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

दिनांक: 17th जून, 2024

सेवा में / To,

एनआरपीसी एवं टीसीसी के सभी सदस्य एवं विशेष आमंत्रित **(**संलग्न सूचीनुसार**)**
Members of NRPC & TCC & Special Invitees (As per List)

विषय: उत्तर क्षेत्रीय विद्युत समिति की 74 वीं बैठक और तकनीकी समन्वय समिति (टीसीसी) की 50 वीं बैठक की कार्यसूची के संदर्भ में।

Subject: Agenda for 74th Northern Regional Power Committee (NRPC) & 50th Technical Co-ordination Committee (TCC)-reg.

महोदय / महोदया,

उत्तरी क्षेत्रीय विद्युत समिति (एनआरपीसी) की **तकनीकी समन्वय समिति (टीसीसी) की 50 वीं बैठक 28.06.2024 (सुबह 10:00 बजे) रायपुर, छत्तीसगढ़ में होगी।**

यह उल्लेख करना उचित है कि एनआरपीसी के व्यवसाय संचालन नियमों के अनुसार, टीसीसी में प्रतिनिधित्व, राज्य उपयोगिताओं में तकनीकी प्रमुखों, पीएसयू में कार्यकारी निदेशकों / मुख्य महाप्रबंधकों या समकक्ष तथा वितरण कंपनी/ ट्रैडर/ आईपीपी में तकनीकी प्रमुखों एवं सीईए में मुख्य अभियंता के स्तर पर होगा।

उत्तरी क्षेत्रीय विद्युत समिति (एनआरपीसी) की **74 वीं बैठक 29.06.2024 (सुबह 10:00 बजे)** को उसी स्थान पर आयोजित की जाएगी।

यह उल्लेख करना उचित है कि एमओपी गजट संकल्प दिनांक 03.12.2021 के अनुसार, संबंधित संगठनों से एनआरपीसी में प्रतिनिधि या तो संगठन का प्रमुख होना चाहिए या कम से कम कंपनी के बोर्ड में निदेशक के पद से नीचे का व्यक्ति नहीं होना चाहिए। केंद्रीय सार्वजनिक क्षेत्र उपक्रमों (सीपीएसयू) में प्रतिनिधि कार्यकारी निदेशक के स्तर पर भी हो सकते हैं।

बैठक की कार्यसूची संलग्न है । **कृपया इसमें भाग लेना सुविधाजनक बनाएं या अपनी ओर से प्रत्येक बैठक में भाग लेने के लिए उपयुक्त प्रतिनिधि (उपरोक्त समकक्षता के अनुसार) नियुक्त करें । नियुक्त प्रतिनिधि अपने संगठन से संबंधित एजेंडा आइटम पर इनपुट प्रदान करने में सक्षम हों।** बैठक की मेजबानी अदानी पावर लिमिटेड, कवाई द्वारा की जा रही है। नोडल अधिकारियों का विवरण इस प्रकार है:

श्री मनोज टौंक, एवीपी; +91-9099005517 श्री रघुवेंद्र सिंह देवरा, एसएम; +91-9099075026

यह अनुरोध किया जाता है कि प्रतिभागी एनआरपीसी सचिवालय को अपनी यात्रा का विवरण (नाम, मोबाइल नंबर, यात्रा की रीति सहित) **seo-nrpc@nic.in** पर दिनाँक **21.06.2024** तक सूचित कर सकते हैं।

The 50th meeting of Technical Co-ordination Committee (TCC) will be held on **28.06.2024 (10:00 AM) at Raipur, Chhattisgarh.**

It is pertinent to mention that as per Conduct of Business Rules of NRPC, the representation in TCC shall be at the level of Technical Heads in State Utilities, Executive Directors / Chief General Managers or equivalent in PSUs / Technical Heads of Distribution company / Traders / IPPs and Chief Engineer in CEA.

The 74th meeting of Northern Regional Power Committee (NRPC) will be held on **29.06.2024 (10:00 AM) at same place.**

It is pertinent to mention that as per MoP gazette resolution dated 03.12.2021, the representative in NRPC from respective organizations should be either the head of the organization or at least a person not below the rank of a Director on the Board of the company/corporate entity except for Central Public Sector Undertakings (CPSUs) where representative could also be at the level of Executive Director.

Agenda for the above meetings is attached. **Kindly make it convenient to attend the same or depute suitable representative (as per above equivalency) for each meeting on your behalf. Deputed representative shall be able to provide input on agenda items related to their organization.** The meetings are being hosted by Adani Power Ltd, Kawai. Details of nodal officials are as below:

Sh. Manoj Taunk, AVP; +91-9099005517 Sh. Raguvendra Singh Dewra, SM; +91- 9099075026

It is requested that participants may intimate their travel details (Name, Mobile No., Travel Mode etc.) to NRPC Secretariat at **seo-nrpc@nic.in latest by 21.06.2024.**

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भवदीय
Yours faithfully

Signed by Vijay Kumar Singh
Date: 17-06-2024 11:08:39

(वी.के. सिंह)
(V.K. Singh)
सदस्य सचिव
Member Secretary

Copy to:
Chairperson, NRPC & MD, HPPTCL (md.tcl@hpmail.in)

सत्यमेव जयते

उत्तर क्षेत्रीय विद्युत समिति

NORTHERN REGIONAL POWER COMMITTEE

Agenda of the

50th meeting of

Technical Co-ordination Committee &

74th meeting of

Northern Regional Power Committee

Date: 28th & 29th June 2024

Time: 10:00 AM

Venue: Raipur, Chhattisgarh

Contents

A. Agenda for TCC meeting

A.1 Approval of MoM of the 49th TCC meeting

A.1.1 The minutes of the 49th TCC meeting (held on 29.03.2024) were issued vide letter dtd. 19.04.2023. Comments received from members on minutes of 49th TCC meeting, were discussed in 73rd NRPC meeting (held on 21.05.2024) and accordingly minutes of 49th TCC meeting were amended and confirmed in 73rd NRPC meeting.

Decision required from Forum:

Forum may note the same.

A.2 Status of action taken on decisions of 73rd NRPC meeting (agenda by NRPC Secretariat)

A.2.1 Status of action taken on decisions of 73rd NRPC meeting is attached as **Annexure-I**.

Decision required from Forum:

Concerned utilities may send the status to NRPC Secretariat for discussion in meeting.

A.3 Procedure for approval of Protection Settings by NRPC (agenda by NRPC Secretariat)

A.3.1 As per clause 14 (2) of IEGC 2023:

All users connected to the grid shall:

i. obtain approval of the concerned RPC for (i) any revision in settings, and (ii) implementation of new protection system;

ii. intimate to the concerned RPC about the changes implemented in protection system or protection settings within a fortnight of such changes;

A.3.2 Accordingly, in 49th PSC meeting (held on 25.01.2024), procedure for approval of protection settings was deliberated and approved.

A.3.3 Further, the agenda was again discussed in 50th PSC meeting (held on 29.05.2024), wherein the procedure was revised (attached as **Annexure-II**).

A.3.4 Utilities may refer the same for compliance of IEGC.

Decision required from Forum:

Utilities may kindly note for compliance.

A.4 Standard Operating Procedure (SOP) for Communication audit of Substations (agenda by NRPC secretariat)

A.4.1 In compliance to Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017, a procedure has been finalised in 14th NPC meeting, held on 3rd February, 2024. This SOP is finalized to maintain uniformity across all regions.

A.4.2 As per Regulation 10 of the Regulations, RPC shall conduct annual audit of the communication system annually as per the procedure finalized in the forum of the concerned RPC. It also mandates that RPC Secretariat shall issue necessary instructions to all stakeholders to comply with the audit requirements within the time stipulated by the RPC Secretariat based on the audit report. An Annual Report on the audit carried out by respective RPC is to be submitted to the Commission within one month of closing of the financial year.

A.4.3 As per SOP, communication audit shall be conducted in two phases: Scrutiny of documents and Physical verification.

A.4.4 Following are pre-requisites for carrying out communication audit:

a) Each User/entity, using inter-state transmission or the intra-state transmission incidental to inter-state, shall submit the detailed report of respective year to RPC Secretariat and RLDC, as per prescribed format on yearly basis by April end.

b) In respect of intra-state users/entities, SLDC shall submit detailed reports yearly by the April end of the respective year, to RPC Secretariat and RLDC.

c) Outage report of all the channels (including Network Management System, PLCC etc) report for a month shall be submitted by the Users/entities to RLDC and respective SLDCs, on monthly basis, by 7th day of the next month. RLDC and SLDCs after verifying the NMS data shall submit report to RPC Secretariat by 15th day.

d) All users/entities and Control Centers shall get the third-party cyber security audits done from a Cert-in certified vendor in compliance of CEA (Cyber Security in Power Sector) and submit detailed report of the Cyber Security Audit by 15th April for the previous financial Year.

A.4.5 A communication sub audit group comprising one member each from RPC secretariat, RLDC, POWERGRID and One of the respective Region SLDCs is to be formed.

A.4.6 Based on recommendations of communication audit sub group after scrutiny of documents, an audit plan shall be prepared by NRPC and audit team shall be constituted for physical inspection.

A.4.7 Further, SOP is enclosed as **Annexure-III** for information and compliance.

Decision required from Forum:

Stakeholders may refer the above for information and compliance.

A.5 Standard Operating Procedure (SOP) for Communication System Outage Planning (agenda by NRPC secretariat)

A.5.1 Regulation 7.3 of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 provides that:
"*The RPC Secretariat shall be responsible for outage planning for communication system in its region. RPC Secretariat shall process outage planning such that uninterrupted communication system is ensured*."

A.5.2 Regulation 10 of Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 provides that:
"10. Outage Planning: Monthly outage shall be planned and got approved by the owner of communication equipment in the concerned regional power committee, as per detailed procedure finalized by the respective regional power committee."

A.5.3 In compliance of above and in order to maintain uniformity across all regions, a Standard Operating Procedure (SOP) for Communication System Outage Planning has been finalized in 14th NPC meeting, held on 3rd February, 2024.

A.5.4 As per SOP, a Communication System Outage Planning Sub-Group/ TeST Sub Committee shall be formed in each region constituting the members from all the entities connected to ISTS including all CGS, ISGS, REGs/SPPDs/SPDs, STUs, SLDCs etc., of the respective Region, RLDC/Grid-India, PGCIL, CTUIL, Private Transmission licensees in respective region & RPC secretariat. The sub-group/ Sub Committee may co-opt any other member from any organization for facilitating the activities of the sub-group/ Sub Committee.

A.5.5 Communication System Outage Planning will be limited to the following systems:

i. ISTS Communication System including ISGS
ii. Intra-state Communication System being utilized for ISTS Communication
iii. ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDCs.
iv. Inter-regional AGC links
v. Any other system agreed by the sub-group.

A.5.6 A web Portal named as “Communication System Outage Planning Portal” shall be developed by respective RLDC.

A.5.7 Entities/Users/Owners shall apply for outage of communication links/equipment through web portal by 7th/ 8th of every month. NRPC Secretariat shall circulate the list of outage proposals by 15th of every month. Communication System Outage Planning (CSOP) meeting shall be conducted during 3rd week of every month. Approved outages shall be published on NRPC website within 3 days from date of CSOP meeting. Communication outage shall be availed as per procedure mentioned in SOP. There is also provision of availing emergency outage in approved SOP.

A.5.8 Outage of the approved communication links and equipment shall be availed by the respective owner /entities after confirming the same with RLDC on D-3 basis.

A.5.9 Further, SOP is enclosed as **Annexure-IV** for information and compliance.

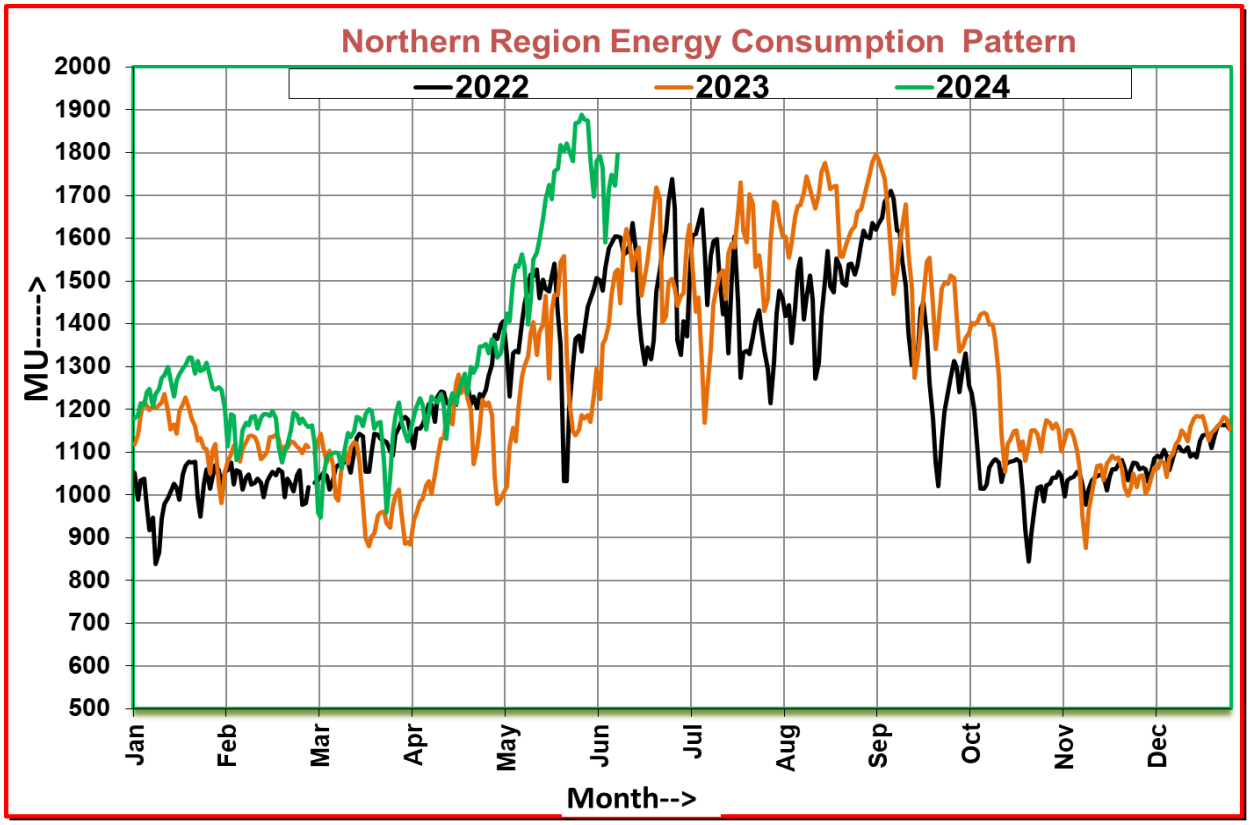
Decision required from Forum:

Stakeholders may refer the above for information and compliance.

A.6 Actions for improvement in grid operation (State wise) (agenda by NRLDC)

A.6.1 Most of the NR states record their maximum demand met and maximum energy consumption during summer/monsoon months. Some of the states have already met their all-time maximum demand and energy consumption during May-Jun this year.

A.6.2 With the increase in temperature and humidity, demand of Northern Region starts increasing. There has been continuous growth over the years. This year already average Northern region energy consumption has been higher by 12% & 30% in April & May respectively compared to previous year. With this growth, this year maximum demand met and energy consumption of Northern region is expected to break many previous records.



A.6.3 During the upcoming high demand season, the transmission system would remain heavily loaded. Accordingly, all SLDCs may ensure that loading of ICTs and lines in their control area are below their N-1 contingency limits. While requisitioning power from various sources, states should take care to limit their scheduled drawl as well as actual drawl in real time within the Available Transfer Capability (ATC) limits assessed by SLDC and NRLDC. SLDCs also need to ensure that their drawl from grid remains within these limits during real-time operation. In the past, it has been observed that some states such as UP, Haryana and Rajasthan have drawn power beyond their ATC limits as assessed by SLDCs and NRLDC. Further, all SLDCs need to make sure that loading of 220kV and below voltage level intrastate lines remain within safe limits during the high demand season.

