



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

दिनांक: 23.01.2026

सेवा में

As per attached list of Members and Other invitees

विषय: संरक्षण उप-समिति की 66 वीं बैठक की कार्यसूची |

Subject: Agenda for 66th Protection Sub-Committee Meeting.

संरक्षण उप-समिति की 66 वीं बैठक, दिनांक 28.01.2026 को 11:00 बजे से एनआरपीसी सचिवालय, कटवारिया सराय, नई दिल्ली में आयोजित की जाएगी। उक्त बैठक की कार्यसूची संलग्न है। यह उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट (<https://nrpc.gov.in/meetings/prsub.html>) पर भी उपलब्ध है। 56 वीं पीएससी बैठक के निर्णयों के अनुसार, आईईजीसी 2023 के सुरक्षा कोड का अनुपालन सुनिश्चित करने के लिए एनआरपीसी सदस्य के अलावा अन्य विद्युत उपयोगिताओं को भी बैठक के लिए आमंत्रित किया गया है। कृपया बैठक में उपस्थिति सुनिश्चित करें।

The 66th meeting of Protection Sub-Committee is scheduled to be held on 28.01.2026 at 11:00 Hrs at NRPC Secretariat, Katwaria Sarai, New Delhi. The agenda for the meeting is attached herewith. The same is also available on NRPC website (<https://nrpc.gov.in/meetings/prsub.html>). As per decisions of 56th PSC meeting, utilities other than NRPC member have also been invited for meeting for ensuring compliance of protection code of IEGC 2023. Kindly make it convenient to attend the same.

Digitally signed by
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निदेशक (संरक्षण)

Agenda of 66th Protection Sub-Committee Meeting (28th January, 2026)

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**66th Meeting of Protection Sub-Committee (PSC) of
Northern Regional Power Committee**

Date and time of meeting : 28.01.2026 11:00 Hrs.
Venue : NRPC Secretariat, Katwaria Sarai,
New Delhi

Part-A: Agenda by NRPC Secretariat

A.1. Confirmation of minutes of 65th meeting of Protection Sub-Committee

A.1.1 65th PSC meeting was held on 30.12.2025. Minutes of the meeting were issued vide letter dtd. 23.01.2026.

Decision required from Forum:

Forum may approve the issued minutes.

A.2. Status of action taken on decisions of 65th Protection Sub-Committee meeting (agenda by NRPC Secretariat)

A.2.1 Status of action taken on the decisions of 65th PSC meeting is attached as **Annexure-A.I.**

Decision required from Forum

Status may be deliberated for timely action on issues.

A.3. Submission of protection performance indices of 220 kV and above system along with reason and corrective action taken for indices less than unity to NRPC Secretariat for month of December 2025 (agenda by NRPC Secretariat)

A.3.1 *As per clause 15 (6) of IEGC 2023;*

- *Users shall submit the following protection performance indices of previous month to their respective RPC and RLDC on monthly basis for 220 kV and above (132 kV and above in NER) system, which shall be reviewed by the RPC:*

a) The **Dependability Index** defined as $D = Nc / (Nc + Nf)$

b) The **Security Index** defined as $S = Nc / (Nc + Nu)$

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c) The **Reliability Index** defined as $R = N_c / (N_c + N_i)$

where,

N_c is the number of correct operations at internal power system faults,

N_f is the number of failures to operate at internal power system faults,

N_u is the number of unwanted operations,

N_i is the number of incorrect operations and is the sum of N_f and N_u

- Each user shall also submit the reasons for performance indices less than unity of individual element wise protection system to the respective RPC and action plan for corrective measures. The action plan will be followed up regularly in the respective RPC.

A.3.2 In earlier PSC meeting, it was decided that each utility shall submit the performance **indices of previous month by 7th day of next month.**

A.3.3 Accordingly, the status of the indices reported for the month of **December 2025** is attached as **Annexure-A.II.**

A.3.4 Further, based on submitted data by the utilities as on date, the summary of events that caused indices less than unity is also attached as **Annexure-A.III.**

A.3.5 **Submitted data has following issues:**

| | |
|---|------------------------------|
| Some Utilities have not submitted data | As mention in Annexure-A.II. |
| Utilities have submitted data for some plants/regions but not all. | As mention in Annexure-A.II. |
| Some utilities have sent data after cut-off date of 7 th | As mention in Annexure-A.II. |

Decision required from Forum:

- i. Forum may discuss cases where indices are less than 1 and may direct necessary action to be taken.
- ii. Forum may direct utilities to submit the performance indices of previous month by 7th day of next month element wise along with the reason for indices

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less than unity and corrective action taken.

A.4. Reporting of protection performance indices of SPS by SLDCs/RLDC (agenda by NRPC Secretariat)

A.4.1 As per clause 16 of IEGC 2023;

- *The users and SLDCs shall report about the operation of SPS immediately and detailed report shall be submitted within three days of operation to the concerned RPC and RLDC in the format specified by the respective RPCs.*
- *The performance of SPS shall be assessed as per the protection performance indices specified in these Regulations. In case, the SPS fails to operate, the concerned User shall take corrective actions and submit a detailed report on the corrective actions taken to the concerned RPC within a fortnight.*

A.4.2 The agenda was discussed in previous PSC meeting and following has been decided:

- i. Utilities and SLDCs shall report about the operation of SPS immediately and detailed report shall be submitted within three days of operation to the concerned RPC and RLDC.
- ii. SLDCs may submit protection performance indices for SPS on monthly basis by 7th date of each month in the same format as that of protection performance indices of elements (lines/ICT etc). All utilities shall report their indices to concerned RLDC/SLDCs, then, after verifying SPS operation from all points, SLDC/RLDCs shall report performance indices to the NRPC Secretariat.

A.4.3 UPSLDC, HPSLDC & Rajasthan SLDC have shared the protection performance indices for the SPS. **Delhi SLDC, Punjab SLDC, Uttarakhand SLDC & Haryana SLDC** have not shared the same for the SPSs coming in their control area. However, it was decided that SLDCs after verifying SPS operation from all points, should report performance indices to the NRPC Secretariat on monthly basis by 7th date of each month.

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- A.4.4 Further, Indices for SPS have been submitted by DTL, PTCUL, PSTCL (Rajpura), RVUN (Suratgarh), & AGEL directly to NRPC Secretariat for the month of December 2025.
- A.4.5 Based on submission by utilities & SLDCs', the status of protection performance indices of SPS for the months of December, 2025 is attached as **Annexure-A.IV**.

Decision required from Forum:

Forum may direct SLDC/utilities for compliance of following:

- I. Utilities and SLDCs shall report about the operation of SPS immediately and detailed report shall be submitted within three days of operation to the concerned RPC and RLDC.
- II. SLDCs may submit protection performance indices for SPS on monthly basis by 7th date of each month in the same format as that of protection performance indices of elements (lines/ICT etc). All utilities shall report their indices to concerned RLDC/SLDCs, then, after verifying SPS operation from all points, SLDC/RLDCs shall report performance indices to the NRPC Secretariat.
- III. Prescribed format (Annexure-A.IV) shall be used for submission of protection performance indices of SPSs by SLDCs after verifying SPS operation from all points in their control area.

A.5. Annual protection audit plan for FY 2026-27 (agenda by NRPC Secretariat)

- A.5.1 As per clause 15 of IEGC 2023;
- *Annual audit plan for the next financial year shall be submitted by the users to their respective RPC by 31st October. The users shall adhere to the annual audit plan and report compliance of the same to their respective RPC.*
- A.5.2 In view of above, all utilities were requested to submit the annual protection audit plan for FY-2026-27 latest by 31st October 2025 in 63rd, 64th, 65th PSC & in the 56th TCC & 81st NRPC meeting (held on 29-30 October, 2025).
- A.5.3 Accordingly, annual audit plans submitted by utilities have been compiled (enclosed as **Annexure- A.V**).

Decision required from Forum:

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Forum may direct utilities who have not submitted audit plan for FY 2026-27 as deadline of 31st October 2025 has already passed.

A.6. Third-party protection audit plan (agenda by NRPC Secretariat)

A.6.1 As per clause 15 of IEGC 2023:

All users shall also conduct third party protection audit of each sub-station at 220 kV and above (132 kV and above in NER) once in five years or earlier as advised by the respective RPC.

A.6.2 In view of above, third party audit plans submitted by utilities have been compiled (enclosed as **Annexure-A.VI**).

A.6.3 It is to mention that two different states may do mutual third-party audit as decided in the 58th PSC meeting.

A.6.4 Further, as per received information, third party protection auditor has been planned as below by utilities-

| Organization where audit is to be done | Organizations finalized for performing audit | | | | | | | | |
|--|--|----------|----------|------------|-----------|------------|-----------|---------------|--------------------|
| | DT L | RVP N | HVP N | UPPTC L | PSTC L | HPPTC L | PTCU L | POWERGR ID | External Vendor |
| DTL | - | - | ✓ | - | - | - | - | - | - |
| RVPN | - | - | ✓ | - | - | - | - | - | - |
| HVPN | - | ✓ | - | - | - | - | - | - | - |
| UPPTCL | - | - | - | - | - | - | - | - | ERDA |
| PSTCL | - | - | - | - | - | - | - | - | ✓ |
| HPPTCL | - | - | - | - | - | - | - | ✓ | - |
| PTCUL | - | - | - | - | - | - | - | - | CBIP |
| UT of J&K | - | - | - | - | - | - | - | ✓ | - |
| UT of Ladakh | - | - | - | - | - | - | - | ✓ | - |
| UT of Chandigarh | - | - | - | - | - | - | - | - | - |
| POWERGRID | - | - | - | - | - | ✓ | - | - | ✓ |

A.6.5 Utilities may update if there is any change from above arrangement.

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Decision required from Forum:

Forum may direct utilities to update the status of 3rd party protection audit as per the submitted audit plans. Subsequently, the audit reports along with compliance status may be submitted to NRPC Secretariat regularly.

A.7. Discussion on audit reports submitted by utilities and compliance of recommendations of protection audit (agenda by NRPC Secretariat)

A.7.1 As per clause 15 (1) of IEGC 2023;

- *All users shall conduct internal audit of their protection systems annually, **and any shortcomings identified shall be rectified and informed to their respective RPC.** The audit report along with action plan for rectification of deficiencies detected, if any, shall be shared with respective RPC for users connected at 220 kV and above (132 kV and above in NER).*

A.7.2 As per clause 15 (4) of IEGC 2023;

The third-party protection audit report shall contain information sought in the format enclosed as Annexure–1 (IEGC). The protection audit reports, along with **action plan for rectification of deficiencies detected, if any, shall be submitted to the respective RPC and RLDC or SLDC, as the case may be, within a month of submission of third-party audit report.** The necessary compliance to such protection audit report shall be followed up regularly in the respective RPC.

A.7.3 Following utility has submitted the internal audit report based on the audit done at their substations:

| S.N. | FY (Audit Date) | Utility | Stations |
|------|-----------------|---------|--|
| 1 | 2025-26 | RVPN | 3 Substations (Baman Ka Tukda, Hamirgarh Pratapgarh) |
| 2 | 2025-26 | BBMB | 3 Substations (Bhiwani, Hisar, Charkhi Dadri) |
| 3 | 2025-26 | PSTCL | 2 Substations (Dhandari Kala-2, Malerkotla) |
| 4 | 2025-26 | AGEL | 5 plants |

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| | | | |
|---|---------|-------------------------|---|
| | | | (SBE Hybrid 450 Adani Solar Energy Jaisalmer One Ltd. Adani Green Energy Twenty-Four Limited Adani Solar Energy RJ two Pvt Ltd Adani Solar Energy Jaisalmer Two Pvt. Ltd. (Project 2)) |
| 5 | 2025-26 | POWERGRID NR-2 | 10 Substations (Abdullapur, Amritsar, Banala, Drass, Hamirpur, Kargil, Khalsti, Phyang, Malerkotla, Sambha) |
| 6 | 2025-26 | Serentica Renewables | SRI4PL Bikaner |
| 7 | 2025-26 | HPPTCL | 4 Substations (400kV Gumma, 400kV Lahal, 220kV Heiling, 220kV Hatkoti) |
| 8 | 2025-26 | Zelestra | 1 Plant (Gorbea Solar Private Limited) |

A.7.4 Following utilities have submitted reports of 3rd Party audit:

| S.N. | Utility | Stations |
|------|---------|----------|
| 1 | SJVN | RHPS |

A.7.5 No utility has submitted action plan on recommendation of audit team.

A.7.6 **The above submitted reports and action plan are available at NRPC website:**
<https://nrpc.gov.in/meetings/prsub.html>

Decision required from Forum:

Forum may discuss audit report as well as action taken by utilities on recommendations of audit. Further, other utilities may be directed to submit the protection audit report (for audited S/s as per submitted plan) to NRPC Secretariat and may update the compliance status regularly.

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A.8. Updation of protection settings database (agenda by NRPC Secretariat)

A.8.1 As per regulation 14 (3) of IEGC 2023:

RPCs shall maintain a centralized database and update the same on periodic basis in respect of their respective region containing details of relay settings for grid elements connected to 220 kV and above (132 kV and above in NER). RLDCs shall also maintain such database.

A.8.2 The agenda was discussed in 62nd PSC meeting held on 26.08.2025. Accordingly, data available with NRPC Secretariat has been placed in Microsoft OneDrive link and has been shared to Nodal Officers for review. It was requested that if any element (line/ICT/etc) is missing, same may be intimated to NRPC Secretariat.

A.8.3 However, NRPC Secretariat has not received any feedback from Nodal Officers.

A.8.4 Further, some utilities have not nominated nodal officers as on date. Letter dated 25.09.2025 asking nomination is attached as **Annexure-VII** for reference. List of nodal officers received is attached as **Annexure-VIII**. The same was also highlighted in the 65th PSC meeting.

Decision required from Forum:

Nodal Officers may apprise status. Utilities from where, nodal officers are not nominated, may be expedited.

A.9. Retaining over-voltage protection settings of Nokhra Solar Plant as per NTPC protection philosophy (agenda by NGEL)

A.9.1 This is with reference to the line tripping event reported at our Nokhra Solar Station and the related recommendations of the 59th Protection Sub-Committee (PSC) and the points discussed during the 61st PSC meeting held on 26.06.2025.

A.9.2 On 18th March 2025, multiple elements had tripped at 400 kV AGE25L and 220 kV Nokhra (IP) at around 10:00 hrs, and the PSC Forum recommended that NTPC needs to ensure over-voltage is disabled at Nokhra end of 220kV Nokhra-Bhadla-2 Circuit.

A.9.3 NGEL has submitted that the incident was reviewed in detail by NTPC, and it was

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observed that the tripping of the Nokhra plant line on 18.03.2025 had occurred due to unintended instantaneous operation of the over-voltage protection at around 110–112% of line voltage, whereas the protection was configured to operate with a time delay of 5 seconds. The root cause of this unintended instantaneous operation was examined jointly with the OEM (M/s Siemens) and the issue has been resolved.

A.9.4 NGEL has also submitted that the over-voltage protection at the Nokhra Plant end is now functioning as intended with the following settings –

- Tripping will occur only if the line voltage remains above 112% for more than 5 seconds, or
- If the line voltage exceeds 140% for more than 100msec.

A.9.5 Further, the above-mentioned settings are consistent with those implemented at across other NTPC solar stations and considered essential for ensuring adequate protection of equipment installed at Solar Plant, while providing sufficient time margin for inverters to meet LVRT/HVRT requirements as per Grid requirement.

A.9.6 Since the issue of unintended instantaneous tripping on overvoltage has been resolved in coordination with the OEM, NGEL has requested to retain the existing over-voltage protection settings at the Nokhra end of the 220 kV Nokhra–Bhadla-2 circuit, which is important to ensure both equipment safety and grid compliance.

Decision required from Forum:

Forum may discuss and decide to allow NGEL to enable over voltage stage- 1 protection on 220kV Nokhra–Bhadla-2 line with proposed settings.

A.10. Installation of Auto Reclosure on 220kV lines emanating from RAPP A Nuclear power plant, Rajasthan (agenda by Rajasthan SLDC)

A.10.1 Following transmission lines are emanating from RAPP A Power plant (Unit 2 - 200MW)

- I. 220kV RAPP A- Sakatpura ckt-1 (39.77km)
- II. 220kV RAPP A- Sakatpura ckt-2 (42.5km)
- III. 220kV RAPP A -Debari line (192km)
- IV. 220kV RAPP A- RAPP B tie line (1.8km)

A.10.2 Issue of frequent tripping of 220kV lines emanating from RAPP A is continuously

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being raised in the OCC and PSC meetings. In this regard, it is intimated that various measures have been taken by RVPN to reduce the trippings of these 220kV lines emanating from RAPP A. However, one of the major reasons for continued increase in tripping incidents is non installation of auto recloser schemes on these 220kV lines as per approved NR protection philosophy.

- A.10.3 Further, Rajasthan SLDC has submitted that on this line Debari end A/R is installed and activated but at RAPP end it is not installed. Therefore, under transient fault A/R is successfully operated at Debari end but tripped from RAPP end.
- A.10.4 Similarly, on both 220 kV circuits between Sakatpura and RAPP(A), Sakatpura end A/R is installed (**kept deactivated**) but at RAPP end A/R is not installed.
- A.10.5 It is pertinent to mentioned that availability of 220 kV S/C RAPP(A)-Debari line is critically required for reliable and secure supply of Udaipur District.
- A.10.6 Rajasthan SLDC has intimated that 220 KV S/C Debari-RAPP(A) line and both 220 KV Sakatpura-RAPP(A) lines are an important evacuating path for RAPP(A) Nuclear generation. Frequent outage of these lines affects the security & reliability of RAPS Nuclear Generation complex. Any major contingencies may also lead to poisoning out of RAPS reactors.
- A.10.7 Majority of faults on the 220 kV lines emanating from RAPP(A) power plant are transient in nature as these lines are passing through dense forest area, therefore, A/R are essentially required to availability of the lines.
- A.10.8 Auto Reclosing scheme shall be installed and activated on 220 kV and above lines as per approved NR Protection Philosophy, but Auto Reclosing scheme are not installed at RAPP(A) end on all 220 kV lines emanating from RAPP(A) power plant which is against agreed & approved NR Protection Philosophy.
- A.10.9 In view of above, Rajasthan SLDC has submitted that
- I. The Nuclear Power Corporation of India Limited (NPCIL) may be advised to install Auto-Reclosure (A/R) schemes on all 220 kV lines emanating from RAPP(A) Nuclear Power Plant at the earliest in line with the agreed and approved NR Protection Philosophy. This will help improve grid stability and reliability and strengthen the power evacuation system of the critical nuclear power plant. If required, refurbishment of the RAPP(A) switchyard may also be undertaken to facilitate installation of A/R schemes on the 220 kV lines.
 - II. Further, RVPN may be permitted to activate Auto-Reclosure at the Sakatpura

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end on the 220 kV circuits between RAPP(A) and Sakatpura to reduce downtime of these 220 kV lines following fault occurrences. In this regard, it may be noted that A/R at the Debari end of the 220 kV S/C Debari-RAPP(A) line is already operational and has proven effective, as in most cases the line remains charged from the Debari end after fault clearance.

A.10.10 The details of trippings of RAPP A to Debari & Sakatpura lines have been tabulated by Rajasthan SLDC and shared with the above proposal attached as **Annexure-IX**.

Decision required from Forum:

Forum may discuss and direct NPCIL to take necessary actions regarding auto recloser installations and implementation.

A.11. Revised 220 kV lines and transformers for Installation of Special Protection Scheme (SPS) on 400/220 kV transformers at PGCIL 400/220 kV Substations in Rajasthan Control area (agenda by Rajasthan SLDC)

A.11.1 Rajasthan SLDC has submitted that 220 kV lines and transformers for Installation of Special Protection Scheme (SPS) on 400/220 kV transformers at PGCIL 400 kV Substations in Rajasthan Control area at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG) was approved by the OCC in its 237th meeting held on 17.11.2025 and further SPS logic was approved in the 64th PSC meeting held on 21.11.2025.

A.11.2 In this regard it is submitted that in ongoing high demand Rabi Season power flow pattern on the transmission lines emanating from PGCIL 400 kV GSS and also at RVPN's 220 kV GSS has been changed, therefore, after detail discussions and deliberations in the joint meeting of RVPN and PGCIL held on 12.1.2026 at Vidyut Bhawan, Jaipur, revised 220 kV lines & transformers for installation of SPS at the PGCIL 400 kV substations at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG) has been identified and attached as **Annexure-X** with detailed proposal submitted by Rajasthan SLDC.

A.11.3 Following SPS logic is proposed for implementation of SPS at the PGCIL 400kV substations:-

- I. SPS logic for Stage-1 operation: Trip commands for stage-1 SPS shall be generated at time delay of 0.5 second IDMT at 115 % over loading of any phase of any one 400/220 kV transformer at concern PGCIL 400 kV GSS.

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II. SPS logic for Stage-2 operation: Trip commands for stage-2 SPS shall be generated at time delay of 0.5 second IDMT at 120 % over loading of any phase of any one 400/220 kV transformer at concern PGCIL 400 kV GSS

- A.11.4 Rajasthan SLDC has asked to further optimize the SPS over load tripping settings and time delay on the basis of the specification of the 400 kV transformers at PGCIL 400 kV GSS and also considering approved protection philosophy of NR to avoid unnecessary SPS operation and optimum utilization of the transformers.
- A.11.5 Further, it has also been requested that different SPS settings for summer and winter period may be approved and considered in view of low temperature in the winter.
- A.11.6 Rajasthan SLDC has submitted that additional 500 MVA transformers are under installation each at the PGCIL 400/220 kV Substations at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG). In the 237th OCC meeting held on 17.11.2025, PGCIL intimated that 500 MVA, 400 kV ICTs at 400 kV GSS Bassi, Kotputli & Kankroli would be commissioned by Dec 2025, but till now these have not been commissioned, therefore, PGCIL may be advised to expedite installation of the approved 400 kV transformers at the PGCIL substations.

Decision required from Forum:

Forum may discuss.

A.12. Facilitation of the officers with award of Protection Pioneer (agenda by NRPC Secretariat)

- A.12.1 As we all know that Power system protection is indispensable for ensuring safety, reliability, stability, and economic operation of electrical power networks. Without proper protection, even minor faults can escalate into major system failures, making protection systems a fundamental requirement of any power system.
- A.12.2 Modern power systems are large, complex, and interconnected networks that operate under high voltages and currents. Due to their exposure to faults, abnormal operating conditions, and external disturbances, power system protection is essential to ensure safe, reliable, and continuous operation.
- A.12.3 Since, IEGC 2023 has become effective since 01.10.2023 as per notification issued by Hon'ble CERC. A new chapter has been added in IEGC 2023 for Protection Code. Protection Protocol, Protection Settings, Protection Audit Plan, System Protection Scheme & Recording Instruments are clauses under the Protection Code.

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- A.12.4 Accordingly, NRPC Secretariat has regularly been monitoring compliances of IEGC, 2023 and discussions on the Protection Performance Indices, Protection audit report observations, compliances, Grid events, and protection philosophies are done in the Protection Sub-Committee meetings. Discussions of the PSC meeting always results in fruitful outcomes with the suggestions of Protection experts from various organizations.
- A.12.5 Now, NRPC is looking forward to recognize outstanding expertise, dedication, and significant contributions in the field of Power System Protection Engineering. There may be officers who have demonstrated proficiency in the analysis and implementation of reliable and selective protection schemes for generators, transformers, transmission lines, substations, and through deep technical knowledge and practical insights, they have consistently ensured system security, operational reliability, under both normal and fault conditions including Regular compliances of IEGC, 2023.
- A.12.6 To recognize technical achievements, invaluable contribution to the reliability, safety, and resilience of the power system, it is proposed to facilitate the officers with award of Protection Pioneer.
- A.12.7 In view of above, modalities may be discussed for facilitating the officers with award of Protection Pioneer.

Decision required from Forum:

Forum may discuss.

Part-B: Agenda by NRLDC

B.1 Status of remedial actions recommended during previous PSC meeting (agenda by NRLDC)

- B.1.1 As per the discussion in pervious PSC meetings, necessary remedial actions were recommended based on the analysis and discussion of the grid events. It is expected that necessary actions would have taken place. In view of the same, a mail dt 19.01.2026 has also been sent from NRLDC to constituents requesting to share the status of remedial actions taken. List of points to be discussed in 66th PSC meeting is attached as **Annexure-B.I**. Constituents can email the details via mail to NRLDC and NRPC.

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Decision required from Forum:

Members may like to discuss.

B.2 Multiple elements tripping events in Northern region in the month of December 2025 (agenda by NRLDC)

- B.2.1 A total of **13** grid events occurred during the month of **December 2025** of which **07** are of GD-1 category, **03** are of GI-2 category and **03** are of GI-1 Category. The tripping report of all the events have been issued from NRLDC. The list of Grid events along with the status of DR/EL submission is attached as **Annexure-B.II**.
- B.2.2 Maximum delayed clearance of fault observed in event of tripping event at 220/66kV South Wazirabad (DTL) at 10:39 hrs on 29th December 2025 (As per PMU at Mandola(PG), R-B phase to phase fault converted to 3-phase fault was observed with delayed fault clearing time of 600ms).
- B.2.3 Delayed clearance of fault (more than 100ms for 400kV and 160ms for 220kV system) observed in total 05 events out of 13 grid events occurred in the months. In 01 (no.) of grid event, there was no fault in the grid.
- B.2.4 Remedial actions taken by constituents to avoid such multiple elements tripping may be shared.
- As per IEGC clause 37.2 (c), Disturbance Recorder (DR), station Event Logger (EL), Data Acquisition System (DAS) shall be submitted within 24 hrs of the event and as per IEGC clause 37.2 (e), the user shall submit a detailed report in the case of grid disturbance or grid incidence within one (1) week of the occurrence of event to RLDC and RPC.***
- B.2.5 Members may take necessary preventive measures to avoid such grid incidents / disturbances in future and report actions taken by respective utilities in OCC & PSC forum. Moreover, utilities may impress upon all concerned for providing the Preliminary Report, DR/EL & Detailed Report of the events to RLDC in line with the regulations.
- B.2.6 The list of major tripping events occurred during **December 2025** is attached as **Annexure-B.III**. Concerned constituents/utilities are requested to share the detailed analysis of the tripping elements along with status of remedial action taken/to be taken.

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B.2.7 Utilities are requested to prepare detailed analysis report and present the event details during 66th PSC meeting. Events involving more than one utility may be jointly prepared and presented.

Decision required from Forum:

Members may like to discuss.

B.3 Frequent elements tripping during December 2025 (agenda by NRLDC)

B.3.1 The following transmission elements were frequently tripping during the month of **December'25**:

| S. NO. | Element Name | No. of forced outages | Utility/SLDC |
|--------|---|-----------------------|----------------------|
| 1 | 400 KV Amritsar(PG)-Makhu(PS) (PSTCL) Ckt-1 | 5 | PGCIL/Punjab |
| 2 | 220 KV Anta(NT)-Lalsote(RS) (PG) Ckt-1 | 4 | NTPC/Rajasthan/PGCIL |
| 3 | 220 KV Ballabgarh(BB)-Badarpur(NT) (BB) Ckt-2 | 4 | NTPC/BBMB |
| 4 | 220 KV Khara(UP)-Saharanpur(PG) (UP) Ckt-1 | 4 | UP/PGCIL |
| 5 | 400 KV Muzaffarnagar-Ataur (UP) Ckt-1 | 4 | UP |
| 6 | 250 MW (PSP) TEHRI HPS - UNIT 6 | 3 | Tehri PSP |

B.3.2 List of tripping is attached as **Annexure-B.IV**.

B.3.3 It may be noted that frequent tripping of such elements affects the reliability and security of the grid. Hence, **utilities are requested to analyse the root cause of the tripping and share the remedial measures taken/being taken in this respect.**

Decision required from Forum:

Members may like to discuss.

B.4 Details of tripping of Inter-Regional lines from Northern Region for December 2025 (agenda by NRLDC)

B.4.1 A total of **10** inter-regional lines tripping occurred in the month of **December 2025**. The list is attached at **Annexure-B.V**. The status of receipt of preliminary reports, DR/EL within 24hrs of the event and fault clearing time as per PMU data has also been mentioned in the table. The non-receipt of DR/EL & preliminary report within 24hrs of the event from SLDCs / ISTS licensees / ISGSs is in violation of regulation 37.2(c) of IEGC and regulation 15(3) of CEA Grid Standards. As per regulations, all

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the utilities shall furnish the DR/EL, flag details & preliminary report to RLDC/RPC within 24hrs of the event. They shall also furnish the detailed investigation report within 7 days of the event if fault clearance time is higher than that mandated by CEA (Grid Standard) Regulations.

Decision required from Forum:

Members may please note and advise the concerned for taking corrective action to avoid such tripping as well as timely submission of the information.

B.5 Frequent multiple elements tripping event at 400/220kV Kanpur(PG) (agenda by NRLDC)

B.5.1 Two major grid events have been reported at 400/220kV Kanpur(PG) during first week of January 2026 in which all the 400kV elements at Kanpur(PG) tripped. There was significant delayed clearance of fault during the events and protection system also didn't operate in coordination and as per desired operation. Brief of the grid events are as follows:

- a) **Multiple elements tripping on 05.01.2026 at 00:29 hrs:** At 00:29 hrs, all the 400kV elements at Kanpur(PG) along with 400kV Kanpur765-Lucknow(PG) D/C and STATCOM at Lucknow(PG) tripped. Event triggered due to stuck of B-ph pole of Main CB at Kanpur end of 400kV Kanpur-Ballabgarh line-I. As per PMU and DR received, B-N fault at 00:28:57:820 hrs with delayed clearance of **~440 msec** followed by R-N fault at 00:28:58:640 hrs with delayed clearance of **~1540 msec** is observed.
- b) **Multiple elements tripping on 07.01.2026 at 16:47 hrs:** At 16:47 hrs, all the 400kV elements at Kanpur(PG) tripped during bus fault on 400kV Bus-1. Fault occurred due to fall of jack bus conductor on 400kV Bus-1 & 2. As per PMU, R-Y-B-N fault at 16:47:53:320 hrs with delayed clearance of **~1560 msec** is observed.

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B.5.2 Brief details w.r.t. Protection operation:

- a) During both the events, fault cleared on back up protection after tripping of lines from remote end in Z-2/Z-3 and ICTs on back up impedance / earth fault protection.
- b) Bus bar protection failed to operate during both the events, leading to significant delayed clearance of fault.

Reason of non-operation of bus bar protection need to be shared.

- c) 400kV Kanpur-Kanpur765 D/C tripped in Z-3 during both the events which should have tripped in Z-2. As informed by POWERGRID(NR-3), reactance of Line Series Reactor (LSR) at Kanpur(PG) end hasn't been considered in distance protection setting. This might be the reason of underreach of Z-2 distance protection.

Distance protection setting (Z-2) of 400kV Kanpur-Kanpur765 D/C need to be reviewed. Philosophy for distance protection setting in case of LSR need to be discussed.

- d) Tie CBs at Kanpur(PG) end also tripped during the first event. As there was no protection operation due to which Tie CB should trip at Kanpur(PG).

Reason of opening of Tie CBs at Kanpur(PG) need to be shared.

B.5.3 Such grid events affect security and reliability of the grid. Therefore, **POWERGRID(NR-3) is requested to share the detailed analysis of the grid events mentioned above.**

B.5.4 Necessary remedial actions need to be taken to avoid such grid events in future. Proper operation of protection system and its coordination also need to be ensured. A committee may also be formed to analyze and address the issues at 400/220kV Kanpur(PG).

Decision required from Forum:

Members may discuss.

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**B.6 Frequent multiple elements tripping event at 400/220kV Muzaffarnagar(UP)
(agenda by NRLDC)**

B.6.1 Five major grid events have been reported at 400/220kV Muzaffarnagar(UP) during mid-week of January 2026 as bus bar protection operated on fault due to insulator flashover. Generation loss also occurred at Alaknanda and Vishnuprayag HEP during these events. Brief of the grid events are as follows:

- a) **Multiple elements tripping on 13.01.2026 at 05:16 hrs:** At 05:16 hrs, all elements connected to 400kV Bus-2 tripped due to bus bar protection operation. As per SCADA, generation loss of **~45 MW** occurred at Vishnuprayag HEP.
- b) **Multiple elements tripping on 13.01.2026 at 07:43 hrs:** At 07:43 hrs, all elements connected to 400kV Bus-2 tripped again due to bus bar protection operation. As per SCADA, generation loss of **~62 MW** occurred at Vishnuprayag HEP.
- c) **Multiple elements tripping on 17.01.2026 at 02:08 hrs:** At 02:08 hrs, all elements connected to 400kV Bus-1 & 2 tripped due to bus bar protection operation. As per SCADA, generation loss of **~74 MW** and **~50 MW** occurred at Alaknanda HEP and Vishnuprayag HEP respectively.
- d) **Multiple elements tripping on 17.01.2026 at 05:34 hrs:** 400kV Bus-1 was charged at 03:54 hrs and again tripped at 05:34 hrs due to bus bar protection operation. As per SCADA, generation loss of **~84 MW** occurred at Alaknanda HEP.
- e) **Multiple elements tripping on 17.01.2026 at 06:18 hrs:** 400kV Bus-2 was charged at 06:08 hrs and again tripped at 06:18 Hrs due to bus bar protection operation. No generation loss occurred during this event as no units of Alaknanda or Vishnuprayag HEP was in running condition.

B.6.2 Reason of bus bar protection operation in every case need to be analyzed and shared.

B.6.3 Such grid events affect security and reliability of the grid. Therefore, **SLDC UP is**

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requested to share the detailed analysis of the grid events mentioned above.

B.6.4 Necessary remedial actions need to be taken to minimize frequent faults due to insulator flashover so that such grid events can be avoided in future.

Decision required from Forum:

Members may discuss.

**B.7 Multiple elements tripping events in Rajasthan RE complex on 14.01.2025
(agenda by NRLDC)**

B.7.1 Multiple elements tripping events have been reported in Rajasthan RE Complex during 13:38 hrs-14:35 hrs on 14th January 2026. Significant drop in NR total RE generation has been observed during these events. Brief of the grid events are as follows:

- i. Event at 13:38 hrs:** As reported, at 13:38 hrs, 400kV Bassi-Phagi ckt-2 tripped on R-Y fault. At the same time, 765 KV Bhadla2-Fatehgarh2 ckt-3 and 220kV Fatehgarh3-RSAPL ckt tripped on overvoltage. As per SCADA, drop in NR total solar generation of approx. 1681 MW was observed. 700 MW RAPP D unit-7 (generating ~600 MW) also tripped during the event on turbine trip.
- ii. Event at 14:05 hrs:** As reported, at 14:05 hrs, 765kV Sikar2-Aligarh ckt-1 tripped on R-Y-B three phase fault. At the same time, 765kV Fatehgarh2-Bhadla2 ckt-1&4, 765kV Bikaner-Bhadla2 ckt-1, 765kV Bhadla2-Ajmer ckt-1, 765kV Bhiwani-Narela ckt, 400kV Fatehgarh1-ACME Pool ckt, 400kV Bikaner(PG)-Renew Solar Ckt and 400kV Renew Solar- Renew Surya Ravi Ckt tripped on overvoltage. . As per SCADA, drop in NR total solar generation of approx. 3787 MW was observed.
- iii. Event at 14:09 hrs:** As reported, at 14:09 hrs, 765kV Sikar2-Aligarh ckt-2 tripped on R-Y fault. As per SCADA, drop in NR total solar generation of approx. 925 MW was observed.

Further, as reported, at 14:35 hrs, 220kV Bikaner2-Renew Dinkar ckt tripped on overvoltage.

Agenda of 66th Protection Sub-Committee Meeting (28th January, 2026)**B.7.2 List of transmission lines tripped on overvoltage with PMU data:**

| Sr. No. | Transmission line | Tripping time | Overvoltage as per PMU |
|----------------|---|----------------------|-------------------------------|
| 1 | 765 KV Bhadla2-Fatehgarh2 ckt-3 | 13:38 hrs | Vph: 469 kV; 1.06pu for ~5s |
| 2 | 220kV Fatehgarh3-RSAPL ckt | 13:38 hrs | Vph: 137kV; 1.08pu for ~14s |
| 3 | 765 KV Bhadla2-Fatehgarh2 ckt-1 | 14:05 hrs | Vph: 469 kV; 1.06pu for ~5s |
| 4 | 765 KV Bhadla2-Fatehgarh2 ckt-4 | 14:05 hrs | Vph: 470 kV; 1.06pu for ~6s |
| 5 | 765kV Bikaner-Bhadla2 ckt-1 | 14:05 hrs | Vph: 475 kV; 1.07pu for ~5s |
| 6 | 765kV Bhadla2-Ajmer ckt-1 | 14:05 hrs | PMU data not available |
| 7 | 765kV Bhiwani-Narela ckt | 14:06 hrs | PMU data not available |
| 8 | 400kV Fatehgarh1-ACME Pool ckt | 14:06 hrs | PMU data not available |
| 9 | 400kV Bikaner(PG)-Renew Solar | 14:06 hrs | Vph: 247 kV; 1.07pu for ~8s |
| 10 | 400kV Renew Solar- Renew Surya Ravi Ckt | 14:06 hrs | Vph: 247kV; 1.07pu for ~10s |
| 11 | 220kV Bikaner2-Renew Dinkar ckt | 14:35 hrs | PMU data not available |

Preliminary observations:

- i. DR/EL for all the tripped elements need to be shared from both the ends.
- ii. Tripping of EHV lines need to be analysed as per recommended over-voltage settings and same may be reviewed if necessary.
- iii. RE plants are requested to analyse LVVRT/HVRT compliance and share DR of their end.

Decision required from Forum:

Members may discuss.

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B.8 Mock testing of System Protection Schemes (SPS) in Northern Region (agenda by NRLDC)

B.8.1 As per IEGC clause 16.2

“For the operational SPS, RLDC or NLDC, as the case may be, in consultation with the concerned RPC(s) shall perform regular load flow and dynamic studies and mock testing for reviewing SPS parameters & functions, at least once in a year. RLDC or NLDC shall share the report of such studies and mock testing including any short comings to respective RPC(s). The data for such studies shall be provided by CTU to the concerned RPC, RLDC and NLDC.”

B.8.2 As per IEGC clause 16.3

“The users and SLDCs shall report about the operation of SPS immediately and detailed report shall be submitted within three days of operation to the concerned RPC and RLDC in the format specified by the respective RPCs.”

B.8.3 There are 62 numbers of System Protection Scheme (SPS) approved in Northern Region. These SPS are implemented at major generation complexes, important evacuating transmission lines and ICTs which are N-1 non-complaint. System Protection Scheme Document of Northern Region has been revised/updated on 31st January, 2025.

B.8.4 SPS is designed to detect abnormal system conditions and take predetermined, corrective action to preserve system integrity and provide acceptable system performance. Therefore, correct operation of SPS as per designed logic is important to serve its purpose. To ensure this, mock testing of SPS needs to be conducted at a regular period. Clause 16.2 of IEGC 2023 also mandates the mock testing of SPS for reviewing SPS parameters & functions, at least once a year.

B.8.5 In this regard, communication has already been sent to constituents through NRLDC letter dated 01.05.2024, 21.02.2025, 05.03.2025, 04.04.2025 & 28.05.2025 and continuous follow up is being done in OCC & PSC meeting since May 2024.

B.8.6 During 2024-25, mock testing of 14 SPS out of total 55 SPS were not conducted. In view of high demand scenario during summer 2025-26, NLRDC vide letter dated 04.04.2025 requested all the concerned utility to conduct the mock testing of pending

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SPS by the end of April 2025. However, as reported, mock testing of 03 SPS out of pending 14 SPS have been done. In this regard, discussion was also held in 60th, 61st, 62nd & 63rd PSC meeting. PSC Forum requested all the members to conduct the mock testing of all the SPS in their respective control area at the earliest.

B.8.7 Status of mock testing of all the SPS in NR is attached as **Annexure-B.VI**.

B.8.8 Status of follow-up actions w.r.t. some of the SPS are as follows:

- i. **SPS of HVDC Rihand-Dadri:** During mock testing of SPS of HVDC Rihand-Dadri on 20.03.2025, issues i.e., faulty SPS hardware at Singrauli TPS (NTPC) and no receipt of SPS signal at 220/132kV Ratangarh(RS) were identified. Further, during recent operation of SPS on 21.05.2025 in incident of outage of both poles, desired SPS actions i.e., generation backdown at Singrauli TPS and load relief in UP, Delhi, Haryana & Punjab were not observed. Desired load / generation relief is important to ensure the security and reliability of grid during such contingency. As per details received, SPS signal was sent to all the mapped stations from POWERGRID end however either due to non receipt of signal or error in SPS system at load / generation, SPS action didn't occur. NRLDC vide letter dated 02.07.2025, requested POWERGRID and Singrauli NTPC to take necessary remedial measures and make complete SPS system healthy.

During 233rd OCC meeting, POWERGRID representative stated that the equipment's at Singrauli TPS end is owned by NTPC and need to be revived by them. SPS system at Rihand(PG) is healthy and operational. NTPC representative stated that as per details received from site, NTPC Singrauli team have initiated necessary actions in coordination with the POWERGRID. SPS operation is crucial as it is planned for special contingencies, and its unavailability may lead to cascade tripping or major grid disturbance especially in case of high demand period.

Discussion during 237th OCC meeting:

- a) NRLDC requested NTPC Singrauli and POWERGRID to share the details of necessary corrective actions taken / planned to be taken to ensure healthiness of SPS system at Singrauli TPS and load stations.

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- b) Representative from NTPC informed that existing SPS system at Singrauli TPS is defective, procurement work has been initiated. NRLDC requested NTPC to share the tentative timeline for completion of work and to expedite the remedial actions for early restoration of SPS system at Singrauli TPS.
- c) Regarding issues at load stations, POWERGRID agreed to take necessary actions in coordination with the site stations.
- d) Further, NRLDC also informed that mock testing of SPS of HVDC Rihand-Dadri has been scheduled tentatively on 19.11.2025. Concerned members were requested to ensure the readiness and share the details of coordinators.

SPS mock testing of HVDC Rihand-Dadri was conducted successfully on 19.11.2025. SPS command didn't receive at 220kV Muradnagar(UP), 220kV Merta(RS), 220kV Kota Sakatpura(RS), 220kV Dhanonda(HR) and Singrauli TPS(NTPC). SPS system at Rihand HVDC, Dadri HVDC and at remaining load and generating stations are healthy.

POWERGRID, Singrauli(NTPC) and other concerned may share the details of actions taken / planned to be taken to rectify the issues in HVDC Rihand-Dadri SPS system.

- ii. **SPS of Anta, Kawai, Chhabra generation complex:** In one of the SPS cases i.e., N-1-1/ N-2 of 765kV Anta-Phagi 1 & 2, instantaneous generation backdown of ~2100 MW is designed as SPS action. In such scenario, to avoid overloading of WR-NR corridor and over drawl by Rajasthan, it was agreed that RVPNL shall implement the automatic load shedding of ~750 MW by 28.02.2018. However, as per details available, implementation of automatic load shedding as per SPS hasn't been done yet. This matter has already been discussed in PSC as well as OCC meetings on regular basis. The concern of grid security and reliability was also raised during request of shutdown of 765kV Anta-Phagi line. is requested to expedite implementation of the automatic load shedding of ~750 MW as per SPS (N-1-1/ N-2 contingency of 765kV Anta-Phagi-1 & 2).

During 235th OCC meeting, SLDC-Rajasthan representative informed that automatic load shedding of ~750 MW has been implemented.

During 236th OCC meeting, SLDC-Rajasthan confirmed that mock testing of

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automatic load shedding part of the SPS has been conducted.

Discussion during 237th OCC meeting:

- a) NRLDC representative requested Rajasthan to share the mock test report of the automatic load shedding part of the SPS.
- b) RVPNL agreed to share the mock test report w.r.t. automatic load shedding part of the SPS at the earliest.

Details haven't been received yet. Rajasthan is requested to share the details at the earliest possible.

- iii. **SPS of N.Jharkri, Karcham, Rampur hydro generation complex:** Status of implementation of case-6(i) and corrective actions w.r.t case-6 (ii) need to be shared. During 235th OCC meeting, HPPTCL representative informed that faulty communication card at Wangtoo S/s is to be replaced with new card. The case is at procurement stage, and it is estimated that work will be completed by the end of December 2025.

Karcham(JSW) through mail dated 08.12.2025 confirmed the incorporation of 400kV kala Amb-Abdullapur D/C in SPS system hence, case-6 is completely implemented now.

HPPTCL may share the update w.r.t. replacement of faulty communication card at Wangtoo(HP).

- iv. **SPS of 765kV Agra-Gwalior D/C:** Mock testing of the SPS was conducted on 10.10.2025. During the testing, it was observed that there is communication issue at Bhiwadi(PG), Bamnauli(DTL), Kota, Debari, Chittorgarh, Ratangarh, Nun-amajra, Safidon, Ajitwal, Dandhari-II, Ablowal substations.

NRLDC requested all the concerned states to submit the mock test report of their respective control area. Details have been received from Delhi, Rajasthan and Punjab. UP, BBMB, Haryana and POWERGRID have shared the partial details.

Further, POWERGRID was requested to share the details of actions taken / planned to be taken to resolve the issues in SPS system.

During 237th OCC meeting, POWERGRID was requested to take expeditious

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corrective actions to rectify the issues and make the SPS healthy and operational at all the stations.

NRLDC has also sent a letter dated 28.11.2025 to POWERGRID for expeditious corrective actions and make complete SPS system healthy and operational.

POWERGRID may share the details of actions taken / planned to be taken to rectify the issues in 765kV Agra-Gwalior D/C SPS system.

B.8.9 Further, Clause 16.2 of IEGC 2023 also mandates the mock testing of SPS for reviewing SPS parameters & functions, at least once a year. Mock testing of all the SPS needs to be conducted in 2025-26. In view of this following is requested:

- i. Concerned constituents / utility are requested to conduct the mock testing of pending SPS (whose mock testing was not conducted in 2024-25) at the earliest.
- ii. Utilities are also requested to conduct the mock testing of SPS schemes in their respective control area w.r.t. year 2025-26.
- iii. In compliance with IEGC clause 16.2, users shall ensure that mock testing along with the review of SPS logic of all the SPS is conducted at least once a year.
- iv. Further In compliance with IEGC clause 16.3, users shall also share the detailed report of SPS operation in their respective control area within 3 days of its operation. Presently, no such report is being received.

B.8.10 Further, during 60th PSC meeting, it was decided that the SPS which are not required from constraint point of view will not be disabled for keeping the assets associated with SPS healthy and will be treated as "reserve SPS", as may be required during prolonged outages of any system element. In case of reserve SPS for transformers (where logic was based on "tripping" of transformer) logic need to be modified based on "loading" of transformer in place of "tripping" of transformer.

B.8.11 During 64th PSC meeting, MS-NRPC suggested that assets of "reserve SPS" can be used in new SPS to be commissioned and hence they may be removed from existing SPS list. PSC forum suggested to remove the above mentioned 06 "reserve SPS" schemes.

B.8.12 During 238th OCC meeting, SLDC UP informed that SPS for Transformers at 400KV Sultanpur (UPPTCL) and Gorakhpur(UPPTCL) is required as loading exceeded (N-1) limit during summer of 2025, hence SPS may be kept in service. SLDC Delhi informed

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that SPS for Transformers at Bamnauli (DTL) may be kept in service until 315 MVA ICT is revived which currently is not in service.

B.8.13 During 65th PSC meeting, it was decided to disable and remove the following SPS:

- i. SPS for Transformers at Ballabgarh (PG)
- ii. SPS for Transformers at 400KV Muzaffarnagar (UP)
- iii. SPS for Transformers at 400KV Greater Noida (UPPTCL)

B.8.14 During 239th OCC meeting, it was proposed that following SPS may be removed:

- i. SPS for Reliable Evacuation of Ropar Generation
- ii. SPS for contingency due to tripping of evacuating lines from Narora Atomic Power Station

PSC forum may decide on the above.

B.8.15 **Implementation of SPS in POWERGRID substations in Rajasthan control area:**

SPS stage wise logic (received from Rajasthan) for SPS of ICTs at POWERGRID stations in Rajasthan control area was discussed in 64th PSC meeting. The time delay logic proposed by Rajasthan was found OK and POWERGRID was requested to start the implementation process of the SPS at designated stations.

Time delay for stage-1&2 of SPS was decided as:

1. Stage-1: 105% loading with 1 sec delay
2. Stage-2: 105% loading with 1.5 sec delay

NRLDC through mail dated 02.12.2025 requested POWERGRID to implement the SPS at designated stations i.e., 400/220kV Kankroli(PG), Bassi(PG), Neemrana(PG), Kotputli(PG), Bhiwadi(PG), Jaipur South(PG) and Sikar(PG) at the earliest possible.

POWERGRID may share the update regarding implementation of above SPS. Mock testing report of the SPS also need to be shared after implementation.

Decision required from Forum:

Members may like to discuss.

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B.9 Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS (agenda by NRLDC)

- B.9.1 On 17th May 2024 on outage of both pole (carrying total ~1500MW), SPS of 500kV HVDC Mundra-Mahindergarh inter regional link didn't operate. This issue was discussed during 51st PSC meeting and ADANI was requested to share the details w.r.t. SPS operation during the meeting.
- B.9.2 Further, NRLDC in coordination with NLDC conducted an online discussion meeting with concerned stakeholders (SLDCs, ADANI, POWERGRID) on 12th August 2024, for further remedial actions required to make this SPS healthy.
- B.9.3 Following actions were decided during the meeting:
- i. POWERGRID, ADANI and concerned states were requested to identify the issue in communication links and take expeditious actions to make the all the communication link healthy. POWERGRID & ADANI shall review the healthiness of SPS system at different load centres and communication path between them in coordination with the SLDCs.
 - ii. States were requested to go through the details of load feeders mentioned in SPS document and share the changes / modifications as per present scenario and share the inputs w.r.t. unavailability in identified load feeders and load shedding. SLDCs shall share the revised updated feeder details (radial) along with expected average/peak load relief through respective feeders.
 - iii. SLDCs in coordination with their transmission and protection team shall share the status and healthiness of existing SPS system along with details of availability of communication path for incorporation of proposed revised/additional feeders.
- B.9.4 Load end details have been received from UP, Haryana, Punjab, Rajasthan & Delhi.
- B.9.5 ADANI via mail dated 29.08.2024 has submitted the status of healthiness of communication network and hardware system at different locations on the basis of preliminary inspection. As per details submitted, counter status was found OFF at Alwar, Ratangarh, Gobindgarh, Malerkotla, Bamnauli, Shamli and Dhanonda.
- B.9.6 Details of nodal officer of different substation involved in SPS scheme has already been shared with ADANI team for coordination and further remedial actions.

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- B.9.7 During 53rd PSC meeting, ADANI was requested to coordinate with the respective states to rectify the issues in the SPS system and share the status of remedial action taken / planned to be taken. Desired remedial actions need to be expedited.
- B.9.8 ADANI agreed for the same and stated that update would be given within 01 week. However, no detail received yet from ADANI.
- B.9.9 During discussion in 55th PSC meeting it was decided that ADANI shall take lead in rectification work as this SPS scheme was commissioned by them. Protection nodal officers from States will provide possible necessary assistance from their end. Further, states were also requested to ensure incorporation of revised decided feeders during work at their stations. States representative assured to provide all necessary coordination from their end.
- B.9.10 During 56th PSC meeting, ADANI was requested to apprise the forum about the present status of remedial actions. ADANI representative stated that they have raised service order to COMTEL (OEM) for approval. After approval of this service order, COMTEL engineers will visit all the sites in coordination with nodal officers from respective stations. It is expected that identification of issues and estimate hardware requirement will be completed by the end April 2025. Thereafter, after financial approval, rectification of issues will be done. ADANI was requested to ensure completion of whole work before summer 2025. State representatives were also requested to coordinate with the ADANI team and ensure incorporation of identified revised feeders for load relief in SPS.
- B.9.11 Further, through mail dt 3rd April 2025, ADANI has informed that they awarded the rectification work service to M/s COMTEL for survey and restoration of possible elements installed at the locations and engineers from M/s COMTEL shall be visiting respective stations as per the schedule.
- B.9.12 During 57th PSC meeting, ADANI representative informed that visit by COMTEL engineers at all the sites is completed and COMTEL will submit the report within 10

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days.

- B.9.13 ADANI was requested to share the report at the earliest and make Action Plan accordingly to ensure completion of whole work before summer 2025.
- B.9.14 ADANI agreed to take expeditious actions and to share the action plan at the earliest.
- B.9.15 During 58th PSC meeting, ADANI representative shared the observations made by COMTEL engineers and informed that it would at least require 6 months to complete the work.
- B.9.16 NRLDC CGM (SO) highlighted that in view of envisaged growth in demand in next summer season, it is important to ensure rectification of issues and healthiness of SPS.
- B.9.17 ADANI representative further informed that cost implication in this case is estimated as approx. Rs. 1.5 Cr. Till now they conducted technical assessment and made cost estimation. They will look into the regulatory aspect of the same for finalising the action plan.
- B.9.18 During 59th PSC meeting, ADANI representative informed that they are doing discussions with ULDC for allocation of necessary links between locations. They have also initiated internal approval for placing necessary orders to the partner for execution of upgradation activity. They are expecting to complete the execution within 4-5 months in collaboration with all the stakeholders from respective utilities and ULDC team. Communication from ATIL in this regard is also sent to NRLDC through letter dated 10th April 2025.
- B.9.19 PSC Forum emphasized that considering the growing energy demands in summer season, healthiness of 500kV Mundra-Mahindergarh SPS is of utmost importance for secure & reliable grid operation. State representatives were also requested to coordinate with the ADANI team and also ensure incorporation of identified revised

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feeders for load relief in SPS. Desired remedial actions need to be expedited.

- B.9.20 During 60th PSC meeting, ADANI representative informed that internal approval is taken for placing the order and order will be released to vendor by end of June-July 2025. They have expedited the execution of upgradation activity and now it is expected to get completed by September- October 2025.
- B.9.21 NRLDC representative requested to share weekly progress report once the execution work starts and ADANI agreed for the same.
- B.9.22 ADANI was requested to apprise the forum about identified issues at various stations, action plan and progress in rectification work.
- B.9.23 During 61st PSC meeting, ADANI representative informed that order will be released by 1st week of July to the vendor for completion of work. The vendor has given 06 (six) months' timeline for completion of whole work however, we will follow up with the vendor and try to complete the whole work within 04 months.
- B.9.24 NRLDC representative requested ADANI to expedite the necessary actions at their end as corrective actions has already been delayed. It was also requested to give action plan of corrective actions for smooth coordination and actions. Weekly progress and status of actions may also be shared.
- B.9.25 Further, through mail dt 30th July 2025, ADANI has informed that order has been placed with vendor for the procurement and development of the scheme on new devices and they also shared the timeline for the upcoming broader steps which has evolved based on discussions held with the vendor.
- B.9.26 During 62nd PSC meeting, ADANI confirmed the following:
- i) The system is expected to be ready by the partner and complete the Factory Acceptance Test (FAT) by 15th September 2025.

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- ii) Following the FAT, the material will be shipped to various sites and installed by 30th October 2025. Concerned constituents need to ensure the material is kept in a safe and secure area till commissioning at original location.
- iii) Implementation of the communication channel with the assistance of ULDC is also scheduled for completion parallelly by 30th October 2025.
- iv) Testing of the installation and wiring will be carried out by 15th November 2025. The same shall require support from respective site representatives.
- v) Testing of the communication link between Mahindergarh and other locations is planned for completion by 30th November 2025.
- vi) Finally, the testing of the SPS scheme is expected to be completed by 31st December 2025.

B.9.27 Further, through mail dtd. 15th September 2025, ADANI has informed that Hardware is expected to be received by the partner by 20th September 2025 and FAT is expected to be carried out by 31st September 2025. The Dispatch and site activities shall be planned based on FAT punch point closures.

B.9.28 During 63rd PSC meeting, ADANI representatives were not present in the meeting.

B.9.29 NRLDC through mail dated 30.10.2025, requested ADANI to share the present status and further actions plan.

B.9.30 ADANI vide mailed dated 05.11.2025 informed the following:

- i. FAT has been completed, and material has been arrived at Mahinderagrh S/s.
- ii. The tentative schedule for visit at different load substations has been planned and shared.

B.9.31 Further vide mailed dated 19.11.2025, ADANI informed that the team has installed and tested the commands up to the DTPC panels from Mahindergarh for the following locations: BBMB, Charkhi Dadri, Ratangarh, Hisar-PG, Alwar, Merta, Nuna Majra and Shamli.

B.9.32 During 64th PSC meeting, ADANI representative informed that SPS for contingency due to tripping of HVDC Mundra- Mahindergarh will be made operational and healthy by Dec'25.

B.9.33 ADANI vide mailed dated 15.12.2025 informed that the scheme has been made ready

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and the commands have been tested between Mahindergarh and locations between DTPCs . All the commands have been terminated to respective trip circuits of the identified feeders except Gobindgarh and Malerkotla where the same is in progress and expected to be completed within a week.

- B.9.34 ADANI vide mailed dated 07.01.2026 informed that the scheme has been made ready to be taken into service and the commands have been tested between Mahindergarh and locations between DTPCs. All the commands have been terminated to respective trip circuits of the identified feeders.
- B.9.35 Details are attached as **Annexure-B.VII.**
- B.9.36 ADANI is requested to conduct mock testing of 500kV Mundra-Mahindergarh SPS at the earliest and share the report after conducting the same.

Decision required from Forum:

Members may like to discuss.

B.10 Confirmation regarding implementation of proposed Overvoltage protection setting by committee (agenda by NRLDC)

- B.10.1 A committee was formed by NRPC during 52nd PSC meeting held on 20th September 2024 to review the Overvoltage Protection settings of 400kV and 765kV transmission lines in Northern Region. This committee was formed for compliance of the recommendation given by the committee formed by CEA for analysis of Grid incident occurred on 17th June 2024. The committee reviewed the Overvoltage Protection settings of 400kV and 765kV transmission lines in Northern Region, finalized the protection settings for overvoltage protection and proposed the revised overvoltage protection settings. The proposed Overvoltage protection settings were discussed and approved in 58th Protection Sub-Committee (PSC) meeting held on 26th March 2025. The PSC forum requested all to implement the proposed overvoltage protection settings in 400kV and 765kV transmission lines in their respective control area. Details of the revised overvoltage protection setting to be implemented is attached as **Annexure-B.VIII.**
- B.10.2 Further, the agenda in this regard was again discussed in 230th OCC meeting and 60th, 61st, 62nd & 63rd PSC meetings. It was observed that many members are yet to

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confirm the implementation of revised overvoltage settings.

- B.10.3 SLDC Punjab vide mail dt 05th June 2025 informed that over-voltage settings implementation will take 3-4 months.
- B.10.4 During 61st PSC meeting, PSTCL representative stated that due to shortage of manpower in protection team, 3–4-month time is required for implementation of revised OV settings.
- B.10.5 PSC Forum suggested PSTCL to address the issue and propose to form separate protection wing so that protection related compliance and grid event analysis may be done in stipulate time frame.
- B.10.6 During 62nd PSC meeting, PSTCL representative confirmed that implementation work is in progress and partially done, however work will be completed before the next PSC meeting.
- B.10.7 During 63rd PSC meeting, POWERGRID(NR-2) representative informed that revised OV setting has been implemented in almost all the lines except 10 lines. Implementation in remaining lines shall also been done at the earliest.
- B.10.8 During 64th & 65th PSC meeting, NRLDC representative requested HVUNL, PSTCL, JKPTCL, Indigrd, APCPL and NTPC to ensure expeditious implementation of proposed Overvoltage Protection settings in the remaining 400kV and 765kV transmission lines in their respective control area at the earliest and send a confirmation mail regarding this to NRPC and NRLDC.
- B.10.9 APCPL Jhajjar vide mail dt 17th January 2026 confirmed over-voltage settings implementation at their end.
- B.10.10 All members were requested to ensure the implementation of proposed overvoltage settings in their control area at the earliest to avoid any unwanted tripping during the ongoing high demand scenario. In this regard, e-mail communication was also sent dated 07.05.2025 & 03.06.2025 to all members.
- B.10.11 Status of confirmation received from BBMB, Rajasthan, UPPTCL, HVPNL, PSTCL (Partial), DTL, NHPC, POWERGRID, Uttarakhand, HP, NUPPL, SJVN & APCPL.
- B.10.12 However, status of confirmation from Harayna (Generation Evacuating lines), Punjab (Partial), J&K, Indigrd and NTPC are yet to be received (38 lines pending out of 683 lines).
- B.10.13 The status of implementation of proposed Overvoltage protection setting in

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transmission lines is attached as **Annexure-B.VIII**.

