues in monetisation of transmission assets include challenges regarding demarcation of assets (meshed network, ARR for whole network), unpredictability of tariff (for RTM assets, tariff changes every 5 year), inadequate payment security mechanism, unclear O&M obligations and complex approval process of lenders as sponsoring agency takes loan on collective assets.
- Key enablers required to boost asset monetisation in transmission space include creation of a collective knowledge base, and setting the necessary ecosystem in place.

Ministry of Power

- Over the last decade, the central grid has seen significant investments through Tariff-Based Competitive Bidding (TBCB) mode with pace of investment accelerating in recent years, driven by the rapid deployment of renewable energy.
- A similar approach can be adopted at the state level to expand grid infrastructure where monetisation of state transmission assets can fund future grid expansions.
- Monetisation involves a fixed period of transfer of assets, addressing fears of privatization of transmission systems, effective communication with stakeholders is critical to ensure acceptance and clarity on this approach.
- Specific assets should be demerged and identified for monetisation, ensuring they are litigation-free and along with support to the staff managing them.
- A transparent bidding process and identification of investors are necessary to build trust and accountability.
- For states lacking investor confidence regarding payment security, PSUs can manage bidding, and enter back-to-back agreements with state governments and service providers.
- Funds collected upfront from monetisation can be parked with state transmission entities to strengthen financial stability.

Department of Economic Affairs (DEA)

- Investment in infrastructure has multiplier effects on the respective state economies.

- Infrastructure can be financed through multiple mechanisms – Grant, Debt instruments and Equity
- Central government has designed various policies (high budgetary capex, National Infrastructure Pipeline, National Monetisation Pipeline, PM Gati Shakti National Monetisation Plan) and has been working towards establishing enabling financial infrastructure (NABFID, Infrastructure financing reforms by way of REITs, InvITs, VGF) to boost investment in infrastructure.
- As the private sector is wary of greenfield asset due to higher risk, state should consider monetisation of brownfield assets.
- States should adopt learnings from monetisation models in other infrastructure sectors (TOT, securitization model) to attract private investors in transmission sector, so states can generate significant returns.

POWERGRID Infrastructure Investment Trust (PGInvIT)

- PGCIL has monetized five tariff-based competitive bidding (TBCB) assets through the infrastructure investment trust (InvIT) route during 2021.
- It was brought to attention that while the management of InvIT model is intricate with various stakeholders – the Sponsor, the Trustee, the Unit holders, the Investment manager and the Project Manager, InvITs provides an opportunity to monetize brownfield assets with predictable cash flows.
- It was suggested that as bulk of state's assets belong to the regulated assets category, (RTM) which are housed in the parent entity's balance sheet and not under separate SPVs, monetisation for such assets hence may require a scheme of arrangement / demerger process which may pose associated transaction overheads such as continuation of tax holiday on assets, capital gains tax, stamp duty etc., due to asset transfer. The Forum of Regulators may be approached to seek guidance on providing a uniform approach for monetisation of RTM assets.
- Learnings were shared on the approach adopted by PGCIL towards identification of assets which included the following:
    - adoption of SEBI InvIT Regulations (Investment by InvIT shall be in holdco and or SPVs or Infrastructure projects or securities in India, InvIT shall invest not less than 80% of the value of the assets in completed and revenue generated infrastructure projects, InvIT holding controlling interest and not less than 51% of the equity

share capital or interest in the SPV, SPVs under successful commercial operation for more than 1 year)
    - Addressing investor expectations on revenue visibility (Transmission charges were discovered through competitive bidding and fixed for 35 years as per TSA – No regulatory reset) and revenue stability (Transmission charges linked to availability & not power flow)
    - Assets housed in project specific SPVs with 100% shareholding of PGCIL
    - Relaxation in equity lock in condition (Transfer of 51% holding permitted after 2 year of commercial operation)
- Key valuation drivers include revenue stability and predictability, quality of asset and remaining useful life, expansion opportunities, scale of project to attract reputed investors and strengthening of regulatory frameworks with clarity on tax incentives.

International Finance Corporation

- Internationally, many countries like Australia, Philippines, US have adopted various transmission assets monetisation models.
- Learnings from Australia (privatized their entire electricity networks):
    - Central government provided financial incentive to States (15% of price of an asset as incentive to States that sell infrastructure assets and re-invest 100% proceeds into new infra) to link monetisation to recycling and trigger infrastructure investment.
    - States could consider setting up a ringfenced fund for a structured recycling program to help overcome public apprehension of monetisation
- Learning from Philippines:
    - Concession was more acceptable than privatization because permanent ownership of strategic assets was not transferred
    - However, concessioning whole-of-grid still creates private monopoly, which puts a heavy burden on regulatory capacity and has higher potential for disputes
- Whole of grid tenders typically attract only a few specialized investors. Less competition means price may not reflect the true value of the business. Concessions for specific transmission assets within a larger network are less complex and may attract more competition.
- Learning from other examples include:

- A defined concession period matching the remaining useful life of asset is preferred for cashflow visibility for investors
- Requirement for better governance on the relationship and risk allocation between key stakeholders

Shardul Amarchand Mangaldas

- The strategic objective of Asset Monetisation is to unlock the value of investments in public sector assets by tapping private sector capital and efficiencies, which can thereafter be leveraged for augmentation/greenfield infrastructure creation
- Substantial investment is required for developing the country's transmission infrastructure, including lines, substations and reactive compensation at 220 kV and above voltage levels which provides justification for monetisation of existing assets.
- It was suggested that certainty around the bid process, high level of preparedness with respect to consultations with regulators, treatment of pre-existing litigations related to the transferred assets, treatment of existing human resource and associated costs which are directly connected to the transferred asset and payment security aspects are critical to encourage private sector participation.
- State transmission Utilities may consider taking up certain obligations prior to tendering or as a condition precedent to effectiveness to strengthen project's bankability. This includes:
  - Asset transfer:
    - Prior to bid completion, assets to be transferred to SPV. Maybe by demerger (i.e through MCA) or through a slump sale (i.e direct contractually) or through G.O in case of statutory corporations / departments.
    - ROWs and land to be transferred and duly registered in the hands of SPV
  - Treatment of warranties and defects liability assurances from suppliers and contractors to be assigned such that SPV operates with the same level of protection as currently available
  - License transfer
    - Transmission license by the CERC/SERC under Section 14, r/w 15 (1) of the Electricity Act for grant of transmission license to be transferred to SPV

    - Other licenses such as from CEA, or from other central and state governments to be transferred to SPV such that SPV has all requisite licenses to operate the transmission business
- Tariff approval
    - In case of RTM model, fresh tariff approval to be taken from ERC. Long term tariff certainty to be provided to investor. In other sectors, a floor tariff principle has been used to underwrite a minimum cash flow
    - In case of TBCB projects, the relevant SPV itself could be used as the monetisation vehicle
- Recasting of TSAs & other agreements: As part of the asset transfer process, all TSAs and other key agreements entered into with respect to the assets under consideration to be transferred to SPV.
- Formulation of Settlement / risk assumption of pre-identified asset specific risks
    - With respect to ongoing claims (employees / contractors / regulatory) or ongoing disputes, a clear settlement plan or a strategy for assumption of risks by the STU will need to be created.
    - Learnings from other sectors (for e.g. Airport sector) on issues of employee claims / pre-existing disputes may be useful
    - Any pre-existing encumbrances / encroachments will need to be considered and dealt with.
- Assets to be 'going concern' ready at the time of acquisition, such that upon acquisition, there is continuity of business operations in the hands of the acquirer.

IndiGrid

- Emphasized the importance of certainty and transparency around bid process and certainty of revenues as the key value drivers.
- Additional factors to be considered to boost investor participation:
    - high quality technical, financial and legal diligence details for assets to be made available to investors prior to bidding.
    - robust payment security mechanism to be put in place to provide comfort to investors as infrastructure monetisation projects entail heavy investments.

    - Cost of capital and valuation: for high quality assets, following assumptions may be considered: ~12% RoE, ~70% debt, and cost of debt at 7-8%; 9x to 9.5x of annual EBIDTA
    - quick and smooth transfer of asset to be ensured for fast operational turnaround
    - clear risk allocations to minimize scope of disputes in future
- It was highlighted that large investors take concentrated positions with investments with platforms, and hence may not be able to make fragmented investments.
- Investors also consider credit quality of state counterparties, track-record for timely payments and well-working contracts while doing risk assessment.

National Investment and infrastructure Fund (NIIF)

- High investment demand in state transmission infrastructure; the AOMT model offers a viable framework for asset monetisation, requiring enablers like model documents and a supportive ecosystem.
- PowerGrid's monetisation experience highlights the importance of regulatory robustness, revenue assurance, and intricate InvIT model management for value discovery.
- The government has been leading infrastructure creation; private sector involvement is crucial, with opportunities to learn from successful monetisation processes.
- Globally, large-scale transmission asset monetisation has attracted significant capital; AOMT/TOT models for specific assets with defined concession periods show promise.
- Certainty in bid processes, high-quality diligence, and robust payment security mechanisms are critical to ensure investor confidence and predictability.
- Successful monetisation requires clear processes, including asset transfer under SPVs, personnel management, and tariff predictability.
- States are increasingly proactive in engaging stakeholders; examples like Orissa show the need for careful handling of asset and personnel transfers.
- Large investors prefer concentrated investments in platforms, emphasizing the importance of ensuring creditworthiness and timely payments from state counterparties.