A.6.4 GRID-INDIA is also taking up with power exchanges to configure each state as separate bid area. In communication to power exchanges, it has been mentioned that for effective implementation of GNA/T-GNA and administration of the market, it is essential to configure each state/union territory as a bid area. A combination of states (e.g., S1S2-S3) may also need to be structured as bid areas. The existing practice of total export and import of the region and identified intra-regional corridors would also be continued in the future. Additionally, Power Exchange shall have provisions for separate bid areas for cross-border entities also. Provisions have been made in NOAR so that each state can be configured as a separate bid area in case

congestion is observed in the import/export. Communication from GRID-INDIA to power exchanges in this regard is attached as **Annexure-V**.

A.6.5 Transmission constraints observed in the grid during high demand period are regularly being highlighted in OCC meetings. Same is also being submitted to CTUIL and CEA through quarterly operational feedback. Recently, a meeting was convened on 29.05.2024 under the chairmanship of Chairperson, CEA between CEA, CTUIL and GRID-INDIA to discuss the TTC/ATC and transmission constraints of states/UTs. Constraints in intra-state transmission system was also discussed. In the meeting it was discussed that these constraints are regularly discussed in RPC forum, however, appropriate action is not being taken by the States/UTs in this regard. Implementation of several planned intra-state transmission systems have been delayed by respective states/UTs, resulting in constraints in the intra-state network. Minutes of meeting is attached as **Annexure-VI.**

A.6.6 It is appreciable that now all the NR states except Chandigarh U/T have started assessing import transfer capability of their control area and sharing the same with NRLDC/ NRPC.

A.6.7 State-wise actions that are required to avoid transmission related issues that were encountered during last high demand season and would help in meeting higher demand in Northern region which were also discussed in the meeting taken by Chairperson, CEA on 29.05.2024 are listed below:

Punjab:

- Expediting ICT Capacity augmentation at Nakodar from 315MVA to 500MVA
- Expediting commissioning of 2nd 400/220kV ICT at Dhanansu Substation
- Expediting ICT Capacity augmentation at 400/220kV Patran
- Commissioning of 400/220kV 2*500 MVA ICTs at new 400kV S/S Ropar with grid connectivity at 400kV
- Minimising outages of Talwandi Saboo thermal generating units

Haryana:

- Plan to mitigate severe N-1 non-compliance issue at 400/220kV Deepalpur and Panipat(BBMB). ICT commissioning at 400/220kV Deepalpur not progressing. Capacity augmentation at Panipat(BBMB) also not being planned (drawl by both Delhi and Haryana)
- Managing N-1 non-compliance being observed in real-time at 400/220kV Kabulpur, Hisar ICTs.

- Reconductoring of 220kV Hisar (PG) - Hisar (IA) to be expedited by POWERGRID.
- Measures to control high loading of 220kV Sonepat-Mohana D/C

Rajasthan:

- Expediting ICT augmentation at almost all 400/220kV RVPN substations such as Ajmer, Merta, Chittorgarh, Jodhpur, Bikaner, Hindaun, Bhilwara, Heerapura, Suratgarh etc. which are loaded well above their N-1 contingency limits.

Measures required for:

- High MVAr drawal observed by intra-state network of Rajasthan at number of substations
- Poor power factor at various 400/220kV substations such as Bikaner, Kankani, Barmer, Jodhpur, Merta etc. (power factor of 0.55 observed at 400/220kV Bikaner on 4th June)
- Voltages at all RE stations & nearby substations such as Akal, Ramgarh, Jaisalmer, Bhadla(RJ), Bikaner(RJ), Jodhpur, Kankani, Heerapura, Bhinmal, Merta etc. are low and fluctuating
- Persistent issue of high loading of 400kV Bhadla(RJ)-Bikaner(RJ) D/C (loading restriction due to poor condition of line)
- Severe low voltages in Hindaun & Alwar area and RE rich Western Rajasthan substations

Uttar Pradesh:

- Managing loading within n-1 contingency limits at 400/220 Agra (PG), Allahabad (PG), Lucknow(PG), Gorakhpur (UP) where loading is crossing N-1 limits.
- Although SPS implemented at number of 400/220kV substations such as Azamgarh, Obra, Sarnath, Nehtaur, Gorakhpur etc. Plan to enhance capacity may also be taken up as per forecasted load growth.
- POWERGRID to expedite commissioning of new ICT at 400/220kV Allahabad.

Delhi:

- After bus -split due to high fault level at Bawana, 2*315 MVA ICTs are N-1 non-compliant. Approved ICT augmentation capacity to be expedited.
- New ICT/ Capacity augmentation at 400/220kV Mundka to be planned by DTL as loading being observed beyond N-1 contingency limits. Although SPS has been implemented as temporary measure.
- Expediting commissioning of 400/220kV Gopalpur and Tikri Khurd.

Uttarakhand:

- Although, SPS implemented at 400/220kV Kashipur, additional ICT to be commissioned as per anticipated load growth and to improve reliability. PTCUL has submitted that bids are not being received for ICT.
- To manage high loading of 220kV CBGanj-Pantnagar and 220kV Roorkee-Roorkee lines, additional connectivity/ conductor upgradation to be planned by PTCUL.
- Very low voltages being observed in intrastate network of PTCUL. Requests also being received from HPPTCL side for improving voltages at 220kV Majri(HP).
- NRPC approved capacitor commissioning to be expedited. Recently, in 71 NRPC meeting held on 29.01.2024, capacitors at 62 no.s 33/11 kV Substations in Uttarakhand. (Rs. 58.99 Cr.) were approved (through PSDF funding)
- Status of 400kV Landhora S/S which is under planning to be furnished

Himachal Pradesh (constraints observed during winter):

- New ICT/ Capacity augmentation to be studied and proposed by HPPTCL/ PSTCL at 400/220kV Nallagarh. New lines or additional supply may be provided.
- Frequent event related to multiple element outages at 220/132kV Kunihar. Substation maintenance and protection related issues need to be resolved.

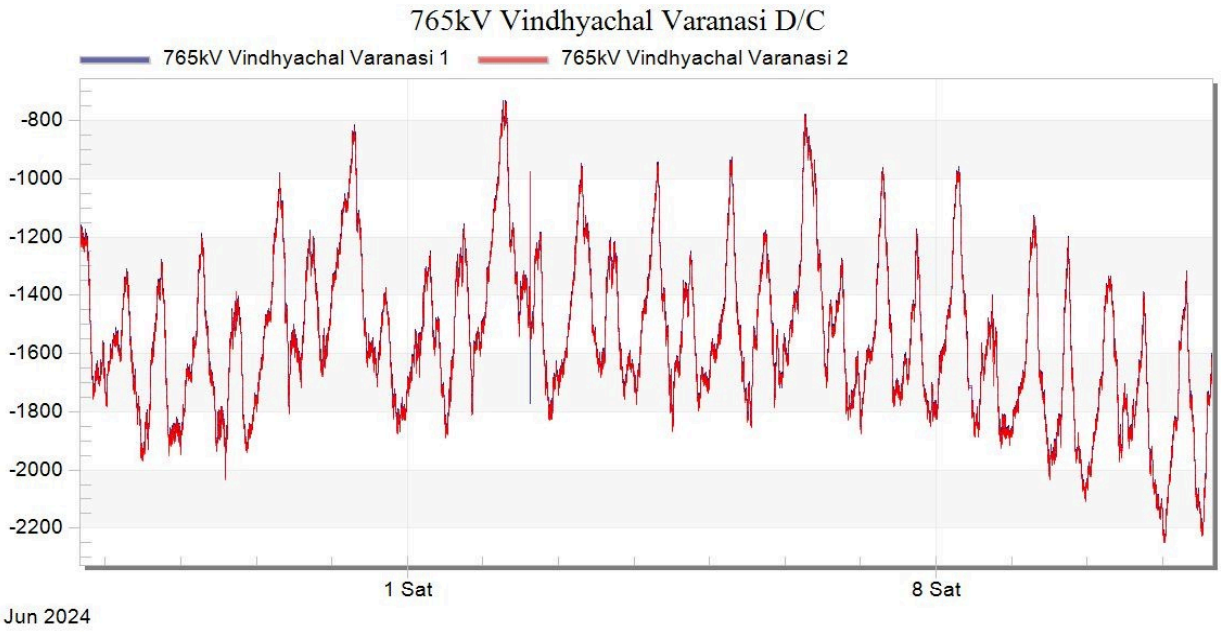
J&K and Ladakh U/T (constraints observed during winter):

- Capacity augmentation at 400/220kV Amargarh to be expedited. As per latest discussion held in 16 CMETS held on 28.02.2023, new ICT to be implemented in next 21 months.
- Additional planned 220kV and low voltage lines to be expedited to manage drawl from Amargarh.

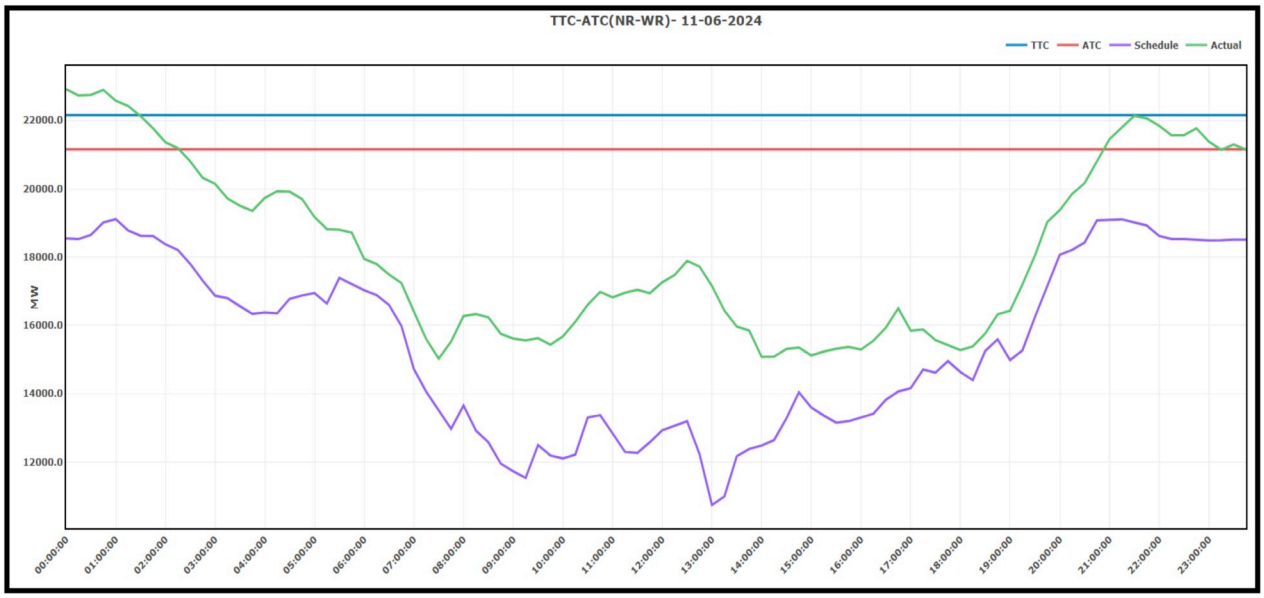
- Actions to manage severe low voltages in J&K control area. SVC at New Wanpoh is being fully utilised (no margin for dynamic support) and outage of SVC leads to very low voltages in valley.

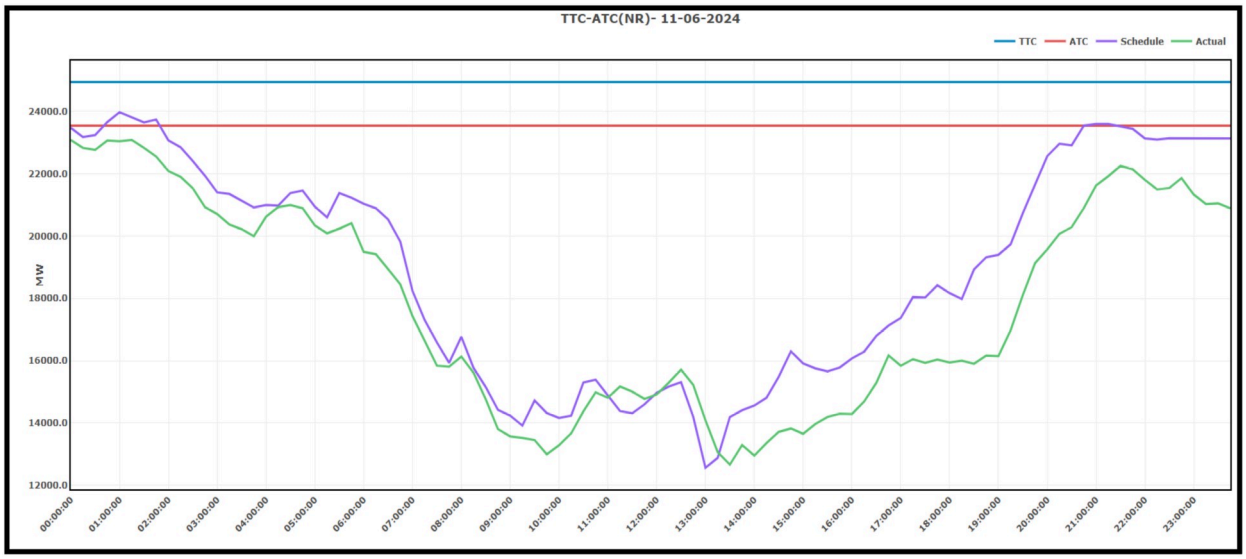
A.6.8 **It is requested that all concerned officials may be advised to implement above actions for meeting higher demand during this and next high demand season with minimal transmission related issues**.

A.6.9 At the time of high demand in UP and NR as whole, it is being observed that the flow on WR-NR corridor is very high and issues related to critical loading of 765 kV Vindhyachal – Varanasi D/C during high NR Import are being observed in real-time as shown below:



A.6.10 Under N-1 contingency of 765kV Vindhyachal-Varanasi one ckt, the loading on other ckt would be >3300MW and may even touch 3500MW under some conditions. Accordingly, measures are required to control loading of 765kV Vindhyachal-Varanasi D/C line and also enhance WR-NR transfer capability limits which are also getting violated.





A.6.11 WR-NR ATC violations in real-time would lead to situation wherein NR states would not be able to draw further power from Western region and as a result, may need to resort to overdrawl or load shedding in case internal generation in NR is not available.

A.6.12 Apart from this, other issues continue to constrain the import of power by Northern region from Western region:

a) Restriction in HVDC Mundra–M'garh power order (1750 MW) due to problem in current measurement device of Pole-2

b) Less reliability of Champa-Kurukshetra HVDC. Multiple tripping (~18 nos. since Apr 2024) of HVDC Champa – Kurukshetra Poles

A.6.13 Apart from above, following are some of the key actions that were agreed in last OCC meeting for ensuring safe and secure grid operation during summer 2024. It is requested that all concerned may be advised to adhere to these measures for safe and secure grid operation.

- Apart GNA/Market arrangements based on forecast, other short term arrangements should also be planned for real time imbalances. For example, ensuring adequate margin while scheduling own thermal generation, units on bar, maintenance of reserves, technical minimum operation of thermal units in case of load crash, tie up with neighbor states or hydro rich states and utilization of real-time market etc. to bridge the load-generation gap in real time.
- Regular monitoring of weather websites for weather forecast information and plan load generation balance accordingly. In case of forecasted thunderstorm or wind storm, generation may be timely backed down so as to avoid any under drawl, high frequency operation of the grid and wastage of precious fuel.
- In view of high/increasing demand & transmission constraints (if any) in importing the power or in case of any contingency in the system, states to maximize their internal generation to avoid low frequency/low voltage operation or other related issues.
- SLDCs to arrange for display window at their control centers so that system operators readily know quantum of reserve available and hence better real-time actions can be taken.
- Some states continue to connect/ disconnect large quantum of load at hourly boundaries resulting in frequency spikes and instantaneous over voltages. Such actions to be avoided especially during high demand season.
- States to take actions to ensure backing down of thermal generation as per latest regulations issued by CEA regarding thermal plants flexible operation. Non-action by intrastate generators leads to under drawl from grid in case of thunderstorms/ load crash.
- Utilities to update & share coal stock position of thermal plants at least a week in advance as agreed earlier in TCC/NRPC meeting, especially in case of anticipation of low coal stock.
- Take all necessary precautions to avoid any issues arising due to low voltages during summer months.
- All state control area/Users shall ensure that their protection and defense system are in working conditions and settings are as per the recommendations of NRPC. It is also suggested to carry out mock testing

exercise of important SPS in Northern region including under state control area.