- B.10.14 The winter season in Northern region begins from mid-October onwards and remains till February, and the challenges faced during these months are well known to all the utilities. During winter with NR load reducing significantly, the lines become lightly loaded leading to high voltages in Grid. Hence, vide NRLDC letter dated 17.09.2025, it was advised to ensure timely implementation of revised approved overvoltage protection settings in all the 400 & 765kV transmission lines to avoid any unwanted tripping of transmission lines on over-voltage.
- B.10.15 Therefore, all the concerned utilities are once again advised to ensure expeditious implementation of proposed Overvoltage Protection settings in 400kV and 765kV transmission lines in their respective control area and send a confirmation regarding this to NRPC and NRLDC.

Decision required from Forum:

Members may like to discuss.

B.11 Status of connected load relief quantum of UFR and df/dt (agenda by NRLDC)

- B.8.1 UFRs and df/dt are envisaged to take care of sudden contingencies arising out of outage of generation stations or separation of inter-regional lines. UFRs setting are for steady state operation of the Grid at considerably low frequency and df/dt settings are for dynamic change change when frequency falls suddenly with jerks.
- B.8.2 As per IEGC 2023 Clause 29.(13)(d),
“SLDC shall ensure that telemetered data of feeders (MW power flow in real time and circuit breaker status) on which UFR and df/dt relays are installed is available at its control centre. SLDC shall monitor the combined load in MW of these feeders at all times. SLDC shall share the above data with the respective RLDC in real time and submit a monthly exception report to the respective RPC...”
- B.8.3 In view of the above, SLDCs are requested to share the list of feeders mapped for UFR and df/dt along with feeder-wise planned load relief quantum. SLDCs are also requested to share details of mapped/telemetered stage-wise quantum of load relief on UFR and df/dt operation against the planned quantum. Data is to be furnished in the format attached as **Annexure-B.IX**.

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B.8.4 As per IEGC 2023 Clause 30.(1),

“The National Reference Frequency shall be 50.000 Hz and the allowable band of frequency shall be 49.900-50.050 Hz. The frequency shall be measured with a resolution of +/-0.001 Hz...”

B.8.5 In view of recent events due to UFR operation, major review of UFR and df/dt settings is required to avoid unwanted tripping of feeders and load loss in states. SLDCs are requested to review UFR settings of the relays (whether frequency settings can be done upto three decimal places or not) and further take up for replacement of the relays, if necessary. SLDCs are also advised to look into any issue in transducer etc to avoid any unwanted tripping on UFR operation in future.

Decision required from Forum:

Members may like to discuss.

Part-C: Agenda for final approval of protection settings by PSC Forum for FTCs which have been provisionally allowed by NRLDC/SLDCs

C.1. First Time Charging of transmission lines/Bays/Transformer/Reactor etc. by NRLDC

C.1.1 NRLDC has submitted the FTCs allowed in month of **December 2025**. The same may be found on NRPC website: <https://nrpc.gov.in/meetings/prsub.html>

C.1.2 All settings for the elements given FTCs in the months of **December 2025** accessed from NRLDC portal are available at NRPC website: <https://nrpc.gov.in/meetings/prsub.html>

C.1.3 Accordingly, protection settings of the elements given FTCs in the **December 2025** are put up for final approval of PSC Forum.

Decision required from Forum:

Members may refer the settings for any correction required. Accordingly, settings may be approved by Forum.

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C.2. First Time Charging of transmission lines/Bays/Transformer/Reactor etc. by SLDCs

- C.2.1 UPSLDC has shared the list and protection settings of elements (>220kV) for which Provisional approval given for FTC from UPSLDC level. The same may be found on NRPC website: <https://nrpc.gov.in/meetings/prsub.html>
- C.2.2 The same is put up for final approval of PSC Forum.

Decision required from Forum:

Members may refer the settings for any correction required. Accordingly, settings may be approved by Forum.

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| 64 | NTPC Devikot Solar plant_240MW | |
| 65 | NTPC Kolayat_400kV | |
| 66 | Nedan Solar NTPC | |
| 67 | NTPC Nokhra_300MW | |
| 68 | One Volt energy Pvt. Ltd. | |
| 69 | ReNew Solar Energy (Jharkhand Three) Private Limited | purnendu.chaubey@renew.com ; |
| 70 | RENEW SOLAR POWER Pvt. Ltd. Bhadla | |
| 71 | Renew Sun Bright Pvt. Ltd. (RSBPL) | |
| 72 | Renew Surya jyoti Pvt. Ltd. | |
| 73 | Renew Surya Partap Pvt. Ltd. | |
| 74 | Renew Surya Ravi Pvt. Ltd. | |
| 75 | Renew Surya Roshni Pvt. Ltd. | |
| 76 | Renew Surya Vihan Pvt. Ltd. | |
| 77 | Renew Hans Urja Pvt Ltd. | |
| 78 | RENEW SOLAR POWER Pvt. Ltd. Bikaner | kailash.pandey@renew.com ; |
| 79 | RENEW SOLAR POWER Pvt. Ltd. Bikaner | |
| 80 | Solzen Urja Private Limited | Neeraj.Verma@energy-sel.com |
| 81 | ReNew Solar Urja Private Limited | anilbhai.chaudhari@indigrid.com ; rohit.kashav@indigrid.com ; |
| 82 | Renew Surya Ayaan Pvt. Ltd. | hiteshbhai.shiyal@indigrid.com |
| 83 | Rising Sun Energy-K Pvt. Ltd. | tushar.gahlot@risingsunenergy.in ; |
| 84 | Serentica Renewables India 4 Private Limited | rajendra.gupta@serenticaglobal.com ; |

| | | |
|----|--|---|
| 85 | Serentica Renewables India 5 Private Limited | regulatory@serenticaglobal.com , Serentica_Asset_NR@sterlitepower.com , kunal.kaistha@serenticaglobal.com , atul.pachauri@serenticaglobal.com , lalit.shukla@serenticaglobal.com , ashwary.sharma@serenticaglobal.com |
| 86 | Khidrat Renewable energy Pvt Ltd. | |
| 87 | Tata Power Green Energy Ltd. (TPGEL) | vinod.kumar@tatapower.com ; |
| 88 | Tata Power Renewable Energy Ltd. (TPREL) | dhmahabale@tatapower.com ; imran.khan@tatapower.com ; |
| 89 | Thar Surya Pvt. Ltd. | vivek.reddy2@enel.com ; mahendra.vishnoi2@enel.com |
| 90 | TP Surya Pvt. Ltd. | sivanarayana@tatapower.com ; sagar.potdar@tatapower.com ; |
| 91 | Banderwala Solar Plant TP Surya Ltd. | arun.sahoo@tatapower.com ; |
| 92 | TRANSITION ENERGY SERVICES PRIVATE LIMITED | |
| 93 | Transition Green Energy Private Limited | kak@evreenergy.com ; |
| 94 | Transition Sustainable Energy Services Private Limited | |
| 95 | Gorbea Solar Pvt Ltd | richpal.singh@zelestra.energy kalpesh.umaretia@zelestra.energy |

Address List of ISTS Transmission Licensees (other than NRPC members)

| S.N. | TBCB/ Licensee Name | Owner Company | E-mail ID |
|-------------|---|----------------------|---------------------------------|
| 1 | Gurgaon Palwal Transmission Ltd | INDIGRID | vivek.karthikeyan1@indigrid.com |
| 2 | NRSS-XXIX Transmission Ltd | | |
| 3 | Parbati Koldam Transmission Company Limited | | |
| 4 | Patran Transmission Company Ltd | | |
| 5 | NRSS-XXXI(B) Transmission Ltd | SEKURA | neeraj.verma@energy-sel.com |
| 6 | NRSS XXXVI Transmission Ltd | TATA POWER | rajnishmehrotra@tatapower.com |
| 7 | AD Hydro Power Limited | - | sumitgarg@Injbhilwara.com |
| 8 | Aravali Power Company Private Limited | | amit.hooda01@apcpl.co.in |
| 9 | POWERLINKS TRANSMISSION LIMITED (PTL) | - | sandeep.shukla@tatapower.com |
| 10 | Adani Transmission India Limited | ADANI | Sunil.Raval@adani.com |
| 11 | Bikaner Khetri Transmission Limited | | |

Status of action taken on decisions of 65th PSC

| S.N. | Agenda No. | Agenda/ Issue | Decision of 65 th PSC | Status of action Taken |
|------|------------|---|---|-------------------------|
| 1 | A5 | Annual protection audit plan for FY 2026-27 | Non-compliant utilities were asked to submit annual audit plan for sub-station wise audit date without any further delay. | Agenda has been listed |
| 2 | A6 | Third-party protection audit plan | Forum directed utilities to submit audit plan. Subsequently, the audit reports along with compliance status may be submitted to NRPC Secretariat within one month of completion of audit. | Agenda has been listed |
| 3 | A11 | Updation of protection settings database (agenda by NRPC Secretariat) | <p>i. Utilities were requested to inform NRPC Secretariat for requirement of addition of elements in folder. Accordingly, "edit" permission shall be granted for updation of database.</p> <p>ii. Nomination of Nodal Officers may be expedited. Letter may be issued for reminder.</p> | Agenda has been listed. |

| Status of performance indices reporting of December 2025 (Last date of submission 07.01.2026) | | | | | | | |
|---|-----------------------------------|---|--------------------------|-----------------|---------------------|------------------------------|--|
| S. No. | Utility | | Received Status (Yes/No) | Vide mail dated | Remarks | Indices less than 1 (Yes/No) | Reason submitted and corrective action taken |
| 1 | PGCIL | Central Government owned Transmission Company | Y | 06.01.2026 | NR-1 | No | NA |
| | | | Y | 09.01.2026 | NR-2 | No | NA |
| | | | Y | 06.01.2026 | NR-3 | No | NA |
| 2 | NTPC | Central Generating Company | Y | 20.01.2026 | Anta | Yes | Yes |
| | | | Y | 21.01.2026 | Auriya | No | NA |
| | | | | | Dadri (Thermal) | | |
| | | | Y | 08.01.2026 | Koldam | No | NA |
| | | | Y | 21.01.2026 | Rihand | No | NA |
| | | | Y | 22.01.2026 | Singrauli | Yes | |
| | | | | | Unchahar | | |
| | | | Y | 03.01.2026 | Tanda | No | NA |
| | | | Y | 08.01.2026 | | No | NA |
| | | | Y | 02.01.2026 | Tehri | No | NA |
| 3 | BBMB | | Y | 02.01.2026 | Tehri PSP | No | NA |
| 4 | THDC | | Y | 03.01.2026 | Koteshwar | No | NA |
| 5 | SJVN | | Y | 05.01.2026 | RHPS | No | NA |
| | | | Y | 02.01.2026 | NJHPS | No | NA |
| 6 | NHPC | | Y | 02.01.2026 | - | Yes | Yes |
| 7 | NPCIL | | Y | 03.01.2026 | RAPS-A | No | NA |
| | | | Y | 06.01.2026 | RAPS-B | No | NA |
| | | | Y | 03.01.2026 | RAPS-C(5&6) | No | NA |
| | | | Y | 07.01.2026 | RAP -D (7 & 8) | No | NA |
| | | | Y | 03.01.2026 | NAPS-1&2 | No | NA |
| 8 | DTL | | Y | 12.01.2026 | | Yes | Yes |
| 9 | HVPNL | | Y | 05.01.2026 | - | No | NA |
| 10 | RRVNL | | Y | 07.01.2026 | - | Yes | Yes |
| 11 | UPPTCL | State Transmission Utility | Y | 05.01.2026 | Meerut Circle | No | NA |
| | | | Y | 05.01.2026 | Agra Circle | No | NA |
| | | | Y | 01.01.2026 | Jhansi Circle | No | NA |
| | | | Y | 05.01.2026 | Prayagraj Circle | Yes | Yes |
| | | | Y | 05.01.2026 | Gorakhpur Circle | No | NA |
| | | | Y | 05.01.2026 | Lucknow Circle | No | NA |
| | | | Y | 06.01.2026 | Kumaon | No | NA |
| 12 | PTCUL | | Y | 07.01.2026 | | Yes | Yes |
| 13 | PSTCL | | Y | 07.01.2026 | - | Yes | Yes |
| 14 | HPPTCL | | Y | 07.01.2026 | - | Yes | Yes |
| 15 | JKPTCL | UT | Y | 05.01.2026 | Jammu | No | NA |
| | | UT | Y | 05.01.2026 | Kashmir | No | NA |
| 16 | Chandigarh Power Distribution Ltd | RPSG Group | Y | 30.12.2025 | 220 Kv Kishangarh | No | NA |
| 17 | IPGCL | | Y | 02.01.2026 | PPS-I | No | NA |
| | | | Y | 02.01.2026 | PPS-III, Bawana | No | NA |
| | | | Y | 09.01.2026 | PTPS, Panipat | No | NA |
| | | | Y | 09.01.2026 | DCRTPP, Yamunanagar | No | NA |
| | | | Y | 09.01.2026 | RGTPP (Khedar) | No | NA |
| | | | Y | 07.01.2026 | KTPS | No | NA |
| | | | Y | 07.01.2026 | kATPP, Jhalawar | No | NA |
| | | | Y | 06.01.2026 | CSCTPP Chhabra | No | NA |
| | | | Y | 03.01.2026 | RGTPP, Ramgarh | No | NA |
| | | | Y | 07.01.2026 | Ctpp,Chhabra | No | NA |
| | | | Y | 01.01.2026 | DCCPP, Dholpur | No | NA |
| | | | Y | 07.01.2026 | STPS Suratgarh | No | NA |
| | | | Y | 07.01.2026 | SSCTPS Suratgarh | No | NA |
| 18 | UPRVUNL | State Generating Company | Y | 02.01.2026 | Parichha B (220 kV) | No | NA |
| | | | Y | 01.01.2026 | Parichha C (400 kV) | Yes | Yes |
| | | | Y | 02.01.2026 | DTPS Anpara | No | NA |
| | | | Y | 05.01.2026 | Obra A & B | No | NA |
| | | | Y | 05.01.2026 | Obra C | No | NA |
| | | | Y | 09.01.2026 | Harduaqani 220 kV | No | NA |
| | | | Y | 09.01.2026 | Harduaqani 400 kV | No | NA |
| | | | Y | 05.01.2026 | Anpara-A&B | Yes | Yes |
| | | | Y | 09.01.2026 | Panki TPS | No | NA |
| | | | Y | 09.01.2026 | Jawaharpur | No | NA |
| | | | Y | 07.01.2026 | Ghatampur 765 kV | No | NA |
| 19 | UJVNL | | Y | 01.01.2026 | Dharasu | No | NA |
| | | | Y | 01.01.2026 | Tiloth | No | NA |
| | | | Y | 03.01.2026 | Khodri | No | NA |

| | | | | | | | |
|----|---|---|---|------------|--------------------------------|-----|-----|
| | | | Y | 03.01.2026 | Chibro | No | NA |
| | | | Y | 03.01.2026 | Vyasi | No | NA |
| 20 | HPPCL | | Y | 03.01.2026 | Kashang HEP | No | NA |
| | | | Y | 03.01.2026 | Sawara Kuddu | No | NA |
| | | | Y | 03.01.2026 | Sainj | No | NA |
| 21 | PSPCL | State Generating Company & State owned Distribution Company | Y | 04.01.2026 | RSD | No | NA |
| | | | Y | 06.01.2026 | GGSTPS, Rupnagar | No | NA |
| | | | Y | 02.01.2026 | GVK Power Goindwal Shahib Ltd. | No | NA |
| | | | Y | 05.01.2026 | GHSTPS, Lehra Mohabbat | No | NA |
| 22 | HPSEBL | Distribution company having Transmission | Y | 06.01.2026 | Hamirpur Circle | No | NA |
| | | | Y | 03.01.2026 | Shimla Circle | Yes | Yes |
| 23 | Prayagraj Power Generation Co. Ltd. | | Y | 01.01.2026 | | No | NA |
| 24 | Aravali Power Company Pvt. Ltd | | | | | | |
| 25 | Apraava Energy Private Limited | | Y | 09.01.2026 | | No | NA |
| 26 | Talwandi Sabo Power Ltd. | | Y | 06.01.2026 | | No | NA |
| 27 | Nabha Power Limited | | Y | 01.01.2026 | | No | NA |
| 28 | MEIL Anpara Energy Ltd (Anpara-C) | | Y | 05.01.2026 | | No | NA |
| 29 | Rosa Power Supply Company Ltd | | Y | 03.01.2026 | | No | NA |
| 30 | Lalitpur Power Generation Company Ltd | | Y | 02.01.2026 | | No | NA |
| 31 | MEJA Urja Nigam Ltd. | | | | | | |
| 32 | Adani Power Rajasthan Limited | | Y | 05.01.2026 | | No | NA |
| 33 | JSW Energy Ltd. (KWHEP) | | Y | 02.01.2026 | | No | NA |
| | | | | | | | |
| | ISTS Transmission Utilities | | | | | | |
| 34 | INDIGRID | | | | | | |
| 35 | ADHPL | | Y | 06.01.2026 | | No | NA |
| 36 | Adani Transmission Limited | AESL | Y | 07.01.2026 | | No | NA |
| 37 | Bikaner Khetri Transmission Limited | | Y | 07.01.2026 | | No | NA |
| 38 | Fatehgarh Bhadla Transmission Limited | | Y | 07.01.2026 | | No | NA |
| | | | | | | | |
| | State Utilities | | | | | | |
| | Uttar Pradesh | | | | | | |
| 39 | Vishnuprayag Hydro Electric Plant (J.P.) | | Y | 01.01.2026 | | No | NA |
| 40 | Alaknanda Hydro Electric Plant (GVK) | | Y | 05.01.2026 | | No | NA |
| 41 | Khara Power House (Khara) | | Y | 02.01.2026 | | No | NA |
| 42 | WUPPTCL | MEIL | Y | 03.01.2026 | | No | NA |
| 43 | SEUPPTCL | Resurgent Power | Y | 05.01.2026 | | No | NA |
| 44 | GTL | AESL | Y | 07.01.2026 | | No | NA |
| 45 | OCBTL | AESL | Y | 07.01.2026 | | No | NA |
| | | | | | | | |
| | Rajasthan | | | | | | |
| 46 | Barsingsar Plant | NLC | | | | | |
| 47 | Rajwest Plant | JSW | | | | | |
| 48 | ATSCL | AESL | Y | 07.01.2026 | | No | NA |
| 49 | HPTSL | AESL | Y | 07.01.2026 | | No | NA |
| 50 | STSL | AESL | Y | 07.01.2026 | | No | NA |
| 51 | MTSCL | AESL | Y | 07.01.2026 | | No | NA |
| | RE Utilities | | | | | | |
| 52 | ABC Renewable Pvt. Ltd | | Y | 03.01.2026 | | No | NA |
| 53 | ACME Heeragarh powertech Pvt. Ltd | ACME | Y | 02.01.2026 | | No | NA |
| 54 | ACME Phalodi | ACME | Y | 02.01.2026 | | No | NA |
| 55 | ACME Deogarh | ACME | | | | | |
| 56 | ACME Raisar | ACME | | | | | |
| 57 | ACME Dhaulpur | ACME | | | | | |
| 58 | ACME Sikar | ACME | Y | 02.01.2026 | | No | NA |
| 59 | ACME Chittorgarh Solar Energy Pvt Ltd (Ayana) | AYANA | | | | | |
| 60 | AHEJOL-Hybrid-1 Madhopura | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 61 | AHEJ3L - Hybrid-2B 300MW | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 62 | AHEJFL(AEML 250) | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 63 | AHEJ4L(AEML-350) | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 64 | ASEJ2PL(Hapasar 300MW) SPC11PL | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 65 | Adani Renewable Energy (RJ) Limited Rawra 200 | ADANI GREEN | Y | 08.01.2026 | | No | NA |

| | | | | | | | |
|-----|--|----------------------|---|------------|--|-----|-----|
| 66 | Adani Solar Energy Four Limited SECI 50 | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 67 | Adani Solar Energy Jodhpur Two Limited Merchant 50 | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 68 | ASEJ05PL (RJ200) | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 69 | ASERJ2PL - Phalodi 150 MW | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 70 | ASERJ01PL-Pokhran 300 MW (SB energy six) | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 71 | AGE25L(Badi Sid) | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 72 | Bhadla park - South block | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 73 | AGE24L (Bhimsar) | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 74 | AHEJ2L - Hybrid-2A 300MW | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 75 | ASERJ2PL - Devikot 180 MW | ADANI GREEN | Y | 08.01.2026 | | No | NA |
| 76 | ASEJOPL-Hybrid 450 MW | ADANI GREEN | Y | 08.01.2026 | | Yes | Yes |
| 77 | Altra Xergi Pvt. Ltd. | | Y | 01.01.2026 | | No | NA |
| 78 | AMP Energy Green Four Pvt. Ltd. | AMPIN ENERGY | | | | | |
| 79 | AMP Energy Green Five Pvt. Ltd. | AMPIN ENERGY | | | | | |
| 80 | AMP Energy Green Six Pvt. Ltd. | AMPIN ENERGY | | | | | |
| 81 | Amplus Aqes Private Limited | GENTARI | Y | 02.01.2026 | | No | NA |
| 82 | Avaada RJHN 240MW | AVAADA | Y | 05.01.2026 | | No | NA |
| 83 | Avaada sunce energy Pvt limited | | Y | 05.01.2026 | | No | NA |
| 84 | Avaada Sunrays Pvt. Ltd. | | Y | 05.01.2026 | | No | NA |
| 85 | Avaada Sustainable RJ Pvt. Ltd. | | Y | 05.01.2026 | | No | NA |
| 86 | Ayana Renewable Power Three Private Limited | | | | | | |
| 87 | Ayaana Renewable Power One Pvt. Ltd. | | | | | | |
| 88 | Azure Power Forty One Pvt limited | | | | | | |
| 89 | Azure Power Forty Three Pvt. Ltd. RSS | | | | | | |
| 90 | Azure Maple Pvt. Ltd. | | | | | | |
| 91 | AZURE POWER INDIA Pvt. Ltd., Bhadla | | | | | | |
| 92 | Azure Power Thirty Four Pvt. Ltd. | | | | | | |
| 93 | Clean Solar Power (Jodhpur) Pvt. Ltd. | Hero Future Energies | Y | 01.01.2026 | | No | NA |
| 94 | Eden Renewable Cite Private Limited | | | | | | |
| 95 | Grian Energy private limited | GENTARI | Y | 02.01.2026 | | No | NA |
| 96 | Mahindra Renewable Private Limited | | | | | | |
| 97 | Mega Surya Urja Pvt. Ltd. (MSUPL) | | | | | | |
| 98 | AURAIYA Solar | | | | | | |
| 99 | DADRI SOLAR | | | | | | |
| 100 | SINGRAULI SOLAR | | | | | | |
| 101 | Anta Solar | | | | | | |
| 102 | Unchahar Solar | | | | | | |
| 103 | NTPC Devikot Solar plant-1 | NGEL | | | | | |
| 104 | NTPC Devikot Solar plant-2 | | | | | | |
| 105 | SKB NTPC -1 (250MW) | NGEL | | | | | |
| 106 | SKB NTPC-2 (300MW) | | | | | | |
| 107 | NTPC Nokhra 300MW | | | | | | |
| 108 | NTPC Fatehgarh 296MW | | | | | | |
| 109 | One Volt energy Pvt. Ltd. | GENTARI | Y | 02.01.2026 | | No | NA |
| 110 | ReNew Solar Urja Private Limited | IndiGrid | | | | | |
| 111 | ReNew Solar Energy (Jharkhand Three) Private Limited | | Y | 06.01.2026 | | No | NA |
| 112 | Neemba Renew Surya Vihan Pvt. Ltd. | | Y | 06.01.2026 | | No | NA |
| 113 | Renew Sun Bright Pvt. Ltd. (RSBPL) | | Y | 06.01.2026 | | No | NA |
| 114 | Renew Surya Partap Pvt. Ltd. | | Y | 06.01.2026 | | No | NA |
| 115 | Renew Surya jyoti Pvt. Ltd. | ReNew | Y | 06.01.2026 | | No | NA |
| 116 | Renew Surya Ravi Pvt. Ltd. | | Y | 06.01.2026 | | No | NA |
| 117 | Renew Surya Roshni Pvt. Ltd. | | Y | 06.01.2026 | | No | NA |
| 118 | Renew Surya Vihan Pvt. Ltd. | | Y | 06.01.2026 | | No | NA |
| 119 | Renew Solar Photovoltaic Pvt Ltd | | Y | 06.01.2026 | | No | NA |
| 120 | Renew Hans Urja Pvt Ltd. | | Y | 06.01.2026 | | No | NA |
| 121 | RENEW SOLAR POWER Pvt. Ltd. Bikaner | | Y | 06.01.2026 | | No | NA |
| 122 | Renew Surya Ayaan Pvt. Ltd. | IndiGrid | | | | | |
| 123 | Rising Sun Energy-K Pvt. Ltd. | | | | | | |

| | | | | | | | |
|-----|--|------------|---|------------|--|----|----|
| 124 | Serentica Renewables India 4 & 5 Private Limited | Serentica | Y | 04.01.2026 | | No | NA |
| 125 | Khidrat Renewable energy Pvt Ltd. | | Y | 07.01.2026 | | No | NA |
| 126 | Solzen Urja Private Limited | Sekura | Y | 09.01.2026 | | No | NA |
| 127 | Tata Power Green Energy Ltd. (TPGEL) | TATA POWER | Y | 02.01.2026 | | No | NA |
| 128 | Tata Power Renewable Energy Ltd. (TPREL) | | Y | 02.01.2026 | | No | NA |
| 129 | Banderwala Solar Plant TP Surya Ltd. | | Y | 02.01.2026 | | No | NA |
| 130 | Thar Surya Pvt. Ltd. | | | | | | |
| 131 | TRANSITION ENERGY SERVICES PRIVATE LIMITED | | | | | | |
| 132 | Transition Green Energy Private Limited | | | | | | |
| 133 | Transition Sustainable Energy Services Private Limited | | | | | | |
| 134 | GSPL_BHDL2 (Gorbea Solar Pvt Ltd) | Zelestra | Y | 09.01.2026 | | No | NA |

Annexure-A.III

| S.No. | Substation | Element name | Date & Time of the tripping | Categorization (F/U) F = Failures to operate at internal power system faults U = Unwanted operations | Reason for failures/Unwanted operation | Corrective action taken/ to be taken |
|-------|-------------|----------------------|-----------------------------|--|---|---|
| 1 | BTPS ANPARA | Anpara Sarnath CKT 2 | 17.12.25/ 15:31:47 | U | Anpara Sarnath Ckt 2 tripped at Anpara end only due to non operation of auto reclose at Anpara end. | Autorecloser circuit was checked and made it corrected. |
| 2 | BTPS ANPARA | Anpara Sarnath CKT 2 | 17.12.25/ 23:27:24 | U | Anpara Sarnath Ckt 2 tripped at Anpara end only due to non operation of auto reclose at Anpara end. | Autorecloser circuit was checked and made it corrected. |
| 3 | BTPS ANPARA | Anpara Sarnath CKT 2 | 18.12.25/ 02:11:13 | U | Anpara Sarnath Ckt 2 tripped at Anpara end only due to non operation of auto reclose at Anpara end. | Autorecloser circuit was checked and made it corrected. |

Format No.-PI-01
Reporting of performance indices for protection system
(for elements connected at 220 kV and above)
Name of Utility: Delhi Transco Ltd
Month: December 2025

| S. No. | Substation | Unit (SPS/Line/ICTR/GT etc) | Nc | Nf | Nu | Ni | Dependability Index (D=Nc/(Nc+Nf)) | Security Index (S=Nc/(Nc+Nu)) | Reliability Index (R=Nc/(Nc+Ni)) | Remedial Action Taken (if applicable)/ Remarks |
|--------|--------------------------|---------------------------------|----|----|----|----|---------------------------------------|----------------------------------|-------------------------------------|---|
| 1 | 400kV Bawana | 400kV Munda Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 2 | 400kV Bannauli | 220kV Pappankalan Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 3 | 400kV Munda | 400kV Jhatkara Ckt-1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 400kV Jhatkara Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 400kV Bawana Ckt-2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Peergarhi Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 4 | 220kV South of Wazirabad | 220kV Mandola Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Mandola Ckt-2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Mandola Ckt-3 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 160MVA Transformer-2 (220/66kV) | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | All 66kV Incomers | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 5 | 220kV BTPS | 220kV Ballabgarh Ckt-2 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Alwar Ckt-1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 6 | 220kV Gopalpur | 220kV Mandola Ckt-1 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 160MVA Transformer-4 (220/66kV) | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 7 | 220kV Tuglakabad | 220kV Mehrauli Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Okha Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 8 | 220kV Geeta Colony | 220kV South of Wazirabad Ckt-1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV South of Wazirabad Ckt-2 | 4 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 9 | 220kV IP | 220kV Patparganj Ckt-1 | 5 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Patparganj Ckt-2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 10 | 220kV Kanjhawala | 220kV Munda Ckt | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Najafgarh Ckt | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 11 | 220kV Kashmere Gate | 220kV South of Wazirabad Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV South of Wazirabad Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 12 | 220kV Lodhi Road | 220kV Maharani Bagh Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | | | | | | | | | |
| 13 | 220kV Maharani Bagh | 220kV Lodhi Road Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Lodhi Road Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |

| S. No. | Substation | Unit (SPS/Line/CT/GT etc) | Nc | Nf | Nu | Ni | Dependability Index ($D=Nc/(Nc+Nf)$) | Security Index ($S=Nc/(Nc+Nu)$) | Reliability Index ($R=Nc/(Nc+Ni)$) | Remedial Action Taken (if applicable)/ Remarks |
|--------|---------------------|---------------------------------|----|----|----|----|---|--------------------------------------|---|---|
| 14 | 220kV Mehrauli | 220kV Tuglakabad Ckt-1 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Tuglakabad Ckt-2 | 3 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 15 | 220kV Najafgarh | 220kV Kanjhawala Ckt | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Bamauli Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 16 | 220kV Narela | 220kV DSIDC Bawana Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 17 | 220kV Patparganj | 220kV Geeta Colony Ckt-1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Geeta Colony Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Preet Vihar Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Preet Vihar Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV IP Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Gazipur Ckt | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 18 | 220kV Pappankalan-I | 100MVA Transformer-2 (220/66kV) | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 19 | 220kV Rajghat | 220kV IP Ckt-1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV IP Ckt-2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 100MVA Transformer-1 (220/33kV) | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 20 | 220kV Ridge Valley | 220kV Naraina Ckt | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Bus Coupler | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 21 | 220kV Rohini-I | 220kV Bawana Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Shalimar Bagh Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 22 | 220kV Sarita Vihar | 220kV BTPS Ckt-1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | Tripping occurred due to tracking on the base of 86 relay. The relay has been repaired. |
| | | 220kV BTPS Ckt-2 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Maharani Bagh Ckt | 2 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 23 | 220kV SGTN | 220kV Shalimar Bagh Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| 24 | 220kV Timarpur | 220kV Kashmere Gate Ckt-1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |
| | | 220kV Kashmere Gate Ckt-2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | |

Justification for less than one index may be attached separately.

Nc is the number of correct operations at internal power system faults

Nf is the number of failures to operate at internal power system faults

Nu is the number of unwanted operations

Ni is the number of incorrect operations and is the sum of Nf and Nu



H.P. POWER TRANSMISSION CORPORATION LIMITED

(A State Government Undertaking)

Regd. Office: Himfed Bhawan, Panjari, Tutikandi, Shimla-171005

DGM (Protection & Communication), Chowki Jamwalan, Hamirpur (H.P.)-177020

Email: dgmprot.tel@hpmail.in; Web: www.hpptcl.com

No: HPPTCL/DGM (P&C)/NRPC/2025-26- **321-323**

Dated:- **07/01/2026**

To

The Superintending Engineer (Protection),
Northern Regional Power Committee,
18-A, Shaheed Jeet Singh Marg,
Katwaria Sarai, New Delhi-110016.
Email: seo-nrpc@nic.in

Subject: Performance indices for protection system of HPPTCL substations and lines for the month of December, 2025.

Sir,

Enclosed please find herewith the detailed performance indices of protection system of HPPTCL for elements connected at 220 kV and above voltage level for the month of December, 2025 for your reference please.

DA: As above

Yours faithfully,


Sr. Manager (E)
O/o DGM (Prot. &Comm.),
HPPTCL, Chowki Jamwalan,
Hamirpur (HP).

Copy to:

1. The General Manager (Projects), HPPTCL, Himfed Bhawan, Shimla-05.
2. The Superintending Engineer, HPSLDC, Totu, Shimla-04.


Sr. Manager (E)
O/o DGM (Prot. &Comm.),
HPPTCL, Chowki Jamwalan,
Hamirpur (HP).

Report of performance indices for protection System for December, 2025
(for elements connected at 220 kV and above)

| Sr. No. | Name of Sub-Station | Unit (SPS/Line/ICT/GT/ etc.) | Nc | Nf | Nu | Nf+Nu | Dependability Index (D) D= Nc/Nc+NF | Security Index (S) S=Nf/Nc+Nu | Reliability Index (R) R=Nc/Nc+Nu | Brief Description of Tripping | Corrective Action |
|---------|--------------------------------------|---|----|----|----|-------|--|----------------------------------|-------------------------------------|-------------------------------|---|
| 1 | 400/220/66 kV Wangtoo Substation | 400 kV Wangtoo - karcham Ckt-I | - | - | - | - | - | - | - | Nil | |
| | | 400 kV Wangtoo - karcham Ckt-II | - | - | - | - | - | - | - | | |
| | | 400 kV Wangtoo - Kala Amb Ckt | - | - | - | - | - | - | - | | |
| | | 400 kV Wangtoo - Sorang Ckt | - | - | - | - | - | - | - | | |
| | | ICT-I (315 MVA, 400/220/33 kV) | - | - | - | - | - | - | - | | |
| | | ICT-II (315 MVA, 400/220/33 kV) | - | - | - | - | - | - | - | | |
| | | 220 kV Wangtoo - Bhaba Ckt. | - | - | - | - | - | - | - | | |
| | | 220 kV Wangtoo - Kashang Ckt | - | - | - | - | - | - | - | | |
| | | 220 kV Wangtoo-Kotia ckt. | - | - | - | - | - | - | - | | |
| | | 220 kV Wangtoo-Bhoktoo | - | - | - | - | - | - | - | | |
| | | Trafo I (80/100 MVA, 220/66/33 kV) | - | - | - | - | - | - | - | | |
| | | Trafo II (80/100 MVA, 220/66/33 kV) | - | - | - | - | - | - | - | | |
| | | 400 kV Lahal Rajera ckt. | - | - | - | - | - | - | - | | |
| | | 400 kV Lahal Kutehar ckt. | - | - | - | - | - | - | - | | |
| 2 | 400/220/33kV GIS Lahal, Distt Chamba | ICT-I (315 MVA, 400/220/33 kV) | - | - | - | - | - | - | - | Nil | |
| | | ICT -2 (315 MVA, 400/220/33 kV) | - | - | - | - | - | - | - | | |
| | | 105 MVA Spare Transformer (400/220/33 kV) | - | - | - | - | - | - | - | | |
| | | 220 kV Lahal -Budhil Ckt. 1 | - | - | - | - | - | - | - | | |
| | | 220 kV Lahal - Bajoli Hoji Ckt. | - | - | - | - | - | - | - | | |
| | | 220 kV Lahal - Helling Ckt. | - | - | - | - | - | - | - | | |
| 3 | 400/220/66kV GIS S/Stn GUMMA | ICT-1 (315 MVA, 400/220/33 kV) | - | - | - | - | - | - | - | Nil | During the Buchholz operation of the spare phase (earlier B-phase), the tripping was initiated to the ICT bank; however, as per the scheme/drawing, this tripping is correct. Corrective action has been taken. |
| | | ICT-2 (315 MVA, 400/220/33 kV) | 1 | 0 | 0 | 0 | 1 | 1 | 1 | | |
| | | 400kV Bus-1 | - | - | - | - | - | - | - | | |
| | | 400kV Bus-2 | - | - | - | - | - | - | - | | |
| | | 400kV Gumma-Panchkuia Ckt-I | - | - | - | - | - | - | - | | |
| | | 400kV Gumma-Panchkuia Ckt-II | - | - | - | - | - | - | - | | |
| | | 400kV Gumma-Jhakri Ckt-I | - | - | - | - | - | - | - | | |
| | | 400kV Gumma-Jhakri Ckt-II | - | - | - | - | - | - | - | | |
| | | 220kV Gumma-Hatkoti Ckt-I | - | - | - | - | - | - | - | | |
| | | 220kV Gumma-Hatkoti Ckt-II | - | - | - | - | - | - | - | | |
| | | 220kV Hatkoti-Gumma Ckt-I | - | - | - | - | - | - | - | | |
| | | 220kV Hatkoti-Gumma Ckt-II | - | - | - | - | - | - | - | | |
| | | 220kV Hatkoti-Netwar Mori Ckt-I | - | - | - | - | - | - | - | | |
| | | 220kV Hatkoti-Sunda Ckt-I | - | - | - | - | - | - | - | | |
| 4 | 220kV Switching S/Stn Hatkoti | 220kV Hatkoti-Sunda Ckt-II | - | - | - | - | - | - | - | Nil | |
| | | 220 kV Sunda-Hatkoti Ckt-1 | - | - | - | - | - | - | - | | |
| | | 220 kV Sunda-Hatkoti Ckt-2 | - | - | - | - | - | - | - | | |
| | | 220/132 kV, ICT-1 | - | - | - | - | - | - | - | | |
| | | 220/132 kV, ICT-2 | - | - | - | - | - | - | - | | |
| | | 220/66 kV Transformer. | - | - | - | - | - | - | - | | |
| 5 | 220/132/66 kV, GIS Substation Sunda | 220/132 kV, ICT-1 | - | - | - | - | - | - | - | Nil | |
| | | 220/132 kV, ICT-2 | - | - | - | - | - | - | - | | |


Assistant Engineer (E)
O/o DGM (Prot. Comm.)
 Unit No. 11

Performance Indices for the Month of Dec'24

| Sl. No. | Name of Utility | Name of PS | Elements (Line/ Unit) | From | To | Total Outage | Outage Reason | Nc | Nf | Nu | Ni | Dependa Bility Index (D=NC/(N c+NI)) | Security Index (S=NC/(N c+NI)) | Reliability Index (R=NC/(N c+NI)) | Reason for wrong operation | Action Taken |
|---------|-----------------|------------|------------------------------------|-----------------|-----------------|--------------|--|----|----|----|----|--------------------------------------|--------------------------------|-----------------------------------|--|---|
| 1 | NHPC Ltd | Chamera-II | 400 KV Chamera-II-Kishanpur Line#1 | 06-Dec-25 17:55 | 06-Dec-25 19:49 | 01:54 | Distance Protection relay operated in Z1 at R-Y Phase fault | 1 | 0 | 0 | 0 | 1 | 1 | 1 | NA | NA |
| 2 | NHPC Ltd | Tanakpur | 220 KV Tanakpur-CB Ganj Line#1 | 08-Dec-25 15:59 | 08-Dec-25 18:10 | 02:11 | Line tripped on operation of DPR in Z2 at B-A phase fault. | 1 | 0 | 0 | 0 | 1 | 1 | 1 | NA | NA |
| 3 | NHPC Ltd | Urf-I | 40 KV Urf-I-Anargah Line#1 | 21-Dec-25 00:46 | 21-Dec-25 02:48 | 02:02 | Line#1 tripped on operation of Direct Trip Signal from the remote end. | 1 | 0 | 0 | 0 | 1 | 1 | 1 | NA | NA |
| 4 | NHPC Ltd | Bairasul | 220 KV Bairasul-Pong Line#1 | 24-Dec-25 16:18 | -- | -- | No tripping from Bairasul end | -- | -- | -- | -- | -- | -- | -- | No tripping from Bairasul end | No tripping from Bairasul end |
| 5 | NHPC Ltd | Salai | 220 KV Salai-Kishanpur Line#5 | 24-Dec-25 05:48 | 24-Dec-25 13:20 | 07:32 | Salai-Kishanpur Line#5 tripped on operation of Z4 protection | 1 | 0 | 1 | 1 | 1 | 0.5 | 0.5 | Due to the sudden loss of the Bus-A Isolator feedback contact, the distance protection relay operated in operation of Z4 protection. | Isolator Feedback status was rectified. |

28/12/2024
SM(E)

Performance Indices of Anta Gas Power Station for Dec-2025

| Index. No. | Number of correct operations at internal power system faults(Nc) | Number of failures to operate at internal power system faults(Nf) | The Dependability Index($D=N_c/(N_c+Nf)$) | Remark |
|------------|--|---|---|--------|
| 1 | 8 | 0 | 1 | |

| Index. No. | Number of correct operations at internal power system faults(Nc) | Number of unwanted operations (Nu) | The Security Index($S=N_c/(N_c+Nu)$) | Remark |
|------------|--|------------------------------------|--|---|
| 2 | 8 | 1 | 0.88888889 | Maloperation of the relay M1 of the line bhlwara-2 ,we have tested the relay and associated circuit and bay equipments Now system is working ok |

| Index. No. | Number of correct operations at internal power system faults(Nc) | Number of incorrect operations (Ni=Nf+Nu) | The Reliability Index ($R=N_c/(N_c+Ni)$) |
|------------|--|---|--|
| 3 | 8 | 1 | 0.88888889 |

Annexure-X

FormatNo.-PI-01

Reporting of performance indices for protection system

(for elements connected at 220 kV and above)

Name of

NTPC SINGRAULI: DEC 2025

| S.N. | Sub-station | Unit(SPS/Line/ICT/GT/etc) | Nc | Nf | Nu | Ni | Dependability index (D) | Security Index (S) | Reliability Index (R) |
|------|--------------------------|--|----|----|----|----|-------------------------|--------------------|-----------------------|
| 1 | STAGE-1 400KV SWITCHYARD | Allahabad line-01 and Allahabad line-02 tripping | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 2 | STAGE-1 400KV SWITCHYARD | | 0 | 0 | 0 | 0 | 1 | 1 | 1 |

1: -On 27th Dec 2025 at 07:26 Hrs Allahabad line-01 got tripped on Bucholz Operation of Reactor. It was maloperation of Bucholz contact. available at
 2:-On 12th Dec 2025 at 03:36 Hrs, Line tripped on unsuccessful A/R operation.

Justification for less than one index may be attached separately.

Nc is the number of correct operations at internal power system faults

Nf is the number of failures to operate at internal power system faults

Nu is the number of unwanted operations.

Ni is the number of incorrect operations and is the sum of Nf and Nu.

The Dependability Index defined as $D = Nc / Nc + Nf$

The Security Index defined as $S = Nc / Nc + Nu$

The Reliability Index defined as $R = Nc / Nc + Ni$


 गौरव उपाध्याय/GAUTAM UPADHYAY
 उप महाप्रबन्धक (ई.एम.डी.)/DGM (EMD)
 एनटीपीसी सिंगरौली / NTPC Singrauli
 प्लॉ शक्तिनगर, सिंगरौली-सोनाद (उ.प्र.) 231222
 P.O. Shaktinagar, Sonabhadra (U.P.) 231222

| S.No. | Substation | Element name | Date & Time of the tripping | Categorization (F/U) F = Failures to operate at internal power system faults U = Unwanted operations | Reason for failures/Unwanted operation | Corrective action taken/ to be taken |
|-------|----------------|-------------------------------|-----------------------------|--|--|---|
| 1 | 400KV PARICHHA | 400KV PARICHHA-ORAI CIRCUIT 1 | 12/28/2025 1:47 | U | During a single-phase transient fault, Auto reclose lockout shot recorded at Parichha end because of continuously persisting COS (carrier out of service) alarm. | UPPTCL Microwave division need to address the issue of healthy carrier feedback signal to relay panel originating from teleprotection panel (DTPC) .We are writing to concerned division for early rectification. |

Tripping Details

Punjab State Transmission Corporation Limited

December-2025

| SN | Sub-Station | Type (S/S/Line/FC/Tower) | Date on which Power System Tripped occurred | Local Feed Indicators | Remote Feed Indicators | Reason & Remedial Action | Nc | Nf | Nu | Ni | Dependency Index (D) | Security Index (S) | Reliability Index (R) |
|-----------------------------|---------------------|---|--|--|---|--|----|----|----|----|----------------------------|--------------------------|-----------------------------|
| 1 | 400 KV S/S Dhuur | 400 KV Dhuur-Talwandi sk:II | 09.12.2025 at 10:06(A/R) | Zone-I, B-Ph, Fault Distance=4.8 km(A/R opnd) | | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Dhuur-Talwandi sk:II | 17.12.2025 at 06:59 hrs (A/R) | Zone-I, Y-Ph, Fault Distance=3.4 km(A/R opnd) | | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Dhuur-Talwandi sk:II | 17.12.2025 at 07:12 hrs (A/R) | Zone-I, B-Ph, Fault Distance=6.4 km (A/R opnd) | | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Dhuur-Talwandi sk:II | 17.12.2025 at 07:15 hrs (A/R) | Zone-I, B-Ph, Fault Distance=2.3 km(A/R opnd) | | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Dhuur-Talwandi sk:II | 17.12.2025 at 07:18 hrs (A/R) | Zone-I, Y-Ph, Fault Distance=20.3 km | Zone-I, B-Ph, Fault Distance=62.74 km | Change Y phase string with healthy one at tower no:187 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Dhuur-Talwandi sk:II | 17.12.2025 at 07:29 hrs | Zone-I, B-Ph, Fault Distance=3.1 km | Zone-I, Fault Distance=14.3 km | Change R phase string with healthy one at tower no: 79 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 2 | 400 KV S/S Nalskaur | 220 KV Dhuur(400)Chajji sk:2 | 18.12.2025 at 02:59 hrs | Zone-I, B-Ph, Fault Distance=1.6 km | Zone-I, B-Ph, Fault Distance=12.5 km | Change B phase string with healthy one at tower no: 99A | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 220 KV Dhuur(400)Sumam sk:1 | 18.12.2025 at 05:18 hrs | Zone-I, Y-Ph, Fault Distance=1.3 km | Zone-I, Y-Ph, Fault Distance=7.59 km | Change Y phase string with healthy one at tower no:462 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 220 KV Dhuur(400)Dhuur sk:1 | 21.12.2025 at 02:17 hrs | Zone-I, B-Ph (A/R opnd) | | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Nalskaur-Talwandi sk:II | 17.12.2025 at 07:01 hrs | Zone-I, R-Ph, Fault Distance=39.1 km | Re-Ph, Fault Distance=42.2 km | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV S/S Rajpura | 17.12.2025 at 05:24 hrs | Zone-I, B-Ph, Fault Distance=16.11 km | Zone-I, B-Ph, Fault Distance=13.18 km | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 06.12.2025 at 00:12 hrs | Zone-I, B-Ph, Fault Distance=8 km | Zone-I, B-Ph, Fault Distance=8.7 km | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 3 | 400 KV S/S Rajpura | 400 KV Rajpura-Ludhiana PQ sk:II | 05.12.2025 at 00:55 hrs | Zone-I, Re-Ph, Fault Distance=8 km(A/R opnd) | Zone-I, Re-Ph, Fault Distance=44.4 km | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 14.12.2025 at 04:28 | Phase-I,2-E, FC- 6.18KA, Distance= 25.3km | Master operated 86.1, L2-E, FC-4.99KA, Distance= 6.8KM Zone-I | Due to issue in Master CB, Line was changed from the CB. The CB tripped with fault of Mubhin sk:II | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 14.12.2025 at 06:28 | No indications | No indications | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 14.12.2025 at 11:46 | Phase-I,2-E, FC- 3.44KA, Distance= 27.2km | No indications | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 16.12.2025 at 04:07 | Phase-I,1-E, FC- 3.8KA, Distance= 65.4km | Master operated 86.1, L1-E, FC=8.15KA, Distance= 23.4KM Zone-I | unwanted tripping because Main (AABB) relay went into default mode | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 16.12.2025 at 04:07 | No indications | Not tripped | Due to issue in Master CB, Line was changed from the CB. The CB tripped with fault of Mubhin sk:II | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 4 | 400 KV S/S Rajpura | 400 KV Rajpura-Ludhiana PQ sk:II | 05.12.2025 at 00:55 hrs | Zone-I, Re-Ph, Fault Distance=8 km(A/R opnd) | Zone-I, Re-Ph, Fault Distance=44.4 km | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 14.12.2025 at 04:28 | Phase-I,2-E, FC- 6.18KA, Distance= 25.3km | Master operated 86.1, L2-E, FC-4.99KA, Distance= 6.8KM Zone-I | Due to issue in Master CB, Line was changed from the CB. The CB tripped with fault of Mubhin sk:II | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 14.12.2025 at 06:28 | No indications | No indications | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 14.12.2025 at 11:46 | Phase-I,2-E, FC- 3.44KA, Distance= 27.2km | No indications | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 16.12.2025 at 04:07 | Phase-I,1-E, FC- 3.8KA, Distance= 65.4km | Master operated 86.1, L1-E, FC=8.15KA, Distance= 23.4KM Zone-I | unwanted tripping because Main (AABB) relay went into default mode | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Rajpura-Ludhiana PQ sk:II | 16.12.2025 at 04:07 | No indications | Not tripped | Due to issue in Master CB, Line was changed from the CB. The CB tripped with fault of Mubhin sk:II | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 5 | 400 KV S/S Malskaur | 220 KV Malskaur-Talwandi sk:II | 16.12.2025 at 04:56 | Zone-I, Y-Ph, Fault Distance=9.1 km | | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 220 KV Malskaur(400)Sardhana sk:II | 16.12.2025 at 11:21 | Zone-I, Y-Ph, Fault Distance=10.2 km | CB not closed from Sardhana end | Y Phase String damaged at Tower no. 35 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Malskaur-Mubhin sk:II | 16.12.2025 at 04:41 | Phase-I,1-E, FC- 4.1KA, Distance= 71.9km | Not tripped | unwanted tripping because Main (AABB) relay went into default mode | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Malskaur-Mubhin sk:II | 23.12.2025 at 03:37 | Phase-I,3-E, FC- 3.67KA, Distance= 68.7km | Master operated 86.1, L1-E, FC=8.96KA, Distance= 22.1 KM Zone-I | Due to issue in Master CB, Line was changed from the CB. The CB tripped with fault of Mubhin sk:II | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Malskaur-Talwandi sk:II | 23.12.2025 at 03:37 | No indications | Not tripped | | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400 KV Malskaur-Talwandi sk:II | 14.12.2025 at 06:28 | Master operated 86.1, L2-E, FC-4.99KA, Distance= 6.8KM Zone-I | Phase-I,2-E, FC- 3.44KA, Distance= 27.2km | Y phase insulator Disc string flashed on Tower No:70 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 6 | 400 KV S/S Mubhin | 400k V Mubhin Malskaur Ch:1 | 14.12.2025 at 11:46 | No indications | Phase-I,2-E, FC- 3.44KA, Distance= 27.2km | Y phase insulator Disc string flashed on Tower No:70 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400k V Mubhin Malskaur Ch:2 | 16.12.2025 at 04:07 | Master operated 86.1, L1-E, FC-8.15KA, Distance= 23.4KM Zone-I | Phase-I,1-E, FC- 3.8KA, Distance= 65.4km | unwanted tripping because Main (AABB) relay went into default mode | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400k V Mubhin Malskaur Ch:1 | 16.12.2025 at 04:04 | Master operated 86.1, L1-E, FC-8.49KA, Distance= 42.7KM Zone-I | Phase-I,1-E, FC- 6.61KA, Distance= 41.2km | R-phase insulator Disc string flashed on Tower No:64 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400k V Mubhin Malskaur Ch:2 | 16.12.2025 at 04:41 | Not tripped | Phase-I,1-E, FC- 4.1KA, Distance= 71.9km | unwanted tripping because Main (AABB) relay went into default mode | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400k V Mubhin Malskaur Ch:1 | 17.12.2025 at 03:50 | Master operated 86.1, L1-E, FC-9.78KA, Distance= 27.7KM Zone-I | Phase-I,1-E, FC- 6.3KA, Distance= 36.4km | R-phase insulator Disc string flashed on Tower No:73 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| | | 400k V Mubhin Malskaur Ch:1 | 19.12.2025 at 07:58 | Master operated 86.1, L1-E, FC-5.12KA, Distance= 46.1KM Zone-I | Phase-I,1-E, FC- 13.62KA, Distance= 14.6km | R-phase insulator Disc string flashed on Tower No:126 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 400k V Mubhin Malskaur Ch:1 | 23.12.2025 at 03:37 | Master operated 86.1, L2-E, FC-8.98KA, Distance= 22.1 KM Zone-I | Phase-I,2-E, FC- 3.67KA, Distance= 68.7km | R-phase insulator Disc string flashed on Tower No:197 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | | |
| 400k V Mubhin Malskaur Ch:1 | 29.12.2025 at 07:59 | Master operated 86.1, L2-E, FC=20.38KA, Distance= 2.8KM Zone-I | Phase-I,2-E, FC- 7.1KA, Distance= 52.7km | Y phase insulator Disc string flashed on Tower No:07 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | | |
| 400k V Mubhin Malskaur Ch:1 | 31.12.2025 at 08:12 | Master operated 86.1, L1-E, FC-7.12KA, Distance= 57.8KM Zone-I | Phase-I,1-E, FC- 14.84KA, Distance= 09.1km | R-phase insulator Disc string flashed on Tower No:149 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | | |

Format No. PI-01

Reporting of performance indices for protection system

(for elements connected at 220 KV and above)

Name of Utility: Protection Division, Jalandhar

Month: -12/2025

| S.N. | Sub-Station | Unit(SPS/line/CT/GT /etc) | Nc | Nf | Nu | Ni | Dependabilities Index (D) | Security Index (S) | Reliability Index (R) | Fault Detail | | Date | From | to | Duration | Remarks |
|------|-----------------------|---------------------------------|----|----|----|----|---------------------------|--------------------|-----------------------|--------------|-------------|------------|-----------|-----------|-----------|---|
| | | | | | | | | | | This End | That End | | | | | |
| 1 | 220 KV S/S Badshahpur | 220 KV Badshahpur- Jansher Line | 0 | 0 | 1 | 1 | 0 | 0 | 0 | ON | DT Received | 10.12.2025 | 13.18 Hrs | 15.17 Hrs | 01.59 Hrs | DT received (wire found short same replaced with new one) |



HIMACHAL PRADESH STATE ELECTRICITY BOARD LIMITED
(A State Government Undertaking)

Registered Office Vidyut Bhawan, HPSEBL Shimla-171004 (H.P.)
CIN U40109HP2009SGC031255
GST HPSEBL 02 AACCH4894EHZB
Website address www.hpseb.com

No. HPSEBL/ESCS/W-249/2025-26- *9/05-08*

Dated: *-03* /01/2026

To

The Chief Engineer,
HPSLDC, Totu Shimla-11.

Sub:- Reporting of performance indices for protection system for the month
of December, 2025 submission thereof.

Sir,

"Jai Hind"

Enclosed please find herewith the reporting of performance indices for
protection system submission for the month of December, 2025 in respect of this circle
is sent herewith for your kind information and further necessary action at your end
please.

DA:- As above.

Yours faithfully,


Superintending Engineer,
Electrical System Circle,
HPSEBL, Totu, Shimla-11.

Copy of above is forwarded to the following for information please:-

1. The Chief Engineer(ES), HPSEBL, Mattansidh Hamirpur.
2. The Superintending Engineer, Northern Regional Power Corporation, 18- A, Shahed
Jeet Singh Marg, Katwartia Sarai, New Delhi-110016(e mail seo-nrpc@nic.in)
3. The Superintending Engineer, PRALDC, HPSEBL, Totu Shimla-11.


Superintending Engineer,
Electrical System Circle,
HPSEBL, Totu, Shimla-11.



Report of performance indices for protection system for December, 2025 (for element connected at 220KV and above) in respect of ES Circle, Toru, Shimla-11

| Sr. No. | Name of Substation | Unit (SPS/Lines/ ICT/GT/ etc) | Nc | Nf | Nu | Ni | Dependability Index(D) D=Nc/Nc+Nf | Security Index(S) S=Nc/Nc+Nu | Reliability Index R=Nc/Nc+Ni | Brief Description of Tripping | Corrective Action |
|---------------------------------------|---|---------------------------------------|----|----|----|----|--------------------------------------|---------------------------------|---------------------------------|---|--|
| I. ES DIVISION NALAGARH | | | | | | | | | | | |
| 1 | 220/66/33/11 KV Sub Station Karha Baddi | 220KV Baddi-Nangal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 220KV Baddi-Mandhala | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 220KV Baddi-Kunihar ckt-No.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 220KV Baddi-Kunihar ckt-No.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 220KV Baddi-Finjore ckt-No.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | 220/66KV Sub Station Nangal Uperlia | 220KV Baddi-Finjore ckt-No.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 220KV Baddi-Finjore ckt-No.11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 100 MVA Transformer No. 01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 100 MVA Transformer No. 02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 3 | 220/66KV Sub Station Mandhala | 100 MVA Transformer No. 03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 220/33 25/31.5 MVA Transformer No. 04 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 85 Relay operated due to E/F, O/C R-Phase on 33KV Feeder No.1 | After check try taken hold ok |
| II. ES DIVISION KOTLA | | | | | | | | | | | |
| 1 | 220/66/22KV Sub Station Kotla (Jeori) | 220KV Kotla-Wangtoo Transmission line | 0 | 0 | 0 | 0 | NA | NA | NA | No outage reported | No outage reported |
| | | 100MVA Transformer-I | 0 | 0 | 0 | 0 | NA | NA | NA | No outage reported | No outage reported |
| | | 100MVA Transformer-II | 0 | 0 | 0 | 0 | NA | NA | NA | No outage reported | No outage reported |
| III. 220KV ES DIVISION KUNIHAR | | | | | | | | | | | |
| 1 | 220/132/33KV Sub Station HPSEBL Kunihar | 220 KV Bhaba-Wangtoo-Kunihar Ckt-I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA | NA |
| | | 220 KV Kotla-Kunihar Ckt-II | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NA |
| | | 220/132KV Bank-I | 0 | 0 | 0 | 1 | 1 | 1 | 1 | E/F, Over current due to CT Blast on L.V side | Supply restored through 220/132KV Trf. Bank No.11 & Blast C. I. has been re placed on the same day |
| IV. ES DIVISION BHABANAGER | | | | | | | | | | | |
| V. ES DIVISION NAHAN | | | | | | | | | | | |
| VI. ES DIVISION SOLAN | | | | | | | | | | | |
| VII. ES DIVISION TOTU | | | | | | | | | | | |

Superintending Engineer,
Electrical System Circle,
HPSEBL, Toru, Shimla-11

Copy of above is forwarded to the Superintending Engineer, PR&ALDC, H.P. Toru Shimla-11 for information and necessary action please.

मुख्य अभियन्ता (रा०)
निदेशक (आपूर्ति)



U.P. Power Transmission
Corporation Ltd.
Shakti Bhawan Extn.
14 Ashok Marg, Lucknow - 226001
Tel/Fax: 0522-2287833 / 2286476
Email: director_op@upptcl.org

No: १५ / Dir (Op)/ NRPC

Date: 02/01/2026

Subject: Protection performance indices & Performance indices (SPS) of protection system for

the month of 12/2025.

SEO
NRPC
New Delhi.

Mail ID - seo-nrpc@nic.in

Kindly find enclosed herewith copy of compiled Protection performance indices & Performance indices (SPS) along with the reports obtained from all 06 Zonal offices of UPPTCL for the month of December, 2025.

(Md. Reza Ahmad)
Chief Engineer (A)
31/1/26

No: / Dir (Op)/

Date:

Copy to :-

- 1 Director (Operation) UPPTCL, Lucknow for information.
- 2 Chief Engineer, TC/TW/TSW/TSC/TSE/TNE, UPPTCL, Lucknow/Meerut/Agra/Jhansi/Prayagraj/Gorakhpur.
- 3 Superintending Engineer (RA), UPSLDC, Lucknow.