- Collaborative efforts between stakeholders can mobilize the required resources, ensuring a transparent, bankable process for long-term success.

Annexure II: key speakers, panellists and participants

Key speakers:

- Mr. Ghanshyam Prasad, Chairperson, Central Electricity Authority (CEA)
- Shri Srikant Nagulapalli, Additional Secretary, Ministry of Power
- Mr. Ajay Talegaonkar, Member, Central Electricity Authority
- Mr. Soloman Arokiaraj, Joint Secretary, Department of Economic Affairs (DEA)
- Mr. Goutam Ghosh, Chief Engineer, Central Electricity Authority
- Mr. Sanjay Sharma, Director, PUTL
- Mr. Bhanu Mehrotra, Principal Investment Officer, International Finance Corporation (IFC)
- Mr. V.R. Neelakantan, Partner, Shardul Amarchand Mangaldas

Panel Discussion: Perspective of Investors

Panelists:

- Mr. Amit Garg, Director, PUTL
- Mr. Harsh Shah, Chief Executive Officer and Director, IndiGrid
- Mr. Rohit Acharya, Principal, Infrastructure and Sustainable Energies Group, CPP Investments

Moderator:

- Mr. Saurabh Suneja, National Investment and Infrastructure Fund (NIIF)

Panel Discussion: Perspective of State Government

Panelists:

- Dr. D. Sai Baba, Joint Secretary, Ministry of Power, GOI
- Ms. Puja Kulkarni, CEO, Tamil Nadu Infrastructure Development Board (TNIDB)

- Mr. Bhaskar Jyoti Sarma, Chairman & MD, Odisha Power Transmission Corporation Limited.
- Mr. Nathmal Didel, Managing Director, Rajasthan Rajya Vidyut Prasaran Nigam Limited

Moderator:

- Mr. Ajay Talegaonkar, Member, CEA

List of Participants

- Sh. V.K Singh, Member Secretary, NRPC, CEA
- Sh. Debasish Prusty, Secretary(Finance), Rajasthan
- Dr. Arun , Secretary(Power), UT of DNH&DD
- Sh. Vishu Mahajan, JMD, TNPDCL, Tamil Nadu
- Sh. Pralay Majumdar, Additional Secretary, Power Dept Govt of W.B
- Sh. Panicker Harishankar, Special Secretary Finance, Govt of W.B
- Sh. Mohammad Tayyab, DTA cum Secretary to Govt. of Punjab, Dpt. Of Finance, Punjab
- Sh. Jatinder Tageja, Financial Advisor, PSPCL, Punjab
- Sh. Uttam Kumar, PSTCL, Punjab
- Sh. Sourabh Maheshwari, Deputy Manager, DNHDDPCL
- Sh. C.A Parmar, Chief Engineer, DNH& DD power Corporation Ltd.
- Sh. T Nengshi wati, Investment officer, IDAN, Government of Nagaland
- Sh. T. Lithrichum Sangtam, SE(GEN), Deptt. Of power Nagaland
- Ms. Bhakti Shamal, Joint Secretary, Energy & Petro Dept. Gujarat
- Sh. Jaynish Modi, GM , GETCO, Gujarat

- Sh. Ganesh Shaw, CFM, GETCO, Gujarat
- Sh. G.P Fanse, O.S.D, F.D, Finance Department, Gujarat
- Sh. Debasish Chakraborty, Chief Engineer, MPPTCL, Madhya Pradesh
- Sh. Birendra Prasad, Director (Operation), DTL, Delhi
- Sh. Radheyshyam Meena, GM, DTL, Delhi
- Ms. Kamna Gupta, AGM, DTL
- Sh. Satish Chavan, Director (op), MSETCL, Maharashtra
- Sh. Kishor B. Garud, Chief Engineer (Design), MSETCL, Maharashtra
- Sh. A.K.V Bhaskar, Director, APTRANSCO, Andhra Pradesh
- Sh. K.V.S Murty, FA&CCA, APTRANSCO, Andhra Pradesh
- Sh. Pankaj Pandey, MD, KPTCC, Karnataka
- Sh. K.N. Gangadhar, KPTCL, Karnataka
- Sh. B.S Lakshmikantha, Chief Engineer, KPTCL, Karnataka
- Sh. B H Shivashankar, Controller of Account, KPTCL, Karnataka
- Sh. Vivek Singh Elangbam, Joint Secretary (Finance), Govt of Manipur
- Sh. S. Priyananda, Executive Director(tech) , MSPCL, Manipur
- Sh. Zahoor A. Wani, Director finance, Power Deptt J&K
- Sh. Vikas Anand , Chief Engineer(Transmission), JKPTCL (Jammu)
- Sh. Jigmet Namgyal, Joint Director , Power deptt UT ladakh
- Sh. Sushil Kumar , SE, SLDC (D&C), HVPNL, Haryana
- Sh. R.S Dahiya, Executive Engineer, HVPNL, Haryana
- Sh. Alok Mehrotra, Chief Engineer, U.P Power corporation Ltd
- Sh.Rajiv Kumar, Sr. Advisor, UPPTCL, Uttar Pradesh
- Sh. Vijay Kumar, Director (Operation) , SBPDCL, Bihar