- All utilities to ensure the telemetry of all analog & digital points of all stations at respective control centers.

A.6.14 It is requested that all concerned officials may be advised to adhere to these measures in real-time grid operation.

Decision required from Forum:

Members may like to discuss.

A.7 Integration of Schedule/DC values of State Generator in SCADA System (agenda by NRLDC)

A.7.1 In high-demand period there is requirement of monitoring Declared Capacity & Schedule of all Generating Stations so that reserves can be monitored for real-time grid operation. Schedule & DC of Central sector is being integrated with NRLDC SCADA system and same is being monitored by Control Room.

A.7.2 However, DC & Schedule of Rajasthan, Uttarakhand and J&K State generator is not integrated with their SCADA system. It was requested that all states take up for integration of state generator in their SCADA system for further integration with NRLDC.

A.7.3 Issue was discussed in 23rd TeST meeting held on 21.09.2023 & 24th Test meeting held on 09.02.2024. Present Integration from J&K, Uttarakhand and Rajasthan is still pending. Considering high-demand crunch period, it is very critical to monitor all the generators and corresponding reserves. In this regard, it is requested to please take for integration of Schedule / DC of generators in SCADA.

A.7.4 Issue was also discussed in 73rd NRPC Meeting held on 21.05.2024 where Rajasthan SLDC representative stated that the work is being carried out in association with L&T and would be completed within next one-two week. Uttarakhand SLDC representative stated that DC declaration portal is under M/S Secure and SCADA system under M/S GE compatibility issues are being noticed. The work would possibly be completed after SCADA upgradation system. NRLDC requested Uttarakhand SLDC to take up the matter with Secure and GE and resolve the issue.

Decision required from Forum:

Rajasthan, Uttarakhand and J&K may please update the status.

A.8 J&K Telemetry Issues (agenda by NRLDC)

A.8.1 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.

A.8.2 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.

A.8.3 The matter has been discussed in various TCC and TeST Meetings but there is no improvement of the same.

Brief details are as follows:

- Under SCADA upgrade project M/s Siemens at all 400KV / 220 KV and 132 KV sub stations/generating Stations of J&K PDD installed 66 RTUs.
- RTUs were not integrated with Control centre due to non-availability of communication network.
- RTUs were tested locally and commissioned without data availability at Control Centre.
- **Due to Non availability of data, JK PDD is not able to monitor its drawal from grid and its generation**. It is dependent of Central sector data for monitoring of drawal.
- Matter was also discussed in Special Meeting with J&K on 28.07.2020 where in Representative of J&K informed that they have given consultancy work to POWERGRID for installation of OPGW in J&K. However, due to funding issue OPGW work has been stalled by POWERGRID. According to J&K almost 95% of the work is complete and once funding issue is resolved Non-availability of telemetry issue will be resolved.
- Further, it was informed that payment issues were resolved and many communication links were commissioned and pending link would be commissioned by December 2022.
- Matter was also discussed in 47th TCC-49th NRPC Meeting, J&K confirmed that they will resolve the issues mutually with POWERGRID so that data reporting gets started to SLDC/ NRLDC.

- During 19th TeST Meeting dated 07.03.2022, J & K representative informed that by 31st December 2022 all 70 RTUs will be integrated with SLDC.
- During 20th TeST Meeting held on 09.09.2022 it was discussed that J&K informed that although some of the links have been commissioned but data reporting is yet to start due to disconnection of CT/PT cables at site / other integration issues of the RTU. Further it was informed that they are in process of rectification of RTU issues and joint visit is planned with M/s Siemens.
- During 64th NRPC Meeting held on 24th March 2023 it was informed that joint visit could not be conducted and after discussions it was decided that a joint meeting shall be conducted comprising members from Siemens, POWERGRID, J&K and NRLDC to resolve the RTU integration issues.
- During 68th NRPC Meeting held on 18th Aug 2023 Representative from J&K informed that there is no improvement in regard to telemetry and they are taking up with POWERGRID and Siemens.
- Issue was also discussed in 23rd TeST Meeting on 21st Sep 2023 and Special Meeting with J&K on 12th Oct 2023 where in J&K confirmed they will start the process of RTU integration with the support of Vendor. However, till date there is no improvement in data reporting from J&K Sub-stations.
- Issue was also discussed in 24th TeST Meeting on 08th Feb 2024 but till date there is no improvement of telemetry from J&K.

Decision required from Forum:

J&K/POWERGRID may update the status.

A.9 Non-Availability / Reliability of Telemetry from RRVPNL sub-Stations (agenda by NRLDC)

A.9.1 SCADA data is very important. Decisions in real-time are taken by Real-time engineers of NRLDC based on real-time data available to Control room. There is requirement of good quality input data for smooth grid monitoring & Control. Further, good telemetry is also essential of running of State Estimator/Energy Management System (EMS).

A.9.2 Since proper telemetry is not available from many RRVPNL substations, it has impact on successful running of state estimator. Correct telemetry is essential for

running State Estimator/ Contingency Analysis in EMS, Better SE output will aid in situational awareness of the system operators of NRLDC.

A.9.3 Telemetry from many Rajasthan Stations is not reliable. Details of stations where telemetry data is not reliable is given in **Annexure-VII.**

A.9.4 RRVPNL/Rajasthan SLDC is requested to please take up for resolution of the issue at the earliest.

A.9.5 Matter was also discussed in 24th held on 09th Feb 2024, where representative from Rajasthan SLDC informed that they have already taken up with matter with STU. However, resolution is still pending from STU.

Decision required from Forum:

RRVPNL may please update the status.

A.10 Availability certification of force majeure events beyond the control of the transmission licensee for month of May 2024 (agenda by NRPC Secretariat)

A.10.1 Following outages of POWERGRID is under consideration:

S.N.	Line	Outage From	Outage upto	Reason
1	400KV KISHENPUR - NEW WANPOH-III	25/04/24 21:20	14/06/24 19:29	Massive landslides and sinking of major chunk of land in village Parnaut in Ramban Gool very near to Line corridor followed by collapse of 03 No towers (Tower Loc No 225,225 &227) and damage to tower No 228.

A.10.2 A team comprising of officials from NRPC, CEA, and CPRI visited the location on 30.04.2024 and based on their photographs and inputs, availability was considered under forced majeure events beyond the control of the transmission licensee while certifying availability certificate for month of Apr 2024 as the duration was below 01 month.

A.10.3 As the outage is going beyond 01 month, approval of NRPC forum is required for consideration under forced majeure as per Appendix-IV of CERC (Terms & Conditions of Tariff) Regulation 2024, mentioned below:

5.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:

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

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

c. 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.10.4 Accordingly, proposal is submitted for allowing above outage under forced majeure.

Decision required from Forum:
Forum may deliberate.

B. Agenda for NRPC meeting

B.1 Approval of MoM of 73rd NRPC meeting

The minutes of the 73rd NRPC meeting (held on 21.05.2024) were issued vide letter dtd. 10.06.2024. No Comments have been received.

Decision required from Forum:

Forum may consider to approve the above MoM.

B.2 Approval of decisions of TCC meeting scheduled on 28.06.2024

Decision required from Forum:

Forum may deliberate on decisions of TCC and may approve accordingly.

B.3 Status of Outstanding Contribution for FY 2024-25 (Agenda by NRPC Secretariat)

B.3.1 Demand Letter for contribution towards NRPC fund for the year 2024-25 was sent on 10.04.2024 to all the constituent members. It was also mentioned that beyond 30th June, 1 % simple interest shall be levied as per the decision of NRPC Forum. Accordingly, NRPC Secretariat has received contributions from some organisations.

B.3.2 Further, it is mentioned that till 17th June, payment has been received from 19 constituent members only. Details of organisations from which payment has not been received is mentioned below:

S. No.	Name of Constituent	Period (FY)	Contribution amount
1	NTPC	2024-25	12,00,000
2	Paschimanchal Vidyut Vitaran Nigam Ltd.	2024-25	12,00,000
3	UPCL	2024-25	12,00,000
4	HPSEB	2024-25	12,00,000
5	Talwandi Sabo Power Ltd.	2024-25	12,00,000
6	Lanco Anpara Power Ltd	2024-25	12,00,000
7	JSW Energy Ltd. (KWHEP)	2024-25	12,00,000
8	UT of J&K	2024-25	12,00,000
9	UT of Ladakh	2024-25	12,00,000
10	UT of Chandigarh	2024-25	12,00,000
11	NPCL	2024-25	12,00,000
12	DTL	2024-25	12,00,000
13	HVPNL	2024-25	12,00,000
14	PSTCL	2024-25	12,00,000
15	HPPTCL	2024-25	12,00,000
16	HPGCL	2024-25	12,00,000
17	RRVUNL	2024-25	12,00,000
18	UJVNL	2024-25	12,00,000
19	HPPCL	2024-25	12,00,000
20	PSPCL	2024-25	12,00,000
21	UHBVN	2024-25	12,00,000
22	Jodhpur Vidyut Vitran Nigam Ltd.	2024-25	12,00,000

23	Fatehgarh Bhadla Transmission Limited	2024-25	12,00,000
24	Apraava Energy Private Limited	2024-25	12,00,000
25	NTPC Vidyut Vyapar Nigam Ltd.	2024-25	12,00,000

B.3.3 It is requested to pay the contribution amount at the earliest and payment after 30th June should be made along with penalty i.e. simple interest of 1 % per month.

B.3.4 The constituent members whose payment have already been made, may share the transaction details for reconciliation at NRPC.

Decision required from Forum:

Members may please deliberate and suggest necessary action.

B.4 Pending Outstanding contributions by J&K (agenda by NRPC Secretariat)

B.4.1 NRPC Secretariat receives contribution from constituent members annually in NRPC fund for functioning of its office. Accordingly, payment of contribution amount is done against demand letter issued by NRPC.

B.4.2 JKSPDCL and JKPDD/JKPCL were both member of NRPC from FY 2014-15 to FY 2021-22. JKSPDCL and JKPDD/JKPCL had outstanding contribution to NRPC fund, of Rs 32 lakhs (FY 2014-15, FY 2015-16 & FY 2018-19) and 22.9 lakhs (FY 2019-2020, FY 2021-22) respectively. Thus, a total of 54.9 lakhs including interest amount was pending from J&K.

B.4.3 In this regard, pending payment status was also discussed in various NRPC meetings and several reminders and D.O. letters were also communicated by NRPC Secretariat.

B.4.4 It is informed that both JKSPDD/JKPCL and JKSPDCL have cleared their outstanding dues (excluding interest amount).

B.4.5 JKSPDD/JKPCL has made payment of contribution amount of Rs 20 Lakhs on 11.03.2024 but it has not paid the penalty interest amount. This matter was subsequently discussed in the 72nd NRPC meeting wherein the forum decided to waive off the interest amount of all constituents including

B.4.6 JKSPDCL has also made contribution amount of Rs 32 Lakhs on 22.05.2024. It had no penalty interest amount pending.

B.4.7 In view of the above, it is stated that both the members from J&K have paid their long outstanding dues.

Decision required from Forum:

Submitted for information to the members of the Forum. NRPC Secretariate thanks JKSPDD/JKPCL *for clearing long outstanding payments. This will also help in clearing the related Audit para of NRPC Secretariate.*

B.5 Hosting of next physical TCC & NRPC meeting (agenda by NRPC Secretariat)

B.5.1 It is proposed that next physical TCC & NRPC meeting may be hosted in the month of September/October 2024. Member may deliberate about the host, date & venue of the meeting.

Decision required Forum:

Forum may deliberate on hosting of next physical meeting.

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NRPC Members for FY 2024-25

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	Member (PS), CEA	Nodal Agency appointed by the Government of India for coordinating cross-border power transactions	Member (PS), CEA	memberpscea@nic.in
3	CTUIL	Central Transmission Utility	Chief Operating Officer	pcgarg@powergrid.in
4	PGCIL	Central Government owned Transmission Company	Director (Operations)	tyagir@powergrid.in
5	NLDC	National Load Despatch Centre	Executive Director	scsaxena@grid-india.in
6	NRLDC	Northern Regional Load Despatch Centre	Executive Director	nroy@grid-india.in
7	NTPC	Central Generating Company	Director (Finance)	jaikumar@ntpc.co.in
8	BBMB		Chairman	cman@bbmb.nic.in
9	THDC		CGM (EM-Design)	rrsemwal@thdc.co.in
10	SJVN		CMD	sectt.cmd@sjvn.nic.in
11	NHPC		Director (Technical)	rajkumar0610.rkc@gmail.com
12	NPCIL		Director (Finance)	df@npcil.co.in
13	Delhi SLDC	State Load Despatch Centre	General Manager	gmsldc@delhisldc.org
14	Haryana SLDC		Chief Engineer (SO&C)	cesocomml@hvpn.org.in
15	Rajasthan SLDC		Chief Engineer (LD)	ce.ld@rvpn.co.in
16	Uttar Pradesh SLDC		Director	directorsldc@upsldc.org
17	Uttarakhand SLDC		Chief Engineer	anupam_singh@ptcul.org
18	Punjab SLDC		Chief Engineer	ce-sldc@punjabsldc.org
19	Himachal Pradesh SLDC		Managing Director	mdhpsldc@gmail.com
20	DTL	State Transmission Utility	CMD	cmd@dtl.gov.in
21	HVPNL		Managing Director	md@hvpn.org.in
22	RRVPNL		CMD	cmd.rvpn@rvpn.co.in
23	UPPTCL		Managing Director	md@upptcl.org
24	PTCUL		Managing Director	md@ptcul.org
25	PSTCL		CMD	cmd@pstcl.org
26	HPPTCL		Managing Director	md.tcl@hpmail.in
27	IPGCL	State Generating Company	Managing Director	md.ipgpp@nic.in
28	HPGCL		Managing Director	md@hpgcl.org.in
29	RRVUNL		CMD	cmd@rrvun.com
30	UPRVUNL		Director (Technical)	director.technical@uprvunl.org
31	UJVNL		Managing Director	mdujvnl@ujvnl.com
32	HPPCL		Managing Director	md@hppcl.in
33	PSPCL	State Generating Company & State owned Distribution Company	CMD	cmd-pspcl@pspcl.in
34	UHBVN	State owned Distribution Company (alphabetical rotaional basis/nominated by state govt.)	Managing Director	md@uhbvn.org.in
35	Jodhpur Vidyut Vitran Nigam Ltd.		Managing Director	md.jdvvnl@rajasthan.gov.in
36	Paschimanchal Vidyut Vitaran Nigam Ltd.		Managing Director	md@pvvnl.org
37	UPCL		Managing Director	md@upcl.org
38	HPSEB		Managing Director	md@hpseb.in
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		CEO	rajneesh.setia@apraava.com
42	Talwandi Sabo Power Ltd.		COO	Vibhav.Agarwal@vedanta.co.in
43	Nabha Power Limited		CEO	sk.narang@larsentoubro.com
44	Lanco Anpara Power Ltd		President	sudheer.kothapalli@meilanparapower.com
45	Rosa Power Supply Company Ltd		Station Director	Hirday.tomar@relianceada.com
46	Lalitpur Power Generation Company Ltd		Managing Director	vksbankoti@bajajenergy.com
47	MEJA Urja Nigam Ltd.		CEO	hopmeja@ntpc.co.in
48	Adani Power Rajasthan Limited		COO, Thermal, O&M	jayadeb.nanda@adani.com
49	JSW Energy Ltd. (KWHEP)		Head Regulatory & Power Sales	jyotiprakash.panda@jsw.in
50	TATA POWER RENEWABLE	IPP having less than 1000 MW installed capacity (alphabetical rotaional basis)	Zonal Head	dhmahabale@tatapower.com
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/ distribution of electricity in the Union Territory.	Chief Engineer, JKSPDCL/JKPDD	cejkpcl2@gmail.com/sojpdd@gmail.com
52	UT of Ladakh		Chief Engineer, LPDD	cepdladakh@gmail.com
53	UT of Chandigarh		Executive Engineer, EWEDC	elop2-chd@nic.in
54	NPCL	Private Distribution Company in region (alphabetical rotaional basis)	Head-Commercial	ssrivastava@noidapower.com
55	Fatehgarh Bhadla Transmission Limited	Private transmission licensee (nominated by cetral govt.)	AVP-O&M	nitesh.ranjan@adani.com
56	NTPC Vidyut Vyapar Nigam Ltd.	Electricity Trader (nominated by central govt.)	CEO	ceonvvn@ntpc.co.in