(Md. Reza Ahmad)
Chief Engineer (A)

Protection Performance Indices

December, 2025

| No. | Transmission Zone | Dependability index | Security index | Reliability index | Remark |
|----------------------------|-------------------|---------------------|----------------|-------------------|---|
| 1 | TC, Lucknow | 1 | 1 | 1 | --- |
| 2 | TSC, Jhansi | 1 | 1 | 1 | --- |
| 3 | TW, Meerut | 1 | 1 | 1 | --- |
| 4 | TNE, Gorakhpur | 1 | 1 | 1 | --- |
| 5 | TSW, Agra | 1 | 1 | 1 | --- |
| 6 | TSE, Prayagraj | 0.94 | 1 | 0.94 | <p>ANALYSIS : Actually fault was in zone-2, relay sense the fault in zone-3 (Zone-2 starts but flags drops in few millisecond) and fault cleared before the delay time of Zone-3 (Fault clearing time is 750ms), Fault cleared from 220 kV rewa road isolux line which relay operates earlier against its earth fault setting.</p> <p>REMEDY ACTION : Relay healthiness checked found normal, detailed testing as per zone reach is planned on 07.01.2026, 400/220 kV rewa road officials will check their tms setting and its operation with respect to time and correct it.</p> <p>Relay healthiness checked found normal, detailed testing found normal, detailed testing as per zone reach is planned on 07.01.2026, 400/220 kV rewa road officials will check their tms setting and its operation with respect to time and correct it.</p> |
| Total indices value | | 0.990 | 1.000 | 0.990 | --- |

AGEL - NR- Performance Indices for the period Dec- 2025

| W. R. / S. NO. | WRRVC / NR / ELEMENT NAME | ELEMENT TYPE | Voltage Level | SFR or other TRIP/PROT DATE | SFR or TRIP/PROT TIME | Steady State | | | Index | | | REMARKS (Standing End) | Action Plan for Corrective Measures | |
|----------------|---------------------------|--------------|---------------|-----------------------------|-----------------------|--------------------------------------|--------------------------------|------------------------------|------------------------------|-----------------------------------|---------------------------------|------------------------|---|---|
| | | | | | | Tripping or protection operation (%) | No of Unwanted Operations (NU) | No of failed operations (NF) | Security Index (S-I) (Nc+NF) | Dependability Index (D-I) (Nc+NF) | Reliability Index (R-I) (Nc+NF) | | | |
| 1 | AGEL/AGEL-1 Main Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 2 | AGEL/AGEL-2 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 3 | AGEL/AGEL-3 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 4 | AGEL/AGEL-4 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 5 | AGEL/AGEL-5 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 6 | AGEL/AGEL-6 Bus | No. Tripping | 220KV | 18.12.2025 | 18:53 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | Differential Protection operated due to OG feeder cable disconnection failure | End Termination replaced and after necessary testing Tribo checked |
| 7 | AGEL/AGEL-7 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 8 | AGEL/AGEL-8 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 9 | AGEL/AGEL-9 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 10 | AGEL/AGEL-10 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 11 | AGEL/AGEL-11 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 12 | AGEL/AGEL-12 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 13 | AGEL/AGEL-13 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 14 | AGEL/AGEL-14 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 15 | AGEL/AGEL-15 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 16 | AGEL/AGEL-16 Bus | No. Tripping | 220KV | 27.12.2025 | 11:07 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | Differential Protection operated due to OG feeder cable disconnection failure | Cable End termination replaced and after necessary testing, Tribo checked |
| 17 | AGEL/AGEL-17 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 18 | AGEL/AGEL-18 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 19 | AGEL/AGEL-19 Bus | No. Tripping | 220KV | | | 0 | 0 | 0 | 0 | NA | NA | NA | | NA |
| 20 | AGEL/AGEL-20 Bus | No. Tripping | 220KV | 18.12.2025 | 7:54 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | Relay contact disconnection in Tribo function | Relay BCU confirmed and cable checked |
| 21 | AGEL/AGEL-21 Bus | No. Tripping | 220KV | 28.12.2025 | 12:58 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | Relay contact disconnection in Tribo function | Relay operation observed suspected. Relay replaced and hardware checked |

Reason for Performance Indices less than Unity- DECEMBER 2025 (RVPN)

Case-1 400KV Bikaner-Bhadla-I & 400KV Bikaner-Bhadla-II at 400 KV GSS BIKANER on 22.12.2025

No. of Unwanted operation – 2

Reason of unwanted operation –

Line were charged for anti-theft and tripped during testing of Busbar integration of NTPC Bay.

Corrective Action taken – YES

Workmen are asked to work carefully.

Case-2 400KV Babai-STPS CKT-I line with 80 MVAR STPS CKT- I Line Reactor, 400KV Babai-STPS CKT-II line with 80 MVAR STPS CKT- I Line Reactor & 315 MVA ICT-I at 400 KV GSS BABAI on 24.12.2025

No. of Unwanted operation – 3

Reason of unwanted operation –

Tripping occurred due to non-selection of VT during shifting of load from main bus 2 to other main bus 1 during shutdown.

Corrective Action taken –YES

VT selection problem rectified.

Case-3 400/220/33KV 500MVA ICT-2 at 400 KV GSS BHADLA on 23.12.2025

No. of Unwanted operation – 1

Reason of unwanted operation –

During Busbar protection testing by Protection Engineers.

Corrective Action taken – YES

Workmen are asked to work carefully.

Case-4 220 KV Kishangarh- Ajmer Line at 220 KV GSS KISHANGARH on 09.12.2025

No. of Unwanted operation – 1

Reason of unwanted operation –

M2 relay tripped with Z2 start.

Corrective Action taken – YES

Relay setting corrected.

Case-5 220KV Karoli- Khushkera line at 220 KV GSS KAROLI on 18.12.2025

No. of Unwanted operation – 1

Reason of unwanted operation –

C.B of 220KV Khushkera line bay at Karoli GSS tripped during attending of its C&R panel relay by M/S Popular switchgear with AEN (MPT&S), Bhiwadi.

Corrective Action taken – YES

Workmen are asked to work carefully.

Case-6 220 kv Sikar -PGCIL CKT- I at 220 KV GSS SIKAR on 18.12.2025

No. of Unwanted operation – 1

Reason of unwanted operation –

Over current setting left enabled.

Corrective Action taken –YES

Over current setting disabled.

Case-7 220/132KV 100MVA TRANSFORMER-II at 220KV GSS LALSOT on 11.12.2025 & 220 / 132 KV 100 MVA, TELK Make Transformer TFR-I 220 KV GSS HINDAUN on 24.12.2025

No. of Unwanted operation – 2

Reason of unwanted operation –

OSR relay defective.

Corrective Action taken – NO

Defective OSR relay put out of service and shall be replaced soon.

Case-8 220/132 KV, 160 MVA TRANSFORMER Ist at 220KV GSS BAP on 28.12.2025

No. of Unwanted operation – 1

Reason of unwanted operation –

Buccholz relay operated due to control cable fault.

Corrective Action taken – YES

Faulty cable replaced.

Case-9 220/132 KV, 100 MVA Transformer-II At 220 KV GSS KAWAI on 29.12.2025

No. of Unwanted operation – 1

Reason of unwanted operation –

REF relay defective.

Corrective Action taken –YES

REF relay replaced.

Status of performance indices reporting of SPS for December 2025 (Last date of submission 07.01.2026)

| Sr. No. | Scheme Name | Owner / Agency | Received Status (Yes/No) | Video mail dated | Remarks | Indices less than 1 (Yes/No) | Reason submitted and corrective action taken | Submitted by Utility | Submitted by SLDC/NRLDC |
|---------|---|----------------------------------|--------------------------|------------------|-------------------|------------------------------|--|----------------------|-------------------------|
| 1 | SPS for WR-NR corridor - 765kV Agra-Gwalior D/C | POWERGRID | | | | | | | |
| 2 | SPS for contingency due to tripping of HVDC Mundra-Mahendergarh | ADANI | | | | | | | |
| 3 | SPS for high capacity 400 kV Muzaffarpur-Gorakhpur D/C Inter-regional tie-line related contingency | POWERGRID | | | | | | | |
| 4 | SPS for 1500 MW HVDC Rihand-Dadri Bipole related contingency | POWERGRID | | | | | | | |
| 5 | System Protection Scheme (SPS) for HVDC Balia-Bhiwadi Bipole | POWERGRID | | | | | | | |
| 6 | SPS for reliable evacuation of power from NIPS, Rampur, Sawra Kuddu, Baspa Sorang and Karcham Wangtoo HEP | SJVN/HPPTCL/JSW/POWERGRID/SORANG | | | | | | | |
| 7 | SPS for Reliable Evacuation of Ropar Generation | PSTCL | | | | | | | |
| 8 | SPS for Reliable Evacuation of Rosa Generation | UPPTCL | Y | 02.01.2026 | Not operated | No | NA | Y | Y |
| 9 | SPS for contingency due to tripping of evacuating lines from Narora Atomic Power Station | NAPS/UPPTCL | | | | | | | |
| 10 | SPS for evacuation of Kawai TPS, Kalisindh TPS generation complex | RVPNL | | | | | | | |
| 11 | SPS for evacuation of Anpara Generation Complex | UPPTCL | Y | 02.01.2026 | correct operation | No | NA | Y | Y |
| 12 | SPS for evacuation of Lalitpur TPS Generation | UPPTCL | Y | 02.01.2026 | Not operated | No | NA | Y | Y |
| 13 | SPS for Reliable Evacuation of Bara TPS Generation | UPPTCL | Y | 01.01.2026 | Not operated | No | NA | Y | Y |
| 14 | SPS for Lahal Generation | HPPTCL | Y | 07.01.2026 | Not operated | No | NA | Y | Y |
| 15 | SPS for Transformers at Ballabgarh (PG) Substation | POWERGRID | | | | | | | |
| 16 | SPS for Transformers at Maharanibagh (PG) substation | POWERGRID | | | | | | | |
| 17 | SPS for Transformers at Mandola (PG) substation | POWERGRID | | | | | | | |
| 18 | SPS for Transformers at Bamnauli (DTL) substation | DTL | Y | 12.01.2026 | Not operated | No | NA | Y | |
| 19 | SPS for Transformers at Moradabad (UPPTCL) Substation | Uttar Pradesh | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 20 | SPS for Transformers at Muradnagar (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 21 | SPS for Transformers at Muzaffarnagar (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 22 | SPS for Transformers at Greater Noida (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 23 | SPS for Transformers at Agra (UPPTCL) Substation | UPPTCL | | | | | | | |
| 24 | SPS for Transformers at 400kV Sarojininagar (UPPTCL) Substation | UPPTCL | | | | | | | |
| 25 | SPS for Transformers at 220kV Sarojininagar (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 26 | SPS for Transformers at 400kV Unnao (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 27 | SPS for Transformers at 400kV Sultanpur (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 28 | SPS for Transformers at 400kV Bareilly (UPPTCL) Substation | UPPTCL | | | | | | | |
| 29 | SPS for Transformers at 400kV Azamgarh (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 30 | SPS for Transformers at 400kV Mau (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 31 | SPS for Transformers at 400kV Gorakhpur/Motiram Adda (UPPTCL) Substation | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 32 | SPS for Transformers at 400kV Sarnath (UPPTCL) Substation | UPPTCL | | | | | | | |
| 33 | SPS for Transformer at 400kV Rajpura (PSTCL) Substation | PSTCL | Y | 06.01.2026 | Not operated | No | NA | Y | |
| 34 | SPS for Transformers at 400kV Mundka (DTL) Substation | DTL | Y | 12.01.2026 | Not operated | No | NA | Y | |
| 35 | SPS for Transformers at 400kV Deerpapur (JKTPL) Substation | HVPNL | | | | | | | |
| 36 | SPS for Transformers at 400kV Ajmer (RVPN) Substation | RVPNL | Y | 07.01.2026 | correct operation | No | NA | Y | Y |
| 37 | SPS for Transformers at 400kV Merta (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | |
| 38 | SPS for Transformers at 400kV Chittorgarh (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | |
| 39 | SPS for Transformers at 400kV Jodhpur (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | |
| 40 | SPS for Transformers at 400kV Bhadla (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | |
| 41 | SPS for Transformers at 400kV Ratangarh (RVPN) Substation | RVPNL | Y | 07.01.2026 | correct operation | No | NA | Y | Y |
| 42 | SPS for Transformers at 400kV Nehtaur(WUPPTCL) Substation | UPPTCL | | | | | | | |
| 43 | SPS for Transformers at Obra TPS | UPPTCL | Y | 05.01.2026 | Not operated | No | NA | Y | Y |
| 44 | SPS for Transformers at 400kV Kashipur (PTCUL) substation | PTCUL | Y | 06.01.2026 | Not operated | No | NA | Y | |
| 45 | SPS for Transformers at 400kV Fatehgarh Solar Park (AREPRL) | ADANI | Y | 08.01.2026 | Not operated | No | NA | Y | |
| 46 | SPS to relieve transmission congestion in RE complex (Bhadla2) | POWERGRID | | | | | | | |

| | | | | | | | | | |
|----|---|------------------|---|------------|--------------|----|----|---|---|
| 47 | SPS for Transformers at 400kV Bikaner (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | Y |
| 48 | SPS for Transformers at 400kV Bawana (DTL) Substation | DTL | Y | 12.01.2026 | Not operated | No | NA | Y | |
| 49 | SPS for Transformers at 400kV Bhilwara (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | Y |
| 50 | SPS for Transformers at 400kV Hinduan (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | Y |
| 51 | SPS for Transformers at 400kV Suratgarh (RVPN) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | Y |
| 52 | SPS for Transformers at 400kV Babai(RS) Substation | RVPNL | Y | 07.01.2026 | Not operated | No | NA | Y | Y |
| 53 | SPS for Transformers at 400kV Allahabad(PG) Substation | UPPTCL | | | | | | | |
| 54 | SPS for Transformers at 400kV Jaunpur(UP) Substation | UPPTCL | | | | | | | |
| 55 | SPS for Transformers at 765kV Jhatikara(PG) Substation (Bamnauli section) | POWERGRID | | | | | | | |
| | SPS for Transformers at 765kV Jhatikara(PG) Substation (Mundka section) | | | | | | | | |
| 56 | SPS for Transformers at 765kV Bhiwani(PG) Substation | POWERGRID | | | | | | | |
| 57 | SPS for Transformers at 400kV Panki (UPPTCL) Substation | UPPTCL | | | | | | | |
| 58 | SPS for Transformers at 400kV Agra(PG) Substation | POWERGRID/UPPTCL | | | | | | | |

Annexure-A.V

| Status of Internal Protection Audit Plan for FY 2026 -27 | | | | |
|--|---------------------------------------|---|---|-----------------------------------|
| S. No. | NRPC Member | Category | Status | Schedule submitted as per utility |
| 1 | PGCIL | Central Government owned Transmission Company | Received (NR-2) (24 Substations), Received (NR-1) (20+16 Substations) | |
| 2 | NTFC | | | |
| 3 | BBMB | | Received | |
| 4 | THDC | Central Generating Company | Received (Tehri HPP) | Feb-27 |
| | | | Received (Koteshwar) | Dec-26 |
| | | | Received (Tehri PSP) | Feb-27 |
| 5 | SJVN | | Received (NJHPS) | December 2026- March 2027 |
| | | | Received (RHPS) | October 2026- December 2026 |
| 6 | NHPC | | Received (13 stations) | |
| 7 | NPCL | | | |
| 8 | Delhi SLDC | | | |
| 9 | Haryana SLDC | | | |
| 10 | Rajasthan SLDC | | | |
| 11 | Uttar Pradesh SLDC | SLDC | | |
| 12 | Uttarakhand SLDC | | | |
| 13 | Punjab SLDC | | | |
| 14 | Himachal Pradesh SLDC | | | |
| 15 | DTL | | Received (47 Substations) | |
| 16 | HVPNL | | Received (91 Substations) | |
| 17 | RRVNL | | Received | 31.03.2027 |
| 18 | UPPTCL | State Transmission Utility | Meerut Zone | 10/1/2027 -15/3/2027 |
| | | | Agra Zone | 10/1/2027 -30/3/2027 |
| | | | Lucknow Zone | 1/1/2027-10/3/2027 |
| | | | Jhansi Zone | 5/1/2027 -30/3/2027 |
| | | | Prayagraj Zone | 1/1/2027-10/3/2027 |
| | | | Gorakhpur Zone | 10/1/2027-30/3/2027 |
| 19 | PTCUL | | Received | |
| 20 | PSTCL | | Received | |
| 21 | HPFTCL | | Received (12 Substations) | |
| 22 | IPGCL | | Received (PPS-I) | 15.11.2026 |
| | | | Received (PPS-III) | 30.10.2026 |
| | | | Received | Apr-26 |
| 23 | HPGCL | | | |
| 24 | RRVUNL | | | |
| 25 | UPRVUNL | State Generating Company | Anpara B | October 2026 |
| | | | Obra A & B | October 2026 |
| | | | Panki | October 2026 |
| | | | Anpara D | May 2026 |
| | | | Harduaganj | May 2026 |
| | | | Harduaganj D | May 2026 |
| | | | Harduaganj E | May 2026 |
| | | | Parichha | August 2026 |
| | | | Parichha Ext | August 2026 |
| | | | Obra C | October 2026 |
| | | | Jawaharpur | October 2026 |
| 26 | UJVNL | | Dharashu | October 2026 |
| | | | Tiloth | December, 2026 |
| | | | Khodri | Nov-26 |
| | | | Chibro | Oct-26 |
| | | | Vyasi | Dec-26 |
| 27 | HPPCL | | | |
| 28 | PSPCL | State Generating Company & State owned Distribution Company | RSD | |
| | | | GGSTPS, Rupnagar | |
| | | | GVK Power Goindwal Shahib Ltd. | |
| | | | GHSTPS, Lehra Mohabbat | Nov-26 |
| 29 | HPSEBL | Distribution company having Transmission connectivity ownership | | |
| 30 | Prayagraj Power Generation Co. Ltd. | | Received | Sep-26 |
| 31 | Aravali Power Company Pvt. Ltd | | Received | Mar-27 |
| 32 | Apravaa Energy Private Limited | | Received | May-26 |
| 33 | Talwandi Sabo Power Ltd. | | | |
| 34 | Nabha Power Limited | | | |
| 35 | MEIL Anpara Energy Ltd | IPP having more than 1000 MW installed capacity | Received | Aug-26 |
| 36 | Rosa Power Supply Company Ltd | | Received | Jan-27 |
| 37 | Lalitpur Power Generation Company Ltd | | Received | Sep-26 |
| 38 | MEJA Urja Nigam Ltd. | | | |
| 39 | Adani Power Rajasthan Limited | | | |
| 40 | JSW Energy Ltd. (KWHEP) | | | |
| 41 | UT of J&K | UT of Northern Region | Received | |
| 42 | UT of Chandigarh | | | |
| | ISTS Transmission Utilities | | | |
| 43 | INDIGRID | | | |

| | | | | | |
|----|--|------|----------|--|-------------|
| 44 | ADHPL | | | | |
| 45 | Adani Transmission Limited | | Received | | Oct-26 |
| 46 | Bikaner Khetri Transmission Limited | | Received | | Oct-26 |
| 47 | Fatehgarh Bhadla Transmission Limited | | Received | | Sep-26 |
| | | | | | |
| | State Utilities | | | | |
| | Uttar Pradesh | | | | |
| 48 | Vishnuprayag Hydro Electric Plant (J.P.) | | Received | | March, 2027 |
| 49 | Alaknanda Hydro Electric Plant (GVK) | | Received | | Nov-26 |
| 50 | Ghatampur TPS | | Received | | Feb-27 |
| 51 | Khara Power House (Khara) | | Received | | Dec-26 |
| 52 | WUPPTCL | | Received | | Oct-26 |
| 53 | SEUPPTCL | | Received | | Dec-26 |
| 54 | ATSCL | AESL | Received | | Sep-26 |
| 55 | GTL (765 kV Hapur extension bays) | AESL | Received | | Nov-26 |
| 56 | GTL (765 kV Agra and Gr. Noida extension bays) | AESL | Received | | Nov-26 |
| 57 | HPTSL | AESL | Received | | Aug-26 |
| 58 | MTSCL | AESL | Received | | Aug-26 |
| 59 | OBTL | AESL | Received | | Dec-26 |
| 60 | STSL | AESL | Received | | Dec-26 |
| | Rajasthan | | | | |
| 61 | Barsingsar Plant | NLC | Received | | 31-03-2027 |
| 62 | Rajwest Plant | JSW | Received | | Aug-26 |
| | | | | | |
| | RE Utilities | | | | |
| 63 | ABC Renewable Pvt. Ltd | | | | |
| 64 | ACME Heeraqarh powertech Pvt. Ltd | | | | |
| 65 | ACME Pholodi | | | | |
| 66 | ACME Deagarh | | | | |
| 67 | ACME Raisar | | | | |
| 68 | ACME Dhoulpar | | | | |
| 69 | ACME Chittorgarh Solar Energy Pvt Ltd | | | | |
| 70 | Adani Hybrid Energy Jaisalmer One Ltd. | AGEL | Received | | 7/16/2026 |
| 71 | Adani Hybrid Energy Jaisalmer Two Ltd. | AGEL | Received | | 7/25/2026 |
| 72 | Adani Hybrid Energy Jaisalmer Three Ltd. | AGEL | Received | | 8/8/2026 |
| 73 | Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 1 -350) | AGEL | Received | | 8/15/2026 |
| 74 | Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 2 -250) | AGEL | Received | | 9/11/2026 |
| 75 | Adani Renewable Energy (RJ) limited Rawara | AGEL | Received | | 9/26/2026 |
| 76 | Adani Solar Energy Four Private Limited | AGEL | Received | | 9/26/2026 |
| 77 | Adani Solar Energy Jaisalmer Two Private Limited Project Two | AGEL | Received | | 10/17/2026 |
| 78 | SB Energy Six Private Limited, Bhadla | AGEL | Received | | 10/28/2026 |
| 79 | Adani Solar Energy Jodhpur Two Limited, Rawara | AGEL | Received | | 9/26/2026 |
| 80 | Adani Solar Energy Jaisalmer One Ltd. (Hybrid450) | AGEL | Received | | 10/3/2026 |
| 81 | Adani Solar Energy RJ Two Pvt. Ltd. (Devkot) | AGEL | Received | | 11/7/2026 |
| 82 | Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi) | AGEL | Received | | 11/14/2026 |
| 83 | Adani Green Energy 24 Limited (Bhimsar) | AGEL | Received | | 11/26/2026 |
| 84 | Adani Green Twenty-Five Limited (Badisid) | AGEL | Received | | 12/4/2026 |
| 85 | Bhadla park - South block | AGEL | Received | | 12/16/2026 |
| 86 | AEML-250 WIND (Hybrid-2A) | AGEL | Received | | 9/16/2026 |
| 87 | AEML-250 WIND (Hybrid-2B) | AGEL | Received | | 9/23/2026 |
| 88 | Hybrid450-WIND (SBE Hybrid 450) | AGEL | Received | | 10/7/2026 |
| 89 | Altra Xergi Pvt. Ltd. | | | | |
| 90 | AMP Energy Green Four Pvt. Ltd. | | | | |

| | | | | |
|-----|--|----------------------|----------|----------------|
| 91 | AMP Energy Green Five Pvt. Ltd. | | | |
| 92 | AMP Energy Green Six Pvt. Ltd. | | | |
| 93 | Amplus Ages Private Limited | | Received | 31-12-2026 |
| 94 | Avaada RJHN_240MW | | Received | Aug-26 |
| 95 | Avaada sunce energy Pvt limited | | Received | Aug-26 |
| 96 | Avaada Sunrays Pvt. Ltd. | | Received | Aug-26 |
| 97 | Avaada Sustainable RJ Pvt. Ltd. | | Received | Aug-26 |
| 98 | Ayana Renewable Power Three Private Limited | | | |
| 99 | Ayaana Renewable Power One Pvt. Ltd. | | | |
| 100 | Azure Power Forty One Pvt limited | | | |
| 101 | Azure Power Forty Three Pvt. Ltd., RSS | | | |
| 102 | Azure Maple Pvt. Ltd. | | | |
| 103 | AZURE POWER INDIA Pvt. Ltd., Bhadla | | | |
| 104 | Azure Power Thirty Four Pvt. Ltd. | | | |
| 105 | Clean Solar Power (Jodhpur) Pvt. Ltd. | Hero Future Energies | Received | May, 2026 |
| 106 | Eden Renewable Cite Private Limited | | | |
| 107 | Grian Energy private limited | | Received | 31-12-2026 |
| 108 | Mahindra Renewable Private Limited | | | |
| 109 | Mega Surya Urja Pvt. Ltd. (MSUPL) | | | |
| 110 | AURAIYA Solar | | | |
| 111 | DADRI SOLAR | | | |
| 112 | SINGRAULI SOLAR | | | |
| 113 | Anta Solar | | | |
| 114 | Unchahar Solar | | | |
| 115 | NTPC Devikot Solar plant_240MW | | | |
| 116 | NTPC Kolayat_400kV | | | |
| 117 | Nedan Solar NTPC | | | |
| 118 | NTPC Nokhra_300MW | | | |
| 119 | One Volt energy Pvt. Ltd. | | Received | 31-12-2026 |
| 120 | ReNew Solar Urja Private Limited (IndiGrid) | IndiGrid | | |
| 121 | Renew Surya Ayaan Pvt. Ltd. (IndiGrid) | IndiGrid | | |
| 122 | ReNew Solar Energy (Jharkhand Three) Private Limited | ReNew | Received | 24/11/2026 |
| 123 | RENEW SOLAR POWER Pvt. Ltd. Bikaner | ReNew | Received | 17/11/2026 |
| 124 | Renew Sun Bright Pvt. Ltd. (RSBPL) | ReNew | Received | 19/11/2026 |
| 125 | Renew Surya Partap Pvt. Ltd. | ReNew | Received | 21/11/2026 |
| 126 | Renew Surya Ravi Pvt. Ltd. | ReNew | Received | 18/11/2026 |
| 127 | Renew Surya Roshni Pvt. Ltd. | ReNew | Received | 24/11/2026 |
| 128 | Renew Surya Vihan Pvt. Ltd. | ReNew | | |
| 129 | Renew Solar Photovoltaic Pvt Ltd | ReNew | | |
| 130 | Renew Hans Urja Pvt Ltd | ReNew | | |
| 131 | Renew Surya Jyoti Pvt Ltd | ReNew | Received | 15/10/2026 |
| 132 | Neemba Renew Surya Vihan Pvt Ltd | ReNew | Received | 15/10/2026 |
| 133 | Rising Sun Energy-K Pvt. Ltd. | | | |
| 134 | Serentica Renewables India 4 Private Limited | | Received | Sep-26 |
| 135 | Serentica Renewables India 5 Private Limited | | Received | Sep-26 |
| 136 | Khidrat Renewable energy Pvt Ltd. | | | |
| 137 | Solzen Urja Private Limited | Sekura | Received | November, 2026 |
| 138 | Tata Power Green Energy Ltd. (TPGEL) (225MW) | | | |
| 139 | Tata Power Renewable Energy Ltd. (TPREL) (300MW) | | | |
| 140 | Tihar Surya Pvt. Ltd. | | | |
| 141 | TP Surya Ltd., Noorsar (110MW) | | | |
| 142 | Bandarwala Solar Plant TP Surya Ltd. (300MW) | | | |
| 143 | TRANSITION ENERGY SERVICES PRIVATE LIMITED | | | |
| 144 | Transition Green Energy Private Limited | | | |
| 145 | Transition Sustainable Energy Services Private Limited | | | |
| 146 | Gorbea Solar Pvt Ltd (GSPL) | | | |

| Status of 3rd Party Protection Audit Plan | | | | | | | | |
|---|--|---|--|-----------------------------------|--|---------------------------------------|---------------------------------------|-------------------|
| S. No. | NRPC Member | Category | Status | Schedule submitted as per utility | Present Status Completed (yes/no) | Report Submission Date by audit party | Discussion held in PSC meeting number | Compliance status |
| 1 | PGCIL | Central Government owned Transmission Company | Received (26 S/s of NR-1, 24 S/s of NR-2, 4 S/s of N-3) | NR-1 - 2026, NR-2 - 2025-2027 | | | | |
| 2 | NTPC | Central Generating Company | Received (Singrauli, Rihand, Unchahar, Dadri, Dadri Gas, Auraiya Gas, Faridabad Gas, Anta Gas Power Station) | By Oct 2028 | | | | |
| 3 | SBM | | Received (Tanda) | By 17.07.2025 | | | | |
| 4 | THDC | | Received (Rihand) | Feb-27 | | | | |
| 5 | SJVN | | Received (RHP) | Nov-Dec 2025 | March 2026-Tehri, F.Y. 2025-26- Koteshwar, December 2026 - Tehri PSP | Completed (Wahawal) | | Report pending |
| 6 | NHPC | | Received (Njhps) | Nov-Dec 2025 | | Completed | 4/11/2025 | 66 |
| | | | Received | Nov 24- March 25 | | Completed (Dhawa) | 26-05-2025 | 65 |
| | | | Received | FY-2025-26 | | Completed (Raj) | 16-05-25 | Planned in 64 |
| 7 | NPCL | SLDC | Completed (220KV INAPS) | Jan-25 | Completed | 18-01-2025 | 67 | |
| | | | RAA A | | Completed | 24-06-2025 | Planned in 64 | |
| | | | RAA B | | Completed | 24-06-2025 | Planned in 64 | |
| | | | RAA C (B&S) | | Completed | 05-12-2024 | Planned in 64 | |
| 8 | Dalhi SLDC | | | | | | | |
| 9 | Haryana SLDC | | | | | | | |
| 10 | Rajasthan SLDC | | | | | | | |
| 11 | Uttar Pradesh SLDC | | | | | | | |
| 12 | Uttarakhand SLDC | | | | | | | |
| 13 | Punjab SLDC | | | | | | | |
| 14 | Himachal Pradesh SLDC | | | | | | | |
| 15 | DTL | State Transmission Utility | Received | September, 2025 to November, 2026 | | | | |
| 16 | HVPL | | Received (5 Substations) | June-Oct 2025 | Completed (Dhanoda) | 22-08-2025 | 63 | |
| 17 | RVPNL | | Received (10 Substations) | 2025 | Completed | | | |
| 18 | UPPTCL | | Received | 2025 | Completed | | | |
| 19 | PTCUL | | Received | By Dec 2025 | Completed (10 Substations) | | 65 | |
| 20 | PSLCL | | Received | FY 25-26 | | | | |
| 21 | HPPTCL | | Received (PPS-I) | November-December 2025 | Completed | | audit report to be submitted | |
| 22 | IPGCL | Received (PPS-III) | FY 25-26 | Completed | | audit report to be submitted | | |
| 23 | HPGCL | State Generating Company & State owned Distribution Company | PTPS, Panipat | Nov-25 | Completed | | audit report to be submitted | |
| | | | DCRTPP, Yamunanagar | Aug-25 | Completed | 22-08-2025 | 64 | |
| | | | RGTRP (Khadra) | Oct-25 | Completed | | audit report to be submitted | |
| 24 | RRVUNL | | CTPP, Chhabra | 2029 | CTPP Completed | Feb-24 | 51 | |
| | | | CSCTPP, Chhabra | 2027-28 | | | | |
| | | | STPS, suratgarh | Sep-27 | | | | |
| | | | SSCTPP, suratgarh | 2028-29 | CTPP completed | | 65 | |
| | | KTPS, Kota | 2025-2026 | KTPS, Completed | Aug-25 | 63 | | |
| | | KATPP, Jhalawar | 2027 | | | | | |
| | | RGTPP, Ramgarh | Jun-26 | | | | | |
| | | DCCTPP, Dholpur | 2026-27 | | | | | |
| 25 | UPRVUNL | Distribution company having Transmission connectivity ownership | Obra-B | Feb-26 | | | | |
| | | | Obra-C | Feb-26 | | | | |
| | | | Anpara D | 2025 | Under tendering | | | |
| | | | Anpara B | 2025 | Under tendering | | | |
| | | | Harduaganj | 2025 | Under tendering | | | |
| | | | Alankhamb D | 2025 | Under tendering | | | |
| | | | Bharatpur F | 2025 | Under tendering | | | |
| | | | Parichha | 2025 | Under tendering | | | |
| | | | Parichha Ext | 2025 | Under tendering | | | |
| | | | Jawaharpur | 2025 | Under tendering | | | |
| | | | Panki | 2025 | Under tendering | | | |
| | | | Dhanasu | 2025 | Completed in Nov, 2024 | | 56 | |
| 26 | LUVNL | | State Generating Company & State owned Distribution Company | Tiloh | Dec-28 | | | |
| | | Vyasi | | | Completed | Nov-23 | 55 | |
| | | Chibro | | | Completed | Nov-23 | 55 | |
| | | Khodri | | | Completed | Nov-23 | 55 | |
| | | Sheara Kuddu | | 2026 | | | | |
| 27 | HPPCL | State Generating Company & State owned Distribution Company | Sani | | | | | |
| | | | Nahang HEP | FY 2025-26 | | | | |
| 28 | PSPCL | | Received (GHTP) | Dec 2025 | | | | |
| | | | Received (GATP) | May 2025 | | | | |
| | | | GSSSTP | 2026 | | | | |
| | | RSD Sahapur Kandi | Mar-26 | | | | | |
| 29 | HPSEBL | Distribution company having Transmission connectivity ownership | Kumbhar | Conducted | 08-08-2024 | 20-11-2024 | 55 | |
| | | | Upper Nanaut | Conducted | 13-02-2025 | | 61 | |
| | | | Kanoo | Conducted | | | | |
| | | | Mattansikh | Conducted | | | | |
| | | | Maharain | Conducted | | | | |
| | | | Baddi | Conducted | | | | |
| | | | Chandigarh | Conducted | | | | |
| 30 | Privaara Power Generation Co. Ltd. | IPP having more than 1000 MW installed capacity | Received | Dec-24 | Completed | 04-01-2025 | 61 | |
| 31 | Aravali Power Company Pvt. Ltd | | Received | Jan-25 | | 08-01-2025 | 59 | |
| 32 | Aarava Energy Private Limited | | Received | By May, 2025 | Completed | Jun-25 | 63 | |
| 33 | Tahaari Sabo Power Ltd. | | Received | By December, 2025 | | | | |
| 34 | Nasha Power Limited | | Received | * May 2025 | | | | |
| 35 | MEIL Anpara Energy Ltd | | Conducted | By 30.09.2024 | 08-08-2024 | 13-01-2025 | 57 | |
| 36 | Rosa Power Supply Company Ltd | | Conducted | | 26-03-2024 | Jun-24 | 64 | |
| 37 | Lalpur Power Generation Company Ltd | | Conducted | | Completed in Oct, 2024 | Nov-24 | 68 | |
| 38 | MEJA Utra Nizam Ltd | | Conducted | November, 2024 | | 04-12-2024 | 56 | |
| 39 | Adani Power Rajasthan Limited | | Received | December 2024 to March 2025 | Completed | 29-01-2025 | 57 | |
| 40 | JSW Energy Ltd. (KWHEP) | | | | | | | |
| 41 | UT of J&K (JKPTCL) | UT of Northern Region | | | | | | |
| 42 | UT of Chandigarh (CDPL) | | | | | | | |
| ISTS Transmission Utilities | | | | | | | | |
| 43 | INDGRID | | Received (PTCL) | FY 25-26 | | | | |
| | | | Received (NRSS 29) | FY 24-25 | | | | |
| 44 | ADHPL | | Received | * September 2026 | | | | |
| 45 | Adani Transmission Limited | | Received (400KV Mohindergarh SS) | October, 2025 | | | | |
| 46 | Bikaner Khetri Transmission Limited | | Received (765 KV Bikaner and Khetri extension bays) | September, 2025 | | | | |
| 47 | Fatehgarh Bhadra Transmission Limited | | Received (400 KV Fatehgarh SS) | September, 2025 | | | | |
| State Utilities | | | | | | | | |
| Uttar Pradesh | | | | | | | | |
| 48 | Vishnuprayag Hydro Electric Plant (J.P.) | | Received | December, 2028 | | | | |
| 49 | Alaknanda Hydro Electric Plant (GVK) | | Received | Mar-25 | | | | |
| 50 | Ghatampur TPS | | Received | FY 27-28 | | | | |
| 51 | Khajuri Power House (Khara) | | Received | Dec-26 | | | | |
| 52 | WUPPTCL | | Conducted | | Completed | 20-03-2025 | 59 | |
| 53 | SEUPPTCL | | Completed | | Completed | October, 2024 | 59 | |
| 54 | ATISCL | AESL | Received (400/220KV Alwar SS) | September, 2025 | | | | |
| 55 | GTL | AESL | Received (765 KV Hapur extension bays) | September, 2025 | | | | |
| 56 | GTL | AESL | Received (765 KV Agra and Gr. Noida extension bays) | September, 2025 | | | | |
| 57 | HPTSL | AESL | Received (220KV Rampur SS) | August, 2025 | | | | |
| 58 | MTSCL | AESL | Received (400/220/132KV Deedwana SS) | August, 2025 | | | | |
| 59 | OCBTL | AESL | Received (400/220/132KV Badli SS) | Jan-25 | Completed (report not shared) | | | |
| 60 | STSL | AESL | | | | | | |
| Rajasthan | | | | | | | | |
| 61 | Bansagar Plant | NLC | Received | by 31-03-2027 | | | | |
| 62 | Raivast Plant | JSW | Received | Aug-26 | | | | |
| RE Utilities | | | | | | | | |
| 63 | ABC Renewable Pvt. Ltd | | | | | | | |
| 64 | ACME Heeraagarh powertech Pvt. Ltd | | | | | | | |
| 65 | ACME Pholli | | | | | | | |
| 66 | ACME Deegah | | | | | | | |
| 67 | ACME Raisar | | | | | | | |
| 68 | ACME Dhoulpur | | | | | | | |
| 69 | ACME Chittorgarh Solar Energy Pvt Ltd | | | | | | | |

| | | | | | | | |
|-----|--|--------------------|--|------------|---------------------------------|------------|----|
| 70 | Adani Hybrid Energy Jaisalmer One Ltd. | | 5 years have not completed since commissioning | | | | |
| 71 | Adani Hybrid Energy Jaisalmer Two Ltd. | | 5 years have not completed since commissioning | | | | |
| 72 | Adani Hybrid Energy Jaisalmer Three Ltd. | | 5 years have not completed since commissioning | | | | |
| 73 | Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 1 - 350) | | 5 years have not completed since commissioning | | | | |
| 74 | Adani Hybrid Energy Jaisalmer Four Ltd. (AEML 2 - 250) | | 5 years have not completed since commissioning | | | | |
| 75 | Adani Renewable Energy (RJ) Limited Rawara | | Received | 1/15/2026 | | | |
| 76 | Adani Solar Energy Four Private Limited | | 5 years have not completed since commissioning | | | | |
| 77 | Adani Solar Energy Jaisalmer Two Private Limited Phalodi Two | | 5 years have not completed since commissioning | | | | |
| 78 | SB Energy Six Private Limited, Bhadla | AGEL | 5 years have not completed since commissioning | | | | |
| 79 | Adani Solar Energy Jodhpur Two Limited, Rawara | | 5 years have not completed since commissioning | | | | |
| 80 | | | | | | | |
| 81 | Adani Solar Energy Jaisalmer One Ltd. (Hybrid450) | | 5 years have not completed since commissioning | | | | |
| 81 | Adani Solar Energy RJ Two Pvt. Ltd. (Devkot) | | 5 years have not completed since commissioning | | | | |
| 82 | Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi) | | 5 years have not completed since commissioning | | | | |
| 83 | Adani Green Energy 24 Limited (Bhimisar) | | 5 years have not completed since commissioning | | | | |
| 84 | Adani Green Twenty-Five Limited (Badwad) | | 5 years have not completed since commissioning | | | | |
| 85 | Bhadla park - South block | | Received | 1/28/2026 | | | |
| 86 | AEML-250 WIND (Hybrid-2A) | | 5 years have not completed since commissioning | | | | |
| 87 | AEML-260 WIND (Hybrid-2B) | | 5 years have not completed since commissioning | | | | |
| 88 | Hybrid450 WIND (SBE Hybrid 450) | | 5 years have not completed since commissioning | | | | |
| 89 | Altra Xera Pvt. Ltd. | | Completed | | 04.02.2025 | 60 | |
| 90 | AMP Energy Green Four Pvt. Ltd. | | Completed | | | | |
| 91 | AMP Energy Green Five Pvt. Ltd. | | Received | Nov-27 | Completed for common substation | | |
| 92 | AMP Energy Green Six Pvt. Ltd. | | Received | Nov-27 | | | |
| 93 | Amplus Apes Private Limited | | Received | 31-12-2028 | | 02.09.2025 | 63 |
| 94 | Avasda R.J.H.N. 240MW | | Received | Aug-26 | | | |
| 95 | Avasda sunca energy Pvt limited | | Received | Aug-26 | | | |
| 96 | Avasda Sunrise Pvt. Ltd. | | Received | Aug-27 | | | |
| 97 | Avasda Sustainable RJ Pvt. Ltd. | | Received | Aug-26 | | | |
| 98 | Avana Renewable Power Three Private Limited | | Conducted | | 24.05.2025 | | 61 |
| 99 | Avana Renewable Power One Pvt. Ltd. | | Conducted | | | | 59 |
| 100 | Azure Power Forty One Pvt limited | | | | | | |
| 101 | Azure Power Forty Three Pvt. Ltd. RSS | | | | | | |
| 102 | Azure Maple Pvt. Ltd. | | | | | | |
| 103 | AZURE POWER INDIA Pvt. Ltd., Bhadla | | | | | | |
| 104 | Azure Power Thirty Four Pvt. Ltd. | | | | | | |
| 105 | Clean Solar Power (Jodhpur) Pvt. Ltd. | Hero Future Energy | Received | Dec-26 | | | |
| 106 | Eden Renewable Cite Private Limited | | Received | 31-12-2028 | | | |
| 107 | Grihan Energy private limited | | | | | | |
| 108 | Mahindra Renewable Private Limited | | | | | | |
| 109 | Mega Surya Urja Pvt. Ltd. (MSUPL) | | | | | | |
| 110 | AURAIYA Solar | | | | | | |
| 111 | DADRI SOLAR | | | | | | |
| 112 | SINGRAULI SOLAR | | | | | | |
| 113 | Anta Solar | | | | | | |
| 114 | Unchahar Solar | | | | | | |
| 115 | NTPC Devkot Solar plant 240MW | | Received | Aug-26 | | | |
| 116 | NTPC Kotagdi 400KW | | Received | Mar-26 | | | |
| 117 | Nedra Solar NTPC | | Received | Jul-26 | | | |
| 118 | NTPC Nokhra 300MW | | Received | Jun-26 | | | |
| 119 | One Volt energy Pvt. Ltd. | | Received | 31-12-2028 | | | |
| 120 | ReNew Solar Urja Private Limited | indical | Received | | | | |
| 121 | ReNew Surya Avasa Pvt. Ltd. | indical | | | | | |
| 122 | ReNew Solar Energy (Jharkhand Three) Private Limited | | Received | | | | |
| 123 | RENEW SOLAR POWER Pvt. Ltd. Bhadla | | Not applicable as Plant coming on 28W | 29-01-2027 | | | |
| 124 | Renew Sun Bright Pvt. Ltd. (RSBPL) | | Received | 16-04-2027 | | | |
| 125 | Renew Surya Partap Pvt. Ltd. | | Received | 22-07-2029 | | | |
| 126 | Renew Surya Raw Pvt. Ltd. | | Received | 24-07-2027 | | | |
| 127 | Renew Surya Roshni Pvt. Ltd. | | Received | 4-07-2029 | | | |
| 128 | Renew Surya Vihan Pvt. Ltd. | | Received | 27-05-2029 | | | |
| 129 | Nasruba Renew Surya Vihan Pvt Ltd | | Received | 30-09-2030 | | | |
| 130 | ReNew Surya Jyoti Pvt. Ltd. | | Received | 11/04/2030 | | | |
| 131 | Renew Solar Photovoltaic Pvt Ltd | | Unconnected projects | | | | |
| 132 | ReNew Hans Urja Pvt Ltd. | | Unconnected projects | | | | |
| 133 | RENEW SOLAR POWER Pvt. Ltd. Bikaner | | awarded the PO | | | | |
| 134 | Rising Sun Energy-K Pvt. Ltd. | | | | | | |
| 135 | Serentica Renewables India 4 Private Limited | | Received | Mar-29 | | | |
| 136 | Serentica Renewables India 5 Private Limited | | Received | Mar-29 | | | |
| 137 | Khidrat Renewable energy Pvt Ltd. | | | | | | |
| 138 | Solzen Urja Private Limited | | Received | Oct-26 | | | |
| 139 | | | | | | | |
| 140 | Tata Power Green Energy Ltd. (TPGEL) (225MW) | | Received | 31-03-2027 | | | |
| 140 | Tata Power Renewable Energy Ltd. (TPREL) (300MW) | | Received | 31-03-2027 | | | |
| 141 | Thar Surya Pvt. Ltd. | | | | | | |
| 142 | TP Surya Ltd. Noorsar (110MW) | | Received | 31-03-2027 | | | |
| 143 | Banderwala Solar Plant TP Surya Ltd. (300MW) | | Received | 31-03-2027 | | | |
| 144 | TRANSITION ENERGY SERVICES PRIVATE LIMITED | | | | | | |
| 145 | Transition Green Energy Private Limited | | | | | | |
| 146 | Transition Sustainable Energy Services Private Limited | | | | | | |
| 147 | Garbeta Solar Pvt Ltd (GSPL) | | | | | | |



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

Annexure-A.VII

दिनांक: 25 सितम्बर, 2025

सेवा में / To,

सूची के अनुसार (As per Addressee List attached)

Subject: Nomination of nodal officer for reporting of protection performance indices & provide the other protection related inputs for compliance of Protection Code of IEGC 2023-reg.

Ref: MoM of 62nd Protection Sub-Committee (PSC) meeting, held on 26th August 2025 (enclosed)

Reference is invited to agenda A.3 of 62nd Protection Sub-Committee (PSC) meeting, held on 26th August 2025 wherein it was observed that utilities are not reporting protection indices data completely and timely, accordingly, it was decided that an officer to be nominated by each utility for reporting of protection performance indices and provide the other protection related inputs.

The nominated officer shall be responsible for timely submission of protection performance indices along with reason and corrective action taken for indices less than unity to NRPC Secretariat. The nominated officer shall collect data from concerned offices of their utility and send a compiled data to NRPC Secretariat.

The nominated officer shall also be responsible for communication with NRPC Secretariat for updating protection setting database and submission of protection audit reports.

The nominated officer shall be in direct communication with NRPC Secretariat for reporting of various indices, reports and provide the other protection related inputs for compliance of Protection Code of IEGC 2023.

In view of above, it is requested to send the nomination of one officer (**strictly**) (at seo-nrpc@nic.in) with details as below within **one week**:

| Name of officer | Designation | Mobile No. | E-mail Id | Present location | Posting |
|-----------------|-------------|------------|-----------|------------------|---------|
| | | | | | |

Encls: As above

DHARMENDER
KUMAR MEENA

Digitally signed by
DHARMENDER KUMAR
MEENA
Date: 2025.09.26 17:49:26
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(डी. के. मीना)
निदेशक (संरक्षण)

Members of Protection Sub-Committee (FY 25-26)

| S. No. | NRPC Member Organization | Designation | Email-ID |
|--------|--|---|---|
| 1 | Member (GO&D), CEA | Director, NPC Division | skdotancea@nic.in |
| 2 | NTPC Vidyut Vyapar Nigam Ltd. | CEO | ceonvvn@ntpc.co.in |
| 3 | CTUIL | Sr.GM | schakrabortv@powergrid.in |
| 4 | PGCIL | GM | gunjan.agrawal@powergrid.in |
| 5 | NLDC* | Executive Director | scsaxena@grid-india.in |
| 6 | NRLDC | CGM(SO) | somara.lakra@grid-india.in |
| 7 | NTPC | DGM(OS-NR) | rameshsingh@ntpc.co.in , asbhoqal@ntpc.co.in |
| 8 | BBMB | Director (P&C) | dirpc@bbmb.nic.in |
| 9 | THDC* | AGM (O&M) ,Tehri | ravindrasrana@thdc.co.in |
| 10 | SJVN | General Manager | sivn.cso@sivn.nic.in |
| 11 | NHPC | General Manager (O&M) | hod-om-co@nhpc.nic.in |
| 12 | NPCIL* | Director (Finance), SO/F, TSU(E&I) | df@npcil.co.in , raieshsharma@npcil.co.in |
| 13 | Delhi SLDC | General Manager | gmsldc@delhisldc.org |
| 14 | Haryana SLDC | Chief Engineer (SO&C) | cesocmm1@hvpn.org.in |
| 15 | Rajasthan SLDC | Chief Engineer (LD) | ce.ld@rvpn.co.in |
| 16 | Uttar Pradesh SLDC | Superintending Engineer (R&A) | sera@upslcd.org |
| 17 | Uttarakhand SLDC | Chief Engineer | anupam_singh@ptcul.org |
| 18 | Punjab SLDC | Chief Engineer | ce-sldc@punjabslcd.org |
| 19 | Himachal Pradesh SLDC | Chief Engineer | cehpsldc@gmail.com |
| 20 | DTL | AGM-Protection | bharatquardtl@gmail.com |
| 21 | HVPNL | Chief Engineer (TS) | cetspl@hvpn.org.in |
| 22 | RRVNL | CE (M&P) | ce.mps@rvpn.co.in |
| 23 | UPPTCL* | Managing Director | md@upptcl.org |
| 24 | PTCUL | SE(T&C) | setandchld@gmail.com |
| 25 | PSTCL | Chief Engineer (P&M) | ce-pm@pstcl.org |
| 26 | HPPTCL* | Managing Director | md.tcl@hpmail.in |
| 27 | IPGCL | DGM (Protection) | arif.ipgcl@gmail.com |
| 28 | HPGCL | SE/M&T RGTPP | semt.rgtp@hpgcl.org.in |
| 29 | RRVUNL* | CMD | cmd@rvun.com |
| 30 | UPRVUNL | Chief Engineer, (L-2) | ce.pmm@uprvunl.org |
| 31 | UJVNL* | Managing Director | mdujvnl@ujvnl.com |
| 32 | HPPCL* | Managing Director | md@hppcl.in |
| 33 | PSPCL | Chief Engineer/GHTP | ce-qhtp@pspcl.in |
| 34 | DHBVN | Chief Engineer | ctorapdrp@dhbvn.org.in , semp@dhbvn.org.in |
| 35 | Ajmer Vidyut Vitran Nigam Ltd. | Managing Director | MD.AVVNL@RAJASTHAN.GOV.IN |
| 36 | Purvanchal Vidyut Vitaran Nigam Ltd. | Managing Director | md@puvvnl.in |
| 37 | UPCL* | Managing Director | md@upcl.org |
| 38 | HPSEB* | Managing Director | md@hpseb.in |
| 39 | Prayagraj Power Generation Co. Ltd.* | Head (Commercial & Regulatory), DGM - Elect | sanjay.bhargava@tatapower.com , dhananjay.singh@ppgcl.co.in |
| 40 | Aravali Power Company Pvt. Ltd* | CEO | brahmaig@ntpc.co.in |
| 41 | Apraava Energy Private Limited* | GM-Electrical | navin.chaturvedi@apraava.com |
| 42 | Talwandi Sabo Power Ltd. * | COO | Vibhav.Agarwal@vedanta.co.in |
| 43 | Nabha Power Limited* | CEO | sk.narang@larsentoubro.com |
| 44 | MEIL Anpara Energy Ltd | COO & WTD, Executive Director | anandkumar.singh@meilanparapower.com , arun.tholia@meilanparapower.com |
| 45 | Rosa Power Supply Company Ltd | GM-ELECTRICAL | Kesarinandan.pandey@reliancegroupindia.com |
| 46 | Lalitpur Power Generation Company Ltd | Head of Maintenance, GM Electrical | alokkumar.ltp@lpgcl.com , aupadhyay.ltp@lpgcl.com |
| 47 | MEJA Urja Nigam Ltd. | AGM-EMD | SPSPUNDIR@NTPC.CO.IN |
| 48 | Adani Power Rajasthan Limited* | GM | Ashish.Baviskar@adani.com |
| 49 | JSW Energy Ltd. (KWHEP)* | Head Regulatory & Power Sales | ivotiprakash.panda@jsw.in |
| 50 | Transition Cleantech Services Private Limited* | Deputy Manager | kswamidoss@evreenergy.com |
| 51 | UT of J&K* | MD, JKPTCL CE, JKPC | mdjkptcl1@gmail.com , cejkpcl2@gmail.com |
| 52 | UT of Ladakh* | Chief Engineer, LPDD | cepladakh@gmail.com |
| 53 | UT of Chandigarh | Executive Engineer | elop2-chd@nic.in |
| 54 | Tata Power Delhi Distribution Limited* | HOG-PMG | sandeep.k@tatapowerddl.com |
| 55 | Gurgaon Palwal Transmission Limited* | Head Regulatory | Lokendra.Ranawat@indigrid.com |
| 56 | PTC India Limited* | AVP | bibhuti.prakash@ptcindia.com |
| 57 | ReNew Power Private Limited* | CEO | sumant@renew.com |
| 58 | NTPC Green Energy Limited* | CEO, Sr. Mgr | rajivgupta@ntpc.co.in , sandeepdahiya@ntpc.co.in |
| 59 | Azure Power India Pvt. Limited* | CEO | sunil.qupta@azurepower.com |
| 60 | Avaada Energy Private Limited* | CEO | kishor.nair@avaada.com |
| 61 | Adani Green Energy Limited | AVP | sanjay.bhatt@adani.com |

* Organizations from where nominations are not received for PSC, members of NRPC have been mentioned. Nomination for PSC forum may be sent at the earliest.

List of Members of Renewable Energy Sub-committee

| S. No. | Members of RE Sub-committee | Representative Email ID |
|---------------|--|--|
| 1 | Ministry of New and Renewable Energy | anindya.parira@nic.in ; |
| 2 | National Load Despatch Center | suhasd@grid-india.in ; |
| 3 | Northern Regional Load Despatch Center | somara.lakra@grid-india.in ; |
| 4 | Central Transmission Utility | sandeepk@powergrid.in |
| 5 | Powergrid Corporation of India Ltd. | saroj.mishra@powergrid.in ; yashpal@powergrid.in |
| 6 | Rajasthan Rajya Vidyut Prasaran Nigam Ltd. | se_pp@rvpn.co.in ; |
| 7 | Rajasthan State Load Despatch Center | se.ldrvpl@rvpn.co.in ; |
| 8 | Solar Energy Corporation of India | sanjaysharma@seci.co.in ; vkumar@seci.co.in ; |
| 9 | National Solar Energy Federation of India | ankur.kumar@nsefi.in ; ceoffice@nsefi.in ; |
| 10 | Indian Wind Power Association | secretarygeneral@indianwindpower.com ; |
| 11 | ABC Renewable Pvt. Ltd | aman.chaturvedi@petronas.com; deepak.asopa@petronas.com; urvika.acharya@petronas.com |
| 12 | ACME Heeragarh powertech Pvt. Ltd | prachi.chauhan@acme.in ; planthead.badisidd.solar@acme.in ; ashutosh.singh@acme.in ; |
| 13 | ACME Chittorgarh Solar Energy Pvt Ltd | sandeepk@ayanapower.com ; yogesh@ayanapower.com ; |
| 14 | Adani Hybrid Energy Jaisalmer One Ltd. | |
| 15 | Adani Hybrid Energy Jaisalmer Two Ltd. | |
| 16 | Adani Hybrid Energy Jaisalmer Three Ltd. | |
| 17 | Adani Hybrid Energy Jaisalmer Four Ltd. | |
| 18 | Adani Renewable Energy (RJ) limited Rawara | |
| 19 | Adani Solar Energy Jaisalmer One Pvt. Ltd._450MW (Solar) | |
| 20 | Adani Solar Energy Four Private Limited | |
| 21 | Adani Solar Energy Jaisalmer Two Private Limited | kailash.nagora@adani.com ; |
| 22 | Adani Solar Energy Jaisalmer Two Private Limited Project Two | sanjay.bhatt@adani.com ; |
| 23 | SB ENERGY FOUR PRIVATE LIMITED, Bhadla | |
| 24 | SB Energy Six Private Limited, Bhadla | |
| 25 | Adani Solar Energy Jodhpur Two Limited, Rawara | |
| 26 | Adept Renewable Technologies Pvt. Ltd. | |
| 27 | Adani Solar Energy RJ Two Pvt. Ltd. (Devikot) | |
| 28 | Adani Solar Energy RJ Two Pvt. Ltd. (Phalodi) | |
| 29 | Adani Green Energy 19 Limited | |

| | | |
|----|--|---|
| 30 | Altra Xergi Pvt. Ltd. | mahendra.kumar@O2power.in ; |
| 31 | AMP Energy Green Five Pvt. Ltd. | vbhattacharya@ampenergyindia.com; |
| 32 | AMP Energy Green Six Pvt. Ltd. | |
| 33 | Amplus Ages Private Limited | manish.tak@amplussolar.com ; |
| 34 | Avaada RJHN_240MW | |
| 35 | Avaada sunce energy Pvt limited | |
| 36 | Avaada Sunrays Pvt. Ltd. | alpesh.prajapati@avaada.com ; |
| 37 | Avaada Sustainable RJ Pvt. Ltd. | |
| 38 | Ayana Renewable Power Three Private Limited | Venkatraman@ayanapower.com; |
| 39 | Ayaana Renewable Power One Pvt. Ltd. | rajeshshukla@ayanapower.com; |
| 40 | Azure Power Forty One Pvt limited | sourin.nandi@azurepower.com; |
| 41 | Azure Power Forty Three Pvt. Ltd._RSS | manohar.reddy@azurepower.com; |
| 42 | Azure Maple Pvt. Ltd. | sourin.nandi@azurepower.com; |
| 43 | AZURE POWER INDIA Pvt. Ltd., Bhadla | yogesh.kumar@adani.com; |
| 44 | Azure Power Thirty Four Pvt. Ltd. | manohar.reddy@azurepower.com; |
| 45 | Clean Solar Power (Jodhpur) Pvt. Ltd. | simhadri.kesapragada@herofutureenergies.com ; atul.tomar@herofutureenergies.com ; sushant.sinha@herofutureenergies.com ; |
| 46 | Clean Solar Power (Bhadla) Pvt. Ltd | |
| 47 | Eden Renewable Cite Private Limited | dejendra.sharma@eden-re.com |
| 48 | Grian Energy private limited | mehul.sharma@amplussolar.com ; |
| 49 | Mahindra Renewable Private Limited | mehar.rahmatulla@mahindra.com ; patil.saurabh2@mahindra.com ; |
| 50 | Mega Surya Urja Pvt. Ltd. (MSUPL) | msupl_250mw_ists@mahindra.com ; |
| 51 | AURAIYA Solar | |
| 52 | DADRI SOLAR | |
| 53 | SINGRAULI SOLAR | |
| 54 | Anta Solar | |
| 55 | Unchahar Solar | raiivgupta@ntpc.co.in ; |
| 56 | NTPC Devikot Solar plant_240MW | |
| 57 | NTPC Kolayat_400kV | |
| 58 | Nedan Solar NTPC | |
| 59 | NTPC Nokhra_300MW | |
| 60 | One Volt energy Pvt. Ltd. | amarjeet.thakur@amplussolar.com ; |
| 61 | ReNew Solar Energy (Jharkhand Three) Private Limited | |
| 62 | RENEW SOLAR POWER Pvt. Ltd. Bhadla | |
| 63 | ReNew Solar Urja Private Limited | |
| 64 | Renew Sun Bright Pvt. Ltd. (RSBPL) | |
| 65 | Renew Sun Waves Private Limited (RSEJ4L) | purnendu.chaubey@renew.com ; |
| 66 | Renew Surya Partap Pvt. Ltd. | kailash.pandey@renew.com ; |
| 67 | Renew Surya Ravi Pvt. Ltd. | |
| 68 | Renew Surya Roshni Pvt. Ltd. | |
| 69 | Renew Surya Vihan Pvt. Ltd. | |
| 70 | Renew Surya Ayaan Pvt. Ltd. | |
| 71 | RENEW SOLAR POWER Pvt. Ltd. Bikaner | |

| | | |
|----|--|---|
| 72 | Rising Sun Energy-K Pvt. Ltd. | tushar.gahlot@risingsunenergy.in ; |
| 73 | Serentica Renewables India 4 Private Limited | prateek.rai@serenticaglobal.com ; |
| 74 | Tata Power Green Energy Ltd. (TPGEL) | vinod.kumar@tatapower.com ; |
| 75 | Tata Power Renewable Energy Ltd. (TPREL) | dhmahabale@tatapower.com ; imran.khan@tatapower.com ; |
| 76 | Thar Surya Pvt. Ltd. | vivek.reddy2@enel.com ; mahendra.vishnoi2@enel.com |
| 77 | TP Surya Pvt. Ltd. | sivanarayana@tatapower.com ; sagar.potdar@tatapower.com ; |
| 78 | Banderwala Solar Plant TP Surya Ltd. | arun.sahoo@tatapower.com ; |
| 79 | TRANSITION ENERGY SERVICES PRIVATE LIMITED | |
| 80 | Transition Green Energy Private Limited | |
| 81 | Transition Sustainable Energy Services Private Limited | |

Address List of ISTS Transmission Licensees (other than NRPC members)

| S.N. | TBCB/ Licensee Name | Owner Company | E-mail ID |
|-------------|---|----------------------|---------------------------------|
| 1 | Gurgaon Palwal Transmission Ltd | INDIGRID | vivek.karthikeyan1@indigrid.com |
| 2 | NRSS-XXIX Transmission Ltd | | |
| 3 | Parbati Koldam Transmission Company Limited | | |
| 4 | Patran Transmission Company Ltd | | |
| 5 | NRSS-XXXI(B) Transmission Ltd | SEKURA | neeraj.verma@energy-sel.com |
| 6 | NRSS XXXVI Transmission Ltd | TATA POWER | rajnishmehrotra@tatapower.com |
| 7 | AD Hydro Power Limited | - | sumitgarg@Injbhilwara.com |
| 8 | Aravali Power Company Private Limited | | amit.hooda01@apcpl.co.in |
| 9 | POWERLINKS TRANSMISSION LIMITED (PTL) | - | sandeep.shukla@tatapower.com |
| 10 | Adani Transmission India Limited | ADANI | Sunil.Raval@adani.com |
| 11 | Bikaner Khetri Transmission Limited | | |



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

दिनांक: 16.09.2025

सेवा में

As per attached list of Members and Other invitees

विषय: संरक्षण उप-समिति की 62 वीं बैठक की कार्यवृत्त |

Subject: Minutes for 62nd Protection Sub-Committee Meeting-reg

संरक्षण उप-समिति की 62 वीं बैठक, दिनांक 26.08.2025 को 10:30 बजे से एनआरपीसी सचिवालय, कटवारिया सराय, नई दिल्ली में आयोजित की गयी थी | उक्त बैठक की कार्यवृत्त संलग्न है | यह उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट (<http://164.100.60.165/>) पर भी उपलब्ध है |

The 62nd meeting of Protection Sub-Committee was held on 26.08.2025 at 10:30 Hrs at NRPC Secretariat, Katwaria Sarai, New Delhi. The minutes of the meeting is attached herewith. The same is also available on NRPC website (<http://164.100.60.165/>).