- Sh. K.R Prasant, Chief Engineer, BSPTCL, Bihar
- Sh. G.S Budiyal, Director (Operation), PTCUL, Uttarakhand
- Sh. R.K Shukla, MD, CSPTCL, Chattisgarh
- Sh. M.S Chauhan , ED (finance), CSPTCL, Chattisgarh
- Sh. Manoj Verma, EE, CSPTCL, Chattisgarh
- Sh. Mrinal Kanti Das, DGM, TPTL, Tripura
- Sh. Pranab Saha , DGM, AEGCL, Assam
- Sh. Sanjeev K. Rawat, DGM (Project), HPPTCL, Himachal Pradesh
- Sh. T. Chanemougam, SE cum HoD, Puducherry
- Sh. V.Suresh , Deputy Chief Engineer, KSEBL, Kerala
- Sh. G.D Pamnani, SE, RRVPNL, Rajasthan
- Sh. Naveen Nikhil Pandey, Assistant Engineer, RVPN, Rajasthan
- Sh. Rohit Maheshwari, Account officer, RVPN, Rajasthan
- Sh. Mahfoz Alam, Resident Engineer , GRIDCO Ltd., Odisha
- Sh. Rahul Srivastav, VP , NaBFID
- Ms. Roli Agarwal, Investment Officer, IFC
- Sh. Abhishek Neotia, Principal, NIIF
- Ms. Kirti Manjusha, Consultant , NIIF
- Sh. Ayush Goyal, VP M&A, IndiGrid
- Sh. Venkataprashanth, AGM, CEO office, IndiGrid
- Sh. Lokendra Singh Ranawat, Head Regulatory, IndiGrid
- Ms. Samridha Nevpane, Partner Shardul Amarchand
- Sh. Neeraj Singh , CGM , PFCCL
- Sh. Sanjay Nagar, SGM, PFCCL

- Sh. Dheeraj Kumar, Dy. Manager, PUTL
- Sh. Gaurav Malik, CFO, PUTL
- Ms. Neela Das, CEO, PUTL
- Sh. Vipin Joseph, DGM, PGInvIT
- Sh. Subhro Paul, Director, CEA
- Sh. Anzum Parwej, SE, NRPC
- Sh. Praveen Jangra, Deputy Director, CEA
- Sh. Manish Maurya, Deputy Director, CEA
- Sh. Saurabh Mishra, Deputy Director, CEA
- Sh. Sharad Chandra, Deputy Director, CEA
- Sh. Mrityunjay Varshney, Assistant Director, CEA
- Sh. Ayush Srivastav, Assistant Director, CEA
- Sh. Ajay Devedwal, Assistant Director, CEA

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Ref No.: NRPC/GEVL/EV/0205 **Date: 02.05.2025**

To,
The Member Secretary
North Regional Power Committee (NRPC)
Shaheed Jeet Singh Marg, Qutab Institutional Area
New Delhi-110016

Sub: Request for Foreclosure of Contract No. GEMC-511687711249042 Dated 3rd July 2025

Dear Sir,

This is in reference to Contract No. GEMC-511687711249042 dated 3rd July 2025, under which 1 No. Tata Nexon EV (Registration No. DL12GD4577) was provided to NRPC on a 5-year wet lease basis. The vehicle is registered in the name of M/s Gensol EV Lease Limited and is currently hypothecated with IDFC Bank Limited.

Due to our current financial situation, we regret to inform you that we are unable to continue the services under this contract. In view of the same, we respectfully request foreclosure of the said contract and wish to submit the following options for your kind consideration:

1. **Option 1 – Buyback by NRPC**: NRPC may kindly consider buying back the vehicle directly from IDFC Bank by settling the outstanding book value, after adjusting the principal and interest amounts paid till date.
2. **Option 2 – Refinancing by NRPC**: NRPC may opt to refinance the vehicle from IDFC Bank based on the outstanding book value, and subsequently take over the repayment through monthly EMIs directly to the bank.
3. **Option 3 – Return of Vehicle**: NRPC may return the vehicle, allowing IDFC Bank to repossess and liquidate the asset in the open market to recover the remaining dues.

We sincerely apologize for any inconvenience this may cause and assure you that we are committed to facilitating a smooth and cooperative resolution. We are ready to provide any further details or documentation required in this regard and remain at your disposal for discussion on any of the proposed options.

We would be deeply grateful for your understanding and kind consideration in this matter.

Thanking You,

Authorized Signatory
Gensol EV Lease Limited