List of addressee (via mail)

TCC Members for FY 2024-25

S. No.	TCC Member	Category	Nominated/ Notified/Delegated Member	E-mail
1	Director (Operation), HPSEBL	Chairperson, TCC		manojupretisolan@gmail.com
2	Member (GO&D), CEA	Member (Grid Operation & Distribution), Central Electricity Authority (CEA)	Chief engineer(GM Division)	cegm-cea@gov.in
3	Member (PS), CEA	Nodal Agency appointed by the Government of India for coordinating cross-border power transactions	Chief Engineer, PSPA-I Division	i.sharan@nic.in
4	CTUIL	Central Transmission Utility	Dy Chief Operating Officer	ashok@powergrid.in
5	PGCIL	Central Government owned Transmission Company	ED, NR-I	akmishra2@powergrid.in
6	NLDC	National Load Despatch Centre		nomination awaited
7	NRLDC	Northern Regional Load Despatch Centre	Executive Director	nroy@grid-india.in
8	NTPC	Central Generating Company	Regional ED, NR	rednr@ntpc.co.in
9	BBMB		Member (Power)	mp@bbmb.nic.in
10	THDC		GM (EMD)	neerajverma@thdc.co.in
11	SJVN		Director (Projects)	de.sectt@sjvn.nic.in
12	NHPC		ED (O&M)	hod-om-co@nhpc.nic.in
13	NPCIL		Outstanding Scientist & ED (commercial)	nrchoudhary@npcil.co.in
14	Delhi SLDC	State Load Despatch Centre		nomination awaited
15	Haryana SLDC		Chief Engineer/SO & Comml.	cesocomml@hvpn.org.in
16	Rajasthan SLDC			nomination awaited
17	Uttar Pradesh SLDC		Chief Engineer (PSO)/Chief Engineer (C&S)	cepso@upsldc.org
18	Uttarakhand SLDC			nomination awaited
19	Punjab SLDC		Chief Engineer	ce-sldc@pstcl.org
20	Himachal Pradesh SLDC			nomination awaited
21	DTL	State Transmission Utility	Director (Operation)	dir.opr@dtl.gov.in
22	HVPNL		Chief Engineer/SO & Comml.	cesocomml@hvpn.org.in
23	RRVPNL		Chief Engineer (PP&D)	ce.ppm@rvpn.co.in
24	UPPTCL		Director (Planning & Commercial)	director_comm@upptcl.org
25	PTCUL		Chief Engineer	ce_oandmk@ptcul.org
26	PSTCL		Director / Technical	dir-tech@pstcl.org
27	HPPTCL		GM (C&D)	gmcd.tcl@hpmail.in
28	IPGCL	State Generating Company	Director(Tech.)	corporate.ppcl@gmail.com
29	HPGCL		Director/Technical	dirtech@hpgcl.org.in
30	RRVUNL		Dy. Chief Engineer	dyce.elect.katpp@rrvun.com
31	UPRVUNL		Director (Technical)	director.technical@uprvunl.org
32	UJVNL		General Manager	kkjaiswal99@gmail.com
33	HPPCL		Director (Electrical) General Manager(Electrical)	dir_elect@hppcl.in gm_elect@hppcl.in
34	PSPCL	State Generating Company & State owned Distribution Company		nomination awaited
35	UHBVN	State owned Distribution Company (alphabetical rotaional basis/nominated by state govt.)		nomination awaited
36	Jodhpur Vidyut Vitran Nigam Ltd.			nomination awaited
37	Paschimanchal Vidyut Vitaran Nigam Ltd.			nomination awaited
38	UPCL		Director (P)	dpupcl29@gmail.com
39	HPSEB			nomination awaited
40	Prayagraj Power Generation Co. Ltd.	IPP having more than 1000 MW installed capacity	Head – Commercial & Regulatory	Sanjay.bhargava@tatapower.com
41	Aravali Power Company Pvt. Ltd		CEO	brahmajig@ntpc.co.in
42	Apraava Energy Private Limited			nomination awaited
43	Talwandi Sabo Power Ltd.		Dy. Head O&M	ravinder.thakur@vedanta.co.in
44	Nabha Power Limited			nomination awaited
45	Lanco Anpara Power Ltd			nomination awaited
46	Rosa Power Supply Company Ltd		VP-Technical Services	Niranjan.Jena@relianceada.com
47	Lalitpur Power Generation Company Ltd		President	rnbedi.ltp@lpgcl.com
48	MEJA Urja Nigam Ltd.		GM (O&M)	piyushkumar@ntpc.co.in
49	Adani Power Rajasthan Limited		AVP	Manoj.taunk@adani.com
50	JSW Energy Ltd. (KWHEP)		Head of Plant	kaushik.maulik@jsw.in
51	TATA POWER RENEWABLE	IPP having less than 1000 MW installed capacity (alphabetical rotaional basis)		nomination awaited
52	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.		nomination awaited
53	UT of Ladakh			nomination awaited
54	UT of Chandigarh			nomination awaited
55	NPCL	Private Distribution Company in region (alphabetical rotaional basis)		nomination awaited
56	Fatehgarh Transmission Limited	Private transmission licensee (nominated by cetral govt.)		nomination awaited
57	NTPC Vidyut Vyapar Nigam Ltd.	Electricity Trader (nominated by central govt.)		nomination awaited

Special Invitees:

1. Smt. Nandita Gorlosa, Chairman, NERPC & Hon'ble Power Minister, Govt. of Assam, Block D, Ground Floor, Janata Bhawan, Dispur, Assam, 781006 [Email: nanditagorlosa77@gmail.com], Telephone no: (0361) – 2237032(O)
2. Shri Gaurav Gupta, Chairperson, SRPC & Managing Director, Karnataka Power Corporation Limited & ACS Energy Department GoK, 240, 2nd floor Vikasa Soudha, Bengaluru, Karnataka 560001. [Email: prs.energy@gmail.com ; acs@karnataka.gov.in] Tel -08022252373
3. Shri Vishal Kumar Dev, IAS, Chairman, ERPC, Principal Secretary to Govt., Department of Energy, Govt. of Odisha, Bhubaneswar. [Email-chairman@gridco.co.in] Tel -06742540098
4. Shri P. Dayanand Chairman CSPTCL & Chairman, WRPC, Office of Chairman, Vidyut Seva Bhavan, Danganiya, Raipur 492 013 (C.G.) [Email: chairmancspc@gmail.com] Tel. 0771 2574000
5. Smt. Rishika Saran, Member Secretary, NPC, Sewa Bhawan, R. K. Puram, New Delhi-66 [Email-cenpc-cea@gov.in]
6. 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] Tel - 02228221636
7. Shri Asit Singh, Member Secretary, SRPC, No.29, Race Course Cross Road, Bengaluru-560009. [Email: mssrpc-ka@nic.in] Tel -08022287205/9449047107
8. Shri N.S. Mondal, Member Secretary, ERPC,14,Golf Club Road, ERPC Building, Tollygunje,Kolkata-700033. [Email: mserpc-power@nic.in]- Tel 03324239651/9958389967
9. Shri K B Jagtap, Member Secretary, NERPC, NERPC Complex, Dong Parmaw, Lapalang, Shillong-793006. [Email: ms-nerpc@gov.in] Tel -03642534077/ 8652776033

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Annexure-I

Status of action taken on decision of 73rd NRPC meeting

S.N.	Agenda	Decision of 73rd NRPC	Status of action taken
A.3	Non-payment of Outstanding dues by PSPCL against Energy Supplied from RHPS & NJHPS (agenda by SJVN)	*Forum decided that SJVN and PSPCL* may come to NRPC Secretariat along-with supporting documents and calculation sheets of their claims.	SJVN vide mail dated 10.6.2024 proposed PSPCL to have meeting at NRPC Secretariat. **PSPCL may reply accordingly**.
A.4	Non-Opening of Letter of Credit by JKPCL (formally PDD, J & K) for power supplied from NJHPS & RHPS (agenda by SJVN)	Forum requested J&K to expedite the process of opening of Letter of Credit for NJSPS & RHPS.	**J&K may update.**
A.7	Shifting of agricultural loads from non-solar hours to solar hours (agenda by NRLDC)	All states/UT were requested to initiate the actions to adhere to the Government of India directives for compliances. All states were requested to regularly provide update regarding shifting of agricultural load to daytime in OCC forum.	**States/UT may update about actions taken.**
A.9	Integration of Schedule/DC values of State Generator in SCADA System (agenda by NRLDC)	Forum asked J&K, Uttarakhand and Rajasthan to expedite integration of DC & schedule of state generator in their SCADA system for	**J&K, Uttarakhand and Rajasthan may update.**

		further integration with NRLDC.	
A.10	Non-availability of Telemetry & forecasting of intra-state RE Generators (agenda by NRLDC)	Forum requested all concerned to please take up for integration of telemetry of RE generators and forecast at SLDC end and further sharing with NRLDC.	**Concerned states may update.**
A.14	To accord approval to connect 220Kv BBMB Samaypur Ckt-1 to 220Kv FGPP Ckt.-1 directly instead of existing LILO arrangement of 220Kv BBMB Samaypur-FGPP Ckt-1 at 220Kv S/Stn. Sector-58, Faridabad by making flying jumpers as per site feasibility as a stop-gap arrangement till restoration work is completed at 220v GIS Sub-station sector-58, Faridabad (agenda by HVPN)	Forum deferred the agenda & decided that NRPC Secretariate shall conduct separate meeting with all concern to address the issue.	Meeting held on 03.06.2024 (11:00 AM) having members from PSPA-1, NRLDC, CTUIL, POWERGRID_NR-1, NTPC, BBMB, HVPN, Haryana SLDC. Issue Resolved.
B.2	Hiring of Office Assistants through GeM (agenda by NRPC Secretariat)	Forum approved the hiring of 02 No. of Graduate level person as Office Assistant and requested constituent members to deploy their officials to NRPC	Hiring through Gem Portal is under process.

		Secretariat for smooth functioning of NRPC.	
B.3	Force closure of Manpower Outsourcing Services-Minimum wage contract (Agenda by NRPC Secretariat)	Forum approved the above proposal of NRPC Secretariat	Salary of April,24 paid by the Contractor after two weeks. Late payment penalty imposed as per the provision of contract while making reimbursement of April,24 Salary bill. Salary for May'24 has been paid by contractor on time. Reimbursement also done by NRPC Secretariate. Foreclosure of the contract is put on hold. Fresh contract proposal is under process as present contract expiring on 12.08.24.

Procedure for Approval of Protection Settings in Northern Region

(Finalized in 50th PSC meeting held on 29.04.2024)

1. ISTS users shall submit proposal for new/revised protection settings to NRLDC and similarly non-ISTS users shall submit to concerned SLDCs in the prescribed formats (of NRLDC/SLDC) in 2 weeks advance.
2. Further, NRLDC/SLDC (as the case may be) will scrutinize the proposal and any deficiency/additional data may be asked by NRLDC/NLDC. If required, NRLDC/SLDC may convene a meeting/interaction with stakeholders.
3. After scrutiny, NRLDC/SLDC will convey to user within 10 days (after receiving proposal) the accepted settings for implementation at site.
4. After implementation of approved settings, stakeholder will intimate to NRPC Secretariat via e-mail at seo-nrpc@nic.in within a fortnight.
5. NRLDC/SLDCs shall place all accepted settings as agenda in upcoming PSC meeting for final approval of forum.

*****

Standard Operating Procedure (SOP) for Communication audit of Substations

1. This procedure has been prepared in compliance to Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017. As per clause 10 of the Regulation, RPC shall conduct annual audit of the communication system annually as per the procedure finalized in the forum of the concerned RPC. However, this SOP for communication audit of substations is finalized to maintain uniformity at the national level. It also mandates that RPC Secretariat shall issue necessary instructions to all stakeholders to comply with the audit requirements within the time stipulated by the RPC Secretariat based on the audit report. An Annual Report on the audit carried out by respective RPC is to be submitted to the Commission within one month of closing of the financial year.
2. The Audit would be conducted in two phases. In first phase scrutiny of the reports, documents etc. In the second phase physical verification shall be carried out.
3. Each User/entity, using inter-state transmission or the intra-state transmission incidental to inter-state, shall submit the detailed report to RPC Secretariat and RLDC, as per prescribed format on yearly basis. The detailed report shall be submitted by the April end of the respective year. This report shall be considered as self-certificate regarding availability and healthiness of the Communication system of respective user/entity.
4. In respect of intra-state users/entities, SLDC shall submit detailed reports yearly by the April end of the respective year, to RPC Secretariat and RLDC.
5. Outage report of all the channels (including Network Management System, PLCC etc.) report for a month shall be submitted by the Users/entities to RLDC and respective SLDCs, on monthly basis, by 7th day of the next month. RLDC and SLDCs after verifying the NMS data shall submit report to RPC Secretariat by 15th day.
6. All users/entities and Control Centers shall get the third-party cyber security audits done from a Cert-in certified vendor in compliance of CEA (Cyber Security in Power Sector) Guidelines,2021. The detailed report of the Cyber Security Audit shall be submitted by 15th April for the previous financial Year.
7. RPC Secretariat may ask any other information required for Audit of the communication system in addition to these periodic reports.

Phase-I Audit: Scrutiny of the Information

8. A Communication System Audit Sub-Group comprising one member each from RPC, RLDC, PowerGrid and One of the respective Region SLDCs shall be constituted by RPC Secretariat with the approval of Member Secretary, RPC. The sub-group may co-opt any other member from any organization for facilitating the activities of the sub-group. Further, consultation from CEA may be taken, if required. The Audit team shall be formed excluding the member for the Organization/Utility whose system is to be audited.
9. The Communication System Audit Sub-group shall scrutinize the information received in RPC Secretariat. The Sub-group may also ask any additional information necessary for its activities. All the users/entities, RLDC, SLDCs shall provide the information to the subgroup on priority within the stipulated time period.
10. The sub-group shall also identify the nodes for physical inspection based on the criticality of the node in view of performance of the communication network or based on the deficiencies observed in the communication system.
11. The Audit would include but not limited to following aspects:
    a. Availability of communication channels. The outage reason needs to be clearly specified whether it is on account of the concerned entity or on account of any other entity, force majeure etc. The list of communication channels would be finalized by Communication System Sub Group in consultation with other stakeholders.
    b. Availability of terminal equipment. The outage reason needs to be clearly specified whether it is on account of the concerned entity or on account of any other entity, force majeure etc. The list of terminal equipment would be finalized by Communication System Sub Group. Part outage like failure of specific cards etc. would also be furnished along-with reasons.
    c. Availability of Auxiliary System e.g. Battery Charger, Battery bank, sufficient cooling equipment etc.
    d. Compliance of CERC and CEA Regulations and the procedures under these Regulations.
    e. Completion of periodic testing of the communication system in accordance with procedure for maintenance and testing prepared by CTU.
    f. Audit of all newly commissioned communication equipment within six months of its commissioning.
    g. Completion of 3rd party Cyber Security Audits.
    h. Network traffic w.r.t capacity.
    i. Spare availability, replenishment etc.
    j. Any other parameters as agreed by the Communication Sub Group.