DHARMENDER
KUMAR MEENA
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DHARMENDER KUMAR
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(डी.के. मीना)
(D.K. Meena)
निदेशक (संरक्षण)

62nd Protection Sub-Committee Meeting (26th Aug, 2025)-MoM

A.2. Status of action taken on decisions of 61st Protection Sub-Committee meeting (agenda by NRPC Secretariat)

- A.2.1 The Status of action taken on the decisions of the 61st PSC meeting was informed to the Forum.
- A.2.2 Concerned utilities submitted the status of action taken. Forum noted the same.
- A.2.3 Updated status of action taken is attached as **Annexure-A.I.**

Decision of the Forum

Forum instructed utilities to take necessary action on pending issues.

A.3. Submission of protection performance indices along with reason and corrective action taken for indices less than unity to NRPC Secretariat for the month of June-July 2025 (agenda by NRPC Secretariat)

- A.3.1 EE (P), NRPC apprised that as per clause 15 (6) of IEGC 2023;
- *Users shall submit the following protection performance indices of the previous month to their respective RPC and RLDC on a monthly basis for 220 kV and above (132 kV and above in NER) system, which shall be reviewed by the RPC:*
 - a) *The **Dependability Index** defined as $D = N_c / (N_c + N_f)$*
 - b) *The **Security Index** defined as $S = N_c / (N_c + N_u)$*
 - c) *The **Reliability Index** defined as $R = N_c / (N_c + N_i)$*

where,

N_c is the number of correct operations at internal power system faults,

N_f is the number of failures to operate at internal power system faults,

N_u is the number of unwanted operations,

N_i is the number of incorrect operations and is the sum of N_f and N_u

Further, as per clause 15 (7) of IEGC 2023;

- *Each user shall also submit the reasons for performance indices less than unity of individual element wise protection system to the respective RPC and action plan*

62nd Protection Sub-Committee Meeting (26th Aug, 2025)-MoM

for corrective measures. The action plan will be followed up regularly in the respective RPC.

A.3.2 In the earlier PSC meeting, it was decided that each utility shall submit the **performance indices of the previous month by the 7th day of the next month.**

A.3.3 Accordingly, the status of the indices reported for the month of **June-July 2025** was presented before the Forum, as attached as **Annexure-A.II. Utilities from where the indices were pending were asked to submit on time in the future.**

A.3.4 The following issues were highlighted by EE (P):

- i. Some Utilities have not submitted data.
- ii. Utilities have submitted on date for some plants, but not all.
- iii. Utilities have not mentioned corrective action taken for indices less than unity.
- iv. Some utilities have sent data after the cut-off date of the 7th.

A.3.5 **Forum observed that the following utilities are non-compliant as indices (June-July-2025) have not been received in the NRPC Secretariat:**

- i. **NTPC (Anta, Auriya, Koldam, Rihand, Singrauli)**
- ii. **MEJA Urja Nigam Ltd.**
- iii. **DTL**
- iv. **UJVNL**
- v. **APCPL**
- vi. **MEIL Anpara Energy Ltd (Anpara-C)**
- vii. **ACME Heeragarh powertech Pvt. Ltd**
- viii. **ACME Chittorgarh Solar Energy Pvt Ltd**
- ix. **Ayana Renewable Power Three Private Limited**
- x. **Ayaana Renewable Power One Pvt. Ltd.**
- xi. **Azure Power Forty One Pvt limited**
- xii. **Azure Power Forty Three Pvt. Ltd._RSS**
- xiii. **Azure Maple Pvt. Ltd.**
- xiv. **AZURE POWER INDIA Pvt. Ltd., Bhadla**
- xv. **Azure Power Thirty Four Pvt. Ltd.**
- xvi. **SB Energy Six Private Limited, Bhadla**
- xvii. **Clean Solar Power (Jodhpur) Pvt. Ltd.**
- xviii. **Clean Solar Power (Bhadla) Pvt. Ltd**
- xix. **Eden Renewable Cite Private Limited**
- xx. **Mahindra Renewable Private Limited**
- xxi. **Mega Surya Urja Pvt. Ltd. (MSUPL)**
- xxii. **AURAIYA Solar**
- xxiii. **DADRI SOLAR**
- xxiv. **SINGRAULI SOLAR**
- xxv. **Anta Solar**
- xxvi. **Unchahar Solar**
- xxvii. **ReNew Solar Urja Private Limited**
- xxviii. **Rising Sun Energy-K Pvt. Ltd.**

62nd Protection Sub-Committee Meeting (26th Aug, 2025)-MoM

- xxix. **Serentica Renewables India 4 Private Limited**
- xxx. **Thar Surya Pvt. Ltd.**
- xxxi. **TP Surya Pvt. Ltd.**
- xxxii. **TRANSITION ENERGY SERVICES PRIVATE LIMITED**
- xxxiii. **Transition Green Energy Private Limited**
- xxxiv. **Transition Sustainable Energy Services Private Limited**

- A.3.6 Incidents, where indices were found less than one, were discussed (**Annexure-A.III.**). It was found that utilities have already taken corrective action except few. Utilities were directed to take corrective action wherever it was pending.
- A.3.7 Subsequently, SE, NRPC requested RE Plants to comply with the IEGC with respect to the protection chapter added newly in the IEGC.
- A.3.8 Further, it was also highlighted that IEGC 2023 has given responsibility to RPCs for receiving indices from all utilities; however, all utilities are not members of NRPC. SLDCs have been requested in earlier PSC meetings to follow up with concerned utilities of states that are not NRPC members and to send compiled indices to NRPC.
- A.3.9 MS, NRPC stated that there shall be one nominated officer from each utility for reporting of indices.

Decision of the Forum:

Utilities were asked to submit the Protection performance indices timely by the 7th day of the month, element-wise, along with corrective action taken for indices less than unity. Non-compliant utilities were asked to take necessary action for reporting data. Utilities were also requested to nominate one officer for reporting of indices.

A.4. Reporting of protection performance indices of SPS by SLDCs (agenda by NRPC Secretariat)

- A.4.1 EE (P), NRPC apprised that as per clause 16 of IEGC 2023;
- *The users and SLDCs shall report about the operation of SPS immediately and a detailed report shall be submitted within three days of operation to the concerned RPC and RLDC in the format specified by the respective RPCs.*
 - *The performance of SPS shall be assessed as per the protection performance indices specified in these Regulations. In case, the SPS fails to operate, the*

| Nodal officer for reporting of protection performance indices & provide the other protection related inputs for compliance of Protection Code of IEGC 2023 | | | | | | |
|--|--------------------------------------|-----------------------|---------------------------|-------------|--|--|
| Sr. No. | Organization | Name | Designation | Mobile no | Email | Present Posting Location |
| 1 | JSW KWHEP | Hunny Kalia | Manager | 7018091548 | hunny.kalia@jsw.in | KWHEP |
| 2 | PTCUL | Er Asim Baig | Executive Engineer | 9412087885 | asimisonet@gmail.com | Kashipur |
| 3 | BBMB | Rashmi Gautam | Deputy Director | 7973755001 | ddtech@bbmb.nic.in | Chandigarh |
| 4 | LPGCL | Abhimanyu Upadhyay | AVP | 9151897271 | upadhyay.ite@lpgcl.com | Lalitpur |
| 5 | UPPTCL | Mohammad Reza Ahmad | Chief Engineer | 8707704798 | director_op@upptcl.org | Lucknow |
| 6 | IPGCL | Arif Rahman | D.G.M | 9717694928 | arif.ipgcl@gmail.com | Bawana |
| 7 | RVUN | Raman Jain | Executive Engineer | 9413349559 | raman_49559@rvun.com | Kota |
| 8 | HPPTCL | Rajat Sharma | Sr. Manager | 7018482028 | smprot1.tcl@gmail.in | Hamirpur |
| 9 | RVPN | Sh. R.R. Gupta | Assistant Engineer | 9413393611 | se_prot_engg@rvpn.co.in | Jaipur |
| 10 | UPRVUNL | Shashank Chaudhary | Executive Engineer | 9453007496 | cgm.to@uprvunl.org | Lucknow |
| 11 | HVPNL | Biresh Kumar Raghava | Superintending Engineer | 9312599029 | semppccdelhi@hvpn.org.in | Delhi |
| 12 | HPPCL | Shikhar Mahajan | Senior Manager | 9736119785 | shikhar.mahajan@hpgcl.in | Shimla |
| 13 | Alaknanda Hydro Electric Plant (GVK) | Bishwambar Bag | Manager-Operation | 9520973715 | bishwambar.bag@gvk.com | Srinagar, Uttarakhand/ ALAKNANDA HYDROPOWER COMPANY LIMITE |
| 14 | MEIL | Mr. Raghavendra Singh | Dy. Manager | 9329403060 | raghvendra.singh@meilanparapower.com | Anpara C TPS, Anpara, District - Sonbhadra UP 231225 |
| 15 | Meja | Vishal Kumar | Sr. Manager | 9613211321 | vishalkumar01@ntpc.co.in | MUNPL-Meja |
| 16 | WUPPTCL | Rajesh Kumar Yadav | AGM | 88138 05738 | wupptcl.co@gmail.com | Indirapuram |
| 17 | SEUPPTCL | Prashant Chauhan | Manager | 9720490066 | pchauhan@tatapower.com | 765/400kV Substation Mainpuri |
| | | Ashish Kumar Singh | Manager | 9690004064 | ashishk@tatapower.com | 400kV GIS REWA ROAD |
| 18 | AESL | Ritesh Gupta | Manager-Protection | 9764997202 | Ritesh.gupta@adani.com | Ahmedabad |
| 19 | Gentari | Mehul Kumar Sharma | Manager | 7414077993 | mehul.sharma@gentari.co.in | Bikaner |
| 20 | Renew | AASHISH BISSA | AGM | 9829633345 | aashish.bissa@renew.com | Phalodi, Rajasthan |
| 21 | AGEL | Neerajchandra Patel | Associate General Manager | 9687660325 | Neeraj.Patel@adani.com | Ahmedabad |



RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED

[Corporate Identity Number (CIN): U40109RJ2000SGC016485]
Regd. Office: Vidyut Bhawan, Janpath, Jyoti Nagar, Jaipur-302005

RVPN
An ISO 9001:2015
Certified Company

OFFICE OF THE CHIEF ENGINEER (LD)

New Prasaran Bhawan, TCC Building, Heerapura, Jaipur Tel. No. 0141-2948293
E-mail: ce.ld@rvpn.co.in website: www.http://energy.rajasthan.gov.in/rvpn

No.RVPN/CE(LD)/SE(SOLD)/XEN-III/A-2/F./D. 1757 dt. 18/1/26

The Member Secretary
NRPC, New Delhi

Sub: - Agenda for inclusion in the 66th PSC meeting scheduled on 28.1.2026 reg
Installation of Auto Reclosure on 220 kV lines emanating from RAPP(A) nuclear power
plant, Rawatbhatta

Ref : i. General Manager, NRLDC, letter dated 6.11.2025 and 6.1.2026
ii. NRPC letter dated 12.1.2026 reg. agenda item for 66th PSC meeting
scheduled on 28.1.2026

On the above-captioned subject, it is intimated that the issue of frequent trippings of 220 kV lines emanating from RAPP(A) Nuclear Power Plant is being continuously raised in OCC and PSC meetings. In this regard, it is further informed that various measures have already been taken by RVPN to reduce the tripping of 220 kV lines emanating from RAPP(A). However, one of the major reason for the continued increase in tripping incidents is the non-installation of an Auto-Recloser Scheme on these 220 kV lines as per agreed & approved NR Protection Philosophy.

In view of the above, it is proposed that the RAPP9A) Nuclear Power Plant, Rawatbhatta may be advised to install an Auto-Recloser Scheme on the 220 kV lines emanating from RAPP(A) at the earliest to improve system security and reliability. Accordingly, an agenda item is enclosed herewith for inclusion of the above issue in the upcoming PSC meeting for discussion and approval.

Encl: As above

(Sudhir Jain)
Chief Engineer (LD)
RVPN, Jaipur

Validity unknown Signature valid

Digitally signed by Sudhir Jain
Designation: Chief Engineer
Date: 2026.01.18 10:33 IST
Reason: Approval

RajKaj Ref No.:
19987240



Copy submitted/ forwarded to the following for information and necessary action:

1. The Director (Operation/Tech), RVPN, Jaipur
2. The Chief Engineer (PP&D), RVPN, Jaipur
3. The Chief Engineer(T&C/MPT&S), RVPN, Jaipur/Ajmer.
4. The Chief Engineer(Procurement), RVPN, Jaipur. It is advised to ensure timely availability of material as per requirement of ZCE(T&C), RVPN, Ajmer.
5. The Superintending Engineer, TA to the MD, RVPN, for kind perusal of MD, RVPN, Jaipur

6. The Superintending Engineer (P&P), RVPN Jaipur
7. The Superintending Engineer (T&C/MPT&S), RVPN, Udaipur /Kota.
8. The Superintending Engineer (Prot. Engg.), RVPN, Jaipur.
9. Sh. Mitesh Mehta, Head Electrical Maintenance RAPP(A) Power Plant, Rawatbhatta. It is advised to install A/R on all 220 kV lines emanating from RAPP(A) power plant and provide the consent to activate A/R on both 220 kV lines at Sakatpura end of both 220 kV circuits between Skatpura and RAPP(A).
10. The Executive Engineer, Shift Incharge, SLDC, Control Room.

Encl:- As above

Chief Engineer (LD)

Copy also forwarded to the following for information:

1. The General Manager, NRLDC, 18A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016 in reference to their letter dated 15.11.2025 and 15.1.2026
2. The Superintending Engineer (Opr.), NRPC, 18A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016.

Encl:- As above

Chief Engineer (LD)

RajKaj Ref No.:
19987240

1

Validity unknown Signature valid

Digitally signed by S. Anir Jain
Designation: Chief Engineer
Date: 2026.01.15 10:33 IST
Reason: Approved

Agenda: Reg Installation of Auto Recloser on 220 kV lines emanating from RAPP(A) nuclear power plant, Rawatbhatta

Following transmission lines are emanating from RAPP(A) power plant (Unit#2 of 200 MW capacity):

- i. 220 kV S/C RAPP(A)-Sakatpura line (Ckt-1): 39.77 km
- ii. 220 kV RAPP(A)-Sakatpura line (Ckt-2): 42.5 km
- iii. 220 kV S/C RAPP(A)-Debari line : 192 km
- iv. 220 kV S/C RAPP(A)-RAPP(B) Tie line : 1.8 km

Issue of frequent tripping of 220 kV lines emanating from RAPP(A) nuclear power plant is being continuously raised in the OCC and PSC meetings. In this regard it is intimated that various measures have been taken by RVPN to reduce tripping of these 220 kV lines but on RVPN end on these lines auto reclosing scheme are installed but at RAPP end not installed and one of major reason to increase tripping of these 220 kV lines which is discussed hereunder :-

Frequent Tripping of 220 kV S/C RAPP(A)-Debari line

- i. **Condition of the Line and Causes of Tripping:** The 220 kV Debari-RAPP (A) transmission line is approximately 200 km long, commissioned in 1971, and is now facing frequent tripping primarily due to aging disc insulators and adverse environmental conditions such as **bird droppings** and **foggy weather**. Further, Approx. 25-30 km section of this line is passing through Mukundara hills tiger reserve .
- ii. **Refurbishment of Tower Stubs:** The line consists of 606 tower locations and at several locations the **stub legs have weakened**. Accordingly, **Administrative & Financial Sanction (A&FS)** for refurbishment of the line has been issued vide letter dated 27.04.2025 (Annexure-1). Although the bid for refurbishment work was initially affected due to **low / non-participation of bidders**, after continuous follow-up, some bidders participated and work order have been placed on 21.11.2025 for refurbishment 696 nos. legs with commissioning schedule of 06 months from arranging tower material by RVPN. Approx. 48 % tower material have been arranged & fabricated as per site condition and reach at the store at 220 kV GSS Debari and work will commence shortly after the collection and fabrication of sufficient material.
- iii. **Replacement of Disc Insulator Suspension Strings:** Out of the 606 tower locations, the disc insulator suspension strings between **locations 300 to 450** were replaced in 2014. Replacement of the remaining suspension strings covering **locations 01-300 and 451-606** (total 385 towers) has already been planned. The **A&FS** for this work was issued vide letter dated 27.08.2023 (Annexure-2). This replacement work will be taken up **after completion of the stub-strengthening work**. Material requirements for the same have already been raised by the concerned field officer vide letter dated 13.10.2025 (Annexure-3).
- iv. Routine patrolling, tree cutting, repair maintenance (R&M) are regularly performed on the line to reduce tripping incidents and improve reliability at identified problematic locations.

It is mentioned that on this line Debari end A/R is installed and activate but at RAPP end it is not installed. Therefore, under transient fault A/R is successfully operated at Debari end but tripped from RAPP end. Tripping reports of this line in the month of Nov-25 and Dec-25 are tabulated at Annexure-4 and abstracted hereunder :

Validity unknownSignature valid

Digitally signed by S. Anir Jain
Designation : Chief Engineer
Date: 2026.01.08 10:09:53 IST
Reason: Approved

RajKaj Ref No.:
19987239



Table-1 : Tripping of 220 kV S/C RAPP(A)-Debari line in the Month of Nov and Dec 2025

| S. No. | OUTAGE DATE | OUTAGE TIME (hrs.) | RESTORATION DATE | RESTORATION TIME (hrs.) | TOTAL OUTAGE DURATION (hrs.) | REASON OF OUTAGE |
|--------|-------------|--------------------|------------------|-------------------------|------------------------------|---|
| 1 | 02.11.2025 | 12:00 | 02.11.2025 | 12:59 | 0.98 | Fault tripping. Line A/R successful operated from Debari End & tripped from RAPP"A" End. Line Tripping could be avoided if A/R is installed at Rapp A End |
| 2 | 24.11.2025 | 02:55 | 24.11.2025 | 04:30 | 1.58 | |
| 3 | 04.12.2025 | 02:38 | 04.12.2025 | 03:37 | 0.98 | |
| 4 | 24.12.2025 | 01:02 | 24.12.2025 | 02:08 | 1.10 | |
| 5 | 25.12.2025 | 05:16 | 25.12.2025 | 06:21 | 1.08 | |
| | | Total(hrs) | 5.73 | 5 hrs 44 minutes | | |

Frequent Tripping of two nos. 220 kV RAPP(A)-Sakatpura lines

- i. The 220 KV Sakatpura-RAPP Ckt-1 was commissioned in 1977.
- ii. The 220 KV Sakatpura-RAPP Ckt-2 was commissioned in 1971.
- iii. The 220 KV S/C Sakatpura-RAPP Ckt-1 from location 9 to 89 and 220 KV Sakatpura-RAPP Ckt-2 from location 10 to 101 pass through a dense forest area and a vulture-prone area.
- iv. Frequent tripping of the lines is mainly due to crossing a dense forest area and being in a vulture-prone area.
- v. Routine patrolling, tree cutting, repair and maintenance (R&M) are regularly performed on the lines to reduce tripping incidents and improve reliability at identified problematic locations.
- vi. In FY 2024-25 to reduce trippings disc insulators have been replaced at maximum locations and also bird guard installed at maximum locations on all 220 kV circuits between Sakatpura and RAPP Generation complex.

It is mentioned that on both 220 kV circuits between Sakatpura and RAPP(A), Sakatpura end A/R is installed (kept deactivate) but at RAPP end A/R is not installed. Tripping reports of 220 kV lines between RAPP(A) and Sakatpura lines in the month of Nov-25 and Dec-25 are tabulated at Annexure-5 and abstracted hereunder :

Validity unknownSignature valid

Digitally signed by S. Anir Jain
 Designation : Chief Engineer
 Date: 2026.01.09 10:09:53 IST
 Reason: Approved

RajKaj Ref No.:
19987239

Table-2 : Tripping of 220 kV RAPP(A)-Sakatpura circuits in the Month of Nov and Dec 2025

| S. No. | OUTAGE DATE | OUTAGE TIME | RESTORATION DATE | RESTORATION TIME | TOTAL OUTAGE DURATION | REASON OF OUTAGE |
|---------------------------------------|-------------|-------------|------------------|--------------------|-----------------------|--|
| 220 KV Sakatpura- RAPP(A) CKT No.1 | | | | | | |
| 1 | 09.11.2025 | 01:32 | 09.11.2025 | 02:28 | 0.93 | Transient fault, therefore, if Auto-recloser installed line might be hold well |
| 2 | 14.11.2025 | 05:33 | 14.11.2025 | 06:25 | 0.87 | |
| 3 | 18.12.2025 | 00:42 | 18.12.2025 | 01:50 | 1.13 | |
| 4 | 18.12.2025 | 03:16 | 18.12.2025 | 15:12 | 11.93 | |
| 5 | 25.12.2025 | 02:57 | 25.12.2025 | 04:27 | 1.50 | |
| | | Total(hrs) | 16.37 | 16 hrs. 22 minutes | | |
| II 220 KV Sakatpura- RAPP(A) CKT No.2 | | | | | | |
| 1 | 12.11.2025 | 0.25 | 12.11.2025 | 07:44 | 1.67 | Transient fault, therefore, if Auto-recloser installed line might be hold well |
| 2 | 26.11.2025 | 0.97 | 27.11.2025 | 00:43 | 1.35 | |
| 3 | 06.12.2025 | 01:08 | 06.12.2025 | 01:56 | 0.80 | |
| | | Total(hrs) | 3.82 | 3 hrs. 49 minutes | | |

From table-1 and table-2 following are observed :-

1. From table-1 it is observed that if A/R on 220 kV S/C Debari-RAPP(A) line at RAPP end was installed, 5 hrs 44 minutes outage (All 05 outages) of this line could be avoided.
2. From table-2 it is observed that if A/R on 220 kV S/C Sakatpura-RAPP(A) Ckt-1 at RAPP end was installed, 4 hrs 25 minutes outage (04 outages of total 05) of this line could be avoided.
3. From table-2 it is also observed that if A/R on 220 kV S/C Sakatpura-RAPP(A) Ckt-2 at RAPP end was installed, 3 hrs 49 minutes outage (All 03 outages) of this line could be avoided.
4. It is pertinent to mentioned that availability of 220 kV S/C RAPP(A)-Debari line is critically required for reliable and secure supply of Udaipur District.
5. Further it is also intimated that 220 KV S/C Debari-RAPP(A) line and both 220 KV Debari-RAPP(A) lines are an important evacuating paths for RAPP(A) Nuclear generation. Frequent outage of these lines affects the security & reliability of RAPS Nuclear Generation complex. Any major contingencies may also lead to poisoning out of RAPS reactors.
6. Majority of faults on the 220 kV lines emanating from RAPP(A) power plant are transient in nature as these lines are passing through dense forest area, therefore, A/R are essential required to availability of the lines.
7. Auto Reclosing scheme shall be installed and activated on 220 kV and above lines as per approved NR Protection Philosophy, but Auto Reclosing scheme are not installed at RAPP(A) end on all 220 KV lines emanating from RAPP(A) power plant which is against agreed & approved NR Protection Philosophy.

Validity unknownSignature valid

Digitally signed by S. Anir Jain
Designation: Chief Engineer
Date: 2026.01.09 10:09:53 IST
Reason: Approved

RajKaj Ref No.:
19987239

In view of above,

- i. The Nuclear Power Corporation of India Limited (NPCIL) may be advised to install Auto-Reclosure (A/R) schemes on all 220 kV lines emanating from RAPP(A) Nuclear Power Plant at the earliest, in line with the agreed and approved NR Protection Philosophy. This will help improve grid stability and reliability and strengthen the power evacuation system of the critical nuclear power plant. If required, refurbishment of the RAPP(A) switchyard may also be undertaken to facilitate installation of A/R schemes on the 220 kV lines.
- ii. Further, RVPN may be permitted to activate Auto-Reclosure at the Sakatpura end on the 220 kV circuits between RAPP(A) and Sakatpura to reduce downtime of these 220 kV lines following fault occurrences. In this regard, it is noted that A/R at the Debari end of the 220 kV S/C Debari-RAPP(A) line is already operational and has proven effective, as in most cases the line remains charged from the Debari end after fault clearance.

Validity unknownSignature valid

Digitally signed by S. Anir Jain
Designation : Chief Engineer
Date: 2026.01.09 11:09:53 IST
Reason: Approved

RajKaj Ref No.:
19987239



RVPN
An ISO 9001:2015
Certified Company

ANNEXURE-1

RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED.

[Corporate Identity Number (CIN):U40109RJ2000SGC016485]

(Regd. Office: Vidyut Bhawan, Jan Path, Jyoti Nagar, Jaipur - 302 005)

OFFICE OF THE SUPERINTENDING ENGINEER (P&P)

Room No. 336, Vidyut Bhawan, Jyoti Nagar, Jaipur Tel. No 0141-2740623

e-mail:se.pp@rvpn.co.in WEBSITE :<https://energy.rajasthan.gov.in/rvpnl>

The Zonal Chief Engineer (T&C),
RVPN, Ajmer.

Sub: Administrative and Financial Sanction for tower stub strengthening (Location 1-606) on 220 KV Debari - RAPP 'A' line at 220 KV GSS Debari under head "R&M of Line & Cable Network.

Ref.: (i) Your Rajkaj e-file No. XEN/220KV/GSS/DEBARI/F.23-24/RAPP A Ground Clearance-00092-Part File(1)-6520076 dt. 22.04.2025.

With the approval of the WTDs of RVPN ,dt. 21.04.2025, the Administrative and Financial Sanction, under DOP item No. 1(c), is hereby conveyed for tower stub strengthening (Location 1-606) on 220 KV Debari - RAPP 'A' line at 220 KV GSS Debari under head "R&M of Line & Cable Network, amounting to **Rs. 39,01,080.00/- (without OH charges)**, as per the estimate sent with your case file dated 22.04.2025.

The above administrative & financial approval has been issued subjected to the budget availability in your jurisdiction. The expenditure of the above schemes shall be made from provisions made under the head "**Repair & Maintenance**" for which the budget shall be provided by the Sr. A.O. (B&R), RVPN, Jaipur.

The technical sanction of the above works may be issued at your end.

(S.C. Meena)
Chief Engineer (PP&D)

Copy to the following for information and necessary action:

1. The Chief Engineer (PP&D/Procurement), RVPN, Jaipur.
2. The Chief Controller of Accounts-I/II, RVPN, Jaipur.
3. The Superintending Engineer (NPP&RA/ Design/ QC. Insp. & Montg/Procurement-I/II), RVPN, Jaipur.
4. The Superintending Engineer (T&C), RVPN, Udaipur.
5. The Sr. Account Officer (B&R),RVPN, Jaipur.
6. The Accounts Officer (T&C), RVPN, Udaipur.
7. The Assistant Engineer-IV (P&P), RVPN, Jaipur.

Chief Engineer (PP&D)

Signature Not Verified



Digitally signed by Suresh Chand Meena
Designation : Chief Engineer
Date: 2025.04.27 16:15:40 IST
Reason: Approved



RVPN
An ISO 9001:2015
Certified Company

RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED.

[Corporate Identity Number (CIN):U40109RJ2000SGC016485]

(Regd. Office: Vidyut Bhawan, Jan Path, Jyoti Nagar, Jaipur - 302 005)

OFFICE OF THE SUPERINTENDING ENGINEER (P&P)

Room No. 336, Vidyut Bhawan, Jyoti Nagar, Jaipur Tel. No 0141-2740623

e-mail: se.pp@rvpn.co.in WEBSITE: <https://energy.rajasthan.gov.in/rvpn/>

The Zonal Chief Engineer (T&C),
RVPN, Ajmer.

Sub: Administrative and Financial Sanction for replacement of balance suspension string by long rod insulator & fixing of vibration damper on 220KV S/C Debari-RAPP-(A) Line under the head of R&M.

Ref.: (i) Your Rajkaj e-file No. XEN/220KV/GSS/DEBARI/F.18-00044 dt. 07.07.2023

The Administrative and Financial Sanction of the WTDs of RVPN (approved on 20.8.2023) under DOP item No. 1(c), is hereby conveyed for replacement of balance suspension string by long rod insulator & fixing of vibration damper on 220KV S/C Debari-RAPP-(A) Line, amounting to **Rs. 1,43,05,407.72** (without overhead charges) as per the estimate sent with your Rajkaj e-file No. XEN/220KV/GSS/DEBARI/F.18-00044 dt. 07.07.2023

The above administrative & financial approval has been issued subjected to the budget availability in your jurisdiction. The expenditure of the above schemes shall be made from provisions made under the head "Repair & Maintenance" for which the budget shall be provided by the Sr. A.O. (B&R), RVPN, Jaipur.

The technical sanction of the above works may be issued at your end

(V.A. Kale)

Superintending Engineer (P&P)

Copy to the following for information and necessary action:

1. The Chief Engineer (PP&D/Procurement), RVPN, Jaipur.
2. The Chief Controller of Accounts-I/II, RVPN, Jaipur.
3. The Superintending Engineer (NPP&RA/Design/QC. Insp. & Montg/Procurement-I/II), RVPN, Jaipur
4. The Superintending Engineer (T&C), RVPN, Udaipur.
5. The Sr. Account Officer (B&R), RVPN, Jaipur.
6. The Accounts Officer (T&C), RVPN, Udaipur.
7. The Assistant Engineer-IV (P&P), RVPN, Jaipur.
8. The JEN (P&P), RVPN, Jaipur

Superintending Engineer (P&P)

Signature valid

Digitally signed by Vistwas Anil Kale
Designation: Superintending
Engineer
Date: 2023.08.27 13:53:50 IST
Reason: Approved

ANNEXURE-3

RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED



(AN ISO 9001:2015 Certified Company)
Corporate Identity Number (CIN): U40109RJ2000SGC016485

OFFICE OF THE EXECUTIVE ENGINEER 220 KV GSS DEBARI (Udaipur)-313024

NO. RVPNL/XEN/220KV/GSS/DEBARI/F. ()/D. Dated:13.10.2025

The Superintending Engineer (T&C),
RVPNL Udaipur (Raj)

Subject:- Urgent Material requirement at 220 KV GSS Debari.

Reference:- NO. RVPNL/XEN/220KV/GSS/DEBARI/F. ()/D. 223 Dated:18.09.2025

On the subject & reference cited above It is kindly requested that the following items be urgently required at 220KV GSS Debari for Work of Replacement of Balance Suspension String & fixing of Vibration damper on 220KV S/C Debari-RAPP” A” Line from Loc No. 01 to 606.

| S.No | Item Name | Qty | A&FS approval No. |
|------|--|-----------|--|
| 1. | 70 KN 220 kV (Suspension) Long Rod Insulator 2000000095 | 1216 Nos. | A&FS has been issued vide Rajkaj Ref No. 4583073 Dt. 27.08.2023 By SE (P&P), Jaipur under the head of R&M |
| 2. | S/S H/W for ZEBRA 9000000224 | 1119 SET | |
| 3. | D/S H/W for ZEBRA 9000000223 | 36 SET | |
| 4. | PA Rod for ZEBRA 9000000127 | 1155 SET | |
| 5. | Vibration Damper 9000000176 | 2280 Nos. | |

Submitted for needful.

Executive Engineer (220 KV GSS)
RRVPNL DEBARI

Copy to:-

- 1.The Zonal Chief Engineer (T&C-AZ) RRVPNL, Ajmer.
2. The Superintending Engineer (Proc-I) RRVPNL,Jaipur.

Executive Engineer (220 KV GSS)
RRVPNL DEBARI

Signature Not Verified

Digitally signed by Rajendra Kothari
Designation : Executive Engineer
Date: 2025.10.13 13:01:46 IST
Reason: Approved

RajKaj Ref No.:
18293816

eSign 1.0



Tripping details of 198.2 km 220 KV S/C RAPP(A)-Debart line in the Month of Nov and Dec 2025

| S. No. | OUTAGE DATE | OUTAGE TIME (Hr:mm) | RESTORATION DATE | RESTORATION TIME (Hr:mm) | TOTAL OUTAGE DURATION (hrs) | REASON OF OUTAGE | Remark |
|--------|-------------|---------------------|------------------|--------------------------|-----------------------------|---|---|
| 1 | 02.11.2025 | 12:00 | 02.11.2025 | 12:59 | 0.98 | Fault tripping:- A/R Operated at Debart End Debart End :- M-1, B-Ph, Z-1, D=131.1KM, I13=0.75KA, Carr recd, carr send M-11, B-Ph, Z-1, D=117.8KM, I13=0.79KA, Carr Send RAPP'A" End :- M-1, B-Ph, Z-1, D=99.8KM, If=1.809KA M-11, B-Ph, Z-1, D=161.3KM, If=549.6A Remark- Tripping at Rapp A End | 59 minutes line remain out of service due to non installation of Auto Reclosure scheme at Rapp end |
| 2 | 24.11.2025 | 02:55 | 24.11.2025 | 04:30 | 1.58 | Fault tripping:- A/R Operated at Debart End Debart End :- M-1, Y-Ph, Z-1, D=15.1KM, I12=1.85KA, Carr recd, carr send M-11, Y-Ph, Z-1, D=13.6KM, I12=1.84KA, Carr Send RAPP'A" End :- M-1, B-Ph, Z-11, D=184.9KM, If=1.219KA M-11, B-Ph, Z-11, D=188.3KM, If=1.246KA Remark- Tripping at Rapp A End | 1 hour 35 minutes line remain out of service due to non installation of Auto Reclosure scheme at Rapp end |
| 3 | 04.12.2025 | 02:38 | 04.12.2025 | 03:37 | 0.98 | Fault tripping:- A/R Operated at Debart End Debart End :- M-1, Y-Ph, Z-1, D=143KM, I12=0.79KA, Carr recd, carr send M-11, Y-Ph, Z-1, D=128.1KM, I12=0.79KA, Carr Send RAPP'A" End :- M-1, B-Ph, Z-1, D=67.44KM, If=2.53KA M-11, NIL Remark- No supply disturbance. Line A/R successful operated <u>from Debart End & tripped from RAPP"A" End</u> | 59 minutes line remain out of service due to non installation of Auto Reclosure scheme at Rapp end |

| S. No. | OUTAGE DATE | OUTAGE TIME (Hr:mm) | RESTORATION DATE | RESTORATION TIME (Hr:mm) | TOTAL OUTAGE DURATION (hrs) | REASON OF OUTAGE | Remark |
|--------|-------------|---------------------|------------------|--------------------------|-----------------------------|---|---|
| 4 | 24.12.2025 | 01:02 | 24.12.2025 | 02:08 | 1.10 | <p>Fault tripping:- A/R Operated at Debari End Debart End :- M-1, Y-Ph, Z-1, D=166.3KM, I12=0.67KA, Carr recd, carr send M-11, Y-Ph, Z-1, D=150.1KM, I12=0.67KA, Carr Send RAPP"A" End :- M-1, Y-Ph, Z-1, D=38.29KM, If=4.02KA, 62/85XX-74UM M-11, Y-Ph, Z-1, D=38.65KM, If=3.939KA Remark- No supply disturbance. Line A/R successful operated from Debart End & tripped from RAPP"A" End</p> | 1 hour 06 minutes line remain out of service due to non installation of Auto Reclosure scheme at Rapp end |
| 5 | 25.12.2025 | 05:16 | 25.12.2025 | 06:21 | 1.08 | <p>Fault tripping:- A/R Operated at Debari End Debart End :- M-1, Y-Ph, Z-1, D=142.6KM, I12=0.77KA, Carr recd, carr send M-11, Y-Ph, Z-1, D=127.8KM, I12=0.78KA, Carr Send RAPP"A" End :- M-1, Y-Ph, Z-1, D=64.46KM, If=2.543KA, 62/85XX-74UM M-11, Y-Ph, Z-1, D=64.8KM, If=2.54KA Remark- No supply disturbance. Line A/R successful operated from Debart End & tripped from RAPP"A" End</p> | 1 hour 05 minutes line remain out of service due to non installation of Auto Reclosure scheme at Rapp end |
| | | | | Total(hrs) | 5.73 | | |
| | | | | | 5 hrs 44 minutes | | |

Tripping details of 220 KV S/C RAPP(A)-Sakalpura Ckt-1 BCK-2 in the Month of Nov and Dec 2025

| S. No. | OUTAGE DATE | OUTAGE TIME (Hr:mm) | RESTORATION DATE | RESTORATION TIME (Hr:mm) | TOTAL OUTAGE DURATION (hrs) | INDICATION | | REASON OF OUTAGE | Remark |
|-------------------------------------|-------------|---------------------|------------------|--------------------------|-----------------------------|---|--|------------------|--|
| | | | | | | END-1 | END-2 | | |
| 220 KV Sakalpura- RAPP(A) CKT No. 1 | | | | | | | | | |
| 1 | 09.11.2025 | 01:32 | 09.11.2025 | 02:28 | 0.93 | <p>Main 1: Phase- C (ABC) carr:reec:,carr:send, Z1 Pickup CG, PU Time= 54 ms, Trip Time = 10 ms, Distance= 28.66km, Ia= 0.38KA,Ib=0.23KA, Ic=5.40 KA, Rec=1.780hm, Xsc=5.730hm, Rpt=3.570hm, Xpt=1.450hm,D%=65.8%</p> <p>Main 2: C- phase ,Z=1, Fault duration =60.05ms, Relay trip time=93.48ms, Fault Location- 27.38KM, Fault Current Ic=5.4257 KA,Ia=378A, Ib=245.2A, VAN=130.1KV, VBN=132.2KV, VCN=103.0KV</p> | <p>Main=1, B Phase (RYB) Zone-1, Distance=12.81KM, Ib=7.655KA, Main2- B phase , Z 1, Distance=12.83KM, Fault Current=7.684 KA</p> | Dist.Prot. | Transient fault, therefore, if Auto-recloser enabled line might be hold well |
| 2 | 14.11.2025 | 05:33 | 14.11.2025 | 06:25 | 0.87 | <p>Main 1: Phase- A, carr:reec:,carr:send, Z1 Pickup AG, PU Time= 57 ms, Trip Time = 0 ms, Distance= 13.0km, Ia= 5.12KA,Ib=0.08KA, Ic=0.04 KA, Rec=4.730hm, Xsc=2.590hm, Rpt=9.460hm, Xpt=5.180hm, Main 2: -A- phase, Z=1, Fault duration =58.27ms, Relay trip time=79.84ms, Fault Location- 12.77KM, Fault Current Ia=6.155KA, VAN=120.0KV, VBN=133KV, VCN=134.4KV, Fault resistance:-14.91 ohm</p> | <p>Main=1, A- Phase Zone-1, Distance=27.63KM, Ia=2.78KA, Fault resistance=36.46 ohm</p> | Dist.Prot. | Transient fault, therefore, if Auto-recloser enabled line might be hold well |
| 3 | 18.12.2025 | 00:42 | 18.12.2025 | 01:50 | 1.13 | <p>Main 1: Phase -A(ABC), Z1 Pickup AG, Z1 Trip ABC, definitive trip-ON, Distance= 16.3km, Rec=2.380hm, Xsc=3.26 Ohm, Rpt=4.760hm, Xpt=6.52 ohm, D(%)=57.5%</p> <p>Main 2: Phase A, Tripped Phase ABC, Earth Fault Start IN Dist. Trip-Z1 Fault Duration=58.37ms, relay trip time=83.38ms, Fault Location=15.35KM, Ia=7.822K A, Ib=140.1 A, Ic=222.4A, VAN=103.7KV, VBN=132.2KV, VCN=133.1KV, Z1</p> | <p>Main=1, Phase=R (RYB), Z1 Fault current=3.671KA, Fault loc=26.34KM Main2-Phase=R, Z1 Fault current=3.644 KA, Fault loc=26.26KM</p> | Dist.Prot. | Transient fault if Auto-recloser enabled fault might be cleared |
| 4 | 18.12.2025 | 03:16 | 18.12.2025 | 15:12 | 11.93 | <p>Main 1: Phase -A(ABC), Z1 Pickup AG, Z1 Trip ABC, Distance= 13.5km, Rec=2.640hm, Xsc=2.70 Ohm, Rpt=5.270hm, Xpt=5.41 ohm, D(%)=31.1%</p> <p>Main 2: Phase A, Tripped Phase ABC, Earth Fault Start IN Dist. Trip-Z1 Fault Duration=60.0ms, relay trip time=84.98ms, Fault Location=13.98KM, Ia=8.074K A, Ib=105.1 A, Ic=180.3A, VAN=107.5KV, VBN=133.2KV, VCN=134.4KV, Z1</p> | <p>Main=1, Phase=R (RYB), Z1 Fault current=3.671KA, Fault loc=26.34KM Main2-Phase=R, Z1 Fault current=3.644 KA, Fault loc=26.26KM</p> | Dist.Prot. | loc. No. 41 to 47 earth wire broken |

| S. No. | OUTAGE DATE | OUTAGE TIME (Hr:mm) | RESTORATION DATE | RESTORATION TIME (Hr:mm) | TOTAL OUTAGE DURATION (hrs) | INDICATION | REASON OF OUTAGE | Remark | |
|--------|------------------------------------|---------------------|------------------|--------------------------|-----------------------------|--|---|------------|--|
| 5 | 25.12.2025 | 02:57 | 25.12.2025 | 04:27 | 1.50 | Main 1: Phase-A, carr.rece.,carr.send, 21 Pickup AG, PU Time=59ms, Trip Time = 1ms, Distance=23.3km, Ia=1.49KA, Rsec=26.590hm, Xsec=4.670hm, Rpt=53.19 Ohm, Xprt=9.340hm,D%=53.7% Main 2: A=Phase,carr.rece.,Z=1, Fault duration =46.68ms, Relay trip time=80.07ms, Fault loc=13.98km, Ia=8.07KA,Ib=105.1A, Ic=180.3A, VAN=107.5KV, VBN=133.2KV, VCN=133.2KV, Fault resistance=7.3960hm | Main=1 PHASE=A,ZONE=1, DIST=19.45KM, Ia=1.744KA, Fault Res=50.06 Ohm Main=2 Phase=A,Dist=19.66 KM,Ia=1.06 KA | Dist.Prot. | Transient fault, therefore, if Auto-recloser enabled line might be hold well |
| II | 220 KV Saketpura- RAPP(A) CKT No.2 | | | | | Total(hrs) | 16.37 | | |
| 1 | 12.11.2025 | 0.25 | 12.11.2025 | 07:44 | 1.67 | Main 1: A=Phase(ABC),carr.rece., 21 Pickup AG, PU Time=49 ms, Trip Time = 0 ms, Distance= 8.5 Km,Ia=10.42KA ,Ib=0.04KA,Ic=0.01KA,Rsec=1.78 ohm,Xsec=1.71 ohm,Rpt=3.56 ohm,Xprt=3.41ohm, d%=19.6 Main 2: A-ph,Z=1,fault duration=58.39ms,RT=79.90 ms; Fault location= 9.824KA,Ia=11.05KA,Ib=24.16A,Ic=5.728A, VAN=101.7KV, VBN=124.3KV, VCN=129.7KV, FR =4.8670hm, | Main1:- R=Ph(RVB),Z=1,Dist.=36.8K m,LI=3.08KA,FR=19.49oh m, M2:- R=Ph,Z=1,Dist.=32.89Km,LI=3.104KA | Dist.Prot. | Transient fault, therefore, if Auto-recloser enabled line might be hold well |
| 2 | 26.11.2025 | 0.97 | 27.11.2025 | 00:43 | 1.35 | Main 1:A =phase(ABC), Carr. rec. PU Time=49 ms, Trip Time = 1 ms, Distance= 13.0km,Ia=8.16KA ,Ib=0.07 KA,Ic=0.11KA, R sec=1.54 ohm,X sec=2.60 ohm, R pri=3.08 ohm, X pri=5.19 ohm, D %=29.8 % Main -2 A -phase, tripped A,B,C , phase=Z1, Dist=14.31 Km ,Ia=9.295KA, Ib=46.30A, Ic=71.27A,VAN=102.2KV,VBN=127KV,VCN=128.9KV ,FR=3.073 Ohm | R=phase (RVB),Z1, Dist=25.44km and IR=4.407 KA, Main=2-R=phase, Z1, Dist=25.62km and Ir=4.1947KA | Dist.Prot. | Transient fault, therefore, if Auto-recloser enabled line might be hold well |
| 3 | 06.12.2025 | 01:08 | 06.12.2025 | 01:56 | 0.80 | Main 1: Phase-A(ABC), carr.rece., 21 Pickup AG, PU Time=47ms, Trip Time=1ms, Dist.=13.3 Km,Ia= 8.17KA,Ib=0.15KA,Ic=0.03KA,Rsec=1.530hm ,Xsec=2.670hm,Rpt=3.060hm,Xprt=5.34 Ohm,D%=30.7% Main 2: A -phase,Z=1, Fault duration =51.65ms, Relay trip time=79.89ms, Fault loc=14.75km, Ia=5.473KA,Ib=32.55A, Ic=19.39A, VAN=109.5KV, VBN=127.9KV, VCN=128.6KV, Fault resistance=3.0740hm | Main:-1 Phase=R (RVB),Z=1, Dist.=25.25KM, Fault current=4.803KA | Dist.Prot. | C |
| | | | | | Total(hrs) | 3.82 | | | |



RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED

[Corporate Identity Number (CIN): U40109RJ2000SGC016485]
Regd. Office: Vidyut Bhawan, Janpath, Jyoti Nagar, Jaipur-302005

RVPN
An ISO 9001:2015
Certified Company

OFFICE OF THE CHIEF ENGINEER (LD)

New Prasaran Bhawan, TCC Building, Heerapura, Jaipur Tel. No. 0141-2948293
E-mail: ce.ld@rvpn.co.in website: [www.http://energy.rajasthan.gov.in/rvpn/](http://energy.rajasthan.gov.in/rvpn/)

No.RVPN/CE(LD)/SE(SOLD)/XEN-III/A-1/F./D. 1745 dt. 16/01/2026

The Member Secretary
NRPC, New Delhi

Sub: - Agenda for inclusion in the 66th PSC meeting scheduled on 28.1.2026- Revised 220 kV lines and transformers for Installation of Special Protection Scheme (SPS) on 400/220 kV transformers at PGCIL 400/220 kV Substations in Rajasthan Control area

Ref : i. This office letter no. 1336 dated 11.11.2025
ii. 237th OCC meeting held on 17.11.2025-MoM item B.10
iii. 64th PSC meeting held on 21.11.2025-MoM item B.5.7
iv. NRPC letter dated 12.1.2026 reg agenda item for 66th PSC meeting scheduled on 28.1.2026

On the above captioned subject, it is submitted that 220 kV lines and transformers for Installation of Special Protection Scheme (SPS) on 400/220 kV transformers at PGCIL 400 kV Substations in Rajasthan Control area at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG) was approved by the OCC in its 237th meeting held on 17.11.2025 and further SPS logic was approved in the 64th PSC meeting held on 21.11.2025.

In this regard it is intimated that in ongoing high demand Rabi Season power flow pattern on the transmission lines emanating from PGCIL 400 kV GSS and at RVPN's 220 kV GSS has been changed, therefore, after detail discussions and deliberations in the joint meeting of SLDC, RVPN and PGCIL on 12.1.2026 at Vidyut Bhawan, Jaipur, revised 220 kV lines & transformers for installation of SPS at the PGCIL 400 kV substations at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG) has been identified and attached at Annexure-1 for discussions and approvals of NRPC.

So, in view of above an Agenda Item is enclosed herewith for including the above issue in upcoming PSC Meeting for discussion and approval.

Encl: As above

(Sudhir Jain)
Chief Engineer (LD)
RVPN, Jaipur

Validity unknown Signature valid

Digitally signed by Sudhir Jain
Designation: Chief Engineer
Date: 2026.01.16 12:45:55 IST
Reason: Approved

RajKaj Ref No.:
19954886



Copy submitted/ forwarded to the following for information and necessary action:

1. The Director (Operation/Tech), RVPN, Jaipur
2. The Chief Engineer (PP&D/Communication), RVPN, Jaipur
3. The Chief Engineer(T&C/MPT&S), RVPN, Jaipur/Ajmer/Jodhpur
4. The Superintending Engineer, TA to the MD, RVPN, for kind perusal of MD, RVPN, Jaipur

5. The Superintending Engineer (P&P), RVPN Jaipur
6. The Superintending Engineer (T&C), RVPN, Jaipur Rural/Udaipur /Bhilwara /Bharatpur /Alwar /Sikar /Babai/Ratangarh/Swaimadhopur/Ratangarh/Hindaun
7. The Superintending Engineer (MPT&S), RVPN, Jaipur/Ajmer/Udaipur /Kota/Bikaner/Jodhpur.
8. The Superintending Engineer (Communication), RVPN, Jaipur/Ajmer/Jodhpur.
9. The Superintending Engineer (Prot. Engg.), RVPN, Jaipur.
10. Sh. Yashpal Choudhary, DGM, PGCIL, Bikaner. It is advised to please complete the requisite survey work for installation of the SPS at the earliest, in coordination with RVPN officers so that the scheme may be apprised to the PSC forum in the upcoming PSC meeting scheduled on 28.01.2026 at New Delhi.
11. The Executive Engineer, Shift Incharge, SLDC, Control Room.

Encl:- As above

Chief Engineer (LD)

Copy also forwarded to the following for information:

1. The General Manager, NRLDC, 18A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016. It is submitted that simulated PSSE files has been mailed on 16.1.2026 (copy enclosed). It is requested to please examine the proposal and if required a joint meeting of NRLDC, PGCIL and SLDC may be convened by the NRLDC to finalize the SPS proposal for discussions and deliberations in the PSC meeting scheduled on 28.1.2026.
2. The Superintending Engineer (Opr.), NRPC, 18A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016.

Encl:- As above

Chief Engineer (LD)

Validity unknownSignature valid

Digitally signed by S. Vir Jain
Designation : Chief Engineer
Date: 2026.01.16 12:45:55 IST
Reason: Approved

RajKaj Ref No.:
19954886

Agenda: Revised 220 kV lines and transformers for Installation of Special Protection Scheme (SPS) on 400/220 kV transformers at PGCIL 400/220 kV Substations in Rajasthan Control area

220 kV lines and transformers for Installation of Special Protection Scheme (SPS) on 400/220 kV transformers at PGCIL 400 kV Substations in Rajasthan Control area at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG) was approved by the OCC in its 237th meeting held on 17.11.2025 and further SPS logic was approved in the 64th PSC meeting held on 21.11.2025.

In this regard it is submitted that in ongoing high demand Rabi Season power flow pattern on the transmission lines emanating from PGCIL 400 kV GSS and also at RVPN's 220 kV GSS has been changed, therefore, after detail discussions and deliberations in the joint meeting of RVPN and PGCIL held on 12.1.2026 at Vidyut Bhawan, Jaipur, revised 220 kV lines & transformers for installation of SPS at the PGCIL 400 kV substations at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG) has been identified and attached at Annexure-1 and abstracted hereunder:-

Table-1: List of 220 kV lines/transformers for installation of SPS on PGCIL 400 kV GSS

| S. No. | Name of 400 kV GSS | 400/220 kV transformers capacity (MVA) | Proposed SPS Feeders | |
|--------|--------------------|--|--|--|
| | | | Stage-1 SPS 220 kV Transmission Lines /220 kV Transformers | Stage-2 SPS 220 kV Transmission Lines /220 kV Transformers |
| 1 | Kankroli | 3x315 MVA | 160 MVA, 220/132 kV transformer at 220 kV GSS Bamantukda | 220 kV S/C Kankroli(PG)-Bhilwara line |
| 2 | Bassi | 2x315+500 MVA | 2x100 MVA, 220/132 kv transformers at 220 kV GSS Sikrai | 2x100 MVA, 220/132 kv transformers at 220 kV GSS Bagru |
| 3 | Kotputli | 2x315 MVA | 2x100 MVA, 220/132 kv transformers at 220 kV GSS Manoharpur | 132 kv S/C Kotputli-Narehada line |
| 4 | Neemrana | 500+315 MVA | 160 MVA, 220/132 kV transformer at 220 kV GSS Behrore | 132 kv S/C Neemrana-Shahjanpur line |
| 5 | Bhiwadi | 3x315 MVA | 2x160 MVA, 220/132 kV transformer at 220 kV GSS Kishangarh Bas | 220 kV D/C Bhiwadi(PG)-Rewari line |
| 6 | Sikar | 2x315+500 MVA | 2x100 MVA, 220/132 kV transformers at 220 kV GSS Dhod | 220 kV D/C Sikar(PG)-Ratangarh line |
| 7 | Jaipur (South) | 2x500 MVA | 220 kV D/C Jaipur(South-PG)-Vatika line | 132 kv S/C Chaksu-Newai line |

Validity unknownSignature valid

Digitally signed by S. Anir Jain
 Designation: Chief Engineer
 Date: 2026.01.12 12:20:51 IST
 Reason: Approved

RajKaj Ref No.:
19954881



PSSE simulation studies for a system load of 19,243 MW indicating power flow in Base Case, After Stage-1 and After Stage-2 SPS operations are attached at Exhibit-1 to Exhibit-7 and also tabulated at Annexure-1.

Following SPS logic is proposed for implementation of SPS at the PGCIL 400kV substations :-

1. SPS logic for Stage-1 operation : Trip commands for stage-1 SPS shall be generated at time delay of 0.5 second IDMT at 115 % over loading of any phase of any one 400/220 kV transformer at concern PGCIL 400 kV GSS .
2. SPS logic for Stage-2 operation : Trip commands for stage-2 SPS shall be generated at time delay of 0.5 second IDMT at 120 % over loading of any phase of any one 400/220 kV transformer at concern PGCIL 400 kV GSS

It is also requested to kindly further optimize the SPS over load tripping settings and time delay on the basis of the specification of the 400 kV transformers at PGCIL 400 kV GSS and also considering approved protection philosophy of NR to avoid unnecessary SPS operation and optimum utilization of the transformers. Further it is also requested that different SPS settings for Summer and Winter period may be approved and considered in view of low temperature in the winter.

It is also submitted that additional 500 MVA transformers are under installation each at the PGCIL 400/220 kV Substations at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG). In the 237th OCC meeting held on 17.11.2025, PGCIL intimated that 500 MVA, 400 kV ICTs at 400 kV GSS Bassi, Kotputli & Kankroli would be commissioned by Dec 2025, but till now these have not been commissioned, therefore, PGCIL may be advised to expedite installation of the approved 400 kV transformers at the PGCIL substations.

In the joint meeting of SLDC, RVPN, and PGCIL held on 12.01.2026 at Vidyut Bhawan, Jaipur, it was advised to appoint Coordinating officers from RVPN and PGCIL for the timely implementation of the proposed SPS. Accordingly, the list of Coordinating Officers from RVPN and PGCIL is placed at Annexure-2.

PSC forum is requested to consider and approve revised Special Protection Scheme (SPS) for Installation on 400/220 kV transformers at PGCIL 400 kV Substations in Rajasthan Control area at Kankroli(PG), Bassi(PG), Kotputli(PG), Neemrana(PG), Bhiwadi(PG), Sikar(PG) and Jaipur(South-PG).

Validity unknown Signature valid

Digitally signed by Sanjiv Jain
Designation : Chief Engineer
Date: 2026.01.14 11:20:51 IST
Reason: Approved

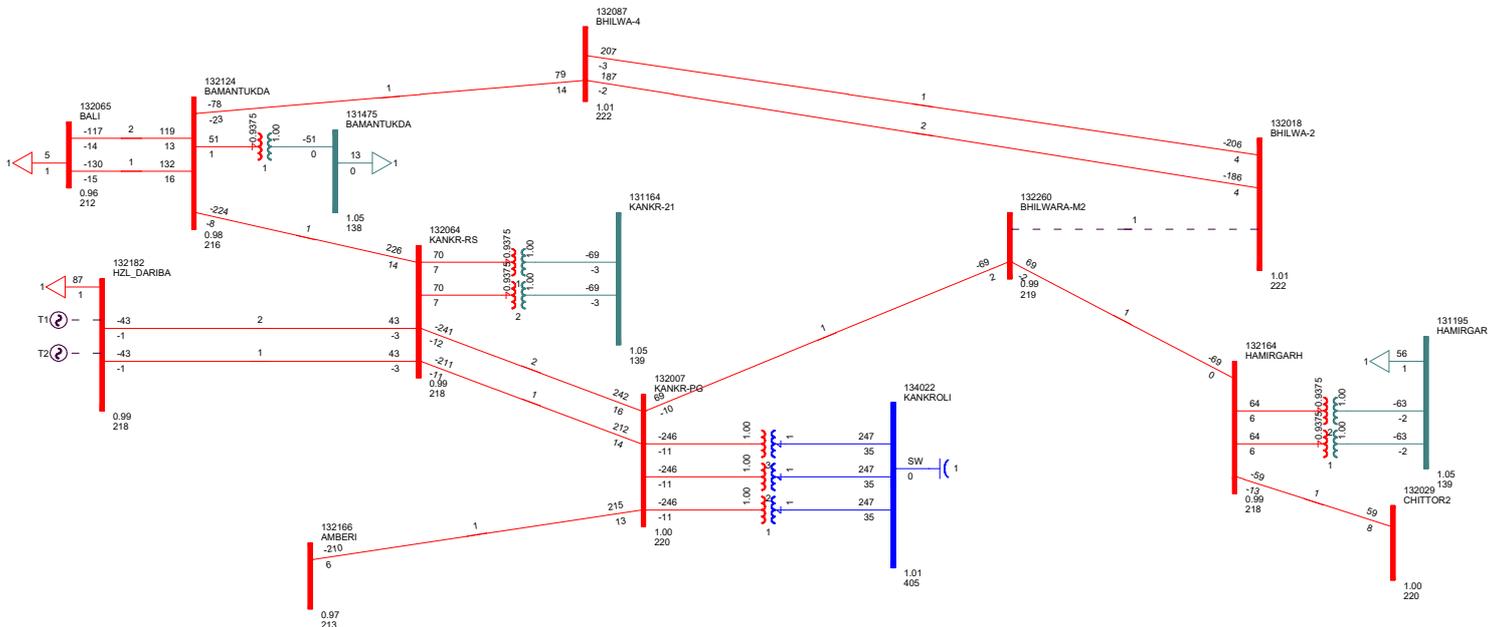
RajKaj Ref No.:
19954881

| List of 220 KV lines/transformers for installation of Special Protection Scheme (SPS) to avoid over loading/tripping of 400/220 KV transformers at PGCIL 400 KV GSS in Rajasthan Control area | | | | | | | | | | | |
|---|--------------------|---------------------------------------|---|--|--------------|----------------------------|---|----------------------------|----------------------------|--|---|
| S. No. | Name of 400 KV GSS | 400/220 KV transformers capacity(MVA) | Proposed SPS Scheme | | PSSE RESULTS | | | | | | |
| | | | Stage-1 SPS 220 KV Transmission Lines /220 KV Transformers | Stage-2 SPS 220 KV Transmission Lines /220 KV Transformers | Base Case | After Stage1 SPS operation | Load relief on the 400/220KV Transformers after Stage-1 SPS operation | After Stage2 SPS operation | After Stage2 SPS operation | Total load relief after SPS operation of Stage-1 and Stage-2 | PSSE IFS pilot reference |
| 1 | Kankrol(PG) | 3x315 MVA | 160 MVA, 220/132 KV transformer at 220 KV GSS Bamantukda (220 KV Trf load : 51 MW) | i. 220 KV S/C Kankrol(PG)-Bhilara line : 69 MW | 3x247 MW | 3x237 MW | 30 | 3x218 MW | 57 | 87 | Base Case:Exhibit-1 Stage-1 : Exhibit-1A Stage-2 : Exhibit-1B |
| 2 | Bassi(PG) | 2x315+500 MVA | i. 2x100 MVA, 220/132 kv transformers at 220 KV GSS Sikrai (220 KV Trf load : 82 MW) | i. 2x100 MVA, 220/132 kv transformers at 220 KV GSS Bagru (220 KV Trf load : 104 MW) | 2x244+424 MW | 2x232+403 MW | 45 | 2x221+383 MW | 42 | 87 | Base Case:Exhibit-2 Stage-1 : Exhibit-2A Stage-2 : Exhibit-2B |
| 3 | Kotputli(PG) | 2x315 MVA | i. 2x100 MVA, 220/132 kv transformers at 220 KV GSS Manoharpur (220 KV Trf load : 138 MW) | 132 kv S/C Kotputli-Narehada line (94 MW) | 2x281 MW | 2x247 MW | 68 | 2x228MW | 38 | 106 | Base Case:Exhibit-3 Stage-1 : Exhibit-3A Stage-2 : Exhibit-3B |
| 4 | Neemrana(PG) | 500+315 MVA | 160 MVA, 220/132 kv transformer at 220 KV GSS Behrore (220 KV Trf load : 138 MW) | 132 kv S/C Neemrana-Shahjapur line(87 MW) | 355+222 MW | 304+190 MW | 83 | 277+173 MW | 44 | 127 | Base Case:Exhibit-4 Stage-1 : Exhibit-4A Stage-2 : Exhibit-4B |
| 5 | Bhwardi(PG) | 3x315 MVA | 2x160 MVA, 220/132 kv transformer at 220 KV GSS Kishangari Bas (220 KV Trf load : 143 MW) | 220 kv D/C Bhwardi(PG)-Rewari line (260 MW) | 3x265 MW | 3x248 MW | 51 | 3x209 MW | 117 | 168 | Base Case:Exhibit-5 Stage-1 : Exhibit-5A Stage-2 : Exhibit-5B |
| 6 | Sikar(PG) | 2x315+500 MVA | 2x100 MVA, 220/132 kv transformers at 220 KV GSS Dhrod (220 KV Trf load : 132 MW) | 220 kv D/C Sikar(PG)-Katangari line (226 MW) | 2x267+426 MW | 2x248+395 MW | 69 | 2x191+304 MW | 204 | 273 | Base Case:Exhibit-6 Stage-1 : Exhibit-6A Stage-2 : Exhibit-6B |
| 7 | Jajpur(South-PG) | 2x500 MVA | i. 220 KV D/C Jajpur(South-PG)-Vatika line (100 MW) | 132 kv S/C Chaksu Newai line (98 MW) | 2x240 MW | 2x220 MW | 40 | 2x202 MW | 36 | 76 | Base Case:Exhibit-7 Stage-1 : Exhibit-7A Stage-2 : Exhibit-7B |

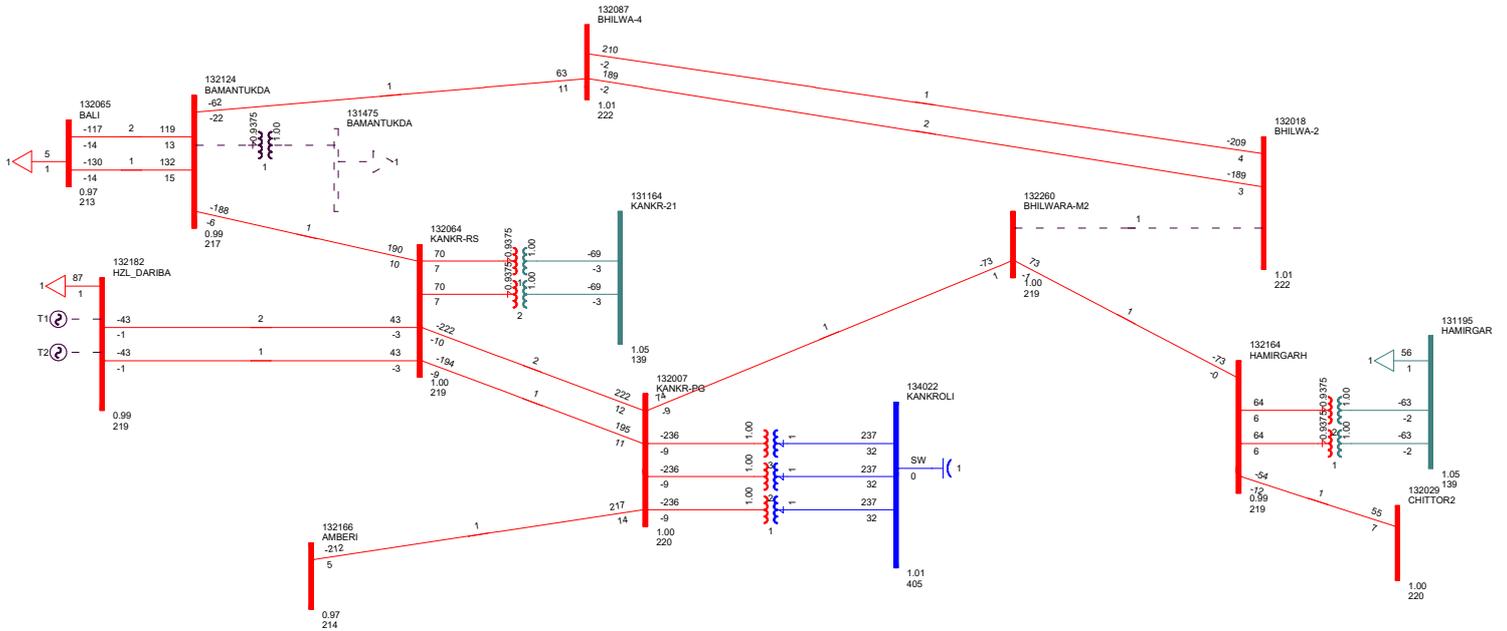
LIST OF RVPN OFFICERS FOR COORDINATION WITH PGCIL FOR IMPLEMENTATION OF SPS AT PGCIL 400 KV GSS IN RAJASTHAN CONTROL AREA

| S.No. | Name of RVPN Officer | Designation | Contact No. | Associated PGCIL GSS | Mail ID |
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**BASE CASE: : LOAD FLOW STUDY FOR SPS OF 400/220 KV TRANSFORMERS AT 400 KV GSS KANKROLI (PG)
EXHIBIT-1**

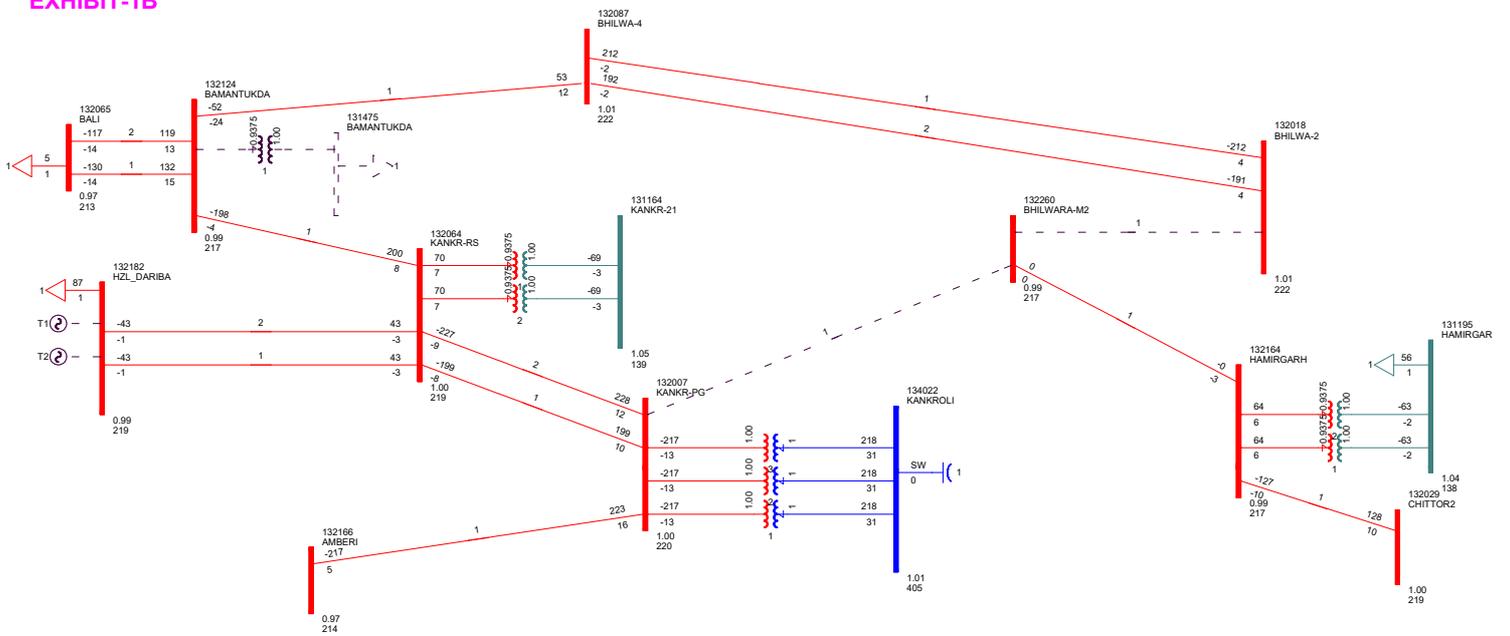


Stage-1 SPS Operation : Tripping of 160 MVA, 220/132 kv transformers at 220 kV GSS Bamantukda
EXHIBIT-1A

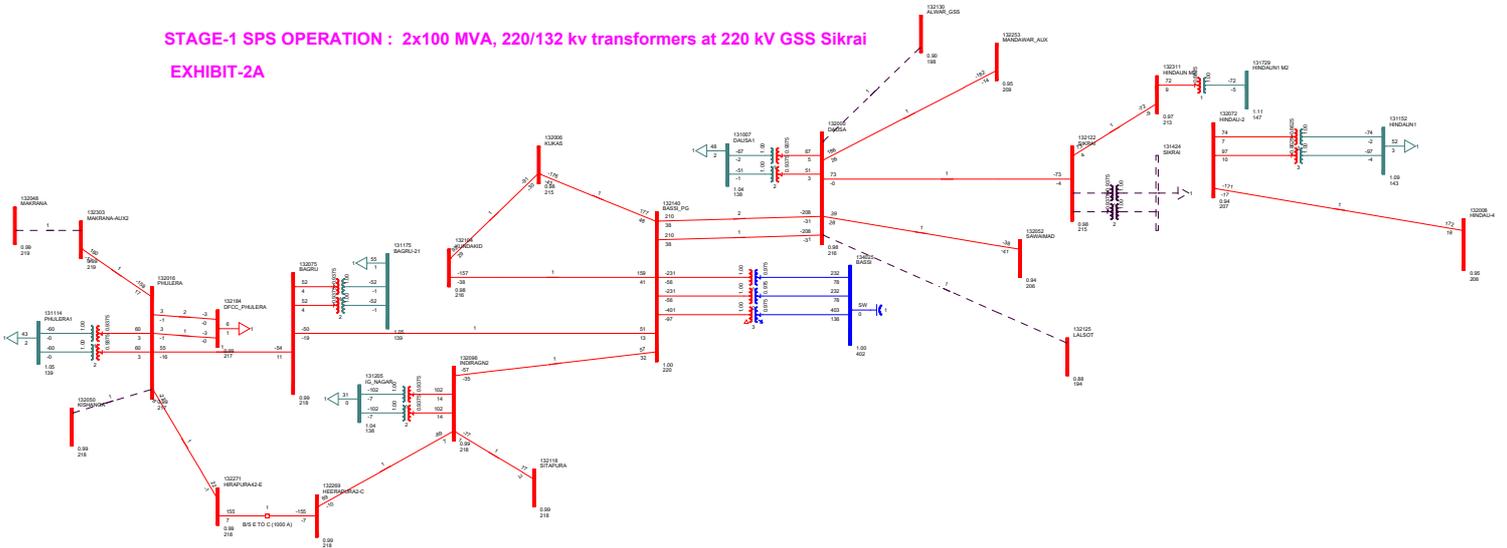


Stage-2 SPS Operation : Tripping of 220 kV S/C Kankroli(PG)-Bhilwara line

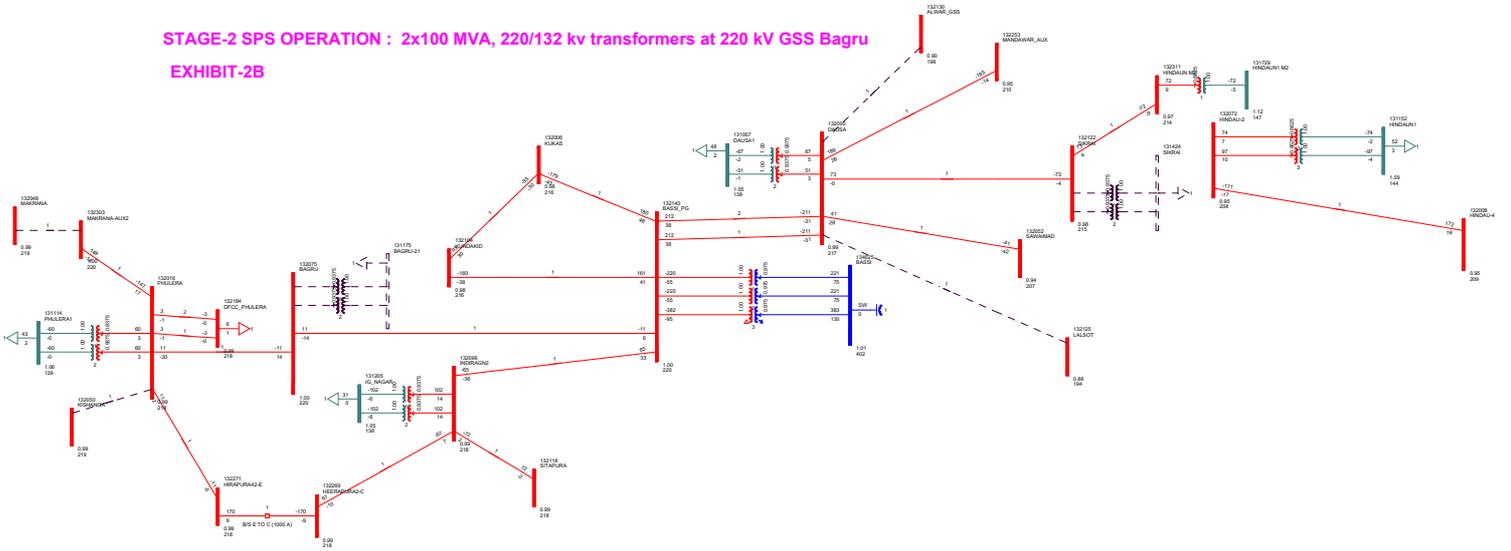
EXHIBIT-1B



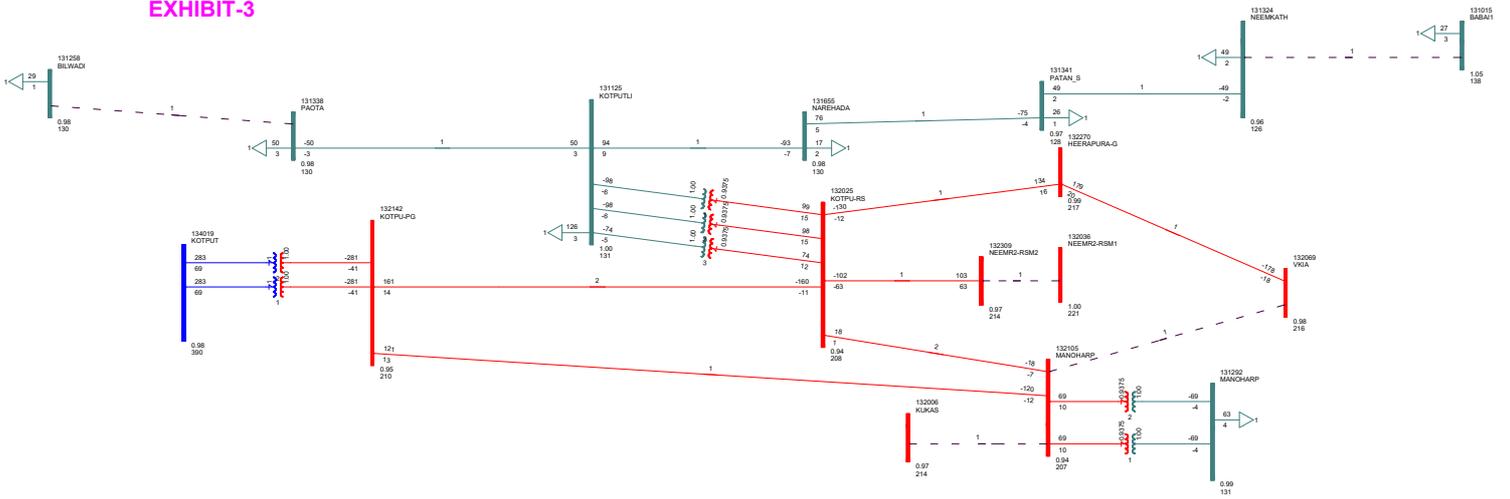
STAGE-1 SPS OPERATION : 2x100 MVA, 220/132 kv transformers at 220 kV GSS Sikrai
EXHIBIT-2A



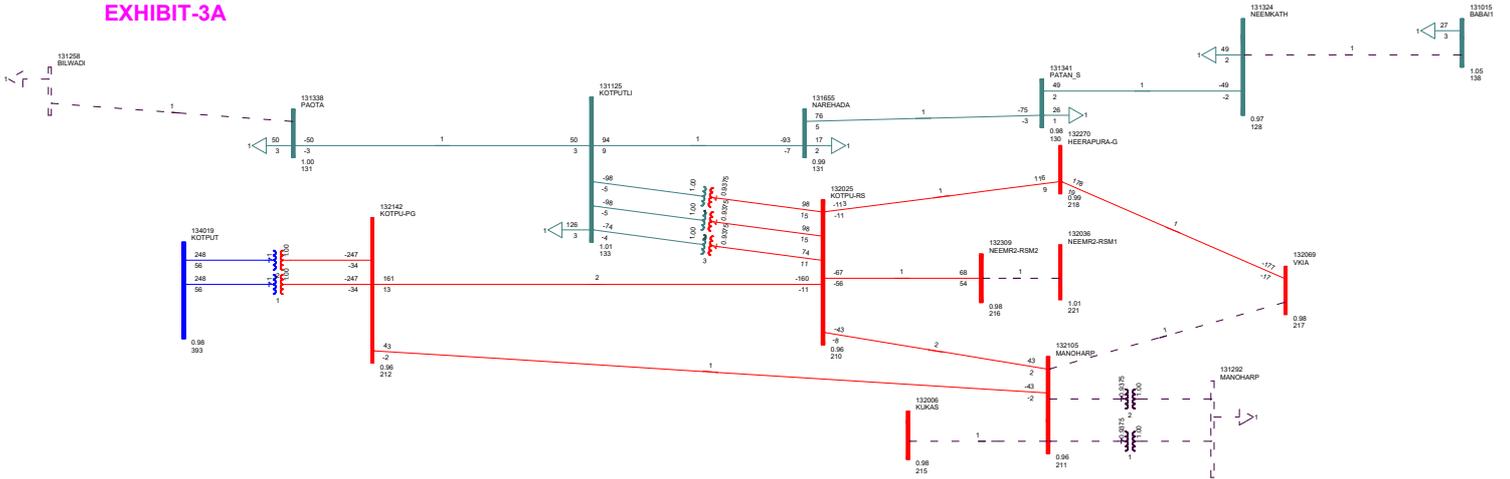
STAGE-2 SPS OPERATION : 2x100 MVA, 220/132 kv transformers at 220 kV GSS Bagru
EXHIBIT-2B



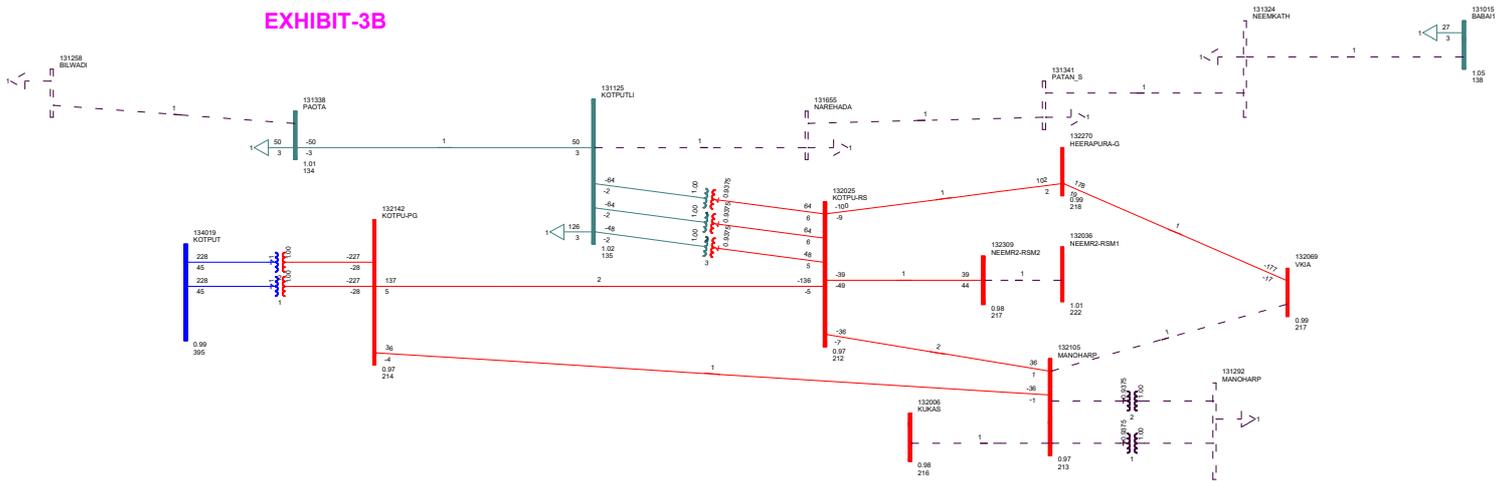
BASE CASE : : LOAD FLOW STUDY FOR SPS OF 400/220 KV TRANSFORMERS AT 400 KV GSS KOTPUTLI (PG)
EXHIBIT-3



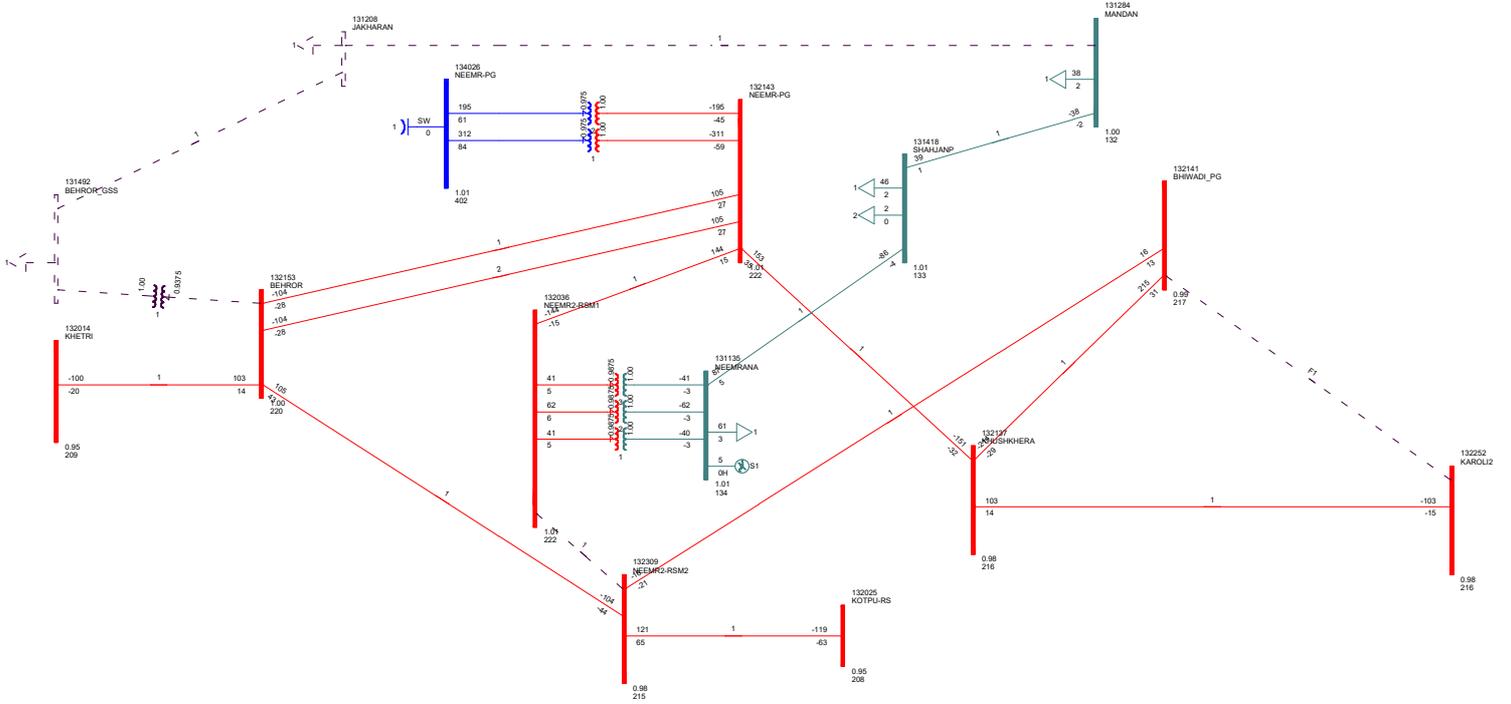
STAGE-1 SPS OPERATION : 2x100 MVA, 220/132 kv transformers at 220 kV GSS Manoharpur
EXHIBIT-3A



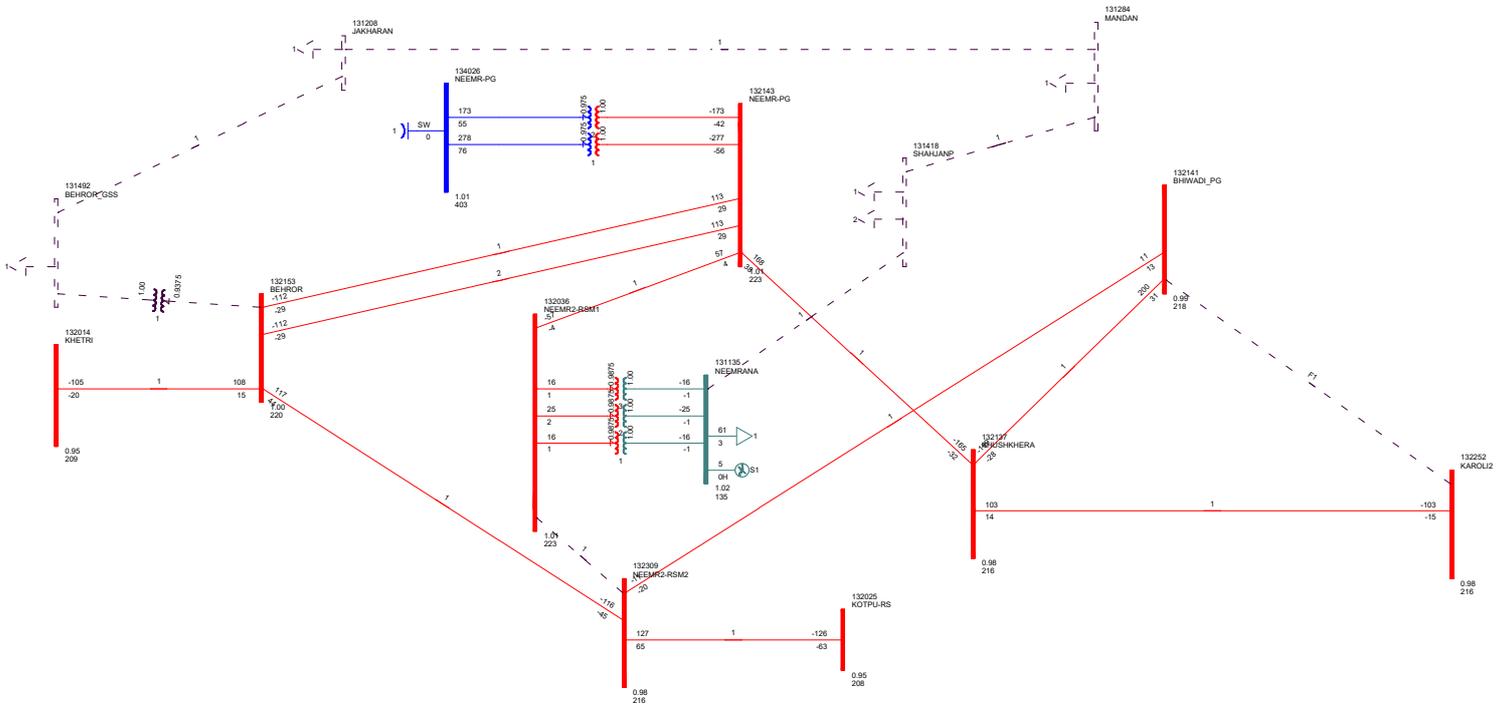
STAGE-2 SPS OPERATION : 132 kV S/C Kotputli-Narehada line
EXHIBIT-3B



STAGE1 SPS OPERATION : 160 MVA, 220/132 kV transformer at 220 kV GSS Behore
EXHIBIT-4A

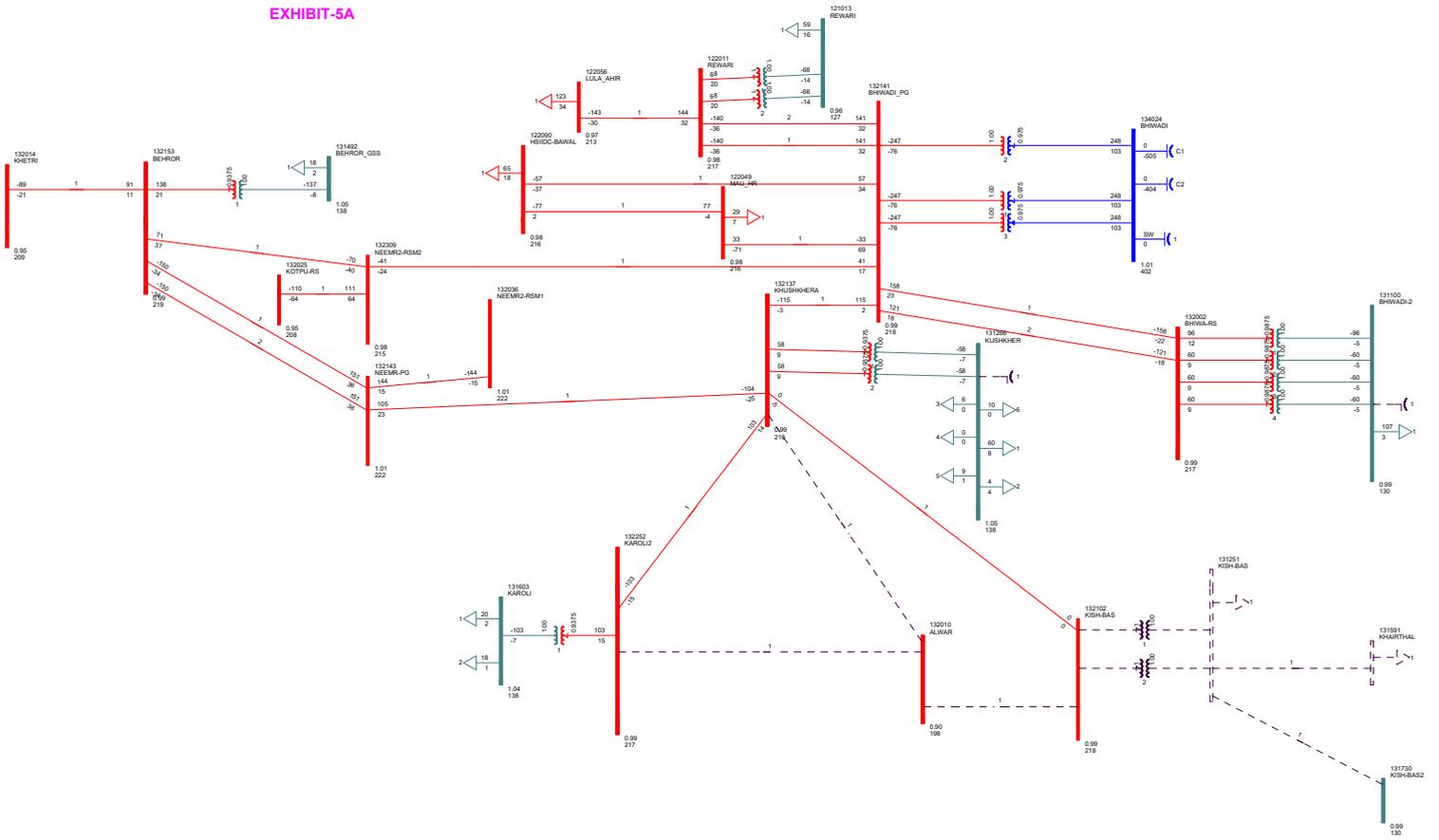


STAGE2 SPS OPERATION : 132 kV S/C Neemrana-Shahjanpur line
EXHIBIT-4B

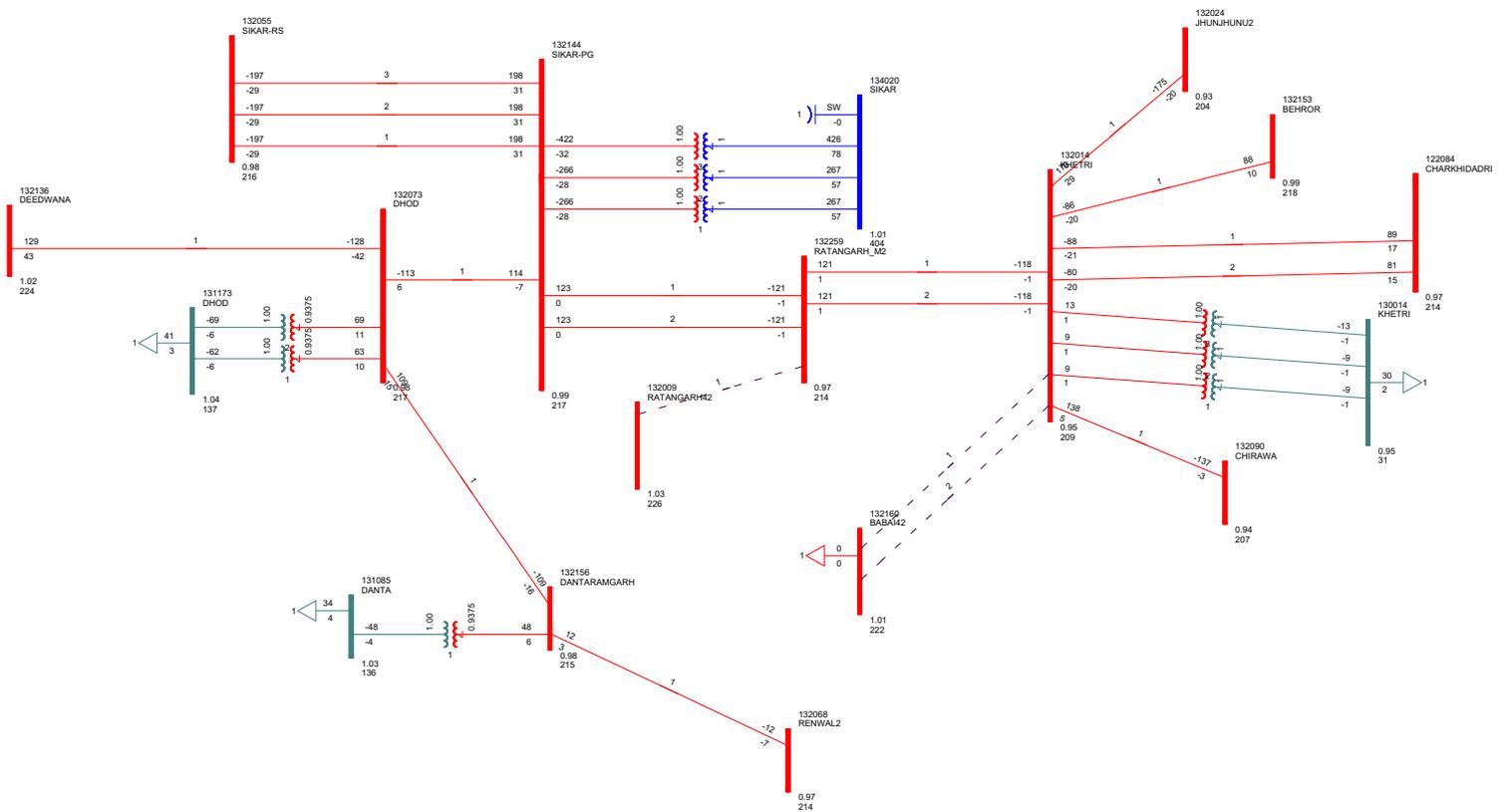


STAGE-1 SPS OPERATION :Tripping of 2x160 MVA, 220/132 kV transformer at 220 kV GSS Kishangarh Bas

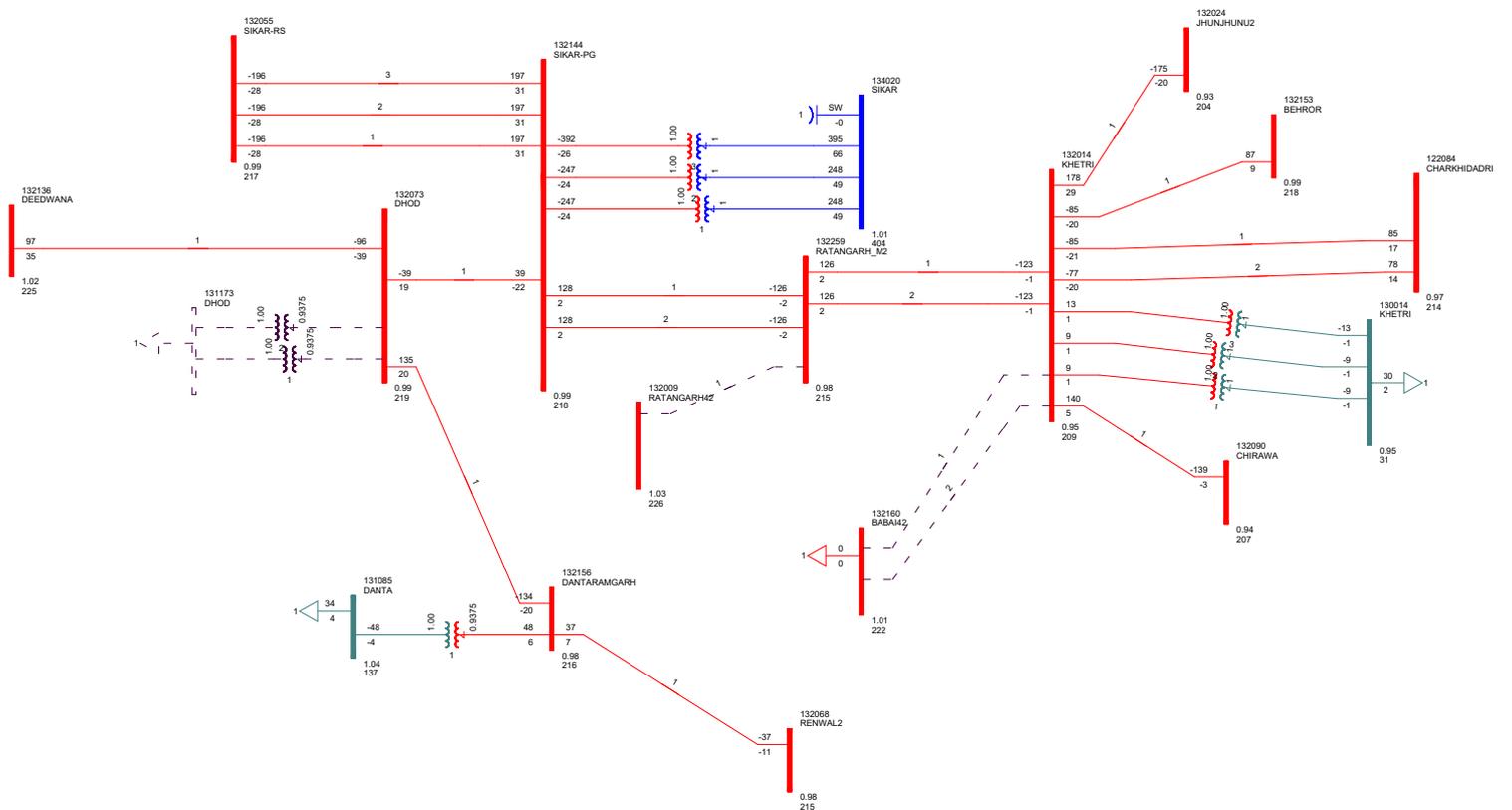
EXHIBIT-5A



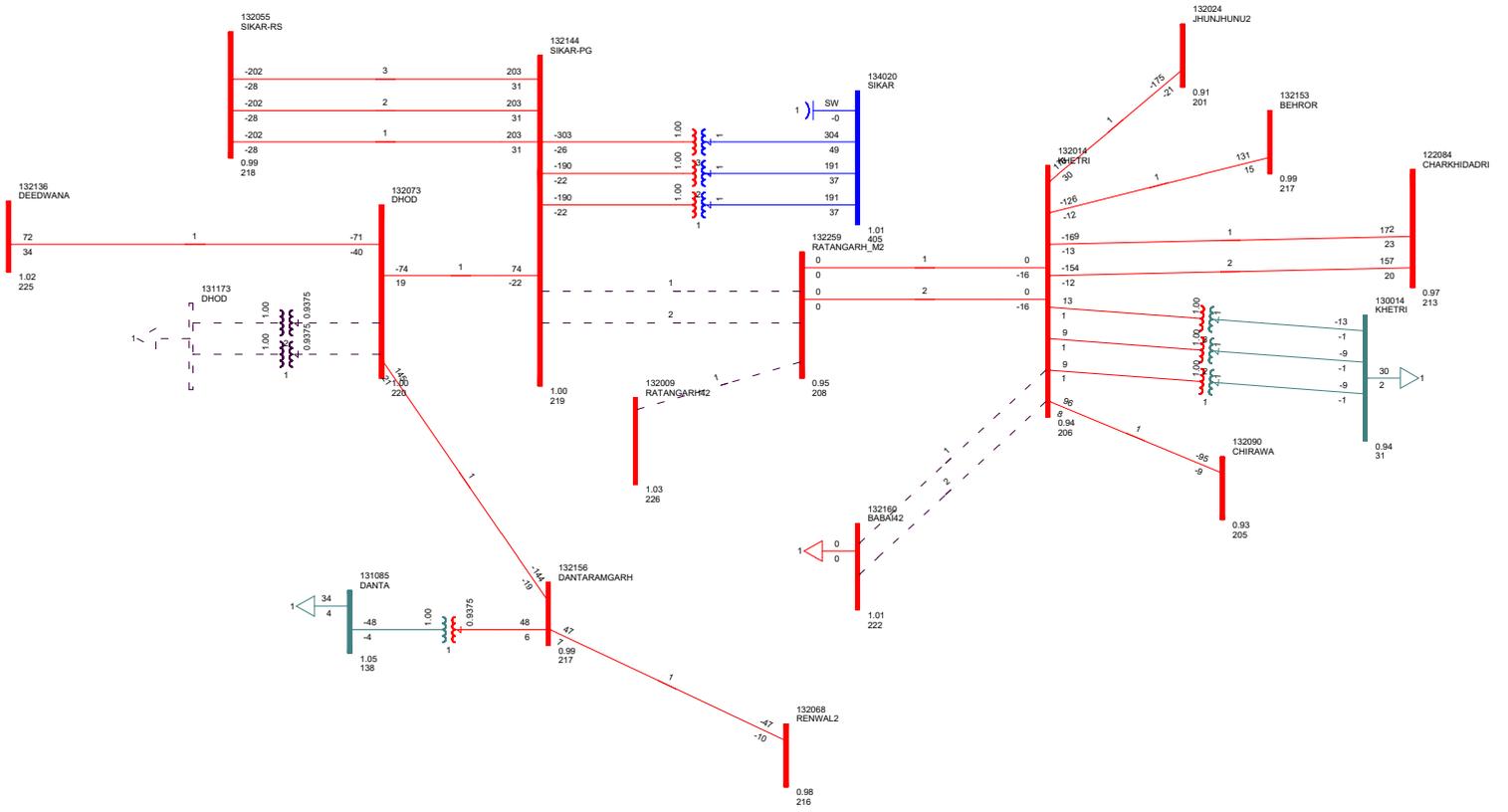
BASE CASE: : LOAD FLOW STUDY FOR SPS OF 400/220 KV TRANSFORMERS AT 400 KV GSS SIKAR (PG)
EXHIBIT-6



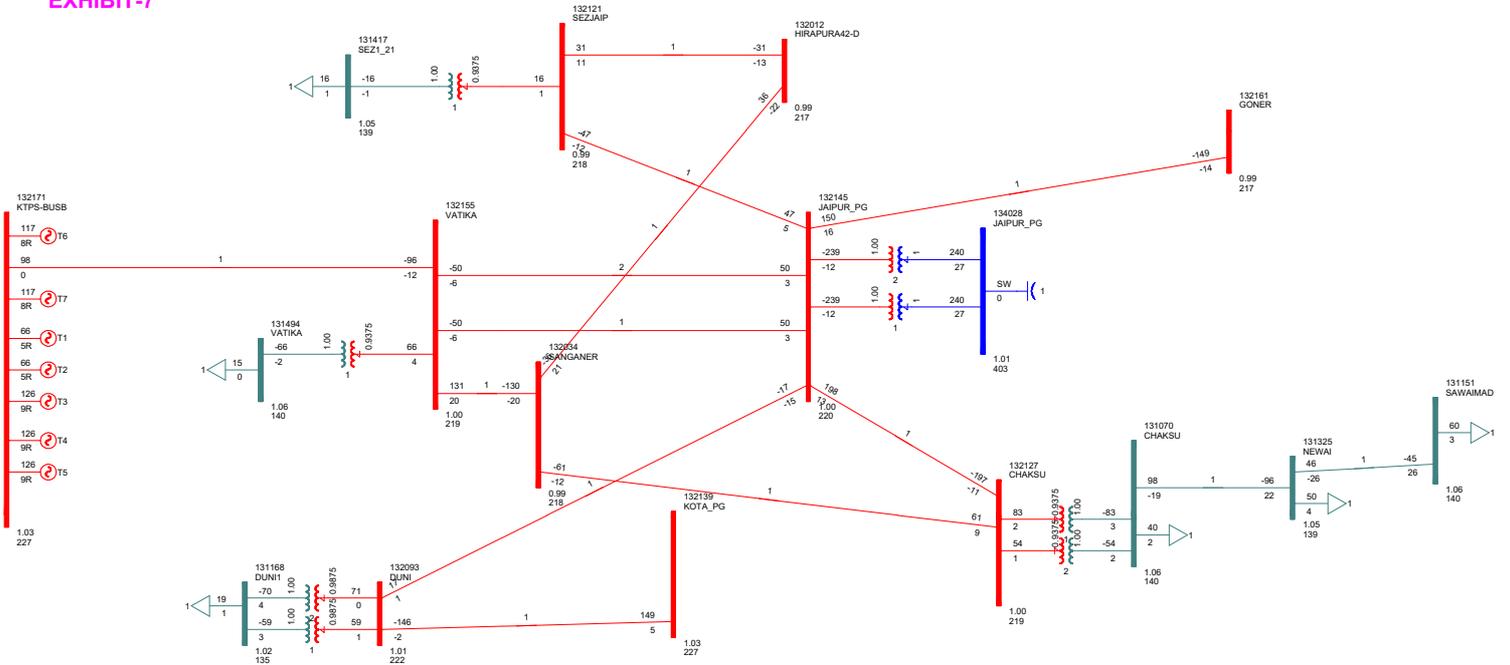
STAGE-1 : 2x100 MVA, 220/132 kV transformers at 220 kV GSS Dhod
EXHIBIT-6A



STAGE-2 SPS OPERATION : 220 KV D/C SIKAR(PG)-RTANGARH LINE
EXHIBIT-6B



BASE CASE: : LOAD FLOW STUDY FOR SPS OF 400/220 KV TRANSFORMERS AT 400 KV GSS JAIPUR (SOUTH-PG)
EXHIBIT-7



| Status of actions points recommended during previous PSC meetings | | | | |
|---|--|---|--|---|
| S. No | Agenda | Remdial actions recommended during PSC meeting | Status of remdial action taken | |
| | | | 65th PSC (30.12.2025) | 66th PSC (28.01.2026) |
| 1 | Frequent multiple elements tripping at 220kV Kunihar, Baddi, Upperla Nangal complex and load loss event in HP control area | 51 PSC: PSC Forum requested HP to complete the protection audit as per mentioned timelines (protection audit of 220kV Kunihar has been awarded and it would be completed within next 15-20 days. In next phase, by 15th September, protection audit of substations in downstream and upstream of 220kV Kunihar S/s would be completed.) and resolve the protection related issues. HP was also requested to share the reports of protection audit to NRPC & NRLDC after completion of audits. | HPSEBL stated that case was forwarded again for funding with curtailed budget of 638.47 lakhs (previously 1605 lakhs). | PSC forum suggested to resolve protection related issues at the earliest and requested HPSEBL to submit the compliance report mentioning details of action taken and planned to be taken with tentative timeline. Further, these stations to be kept under observation and necessary actions need to be taken to minimise the tripping incidents. |
| 2 | Multiple elements tripping at 220kV Hissar(BBMB) 07th May 2024, 11:16 hrs | 51 PSC: a) Expedite the implementation of differential protection in short lines to avoid undesired operation of distance protection. | HVPLN representative informed that status is same and tender is in approval stage. | PSC forum raised concern over long pending action and requested HVPLN to expedite the process of implementation of differential protection in short lines and also share the expected timeline. |
| 3 | Multiple elements tripping at 400kV Sainj (HP), 400kV Parbat2 & Parbat3 (NHPC) Stations on 07th May 2024, 16:17 hrs | 51 PSC: a) NHPC shall follow up with the relay engineer and taken necessary remedial actions to ensure proper operation of A/R scheme at Parbat2 end. b) NHPC and HPPCL shall review the healthiness of PLCC at Parbat3 and Sainj end and take necessary actions to ensure their proper operation. c) Expedite the implementation of differential protection in 400kV Parbat2-Sainj line. d) Standardisation of recording instruments (DR/EL) need to be ensured. | NHPC representative stated that OPGW work will be completed by Jan'26 due to delay from INDGRID. HPPCL representative stated that PLCC card was received on 7th Dec'25 and will be installed by 14th Dec'25. | PSC forum recommended NHPC & HPPCL to take expeditious action at their end and ensure healthiness of protection system. POWERGRID(NR-1) representative stated that PO couldn't be placed as only 2 bidders were there and minimum bidder requirement was 3. PO will be placed after 2nd Jan'26. |
| 4 | Multiple elements tripping at 400kV Koteswar(PG) on 17th May 2024, 17:21 hrs | 51 PSC: a) In view of short line length of 400kV Koteswar(PG)-Tehri D/C, POWERGRID shall plan for the differential protection in the line on priority in near future to avoid overreach of distance protection. | POWERGRID(NR-1) representative stated that PO couldn't be placed as only 2 bidders were there and minimum bidder requirement was 3. PO will be placed after 2nd Jan'26. | PSC forum requested POWERGRID(NR-1) to expedite the process of implementation of differential protection at Koteswar HEP. |
| 5 | Multiple elements tripping at 220kV Sarma (PS) on 04th May 2024, 07:10 hrs | 51 PSC: a) Punjab shall expedite the commissioning of new bus scheme. b) POWERGRID shall revise the 2-4 time delay setting of Kishenpur lines at Sarma (PS) end as 160msec till bus bar get operational. | PSTCL representative informed that new panel for busbar scheme will be installed at Sarma, Moga and Lalokalan. Budget approval for the same is expected by Jan'26. | PSC forum requested PSTCL to expedite the work related to implementation of bus bar protection at Sarma S/s. |
| 6 | Multiple elements tripping at 220kV KTPS (RVUN) on 21st June 2024, 11:37 hrs | 51 PSC: a) Commissioning of bus coupler between 220kV Bus-3 & 5 need to be expedited. | RVUNL representative stated that status is same. | PSC forum requested KTPS to expedite the process. |
| 7 | Frequent tripping of 220 KV Anta(NT)-Sakatpura(RS) (RS) Ckt-1 | 52 & 53 PSC: RVPN was requested to expedite the process of relay replacement and rectification of issues related to A/R operation. | RVPN representative informed that PO was issued and work will start from Jan'26 and is expected to be completed by Mar'26. | PSC forum requested RVPN to expedite the actions at their end. |
| 8 | Frequent tripping of 220 KV Khara(UP)-Saharanpur(PG) (UP) Ckt-1 | 52 & 53 PSC: UP was requested to expedite the process of relay replacement at Khara end. POWERGRID shall review and ensure the A/R operation at their end. | SLDC UP informed that Unit-2 replacement work was done. Unit -3 work will be completed by this winter. | PSC forum requested UPPTCL to expedite the replacement of relays at Khara(UP) end. |
| 9 | Multiple elements tripping at 220kV Khodri HEP & Chibro HEP on 5th, 11th & 19th September 2024, 15th & 20th July 2025, 17th August 2025 and 02nd & 18th October 2025 | 53 & 62 PSC: a) Timely submission of disturbance recorder (DR) and event logger (EL) files need to be ensured. b) UPPTCL shall take necessary actions to rectify the protection related issue in 220kV Khodri-Majri ckt-2. c) OV protection needs to be disabled in 220kV lines at the earliest. d) Over frequency and over current protection operation in units at Khodri HEP need to be reviewed. e) A/R should be made operational in Sarsawan line at the earliest. f) UJVNL shall share the CPRI audit report and details of remedial action taken within one week. g) Replacement of Units: breakers need to be expedited. 63 PSC: a) UJVNL shall review and share the complete protection settings of Khodri HEP to NRLDC/NRPC within a week. b) HPSEBL in coordination with UJVNL shall review the protection setting of 220kV Khodri-Majri line-II and Majri S/s 64 PSC: a) Zone-2 settings of 220 KV Saharanpur(UP)- Saharanpur(PG) Ckt need to be reviewed | HPSEB stated that there are panel related issues which was previously installed by UJVNL. UJVNL stated that relay replacement work need to be addressed by HPSEB as the owner of the same. PSC forum suggested that relay replacement work will be done by HPSEB by Feb'26 and UJVNL will resolve panel related issues by Feb'26. HPSEB and UJVNL both agreed for the same. UPPTCL stated that Zone 2 settings of 220kV Saharanpur- Saharanpur (PG) line checked at UPPTCL end and found in order. | |
| 10 | Multiple elements tripping at 400/220kV Obra_A(UP) on 9th October 2024 | 54 PSC Recommendations: a) UPPTCL & Obra_A(UP) shall ensure the implementation of LBB protection at the earliest at 220kV side. b) GIS scheme shall be implemented at Obra_B(UP) by the end of January 2025 and time sync of recording devices will be ensured. | UPPTCL representative informed that time sync work will be completed by Mar'26 and LBB relay work is pending from headquarters. | PSC forum requested UPPTCL to follow up with headquarters for expedited corrective actions. |
| 11 | Frequent tripping of 220 KV RAPS_A(NP)-Sakatpura (RS) (RS) Ckt-1 & 2 | 55 PSC Recommendations: Expeditious corrective actions to minimise frequent faults in line. | NPCL representatives (RAPS) were not present in the meeting. | |
| 12 | Frequent tripping of 400 KV Amritsar(PG)-Makhu(PS) (PSTCL) Ckt-1 & 400 KV Talwandi Saboo(PSG)-Nakodar (PSG) (PS) Ckt-1 | 55 PSC Recommendations: PSTCL was requested to plan replacement of porcelain insulators with polymer type. | PSTCL representative informed that no insulator is available in stock and new procurement is needed for insulator replacement work. Insulator replacement work will be done before next winter season. | PSC forum requested PSTCL for expeditious actions to avoid frequent trippings during fog. |
| 13 | Multiple element tripping event at 400kV Aligarh(UP) on 02nd November, 2024 | 55 PSC Recommendations: UPPTCL shall ensure the healthiness of carrier communication and A/R operation at Mursadnagar_1(UP) end. | UPPTCL representative informed that panels are yet to be commissioned. Work will be completed by Jan'26. | PSC forum requested UPPTCL to expedite the corrective actions. |
| 14 | Frequent tripping of 400 KV Anpara_B(UPUN)-Sarnath(UP) (UP) Ckt-2 | 57 PSC Recommendations: Healthiness of carrier communication need to be reviewed. | UPPTCL representative informed that link is yet to be commissioned, firm's engineer is expected to reach at site in first week of January'26. | PSC forum requested UPPTCL to expedite the corrective actions. |
| 15 | Multiple elements tripping at 400/220kV Heerapura(RS) on 10th January, 2025 | 57 PSC Recommendations: a) Instantaneous OC relay (High set) settings of ICTs at Heerapura(RS) may be reviewed. b) Replacement of remaining electromechanical/ static relays & schemes with numerical relay need to be expedited at Heerapura(RS). | RVPNL representative stated that new bus bar relay(numerical type) procurement is delayed as the same is clubbed together with other substations at Rajasthan. | PSC forum requested RVPNL to expedite corrective actions at their end. |
| 16 | Frequent tripping of 220 KV Debari(RS)-RAPS_A(NP) (RS) Ckt-1 | 58 PSC Recommendations: Expeditious corrective actions to minimise frequent faults in line. | RVPNL representative informed that PO was placed for tower replacement work. | PSC forum requested NPCL and RVPNL to resolve the issue of A/R at RAPS end and to take expeditious corrective action to minimise frequent faults in line. |
| 17 | Multiple elements tripping at 400kV AGE25L & 220kV Nokhra(IP) at 10:00 hrs on 18th March, 2025 | 59 PSC Recommendations: NTPC need to ensure over-voltage is disabled at Nokhra end of 220kV Nokhra-Bhadia2 Ckt. | NTPC RE representatives were not present in the meeting. | |
| 18 | Multiple elements tripping at 400 KV Uri-II HEP (NHPC) at 21:35 hrs on 18th May, 202 | 61 PSC Recommendation: NHPC in coordination with the POWERGRID(NR-2) shall review the healthiness of carrier protection in 400kV Uri_2-Wagora line | NHPC representative stated that work could not be completed as shutdown was not approved due to low voltage. | PSC forum requested to complete the work within the stipulated time. |
| 19 | Multiple elements tripping at 220kV Maharanibagh(DTL) & 220/66kV Pragati(DTL) at 03:48 hrs on 15.06.2025 | 62 PSC Recommendation: a) Old REB S00 scheme of bus bar protection need to be up-graded & replaced by PGCIL in coordination with DTL. b) Distance protection settings need to be reviewed at 220kV Maharanibagh-Pragati Ckt-2. c) DR nomenclatures need to be corrected and time synchronisation issue need to be resolved at the earliest at Maharanibagh. | DTL representative informed that material was diverted to 400kV Maharanibagh(PG). | PSC forum requested DTL & POWERGRID(NR-1) to resolve the co-ordination issue through bilateral meetings and expedite the corrective actions. |

| | | | |
|----|---|---|--|
| 20 | Multiple elements tripping at 220/132kV Pampore(J&K) at 23:25 hrs on 20.06.2025 | 62 PSC Recommendation: a) DR/EL along with detailed tripping report along with remedial action taken details need to be shared within one week. b) Healthiness of protection system and other auxiliary equipments need to be ensured at 220/132kV Pampore(J&K). c) Line protection settings at 220/132kV Pampore(J&K) need to be reviewed in line with NRPC Protection philosophy. | J&K representative was present however no update received regarding the same. PSC forum suggested to appoint nodal officer for DR/EL extraction work after each event and also proposed that training may be organised by POWERGRID NR-2 if needed. |
| 21 | Multiple elements tripping at 220/132kV Moga(PS), 220 kV /66kV Badhni kalan(PS) & 220/66 kV Himmatpura(PS) at 11:06 hrs on 01.07.2025 | 62 PSC Recommendation: a) Healthiness of bus bar protection need to be ensured at Baghapurana and Ajitwal S/s. b) New busbar protection need to be installed at Moga PSTCL at the earliest. c) Line protection settings at 220/132kV Moga(PS), 220 kV /66kV Badhni kalan(PS) & 220/66 kV Himmatpura(PS) need to be reviewed in line with NRPC Protection philosophy. d) CT mismatch issue at both the ends of 220 kV Moga PSTCL – Moga Ckt-2 need to be addressed and differential protection need to be installed at the earliest by PSTCL in co-ordination with PGCIL. | PSTCL representative stated that budget approval is in process. PSC forum requested PSTCL to complete the bus bar protection installation work within the stipulated time. |
| 22 | Multiple elements tripping at 220/66kV Narela(DTL) at 15:41 hrs on 10.07.2025 | 62 PSC Recommendation: a) Tele-protection communication need to be restored at 220kV Narela at the earliest. b) Line protection settings need to be reviewed at 220kV Narela-Mandola D/C as per NRPC protection philosophy. c) Availability and healthiness of SCADA data at 220kV Narela need to be ensured. | DTL representative stated that work was completed for one ckt and work will be done for the other ckt by first week of Jan'26. PSC forum requested DTL to implement the Tele-protection communication system at the earliest. |
| 23 | Multiple elements tripping at 220/132kV Ziankote(J&K) at 10:18 hrs on 24.07.2025 | 62 PSC Recommendation: a) DR/EL along with detailed tripping report along with remedial action taken details need to be shared within one week. b) Zone-2 settings need to be revised to 160ms at Amargarh end of 220kV Amargarh-Ziankote D/C. c) Healthiness of protection system and other auxiliary equipments need to be ensured at 220/132kV Ziankote(J&K). d) Line protection settings at 220/132kV Ziankote(J&K) need to be reviewed in line with NRPC Protection philosophy. | J&K representative stated that relays were replaced at Ziankote(JK) before 6 months. PSC forum requested JKPTCL to address other protection related issues at Ziankote(JK) at the earliest. |
| 24 | Multiple elements tripping at 765/400kV Bara TPS(UP) at 21:33 hrs on 08.08.2025 | 63 PSC Recommendation: a) UPPTCL shall review and correct the DEF protection setting at Mainpuri end of 765kV Bara-Mainpuri line-2 to avoid unwanted tripping of the line. b) UPPTCL and Bara TPS shall review the logic of SPS operation (breaker status of both ends may be taken for desired decision) to ensure its proper operation in future events. | UPPTCL representative stated that backup earth fault protection is reviewed however comprehensive review is to be done at Mainpuri end. Bara TPS informed that they will modify the logic after receiving CB status of remote end. PSC forum requested UPPTCL to expedite the corrective actions. |
| 25 | Multiple elements tripping at 220/66kV Lalokalan(PS) at 04:35 hrs on 30.08.2025 | 63 PSC Recommendation: a) PSTCL shall ensure the bus bar protection at 220/66kV Lalokalan(PS) at the earliest possible. b) Timely submission of DR/EL & tripping report need to be ensured. | PSTCL representative informed that there is delay from OEM side; OEM will update whether relay is repairable or not. PSC forum requested PSTCL to ensure healthiness of busbar protection at the earliest. |
| 26 | Multiple elements tripping at 400kV Kishenpur(PG) & Baglihar stage-I HEP at 21:58 hrs on 05.09.2025 | 64 PSC Recommendation: a) DT was not sent to remote end on TEED protection operation at Kishenpur end. PLCC/DTPC system needs to be reviewed and DT scheme needs to be configured if not available. b) Overreach of distance protection in 400kV Kishenpur-New Wanpoh line-IV needs to be reviewed. c) Protection settings of units at Baglihar need to be reviewed. | POWERGRID(NR-2) representative informed that PLCC will be made healthy by Mar'26. PSC forum requested JKPTCL and POWERGRID to expedite the corrective actions. |
| 27 | Multiple elements tripping at 400/220kV at Daulatabad(HR) at 06:02 hrs on 31.10.2025 | 64 PSC Recommendation: a) Bus bar protection need to be restored at the earliest. | HVPNL representative informed that no response was received from OEM so far regarding internal fault of busbar relay (Sifang). PSC forum requested HVPNL to restore bus bar protection at 220kV Daulatabad(HR) at the earliest. |
| 28 | Multiple element tripping event at 220/132/33kV Jammu/Gladni(J&K) at 16:24 hrs on 10.11.2025 | 65 PSC Recommendation: a) Distance protection relay settings need to be reviewed at 220kV Jammu/Gladni(J&K) in co-ordination with POWERGRID. | PSC forum requested JKPTCL and POWERGRID to review distance protection relay settings at 220kV Jammu/Gladni(J&K) in co-ordination with POWERGRID at the earliest. |
| 29 | Multiple element tripping event at 220/33kV Chowadhi(JK) at 19:44 hrs on 22.11.2025 | 65 PSC Recommendation: a) Carrier communication issue at Chowadhi(JK) end need to be resolved at the earliest. | PSC forum requested JKPTCL and POWERGRID to resolve Carrier communication issue at Chowadhi(JK) end at the earliest. |