Phase-II Audit: Physical Verification

12. Based on the Recommendations of the Communication System Audit Sub-group, Audit team shall be constituted and the physical inspection Audit plan shall be prepared by RPC Secretariat.
13. Audit team shall be formed on regional basis.
14. Audit shall be carried out in a planned manner as included in this document by a team of three members. The audit team shall comprise of one representative from the RPC Secretariat, one representative from RLDC and one representative from any of the Utilities or SLDCs of respective Region. The Audit team shall be formed excluding the member for the Organization/Utility whose system is to be Audited. The Audit team may co-opt any other member from any organization for facilitating the activities of the committee.
15. Once the plan is finalized, minimum 3 days advance notice shall be served to the concerned Auditee entity intimating the detailed plan so that availability of required testing equipment and the required documents is ensured by Auditee entity and is made available to the Audit team during the site visit.
16. Member Secretary, RPC in consultation with the Communication System Audit SubGroup may decide on any additional nodes/locations for physical inspection if a location is very critical in view of performance of the communication network at any time of the year.
17. The Scope of the physical verification shall include but not limited to the following:
    a. Available communication Network for its redundancy
    b. Availability of channel redundancy for all the functions for which it is configured.
    c. Communication equipment (hardware and software configuration) of all the nodes including repeater stations for its recommended performance.
    d. Documentation of the configuration of the respective site and its updation.
    e. Fibre layout / usage of fibre / Availability of dark fibre and its healthiness.
    f. Cable Schedule and identification / tagging.
    g. Healthiness of Auxiliary supply including the healthiness of Battery backup.
    h. Healthiness of Earthing / Earth protection for communication system.
    i. Availability of sufficient cooling equipment at the User's premises to maintain the stipulated temperature for the communication equipment.
    j. Optical power level
    k. Alternate modes of communication for speech

18. The format for collecting the details of Communication channels/links and Equipment is at **Annexure-I** and the same shall be furnished by the Auditee entity.

19. Communication Audit Checklist points are given in **Annexure-II** and the same are to be thoroughly verified by the Audit team.
20. Expenses towards Lodging, Boarding & Transportation (Excluding Air/Train Fair) between various places within the jurisdiction of Auditee entity shall be borne by respective Auditee entity. The Coordinating Officer(s) from the Auditee Utilities identified for each Team is (are) responsible for facilitating them to all the Members of respective Team.
21. Audit team shall submit report including recommendations for action on deficiencies, if any, found during the inspection, within 15 days from the date of inspection to Member Secretary, RPC. After approval of MS, RPC, the report would be communicated to the Auditee entity for compliance.

Audit Compliance Monitoring

22. Communication System Audit Sub-group would monitor the compliance of audit observations as applicable. Non-compliance of Audit Recommendations, if any, shall be put up to TCC and RPC.
23. The Annual Audit Report would be reviewed by a Communication System Sub Group at RPCs level. After considering the observations of Sub Group, RPC Secretariat shall issue necessary instructions to all stakeholders to comply with the audit requirements within the time stipulated by the RPC Secretariat based on the audit report. An Annual Report on the audit carried out by RPC would be submitted to the Commission within one month of closing of the financial year.

***

REGIONAL COMMUNICATION AUDIT REPORT			
General Information:			
1	**Substation Name**		
2	**SS Voltage level**		
3	**Date of commissioning of the substation**	**dd/mm/yyyy**	
4	**Region & State / Auditee**		
5	**Audit Date**		
6	**Name of the Utility which owns the SS**		
Details of Audit Team Members :			
Sl	**Name**	**Designation**	**Organization**
1			
2			
3			
4			
Attached Documents, if any			
Sl	**Name of the document**		**Original / Signed / Copy**
1			
2			
3			
4			
5			
6			
7			

Communication Channels and Equipment Audit Format

(A) List of channels in usage for data (64 kbps, 104, PMU, VC, 101) / Voice / Protection circuits / others:

Sl	Description (64 kbps, 104, PMU, VC, 101) / Voice / Protection circuits / Others)	Source	Destination	Channel Routing	Ownership details of terminal equipment / Links
1					
2					
3					
4					
5					
6					
7					
8					

(B) List of terminal communication equipments:

Sl	Name of Station	Equipment Type (SDH / PDH / Radio / VSAT / EPABX)	Make / Model	Ownership
1				
2				
3				
4				
5				

(C) Communication System Details:

I. SDH Equipment

(1) Card Details:

Slot No	IP Address & Path / Direction Name	Card Details	Place a mark if on usage, else Write as "Spare"	Whether Card is healthy/ Faulty? (H/ F)	Cards Redundancy available (Y/N)	Power Supply card/ Optical card (Y/N)	MSP configured (Y/N)	Action Plan for faulty cards	Other Information, if any
1									
2									
3									
And so on									

(2) Whether equipment is time synchronized: Yes / No
If Yes, then how:

(3) Failures during last FY / since last Audit :

Particulars	Number of failures of Card / Power Supply	Reason for failures	Measures taken for rectification
Card		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**
Power Supply		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**

(4) Configuration of the Node:

Name of Equipment	Number of Nodes	Number of directions	Name of Directions	Number of links down, with details	Details of corrective action, if any, taken

(5) Preventive maintenance schedule and its compliance:

Date of Last Preventive maintenance	Maintenance carried out as per schedule? (Yes / No)	Whether all the defects have been attended? (Yes / No) Give details

II. PDH Equipment

(1) Card Details:

Slot No	IP Address & Path / Direction Name	Card Details	Place a mark if on usage, else Write as "Spare"	Whether Card is healthy/ Faulty? (H/ F)	Cards Redundancy available (Y/N)	Power Supply card/ Optical card (Y/N)	MSP configured (Y/N)	Action Plan for faulty cards	Other Information, if any
1									
2									
3									
And so on									

(2) Whether equipment is time synchronized: Yes / No
If Yes, then how:

(3) Failures during last Fin. year / since last Audit :

Particulars	Number of failures of Card / Power Supply	Reason for failures	Measures taken for rectification
Card		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**
Power Supply		**(i)** **(ii)** **(iii)**	**(i)** **(ii)** **(iii)**

(4) Configuration of the Node:

Name of Equipment	Number of Nodes	Number of directions	Name of Directions	Number of links down, with details	Details of corrective action, if any, taken

(5) Preventive maintenance schedule and its compliance:

Date of Last Preventive maintenance	Maintenance carried out as per schedule? (Yes / No)	Whether all the defects have been attended? (Yes / No) Give details

III. OPGW / Optical Fibre Details

Number of Directions	Name of Direction	No. of Pairs	No. of Fibers used	No. of spare & healthy Fibers	Unarmored cable laid within PVC/Hume duct pipe?	Fibre Count in OPGW? Whether matching with Approach cable to FODP?	Overall Optical Fibre Path Attenuation (dB/km)	Power Received	Conformation to Compliance of CEA Standards

IV. Healthiness of Auxiliary System:

(1) Details of 2 independent Power Sources:

Source	Commissioning Date	Battery Back up (Hour)	Battery capacity (AH)	Supply Voltage (V)	Healthiness of Battery (Yes / No)	Make of Charger	Charger Capacity (A)	Periodicity of Maintenance Schedule	Date of Last 2 Actual Maintenance	Remarks
1										
2										

(2) Conformation to Compliance of CEA Standards:

V. Healthiness of Earthing of each equipment:

Sl	Equipment	Status on Healthiness of Earthing

VI. Details of Voice communication available between Sub-station and Control Centre:

Sl	Voice communication (Sub-station - Control Centre)	Status on Healthiness of Voice communication	Healthiness of air-conditioning of communication room as per OEM recommendation

VII. PLCC Details:

Number of Panels	Make and Model	Direction	Frequency (Tx & Rx) KHz	Status on Healthiness	Last preventive maintenance		Details of defects, if any, attended	Status of Availability of Spares	Conformation to Compliance of CEA Standards
					Schedule	Actual			

VIII. Radio Communication Details:

Number of Equipment	Make and Model	Status on Healthiness	Last preventive maintenance		Details of defects, if any, attended	Status of Availability of Spares	Conformation to Compliance of CEA Standards
			Schedule	Actual			

IX. Data Retention : (i) Earliest Date of availability of data :
(ii) Historical data availability :___ days.

X. Control Command Delay : (i) Time delay in seconds from Control Centre for SCADA :___ Seconds
(ii) Time delay in seconds from Control Centre for WAMS :___ Seconds

XI. Wide Band Network : (i) Absolute channel delay in protection applications :_____ ms
(ii) Channel delay asymmetry in protection applications :_____ ms
(iii) Switching Time delay to alternate path/route during failure of one path :_____ ms

XII. Status of integration with U-NMS or state NMS:

XIII. Any other information :

Audit Team Member NRPC Secretariat

Audit Team Member Co-Ordinator

Audit Team Member PGCIL (Internal / External)

Audit Team Member State (Internal / External)

Communication Audit Checklist (Annexure-II)

Sl	Check list points	Expected	Actual	Reference
1.	Whether OPGW is terminated properly. Down lead shall be fixed property in sufficient locations. Metallic part shall be connected to earth mat riser.			
2.	1. Distinct approach cable shall be laid a. Protection & Communication b. Fibers for commercial applications 2. Item no 1 cable shall be terminated in communication room FODP 3. One number FODP panel shall be 4. available in communication room			
3.	Fiber Identification shall be done in FODP properly			
4.	Whether End to end tests were carried out during installation and records are available (both Optical Power Source/ receiver test and OTDR Test results			
5.	Whether patch chords 1. Cross labelled (source/ receive) 2. Tx – Rx Marking 3. Mechanical protection is provided for patch chords laid between panels			
6.	Whether separate room for communication is available with following: - 1. Air conditioning with standby A/C Unit 2. AC Distribution board with ELCB 3. Single point earthing bar which shall be connected to substation Earth mat			
7.	Two sets of 48 V (Positive Earthed) DC System shall be available with 1. Common DC Distribution board/ Panels with incoming MCB, coupler MCB, out doing MCBs etc. 2. Minimum 200 Ah (2 sets of battery) VRLA batteries are preferred to keep chargers and battery in communication room. 3. Battery Charger shall be Thryristorised/ SMPS			
8.	Battery Charger alarms / measurements shall be made available to SAS (if available) It can be achieved through MOD bus or connecting analogue/ digital signals to Common BCU of SAS.			

Sl	Check list points	Expected	Actual	Reference
	If such system is not available major alarms shall be alarmed in common substation annunciator.			
9.	2 nos of substation Data (From RTU or SAS Gateway) shall route in different roots to Main and Standby Load Dispatch centres			
10.	Kindly assure proper protection is available for AC Distribution (ELCB, MCB, Backup fuse),			
11.	Aux Transformer neutral Earthing shall be connected to Stations earth mat (Aux. Transformers shall be installed in yard earth mat area only)			
12.	Whether DG sets with AMF panels are provided for Aux AC Supply			
13.	Whether 2 nos. 11 kV (or 33kV) supplies are available for Each station aux Transformer			

Final Standard Operating Procedure (SoP) for Communication System Outage Planning

1. As per the following CEA and CERC Regulations, the Communication Outage for the Region shall be carried out by RPC Secretariat:
   a) Regulation 7.3 of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 stipulates as below:

   Quote:

   7.3 Role of National Power Committee (NPC) and Regional Power Committee (RPC):

   ……

   (iv) The RPC Secretariat shall be responsible for outage planning for communication system in its region. RPC Secretariat shall process outage planning such that uninterrupted communication system is ensured.

   ……

   Unquote

   b) Regulation 10 Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 notified on 27.02.2020 envisages as below:

   Quote:

   10. Outage Planning: Monthly outage shall be planned and got approved by the owner of communication equipment in the concerned regional power committee, as per detailed procedure finalized by the respective regional power committee.

   Unquote

2. A Communication System Outage Planning Sub-Group/ TeST Sub Committee shall be formed in each region constituting the members from all the entities connected to ISTS including all CGS, ISGS, REGs/SPPDs/SPDs, STUs, SLDCs etc., of the respective Region, RLDC/Grid-India, PGCIL, CTUIL, Private Transmission licensees in respective region & RPC secretariat. The sub-group/ Sub Committee may co-opt any other member from any organization for facilitating the activities of the sub-group/ Sub Committee.
3. Communication System Outage Planning will be limited to the following systems:
   (i) ISTS Communication System including ISGS
   (ii) Intra-state Communication System being utilized for ISTS Communication
   (iii) ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDCs.
   (iv) Inter-regional AGC links.
   (v) Any other system agreed by the sub-group.

4. Communication Equipment/link within the scope of the Procedure would include :

   (i) Optic Fibre links
   (ii) Any other link being used for ISTS communication
   (iii) ICCP links between Main & Backup RLDCs, Main & Backup SLDCs & Main & Backup NLDC
   (iv) VC links between LDCs
   (v) Inter-regional AGC links
   (vi) SPS Links
   (vii) Tele-Protection
   (viii) AMR
   (ix) PMU
   (x) SDH & PDH
   (xi) DCPC
   (xii) RTU & its CMU cards
   (xiii) DTPCs
   (xiv) Battery Banks and Charging Equipment
   (xv) EPABX
   (xvi) Any other equipment/link agreed by the sub-group

5. A Web Portal named as "Communication System Outage Planning Portal" shall be developed by respective RLDCs or a module shall be provided in the U-NMS. Log-in credentials shall be provided to all the ISTS connected entities/concerned entities.

6. Entities/Users/Owners shall add their communication links and the equipment to the Web Portal as soon as they are commissioned. The same has to be furnished to RPC Secretariat /RLDCs.

7. Entities/Users/Owners of the communication equipment shall upload the outage proposals of communication links and the equipment (in the prescribed format only) to be availed during subsequent month by 7th/8th of every month in the Web Portal.

8. RPC Secretariat consolidates the list of outage proposals received from various Entities/Users/Owners of the communication links and equipment by downloading from the Web portal and circulate the same among all the respective region entities by 15th of every month. Communication outages affecting other regions would be coordinated by respective RLDC through NLDC.

9. Communication System Outage Planning (CSOP) meeting shall be conducted during the third week of every month normally (preferably through VC) to discuss and approve the proposed outages of communication links and equipment.

10. The approved outages of Communication links and equipment in the CSOP meeting shall be published in the RPC website and respective RPCs Communication Outage Portal within 3 days from the date of CSOP meeting.

11. Outage of the approved communication links and equipment shall be availed by the respective owner /entities after confirming the same with RLDC on D-3 basis.

12. In case of any emergency outage requirement of communication links and equipment, Entities/Users/Owners may directly apply to respective RLDC with intimation to respective RPCs on D-2 basis. Confirmation of approval/rejection will be provided on D-1 basis by RLDCs in consultation with respective RPCs considering 24hrs processing window.

13. Entities/Users/Owners shall take the code from the respective RLDC before availing the planned outage of the communication links & equipment and before restoration of the same.

14. Entities/Users/Owners of the communication links and equipment shall submit the deviation report for the approved outages (approved dates & approved period) availed during the previous month and the report on planned / forced / other outage of communication links / equipment by 10th of the month to RPC Secretariat as per the format at **Annexure-I** .

15. In the monthly CSOP meetings, communication links and equipment whose outage duration (Planned / Forced / Others) more than 48 hours for the last 12 months of rolling period shall be deliberated for the measures to be taken in future for the better outage management. The date deviations and non-availing the outages that were approved in the previous CSOP meetings shall also be deliberated in the CSOP meetings.

***

Annexure: DCOA-I

Outage Deviation Report : List of outages of Communication Links, availed / deviated during the month of

mmm-yyyy

Dated : **dd-mm-yyyy**

A **Details of Communication Links (Point to Point) availed :**

SL	Name of Requesting Agency	Description of Link	Source	Destination	Channel Routing	Ownership	Reason for availing outage with the details of equipment attended	Approved Start Date : Time [dd-mm-yyyy hh:mm]	Approved End Date : Time [dd-mm-yyyy hh:mm]	Approved Outage Hours	Outage availed Start Date : Time [dd-mm-yyyy hh:mm]	Outage availed End Date : Time [dd-mm-yyyy hh:mm]	Total hours of outage availed now	Deviation ? (Y/N)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Example**	Back up Control Center (BCC) : Data	KAYATHAR 230 kV SS	MADURAI LDC	Data will be availble through the alternate route - 230 KV Kayathar-TTPS-TTN Auto-400 KV Kayathar-BCC/Madurai	TANTRANSCO	Shifting of FODB panel at Kayathar 230 KV SS	10-Mar-2021 09:00	10-Mar-2021 18:00	**09:00**	10-Mar-2021 14:07	10-Mar-2021 17:30	**03:23**	**N**

Annexure: DCOA-II

Outage Deviation Report : List of outages of Communication Equipment availed / deviated during the month of

mmm-yyyy

Dated : **dd-mm-yyyy**

B Details of Communication Equipment availed :

SL	Name of Requesting Agency	Name of the communication equipment	Location of the Equipment / Name of Station	Name of the Link/Channel/Path / directions affected	Alternate Channel/Path available ? (Furnish details)	Ownership	Reason for availing outage with the details of faults	Approved Start Date : Time [dd-mm-yyyy hh:mm]	Approved End Date : Time [dd-mm-yyyy hh:mm]	Approved Outage Hours	Outage availed Start Date : Time [dd-mm-yyyy hh:mm]	Outage availed End Date : Time [dd-mm-yyyy hh:mm]	Total hours of outage availed now	Deviation ? (Y/N)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Example**	DC Charger -2, Amararaja, 48v,200A	Edamon	Nil	Nil	KSEBL	Monthly maintenance. No interruption as alternate chargers available	16-Mar-21, 11:00	16-Mar-21, 16:00	**05:00**	16-Mar-21, 10:30	16-Mar-21, 16:00	**05:30**	**Y**

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

Annexure-V

संदर्भ संख्या : GRID-INDIA/NLDC/2023/

दिनांक : 14th Sep 2023

सेवा में,

Head - Market Operations
Indian Energy Exchange Limited
Max Towers, Sector 16B, Noida,
Uttar Pradesh 201301

Head - IT & Operations
Power Exchange of India Limited
9th Floor, Sumer Plaza,
Marol Marashi Road, Andheri (East),
Mumbai 400 059

Chief Operating Officer
Hindustan Power Exchange
Plot No, 1, Delhi Naida Direct Flyway,
Central Auto Market, Block C, Block B,
Sector 16, Noida, Uttar Pradesh 201301

विषय : Regarding creation of bid areas and congestion check in T-GNA regime

संदर्भ :

1. NLDC letter no. POSOCO/NLDC/2022/169 to Power Exchanges regarding Congestion management and creation of new bid areas dated 27th January 2022
2. Minutes of the Power Exchange coordination meeting held on 2nd November 2022

महोदय,

Hon'ble CERC has notified the (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 on 07th June 2022. The Indian Electricity Grid Code 2023 has been notified on 29th May 2023. Further, as per notification dated 03rd August 2023, the date of implementation of IEGC 2023 and scheduling under GNA regulations 2022 have been notified as 01st October 2023.

For effective implementation of GNA/T-GNA and administration of the market, it is essential to configure each state/union territory as a bid area. A combination of states (e.g., S1S2-S3) may also need to be structured as bid areas. The existing practice of total export and import of the region and identified intra-regional corridors would also be continued in the future. Additionally, Power Exchange shall have provisions for separate bid areas for cross-border entities also.

National Open Access Registry (NOAR) application is in the advanced stage of implementation for T-GNA. Provisions have been made in NOAR so that each state can be configured as a separate bid area in case congestion is observed in the import/export.

With respect to references cited above (copy enclosed for ready reference), Power Exchanges were requested to make necessary arrangements in their system software for the creation of bid areas for all states and union territories. It is to mention that for each state/UT, two separate bid areas need to be created as explained below:

a) Bid-area – Consisting of all intra-state entities
b) Bid-area^{ISGS} – Consisting of only regional entities present within the geographical boundary of that state/UT

The general formula for margin calculation for states/UTs shall be as per the equation shown below:

*"Margin = Import/Export **ATC** (Bid-area) – Net Import/Export (Bid Area) – Net Import/Export (Bid-area^{ISGS})"*

Further details in this regard are provided in **Annexure-I.**

As previously stated, a collection of states/parts of states may also need to be structured as bid areas on an as need basis. Accordingly, flexibility of creation of new bid area is also needed in the software. The list of bid areas to start with is attached as **Annexure - II.**

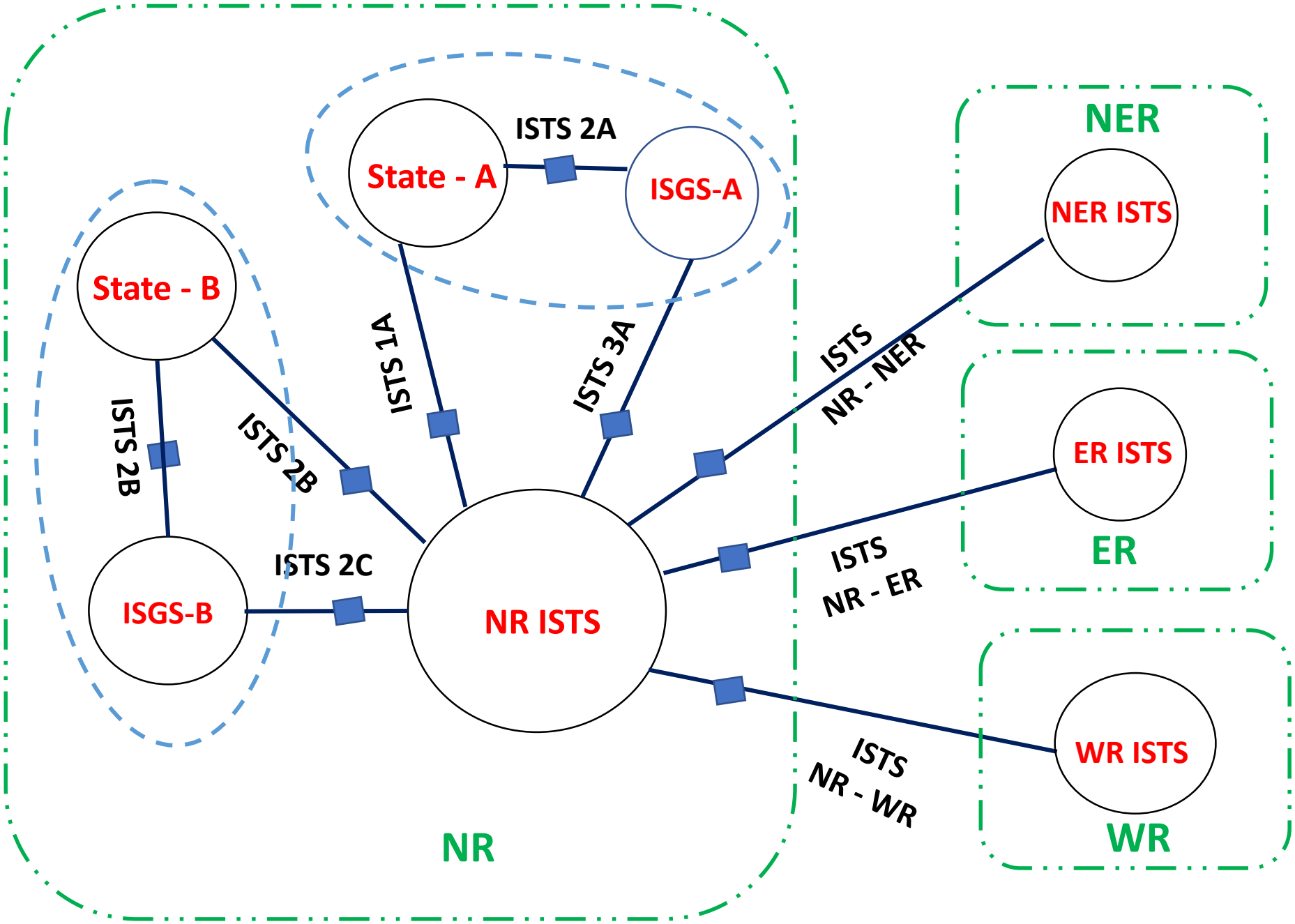
It is kindly requested to take all necessary steps for the above. Further, the status of readiness may also be informed.

Yours sincerely,

(S C Saxena)
Executive Director, NLDC

Copy: Secretary, CERC

Annexure - 1



Legend

Geographical boundary of a State

Electrical boundary

Geographical boundary of a Region

Corridor

ISGS-A/B area *comprises of all the regional entity generating stations within the geographical boundary of state-A/B*

Annexure - 1

Congestion Check Methodology for Regional Import (NR)

1. Net NR Import = ISTS (NR_NER) + ISTS (NR_WR) + ISTS (NR_ER)

2. Limits will be specified for NR Import, ISTS (NR_NER), ISTS (NR_WR) and ISTS (NR_ER)

3. If path-wise limits are not specified, a high limit such as 99999 MW to be considered

4. Congestion check for Import of NR:

   Net NR Import ≤

   Min {[NR Import Limit], [ISTS (NR_NER) Limit + ISTS (NR_WR) Limit + ISTS (NR_ER) Limit]}

5. Similar arrangement to be considered for export

Annexure - 1

Congestion Check Methodology for State ‘A’ Import

1. Net State ‘A’ Import = ISTS-1A + ISTS-2A

2. Limits will be specified for State ‘A’ Import only

3. Individual Import limits for State ‘A’ via ISTS-1A and ISTS-2A not specified; to be considered a high value such as 99999 MW

4. Congestion check for Import of State ‘A’:

   Net State ‘A’ Import ≤ Min {(State A Import Limit), (ISTS-1A Limit), (ISTS-2A Limit)}

5. Similar arrangement to be considered for export

Annexure - 1

Congestion Check Methodology for 'ISGS-A' Export

1. ISGS-A area comprises of all the regional entity generating stations within the geographical boundary of state-A

2. Net ISGS-A Export = (ISTS-2A + ISTS-3A) or (ISGS-1A + ISGS-2A …… + ISGS-nA)

3. Individual export limits for 'ISGS-A' area via ISTS-2A and ISTS-3A not specified; to be considered as per the NOC

4. Similar arrangement to be considered for import

Annexure – II

1. List of New Bid Areas for Intra-State Entities/Regional Bulk Consumers/Regional CPP

Sr. No.	Region	State	Bid Area for Intra-state Entities	Combination of Bid Areas
1	NR	Punjab	N3	
2	NR	Chandigarh	N4	N1
3	NR	Himachal Pradesh	N5	
4	NR	Jammu and Kashmir	N6	
5	NR	Haryana	N7	
6	NR	Delhi	N8	N2
7	NR	Rajasthan	N9	
8	NR	Uttar Pradesh	N10	
9	NR	Uttarakhand	N11	
10	ER	Odisha	E2	
11	ER	Bihar	E3	E1
12	ER	Damodar Valley Corporation (DVC)	E4	
13	ER	Jharkhand	E5	
14	ER	Sikkim	E6	
15	ER	West Bengal	E7	
16	WR	Madhya Pradesh	W1	
17	WR	Chhattisgarh	W3	
18	WR	Dadar and Nagar Haveli	W4	W2
19	WR	Dadar and Nagar Haveli & Daman	W5	
20	WR	Diu	W6	
21	WR	Goa WR	W7	
22	WR	Gujarat	W8	
23	WR	Maharashtra	W9	
24	WR	ArcelorMittal Nippon Steel India Limited	W10	
25	WR	Bharat Aluminium Company Ltd	W11	
26	SR	Kerala	S3	
27	SR	Andhra Pradesh	S4	S1
28	SR	Goa SR	S5	
29	SR	Telangana	S6	
30	SR	Karnataka	S7	
31	SR	Puducherry (Yenam)	S8	
32	SR	Puducherry (Karaikal)	S9	S2
33	SR	Puducherry (Mahe)	S10	
34	SR	Puducherry (Puducherry)	S11	
35	SR	Tamil Nadu	S12	
36	NER	Manipur	A3	A1
37	NER	Mizoram	A4	
38	NER	Nagaland	A5	
39	NER	Tripura	A6	
37	NER	Meghalaya	A7	A2
38	NER	Arunachal Pradesh	A8	
39	NER	Assam	A9	

Annexure – II

2. List of New Bid Areas for ISGS located in the States

Sr. No.	Region	ISGS located in the State	Bid Area
1	NR	Haryana	ISGS_HR
2	NR	Himachal Pradesh	ISGS_HP
3	NR	Jammu and Kashmir	ISGS_JK
4	NR	Rajasthan	ISGS_RJ
5	NR	Uttar Pradesh	ISGS_UP
6	NR	Uttarakhand	ISGS_UT
7	ER	Bihar	ISGS_BR
8	ER	Jharkhand	ISGS_JH
9	ER	Odisha	ISGS_OD
10	ER	Sikkim	ISGS_SK
11	ER	West Bengal	ISGS_WB
12	WR	Gujarat	ISGS_GJ
13	WR	Maharashtra	ISGS_MH
14	WR	Chhattisgarh	ISGS_CG
15	WR	Madhya Pradesh	ISGS_MP
16	SR	Andhra Pradesh	ISGS_AP
17	SR	Karnataka	ISGS_KA
18	SR	Tamil Nadu	ISGS_TN
19	SR	Telangana	ISGS_TS
20	NER	Arunachal Pradesh	ISGS_AR
21	NER	Assam	ISGS_AS
22	NER	Manipur	ISGS_MN
23	NER	Nagaland	ISGS_NL
24	NER	Tripura	ISGS_TR

3. List of New Cross-border Bid-Areas

Sr. No.	Region	Cross - Border Interconnection	Cross-border Bid-Areas
1	ER	India (ER- ISTS) - Bangladesh	CB_ER_BAN
2	ER	India (ER – ISTS) - Bhutan	CB_ER_BHU
3	ER	India (Bihar STU) - Nepal	CB_BR_NEA
4	NR	India (NR – ISTS) – Nepal	CB_NR_NEA

पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड
(भारत सरकार का उपक्रम)
POWER SYSTEM OPERATION CORPORATION LIMITED
(A Government of India Enterprise)

पंजीकृत एवं केंद्रीय कार्यालय:बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016
(CIN No: U40105DL2009GOI188682)
Registered Office: B – 9, 1st Floor, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110016
Website: www.posoco.in, Tel: 011 – 26536832, 26524522, Fax: 011 – 26524525, 26536901

संदर्भ संख्या: पोसोको/एनएलडीसी/2022/ 169 दिनाँक: 27th January 2022

सेवा मे,

Mr. Amit Kumar Head - Market Operations Indian Energy Exchange Limited Max Towers, Sector 16B, Noida, Uttar Pradesh 201301	Mr. Chandra Shekar Bhat Head – IT & Operations Power Exchange of India Limited 9th Floor, Sumer Plaza, Marol Maroshi Road, Andheri (East), Mumbai 400 059
Mr. Akhilesh Awasthy Chief Operating Officer Hindustan Power Exchange Plot No, 1, Delhi Noida Direct Flyway, Central Auto Market, Block C, Block B, Sector 16, Noida, Uttar Pradesh 201301	

विषय: Congestion management and creation of new bid areas

महोदय,

The draft GNA regulation have been notified by the Hon'ble Commission which would be finalized in due course. Implementation of short-term open access under these regulations is proposed to be modified to "Temporary-GNA (TGNA)" and the duration of such short term access has also been proposed to be a maximum of 11 months. Moreover, approval of TGNA and scheduling have been decoupled in the draft regulations.

In order to implement the regulatory provisions, it is essential to configure each state as a bid area. If required, a combination of states (e.g., S2) may also be considered for congestion management. This is essential for effective implementation of GNA and administration of the market.

Presently also, some states like Gujarat, Chhattisgarh, Punjab and Kerala etc. are facing congestion during some periods of high demand. Further, the existing practice of total export and import of the region and identified intra-regional corridor would also be continued in future. Additionally, Nepal and Bhutan have already started trading in collective market and Bangladesh is expected to participate in power exchange shortly. Hence, we need to create separate bid area for cross border entities also.

National Open Access Registry (NOAR) is under advanced stages of implementation. Provisions have been made in NOAR so that each state can be configured as separate bid area in case congestion is observed in the import/export.

Accordingly, you are kindly requested to make necessary arrangements in your system software for creation of bid area for all states and union territories. To begin with, high power transaction limits will be kept for the bid areas with no congestion. The bid area shall be kept ready so that it can be made operationalised at a short notice, in case of congestion.