Data Submission Status for Grid Events of December 2025

| S.No. | Category of Grid Incident/ Disturbance (GL-1 to GD-V) | Name of Elements (Tripped/Manually opened) | Affected Area | Owner/ Agency | Outage | | Event (As reported) | Loss of generation / loss of load during the Grid Disturbance | | Fault Clearance time (in ms) | Compliance of Protection Protocol/Standard | | |
|-------|--|---|---------------|--------------------|-----------|-------|---|---|----------------|------------------------------|--|-----------------------------|---|
| | | | | | Date | Time | | Generation Loss(MW) | Load Loss (MW) | | Flash Report Submission (Y/N) | DR/EL Submission (Y/N) | Detail Tripping Report Submission (Y/N) |
| | | | | | | | | | | | | | |
| 1 | GD-1 | 1) 220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-3 2) 220 KV Raebareilly(PG)-Bachrawan(UP) (PG) Ckt | Uttar Pradesh | PGCL, UPPTCL, NTPC | 2-Dec-25 | 12.25 | i)220/132KV Raebareilly(PG) has double main & transfer bus scheme at 220KV level. ii)During antecedent condition, 220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-1 & 2 were under shutdown for line diversion work by UPPTCL since 02.11.2025 and 220 KV Raebareilly(PG)-C.G. City Ckt was under shutdown since 02.11.2025 for load management of 220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-3 as it is the only source line. 220/132/33 KV Bachrawan UPPTCL station was being fed only from 220 KV Raebareilly(PG)-Bachrawan(UP) (PG) Ckt. iii)As reported, at 12:25 hrs, Broken conductor alarm was observed at both Raebareilly (PG) and Unchahar(NT) end of 220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-3. Line tripped from Unchahar (NTPC) end only as tripping was enabled on Broken conductor alarm. iv)Since the Broken conductor alarm was observed at both PG and NTPC ends, the Raebareilly TLM team was immediately mobilized for emergency patrolling of the line, considering the possibility of conductor or jumper snapping. The TLM team thoroughly patrolled all 37 tension towers (Location 1 to 144), however no abnormalities were reported on the line. v)As at the time of tripping 220KV Bachrawan was being fed radially through 220 KV Raebareilly(PG)-Bachrawan(UP) (PG) Ckt, the tripping of 220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-3 resulted into loss of source for 220 KV Raebareilly (PG) and 220KV Bachrawan. vi)This led to operation of UFR relays at 220 KV Raebareilly (PG) (47.7Hz), 220 KV Bachrawan (47.7Hz) and 132KV Amawa (47.9Hz), 132KV Tripula (47.9Hz), 132KV Dalmou (47.9Hz), 132 KV Bachrawan (47.9Hz) and 132KV Salon (47.9Hz). This UFR panel, installed by UPPTCL at the PG end, is part of the Unchahar islanding scheme and is designed to isolate Bachrawan and C.G. City lines under such conditions. vii)As both 220 KV Unchahar(NT)-Raebareilly(PG) (PG) Ckt-3 and 220 KV Raebareilly(PG)-Bachrawan(UP) (PG) Ckt tripped and no alternate power source was available at 220KV Raebareilly(PG), complete blackout occurred at 220KV Raebareilly(PG) S/s. viii)As per PMU at Bareilly(PG), no fault is observed in the system. ix)As per SCADA, change in demand of approx. 65 MW in UP control area was observed. However, as reported by SLDC UP, load loss of approx. 110 MW occurred in UP control area. | 0 | 110 | 320 | Y(PG) Y(D)UP N(NTPC) | Y(D)PG N(LUP) N(NTPC) | Y(D)PG Y(D)UP N(NTPC) |
| 2 | GD-1 | 1)220 KV Harduaganj-Sikandra Rao (UP) Ckt 2)220 KV Harduaganj-Elah (UP) Ckt 3)220 KV Harduaganj-Khurga (UP) Ckt-1 4)220 KV Harduaganj-Khurga (UP) Ckt-2 5)20 KV Harduaganj-Boner (UP) Ckt 6)220 KV Harduaganj-Atrauli(UP) Ckt 7)220 KV Harduaganj-Jahangirabad (UP) Ckt 8)220 KV Harduaganj-Rukh (UP) Ckt 9)220 KV Harduaganj-Harduaganj Ext (UP) Ckt-1 10)220 KV Harduaganj-Harduaganj Ext (UP) Ckt-2 11)220 KV Bus 1 at Harduaganj (UP) 12)220 KV Bus 2 at Harduaganj (UP) 13)220/132 KV 160 MVA ICT-1 at Harduaganj(UP) 14)220/132 KV 160 MVA ICT-2 at Harduaganj(UP) | Uttar Pradesh | UPPTCL | 4-Dec-25 | 05.46 | i)220/132KV Harduaganj(UP) has double main & transfer bus scheme at 220KV level. ii)As reported, at 05:46 hrs, due to breakdown (blast) of B-Ph CT of Bus coupler, bus bar protection operated at both the buses of 220KV Harduaganj(UP). iii)This led to tripping of all the elements connected to both 220KV Bus-1 & 2 and complete blackout occurred at 220 KV Harduaganj (UP). iv)As per PMU at Bareilly(PG), B-N phase to earth fault was observed with delayed fault clearing time of 290ms. v)As per SCADA, change in demand of approx. 205 MW in UP control area was observed. vi)Substation normalized at 10:14 hrs via charging of 220 KV Harduaganj-Sikandra Rao (UP) Ckt and 220KV Bus-1 at Harduaganj (UP). | 0 | 205 | 280 | Y(UP) | N(LUP) | Y(UP) |
| 3 | GI-1 | 1)220 KV Khodri(LUK)-Majri(HP) (UK) Ckt-1 2)220 KV Khodri(LUK)-Majri(HP) (UK) Ckt-2 3)132 KV Majri-Kala Amb(HP) Ckt | HP | HPPTCL, PTCL | 6-Dec-25 | 09.49 | i)220/132KV Majri/Giri(HP) have double main bus scheme at 220KV level. ii)During antecedent condition, 220 KV Khodri(LUK)-Majri(HP) (UK) Ckt-1 & 2 were carrying approx. 78 MW each (as per SCADA). iii)As reported, at 09:49 hrs, 132 KV Majri-Kala Amb(HP) Ckt tripped on 4/f (at end distance relay (electromechanical) operation (exact reason yet to be shared). iv)During the same time, 220 KV Khodri(LUK)-Majri(HP) (UK) Ckt-1 & 2 also tripped (exact reason of tripping and nature of protection operated yet to be shared). v)As per SCADA SOE, 220 KV Majri-VISCO (HP) Ckt also tripped during the same time (exact reason of tripping yet to be shared). vi)As per PMU at Dehradun(PG), no fault was observed in the system. vii)As per SCADA, change in demand of approx. 160 MW was observed in Himachal Pradesh control area. | 0 | 160 | NA | Y(LUK) Y(HP) | N(LUK) N(HP) | N(LUK) N(HP) |
| 4 | GI-2 | 1)400 KV Panchkula-Abdullapur (PG) Ckt-1 2)400 KV Panchkula-Abdullapur (PG) Ckt-2 3)220 KV DandharKalan(PS)-Ludhiana(PG) (PSTCL) Ckt-1 4)220 KV DandharKalan(PS)-Ludhiana(PG) (PSTCL) Ckt-2 | Punjab | PGCL, PSTCL | 7-Dec-25 | 14.12 | i)400/220KV Abdullapur(PG) has one & half breaker scheme at 400KV level and 400/220KV Ludhiana(PG) has double main & transfer bus scheme at 220KV level. ii)During antecedent condition, 220 KV DandharKalan(PS)-Ludhiana(PG) (PSTCL) Ckt-1 & 2 were carrying ~33 MW & ~29 MW respectively. iii)As reported, at 14:12 hrs, 400 KV Panchkula-Abdullapur (PG) Ckt-2 tripped on R-B phase to phase fault with fault distance of 2.061km and Fault current of 31.24kA from Abdullapur & fault distance of 63km and Fault current of 4.72kA from Panchkula. iv)400 KV Panchkula-Abdullapur (PG) Ckt-1 also tripped during the same time on R-B phase to phase fault due to kite string (exact location and nature of fault yet to be shared). v)Hitachi malar relay at DandharKalan(PS) end of 220 KV DandharKalan(PS)-Ludhiana(PG) (PSTCL) Ckt-1 & 2 sensed this fault and 86 Master Trip relay operated in Out of Zone Disturbance Pickup, as "2 PHASE FAILURE DETECTED" Signal was wrongly connected to "86 OPTD" in Relay Logic by default. vi)This led to tripping of both 220 KV DandharKalan(PS)-Ludhiana(PG) (PSTCL) Ckt-1 & 2 from DandharKalan(PS) end only. vii)As per PMU at Ludhiana(PG), R-B double phase fault with fault clearing time of 80ms was observed. viii)As per SCADA, change in demand of approx. 125 MW in Punjab control area was observed. ix)As remedial measure, wrong mapping has been corrected and tested in the Relay Logic. | 0 | 125 | 80 | Y(D)PG Y(D)PS | Y(D)PG Y(D)PS | Y(D)PG N(PS) |
| 5 | GI-1 | 1) 220KV Tughlakabad(PG)-Mehrauli(DTL) (DTL) Ckt-1 | Delhi | DTL, PGCL | 8-Dec-25 | 10.44 | i)220/66KV Mehrauli(DTL) has double main Bus arrangement at 220KV side. ii)During antecedent condition, 220KV Tughlakabad(PG)-Mehrauli(DV) (DTL) Ckt-2 was under planned shutdown from 10:05 hrs for tree trimming. 220KV DIAL-Mehrauli (DTL) Ckt-1 & 2 were on no-load. 220KV Bus coupler at Mehrauli(DTL) was in ON position. iii)As reported, at 10:44 hrs, 220KV Tughlakabad(PG)-Mehrauli(DV) (DTL) Ckt-1 tripped on Y-B phase to phase fault with fault distance of 2.9 km and fault current of I _r =2.22kA and I _b =2.26kA from Mehrauli(DV). As per DR, differential protection operated; fault clearing time was ~60 ms. iv)As per PMU at Mandla(PG), B-N phase to earth fault was observed with fault clearing time of 120 ms. v)As per SCADA, change in demand of approx. 285 MW in Delhi control area is observed. vi)As reported, load was normalized by taking 220KV Tughlakabad(PG)-Mehrauli(DV) (DTL) Ckt-2 in service at 10:58 hrs. | 0 | 285 | 120 | Y(D)DTL Y(D)PG | Y(D)DTL N(PG) | Y(D)DTL Y(D)PG |
| 6 | GD-1 | 1)220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 2)220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-2 3)220/66KV 150 MVA ICT-1 at Naraingarh(PS) 4)220/66KV 100 MVA ICT-2 at Naraingarh(PS) | Punjab | PGCL, PSTCL | 13-Dec-25 | 03.55 | i)220/66KV Naraingarh(PS) has double main bus scheme at 220KV level. 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2 are on single tower. ii)During antecedent condition, 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2 were carrying ~14 MW each. iii)As reported, at 03:55 hrs, during construction of NHAI highway road, some object came in contact with the conductor of both 220KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2 which were on same tower. iv)As further reported by SLDC Punjab, 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 tripped on R-N phase to earth fault (zone-1) with fault current of 6.983 KA from Naraingarh(PS) (exact location of fault yet to be shared). v)220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-2 also tripped at the same time on phase to earth fault (zone-1) with fault distance of 4.751 km and fault current of I _r =7.57 kA, I _b =8.923 kA & I ₀ =8.754 kA from Naraingarh(PS). vi)Due to tripping of both 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2, supply to 220/66KV 150 MVA ICT-1 and 100 MVA ICT-2 at Naraingarh(PS) failed and complete blackout occurred at 220/66KV Naraingarh(PS) S/s. vii)As per PMU at Amritsar(PG), two consecutive R-N phase to earth faults followed by B-N phase to earth fault with fault clearing time of 120ms, 440ms (delayed) and 120ms respectively were observed. viii)As per SCADA, change in demand of approx. 28 MW in Punjab control area was observed. | 0 | 28 | 440 | Y(D)PG Y(PS) | Y(D)PG N(PS) | Y(D)PG N(PS) |
| 7 | GI-1 | 1)220 KV Geeta Colony-South Wazirabad(DV) (DTL) Ckt-1 2)220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-1 3)220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-3 4)220 KV Kashmiri Gate-South Wazirabad(DV) (DTL) Ckt-1 5)220 KV Gopalpur-South Wazirabad(DV) (DTL) Ckt-1 6)220 KV Bus -2 at South Wazirabad(DTL) 7)220/66 KV 100 MVA ICT-1 at South Wazirabad(DTL) 8)220/66 KV 160 MVA ICT-1 at South Wazirabad(DTL) | Delhi | DTL, PGCL | 15-Dec-25 | 04.15 | i)220/66KV South Wazirabad(DTL) has double main Bus arrangement at 220KV side. ii)During antecedent condition, 220 KV Geeta Colony-South Wazirabad(DV) (DTL) Ckt-1, 220 KV Gopalpur-South Wazirabad(DV) (DTL) Ckt-1, 220 KV Kashmiri Gate-South Wazirabad(DV) (DTL) Ckt-1, 220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-1 & 3, 220/66 KV 100 MVA ICT-1 & 160 MVA ICT-2 at South Wazirabad(DTL) were connected to 220 KV Bus -2 at South Wazirabad(DTL). 220KV Bus coupler at South Wazirabad(DTL) was in closed position. iii)As reported, at 04:15 hrs, R-N phase to earth fault occurred on 220 KV Geeta Colony-South Wazirabad(DV) (DTL) Ckt-1 (exact reason, nature and location of fault need to be shared). iv)Due to delayed clearance of the said fault, as per DR, LBB operated and all the elements connected to 220 KV Bus -2 at South Wazirabad(DTL) tripped and Bus-2 became dead (DR was not time synced). v)As per PMU at Mandla(PG), R-N phase to earth fault was observed with delayed fault clearing time of 200 ms. vi)As per SCADA, change in demand of approx. 120 MW in Delhi control area is observed. However, as reported by SLDC Delhi, load loss of 94 MW (Wazirabad: 29 MW, Kashmiri Gate: 12 MW, RPH: 27 MW, Geeta Colony: 11 MW and I.P. Str: 15 MW) occurred in Delhi control area. 11 no.s of 33KV feeders at I.P. Str tripped on under frequency relay operation at 04:15 hrs and restored at 05:10 hrs. vii)As reported by SLDC Delhi, load of Wazirabad, Kashmiri Gate, RPH, Geeta Colony and I.P. Str were restored by 04:27 hrs, 04:26 hrs, 04:27 hrs, 04:41 hrs and 05:10 hrs respectively. | 0 | 120 | 200 | Y(D) | Y(D)(partial) | Y(D) |
| 8 | GI-2 | 1)765 KV Obra_C_TPS-Utnao(UP) Ckt 2)660 MW Unit-1 at Obra_C_TPS (UP) 3)660 MW Unit-2 at Obra_C_TPS (UP) 4)765/400KV 1000 MVA ICT-1 at Obra_C(UP) | Uttar Pradesh | UPPTCL | 16-Dec-25 | 06.34 | i)During antecedent condition, both the 660 MW unit-1&2 at Obra C TPS were in service and generating ~617 MW & ~635 MW respectively. ii)As reported, at 06:34 hrs, 765KV Obra_C-Utnao line tripped on Y-N fault. As reported, fault distance was ~18.5km from Utnao end and ~238km from Obra_C_end. Fault current was ~1.8kA from Obra_C_end and 9.5 km from Utnao end. iii)As per PMU at Lucknow(PG) and DR received, Y-N fault which cleared within 100msc is observed. iv)At the same time, 660 MW Unit-1&2 at Obra_C TPS and 765/400KV 1000 MVA ICT-1 at Obra_C (UP) also tripped. As reported, Units and ICT-1 tripped on earth fault protection operation. v)As per SCADA, change in generation of ~1250 MW occurred at Obra C TPS during the event. | 1250 | 0 | 80 | Y(D) | Y(D)(partial) | Y(D) |

| S.No. | Category of Grid Incident/ Disturbance (GL-1 to GD-V) | Name of Elements (Tripped/Manually opened) | Affected Area | Owner/ Agency | Outage | | Event (As reported) | Loss of generation / loss of load during the Grid Disturbance | | Fault Clearance time (in ms) | Compliance of Protection Protocol/Standard | | |
|-------|---|--|---------------|------------------|-----------|-------|---|---|----------------|------------------------------|--|------------------------|---|
| | | | | | Date | Time | | Generation Loss(MW) | Load Loss (MW) | | Flash Report Submission (Y/N) | DR/EL Submission (Y/N) | Detail Tripping Report Submission (Y/N) |
| | | | | | | | | | | | | | |
| 9 | GL-2 | 1)765 KV Anpara_C(LAN)-Unnao(LUP) (UP) Ckt 2) 500 MW Unit-2 at Anpara-D TPS (UP) | Uttar Pradesh | UPPTCL | 16-Dec-25 | 07:29 | i)During antecedent condition, both the 600 MW units of Anpara C and 500 MW units of Anpara D were in service and generating 366 MW, 574 MW, 476 MW & 475 MW respectively. MW loading of 400kV Anpara-Obra_B line and 400kV Obra_B-Obra_C line were 675 MW (towards Obra_B) and 257 MW (towards Obra_C) respectively. ii)As reported, at 07:29 hrs, 765kV Anpara_C-Unnao line tripped on R-N fault. As reported, fault distance was ~18km from Unnao end and ~357km from Anpara_C end. Fault current was ~2.3KA from Anpara_C end and 6.7km from Unnao end. iii)As per PMU at Lucknow(PG) and DR received, R-N fault which cleared within 100msec with unsuccessful A/R operation due to permanent nature of fault is observed. iv)With the tripping of 765KV Anpara_C-Unnao line, line loading of 400kV Anpara-Obra_B line increased to more than 1100 MW. On this contingency, case-3 of SPS of Anpara complex related to loading of 400kV Anpara-Obra_B line operation. v)On the operation of SPS, 500 MW Unit-2 at Anpara-D tripped and ~220 MW & ~80 MW generation backdown occurred at Anpara-C & D respectively. 1 unit of Anpara C which was supposed to trip on SPS operation couldn't trip due to issue in SPS logic communication at Anpara C end. vi)As per SCADA, total generation backdown of ~780 MW occurred at Anpara C & D during the event. vii)As reported, Anpara-C shall plan the inspection of SPS trip signal communication issue at their end and rectify the issue at the earliest. | 780 | 0 | 80 | Y(d) | Y(d)(partial) | Y(d) |
| 10 | GD-1 | 1)220KV Bus 1 at Pong(BB) 2)220KV Bus 2 at Pong(BB) 3)220 KV Jalandhar-Pong (BB) Ckt-1 4)220 KV Jalandhar-Pong (BB) Ckt-2 5)220 KV Bairasia(NH)-Pong(BB) (PG) Ckt-1 6)220 KV Jessore(HP)-Pong(BB) (PG) Ckt-1 7)220 KV Pong(BB)-Dasuya(PS) (BBMB) Ckt-1 8)220 KV Pong(BB)-Dasuya(PS) (BBMB) Ckt-2 9)66 MW Pong HPS - UNIT 3 10)66 MW Pong HPS - UNIT 4 11)66 MW Pong HPS - UNIT 5 | HP, Punjab | BBMB | 24-Dec-25 | 16:18 | i)220KV Pong (BBMB) has main & transfer bus scheme. Main bus is divided into two parts (Bus-1A & 1B) through bus sectionaliser. ii)During antecedent condition, 66 MW unit-3, 4 & 5 were running and generating 66 MW, 50 MW & 60 MW respectively. iii)As reported, at 16:18 hrs, bus bar protection operated at 220KV Pong(BBMB) leading to tripping of all the elements connected to 220KV Bus-1A & 1B. During event analysis, it was found that external tripping initiated in 220kV bus coupler however bus coupler CB didn't open. Due to this, LBB of bus coupler breaker operated leading to tripping of both 220KV Bus-1A & B. During investigation, broken cables have been found in trip circuit of bus coupler breaker. Further review is being done. iv)As per PMU at Jalandhar(PG), no fault in system is observed. v)As per SCADA, loss of generation of ~175 MW occurred at Pong HEP due to tripping of 66 MW Unit-3, 4 & 5. | 175 | 0 | 80 | Y(d) | Y(d) | Y(d) |
| 11 | GD-1 | 1) 220/33kV 100 MVA ICT-2 at Nokhra(IP) 2) 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt | Rajasthan | NTPC Green, PGCL | 26-Dec-25 | 10:46 | i)Generation of 220kV Nokhra (IP) stations evacuates through 220 KV Nokhra SL_BHD2 (NTPC)-Bhadia_2 (PG) (NTPC_NOKHRA) Ckt. ii)During antecedent condition, 220KV Nokhra (IP) was generating approx. 270 MW (as per PMU). iii)As reported, at 10:46hrs, 220/33 kV 100 MVA ICT-2 tripped on differential protection operation on B-N fault. iv)At the same time, 220KV Bhadia2-Nokhra line also tripped. Reason of the tripping is yet to be received. v)As per PMU at Bhadia2(PG), B-N phase to earth fault cleared within 100 msec is observed. vi)As per PMU plot of MW of Nokhra(IP), solar generation loss of ~270 MW occurred at Nokhra Restation. | 270 | 0 | 80 | Y(d)(PG) N(Nokhra) | Y(d)(PG) N(Nokhra) | Y(d)(PG) N(Nokhra) |
| 12 | GD-1 | 1)220/66 KV 100 MVA ICT-1 at South Wazirabad(DTL) 2)220/66 KV 160 MVA ICT-2 at South Wazirabad(DTL) 3)220/66 KV 100 MVA ICT-3 at South Wazirabad(DTL) 4)220/66 KV 160 MVA ICT-4 at South Wazirabad(DTL) | Delhi | DTL | 29-Dec-25 | 10:39 | i)220/66kV South Wazirabad(DTL) has double main bus arrangement at 220kV side. ii)As reported, at 10:39hrs, during bus shifting operation of 66/11kV 20 MVA transformer, bus fault occurred at 66kV bus. On this fault, all four 220/66kV ICTs at 220kV South Wazirabad(DTL) tripped on overcurrent earth fault protection operation. iii)As per PMU at Manolda(PG), R-Y-B three phase fault with delayed clearance of ~600 msec is observed. iv)As per SCADA, change in demand of ~200 MW in Delhi control area is observed. However, as reported by SLDC Delhi load loss of ~160 MW occurred in Delhi control area. | 0 | 160 | 600 | Y(d) | Y(d) | Y(d) |
| 13 | GD-1 | 1) 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt-1 2) 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt-1 3) 220 KV Kushkhera-karoli ckt 4) 220/132kV 160 MVA Transformer-1 at Kushkhera(RS) 5) 220/132kV 160 MVA Transformer-2 at Kushkhera(RS) | Rajasthan | RVPNL, PGCL | 29-Dec-25 | 16:12 | i)220KV Kushkhera(RS) has double main bus scheme. ii)During antecedent condition, 220kV 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt-1 and 220 KV Bhiwadi(PG)-Kushkhera(RS) (RS) Ckt-1 were carrying 108 MW & 186 MW respectively. iii)As reported, at 16:12hrs, bus post B-P jumper of 220 KV Neemrana(PG)-Kushkhera(RS) (RS) Ckt-1 (connected at 220kV Bus-I) at Kushkhera end damaged and created bus fault. On this fault, bus bar protection of 220kV Bus-2 at Kushkhera(RS) operated leading to tripping of all the elements connected at 220kV Bus-II. iv)As per PMU at Neemrana(PG), B-N phase to earth fault cleared within 100 msec is observed. v)As per SCADA, change in demand of ~260 MW in Rajasthan control area is observed. | 0 | 260 | 80 | Y(d) | Y(d)(partial) | Y(d) |

Grid Events to be discussed in 66th PSC Meeting

| S.No. | Category of Grid Incident/ Disturbance (GL-1 to GD-V) | Name of Elements (Tripped/Manually opened) | Affected Area | Owner/ Agency | Outage | | Event (As reported) | Loss of generation / loss of load during the Grid Disturbance | | Fault Clearance time (in ms) | Points of Discussion |
|-------|--|---|---------------|---------------------|-----------|-------|---|---|----------------|------------------------------|---|
| | | | | | Date | Time | | Generation Loss(MW) | Load Loss (MW) | | |
| | | | | | | | | | | | |
| 1 | GD-1 | 1) 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-3 2) 220 KV Raebareilly(PG)-Bachravan(UP) (PG) Ckt | Uttar Pradesh | PGCIL, UPPTCL, NTPC | 2-Dec-25 | 12:25 | i)220/132KV Raebareilly(PG) has double main & transfer bus scheme at 220KV level. ii)During antecedent condition, 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-1 & 2 were under shutdown for line diversion work by UPPTCL since 02.11.2025 and 220 KV Raebareilly(PG)-C.G. City Ckt was under shutdown since 02.11.2025 for load management of 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-3 as it is the only source line. 220/132/33 KV Bachravan UPPTCL station was being fed only from 220 KV Raebareilly(PG)-Bachravan(UP) (PG) Ckt. iii)As reported, at 12:25 hrs, Broken conductor alarm was observed at both Raebareilly (PG) and Uncharhar(NT) end of 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-3. Line tripped from Uncharhar (NTPC) end only as tripping was enabled on Broken conductor alarm. iv)Since the Broken conductor alarm was observed at both PG and NTPC ends, the Raebareilly TLM team was immediately mobilized for emergency patrolling of the line, considering the possibility of conductor or jumper snapping. The TLM team thoroughly patrolled all 37 tension towers (Location 1 to 144), however no abnormalities were reported on the line. v)As at the time of tripping 220KV Bachravan was being fed radially through 220 KV Raebareilly(PG)-Bachravan(UP) (PG) Ckt, the tripping of 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-3 resulted into loss of source for 220 KV Raebareilly (PG) and 220KV Bachravan. vi)This led to operation of URFR relays at 220 KV Raebareilly (PG) (47.7Hz), 220 KV Bachravan (47.7Hz) and 132KV Anawa (47.9Hz), 132KV Tripura (47.9Hz), 132KV Dalmu (47.9Hz), 132 KV Bachravan (47.9Hz) and 132KV Salon (47.9Hz). This URFR panel, installed by UPPTCL at the PG end, is part of the Uncharhar islanding scheme and is designed to isolate Bachravan and C.G. City lines under such conditions. vii)As both 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-3 and 220 KV Raebareilly(PG)-Bachravan(UP) (PG) Ckt tripped and no alternate power source was available at 220KV Raebareilly(PG), complete blackout occurred at 220KV Raebareilly(PG) S/s. viii)As per PMU at Raebareilly(PG), no fault is observed in the system. ix)As per SCADA, change in demand of approx. 65 MW in UP control area was observed. However, as reported by SLDC UR, load loss of approx. 110 MW occurred in UP control area. | 0 | 110 | 320 | (Reason for broken conductor alarm in 220 KV Uncharhar(NT)-Raebareilly(PG) (PG) Ckt-3 need to be analyzed. Why tripping was enabled at NTPC end? ii)URFR, along with detailed tripping report need to be shared by NTPC. iii)Remedial action taken report need to be shared. |
| 2 | GD-1 | 1)220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 2)220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-2 3)220/66KV 160 MVA ICT-1 at Naraingarh(PS) 4)220/66KV 100 MVA ICT-2 at Naraingarh(PS) | Punjab | PGCIL, PSTCL | 13-Dec-25 | 03:55 | i)220/66KV Naraingarh(PS) has double main bus scheme at 220KV level. 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2 are on single tower. ii)During antecedent condition, 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2 were carrying ~14 MW each. iii)As reported, at 03:55 hrs, during construction of NHAI highway road, some object came in contact with the conductor of both 220KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2 which were on same tower. iv)As further reported by SLDC Punjab, 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 tripped on R-N phase to earth fault (zone-1) with fault current of 6.983 KA from Naraingarh(PS) (exact location of fault yet to be shared). v)220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-2 also tripped at the same time on 3 phase to earth fault (zone-1) with fault distance of 4.751 km and fault current of I _r =7.57 KA & I _b =7.54 KA from Naraingarh(PS). vi)Due to tripping of both 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 & 2, supply to 220/66KV 160 MVA ICT-1 and 100 MVA ICT-2 at Naraingarh(PS) failed and complete blackout occurred at 220/66KV Naraingarh(PS) S/s. vii)As per PMU at Amritsar(PG), two consecutive R-N phase to earth faults followed by B-N phase to earth fault with fault clearing time of 120ms, 440ms (delayed) and 120ms respectively were observed. viii)As per SCADA, change in demand of approx. 28 MW in Punjab control area was observed. | 0 | 28 | 440 | (Exact location of fault in 220 KV Amritsar(PG)-Naraingarh(PS) (PSTCL) Ckt-1 need to be shared. ii)SCADA data was not available at 220/66KV Naraingarh(PS) during the event. Healthiness and availability of the same need to be ensured. iii)URFR, along with detailed tripping report need to be shared for all the elements from both ends. iv)Necessary remedial actions need to be taken to avoid such events in future. |
| 3 | GI-1 | 1)220 KV Geeta Colony-South Wazirabad(DV) (DTL) Ckt-1 2)220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-1 3)220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-3 4)220 KV Kashmiri Gate-South Wazirabad(DV) (DTL) Ckt-1 5)220 KV Gopalpur-South Wazirabad(DV) (DTL) Ckt-1 6)220 KV Bus -2 at South Wazirabad(DTL) 7)220/66 KV 100 MVA ICT-1 at South Wazirabad(DTL) 8)220/66 KV 160 MVA ICT-1 at South Wazirabad(DTL) | Delhi | DTL, PGCIL | 15-Dec-25 | 04:15 | i)220/66KV South Wazirabad(DTL) has double main Bus arrangement at 220KV side. ii)During antecedent condition, 220 KV Geeta Colony-South Wazirabad(DV) (DTL) Ckt-1, 220 KV Gopalpur-South Wazirabad(DV) (DTL) Ckt-1, 220 KV Kashmiri Gate-South Wazirabad(DV) (DTL) Ckt-1, 220 KV Mandola(PG)-South Wazirabad(DV) (DTL) Ckt-1 & 3, 220/66 KV 100 MVA ICT-1 & 160 MVA ICT-2 at South Wazirabad(DTL) were connected to 220 KV Bus -2 at South Wazirabad(DTL). 220KV Bus coupler at South Wazirabad(DTL) was in closed position. iii)As reported, at 04:15 hrs, R-N phase to earth fault occurred on 220 KV Geeta Colony-South Wazirabad(DV) (DTL) Ckt-1 (exact reason, nature and location of fault need to be shared). iv)Due to delayed clearance of the said fault, as per DR, LBB operated and all the elements connected to 220 KV Bus -2 at South Wazirabad(DTL) tripped and Bus-2 became dead (DR was not time synced). v)As per PMU at Mandola(PG), R-N phase to earth fault was observed with delayed fault clearing time of 200 ms. vi)As per SCADA, change in demand of approx. 120 MW in Delhi control area is observed. However, as reported by SLDC Delhi, load loss of 94 MW (Wazirabad: 29 MW, Kashmiri Gate: 12 MW, RPH: 27 MW, Geeta Colony: 11 MW and I.P. Str: 15 MW) occurred in Delhi control area. 11 no.s of 33KV feeders at I.P. Str tripped on under frequency relay operation at 04:15 hrs and restored at 05:10 hrs. vii)As reported by SLDC Delhi, load of Wazirabad, Kashmiri Gate, RPH, Geeta Colony and I.P. Str were restored by 04:27 hrs, 04:26 hrs, 04:27 hrs, 04:41 hrs and 05:10 hrs respectively. | 0 | 120 | 200 | (Exact reason, nature and location of fault need to be shared. ii)Reason of delayed clearance of fault need to be shared. iii)DR time sync issue at South Wazirabad(DTL) need to be resolved at the earliest. iv)SCADA data was suspected and frozen during the event at South Wazirabad(DTL). Availability and healthiness of SCADA data need to be ensured. v)URFR/LSL/ctg file with detailed tripping report need to be shared for all the elements. vi)Remedial action taken report needs to be shared. |
| 4 | GI-2 | 1)765 KV Obra_C_TPS-Unnao (UP) Ckt 2)660 MW Unit-1 at Obra_C TPS (UP) 3)1660 MW Unit-2 at Obra_C TPS (UP) 4)765/400KV 1000 MVA ICT-1 at Obra_C (UP) | Uttar Pradesh | UPPTCL | 16-Dec-25 | 06:34 | i)During antecedent condition, both the 660 MW unit-1&2 at Obra C TPS were in service and generating ~617 MW & ~635 MW respectively. ii)As reported, at 06:34 hrs, 765KV Obra_C-Unnao line tripped on Y-N fault. As reported, fault distance was ~18.5km from Unnao end and ~328km from Obra_C end. Fault current was ~1.8KA from Obra_C end and 9.5 km from Unnao end. iii)As per PMU at Lucknow(UP) and DR received, Y-N fault which cleared within 100msec is observed. iv)At the same time, 660 MW Unit-1&2 at Obra_C TPS and 765/400KV 1000 MVA ICT-1 at Obra_C (UP) also tripped. As reported, Units and ICT-1 tripped on earth fault protection operation. v)As per SCADA, change in generation of ~1250 MW occurred at Obra C TPS during the event. | 1250 | 0 | 80 | (Reason of tripping of 660 MW Unit-1&2 at Obra_C and 765/400KV 1000 MVA ICT-1 at Obra_C (UP) need to be shared. As line fault cleared within 100msec, Unit and ICT shouldn't have tripped. Earth fault protection setting need to be reviewed. SLDC UP may share the O/C E/F protection setting details of Units and ICT at Obra_C (UP). ii)URFR/LSL/ctg file of tripping of units and ICT at Obra_C need to be shared. iii)Disturbance recorder at Unnao end (time DR is not standardized (time sync issue)). iv)Remedial action taken report needs to be shared. |
| 5 | GI-2 | 1)765 KV Anpara_C(Unnao)-Unnao(UP) (UP) Ckt 2) 500 MW Unit-2 at Anpara-D TPS (UP) | Uttar Pradesh | UPPTCL | 16-Dec-25 | 07:29 | i)During antecedent condition, both the 600 MW units of Anpara C and 500 MW units of Anpara D were in service and generating 366 MW, 574 MW, 476 MW & 475 MW respectively. MW loading of 400KV Anpara-Obra_B line and 400KV Obra_B-Obra_C line were 675 MW (towards Obra_B) and 257 MW (towards Obra_C) respectively. ii)As reported, at 07:29 hrs, 765KV Anpara_C-Unnao line tripped on R-N fault. As reported, fault distance was ~18km from Unnao end and ~357km from Anpara_C end. Fault current was ~2.3KA from Anpara_C end and 6.7km from Unnao end. iii)As per PMU at Lucknow(UP) and DR received, R-N fault which cleared within 100msec with unsuccessful A/R operation due to permanent nature of fault is observed. iv)With the tripping of 765KV Anpara_C-Unnao line, line loading of 400KV Anpara-Obra_B line increased to more than 1100 MW. On this contingency, case-3 of SPS of Anpara complex related to loading of 400KV Anpara-Obra_B line operated. v)On the operation of SPS, 500 MW Unit-2 at Anpara-D tripped and ~220 MW & ~80 MW generation backdown occurred at Anpara-C & D respectively. 1 unit of Anpara C which was supposed to trip on SPS operation couldn't trip due to issue in SPS logic communication at Anpara C end. vi)As per SCADA, total generation backdown of ~780 MW occurred at Anpara C & D during the event. vii)As reported, Anpara-C shall plan the inspection of SPS trip signal communication issue at their end and rectify the issue at the earliest. | 780 | 0 | 80 | (Disturbance recorder at Unnao end is not standardized (time sync issue and time window is less). ii)Issue wrt SPS operation at Anpara_C end need to be reviewed and corrected at the earliest possible. iii)Remedial action taken report needs to be shared. |
| 6 | GD-1 | 1)220/66 KV 100 MVA ICT-1 at South Wazirabad(DTL) 2)220/66 KV 160 MVA ICT-2 at South Wazirabad(DTL) 3)220/66 KV 100 MVA ICT-3 at South Wazirabad(DTL) 4)220/66 KV 160 MVA ICT-4 at South Wazirabad(DTL) | Delhi | DTL | 29-Dec-25 | 10:39 | i)220/66KV South Wazirabad(DTL) has double main Bus arrangement at 220KV side. ii)As reported, at 10:39hrs, during bus shifting operation of 66/11KV 20 MVA Transformer, bus fault occurred at 66KV bus. On this fault, all four 220/66KV ICTs at 220KV South Wazirabad(DTL) tripped on overcurrent earth fault protection operation. iii)As per PMU at Mandola(PG), R-F-B three phase fault with delayed clearance of ~600 msec is observed. iv)As per SCADA, change in demand of ~200 MW in Delhi control area is observed. However, as reported by SLDC Delhi load loss of ~160 MW occurred in Delhi control area. | 0 | 160 | 600 | (Reason of occurrence of fault on 66kv bus at South Wazirabad(DTL). ii)As per DR of ICT-3, no significant fault current is observed in phases. Reason of the same need to be shared. iii)SCADA data of South Wazirabad(DTL) got frozen after the tripping event. Healthiness of SCADA data needs to be ensured. iv)Remedial action taken report needs to be shared. |

Annexure-B.IV

| Sr No | Element Name | Outage Date | Outage Time | Reason |
|-------|---|-------------|-------------|---|
| 1 | 400 KV Amritsar(PG)-Makhu(PS) (PSTCL) Ckt-1 | 16-Dec-25 | 06:42 | Phase to earth fault R-N |
| | | 17-Dec-25 | 05:01 | Phase to earth fault R-N |
| | | 19-Dec-25 | 07:58 | Phase to earth fault R-N |
| | | 29-Dec-25 | 07:09 | Phase to earth fault Y-N |
| | | 31-Dec-25 | 08:12 | Phase to earth fault R-N |
| 2 | 220 KV Anta(NT)-Lalsote(RS) (PG) Ckt-1 | 27-Dec-25 | 04:04 | Phase to earth fault R-N |
| | | 27-Dec-25 | 23:19 | Phase to earth fault R-N |
| | | 28-Dec-25 | 00:15 | Phase to earth fault R-N |
| | | 30-Dec-25 | 19:58 | Phase to earth fault R-N |
| 3 | 220 KV Ballabgarh(BB)-Badarpur(NT) (BB) Ckt-2 | 14-Dec-25 | 03:59 | Phase to earth fault Y-N |
| | | 15-Dec-25 | 00:38 | Phase to earth fault Y-N |
| | | 18-Dec-25 | 00:52 | Phase to earth fault R-N |
| | | 28-Dec-25 | 22:55 | Phase to earth fault R-N |
| 4 | 220 KV Khara(UP)-Saharanpur(PG) (UP) Ckt-1 | 18-Dec-25 | 10:13 | Phase to earth fault R-N |
| | | 20-Dec-25 | 01:49 | Phase to earth fault Y-N |
| | | 23-Dec-25 | 02:25 | Transient fault |
| | | 28-Dec-25 | 05:49 | Phase to earth fault B-N |
| 5 | 400 KV Muzaffarnagar-Ataur (UP) Ckt-1 | 17-Dec-25 | 06:51 | Auto-Reclosure Problem |
| | | 19-Dec-25 | 01:15 | Phase to Ground Fault R-N |
| | | 26-Dec-25 | 06:09 | Phase to Ground Fault R-N |
| | | 27-Dec-25 | 03:16 | Bus Bar Protection Operated |
| 6 | 250 MW (PSP) TEHRI HPS - UNIT 6 | 15-Dec-25 | 12:45 | Closed cooling water (CCW) line flow water meter clogged. |
| | | 22-Dec-25 | 11:00 | QSD due to fault in main dewatering valve |
| | | 31-Dec-25 | 22:30 | PRV trip |

Annexure-B.V

| S. No. | Name of Transmission Element Tripped | Owner/ Utility | Outage | | Load Loss/ Gen. Loss | Brief Reason (As reported) | Category as per CEA Grid standards | # Fault Clearance Time (>100 ms for 400 kV and 160 ms for 220 kV) | *FIR Furnished (YES/NO) | DR/EL provided in 24 hrs (YES/NO) | Other Protection Issues and Non Compliance (Inference from PMU, utility details) | Remarks |
|--------|---|----------------|-----------|-------|----------------------|---|------------------------------------|---|-------------------------|-----------------------------------|--|---|
| | | | Date | Time | | | | | | | | |
| 1 | 400 KV Gorakhpur(PG)-Motihari(BS) (PG) Ckt-1 | POWERGRID | 01-Dec-25 | 09:21 | Nil | Phase to Phase Fault R-B | NA | 80 ms | Yes | Yes | - | As per PMU and DR, R-B phase to phase fault is observed. Fault was in Z-1 (54.8km(29%)) from Gorakhpur end and fault current was Ir & Ib= ~7.5kA. |
| 2 | 765 KV Balia-Gaya (PG) Ckt-1 | POWERGRID | 01-Dec-25 | 14:20 | Nil | Phase to Phase Fault Y-B | NA | 80 ms | Yes | Yes | - | As per PMU and DR, Y-B phase to phase fault is observed. Fault was in Z-1 (14.1km(6%)) from Balia end and fault current was Iy & Ib= ~13.5kA. |
| 3 | 765 KV Orai-Satna (PG) Ckt-1 | POWERGRID | 05-Dec-25 | 06:42 | Nil | Phase to earth fault B-N | NA | 80 ms | Yes | No | DR/EL not received | As per PMU, B-N phase to earth fault with unsuccessful A/R is observed. |
| 4 | 400 KV Allahabad-Sasaram (PG) Ckt-1 | POWERGRID | 05-Dec-25 | 23:49 | Nil | PLCC maloperation | NA | NA | No | No | FIR/DR/EL not received; PLCC maloperation | As per PMU, no fault in system is observed |
| 5 | 400 KV Sahupuri(UP)-Biharshariff(PG) (PG) Ckt-1 | POWERGRID | 17-Dec-25 | 23:11 | Nil | Phase to earth fault R-N | NA | 80 ms | Yes | Yes | A/R non operation at Sahupuri end | As per PMU & DR, R-N phase to earth fault with no A/R operation at Sahupuri end is observed. Fault location was 1.5km from Sahupuri end fault current was 12.6km. |
| 6 | 400 KV Allahabad-Sasaram (PG) Ckt-1 | POWERGRID | 18-Dec-25 | 00:31 | Nil | Phase to earth fault Y-N | NA | 80 ms | No | No | FIR/DR/EL not received | As per PMU, Y-N phase to earth fault with unsuccessful A/R is observed. |
| 7 | 220 KV Auraiya(NT)-Malanpur(MP) (PG) Ckt-1 | MPSEBL | 18-Dec-25 | 01:07 | Nil | Phase to earth fault R-N | NA | 80 ms | No | No | FIR/DR/EL not received | As per PMU, R-N fault with no A/R is observed. |
| 8 | 765 KV Balia-Gaya (PG) Ckt-1 | POWERGRID | 18-Dec-25 | 13:10 | Nil | Phase to earth fault Y-N | NA | NA | No | No | FIR/DR/EL not received | As per PMU, no fault is observed in the system. |
| 9 | 765 KV Balia-Gaya (PG) Ckt-1 | POWERGRID | 23-Dec-25 | 02:01 | Nil | Phase to earth fault R-N | NA | 80 ms | No | No | FIR/DR/EL not received | As per PMU, two consecutive R-N phase to earth faults (within reclaim time) is observed. |
| 10 | 400 KV Balia-Biharshariff (PG) Ckt-2 | POWERGRID | 23-Dec-25 | 05:57 | Nil | Phase to earth fault B-N | NA | 80 ms | No | No | FIR/DR/EL not received | As per PMU, B-N phase to earth fault with unsuccessful A/R is observed. |
| 11 | 800 KV HVDC Kurukshetra(PG) Pole-1 | POWERGRID | 30-Dec-25 | 12:17 | Nil | Tripped /Blocked on Converter differential. | NA | NA | No | No | FIR/DR/EL not received | As per PMU, fluctuation in voltage and no fault in system is observed. |

Fault Clearance time has been computed using PMU Data from nearest node available and/or DR provided by respective utilities (Annexure-II)

*Yes, if written Preliminary report furnished by constituent(s)

R-Y-B phase sequencing (Red, Yellow, Blue) is used in the list content.All information is as per Northern Region unless specified.

^^ tripping seems to be in order as per PMU data, reported information. However, further details may be awaited.

Reporting of Violation of Regulation for various issues for above tripping

| | | |
|---|---|--|
| 1 | Fault Clearance time(>100ms for 400kV and >160ms for 220kV) | 1. CEA Grid Standard-3.e 2. CEA Transmission Planning Criteria |
| 2 | DR/EL Not provided in 24hrs | 1. IEGC 37.2(c) 2. CEA Grid Standard 15.3 |
| 3 | FIR Not Furnished | 1. IEGC 37.2(b) 2. CEA Grid Standard 12.2 (Applicable for SLDC, ALDC only) |
| 4 | Protection System Mal/Non Operation | 1. CEA Technical Standard of Electrical Plants and Electric Lines: 43.4.A 2. CEA (Technical Standards for connectivity to the Grid) Regulation, 2007: Schedule Part 1. (6.1, 6.2, 6.3) |
| 5 | A/R non operation | 1. CEA Technical Standard of Electrical Plants and Electric Lines: 43.4.C 2. CEA Technical Planning Criteria |

Status of Mock Test of SPS in NR during 2025-26

| Sr. No. | Scheme Name | Owner / Agency | Commission Year | Last Review | Mock testing conducted before 2025-26 | Tentative Schedule of SPS Mock testing to be conducted during 2025-26 | Date of SPS Mock testing conducted during 2025-26 | Remarks |
|---------|---|----------------------------------|-----------------|-------------|---|---|---|---|
| 1 | SPS for WR-NR corridor - 765kV Agra-Gwalior D/C | POWERGRID | | | 27-03-2025 | conducted | 10.10.2025 | Communication issue at Bhiwadi(PG), Bamnauli(DTL), Kota, Debari, Chittorgarh, Ratangarh, Nunamajra, Safidon, Ajitwal, Dandhari-II, Ablawal. |
| 2 | SPS for contingency due to tripping of HVDC Mundra-Mahendergarh | ADANI | | | | Schedule awaited | | As reported by ADANI, scheme has been made ready to be taken into service. |
| 3 | SPS for high capacity 400 kV Muzaffarpur-Gorakhpur D/C Inter-regional tie-line related contingency | POWERGRID | | | | SPS Under Review | | Not conducted in 2024-25 also. NRLDC Studies team advised to disable the same. NLDC input awaited. |
| 4 | SPS for 1500 MW HVDC Rihand-Dadri Bipole related contingency | POWERGRID | | | 19-03-2025 and 20-03-2025 | conducted | 19.11.2025 | SPS command didn't receive at 220kV Muradnagar(UP), 220kV Merta(RS), 220kV Kota Sakatpura(RS), 220kV Dhanonda(HR) and Singrauli TPS(NTPC) |
| 5 | System Protection Scheme (SPS) for HVDC Balia-Bhiwadi Bipole | POWERGRID | | | | SPS Under Review | | Not conducted in 2024-25 also |
| 6 | SPS for reliable evacuation of power from NJPS, Rampur, Sawra Kuddu, Baspa Sorang and Karcham Wangtoo HEP | SJVN/HPPTCL/JSW/POWERGRID/SORANG | | | 19-12-2024 | Dec-25 | 04-09-2025 (Partial: Case-1, 3 & 5 conducted) | Case-6(j) & (ii) has been implemented (as confirmed by Karcham(JSW) via mail dated 08.12.2025). Communication card issue at Wangtoo(HP) |
| 7 | SPS for Reliable Evacuation of Ropar Generation | PSTCL | | | | SPS Under Review | | As per NRLDC study, evacuation network at Ropta TPS meets N-1-1 reliability criteria, the need for an SPS at Ropar appears redundant under the current network configuration. During 239th OCC, it was decided to remove the SPS. |
| 8 | SPS for Reliable Evacuation of Rosa Generation | UPPTCL | | | 20-04-2024 | conducted | 12-04-2025 | Mock test report received (Review to be done in view of commissioning of 400kV Rosa-Badaun D/C in April 2021.) |
| 9 | SPS for contingency due to tripping of evacuating lines from Narora Atomic Power Station | NAPS / UPPTCL | | | | SPS Under Review | | Not conducted in 2024-25 also. As reported by UPPTCL, no SPS system is in service at Narora S/s. NRLDC Studies team advised to disable the same. During 239th OCC, it was decided to remove the SPS. |
| 10 | SPS for evacuation of Kawai TPS, Kalisindh TPS generation complex | RVPNL | | | 14-03-2025 (Partial) | conducted | 26-04-2025 | As informed by RVPNL, automatic load shedding part of the SPS has been implemented and mock tested. Mock test report is yet to be received. |
| 11 | SPS for evacuation of Anpara Generation Complex | UPPTCL | | | 08-10-2024 (unit-7) and 19-10-2024 (unit-6) | conducted | 21-07-2025 | |
| 12 | SPS for evacuation of Lalitpur TPS Generation | UPPTCL | | | 21-05-2024 | conducted | 09-04-2025 | Mock test report received |
| 13 | SPS for Reliable Evacuation of Bara TPS Generation | UPPTCL | | | 20-11-2024 | conducted | 23-05-2025 | Mock test report received |
| 14 | SPS for Lahal Generation | HPPTCL | | | 08-07-2020 | SPS Under Review | | As reported by HPPTCL, SPS at Lahal not required now. |
| 15 | SPS for Transformers at Maharaniabagh (PG) substation | POWERGRID | | | | conducted | Apr-25 | Mock test report received |
| 16 | SPS for Transformers at Mandola (PG) substation | POWERGRID | | | | conducted | Apr-25 | Mock test report received |
| 17 | SPS for Transformers at Bamnauli (DTL) Substation | DTL | | | | Dec-25 | | N-1 compliant (To be removed). As reported by SLDC Delhi, scheme may be kept in service until 315 MVA ICT is revived which currently is not in service |
| 18 | SPS for Transformers at Moradabad (UPPTCL) Substation | UPPTCL | | | 20-04-2024 | conducted | 02-04-2025 | Mock test report received |
| 19 | SPS for Transformers at Muradnagar (UPPTCL) Substation | UPPTCL | | | 27-03-2025 | Mar-26 | | |
| 20 | SPS for Transformers at Agra (UPPTCL) Substation | UPPTCL | | | 21-03-2025 | Mar-26 | | |
| 21 | SPS for Transformers at 400kV Sarojininar (UPPTCL) Substation | UPPTCL | | | 15-05-2024 | conducted | 23-07-2025 | Mock test report received |
| 22 | SPS for Transformers at 220kV Sarojininar (UPPTCL) Substation | UPPTCL | | | 06-06-2024 | conducted | 23-07-2025 | Mock test report received |

| | | | | | | | |
|----|---|-------------------|--|---------------------------|---------------------------------|-------------------------|--|
| 23 | SPS for Transformers at 400kV Unnao (UPPTCL) Substation | UPPTCL | | 19-05-2023 | SPS made healthy on 27.05.2025 | 27.05.2025 | Mock test report received |
| 24 | SPS for Transformers at 400kV Sultanpur (UPPTCL) Substation | UPPTCL | | | SPS made healthy on 05.05.2025 | | As reported by SLDC UP, scheme is required as loading exceeded (N-1) limit during summer of 2025 |
| 25 | SPS for Transformers at 400kV Bareilly (UPPTCL) Substation | UPPTCL | | | Revised SPS approved in 234 OCC | | SPS yet to be implemented |
| 26 | SPS for Transformers at 400kV Azamgarh (UPPTCL) Substation | UPPTCL | | 06-05-2024 | conducted | 19-04-2025 | Mock test report received |
| 27 | SPS for Transformers at 400kV Mau (UPPTCL) Substation | UPPTCL | | 27-04-2024 | conducted | 21-04-2025 | Mock test report received |
| 28 | SPS for Transformers at 400kV Gorakhpur (UPPTCL) Substation | UPPTCL | | 27-04-2024 | conducted | 21-04-2025 | As reported by SLDC UP, scheme is required as loading exceeded (N-1) limit during summer of 2025 |
| 29 | SPS for Transformers at 400kV Sarnath (UPPTCL) Substation | UPPTCL | | 23-05-2024 | conducted | 01-04-2025 | Mock test report received |
| 30 | SPS for Transformer at 400kV Rajpura (PSTCL) Substation | PSTCL | | 31-01-2025 | Jan-26 | | |
| 31 | SPS for Transformers at 400kV Mundka (DTL) Substation | DTL | | 03-02-2025 | Dec-25 | | |
| 32 | SPS for Transformers at 400kV Deepalpur (JKTPL) Substation | HVPNL | | | conducted | 08-05-2025 | Mock test report pending |
| 33 | SPS for Transformers at 400kV Ajmer (RVPN) Substation | RVPNL | | 10-09-2024 | conducted | 20-08-2025 | Mock test report received. |
| 34 | SPS for Transformers at 400kV Merta (RVPN) Substation | RVPNL | | 12-09-2024 | conducted | 09-09-2025 | Mock test report received. |
| 35 | SPS for Transformers at 400kV Chittorgarh (RVPN) Substation | RVPNL | | 31-08-2024 and 05-09-2024 | conducted | 11-09-2025 & 12-09-2025 | Mock test report received. |
| 36 | SPS for Transformers at 400kV Jodhpur (RVPN) Substation | RVPNL | | 24-09-2024 | Dec-25 | | |
| 37 | SPS for Transformers at 400kV Bhadia (RVPN) Substation | RVPNL | | 27-09-2024 | conducted | 27-09-2025 | |
| 38 | SPS for Transformers at 400kV Ratangarh (RVPN) Substation | RVPNL | | 20-09-2024 | conducted | 25-09-2025 | |
| 39 | SPS for Transformers at 400kV Nehtaur(WUPPTCL) Substation | UPPTCL | | 11-01-2025 | Dec-25 | | |
| 40 | SPS for Transformers at Obra TPS | UPPTCL | | 20-05-2024 | Schedule awaited | | ICTs failed during fire incident |
| 41 | SPS for Transformers at 400kV Kashipur (PTCUL) substation | PTCUL | | Septemeber 2024 | conducted | 05-10-2025 | |
| 42 | SPS for Transformers at 400kV Fatehgarh Solar Park (AREPRL) | ADANI | | | conducted | 19-04-2025 | Mock test report received. |
| 43 | SPS to relive transmission congestion in RE complex (Bhadla2) | POWERGRID | | | conducted | 26-08-2025 | Mock test report pending |
| 44 | SPS for Transformers at 400kV Bikaner (RVPN) Substation | RVPNL | | 26-09-2024 | conducted | 13-09-2025 & 17-09-2025 | |
| 45 | SPS for Transformers at 400kV Bawana (DTL) Substation | DTL | | 04-01-2025 | Dec-25 | | |
| 46 | SPS for Transformers at 400kV Bhilwara (RVPN) Substation | RVPNL | | 09-07-2024 and 10-07-2024 | conducted | 09-2025 & 23-09-24 | Mock test report received. |
| 47 | SPS for Transformers at 400kV Hindaun (RVPN) Substation | RVPNL | | 26-09-2024 | conducted | 11-09-2025 | Mock test report received. |
| 48 | SPS for Transformers at 400kV Suratgarh (RVPN) Substation | RVPNL | | 20-10-2024 | Dec-25 | | |
| 49 | SPS for Transformers at 400kV Babai(RS) Substation | RVPNL | | 20-10-2024 | conducted | 07-08-2025 | Mock test report received. |
| 50 | SPS for Transformers at 400kV Allahabad(PG) Substation | UPPTCL | | 25.07.2024 | Jan-26 | | |
| 51 | SPS for Transformers at 400kV Jaunpur(UP) Substation | UPPTCL | | | Schedule awaited | | Implemented on 08.10.2025 |
| 52 | SPS for Transformers at 765kV Jhatikara(PG) Substation (Bamnauli section) | POWERGRID | | | conducted | Jun-25 | Mock test report received. |
| | SPS for Transformers at 765kV Jhatikara(PG) Substation (Mundka section) | | | | conducted | Jun-25 | |
| 53 | SPS for Transformers at 765kV Bhiwani(PG) Substation | POWERGRID | | | SPS implemented | | Mock test report received. |
| 54 | SPS for Transformers at 400kV Panki (UPPTCL) Substation | UPPTCL | | | Approved in 234 OCC | | Expected to be implemented by Dec-25 |
| 55 | SPS for Transformers at 400kV Agra(PG) Substation | POWERGRID/UP PTCL | | | Approved in 234 OCC | | Expected to be implemented by Dec-25 |
| 56 | SPS for Transformers at 400kV Jaipur South(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |
| 57 | SPS for Transformers at 400kV Bassi(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |
| 58 | SPS for Transformers at 400kV Kankroli(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |
| 59 | SPS for Transformers at 400kV Kotputli(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |
| 60 | SPS for Transformers at 400kV Neemrana(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |
| 61 | SPS for Transformers at 400kV Bhiwadi(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |
| 62 | SPS for Transformers at 400kV Sikar(PG) Substation | POWERGRID/RVP NL | | | Approved in 237 OCC | | Yet to be implemented |

Fw: Mundra-Mohindergarh HVDC , SPS-NR defect resolutions

Deepak Kumar

Tue 04-Feb-25 17:04

To: Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>;

📎 1 attachments (23 KB)

Revised Schedule for Site Visit.xlsx;

From: Sumeet Sharma <Sumeet.Sharma@adani.com>

Sent: Monday, February 3, 2025 6:58 PM

To: aen.com; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kv1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldvrpn@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Cc: NRLDC SO 2; Somara Lakra (सोमारा लाकरा); Mahavir Prasad Singh (महावीर प्रसाद सिंह); Deepak Kumar; Sunil Kumar Raval; Namandeep Matta; Kali Charan Sahu; RAVINDRA ATALE; Nihar Raj; Milan Popat; Abhishek Kukreja; Naman Vyas; Abhishek Kumar Singh

Subject: Mundra-Mohindergarh HVDC , SPS-NR defect resolutions

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Dear Sirs,

This refers to the matter discussed during recent Protection subcommittee (PSC) meetings with regards to the requirement of rectifications of SPS-NR implemented for Mundra-Mohindergarh HVDC transmission. We have awarded the service to M/s commtel for survey and restoration of possible elements installed at the locations.