Thanking you,

Yours sincerely,

Debasis De
(Executive Director, NLDC)

Copy: Secretary, CERC

पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड
(भारत सरकार का उद्यम)
POWER SYSTEM OPERATION CORPORATION LIMITED
(A Govt. of India Enterprise)

पंजीकृत एवं केन्द्रीय कार्यालय : प्रथम तल, बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016
Registered & Corporate Office : Ist Floor, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi -110016
CIN : U40105DL2009GOI188682, Website : www.posoco.in, E-mail : posococc@posoco.in,Tel.: 011- 41035696, Fax : 011- 26536901

संदर्भ संख्या: पोसोको/एनएलडीसी/2022/ दिनाँक: 16th November 2022

सेवा में,

Secretary Central Electricity Regulatory Commission 36, Janpath Rd, Janpath, Connaught Place New Delhi, Delhi 110001	Head, Market Operations & NPI Indian Energy Exchange Max Towers, Sector 16B, Noida Uttar Pradesh 201301
Head, Operation Power Exchange India Limited 9th Floor, Sumer Plaza, Marol Maroshi Road, Marol Andheri (East), Mumbai 400 059, India	Chief Executive Officer Hindustan Power Exchange Limited World Trade Tower, 8th Floor, Sector 16, Noida Uttar Pradesh 201301

विषय: Minutes of the Power Exchange Coordination Meeting held on 02.11.2022 at 11:00 AM at 2nd Floor Conference Room, NLDC -reg

महोदय,

Please find herewith (enclosed) the Minutes of the Power Exchange Coordination meeting held on 02.11.2022 at 11:00 AM at 2nd Floor Conference Room, NLDC.

सादर धन्यवाद,

भवदीय,

(S. C. Saxena)
CGM , NLDC

Enclosure : As above

Minutes of Power Exchange Coordination meeting held at 1100 hrs. on 02 Nov 2022, at NLDC Conference Hall

List of participants enclosed as Annexure-1

Director Market Operations, POSOCO, welcomed the participants from CERC and the three Power Exchanges in the meeting.

Agenda items were taken up for discussion:

1. NLDC presented the salient features of development of High Price Market Segment (HP-DAM) including margin allocation, curtailment priority, data files sharing, exchange readiness etc. as per communication received from Ministry of Power (Annexure-2).
2. It was discussed that the HP-DAM category shall be mentioned in the Standing Clearances issued by the RLDCs/SLDCs, as per criteria prescribed by MOP/CERC. It was decided that allocated margin will be first utilized by GDAM then by DAM and remaining margin will be used for HPDAM. During transmission constraint and/or in view of grid security, curtailment will be in the order of HPDAM followed by DAM and followed by GDAM. Information exchange between power exchanges and NLDC will happen through API like present IDAM and only number of files will increase with additional files for HPDAM.
3. Power Exchanges informed that the buyers would get an option to carry forward the uncleared bids in DAM and GDAM along with the price variation at the time of submission of the bids in the Power Exchange platform. It was agreed by all the exchanges that present methodology in IDAM will be continued with an additional segment of HP-DAM along with GDAM and DAM.
4. It was discussed that there is a requirement of clarification on regulation and contour of different products needs to be finalized. Regarding this, staff of CERC agreed and deliberated that it will be taken care during the implementation phase, when Power Exchanges approach CERC for approvals for interdiction of the new segment of HPDAM.

5. Power Exchanges informed that they would require about 3 months period to implement the HP-DAM product at their platform after the order from Hon'ble Commission comes into force.
6. It was discussed that with the implementation of T-GNA, each state will be considered as a separate bid area and grouping of bid areas may also be considered, if required. NLDC requested all three power exchanges to make provision in their systems for flexibility in configuration / re-configuration of bid areas as per the requirement of congestion management . Further, provisions shall be made to allow fragmentation of bid areas into smaller bid zones as per requirement.
7. It was decided in the meeting that NLDC shall share the list of bid areas, group of bid areas along with their NOAR IDs for proper mapping with power exchanges. Exchanges informed that they need to have at least one month mock exercise for testing the system after implementation of the above.
8. NLDC further stated that import and export transfer capability of all bid areas shall declared by NLDC. In case of congestion, the available margins in import/export by a bid area shall be informed to the Power Exchanges. Declaration of corridor/link wise TTC/ATC would be discontinued.
9. Regarding implementation of T-GNA, CERC staff informed that it will be implemented as soon as new IEGC comes into force and tentative date is 1st Feb 2023.
10. Timelines for the different activities for Day Ahead Market applications processing were discussed. NLDC explained the new DAM timeline that will be followed after T-GNA comes into force. It was informed that exchanges need to strictly adhere with the timeline and must submit the final trade by 1300hrs so that NLDC will use the remaining margin for exigency applications. Power Exchanges agreed with the process flow.
11. NLDC explained the Exigency application processing and automatic approval will happen in one time block to avoid the margin overlapping with RTM. It was informed that if an exigency applications is applied in odd time block, then T-GNA

can be granted with a minimum start time of 7 (seven) time blocks and if an exigency applications is applied in even time block, then T-GNA can be granted with a minimum start time of 8 (eight) time blocks.

12. It was discussed that applicability of ISTS charges under T-GNA regime would be accounted on post facto basis. Power Exchanges raised the issues regarding the methodology for collection of ISTS charges from the individual entities for the collective transaction on and above the GNA and TGNA quantum of states in multi exchange scenario. NLDC informed that the charges for each regional entity under the jurisdiction of RLDCs shall be computed by NLDC and apportioned to each Power Exchange in the ratio of the volume traded by the concerned regional entity.
13. Power exchanges suggested that NLDC may calculate the transmission charges entity wise (for both regional and embedded entity) in the collective transaction for the quantum above TGNA and GNA quantum. But NLDC explained that RLDC schedules only the regional entities and has no visibility on scheduling quantum for the intra state entities and hence this methodology cannot be adopted.
14. Alternatively, Power Exchanges suggested that transmission charges can be collected from all the embedded entities for the quantum transacted in collective transaction irrespective of GNA or TGNA quantum. NLDC explained that if this procedure is adopted then excess transmission charges shall be collected and it will violate the provision of GNA regulation.

    All the members unanimously agreed that this issue can be addressed through appropriate direction by Hon'ble Commission in the Sharing Regulation.

The meeting ended with vote of thanks by CGM, Market operations, NLDC.

***

POSOCO

1. Sh. S. S. Barpanda
2. Sh. S. C. Saxena
3. Sh. Surajit Banerjee
4. Sh. Vivek Pandey
5. Sh. Neeraj Kumar
6. Sh. Subhendu Mukherjee
7. Sh. Debajyoti Majumder
8. Sh. Saif Rehman
9. Sh. Priyam Jain
10. Sh. Rohit Hisariya
11. Sh. Datta Gadekar
12. Ms. Sonali Mangal
13. Ms. Manisha Subhlaxmi

CERC

1. Sh. Gagan Diwan
2. Sh. Ravindra Kadam

HPX

1. Sh. Akhilesh Awasthy
2. Sh. Naveen Godiyal

IEX

1. Sh. Nitin Srivastava
2. Sh. Amit Kumar
3. Sh. Jogendra Behera

PXIL

1. Sh. Mukti Marchino
2. Sh. Anil Vitthal Kale
3. Sh. Ambrish Khare

Annexure-2

File No. 23/16/2020-R&R
Government of India
Ministry of Power

Shram Shakti Bhawan, Rafi Marg
New Delhi, 11th October, 2022

To

1. Secretary, CERC, New Delhi
2. CMD, POSOCO, New Delhi

Subject: Development of High Price Market Segment (HP-DAM) in the existing Integrated Day Ahead Market (DAM) in Power Exchange -Reg

Sir,

Our nation has been witnessing a remarkable transformation towards sustainable energy economy with increasing share of clean and green energy in its energy mix. The Power Exchanges have provided flexibility to participants by offering diversified products to trade in electricity starting real time market in intra-day, day-ahead and week ahead contracts.

2. While the steps taken by CERC has ensured that the spot prices are within Rs.12/unit, the generators based on high variable cost are unable to participate in this market. In this background, a detailed Note on the subject "Development of High Price Market Segment (HP-DAM) in the existing Integrated Day Ahead Market (DAM) in Power Exchange" was circulated for stakeholders comments. Based on the comments received from the Stakeholders, the "Development of High Price Market Segment (HP-DAM) in the existing Integrated Day Ahead Market (DAM) in Power Exchange" has been finalised which is enclosed for implementation within one month through necessary regulatory process.

3. This issues with the approval of Hon'ble Minister of State (I/C) for Power, New & Renewable Energy.

Yours faithfully,

Encl:- As above

(Dr. P.K. Sinha)
Deputy Secretary to the Govt. of India
Tel: 011 2373 0265

Copy to:

1. Secretary, MNRE, New Delhi
2. Chairperson, Central Electricity Authority, New Delhi.
3. Secretary(Power), JS(RR & OM), Ministry of Power

Development of High Price Market Segment (HP-DAM) in the existing Integrated Day Ahead Market (DAM) in Power Exchange

1. Power Exchanges are presently operating Term Ahead Market (TAM), Green-TAM, Integrated Day Ahead Market (including G-DAM), Intra-day market and RTM in electricity segment. The Power Exchanges have provided flexibility to participants by offering diversified products to trade in electricity starting real time market in intra-day, day-ahead and week-ahead contracts. In addition to electricity, exchanges also operate Renewable Energy Certificate (REC) and Energy Saving Certificates (ESCERTs) Markets.
2. In order to address the issue of high price in spot market in Power Exchanges, a Price Cap was introduced by CERC in all the market segments of the Power Exchanges, in April, 2022. Subsequently, CERC has extended the period of the price cap upto 30th Sep, 2022. While this has ensured that the spot prices are within Rs.12/unit, the generators based on high variable cost are unable to participate in this market as the average price in the market is even less than the variable charges on many days.
3. In this background, it is proposed to introduce a **High Price Market segment (HP-DAM) within the existing Integrated-DAM (I-DAM),** as outlined below:

High Price Day Ahead Market segment (HP-DAM) in the existing I-DAM

A. Eligibility of Sellers:

Sellers with high cost of generation will be allowed to sell in this market. To begin with, the following categories of generators shall be eligible to participate in HP-DAM:

1. Gas based Power Plants using imported RLNG and Naptha
2. Imported Coal based Power Plant using imported coal.
3. Battery Energy Storage Systems (BESS)

The category of plants eligible to participate in HP DAM shall be subject to quarterly review by the Central Commission.

B. Bid Price Range:

There will not be any floor price and forbearance price in HP DAM.

C. Market Design-Integrated HP-DAM:

a. The segment can be operated in an integrated (parallel) manner.
b. In the integrated option the HP-DAM will operate similar to Green-DAM market in I-DAM. G-DAM segment has been implemented with the same approach and the market is running efficiently.
c. The Sellers eligible for HP-DAM will be allowed to place bids in this product. The Buyers will have an option of auto-carry their uncleared bids from DAM to HP-DAM. The Buyers can also separately place bids in the HP-DAM.During auto-carry option, the buyers have a flexibility to specify different prices for the un-cleared quantity in DAM. Market Clearing shall take place in a sequential manner i.e., first DAM will be cleared followed by HP-DAM considering the uncleared bids in DAM, if any.

D. **Market Timelines:**

- The Bidding will take place between 10 AM &12:00 PM.
- Power Exchanges will send the provisional file to NLDC at 1:00 PM (combined file after considering provisional volume across all three product segments i.e., G-DAM, DAM, HP-DAM).
- NLDC will provide the transmission capacity by 2:00 PM.
- In case of congestion, the transmission corridor allocation will be first for G-DAM, then DAM, and last for HP-DAM.
- Power Exchanges will send the Final File to NLDC by 3:00 PM (combined file after considering the final cleared volume across all three product segments – G-DAM, DAM, HP-DAM).
- NLDC/ RLDC will publish the Final Schedule by 5:30 PM.
- All the activities viz. bidding, price discovery, allocation of transmission corridor etc. will be completed within the given timeline.
- As all this can be achieved in a single process, allocating available transmission capacity first to the renewable segment and then to the conventional segment in DAM then to HP-DAM, the process can be managed in the existing timelines

E. **Other Features:**

a. The price discovery for HP-DAM will be Double-Sided Closed Auction (same as G-DAM, DAM and RTM).
b. This will enable high cost power plant to be made available during the high demand period. Only such buyers who are in deficit and can afford to pay high price will be able to participate in this segment. The other buyers and consumers will not get affected.
c. CERC shall take necessary actions for its implementation at the earliest through POSOCO and Power Exchanges.

****

Coordination meeting with Power Exchanges

Venue: NLDC Conference Room

Date: 02nd November 2022

Time: 1100 hrs.

Development of High Price Market Segment (HP-DAM)

- **Allocation of margin by Power Exchange:**

  GDAM followed by DAM and HPDAM

- **Margin:**

  NLDC to provide margin for IDAM only.

- **Curtailment priority:**

  HP DAM followed by DAM and GDAM

- **Information Exchange:**

  Through API, similar to present IDAM

- **Data Files:**

  Separate entity wise file, Price file

- **Exchange Readiness:**

- **Implementation Timeline:**

D. **Market Timelines:**

- The Bidding will take place between 10 AM &12:00 PM.
- Power Exchanges will send the provisional file to NLDC at 1:00 PM (combined file after considering provisional volume across all three product segments i.e., G-DAM, DAM, HP-DAM).
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b. This will enable high cost power plant to be made available during the high demand period. Only such buyers who are in deficit and can afford to pay high price will be able to participate in this segment. The other buyers and consumers will not get affected.
c. CERC shall take necessary actions for its implementation at the earliest through POSOCO and Power Exchanges.

Implementation of T-GNA:

❖ Configuration of bid area for all states or group of states to administer the margin allocation in case of congestion.

✓ **Future Bid Areas: - Presently, 24 states are declaring TTC ATC**

Region	Name of the State/UT/ Control	Web Link
NR	Uttar pradesh	https://www.up.org/documents/20182/0/ttc_atc_24-11-16/4c79978e-35f2-4aef-8c0f-7f30d878dbde
	Haryana	https://hvpn.org.in/#/atcttc
	Punjab	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/defined-bid-area-2021-2022/
	BBMB	Not available
	Delhi	Not available
	Himachal Pradesh	Not available
	Jammu	Not available
	Rajasthan	Not available
	Uttarakhand	Not available
ER	West Bengal	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/other-states/er-2021-2022/
	Odisha	
	Jharkhand	
	Bihar	
	Sikkim	
	DVC	
WR	Madhya Pradesh	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/other-states/wr-2021-2022/
	Dadra and Nagar Haveli	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/defined-bid-area-2021-2022/
	Chhattisgarh	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/other-
	Gujarat	
	Daman and Diu	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/defined-bid-area-2021-2022/
	Goa	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/other-
	Maharashtra	
SR	Kerala	https://posoco.in/market/monthly-atc-intra-regional/intra-regional-2021-22/defined-bid-area-2021-2022/
	Tamil Nadu	Not available
	Andhra Pradesh	Not available
	Puducherry	Not available
	Karnataka	Not available
	Telangana	Not available
NER	Arunachal Pradesh	https://nerldc.org/ner_state/arunachal-pradesh/#
	Assam	https://nerldc.org/ner_state/assma/
	Manipur	https://nerldc.org/ner_state/manipur/
	Meghalaya	https://nerldc.org/ner_state/meghalaya/
	Mizoram	https://nerldc.org/ner_state/mizoram/
	Nagaland	https://nerldc.org/ner_state/nagaland/
	Tripura	https://nerldc.org/ner_state/tripura/

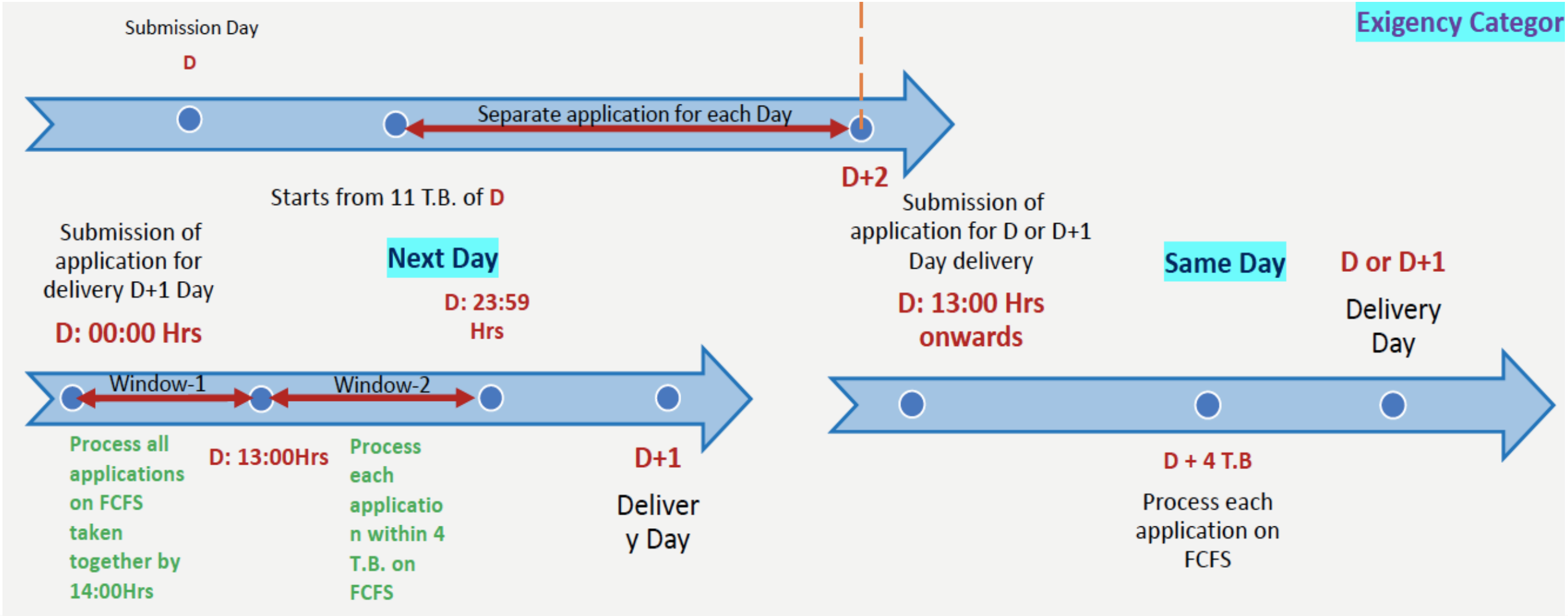
Implementation of T-GNA:

- Preparation of T-GNA implementation in Power Exchanges
- Comments on T-GNA procedure:
  - Regulation Notified on : 07.06.2022
  - NLDC uploaded draft procedure for stakeholders' commen on : 06.10.2022
  - NLDC seeks comments by : 28.10.2022
  - Timeline extension for submission of comments : 07.11.2022

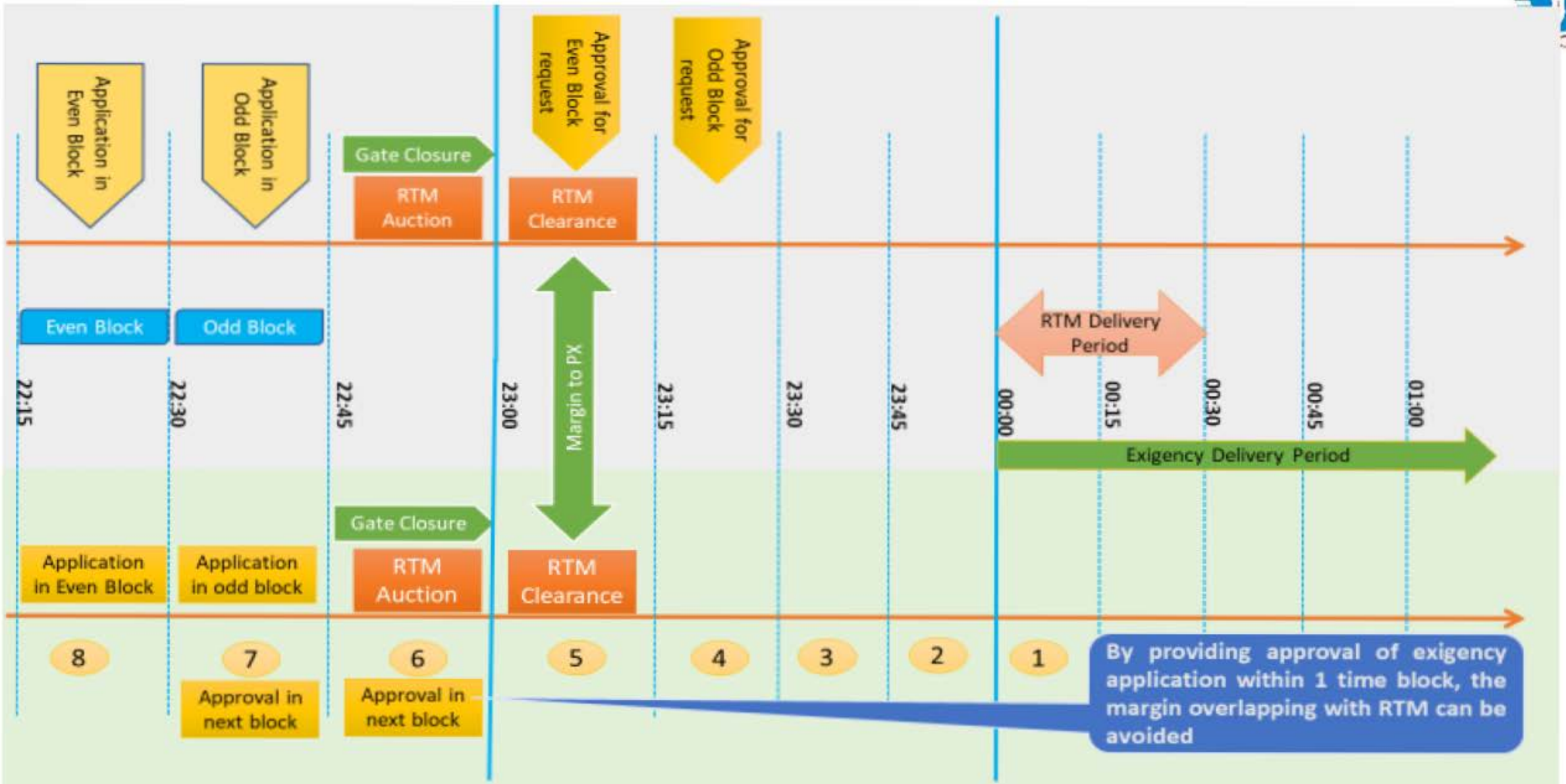
DAM Timeline	Activity
Latest by 10:00	NOC Fetch by Exchanges
10:00 – 11:30 Hrs	Bidding at Exchanges
12:00 Hrs	Provisional trade submission by Exchanges to NLDC
12:30 Hrs	Congestion check and Margin allocation to Exchanges
13:00 Hrs	Final trade submission by Exchanges
13:30 Hrs	Scheduling of transactions. NOC used details by exchanges and violation check by NLDC

Exigency Application Processing Window

❖ Scheduling of TAM, Contingency and Same Day transaction under T-GNA regime



RTM and Exigency Application Processing Window



Calculation of Transmission charge for Collective segment

Payment for DAM/RTM

GNA - 3000 (Scheduled - 2500)

T-GNA - 1500 (Schedule - 1500)

Combined (GNA+T-GNA = 4500) - Combined Schedule (4000)

Balance - (4500-4000) = 500

If Collective - 2000

Then, ISTS charges will obly be paid for (2000-500) = 1500

Applicability of ISTS transmission charges for a state in multi exchange scenario under TGNA regime

	GNA Grantee X	GNA Grantee Y	GNA Grantee Z	Total requisition by GNA grantees	Embedded Entity	Total
Power Exchange 1	50	100	200	350	70	420
Power Exchange 2	50	200	100	350	30	380
Power Exchange 3	0	200	200	400	0	400
Total Transaction in Power Exchange	**100**	**500**	**500**	**1100**	**100**	**1200 (A)**
Collective volume in a time block more than GNA+TGNA as informed by NLDC						**700 (B)**

	Exchange 1	Exchange 2	Exchange 3	Total
Cleared volume for the states (C)	420	380	400	1200
Allocation of Transmission Charges for T-GNA in ratio of Cleared Volume of intra-State entities across the Power Exchange : (C) x (B) / (A)	245	222	233	700

Miscellaneous Agenda:

1. Quarterly Reconciliation of Collective Charges (IDAM & RTM):

- NLDC has issued quarterly reconciliation statement for Quarter 2 on 19th October 2022
- Signed statement received only from IEX & HPX
- Signed statement pending from PXIL: Qtr-1 and Qtr-2
- Signed statement received from HPX : Qtr-2

2. Day to day operational issues :

3. Any other discussion points:

Thank You

Annexure-VI

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन - I प्रभाग
Power System Planning & Appraisal-I Division

सेवा में / To,

i. CMD, Grid-India, B-9, Qutub Institutionl Area, Katwaria Sarai, New Delhi – 110016
ii. COO, CTUIL, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122001

विषय / Subject: Minutes of meeting held on 29.05.2024 to discuss the TTC/ATC and transmission constraints of states/UTs – reg

महोदया /महोदय,

A meeting was held on 29.05.2024 amongst CEA, CTUIL & GRID-INDIA under the Chairmanship of Chairperson, Central Electricity Authority, to discuss the TTC/ATC and transmission constraints of states/UTs.

The minutes of the meetings are attached herewith. This issues with the approval of Chairperson, CEA.

भवदीय / Yours faithfully,
Signed by Vikas Sachan
Date: 10-06-2024 12:23:26

(विकास सचान / Vikas Sachan)
उप निदेशक / Deputy Director

सेवा भवन, आर. के. पुरम-I, नई दिल्ली-110066 टेलीफैक्स: 011-26102045 ईमेल: cea-pspa1@gov.in वेबसाइट: www.cea.nic.in
Sewa Bhawan, R.K Puram-I, New Delhi-110066 Telefax: 011-26102045 email: cea-pspa1@gov.in Website: www.cea.nic.in

Minutes of meeting held on 29.05.2024 to discuss the TTC/ATC and transmission constraints of states/UTs

1. A meeting was held on 29.05.2024 amongst CEA, CTUIL & GRID-INDIA under the Chairmanship of Chairperson, CEA, to discuss the TTC/ATC and transmission constraints of states/UTs. The list of the participants is attached as **Annexure-I**.
2. Grid-India and CTUIL has made a presentation highlighting the transmission constraints region-wise/state-wise in meeting.
3. After the detailed deliberations, following was agreed:

   (i) Operational constraints in the grid are being highlighted regularly by Grid-India. Implementation of new transmission system generally takes about three years, considering 24 months of construction time and about 12 months for stakeholders consultation, approval of the scheme by NCT, bidding of the scheme etc. Augmentation of ICTs takes about 18-24 months. It was decided that a working level group under Grid-India with representatives from CEA and CTUIL would be constituted to study the operational constraints likely to arise in future (2-3 years ahead) and plan the transmission system to resolve the same. Thereafter the planned transmission system would be taken up for stakeholders' consultation and approval. The group shall meet at least once every month. CEA and CTUIL would be furnishing nominations to Grid-India for constitution of the group.

   (ii) Grid-India informed that the Champa - Kurukshetra HVDC line trips frequently. Chairperson, CEA, suggested that letter should be written by Power System Engineering & Technology Development (PSE&TD) Division, CEA, highlighting the matter to POWERGRID (TSP) and GE (OEM) along with a copy to Secretary, CERC. Grid-India to provide relevant material/inputs to CEA in this regard.

   (iii) Grid-India further informed that various issues are being faced in reversal of power on the Mundra – Mohindergarh HVDC line, operated by Adani Transmission Limited. It was decided that PSE&TD Division, CEA, would take up the matter with TSP and CTUIL for analysis of the same. Remedial action for reversal of power on the HVDC line to be intimated to Adani Transmission Ltd. alongwith a copy to CERC.

(iv) Constraints in intra-state transmission system was also discussed. It was informed that these constraints are regularly discussed in RPC forum, however, appropriate action is not being taken by the States/UTs in this regard. Implementation of several planned intra-state transmission systems have been delayed by respective states/UTs, resulting in constraints in the intra-state network. Chairperson, CEA, suggested that letter would be written by him to the Energy Secretary of respective states/UTs highlighting the issue. Grid-India, CTUIL and RPCs to provide relevant state-wise inputs in this regard.

(v) CTUIL informed that based on the request of Southern Region constituents in SRPC meeting, joint study meeting had been held to identify additional inter-regional corridors between NEW Grid and SR Grid. Three additional inter-regional links were studied out of which two links have been agreed in the joint study meeting viz. Parli (WR) - Bidar (SR) 765 kV D/c line and Angul/Goplapur (ER) - Srikakulam (SR) 765 kV D/c line. CTUIL further informed that looking into the GNA requirement of Southern Region constituents, existing inter-regional links are adequate and additional inter-regional corridors are not required. Therefore, these additional inter-regional links would be put-up to forthcoming SRPC meeting for further deliberations. Further, if Southern Region constituents want to draw more power from NEW grid, they must increase their GNA requirements.

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Annex-I

List of participants of meeting held on 29.05.2024 to discuss the TTC/ATC and transmission constraints of states/UTs

S. No.	Name of the participants (Shri)	Organization
1.	Ghanshyam Prasad, Chairperson	CEA
2.	Ashok Kumar Rajput, Member (Power Systems)	CEA
3.	Ishan Sharan, Chief Engineer (PSPA-I)	CEA
4.	B. Lee Lyngkhoi, Chief Engineer (GM)	CEA
5.	B. S. Bairwa, Chief Engineer (PSPA-II)	CEA
6.	Ashok Pal, Dy. COO	CTUIL
7.	Partha Sarathi Das, Sr. GM	CTUIL
8.	Anil Kumar Meena, GM	CTUIL
9.	Sandeep Kumawat, Chief Manager	CTUIL
10.	S. R. Narasimhan, CMD	Grid-India
11.	Vivek Pandey, Sr. GM	Grid-India
12.	Priyam Jain, Chief Manager	Grid-India

Annexure-VII

STATION	DIGITAL	ANALOG
AAU	LINE ISO	1. BUS V AND FREQ
		2. ICT P AND Q
ADANI KAWAI	ALL ISO	
AJMER 220	ISO	ALL ANALOG VALUE
AKAL	CB AND ISO	BUS VOLTAGE
		BR Q
		JODHPUR LINE P AND Q
ALWAR 400	OK	OK
AMARSAGAR 220	ISO AND CB	ICT HV SIDE ANALOG
BARMER	RAJWEST DIA DIGITAL	ICT HV SIDE ANALOG
BARSINSAR		BUS VOLATGE
BADDISID		BUS VOLATGE
BABAI 400		BUS2 V AND FREQ
		ICT ANALOG
BHILWARA		COMPLETE DATA
BHAINSARA 400		BUS V AND FREQ
	BARMER LINE DATA	BARMER LINE DATA
BHINMAL 220		ANALOG DATA
BIKANER 400	ISO	ICT HV SIDE
BHADLA	ALL DATA	ALL DATA
BHOPALGARH	ALL DATA	ALL DATA
CHIRAWA	ALL DATA	ALL DATA
CHITTORGARH 220	ALL DATA	ALL DATA
CHITTORGARH 400		ICT DATA HV AND LV
CHABBRA 400	DIGITAL DATA	ANALOG DATA
DHOLPUR 220	ALL DATA	ALL DATA
DUNI 220	ALL DATA	ALL DATA
HERAPURA 400	ALL DATA	ALL DATA
HINDAUN 400		ICT HV SIDE DATA
KAWAI 220		ICT ANALOG
KANKANI	ALL DATA	ALL DATA
KANKROLI 220		ANALOG DATA
PHAGI 765		LR Q VALUE
RAMGARH 400		ICT 1 ANALOG VALUE
		BUS 1 V AND FREQ

RATANGARH 400		ICT VALUE
		BUS1 FREQ
RATANGARH 220	ISO	
SRI GANGANAGAR		ICT DATA
PRATAPGARH	ISO	
FALODI	ALL DATA	ALL DATA