Please note that Engineers from M/s Commtel shall be visiting your stations as per the attached schedule and necessary coordination shall be done by Mr. Abhishek Singh (Station -in charge) of Mohindergarh HVDC station (AESL-GD). He can be contacted at Mobile: 9671306831.

We request your kind permission and necessary support in carrying out the observations/possible restorations of the installations at your respective stations.

Thank you.

Regards,

Sumeet Sharma

Head- Automation, Communications , OT-Cyber & Technology

Adani Energy Solutions Limited.(Grid Division)

Mob +91 90990 05648 | sumeet.sharma@adani.com | www.adani.com

KP Epitome | 10th Floor South Wing | SG Highway | Ahmedabad-382421 | Gujarat

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Project : To check Sytem healthiness anc configuration of system installed Under M/s Adani

| S. No | Site name | Region | Site visit |
|--------------|------------------|---------------|-------------------|
| 1 | Ialtokalan | Punjab | 03.02.2025 |
| 2 | Gobidngarh | | 04.02.2025 |
| 3 | Malerkotla | | 05.02.2025 |
| 4 | Mandula | UP | 06.02.2025 |
| 5 | Bamnauli | DTL | 07.02.2025 |
| 6 | Ratangarh | Rajasthan | 06.02.2025 |
| 7 | Bhilwara | | 07.02.2025 |
| 8 | Merta | | 07.02.2025 |
| 9 | Alwar | | 08.02.2025 |
| 10 | PG Bhiwani | Haryana | 10.02.2025 |
| 11 | BBMB bhiwani | | 10.02.2025 |
| 12 | Hissar | | 11.02.2025 |
| 13 | Dadri | | 11.02.2025 |
| 14 | Bahadurgah | | 12.02.2025 |
| 15 | Dhanoda | | 12.02.2025 |
| 16 | Shamli | UP | 12.02.2025 |

RE: Mock testing of SPS of 500kV HVDC Mundra-Mahindergarh link

Thu 8/29/2024 7:29 PM

To:NRLDC SO 2 <nrlcdso2@grid-india.in>; CPCC1 <rtamc.nr1@powergrid.in>;

Cc:seo-nrpc <seo-nrpc@nic.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Arunkumar P <Arunkumar.P@adani.com>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; AMIT SHARMA <amsharma@grid-india.in>; Bikas Kumar Jha (बिकास कुमार झा) <bikaskjha@grid-india.in>; Manas Ranjan Chand (मानस रंजन चंद) <manas@grid-india.in>; Aman Gautam (अमन गौतम) <amangautam@grid-india.in>; Gnanaguru . <Gnanaguru.1@adani.com>; Sumeet Sharma <Sumeet.Sharma@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Milan Popat <Milan.Popat@adani.com>; Nihar Raj <nihar.raj@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>;

5 attachments (9 MB)

Counter (2).jpg; Counter.jpg; TPS (2).jpg; TPS.jpg; 220KV Alwar ss.jpg;

****Warning****

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Dear Sir,

Please find the attached Photos. on 28-08-2024, a representative from M/s. Commtel Networks visited the Mahendragarh site and confirmed the healthiness of the SDH and TPS, along with their associated cards.

All SPS System equipment are functioning properly. The 15 TPS installed in the remote substation.

The details and status of TPS and Counter at Mahendragarh End.

| S.No | TPS | TPS Status | Counter | Counter Status |
|------|-------------|------------|---------|----------------|
| 1 | PG Hissar | ON | 17 | OKAY |
| 2 | Bhiwani | ON | 17 | OKAY |
| 3 | Dadari | ON | 17 | OKAY |
| 4 | Alwar | ON | - | OFF |
| 5 | Bhilwara | ON | 12 | OKAY |
| 6 | Merta | ON | 14 | OKAY |
| 7 | Ratangarh | ON | - | OFF |
| 8 | Gobinugarg | ON | - | OFF |
| 9 | Malerkotla | ON | - | OFF |
| 10 | Laton Kalan | ON | 6 | OKAY |
| 11 | Mandula | ON | 12 | OKAY |
| 12 | Bamnauli | ON | - | OFF |
| 13 | Shamli | ON | - | OFF |
| 14 | Bahadurgarh | ON | 10 | OKAY |

| | | | | |
|----|----------|----|---|-----|
| 15 | Dhanonda | ON | - | OFF |
|----|----------|----|---|-----|

There alarms on the system are due to the following reasons.

1. Equipment Failure/ card failure/ power failure at Remote Sites.
2. Cable connectivity break between the remote System and cable coming from Field.
3. E1 connectivity outage at remote Sites.

Our team, with support from CommTel Networks, visited the nearest TPS installed at the 220/132 kV Alwar Substation to check its healthiness. However, during the inspection, the panel was found to be de-energized, necessitating an end-to-end test. (Photo Attached) Similarly, each substation needs to be ensured the healthiness of the TPS by respective Substation owner.

We request you to please confirm the healthiness of the Sr no 1 and 2 .

Thanks and Regards,

Kalicharan Sahu
(O&M) HVDC & EHV Substations,
Adani Energy Solutions Limited
| ±500kV HVDC Mahendragarh Terminal Sub Station I
Village-Kheri- Aghiyar, Taluka- Kanina, Mahendragarh 123 029, Haryana, India
Mob +91 9764006167| Off +91 1285 277326

adani

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with
Goodness

Our Values: Courage | Trust | Commitment

 /AdaniOnline

From: NRLDC SO 2 <nrlDCso2@grid-india.in>

Sent: Tuesday, August 27, 2024 10:07 AM

To: SLDC Punjab <se-sldcprojects@pstcl.org>; PC PSTCL SLDC PUNJAB <pcpstcl@gmail.com>; Haryana <sldcharyanacr@gmail.com>; Delhi <sldcmintoroad@gmail.com>; UP <sera@upslcd.org>; Rajasthan <SE.LDRVNL@RVPN.CO.IN>; ce.ld@rvpn.co.in; CPCC1 <rtamc.nr1@powergrid.in>; neerajk@powergrid.in; setncmrt@upptcl.org; bharatlalgujar@gmail.com; akashdeep3433786@gmail.com; xenemtcbhpp2@bbmb.nic.in; PC Control Room <pccont@bbmb.nic.in>; se.prot.engg@rvpn.co.in; Arunkumar P <Arunkumar.P@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; rajbir-walia79@yahoo.com; ase-sldcop@pstcl.org; sesldcop@hvpn.org.in; cepso@upslcd.org; se-sldcop <se-sldcop@pstcl.org>; SICHVDC Controlroom <SICHVDC.Controlroom@adani.com>

Cc: seo-nrpc <seo-nrpc@nic.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; AMIT SHARMA <amsharma@grid-india.in>; bikaskjha <bikaskjha@grid-india.in>; Manas Ranjan Chand (मानस रंजन चंद) <manas@grid-india.in>; Aman Gautam (अमन गौतम) <amangautam@grid-india.in>

Subject: Re: Mock testing of SPS of 500kV HVDC Mundra-Mahindergarh link

***CAUTION:** This mail has originated from outside Adani. Please exercise caution with links and attachments.*

Sir,

उत्तर प्रदेश राज्य भार प्रेषण केन्द्र लि०
यू०पी०एस०एल०डी०सी०परिसर, विभूति
खण्ड II, गौमती नगर, लखनऊ-226010
ई मेल : sera@upslde.org



U.P. State Load Despatch Centre Ltd.
UPSLDC Complex, Vibhuti Khand II
Gomti Nagar, Lucknow- 226010
E-mail: sera@upslde.org

No: - 2661 /SE(R&A)/EE-II/SPS

Dated:- 07/08/2024

General Manager, NRLDC18-A,
SJSS Marg, Katwaria Sarai,
New Delhi - 110016

Subject- Regarding SPS of HVDC Mundra-Mahendargarh line

Kindly refer to SE (ETC) Muzaffarnagar letter no/062/E.T.C./MZN/400 kV S/S Shamli dated 05.05.2024. (copy enclosed) regarding feeder wise load of Shamli area. As per the letter, at present complete load relief (i.e. 300MW) may not be provided by 220 kV Shamli, so that alternatively feeder and load details of 400 kV Shamli has also been provided. Also it is informed that at present SPS system at 220 kV Shamli is not healthy which is being maintained by PGCI..

It is therefore requested to kindly instruct the concerned to incorporate 132 kV feeders of 220 kV Shamli & 400 kV Shamli in SPS of HVDC Mundra-Mahendargarh line so that appropriated load relief may be provided from UP Control area and take necessary action regarding healthiness of SPS system

Sangeeta

(Sangeeta)

Superintending Engineer (R&A)

No: - /SE(R&A)/EE-II/SPS

Dated: - 2024

Copy forwarded to following via e-mail for kind information and necessary action:-

1. Director, UPSLDC, Vibhuti Khand II, Gomti Nagar, Lucknow.
2. Director (Operation), UPPTCL, 11th Floor, Shakti Bhawan Extn., Lucknow.
3. Chief Engineer (PSO), Vibhuti Khand - II, Gomti Nagar, Lucknow.
4. Chief Engineer (Trans. West), Pareshan Bhawan, 130D, Hydrel Colony, Victoria Park, Meerut 250001.
5. SE (Operations), 18 A SJSS Marg, Katwaria Sarai, New Delhi, 110016.

/

(Sangeeta)

Superintending Engineer (R&A)



कार्यालय
अधीक्षण अभियन्ता
विद्युत पारेषण मण्डल
उपग्राम ट्रांसमिशन कारपोरेशन लि०
132 के०वी० भोपारोड उपकेन्द्र
मुजफ्फरनगर-251001

OFFICE OF THE
SUPERINTENDING ENGINEER
Electricity Transmission Circle
U.P. Power Transmission Corporation Ltd.
132 KV Bhopa Road Sub-station
Muzaffarnagar-251001

दूरभाष : 0131-2608038

Ph. 0131-2608038

E-mail : seetcmzn@upptel.org, seetcmzn@gmail.com

संख्या / No. 1062 /E.T.C./MZN/400 KV S/S Shamli

दिनांक / DATED 05/08/24

Subject: - Regarding SPS of HVDC Mundra-Mahendargarh.

Superintending Engineer (R & A)
U.P State Load Despatch Centre Ltd.
UPSLDC Complex, Vibhuti Khand-II
Gomti Nagar, Lucknow.
Email. sera@upslde.org

Please refer to your office letter no. 2187 dt. 01.07.2024, forwarded to this office by SE (T&C), Meerut vide endorsement no. 2237/CE(TW)/MT/SPS dt. 23.07.2024 vide which it has been requested to provide details of 132 KV feeders for planned relief to HVDC Mundra-Mahendargarh SPS.

In this reference, it is to apprise that following is the details of 132 KV feeders being fed from 220 KV Sub-Station Shamli.

| S.No. | Name of feeder | Connected Load (MVA) | Maximum Load (MW) | Average Load (MW) |
|-------|---------------------|----------------------|-------------------|-------------------|
| 1 | 132 KV Lalukheri | 63+63 | 72 | 47 |
| 2 | 132 KV Jhinhana | 63+40+40 | 80 | 52 |
| 3 | 132 KV Kairana-I/II | 63+63 | 41 | 27 |
| 4 | 132 KV Jasala | 63+40 | 58 | 38 |
| Total | | | 251 | 164 |

1. Following Case wise Trippings of 132 KV Feeders at 220 KV Sub-Station, Shamli for tripping of HVDC Mundra-Mahendargarh Line may be used.

(A) In Maximum Load Condition:-

| S. No. | State.L.S quantum | Name of feeding substation | Feeder/line/ equipment | MW | Case-1 50 MW | Case-2 100 MW | Case-3 200MW | Case-4 300 MW |
|--------------|--|----------------------------------|------------------------|------|--------------|---------------|--------------|---------------|
| 1 | Uttar Pradesh Case-1 =50 MW Case-2 =100 MW Case-3 =200 MW Case-4 =300 MW | 220 KV Subsatation, Shamli | 132 KV Jasala | 58 | 1 | 1 | 1 | 1 |
| 2 | | | 132 KV Kairana-I | 20.5 | | 1 | | 1 |
| 3 | | | 132 KV Kairana-II | 20.5 | - | 1 | | 1 |
| 4 | | | 132 KV Lalukheri | 72 | - | - | 1 | 1 |
| 5 | | | 132 KV Jinjhana | 80 | - | - | 1 | 1 |
| Total Relief | | | | 251 | 58 | 99 | 210 | 251 |

(B) In Average Load Condition :-

| S. No. | State.L.S quantum | Name of feeding substation | Feeder/line/ equipment | MW | Case-1 50 MW | Case-2 100 MW | Case-3 200MW | Case-4 300 MW |
|--------------|--|----------------------------------|------------------------|------|--------------|---------------|--------------|---------------|
| 1 | Uttar Pradesh Case-1 =50 MW Case-2 =100 MW Case-3 =200 MW Case-4 =300 MW | 220 KV Subsatation, Shamli | 132 KV Jasala | 38 | 1 | | 1 | 1 |
| 2 | | | 132 KV Kairana-I | 13.5 | 1 | | 1 | 1 |
| 3 | | | 132 KV Kairana-II | 13.5 | - | | 1 | 1 |
| 4 | | | 132 KV Lalukheri | 47 | - | 1 | 1 | 1 |
| 5 | | | 132 KV Jinjhana | 52 | - | 1 | 1 | 1 |
| Total Relief | | | | 164 | 51.5 | 99 | 164 | 164 |

Alternatively HVDC Mundra-Mahendargarh SPS may be shifted to 400 KV Sub-Station Shamli, details of 132 KV feeders from 400 KV Sub-Station Shamli with its Maximum and Average load is as follows :

| S.No. | Name of feeder | Connected Load (MVA) | Maximum Load (MW) | Average Load (MW) |
|-------|--------------------|----------------------|-------------------|-------------------|
| 1 | 132 KV Budhana | 63+40 | 82 | 53 |
| 2 | 132 KV Kharad | 63+40 | 78 | 51 |
| 3 | 132 KV Jalalpur | 40+40 | 41 | 27 |
| 4 | 132 KV Thanabhawan | 63+63+40 | 74 | 48 |
| 5 | 132 KV Kaniyan | 40+40 | 35 | 23 |
| Total | | | 310 | 202 |

2. Following Case wise Trippings of 132 KV Feeders at 400 KV Sub-Station, Shamli for tripping of HVDC Mundra-Mahendargarh Line is hereby recommended

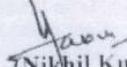
(A). In Maximum Load Condition :-

| S. No. | State.L.S quantum | Name of feeding substation | Feeder/line/ equipment | MW | Case-1 50 MW | Case-2 100 MW | Case-3 200MW | Case-4 300 MW |
|--------------|--|----------------------------------|------------------------|-----|--------------|---------------|--------------|---------------|
| 1 | Uttar Pradesh Case-1 -50 MW Case-2 -100 MW Case-3 -200 MW Case-4 -300 MW | 400 KV Subsatation, Shamli | 132 KV Budhana | 82 | - | - | 1 | 1 |
| 2 | | | 132 KV Kharad | 78 | - | - | 1 | 1 |
| 3 | | | 132 KV Jalalpur | 41 | 1 | - | 1 | 1 |
| 4 | | | 132 KV Thanabhawan | 74 | - | 1 | - | 1 |
| 5 | | | 132 KV Kaniyan | 35 | 1 | 1 | - | 1 |
| Total Relief | | | | 310 | 76 | 109 | 201 | 310 |

(B). In Average Load Condition :-

| S. No. | State.L.S quantum | Name of feeding substation | Feeder/line/ equipment | MW | Case-1 50 MW | Case-2 100 MW | Case-3 200MW | Case-4 300 MW |
|--------------|--|----------------------------------|------------------------|-----|--------------|---------------|--------------|---------------|
| 1 | Uttar Pradesh Case-1 -50 MW Case-2 -100 MW Case-3 -200 MW Case-4 -300 MW | 400 KV Subsatation, Shamli | 132 KV Budhana | 53 | - | 1 | 1 | 1 |
| 2 | | | 132 KV Kharad | 51 | 1 | 1 | 1 | 1 |
| 3 | | | 132 KV Jalalpur | 27 | - | - | 1 | 1 |
| 4 | | | 132 KV Thanabhawan | 48 | - | - | 1 | 1 |
| 5 | | | 132 KV Kaniyan | 23 | - | - | 1 | 1 |
| Total Relief | | | | 202 | 51 | 104 | 202 | 202 |

Submitted for information and necessary action


(Nikhil Kumar)
Superintending Engineer

संख्या / No.

/E.T.C./MZN/

दिनांक / DATED

Copy forwarded to the following for information and necessary action :

1. Chief Engineer (TW) UPPTCL Meerut.
2. Superintending Engineer, Electricity (T&C) Circle, UPPTCL Meerut.
3. Executive Engineer Electricity Transmission Division, Shamli

(Nikhil Kumar)
Superintending Engineer

कार्यालय
अधीक्षण अभियन्ता
विद्युत परीक्षण एवं परिचालन मण्डल
उ०प्र० पावर ट्रांसमिशन कारपोरेशन लि०
प्रथम तल पारेषण भवन, 130-डी, विक्टोरिया पार्क
मेरठ- 250 003
मोबाइल: 9412749817



OFFICE OF THE
SUPERINTENDING ENGINEER
Electricity Test & Commissioning Circle
U.P. POWER TRANSMISSION CORPORATION LTD.
1st Floor Pareshan Bhawan, 130-D, Victoria Park,
Meerut 250 003
Mobile: 9412749817

No. 82 / ETCC-MT /

Dated- 30/05/24

Sub :- SPS related to HVDC Mundra-Mahendargarh.

Superintending Engineer (R&A)
UPSLDC Vibhuti Khand,
Gomti Nagar,
Lucknow.

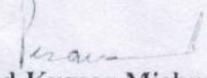
(By e-mail)

In reference to the above cited subject, UPSLDC via email on 22.05.2024 informed that on 17.05.2024 at 16:20 hrs, Case-3 of SPS related to HVDC Mundra - Mahendargarh operated. As per action in case-3 operation of this line SPS, 200MW load relief at 220kV Shamli (UP) is desired. However, no load relief at 220kV Shamli was observed at given date and time. It is to bring in your notice that due to commissioning of 400kV Shamli S/s entire power flow scenario has been changed. Current situation is summarized as below.

| At 220kV Shamli S/s feeders shown in the list | Planned load relief (MW) | Current situation |
|---|--------------------------|--|
| Thana Bhawan -1 | 25 | The only line cateting Thana Bhawan has been made LILO at 132kV Jalalpur. Now Jalalpur is fed from 220kV Shamli S/s while load of Thana Bhawan is fed from 400kV Shamli S/s. |
| Thana Bhawan -2 | 25 | |
| Jasala-1 | 25 | Only one line exists. |
| Jasala-2 | 25 | |
| Kharad-1 | 50 | Only one line exists which is normally kept open at Kharad and load of Kharad is normally fed from 400kV Shamli S/s. |
| Kharad-2 | 50 | |
| Baraut-1 | 150 (case-4) | No such line exist at 220kV Shamli S/s. |
| Baraut-2 | 150 (case-4) | |

In view of the above facts, entire load relief strategy needs to be reviewed and redesigned for SPS. On 17.05.2024 at 16:20 hrs, no tripping observed at 220kV S/S Shamli as SPS system is unhealthy, which is being maintained by M/s PGCIL.

Hence it is requested to you to kindly coordinate with M/s PGCIL for modification of the scheme and rectification of the fault in SPS.

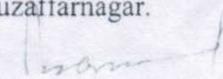

(Pramod Kumar Mishra)
Superintending Engineer

No. 82 / ETCC-MT /

Dated/- 30/05/24

Copy forwarded to the following for information & necessary action:-

1. Chief Engineer (TW), UPPTCL Victoria Park, Meerut.
2. Executive Engineer, Electricity Test & Commissioning Div., Muzaffarnagar.


(Pramod Kumar Mishra)
Superintending Engineer

SK/SENew/NewEngL.letter01

Rajasthan Details

Revised updated feeder details (radial) along with expected average Load Relief

| S.No. | Name of Sub- Station | Feeder name as per existing detail | Revised name of Existing Feeder /Line/Equipment | Average Load relief (MW) | Remark |
|-------|----------------------|------------------------------------|---|---------------------------|------------------------------------|
| 1 | 220 kV GSS Alwar | 132 kV GSS Mundawar | 132 kV GSS Pinan | 25 | |
| | | 132 kv GSS Bansoor | 132 kV GSS Telco | 45 | |
| | | 132 kV GSS Ramgarh | 132 kV GSS Ramgarh | 65 | |
| | | 132 kV GSS Malakhera | 132 kV GSS Malakhera | 50 | |
| | | 132 kV Alwar (LOCAL) | 132 kV GSS Alwar (LOCAL) | 120 | |
| 2 | 220 kV GSS Ratangarh | 132 kV Sardar Sher | | | Generally Feed from 220 kV Halasar |
| 3 | 220 kV GSSV Bhilwara | 132 kV GSS Gangapur | 132 kv GSS Karoi | 15 | |
| | | 132 kV GSS Danta | 132 kV GSS Danta | 30 | |
| | | 132 kV GSS Devgarh | 132 kV GSS Bankali | 18 | |
| | | 132 kV GSS Kareda | | | |
| 4 | 400 kV GSS Merta | 132 kV GSS Kuchera | 132 kV GSS Dhawa | 25 | |
| | | 132 kV GSS Lamba | 132 kV GSS Lamba jatan | 55 | |
| | | 132 kV GSS Gotan | | | |

Email**Control Room CONTROL ROOM SLDC**

Re: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

From : Executive Engineer TS Rewari
<xentsrwr@hvpn.org.in>

Thu, Aug 29, 2024 01:20 PM

Subject : Re: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.**To :** Control Room CONTROL ROOM SLDC
<controlroomsldc@hvpn.org.in>**Cc :** SE TS GGN <setsggn@hvpn.org.in>, Executive Engineer Executive Engineer
<xen400kvdhanoda@hvpn.org.in>, Substation Engineer <sse220kvlulaahir@hvpn.org.in>

In continuation of trailing email and discussion held today telephonically, it is gathered that desired load relief shall not get as load of 220 kV Lula Ahir shall be fed through 220 kV Dadri-Lula Ahir line being synchronized. Therefore, it is proposed that in the existing scheme SPS, the tripping of 220 kV D/C Lula Ahir line at 400 kV Dhanonda end may be removed and tripping of all incomers (2 no. 132 kV Incomers of 100 MVA 220/132 kV TFs and one no. 33 kV incomer of 100 MVA 220/33 kV TF) at 220 kV Lula Ahir substation may be added.

The maximum load (for FY 2023-24) on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 53.46 MVA, 86.26 MVA and 87.02 MVA

The average load on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 50 MVA, 70 MVA and 70 MVA

From: "Executive Engineer TS Rewari" <xentsrwr@hvpn.org.in>**To:** "Control Room CONTROL ROOM SLDC" <controlroomsldc@hvpn.org.in>**Cc:** "SE TS GGN" <setsggn@hvpn.org.in>, "Executive Engineer Executive Engineer" <xen400kvdhanoda@hvpn.org.in>, "Substation Engineer" <sse220kvnarnaul@hvpn.org.in>**Sent:** Wednesday, August 28, 2024 12:46:13 PM**Subject:** Re: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

In reference of trailing email it is submitted that 220 kV Lula Ahir is connected with 400 kV Dhanonda through 220kV D/C line and with 220 kV Dadri through 220kV S/C line and with 220 kV Rewari with 220kV S/C line.

In general circuits of 400 kV Dhanonda and 220 kV Dadri runs in synchronization. The maximum load (for FY 2023-24) on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 53.46 MVA, 86.26 MVA and 87.02 MVA. It is further added that in general 220 kV Dadri takes load from 220 kV Lula Ahir substation and thus act as sink.

In case of operation of SPS at 400 kV Dhanonda, the desired load relief as mentioned in trailing email (90+95 MW) can be achieved through existing scheme (by outage of three no. 100 MVA TFs and 220 kV Dadri (acting as sink)).

Regards
XEN/TS Division
HVPNL Rewari.

From: "Control Room CONTROL ROOM SLDC" <controlroomsldc@hvpn.org.in>
To: "Executive Engineer TS Rewari" <xentsrwr@hvpn.org.in>, "Executive Engineer TS Rohtak" <xentsrtk@hvpn.org.in>, "Executive Engineer Ts Bhiwani" <xentsbhw@hvpn.org.in>, "Executive Engineer Executive Engineer" <xen400kvdhanoda@hvpn.org.in>, xendhanonda@gmail.com
Cc: "Chief Engineer SO Commercial" <cesocomml@hvpn.org.in>, "Chief Engineer TS Panchkula" <etspkl@hvpn.org.in>, "Chief Engineer TS Hisar" <etsshr@hvpn.org.in>, "Superintending Engineer SLDC OP" <sesldcop@hvpn.org.in>, "SE TS Rohtak" <setsrtk@hvpn.org.in>, "SE TS GGN" <setsrgn@hvpn.org.in>, "Superintending Engineer TS Hisar" <etsshr@hvpn.org.in>, "Superintending Engineer MP CC Dhulkote" <sempccdk@hvpn.org.in>, "Superintending Engineer MP CC Delhi" <sempccdelhi@hvpn.org.in>, "Executive Engineer MP Rohtak" <xenmpccrtk@hvpn.org.in>, "XEN MP Hisar" <xenmpccshr@hvpn.org.in>, "XEN MP CC" <xenmpccggn@hvpn.org.in>
Sent: Wednesday, August 21, 2024 11:57:59 AM
Subject: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

Sir,

Please see the attachments.

--

Regards,
SCE (पाली प्रभारी अभियंता)/SLDC Control room,
HVPNL Panipat
Contact No- 9053090722,9053090721,0180-2664095

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Fwd: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

[Control Room CONTROL ROOM SLDC <controlroomsldc@hvpn.org.in>](mailto:controlroomsldc@hvpn.org.in)

Fri 8/30/2024 12:44 PM

To: NRLDC SO 2 <nrlldso2@grid-india.in>; NRLDC SO-II <nrlldso2@gmail.com>; Deepak Kumar <deepak.kr@grid-india.in>;

Cc: Superintending Engineer SLDC OP <sesldcop@hvpn.org.in>;

 2 attachments (209 KB)

Email SPS Rewari.pdf; Regarding SPS Bhiwani.pdf;

****Warning****

This email has not originated from Grid-India. Do not click on attachment or links unless sender is reliable. Malware/ Viruses can be easily transmitted via email.

Sir,

In reference to the SPS installed for 500kV HVDC Munda - Mahindergarh link the information received from TS wing (copy attached) is as under:

1. At 400kV Dhanonda through Lula Ahir substation:- It is proposed that in the existing scheme SPS, the tripping of 220 kV D/C Lula Ahir line at 400 kV Dhanonda end may be removed and tripping of all incomers (2 no. 132 kV Incomers of 100 MVA 220/132 kV TFs and one no. 33 kV incomer of 100 MVA 220/33 kV TF) at 220 kV Lula Ahir substation may be added. The maximum load (for FY 2023-24) on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 53.46 MVA, 86.26 MVA and 87.02 MVA. The average load on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 50 MVA, 70 MVA and 70 MVA.

2. At 400/220kV Bhiwani BBMB: It is proposed that in the existing scheme SPS, the tripping of 220 kV Bapora (Bhiwani HVPNL) D/C line at Bhiwani BBMB end may be removed and tripping of all incomers (2 no. 132 kV Incomers of 100 MVA 220/132 kV T-1 & T-2 TFs) at 220 kV Bapora (Bhiwani HVPNL) substation may be added. The maximum load on two no. 100 MVA TFs installed at 220kV Bhiwani HVPNL is 80 MW and 85 MW respectively. The average load on two no. 100 MVA TFs installed at 220kV Bhiwani HVPNL is 70 MW and 70 MW respectively.

3. At 132kV Charkhi Dadri: It is proposed that in the existing scheme SPS, the tripping of 132kV Kalanaur line at Dadri BBMB end may be removed and tripping of 132kV Haluwas & 132kV Dadri old at Dadri BBMB may be added. The maximum load on 132kV Haluwas & 132kV Dadri old line is 45 MW and 50 MW respectively. The average load on 132kV Haluwas & 132kV Dadri old line is 40 MW and 40 MW respectively.

Rest information kept unchanged. It is also added here that the fiber connectivity is also available on all the above substations.

It is also pertinent to mention here that 700 MW load relief is expected from Haryana. Rest of the states have been allotted with a relative less amount of relief as compared to Haryana for 500kV HVDC Mundra - Mahendargarh link. The Haryana share from APL Mundra has also been reduced now. In view of the above, the expected load relief from the NR states is required to be reviewed accordingly. The same was also pointed out by this office during the online meeting held on dated 20.08.2024.

This is for information & further necessary action please.

From: "Executive Engineer TS Rewari" <xentsrwr@hvpn.org.in>

To: "Control Room CONTROL ROOM SLDC" <controlroomsldc@hvpn.org.in>

Cc: "SE TS GGN" <setsggn@hvpn.org.in>, "Executive Engineer Executive Engineer" <xen400kvadhanoda@hvpn.org.in>, "Substation Engineer" <sse220kvlulaahir@hvpn.org.in>

Sent: Thursday, August 29, 2024 1:20:08 PM

Subject: Re: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

In continuation of trailing email and discussion held today telephonically, it is gathered that desired load relief shall not get as load of 220 kV Lula Ahir shall be fed through 220 kV Dadri-Lula Ahir line being synchronized. Therefore, it is proposed that in the existing scheme SPS, the tripping of 220 kV D/C Lula Ahir line at 400 kV Dhanonda end may be removed and tripping of all incomers (2 no. 132 kV Incomers of 100 MVA 220/132 kV TFs and one no. 33 kV incomer of 100 MVA 220/33 kV TF) at 220 kV Lula Ahir substation may be added.

8/30/24, 3:08 PM

Mail - deepak.kr@grid-india.in

The maximum load (for FY 2023-24) on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 53.46 MVA, 86.26 MVA and 87.02 MVA

The average load on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 50 MVA, 70 MVA and 70 MVA

From: "Executive Engineer TS Rewari" <xentsrwr@hvpn.org.in>
To: "Control Room CONTROL ROOM SLDC" <controlroomsldc@hvpn.org.in>
Cc: "SE TS GGN" <setsggn@hvpn.org.in>, "Executive Engineer Executive Engineer" <xen400kvdhanoda@hvpn.org.in>, "Substation Engineer" <sse220kvnarnaul@hvpn.org.in>
Sent: Wednesday, August 28, 2024 12:46:13 PM
Subject: Re: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

In reference of trailing email it is submitted that 220 kV Lula Ahir is connected with 400 kV Dhanonda through 220kV D/C line and with 220 kV Dadri through 220kV S/C line and with 220 kV Rewari with 220kV S/C line.

In general circuits of 400 kV Dhanonda and 220 kV Dadri runs in synchronization. The maximum load (for FY 2023-24) on three no. 100 MVA TFs installed at 220 kV Lula Ahir is 53.46 MVA, 86.26 MVA and 87.02 MVA. It is further added that in general 220 kV Dadri takes load from 220 kV Lula Ahir substation and thus act as sink.

In case of operation of SPS at 400 kV Dhanonda, the desired load relief as mentioned in trailing email (90+95 MW) can be achieved through existing scheme (by outage of three no. 100 MVA TFs and 220 kV Dadri (acting as sink)).

Regards
XEN/TS Division
HVPNL Rewari.

From: "Control Room CONTROL ROOM SLDC" <controlroomsldc@hvpn.org.in>
To: "Executive Engineer TS Rewari" <xentsrwr@hvpn.org.in>, "Executive Engineer TS Rohtak" <xentsrtk@hvpn.org.in>, "Executive Engineer Ts Bhiwani" <xentsbhw@hvpn.org.in>, "Executive Engineer Executive Engineer" <xen400kvdhanoda@hvpn.org.in>, xendhanonda@gmail.com
Cc: "Chief Engineer SO Commercial" <cesocomml@hvpn.org.in>, "Chief Engineer TS Panchkula" <cetspkl@hvpn.org.in>, "Chief Engineer TS Hisar" <cetshsr@hvpn.org.in>, "Superintending Engineer SLDC OP" <sesldcop@hvpn.org.in>, "SE TS Rohtak" <setsrtk@hvpn.org.in>, "SE TS GGN" <setsggn@hvpn.org.in>, "Superintending Engineer TS Hisar" <setshsr@hvpn.org.in>, "Superintending Engineer MP CC Dhulkote" <sempccdk@hvpn.org.in>, "Superintending Engineer MP CC Delhi" <sempccdelhi@hvpn.org.in>, "Executive Engineer MP Rohtak" <xenmpccrtk@hvpn.org.in>, "XEN MP Hisar" <xenmpccshr@hvpn.org.in>, "XEN MP CC" <xenmpccggn@hvpn.org.in>
Sent: Wednesday, August 21, 2024 11:57:59 AM
Subject: Review of SPS installed for 500kV HVDC Mundra - Mahindergarh.

Sir,

Please see the attachments.

--
Regards,
SCE (पाली प्रभारी अभियंता)/SLDC Control room,
HVPNL Panipat
Contact No- 9053090722,9053090721,0180-2664095

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Regards,
SCE (पाली प्रभारी अभियंता)/SLDC Control room,
HVPNL Panipat
Contact No- 9053090722,9053090721,0180-2664095

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HARYANA VIDYUT PRASARAN NIGAM LIMITED

Regd. Office: Shakti Bhawan, Plot No. C-4, Sector-6, Panchkula, 134109.

Corporate Identity Number: U40101HR1997SGC033683

Website: www.hvsn.org.in, E-mail - xentsbhw@hvsn.org.in

Phone No: 01664-242797(O)

To

The Executive Engineer,
LDPC, HVPNL,
Panipat.

Memo No.Ch-116/OMBE-7

Dated: 29.08.2024

Subject: SPS scheme at HVPNL substations for getting load relief due to tripping of 500Kv HVDC Mundra – Mahendargarh

Please refer to this O/Memo No. 108/OMBE-7 dated 27.08.2024 and O/Email dated 09.08.2024 on the subject cited matter.

In this continuation to above, the details of SPS under TS division, HVPNL, Bhiwani is as under:

| S No. | Name of feeding S/Stn | Feeder/Line/Equipment | SPS Installed | Max. Load | Load Relief (Avg Load) | Remarks |
|-------|--------------------------|--|---------------|-----------|------------------------|--|
| 1 | 220KV S/Stn Bhiwani | 132KV IA Bhiwani Line | UFR | 50MW | 40 MW | SPS (UFR)Installed and healthy |
| 2 | 220KV S/Stn Bhiwani | 132KV Bhiwani Ckt 2 | UFR | 50MW | 40 MW | SPS (UFR)Installed and healthy |
| 3 | 220KV S/Stn Bhiwani | 132KV Tosham | UFR | - | - | SPS (UFR) Installed and healthy but line is running on No load as 2 nd source to 132KV Tosham |
| 4 | 220KV S/Stn Bhiwani | 132KV Incomer of Transformer 100MVA Transformer T2 | - | 85MW | 70 MW | SPS may be provided for load relief as mentioned on subject above. |
| 5 | 220KV S/Stn Bhiwani | 132KV Incomer of 100MVA Transformer T1 | - | 80MW | 70 MW | SPS may be provided for load relief as mentioned on subject above. |
| 6 | 132kv substation Dadri-2 | 132kv Dadri-kalanaur ckt | Yes | | Nil | SPS Installed and healthy but line is running on No load as 2 nd source to 132KV Kalanaur |
| 7 | 132kv substation Dadri-2 | 132kv Dadri-Makrani ckt | Yes | | Nil | SPS Installed and healthy but line is running on No load as 2 nd source to 132KV Makrani |
| 8 | 132kv substation Dadri-2 | 132kv Dadri-Haluwas ckt | - | 45MW | 40MW | SPS may be provided for load relief as mentioned on subject above. |
| 9 | 132kv substation Dadri-2 | 132kv Dadri-Dadri old | - | 50MW | 40MW | SPS may be provided for load relief as mentioned on subject above. |

This is for kind information and necessary action please.


Executive Engineer,
Transmission System Division,
HVPNL, Bhiwani

CC to:

1. SE/TS Circle, HVPNL, Hisar for kind information, please.

Re: Mock testing of SPS of 500kV HVDC Mundra-Mahindergarh link

SLDC, DELHI <sldcmintoroad@gmail.com>

Wed 8/28/2024 3:48 PM

To:NRLDC SO 2 <nrlDCso2@grid-india.in>;

Cc:sinha.surendra <sinha.surendra@yahoo.com>; dgmsodelhisldc@gmail.com <dgmsodelhisldc@gmail.com>; Manager (T) SO <managersogd@gmail.com>;

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In reference to trailing mail, the maximum load on 220kV feeders covered under SPS of 500kV HVDC Mundra-Mahindergarh link are as under:

| S. No. | Name of the Element | MW |
|--------|-------------------------------------|-----|
| 1 | 220 KV BAMNAULI-PAPANKALAN-I CKT-I | 120 |
| 2 | 220 KV BAMNAULI-PAPANKALAN-I CKT-II | 120 |
| 3 | 220 KV MANDAULA- GOPALPUR CKT-I | 212 |
| 4 | 220 KV MANDAULA- GOPALPUR CKT-II | 214 |

Regards,
SLDC Delhi

On Tue, Aug 27, 2024 at 10:07 AM NRLDC SO 2 <nrlDCso2@grid-india.in> wrote:

Sir,

In reference of the trailing mail, it is to be mentioned that inputs have received from Rajasthan only. Members agreed to shared the details by 22nd August 2024, however no further details received from Haryana, Punjab, Delhi, UP & ADANI.

Kindly share the details as discussed during the meeting held on 20th August 2024, so that further remedial actions can be initiated on the basis of those details.

सादर धन्यवाद/ Thanks & Regards
प्रणाली संचालन-II/ System Operation-II
उ०क्षे०भा०प्रे०के०/ NRLDC
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as
पोसोको / POSOCO

Punjab Details

| | Name of S/S | 66kV Feeders | Average Demand(Amp.) | Maximum Demand(Amp.) |
|------------------------|-----------------------|-----------------------------|----------------------|----------------------|
| | | | | |
| Punjab Control Area | 220/66kV Gobindgarh | 66kV Talwara-19(ADANI SPS) | 375 | 430 |
| | | 66kV Talwara-2(ADANI SPS) | 375 | 430 |
| | 220/66kV Lalton kalan | 66kV Gill road-1(DADRI SPS) | 543 | 610 |
| | | 66kV Gill Road-2(DADRI SPS) | 518 | 692 |
| | | 66kV Dugri(DADRI SPS) | 325 | 450 |
| | 220/66kV Malerkotla | 66kV Malerkotla(ADANI SPS) | 213 | 403 |
| | | 66kV Amargarh(ADANI SPS) | 238 | 405 |
| | | 66kV Malaud ckt 1(DTPC SPS) | 257 | 356 |

Note: 66kV Malaud at 220kV S/S Malerkotla was bifurcated into two circuits in the month of July 2024.

Nodal officers details

| Control Area | Station Name | Nodal Person (SPS, communication system) | Contact details | Email Id |
|--------------|---------------------------|--|--------------------------|--|
| Rajasthan | 220/132kV Alwar | Sh. Vijaypal Yadav XEN (Prot.) Ms. Pooja Verma AEN (Comm) | 9413361407 9413375366 | xen.prot.alwar@rvpn.co.in aen.comm.alwar@rvpn.co.in |
| | 220/132kV Ratangarh | Sh. Mukesh Somra AEN (MPT&S) , Sh. Dharmender Singh (Comm.) | 9414061442 9413383246 | aen.mpt&s.rtg@rvpn.co.in aen.comm.ratangarh@rvpn.co.in |
| | 220/132kV Bhitwara | Sh. Madhusudan Sharma, AEN (SLDC-comm) Sh. Suresh Garg, XEN (MPT&S) | 9413383176 9414061424 | aen.subsldc.bhl@rvpn.co.in xen.mpts.bhl@rvpn.co.in |
| | 220/132kV Merta | Mukesh Kumar (AEN Prot.) Mahip Singh (Aen) Comm) | 7734806466 9413362995 | aen.prot.mertacity@RVPN.CO.IN aen.comm.merta@RVPN.CO.IN |
| BBMB | 400/220kV Bhiwani(BBMB) | | | |
| POWERGRID | 400/220kV Hissar(PG) | | | |
| | Bhiwani(PG) | | | |
| | 400/220kV Bahadurgarh(PG) | | | |
| Haryana | 400/220kV Dhanonda | Gautam / SSE, 400kV Dhanonda | 9313472669 | dhanonda400kv@gmail.com |
| | 220kV Lulahir | Er. Subhash Chander | 9416373135 | sse220kvlulaahir@hvpn.org.in |
| | 220kV Rewari | Er. Kavinder Yadav | 9315315649 | sse220kvrwr@hvpn.org.in |
| | 132kV Charkhi Dadri | Vivek Sangwan | 9034459489 | sse132kvdadri@hvpn.org.in |
| Punjab | 220/66kV Gobindgarh | Er. Harwinder Singh | 96461-18184 | ae-220kvg1-mgg@pstcl.org |
| | 220/66kV Lattokalan | Er. Supinder Singh | 96461-24495 | sse-pm-lalton@pstcl.org |
| | 220/66kV Materkotla | Er. Sanju Bala | 96461-64007 | sse-pm-mlrk@pstcl.org |
| UP | Shamli | Er. Krishna Nand | 9412756631 | eeetdshamli@upptcl.org |
| | 400kV Muradnagar | Er. D.S. Sengar | 9412748666 | ee400mrd2@upptcl.org |
| Delhi | 400/220kV Bamnauli | | | |
| | 400/220kV Mandola | | | |

4/11/25, 5:59 PM

Mail - deepak.kr@grid-india.in

ULDC network for SPS Mundra-Mohindergarh 500kV HVDC

Sumeet Sharma <Sumeet.Sharma@adani.com>

Thu 4/10/2025 5:42 PM

To: nkmeena@powergrid.in <nkmeena@powergrid.in>;

Cc: Deepak Kumar <deepak.kr@grid-india.in>; seo-nrpc <seo-nrpc@nic.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Somara Lakra (सोमारा लकरा) <somara.lakra@grid-india.in>; Afak Pothiwala <afak.pothiwala@adani.com>; Nihar Raj <niharraj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishek.Singh@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Naman Vyas <Naman.Vyas@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>;

1 attachments (323 KB)

20250408 ULDC discussion.pdf;

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Dear Meena ji,

Kindly accept my sincere thanks for the courtesy extended during our meeting on 08-Apr-25 with regards to the subject requirements.

I also express my thanks on the confirmation from your end with regards to availability of the 'E1' links between Mohindergarh and respective locations where the SPS commands are being extended. Kindly find attached the list discussed and agreed, for our reference.

Looking forward to your continued support and cooperation during the execution of this activity.

Regards,

Sumeet Sharma

Head- Automation, Communications & OT-Cyber Technology
Adani Energy Solutions Limited.(Grid Division)

Mob +91 90990 05648 | sumeet.sharma@adani.com | www.adani.com

KP Epitome|10th Floor South Wing | SG Highway |Ahmedabad-382421| Gujarat

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SPS Protection scheme for Mohindergarh-Mundra HVDC Transmission System

| Sr. No. | Load Station | Equipment Make | Tripping command Station | Equipment Make | Remarks | Comments |
|---------|--------------|----------------|--------------------------|----------------|--|--------------------------------------|
| 1 | Mohindergarh | Tejas | Bhiwani BBMB | Tejas | | |
| 2 | Mohindergarh | Tejas | Hissar PG | Tejas | | |
| 3 | Mohindergarh | Tejas | Bahadurgarh- PG | Tejas | | |
| 4 | Mohindergarh | Tejas | HVPNL Charvi Dadri | Fibrehome | HVPNL Network | Inter-Patching at nearest Tejas Site |
| 5 | Mohindergarh | Tejas | Gobindgarh PSTCL | Fibrehome | PSTCL Network | Inter-Patching at nearest Tejas Site |
| 6 | Mohindergarh | Tejas | Lalokalan PSTCL | Fibrehome | PSTCL Network | Inter-Patching at nearest Tejas Site |
| 7 | Mohindergarh | Tejas | Malerkotla PSTCL | Fibrehome | PSTCL Network | Inter-Patching at nearest Tejas Site |
| 8 | Mohindergarh | Tejas | Alwar | Tejas | | |
| 9 | Mohindergarh | Tejas | Ratangarh | Fibrehome | New Tejas equipment is being installed within 3 months | |
| 10 | Mohindergarh | Tejas | Bhiwada | Tejas | | |
| 11 | Mohindergarh | Tejas | Merta City | Fibrehome | New Tejas equipment is being installed within 3 months | |
| 12 | Mohindergarh | Tejas | Samli - UPPTCL | Fibrehome | UPPTCL Network | Inter-Patching at nearest Tejas Site |
| 13 | Mohindergarh | Tejas | Bannauli | Tejas | | |
| 14 | Mohindergarh | Tejas | Mondola PG | Tejas | | |

Ref No. : ATIL_NRPC_SPS-NR_20250410_1

10-Apr-25

To,
The Deputy General Manager (Grid-Operations)
Northern Region Load Dispatch Center
18-A, Shaheed Jeet Singh Marg
Katwaria Sarai
New Delhi, 110016

Ref: Your letter # NRLDC/TS-15, dated 02-Apr-25

Subject: Corrective action for healthiness of +/- 500kV HVDC Mundra-Mohindergarh SPS

Sir,

We acknowledge the receipt of your letter mentioned in the reference above with regards to ensuring the healthiness of the SPS scheme implemented in 2012 during commissioning of the subject HVDC link.

It is to be noted that the systems and components installed at the commissioning time have lived their life and are now declared obsolete by the partner who has commissioned this system. Also the ULDC network which had been used to provide the E1 communication for the DTPCs to execute the commands and provide the required relief, has also undergone changes impacting the communication between the DTPCs. We are in discussion with ULDC for allocation of necessary links between the locations.

In order to make the scheme operational again in full, we had ordered a survey of the scheme by the original systems provider who have reverted with their observations and recommendations for upgrading the systems by the latest one. This upgrade requires activities from basics i.e. Designing, Manufacturing, Testing, transporting, installation, configuration and final field testing. We have initiated the internal approval for placing necessary orders to the partner for execution under RTM. We expect that complete execution of this activity in totality shall take 4-5 months in collaboration with all the stake holders from respective utilities and ULDC team.

We assure you of our best efforts towards comprehensive and timely completion of this scheme at the earliest and seek your guidance and support for necessary coordination between the respective stake holders during this process.

Regards


Sumeet Sharma
Head Automation, Communication and OT-Cyber
Adani Transmission (India) Ltd.

Adani Transmission (India) Ltd
Adani Corporate House
Adani Shantigram, S.G Highway
Ahmedabad 382421
CIN: U40101GJ2013PLC077700

Tel +91 79 2555 6900
Fax +91 79 2555 7155
info@adani.com
www.adani.com

RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Sumeet Sharma <Sumeet.Sharma@adani.com>

Wed 7/30/2025 6:54 PM

To: NRLDC SO 2 <nrldcso2@grid-india.in>;

Cc: NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; S Usha (एस उषा) <susha@grid-india.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in <m.alwar@rvpn.co.in>; aen.mpt&s.rtg@rvpn.co.in <aen.mpt&s.rtg@rvpn.co.in>; aen.comm.ratangarh@rvpn.co.in <aen.comm.ratangarh@rvpn.co.in>; aen.subslcd.bhl@rvpn.co.in <aen.subslcd.bhl@rvpn.co.in>; xen.mpts.bhl@rvpn.co.in <xen.mpts.bhl@rvpn.co.in>; aen.prot.mertacity@RVPN.CO.IN <aen.prot.mertacity@RVPN.CO.IN>; aen.comm.merta@RVPN.CO.IN <aen.comm.merta@RVPN.CO.IN>; nainwal@powergrid.in <nainwal@powergrid.in>; vinaykumargupta@powergrid.in <vinaykumargupta@powergrid.in>; ravindra_kumar@powergrid.in <ravindra_kumar@powergrid.in>; smahajan1999@powergrid.in <smahajan1999@powergrid.in>; rkagrwal83@powergrid.in <rkagrwal83@powergrid.in>; dharmendrameena@powergrid.in <dharmendrameena@powergrid.in>; vineet@powergrid.in <vineet@powergrid.in>; bhakalramjash@powergrid.in <bhakalramjash@powergrid.in>; dhanonda400kv@gmail.com <dhanonda400kv@gmail.com>; sse220kvlulaahir@hvpn.org.in <sse220kvlulaahir@hvpn.org.in>; sse220kvrwr@hvpn.org.in <sse220kvrwr@hvpn.org.in>; sse132kvdadri@hvpn.org.in <sse132kvdadri@hvpn.org.in>; ae-220kvg1-mgg@pstcl.org <ae-220kvg1-mgg@pstcl.org>; sse-pm-lalton@pstcl.org <sse-pm-lalton@pstcl.org>; sse-pm-mlrk@pstcl.org <sse-pm-mlrk@pstcl.org>; eeetdshamli@upptcl.org <eeetdshamli@upptcl.org>; ee400mrd2@upptcl.org <ee400mrd2@upptcl.org>; aeProtection@upslcd.org <aeProtection@upslcd.org>; ase-sldcop@pstcl.org <ase-sldcop@pstcl.org>; bl.gujar@dtl.gov.in <bl.gujar@dtl.gov.in>; ce.ld@rvpn.co.in <ce.ld@rvpn.co.in>; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in <dtldata@yahoo.co.in>; dtlscheduling@gmail.com <dtlscheduling@gmail.com>; eesldccontrol@upslcd.org <eesldccontrol@upslcd.org>; ldrvpnl@rvpn.co.in <ldrvpnl@rvpn.co.in>; ldshutdown@gmail.com <ldshutdown@gmail.com>; ldshutdown@rvpn.co.in <ldshutdown@rvpn.co.in>; paritosh.joshi@dtl.gov.in <paritosh.joshi@dtl.gov.in>; pccont@bbmb.nic.in <pccont@bbmb.nic.in>; pc-sldcop@pstcl.org <pc-sldcop@pstcl.org>; rajbir-walia79@yahoo.com <rajbir-walia79@yahoo.com>; rtamc.nr1@powergrid.in <rtamc.nr1@powergrid.in>; pankaj.jha@powergrid.in <pankaj.jha@powergrid.in>; neerajk@powergrid.in <neerajk@powergrid.in>; se.mpts.uds@rvpn.co.in <se.mpts.uds@rvpn.co.in>; se.prot.engg@rvpn.co.in <se.prot.engg@rvpn.co.in>; se.sold@rvpn.co.in <se.sold@rvpn.co.in>; sera@upslcd.org <sera@upslcd.org>; sesc@upslcd.org <sesc@upslcd.org>; sesldcop@hvpn.org <sesldcop@hvpn.org>; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org <setncmrt@upptcl.org>; sldcdata@gmail.com <sldcdata@gmail.com>; sldcharyanacr@gmail.com <sldcharyanacr@gmail.com>; sldcmintoroad@gmail.com <sldcmintoroad@gmail.com>; system.uppl@gmail.com <system.uppl@gmail.com>; xenemtcbbpp2@bbmb.nic.in <xenemtcbbpp2@bbmb.nic.in>; xenmpccggn@hvpn.org <xenmpccggn@hvpn.org>; xenplgss@hvpn.org <xenplgss@hvpn.org>; nrlcd_hods_tech <nrlcd_hods_tech@grid-india.in>; Rahul Shukla (राहुल शुक्ला) <rahulshukla@grid-india.in>;

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Dear Sir,

I hope this message finds you well. I'm writing to provide you with an update on the actions for the healthiness of the 500kV Mundra-Mahindergarh SPS.

We are pleased to inform you that the order has been placed with our partner for the procurement and development of the scheme on new devices. Here is the timeline for the upcoming broader steps which has evolved based on discussions held with them-

a) The system is expected to be ready by the partner and complete the Factory Acceptance Test (FAT) by 15th September 2025.

- b) Following the FAT, the material will be shipped to various sites and installed by 30th October 2025. We seek your support for necessary directions to concerned constituents to ensure the material is kept in a safe and secure area till commissioning at original location.
- c) Implementation of the communication channel with the assistance of ULDC is also scheduled for completion parallelly by 30th October 2025.
- d) Testing of the installation and wiring will be carried out by 15th November 2025. The same shall require support from respective site representatives.
- e) Testing of the communication link between Mahindergarh and other locations is planned for completion by 30th November 2025.
- f) Finally, the testing of the SPS scheme is expected to be completed by 31st December 2025.

We understand the importance of this project and will do our utmost to expedite the process to the maximum extent possible and shall seek your guidance and support for necessary alignment of efforts required with respective stake holders and facilitators.

Thank you for your attention and understanding.

Regards,

Sumeet Sharma

Head- Automation, Communications & OT-Cyber Technology

Adani Energy Solutions Limited.(Grid Division)

Mob +91 90990 05648 | sumeet.sharma@adani.com | www.adani.com

KP Epitome|10th Floor South Wing | SG Highway |Ahmedabad-382421| Gujarat

From: NRLDC SO 2 <nrlcdcso2@grid-india.in>

Sent: Thursday, July 24, 2025 11:16 AM

To: Sumeet Sharma <Sumeet.Sharma@adani.com>

Cc: NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; susha <susha@grid-india.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvluhaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvq1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeoprotection@upsldc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upsldc.org; ldsvpnl@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upsldc.org; sesc@upsldc.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrldc_hods_tech <nrldc_hods_tech@grid-india.in>; Rahul Shukla (राहुल शुक्ला) <rahulshukla@grid-india.in>

Subject: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

CAUTION: This mail has originated from outside Adani. Please exercise caution with links and attachments.

Sir,

The agenda regarding corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS was discussed in 61st PSC meeting held on 26.06.2025. During the meeting, ADANI representative informed that work order will be released by 1st week of July 2025 to the vendor / OEM and expected timeline for completion of work is by the end of October 2025.

In view of above, it is requested to confirm whether work order to OEM has been placed or not. Further, as discussed in PSC meeting, it is also requested to share the status of actions taken and planned to be taken along with the timeline to NRPC & NRLDC weekly or fortnight basis.

सादर धन्यवाद/ Thanks & Regards
 दीपक कुमार / Deepak Kumar
 प्रणाली संचालन-II/ System Operation-II
 उ०क्ष०भा०प्रे०के०/ NRLDC
 ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
 Formerly known as
 पोसोको / POSOCO



From: Sumeet Sharma <Sumeet.Sharma@adani.com>

Sent: Tuesday, June 24, 2025 3:39 PM

To: NRLDC SO 2

Cc: NARESH BHANDARI; seo-nrpc; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल); S Usha (एस उषा); Sunil Kumar Raval; Namandeep Matta; Kali Charan Sahu; RAVINDRA ATALE; Nihar Raj; Milan Popat; Abhishek Kukreja; Naman Vyas; Abhishek Kumar Singh; Nikhil Singh; Narendra Kumar Ojha; Afak Pothiawala; Mahesh M. Mehendale (महेश एम. मेहंदले); Somara Lakra (सोमारा लाकरा); Mahavir Prasad Singh (महावीर प्रसाद सिंह); Sudipto Sarkar (सुदिप्तो सरकार); Sugata Bhattacharya (सुगाता भट्टाचार्या); Deepak Kumar; aen.com; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upsldc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upsldc.org; ldrvpn@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upsldc.org; sesc@upsldc.org; sesldcop@hvpn.org; se-sldcop; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org;

xenplgss@hvpn.org; nrlcdc_hods_tech

Subject: RE: NRLDC Letter regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS

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Dear Sir,

With reference to the trailing email we would like to inform you that the negotiations and the scope discussions have been completed with the partner and the necessary formalities for processing the order is in progress. We expect the order to be released by 30th-Jun-25. Further in parallel we have also put-up the issue in the 232nd OCC meeting for approval of the scheme on add-cap basis.

We regret the time taken in this process, however will expedite the further process to meet the expectation of putting the scheme back in service.

Regards,

Sumeet Sharma

Head- Automation, Communications & OT-Cyber Technology

Adani Energy Solutions Limited.(Grid Division)

Mob +91 90990 05648 | sumeet.sharma@adani.com | www.adani.com

KP Epitome|10th Floor South Wing | SG Highway | Ahmedabad-382421 | Gujarat

From: NRLDC SO 2 <nrlcdcso2@grid-india.in>

Sent: Wednesday, June 18, 2025 11:43 AM

To: Sumeet Sharma <Sumeet.Sharma@adani.com>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>

Cc: NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; susha <susha@grid-india.in>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sudipto Sarkar (सुदिप्तो सरकार) <ssarkar@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcdc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrwal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhokalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcdc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc@ce-sldc@pstcl.org; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcdc.org; ldrvpn1@rvpn.co.in;

8/5/25, 2:48 PM

Mail - deepak.kr@grid-india.in

ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; [se-sldcop <se-sldcop@pstcl.org>](mailto:se-sldcop@pstcl.org); setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; [nrlcd_hods_tech <nrlcd_hods_tech@grid-india.in>](mailto:nrlcd_hods_tech@grid-india.in)

Subject: Re: NRLDC Letter regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS

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Sir,

In reference of the NRLDC communication dated 02.04.2025 it is requested to provide the present status regarding corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS.

The agenda in this regard is under discussion since 51st PSC meeting held in July 2024. During last PSC meeting (60th PSC meeting held on 26.05.2025), ADANI representative informed that internal approval has been taken for placing the order for corrective actions and order will be released to vendor by end of May 2025. It was also informed that actions have been expedited and SPS of HVDC Mundra-Mahindergarh will be restored by the end of August 2025.

In view of above, it is requested to share the present status of corrective action. As discussed during 60th PSC meeting, weekly update on the corrective actions and action planned may be shared to NRLDC / NRPC so that necessary coordination with state counterpart may also be done for smooth coordination and actions.

सादर धन्यवाद/ Thanks & Regards

दीपक कुमार / Deepak Kumar

प्रणाली संचालन-II/ System Operation-II

उ०क्ष०भा०प्रे०के०/ NRLDC

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as

पोसोको / POSOCO





From: NRLDC SO 2

Sent: Wednesday, April 2, 2025 3:11:51 PM

To: Sumeet.Sharma@adani.com; Sunil Kumar Raval; Namandeep Matta; Kali Charan Sahu; RAVINDRA ATALE; Nihar Raj; Milan Popat; Abhishek Kukreja; Naman Vyas; Abhishek Kumar Singh; Nikhil Singh; Narendra Kumar Ojha; afak.pothiawala@adani.com

Cc: NARESH BHANDARI; seo-nrpsc; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल); S Usha (एस उषा); Mahesh M. Mehendale (महेश एम. मेहंदले); Somara Lakra (सोमारा लाकरा); Mahavir Prasad Singh (महावीर प्रसाद सिंह); Sudipto Sarkar (सुदिप्तो सरकार); Sugata Bhattacharya (सुगाता भट्टाचार्या); Deepak Kumar; aen.com; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhokalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kv1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upsldc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upsldc.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upsldc.org; sesc@upsldc.org; sesldcop@hvpn.org; se-sldcop; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrldc_hods_tech

Subject: NRLDC Letter regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS

Sir,

Please find the attached NRLDC Letter dt 02-04-2025 regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS.

सादर धन्यवाद/ Thanks & Regards

प्रणाली संचालन-II/ System Operation-II

उ०क्षे०भा०प्रे०के०/ NRLDC

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
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Mail - deepak.kr@grid-india.in

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RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Mon 9/15/2025 8:16 PM

Inbox

To: NRLDC SO 2 <nrldcso2@grid-india.in>;

Cc: NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; S Usha (एस उषा) <susha@grid-india.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in <m.alwar@rvpn.co.in>; aen.mpt&s.rtg@rvpn.co.in <aen.mpt&s.rtg@rvpn.co.in>; aen.comm.ratangarh@rvpn.co.in <aen.comm.ratangarh@rvpn.co.in>; aen.subslcd.bhl@rvpn.co.in <aen.subslcd.bhl@rvpn.co.in>; xen.mpts.bhl@rvpn.co.in <xen.mpts.bhl@rvpn.co.in>; aen.prot.mertacity@RVPN.CO.IN <aen.prot.mertacity@RVPN.CO.IN>; aen.comm.merta@RVPN.CO.IN <aen.comm.merta@RVPN.CO.IN>; nainwal@powergrid.in <nainwal@powergrid.in>; vinaykumargupta@powergrid.in <vinaykumargupta@powergrid.in>; ravindra_kumar@powergrid.in <ravindra_kumar@powergrid.in>; smahajan1999@powergrid.in <smahajan1999@powergrid.in>; rkagrawal83@powergrid.in <rkagrawal83@powergrid.in>; dharmendrameena@powergrid.in <dharmendrameena@powergrid.in>; vineet@powergrid.in <vineet@powergrid.in>; bhakalramjash@powergrid.in <bhakalramjash@powergrid.in>; dhanonda400kv@gmail.com <dhanonda400kv@gmail.com>; sse220kvlulaahir@hvpn.org.in <sse220kvlulaahir@hvpn.org.in>; sse220kvrwr@hvpn.org.in <sse220kvrwr@hvpn.org.in>; sse132kvdadri@hvpn.org.in <sse132kvdadri@hvpn.org.in>; ae-220kvg1-mgg@pstcl.org <ae-220kvg1-mgg@pstcl.org>; sse-pm-lalton@pstcl.org <sse-pm-lalton@pstcl.org>; sse-pm-mlrk@pstcl.org <sse-pm-mlrk@pstcl.org>; eeetdshamli@upptcl.org <eeetdshamli@upptcl.org>; ee400mrd2@upptcl.org <ee400mrd2@upptcl.org>; ae-protection@upslcd.org <ae-protection@upslcd.org>; ase-sldcop@pstcl.org <ase-sldcop@pstcl.org>; bl.gujar@dtl.gov.in <bl.gujar@dtl.gov.in>; ce.ld@rvpn.co.in <ce.ld@rvpn.co.in>; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in <dtldata@yahoo.co.in>; dtlscheduling@gmail.com <dtlscheduling@gmail.com>; eesldcontrol@upslcd.org <eesldcontrol@upslcd.org>; ldrvpnl@rvpn.co.in <ldrvpnl@rvpn.co.in>; ldshutdown@gmail.com <ldshutdown@gmail.com>; ldshutdown@rvpn.co.in <ldshutdown@rvpn.co.in>; paritosh.joshi@dtl.gov.in <paritosh.joshi@dtl.gov.in>; pccont@bbmb.nic.in <pccont@bbmb.nic.in>; pc-sldcop@pstcl.org <pc-sldcop@pstcl.org>; rajbir-walia79@yahoo.com <rajbir-walia79@yahoo.com>; rtamc.nr1@powergrid.in <rtamc.nr1@powergrid.in>; pankaj.jha@powergrid.in <pankaj.jha@powergrid.in>; neerajk@powergrid.in <neerajk@powergrid.in>; se.mpts.udr@rvpn.co.in <se.mpts.udr@rvpn.co.in>; se.prot.engg@rvpn.co.in <se.prot.engg@rvpn.co.in>; se.sold@rvpn.co.in <se.sold@rvpn.co.in>; sera@upslcd.org <sera@upslcd.org>; sesc@upslcd.org <sesc@upslcd.org>; sesldcop@hvpn.org <sesldcop@hvpn.org>; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org <setncmrt@upptcl.org>; sldcdata@gmail.com <sldcdata@gmail.com>; sldcharyanacr@gmail.com <sldcharyanacr@gmail.com>; sldcmintoroad@gmail.com <sldcmintoroad@gmail.com>; system.uppl@gmail.com <system.uppl@gmail.com>; xenemtcbhpp2@bbmb.nic.in <xenemtcbhpp2@bbmb.nic.in>; xenmpccggn@hvpn.org <xenmpccggn@hvpn.org>; xenplgss@hvpn.org <xenplgss@hvpn.org>; nrldc_hods_tech <nrldc_hods_tech@grid-india.in>; Rahul Shukla (राहुल शुक्ला) <rahulshukla@grid-india.in>;

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Dear Sir,

Please find the present status as on 15-Sep-25 as below-

- a. Hardware expected to be received by the partner by this week.(20-Sep-25)
- b. FAT expected to be carried out within this month.(31-Sep-25)

The Dispatch and site activities shall be planned based on FAT punch point closures.

Regards

Sumeet Sharma

From: NRLDC SO 2 <nrldcso2@grid-india.in>**Sent:** Wednesday, September 10, 2025 5:00 PM**To:** Sumeet Sharma <Sumeet.Sharma@adani.com>**Cc:** NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; susha <susha@grid-india.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrldc_hods_tech <nrldc_hods_tech@grid-india.in>; Rahul Shukla (राहुल शुक्ला) <rahulshukla@grid-india.in>**Subject:** Re: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS***CAUTION:** This mail has originated from outside Adani. Please exercise caution with links and attachments.*

Sir,

During discussion on agenda "Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS" in 62nd PSC meeting, PSC forum requested ADANI to share the weekly update on status of remedial actions.

Kindly share the update in this regard.

सादर धन्यवाद/ Thanks & Regards
प्रणाली संचालन-II/ System Operation-II
उ०क्ष०भा०प्रे०के०/ NRLDC
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as
पोसोको / POSOCO



From: Sumeet Sharma <Sumeet.Sharma@adani.com>

Sent: Wednesday, July 30, 2025 6:54 PM

To: NRLDC SO 2

Cc: NARESH BHANDARI; seo-nrpc; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल); S Usha (एस उषा); Sunil Kumar Raval; Namandeep Matta; Kali Charan Sahu; RAVINDRA ATALE; Nihar Raj; Milan Popat; Abhishek Kukreja; Naman Vyas; Abhishek Kumar Singh; Nikhil Singh; Narendra Kumar Ojha; Afak Pothiawala; Mahesh M. Mehendale (महेश एम. मेहंदले); Somara Lakra (सोमारा लाकरा); Mahavir Prasad Singh (महावीर प्रसाद सिंह); Sugata Bhattacharya (सुगाता भट्टाचार्या); Deepak Kumar; aen.com; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcd.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldcontrol@upslcd.org; ldrvpn@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrldc_hods_tech; Rahul Shukla (राहुल शुक्ला)

Subject: RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

****Warning****

This email has not originated from Grid-India. Do not click on attachment or links unless sender is reliable.
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Dear Sir,

I hope this message finds you well. I'm writing to provide you with an update on the actions for the healthiness of the 500kV Mundra-Mahindergarh SPS.

We are pleased to inform you that the order has been placed with our partner for the procurement and development of the scheme on new devices. Here is the timeline for the upcoming broader steps which has evolved based on discussions held with them-

- a) The system is expected to be ready by the partner and complete the Factory Acceptance Test (FAT) by 15th September 2025.
- b) Following the FAT, the material will be shipped to various sites and installed by 30th October 2025. We seek your support for necessary directions to concerned constituents to ensure the material is kept in a safe and secure area till commissioning at original location.
- c) Implementation of the communication channel with the assistance of ULDC is also scheduled for completion parallelly by 30th October 2025.
- d) Testing of the installation and wiring will be carried out by 15th November 2025. The same shall require support from respective site representatives.
- e) Testing of the communication link between Mahindergarh and other locations is planned for completion by 30th November 2025.
- f) Finally, the testing of the SPS scheme is expected to be completed by 31st December 2025.

We understand the importance of this project and will do our utmost to expedite the process to the maximum extent possible and shall seek your guidance and support for necessary alignment of efforts required with respective stake holders and facilitators.

Thank you for your attention and understanding.

Regards,

Sumeet Sharma

Head- Automation, Communications & OT-Cyber Technology

Adani Energy Solutions Limited.(Grid Division)

Mob +91 90990 05648 | sumeet.sharma@adani.com | www.adani.com

KP Epitome|10th Floor South Wing | SG Highway |Ahmedabad-382421 | Gujarat

From: NRLDC SO 2 <nrldcso2@grid-india.in>

Sent: Thursday, July 24, 2025 11:16 AM

To: Sumeet Sharma <Sumeet.Sharma@adani.com>

Cc: NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; susha <susha@grid-india.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiwala <afak.pothiwala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcd.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in;

9/17/25, 10:30 AM

Mail - nrlcdcso2@grid-india.in

aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in;
vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in;
rkagrwal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhokalramjash@powergrid.in;
ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in;
ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org;
ee400mrd2@upptcl.org; aeprotection@upslcdc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc@pstcl.org;
dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcdc.org; ldrvpn1@rvpn.co.in;
ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org;
rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in;
se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcdc.org; sesc@upslcdc.org;
sesldcop@hvpn.org; se-sldcop@pstcl.org; setncmrt@upptcl.org; sldcdata@gmail.com;
sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in;
xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrlcdc_hods_tech <nrlcdc_hods_tech@grid-india.in>; Rahul Shukla (राहुल शुक्ला) <rahulshukla@grid-india.in>

Subject: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

***CAUTION:** This mail has originated from outside Adani. Please exercise caution with links and attachments.*

Sir,

The agenda regarding corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS was discussed in 61st PSC meeting held on 26.06.2025. During the meeting, ADANI representative informed that work order will be released by 1st week of July 2025 to the vendor / OEM and expected timeline for completion of work is by the end of October 2025.

In view of above, it is requested to confirm whether work order to OEM has been placed or not. Further, as discussed in PSC meeting, it is also requested to share the status of actions taken and planned to be taken along with the timeline to NRPC & NRLDC weekly or fortnight basis.

सादर धन्यवाद/ Thanks & Regards

दीपक कुमार / Deepak Kumar

प्रणाली संचालन-II/ System Operation-II

उ०क्ष०भा०प्रे०के०/ NRLDC

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as

पोसोको / POSOCO





From: Sumeet Sharma <Sumeet.Sharma@adani.com>

Sent: Tuesday, June 24, 2025 3:39 PM

To: NRLDC SO 2

Cc: NARESH BHANDARI; seo-nrpc; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल); S Usha (एस उषा); Sunil Kumar Raval; Namandeep Matta; Kali Charan Sahu; RAVINDRA ATALE; Nihar Raj; Milan Popat; Abhishek Kukreja; Naman Vyas; Abhishek Kumar Singh; Nikhil Singh; Narendra Kumar Ojha; Afak Pothiwala; Mahesh M. Mehendale (महेश एम. मेहंदले); Somara Lakra (सोमारा लाकरा); Mahavir Prasad Singh (महावीर प्रसाद सिंह); Sudipto Sarkar (सुदिप्तो सरकार); Sugata Bhattacharya (सुगाता भट्टाचार्या); Deepak Kumar; aen.com; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrwal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpnl@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrldc_hods_tech

Subject: RE: NRLDC Letter regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS

****Warning****

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Dear Sir,

With reference to the trailing email we would like to inform you that the negotiations and the scope discussions have been completed with the partner and the necessary formalities for processing the order is in progress. We expect the order to be released by 30th-Jun-25. Further in parallel we have also put-up the issue in the 232nd OCC meeting for approval of the scheme on add-cap basis.

We regret the time taken in this process, however will expedite the further process to meet the expectation of putting the scheme back in service.

Regards,

Sumeet Sharma

Head- Automation, Communications & OT-Cyber Technology

Adani Energy Solutions Limited.(Grid Division)

Mob +91 90990 05648 | sumeet.sharma@adani.com | www.adani.com

KP Epitome|10th Floor South Wing | SG Highway |Ahmedabad-382421| Gujarat

From: NRLDC SO 2 <nrldco2@grid-india.in>

Sent: Wednesday, June 18, 2025 11:43 AM

To: Sumeet Sharma <Sumeet.Sharma@adani.com>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>

Cc: NARESH BHANDARI <ms-nrpc@nic.in>; seo-nrpc <seo-nrpc@nic.in>; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल) <mkagarwal@grid-india.in>; susha <susha@grid-india.in>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sudipto Sarkar (सुदिप्तो सरकार) <ssarkar@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhokalramjash@powergrid.in; ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc@pstcl.org; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpnl@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop@se-sldcop@pstcl.org; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.upptcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrldc_hods_tech <nrldc_hods_tech@grid-india.in>

Subject: Re: NRLDC Letter regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS

***CAUTION:** This mail has originated from outside Adani. Please exercise caution with links and attachments.*

Sir,

In reference of the NRLDC communication dated 02.04.2025 it is requested to provide the present status regarding corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS.

9/17/25, 10:30 AM

Mail - nrldco2@grid-india.in

The agenda in this regard is under discussion since 51st PSC meeting held in July 2024. During last PSC meeting (60th PSC meeting held on 26.05.2025), ADANI representative informed that internal approval has been taken for placing the order for corrective actions and order will be released to vendor by end of May 2025. It was also informed that actions have been expedited and SPS of HVDC Mundra-Mahindergarh will be restored by the end of August 2025.

In view of above, it is requested to share the present status of corrective action. As discussed during 60th PSC meeting, weekly update on the corrective actions and action planned may be shared to NRLDC / NRPC so that necessary coordination with state counterpart may also be done for smooth coordination and actions.

सादर धन्यवाद/ Thanks & Regards

दीपक कुमार / Deepak Kumar

प्रणाली संचालन-II/ System Operation-II

उ०क्षे०भा०प्रे०के०/ NRLDC

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as

पोसोको / POSOCO



From: NRLDC SO 2

Sent: Wednesday, April 2, 2025 3:11:51 PM

To: Sumeet.Sharma@adani.com; Sunil Kumar Raval; Namandeep Matta; Kali Charan Sahu; RAVINDRA ATALE; Nihar Raj; Milan Popat; Abhishek Kukreja; Naman Vyas; Abhishek Kumar Singh; Nikhil Singh; Narendra Kumar Ojha; afak.pothiawala@adani.com

Cc: NARESH BHANDARI; seo-nrpc; Manoj Kumar Agarwal (मनोज कुमार अग्रवाल); S Usha (एस उषा); Mahesh M. Mehendale (महेश एम. मेहंदले); Somara Lakra (सोमारा लाकरा); Mahavir Prasad Singh (महावीर प्रसाद सिंह); Sudipto Sarkar (सुदिप्तो सरकार); Sugata Bhattacharya (सुगाता भट्टाचार्या); Deepak Kumar; aen.com; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratargarh@rvpn.co.in; aen.subslcd.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in;

ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc@dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpn@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org; nrlc_hods_tech

Subject: NRLDC Letter regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS

Sir,

Please find the attached NRLDC Letter dt 02-04-2025 regarding Corrective action for healthiness of 500kV Mundra-Mahindergarh SPS.

सादर धन्यवाद/ Thanks & Regards

प्रणाली संचालन-II/ System Operation-II

उ०क्षे०भा०प्रे०के०/ NRLDC

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as

पोसोको / POSOCO



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RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Sumeet Sharma <Sumeet.Sharma@adani.com>

Wed 11/5/2025 11:57 AM

Inbox

To:NRLDC SO 2 <nrlcso2@grid-india.in>;

Cc:seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Afak Pothiwala <afak.pothiwala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in <m.alwar@rvpn.co.in>; aen.mpt&s.rtg@rvpn.co.in <aen.mpt&s.rtg@rvpn.co.in>; aen.comm.ratangarh@rvpn.co.in <aen.comm.ratangarh@rvpn.co.in>; aen.subslcd.bhl@rvpn.co.in <aen.subslcd.bhl@rvpn.co.in>; xen.mpts.bhl@rvpn.co.in <xen.mpts.bhl@rvpn.co.in>; aen.prot.mertacity@RVPN.CO.IN <aen.prot.mertacity@RVPN.CO.IN>; aen.comm.merta@RVPN.CO.IN <aen.comm.merta@RVPN.CO.IN>; nainwal@powergrid.in <nainwal@powergrid.in>; vinaykumargupta@powergrid.in <vinaykumargupta@powergrid.in>; ravindra_kumar@powergrid.in <ravindra_kumar@powergrid.in>; smahajan1999@powergrid.in <smahajan1999@powergrid.in>; rkagrawal83@powergrid.in <rkagrawal83@powergrid.in>; dharmendrameena@powergrid.in <dharmendrameena@powergrid.in>; vineet@powergrid.in <vineet@powergrid.in>; bhakalramjash@powergrid.in <bhakalramjash@powergrid.in>; dhanonda400kv@gmail.com <dhanonda400kv@gmail.com>; sse220kvlulaahir@hvpn.org.in <sse220kvlulaahir@hvpn.org.in>; sse220kvrwr@hvpn.org.in <sse220kvrwr@hvpn.org.in>; sse132kvdadri@hvpn.org.in <sse132kvdadri@hvpn.org.in>; ae-220kvg1-mgg@pstcl.org <ae-220kvg1-mgg@pstcl.org>; sse-pm-lalton@pstcl.org <sse-pm-lalton@pstcl.org>; sse-pm-mlrk@pstcl.org <sse-pm-mlrk@pstcl.org>; eeetdshamli@upptcl.org <eeetdshamli@upptcl.org>; ee400mrd2@upptcl.org <ee400mrd2@upptcl.org>; aeProtection@upslcd.org <aeProtection@upslcd.org>; ase-sldcop@pstcl.org <ase-sldcop@pstcl.org>; bl.gujar@dtl.gov.in <bl.gujar@dtl.gov.in>; ce.ld@rvpn.co.in <ce.ld@rvpn.co.in>; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in <dtldata@yahoo.co.in>; dtlscheduling@gmail.com <dtlscheduling@gmail.com>; eesldccontrol@upslcd.org <eesldccontrol@upslcd.org>; ldrvpnl@rvpn.co.in <ldrvpnl@rvpn.co.in>; ldshutdown@gmail.com <ldshutdown@gmail.com>; ldshutdown@rvpn.co.in <ldshutdown@rvpn.co.in>; paritosh.joshi@dtl.gov.in <paritosh.joshi@dtl.gov.in>; pccont@bbmb.nic.in <pccont@bbmb.nic.in>; pc-sldcop@pstcl.org <pc-sldcop@pstcl.org>; rajbir-walia79@yahoo.com <rajbir-walia79@yahoo.com>; rtamc.nr1@powergrid.in <rtamc.nr1@powergrid.in>; pankaj.jha@powergrid.in <pankaj.jha@powergrid.in>; neerajk@powergrid.in <neerajk@powergrid.in>; se.mpts.udr@rvpn.co.in <se.mpts.udr@rvpn.co.in>; se.prot.engg@rvpn.co.in <se.prot.engg@rvpn.co.in>; se.sold@rvpn.co.in <se.sold@rvpn.co.in>; sera@upslcd.org <sera@upslcd.org>; sesc@upslcd.org <sesc@upslcd.org>; sesldcop@hvpn.org <sesldcop@hvpn.org>; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org <setncmrt@upptcl.org>; sldcdata@gmail.com <sldcdata@gmail.com>; sldcharyanacr@gmail.com <sldcharyanacr@gmail.com>; sldcmintoroad@gmail.com <sldcmintoroad@gmail.com>; system.uppcl@gmail.com <system.uppcl@gmail.com>; xenemtcbhpp2@bbmb.nic.in <xenemtcbhpp2@bbmb.nic.in>; xenmpccggn@hvpn.org <xenmpccggn@hvpn.org>; xenplgss@hvpn.org <xenplgss@hvpn.org>;

2 attachments (47 KB)

E1 details.xlsx; Tentative Schedule.xlsx;

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Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status and plan of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I'm pleased to inform you that the FAT was completed and the material has arrived at the Mohindergarh station . Please find attached the tentative activity schedule at the respective locations(subject o site constraints -if any) as submitted by our partner. The coordination of these activities will be handled by our Mohindergarh Station Head, Mr. Abhishek Singh, in collaboration with M/s Commtel. Mr. Singh can be reached at Mobile # 9671306831 for any immediate coordination.

We seek the support of each utility and your esteemed office to facilitate the activities to be carried out by M/s Commtel at the respective locations. As this involves the replacement of existing hardware with new ones, we require the return of the existing material for necessary commercial formalities. We kindly request your support in clearing the same for M/s Commtel to carry back.

Additionally, we will need the configuration of E1 channels identified along with M/s PGCIL between Mohindergarh and the respective locations and allocation of two Optical ports at the Tejas SDH (TJ 1400) installed at the Mohendragarh Control Room for the communication setup and to execute commands and feedbacks.

Sincere Thanks for your cooperation and support.

Regards,
Sumeet Sharma

From: NRLDC SO 2 <nrlcso2@grid-india.in>

Sent: Thursday, October 30, 2025 5:45 PM

To: Sumeet Sharma <Sumeet.Sharma@adani.com>

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeProtection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpnl@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: Re: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

CAUTION: This mail has originated from outside Adani. Please exercise caution with links and attachments.

महोदय / महोदया,

In reference of the trailing mail, it is requested to kindly share the update regarding FAT which was supposed to be completed by 30.09.2025 and further following the FAT, the material are to be shipped to various sites and installed by 30th October 2025.

In view of above, it is requested to kindly update the present status and future action plan.

सादर धन्यवाद/ Thanks & Regards
प्रणाली संचालन-II/ System Operation-II
उ०क्षे०भा०प्रे०के०/ NRLDC
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as
पोसोको / POSOCO



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RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Wed 19-Nov-25 18:31

To:NRLDC SO 2 <nrlcso2@grid-india.in>;

Cc:seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Afak Pothiwala <afak.pothiwala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगता भट्टाचार्य) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in <m.alwar@rvpn.co.in>; aen.mpt&s.rtg@rvpn.co.in <aen.mpt&s.rtg@rvpn.co.in>; aen.comm.ratangerh@rvpn.co.in <aen.comm.ratangerh@rvpn.co.in>; aen.subslcd.bhl@rvpn.co.in <aen.subslcd.bhl@rvpn.co.in>; xen.mpts.bhl@rvpn.co.in <xen.mpts.bhl@rvpn.co.in>; aen.prot.mertacity@RVPN.CO.IN <aen.prot.mertacity@RVPN.CO.IN>; aen.comm.merta@RVPN.CO.IN <aen.comm.merta@RVPN.CO.IN>; nainwal@powergrid.in <nainwal@powergrid.in>; vinaykumargupta@powergrid.in <vinaykumargupta@powergrid.in>; ravindra_kumar@powergrid.in <ravindra_kumar@powergrid.in>; smahajan1999@powergrid.in <smahajan1999@powergrid.in>; rkagrawal83@powergrid.in <rkagrawal83@powergrid.in>; dharmendrameena@powergrid.in <dharmendrameena@powergrid.in>; vineet@powergrid.in <vineet@powergrid.in>; bhakalramjash@powergrid.in <bhakalramjash@powergrid.in>; dhanonda400kv@gmail.com <dhanonda400kv@gmail.com>; sse220kvlulaahir@hvpn.org.in <sse220kvlulaahir@hvpn.org.in>; sse220kvrwr@hvpn.org.in <sse220kvrwr@hvpn.org.in>; sse132kvdadri@hvpn.org.in <sse132kvdadri@hvpn.org.in>; ae-220kvg1-mgg@pstcl.org <ae-220kvg1-mgg@pstcl.org>; sse-pm-lalton@pstcl.org <sse-pm-lalton@pstcl.org>; sse-pm-mlrk@pstcl.org <sse-pm-mlrk@pstcl.org>; eeetdshamli@upptcl.org <eeetdshamli@upptcl.org>; ee400mrd2@upptcl.org <ee400mrd2@upptcl.org>; aeProtection@upslcd.org <aeProtection@upslcd.org>; ase-sldcop@pstcl.org <ase-sldcop@pstcl.org>; bl.gujar@dtl.gov.in <bl.gujar@dtl.gov.in>; ce.ld@rvpn.co.in <ce.ld@rvpn.co.in>; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in <dtldata@yahoo.co.in>; dtlscheduling@gmail.com <dtlscheduling@gmail.com>; eesldcontrol@upslcd.org <eesldcontrol@upslcd.org>; ldrvpn@rvpn.co.in <ldrvpn@rvpn.co.in>; ldshutdown@gmail.com <ldshutdown@gmail.com>; ldshutdown@rvpn.co.in <ldshutdown@rvpn.co.in>; paritosh.joshi@dtl.gov.in <paritosh.joshi@dtl.gov.in>; pccont@bbmb.nic.in <pccont@bbmb.nic.in>; pc-sldcop@pstcl.org <pc-sldcop@pstcl.org>; rajbir-walia79@yahoo.com <rajbir-walia79@yahoo.com>; rtamc.nr1@powergrid.in <rtamc.nr1@powergrid.in>; pankaj.jha@powergrid.in <pankaj.jha@powergrid.in>; neerajk@powergrid.in <neerajk@powergrid.in>; se.mpts.udr@rvpn.co.in <se.mpts.udr@rvpn.co.in>; se.prot.engg@rvpn.co.in <se.prot.engg@rvpn.co.in>; se.sold@rvpn.co.in <se.sold@rvpn.co.in>; sera@upslcd.org <sera@upslcd.org>; sesc@upslcd.org <sesc@upslcd.org>; sesldcop@hvpn.org <sesldcop@hvpn.org>; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org <setncmrt@upptcl.org>; sldcdata@gmail.com <sldcdata@gmail.com>; sldcharyanacr@gmail.com <sldcharyanacr@gmail.com>; sldcmintoroad@gmail.com <sldcmintoroad@gmail.com>; system.uppcl@gmail.com <system.uppcl@gmail.com>; xenemtcbhpp2@bbmb.nic.in <xenemtcbhpp2@bbmb.nic.in>; xenmpccggn@hvpn.org <xenmpccggn@hvpn.org>; xenplgss@hvpn.org <xenplgss@hvpn.org>;

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Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I would like to express my gratitude and appreciation to all the members on this email for their incredible support to the team implementing the scheme at their respective locations. We are also receiving excellent support from Powergrid in configuring the communication path between Mohindergarh and the SPS locations.

As of today, the team has installed and tested the commands up to the DTPC panels from Mohindergarh for the following locations:
- BBMB

- Charkhi Dadri
- Ratangarh
- Hisar-PG
- Alwar
- Merta
- Nuna Majra
- Shamli

The support from respective utility representatives, especially with regards to ensuring the termination of cables to the correct feeders and terminals, is crucial in ensuring the actual relief during the operation of the SPS.

We shall continue our efforts to complete the remaining locations with your support to bring the scheme into full operation.

Regards,
Sumeet Sharma

From: Sumeet Sharma

Sent: Wednesday, November 5, 2025 11:57 AM

To: 'NRLDC SO 2' <nrldcso2@grid-india.in>

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcd.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kv1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeoprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status and plan of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I'm pleased to inform you that the FAT was completed and the material has arrived at the Mohindergarh station . Please find attached the tentative activity schedule at the respective locations(subject o site constraints -if any) as submitted by our partner. The coordination of these activities will be handled by our Mohindergarh Station Head, Mr. Abhishek Singh, in collaboration with M/s Commtel. Mr. Singh can be reached at Mobile # 9671306831 for any immediate coordination.

We seek the support of each utility and your esteemed office to facilitate the activities to be carried out by M/s Commtel at the respective locations. As this involves the replacement of existing hardware with new ones, we require the return of the existing material for necessary commercial formalities. We kindly request your support in clearing the same for M/s Commtel to carry back.

Additionally, we will need the configuration of E1 channels identified along with M/s PGCIL between Mohindergarh and the respective locations and allocation of two Optical ports at the Tejas SDH (TJ 1400) installed at the Mohendragarh Control Room for the communication setup and to execute commands and feedbacks.

Sincere Thanks for your cooperation and support.

Regards,
Sumeet Sharma

From: NRLDC SO 2 <nrlcso2@grid-india.in>
Sent: Thursday, October 30, 2025 5:45 PM
To: Sumeet Sharma <Sumeet.Sharma@adani.com>
Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcd.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeoprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: Re: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

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महोदय / महोदया,

In reference of the trailing mail, it is requested to kindly share the update regarding FAT which was supposed to be completed by 30.09.2025 and further following the FAT, the material are to be shipped to various sites and installed by 30th October 2025.

In view of above, it is requested to kindly update the present status and future action plan.

सादर धन्यवाद/ Thanks & Regards
प्रणाली संचालन-II/ System Operation-II
उ०क्ष०भा०प्रे०के०/ NRLDC

12/22/25, 3:41 PM

Mail - sugata@grid-india.in

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited

Formerly known as

पोसोको / POSOCO



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RE: Status of Corrective actions for healthiness of 500kV Mundra-Mohindergarh SPS

Sumeet Sharma <Sumeet.Sharma@adani.com>

Mon 15-Dec-25 19:08

To: NRLDC SO 2 <nrlcso2@grid-india.in>;

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Prashant Kumar <Prashant.Kumar1@adani.com>; Saurabh Sharma <Saurabh.Sharma@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in <m.alwar@rvpn.co.in>; aen.mpt&s.rtg@rvpn.co.in <aen.mpt&s.rtg@rvpn.co.in>; aen.comm.ratangarh@rvpn.co.in <aen.comm.ratangarh@rvpn.co.in>; aen.subsldc.bhl@rvpn.co.in <aen.subsldc.bhl@rvpn.co.in>; xen.mpts.bhl@rvpn.co.in <xen.mpts.bhl@rvpn.co.in>; aen.prot.mertacity@RVPN.CO.IN <aen.prot.mertacity@RVPN.CO.IN>; aen.comm.merta@RVPN.CO.IN <aen.comm.merta@RVPN.CO.IN>; nainwal@powergrid.in <nainwal@powergrid.in>; vinaykumargupta@powergrid.in <vinaykumargupta@powergrid.in>; ravindra_kumar@powergrid.in <ravindra_kumar@powergrid.in>; smahajan1999@powergrid.in <smahajan1999@powergrid.in>; rkagrwal83@powergrid.in <rkagrwal83@powergrid.in>; dharmendrameena@powergrid.in <dharmendrameena@powergrid.in>; vineet@powergrid.in <vineet@powergrid.in>; bhakalramjash@powergrid.in <bhakalramjash@powergrid.in>; dhanonda400kv@gmail.com <dhanonda400kv@gmail.com>; sse220kvlulaahir@hvpn.org.in <sse220kvlulaahir@hvpn.org.in>; sse220kvrwr@hvpn.org.in <sse220kvrwr@hvpn.org.in>; sse132kvdadri@hvpn.org.in <sse132kvdadri@hvpn.org.in>; ae-220kvg1-mgg@pstcl.org <ae-220kvg1-mgg@pstcl.org>; sse-pm-lalton@pstcl.org <sse-pm-lalton@pstcl.org>; sse-pm-mlrk@pstcl.org <sse-pm-mlrk@pstcl.org>; eeetdshamli@upptcl.org <eeetdshamli@upptcl.org>; ee400mrd2@upptcl.org <ee400mrd2@upptcl.org>; aeProtection@upslcd.org <aeProtection@upslcd.org>; ase-sldcop@pstcl.org <ase-sldcop@pstcl.org>; bl.gujar@dtl.gov.in <bl.gujar@dtl.gov.in>; ce.ld@rvpn.co.in <ce.ld@rvpn.co.in>; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in <dtldata@yahoo.co.in>; dtlscheduling@gmail.com <dtlscheduling@gmail.com>; eesldcontrol@upslcd.org <eesldcontrol@upslcd.org>; ldrvpnl@rvpn.co.in <ldrvpnl@rvpn.co.in>; ldshutdown@gmail.com <ldshutdown@gmail.com>; ldshutdown@rvpn.co.in <ldshutdown@rvpn.co.in>; paritosh.joshi@dtl.gov.in <paritosh.joshi@dtl.gov.in>; pccont@bbmb.nic.in <pccont@bbmb.nic.in>; pc-sldcop@pstcl.org <pc-sldcop@pstcl.org>; rajbir-walia79@yahoo.com <rajbir-walia79@yahoo.com>; rtamc.nr1@powergrid.in <rtamc.nr1@powergrid.in>; pankaj.jha@powergrid.in <pankaj.jha@powergrid.in>; neerajk@powergrid.in <neerajk@powergrid.in>; se.mpts.udr@rvpn.co.in <se.mpts.udr@rvpn.co.in>; se.prot.engg@rvpn.co.in <se.prot.engg@rvpn.co.in>; se.sold@rvpn.co.in <se.sold@rvpn.co.in>; sera@upslcd.org <sera@upslcd.org>; sesc@upslcd.org <sesc@upslcd.org>; sesldcop@hvpn.org <sesldcop@hvpn.org>; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org <setncmrt@upptcl.org>; slcddata@gmail.com <slcddata@gmail.com>; sldcharyanacr@gmail.com <slcharyanacr@gmail.com>; slcdmintonroad@gmail.com <slcdmintonroad@gmail.com>; system.uppcl@gmail.com <system.uppcl@gmail.com>; xenemtcbhpp2@bbmb.nic.in <xenemtcbhpp2@bbmb.nic.in>; xenmpccggn@hvpn.org <xenmpccggn@hvpn.org>; xenplgss@hvpn.org <xenplgss@hvpn.org>;

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Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status of the activities related to the 500kV Mundra-Mohindergarh SPS. Following is the status of the scheme as on 15-Dec-25.

- a. FOTE installation and commissioning : Completed
- b. E1 link establishment between Mohindergarh and respective sites : Completed
- c. DTPC installation and link establishment between Mohindergarh and respective locations : Completed
- d. Command Testing from DTPC to DTPC for all Location : Completed

- e. Cable laying and Termination between DTPC and Trip Circuits: Completed except two locations (Gobindgarh and Malerkotla)

The scheme has been made ready and the commands have been tested between Mohindergarh and locations between DTPCs . All the commands have been terminated to respective trip circuits of the identified feeders **except Gobindgarh and Malerkotla** where the same is in progress.. **We seek the support from respective in-charges** to provide terminal details to the executing team for proper terminations.

With support from respective in-charges, we expect the completion of these two location within this week and system can then be declared operational. We seek your guidance for further course of action.

Regards,
Sumeet Sharma

From: Sumeet Sharma

Sent: Wednesday, November 19, 2025 6:31 PM

To: 'NRLDC SO 2' <nrlcso2@grid-india.in>

Cc: 'seo-nrpc' <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; 'Afak Pothiwala' <afak.pothiwala@adani.com>; 'Mahesh M. Mehendale (महेश एम. मेहंदले)' <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; 'Mahavir Prasad Singh (महावीर प्रसाद सिंह)' <mahavir@grid-india.in>; 'Sugata Bhattacharya (सुगाता भट्टाचार्या)' <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; 'aen.com' <xen.prot.alwar@rvpn.co.in>; 'm.alwar@rvpn.co.in' <m.alwar@rvpn.co.in>; 'aen.mpt&s.rtg@rvpn.co.in' <aen.mpt&s.rtg@rvpn.co.in>; 'aen.comm.ratangarh@rvpn.co.in' <aen.comm.ratangarh@rvpn.co.in>; 'aen.subsldc.bhl@rvpn.co.in' <aen.subsldc.bhl@rvpn.co.in>; 'xen.mpts.bhl@rvpn.co.in' <xen.mpts.bhl@rvpn.co.in>; 'aen.prot.mertacity@RVPN.CO.IN' <aen.prot.mertacity@RVPN.CO.IN>; 'aen.comm.merta@RVPN.CO.IN' <aen.comm.merta@RVPN.CO.IN>; 'nainwal@powergrid.in' <nainwal@powergrid.in>; 'vinaykumargupta@powergrid.in' <vinaykumargupta@powergrid.in>; 'ravindra_kumar@powergrid.in' <ravindra_kumar@powergrid.in>; 'smahajan1999@powergrid.in' <smahajan1999@powergrid.in>; 'rkagrwal83@powergrid.in' <rkagrwal83@powergrid.in>; 'dharmendrameena@powergrid.in' <dharmendrameena@powergrid.in>; 'vineet@powergrid.in' <vineet@powergrid.in>; 'bhakalramjash@powergrid.in' <bhakalramjash@powergrid.in>; 'dhanonda400kv@gmail.com' <dhanonda400kv@gmail.com>; 'sse220kvlulaahir@hvpn.org.in' <sse220kvlulaahir@hvpn.org.in>; 'sse220kvrwr@hvpn.org.in' <sse220kvrwr@hvpn.org.in>; 'sse132kvdadri@hvpn.org.in' <sse132kvdadri@hvpn.org.in>; 'ae-220kvg1-mgg@pstcl.org' <ae-220kvg1-mgg@pstcl.org>; 'sse-pm-lalton@pstcl.org' <sse-pm-lalton@pstcl.org>; 'sse-pm-mlrk@pstcl.org' <sse-pm-mlrk@pstcl.org>; 'eeetdshamli@upptcl.org' <eeetdshamli@upptcl.org>; 'ee400mrd2@upptcl.org' <ee400mrd2@upptcl.org>; 'ae-protection@upslcd.org' <ae-protection@upslcd.org>; 'ase-sldcop@pstcl.org' <ase-sldcop@pstcl.org>; 'bl.gujar@dtl.gov.in' <bl.gujar@dtl.gov.in>; 'ce.ld@rvpn.co.in' <ce.ld@rvpn.co.in>; 'ce-sldc' <ce-sldc@pstcl.org>; 'dtldata@yahoo.co.in' <dtldata@yahoo.co.in>; 'dtlscheduling@gmail.com' <dtlscheduling@gmail.com>; 'eesldcontrol@upslcd.org' <eesldcontrol@upslcd.org>; 'ldrvpn1@rvpn.co.in' <ldrvpn1@rvpn.co.in>; 'ldshutdown@gmail.com' <ldshutdown@gmail.com>; 'ldshutdown@rvpn.co.in' <ldshutdown@rvpn.co.in>; 'paritosh.joshi@dtl.gov.in' <paritosh.joshi@dtl.gov.in>; 'pccont@bbmb.nic.in' <pccont@bbmb.nic.in>; 'pc-sldcop@pstcl.org' <pc-sldcop@pstcl.org>; 'rajbir-walia79@yahoo.com' <rajbir-walia79@yahoo.com>; 'rtamc.nr1@powergrid.in' <rtamc.nr1@powergrid.in>; 'pankaj.jha@powergrid.in' <pankaj.jha@powergrid.in>; 'neerajk@powergrid.in' <neerajk@powergrid.in>; 'se.mpts.udr@rvpn.co.in' <se.mpts.udr@rvpn.co.in>; 'se.prot.engg@rvpn.co.in' <se.prot.engg@rvpn.co.in>; 'se.sold@rvpn.co.in' <se.sold@rvpn.co.in>; 'sera@upslcd.org' <sera@upslcd.org>; 'sesc@upslcd.org' <sesc@upslcd.org>; 'sesldcop@hvpn.org' <sesldcop@hvpn.org>; 'se-sldcop' <se-sldcop@pstcl.org>; 'setncmrt@upptcl.org' <setncmrt@upptcl.org>; 'sldcdata@gmail.com' <sldcdata@gmail.com>; 'sldcharyanacr@gmail.com' <sldcharyanacr@gmail.com>; 'sldcmintoroad@gmail.com' <sldcmintoroad@gmail.com>; 'system.uppcl@gmail.com' <system.uppcl@gmail.com>; 'xenemtcbhpp2@bbmb.nic.in' <xenemtcbhpp2@bbmb.nic.in>; 'xenmpccggn@hvpn.org' <xenmpccggn@hvpn.org>; 'xenplgss@hvpn.org' <xenplgss@hvpn.org>

Subject: RE: Status of Corrective actions for healthiness of 500KV Mundra-Mahindergarh SPS

Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I would like to express my gratitude and appreciation to all the members on this email for their incredible support to the team implementing the scheme at their respective locations. We are also receiving excellent support from Powergrid in configuring the communication path between Mohindergarh and the SPS locations.

As of today, the team has installed and tested the commands up to the DTPC panels from Mohindergarh for the following locations:

- BBMB
- Charkhi Dadri
- Ratangarh
- Hisar-PG
- Alwar
- Merta
- Nuna Majra
- Shamli

The support from respective utility representatives, especially with regards to ensuring the termination of cables to the correct feeders and terminals, is crucial in ensuring the actual relief during the operation of the SPS.

We shall continue our efforts to complete the remaining locations with your support to bring the scheme into full operation.

Regards,
Sumeet Sharma

From: Sumeet Sharma

Sent: Wednesday, November 5, 2025 11:57 AM

To: 'NRLDC SO 2' <nrlcso2@grid-india.in>

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kv1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc@pstcl.org; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpnl@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop@pstcl.org; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Dear Sir,

12/23/25, 3:30 PM

Mail - sugata@grid-india.in

I hope this message finds you well. I am writing to provide an update on the status and plan of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I'm pleased to inform you that the FAT was completed and the material has arrived at the Mohindergarh station . Please find attached the tentative activity schedule at the respective locations(subject o site constraints -if any) as submitted by our partner. The coordination of these activities will be handled by our Mohindergarh Station Head, Mr. Abhishek Singh, in collaboration with M/s CommTel. Mr. Singh can be reached at Mobile # 9671306831 for any immediate coordination.

We seek the support of each utility and your esteemed office to facilitate the activities to be carried out by M/s CommTel at the respective locations. As this involves the replacement of existing hardware with new ones, we require the return of the existing material for necessary commercial formalities. We kindly request your support in clearing the same for M/s CommTel to carry back.

Additionally, we will need the configuration of E1 channels identified along with M/s PGCIL between Mohindergarh and the respective locations and allocation of two Optical ports at the Tejas SDH (TJ 1400) installed at the Mohendragarh Control Room for the communication setup and to execute commands and feedbacks.

Sincere Thanks for your cooperation and support.

Regards,
Sumeet Sharma

From: NRLDC SO 2 <nrlcso2@grid-india.in>

Sent: Thursday, October 30, 2025 5:45 PM

To: Sumeet Sharma <Sumeet.Sharma@adani.com>

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kv1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlr@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeProtection@upsldc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldcontrol@upsldc.org; ldrvpl@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pcont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upsldc.org; sesc@upsldc.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: Re: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

***CAUTION:** This mail has originated from outside Adani. Please exercise caution with links and attachments.*

महोदय / महोदया,

In reference of the trailing mail, it is requested to kindly share the update regarding FAT which was supposed to be completed by 30.09.2025 and further following the FAT, the material are to be shipped to various sites and installed by 30th October 2025.

<https://mail.grid-india.in/owa/#path=/mail/search>

4/5

In view of above, it is requested to kindly update the present status and future action plan.

सादर धन्यवाद/ Thanks & Regards
प्रणाली संचालन-II/ System Operation-II
उ०क्षे०भा०प्रे०के०/ NRLDC
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited
Formerly known as
पोसोको / POSOCO



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RE: Status of Corrective actions for healthiness of 500kV Mundra-Mohindergarh SPS

Wed 07-Jan-26 18:07

To:NRLDC SO 2 <nrlcso2@grid-india.in>;

Cc:seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Prashant Kumar <Prashant.Kumar1@adani.com>; Saurabh Sharma <Saurabh.Sharma@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगता भट्टाचार्या) <sugata@grid-india.in>; Deepak Kumar <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in <m.alwar@rvpn.co.in>; aen.mpt&s.rtg@rvpn.co.in <aen.mpt&s.rtg@rvpn.co.in>; aen.comm.ratangarh@rvpn.co.in <aen.comm.ratangarh@rvpn.co.in>; aen.subsldc.bhl@rvpn.co.in <aen.subsldc.bhl@rvpn.co.in>; xen.mpts.bhl@rvpn.co.in <xen.mpts.bhl@rvpn.co.in>; aen.prot.mertacity@RVPN.CO.IN <aen.prot.mertacity@RVPN.CO.IN>; aen.comm.merta@RVPN.CO.IN <aen.comm.merta@RVPN.CO.IN>; nainwal@powergrid.in <nainwal@powergrid.in>; vinaykumargupta@powergrid.in <vinaykumargupta@powergrid.in>; ravindra_kumar@powergrid.in <ravindra_kumar@powergrid.in>; smahajan1999@powergrid.in <smahajan1999@powergrid.in>; rkagrawal83@powergrid.in <rkagrawal83@powergrid.in>; dharmendrameena@powergrid.in <dharmendrameena@powergrid.in>; vineet@powergrid.in <vineet@powergrid.in>; bhakalramjash@powergrid.in <bhakalramjash@powergrid.in>; dhanonda400kv@gmail.com <dhanonda400kv@gmail.com>; sse220kvlulaahir@hvpn.org.in <sse220kvlulaahir@hvpn.org.in>; sse220kvrwr@hvpn.org.in <sse220kvrwr@hvpn.org.in>; sse132kvdadri@hvpn.org.in <sse132kvdadri@hvpn.org.in>; ae-220kvg1-mgg@pstcl.org <ae-220kvg1-mgg@pstcl.org>; sse-pm-lalton@pstcl.org <sse-pm-lalton@pstcl.org>; sse-pm-mlrk@pstcl.org <sse-pm-mlrk@pstcl.org>; eeetdshamli@upptcl.org <eeetdshamli@upptcl.org>; ee400mrd2@upptcl.org <ee400mrd2@upptcl.org>; aeProtection@upslcd.org <aeProtection@upslcd.org>; ase-sldcop@pstcl.org <ase-sldcop@pstcl.org>; bl.gujar@dtl.gov.in <bl.gujar@dtl.gov.in>; ce.ld@rvpn.co.in <ce.ld@rvpn.co.in>; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in <dtldata@yahoo.co.in>; dtlscheduling@gmail.com <dtlscheduling@gmail.com>; eesldcontrol@upslcd.org <eesldcontrol@upslcd.org>; ldrvpn@rvpn.co.in <ldrvpn@rvpn.co.in>; ldshutdown@gmail.com <ldshutdown@gmail.com>; ldshutdown@rvpn.co.in <ldshutdown@rvpn.co.in>; paritosh.joshi@dtl.gov.in <paritosh.joshi@dtl.gov.in>; pccnt@bbmb.nic.in <pccnt@bbmb.nic.in>; pc-sldcop@pstcl.org <pc-sldcop@pstcl.org>; rajbir-walia79@yahoo.com <rajbir-walia79@yahoo.com>; rtamc.nr1@powergrid.in <rtamc.nr1@powergrid.in>; pankaj.jha@powergrid.in <pankaj.jha@powergrid.in>; neerajk@powergrid.in <neerajk@powergrid.in>; se.mpts.udr@rvpn.co.in <se.mpts.udr@rvpn.co.in>; se.prot.engg@rvpn.co.in <se.prot.engg@rvpn.co.in>; se.sold@rvpn.co.in <se.sold@rvpn.co.in>; sera@upslcd.org <sera@upslcd.org>; sesc@upslcd.org <sesc@upslcd.org>; sesldcop@hvpn.org <sesldcop@hvpn.org>; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org <setncmrt@upptcl.org>; sldcdata@gmail.com <sldcdata@gmail.com>; sldcharyanacr@gmail.com <sldcharyanacr@gmail.com>; sldcmintoroad@gmail.com <sldcmintoroad@gmail.com>; system.uppl@gmail.com <system.uppl@gmail.com>; xenemtcbhpp2@bbmb.nic.in <xenemtcbhpp2@bbmb.nic.in>; xenmpccggn@hvpn.org <xenmpccggn@hvpn.org>; xenplgss@hvpn.org <xenplgss@hvpn.org>;

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Dear sir,

I hope this message finds you well. I am writing to provide an update on the status of the activities related to the 500kV Mundra-Mohindergarh SPS. Following is the status of the scheme as on 25-Dec-25-

- a. FOTE installation and commissioning : Completed
- b. E1 link establishment between Mohindergarh and respective sites : Completed
- c. DTPC installation and link establishment between Mohindergarh and respective locations : Completed
- d. Command Testing from DTPC to DTPC for all Location : Completed
- e. Cable laying and Termination between DTPC and Trip Circuits: Completed

The scheme has been made ready and the commands have been tested between Mohindergarh and locations between DTPCs . All the commands have been terminated to respective trip circuits of the identified feeders

We declare our readiness for the scheme to be taken into service and once again express our sincere Thanks to all the stake holder for extending their support during execution of this scheme.

We seek your guidance for further course of action in this regards.

Regards,
Sumeet Sharma

From: Sumeet Sharma

Sent: Monday, December 15, 2025 7:08 PM

To: NRLDC SO 2 <nrlcdcso2@grid-india.in>

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Prashant Kumar <Prashant.Kumar1@adani.com>; Saurabh Sharma <Saurabh.Sharma@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subsldc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeoprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: RE: Status of Corrective actions for healthiness of 500kV Mundra-Mohindergarh SPS

Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status of the activities related to the 500kV Mundra-Mohindergarh SPS. Following is the status of the scheme as on 15-Dec-25.

- a. FOTE installation and commissioning : Completed
- b. E1 link establishment between Mohindergarh and respective sites : Completed
- c. DTPC installation and link establishment between Mohindergarh and respective locations : Completed
- d. Command Testing from DTPC to DTPC for all Location : Completed
- e. Cable laying and Termination between DTPC and Trip Circuits: Completed except two locations (Gobindgarh and Malerkotla)

The scheme has been made ready and the commands have been tested between Mohindergarh and locations between DTPCs . All the commands have been terminated to respective trip circuits of the identified feeders **except Gobindgarh and Malerkotla** where the same is in progress.. **We seek the support from respective in-charges** to provide terminal details to the executing team for proper terminations.

With support from respective in-charges, we expect the completion of these two location within this week and system can then be declared operational. We seek your guidance for further course of action.

Regards,
Sumeet Sharma

From: Sumeet Sharma

Sent: Wednesday, November 19, 2025 6:31 PM

To: 'NRLDC SO 2' <nrlcso2@grid-india.in>

Cc: 'seo-nrpc' <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; 'Afak Pothiawala' <afak.pothiawala@adani.com>; 'Mahesh M. Mehendale (महेश एम. मेहंदले)' <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; 'Mahavir Prasad Singh (महावीर प्रसाद सिंह)' <mahavir@grid-india.in>; 'Sugata Bhattacharya (सुगाता भट्टाचार्या)' <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; 'aen.com' <xen.prot.alwar@rvpn.co.in>; 'm.alwar@rvpn.co.in' <m.alwar@rvpn.co.in>; 'aen.mpt&s.rtg@rvpn.co.in' <aen.mpt&s.rtg@rvpn.co.in>; 'aen.comm.ratangarh@rvpn.co.in' <aen.comm.ratangarh@rvpn.co.in>; 'aen.subsldc.bhl@rvpn.co.in' <aen.subsldc.bhl@rvpn.co.in>; 'xen.mpts.bhl@rvpn.co.in' <xen.mpts.bhl@rvpn.co.in>; 'aen.prot.mertacity@RVPN.CO.IN' <aen.prot.mertacity@RVPN.CO.IN>; 'aen.comm.merta@RVPN.CO.IN' <aen.comm.merta@RVPN.CO.IN>; 'nainwal@powergrid.in' <nainwal@powergrid.in>; 'vinaykumargupta@powergrid.in' <vinaykumargupta@powergrid.in>; 'ravindra_kumar@powergrid.in' <ravindra_kumar@powergrid.in>; 'smahajan1999@powergrid.in' <smahajan1999@powergrid.in>; 'rkagrawal83@powergrid.in' <rkagrawal83@powergrid.in>; 'dharmendrameena@powergrid.in' <dharmendrameena@powergrid.in>; 'vineet@powergrid.in' <vineet@powergrid.in>; 'bhakalramjash@powergrid.in' <bhakalramjash@powergrid.in>; 'dhanonda400kv@gmail.com' <dhanonda400kv@gmail.com>; 'sse220kvlulaahir@hvpn.org.in' <sse220kvlulaahir@hvpn.org.in>; 'sse220kvrwr@hvpn.org.in' <sse220kvrwr@hvpn.org.in>; 'sse132kvdadri@hvpn.org.in' <sse132kvdadri@hvpn.org.in>; 'ae-220kvg1-mgg@pstcl.org' <ae-220kvg1-mgg@pstcl.org>; 'sse-pm-lalton@pstcl.org' <sse-pm-lalton@pstcl.org>; 'sse-pm-mlrk@pstcl.org' <sse-pm-mlrk@pstcl.org>; 'eeetdshamli@upptcl.org' <eeetdshamli@upptcl.org>; 'ee400mrd2@upptcl.org' <ee400mrd2@upptcl.org>; 'ae-protection@upslcd.org' <ae-protection@upslcd.org>; 'ase-sldcop@pstcl.org' <ase-sldcop@pstcl.org>; 'bl.gujar@dtl.gov.in' <bl.gujar@dtl.gov.in>; 'ce.ld@rvpn.co.in' <ce.ld@rvpn.co.in>; 'ce-sldc' <ce-sldc@pstcl.org>; 'dtldata@yahoo.co.in' <dtldata@yahoo.co.in>; 'dtlscheduling@gmail.com' <dtlscheduling@gmail.com>; 'eesldccontrol@upslcd.org' <eesldccontrol@upslcd.org>; 'ldrvpn@rvpn.co.in' <ldrvpn@rvpn.co.in>; 'ldshutdown@gmail.com' <ldshutdown@gmail.com>; 'ldshutdown@rvpn.co.in' <ldshutdown@rvpn.co.in>; 'paritosh.joshi@dtl.gov.in' <paritosh.joshi@dtl.gov.in>; 'pccont@bbmb.nic.in' <pccont@bbmb.nic.in>; 'pc-sldcop@pstcl.org' <pc-sldcop@pstcl.org>; 'rajbir-walia79@yahoo.com' <rajbir-walia79@yahoo.com>; 'rtamc.nr1@powergrid.in' <rtamc.nr1@powergrid.in>; 'pankaj.jha@powergrid.in' <pankaj.jha@powergrid.in>; 'neerajk@powergrid.in' <neerajk@powergrid.in>; 'se.mpts.udr@rvpn.co.in' <se.mpts.udr@rvpn.co.in>; 'se.prot.engg@rvpn.co.in' <se.prot.engg@rvpn.co.in>; 'se.sold@rvpn.co.in' <se.sold@rvpn.co.in>; 'sera@upslcd.org' <sera@upslcd.org>; 'sesc@upslcd.org' <sesc@upslcd.org>; 'sesldcop@hvpn.org' <sesldcop@hvpn.org>; 'se-sldcop' <se-sldcop@pstcl.org>; 'setncmrt@upptcl.org' <setncmrt@upptcl.org>; 'sldcdata@gmail.com' <sldcdata@gmail.com>; 'sldcharyanacr@gmail.com' <sldcharyanacr@gmail.com>; 'sldcmintoroad@gmail.com' <sldcmintoroad@gmail.com>; 'system.uppcl@gmail.com' <system.uppcl@gmail.com>; 'xenemtcbhpp2@bbmb.nic.in' <xenemtcbhpp2@bbmb.nic.in>; 'xenmpccggn@hvpn.org' <xenmpccggn@hvpn.org>; 'xenplgss@hvpn.org' <xenplgss@hvpn.org>

Subject: RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I would like to express my gratitude and appreciation to all the members on this email for their incredible support to the team implementing the scheme at their respective locations. We are also receiving excellent support from Powergrid in configuring the communication path between Mohindergarh and the SPS locations.

As of today, the team has installed and tested the commands up to the DTPC panels from Mohindergarh for the following locations:

- BBMB
- Charkhi Dadri
- Ratangarh
- Hisar-PG
- Alwar
- Merta
- Nuna Majra
- Shamli

The support from respective utility representatives, especially with regards to ensuring the termination of cables to the correct feeders and terminals, is crucial in ensuring the actual relief during the operation of the SPS.

We shall continue our efforts to complete the remaining locations with your support to bring the scheme into full operation.

Regards,
Sumeet Sharma

From: Sumeet Sharma

Sent: Wednesday, November 5, 2025 11:57 AM

To: 'NRLDC SO 2' <nrlcdcso2@grid-india.in>

Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Hunny Garg <Hunnya.Garg@adani.com>; Bhavin Parmar <Bhavin.Parmar@adani.com>; Bhoopesh H <Bhoopesh.H@adani.com>; Afak Pothiwala <afak.pothiwala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcdc.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; ghanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeprotection@upslcdc.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc@pstcl.org; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcdc.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcdc.org; sesc@upslcdc.org; sesldcop@hvpn.org; se-sldcop@pstcl.org; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: RE: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

Dear Sir,

I hope this message finds you well. I am writing to provide an update on the status and plan of the activities related to the 500kV Mundra-Mohindergarh SPS.

Firstly, I'm pleased to inform you that the FAT was completed and the material has arrived at the Mohindergarh station . Please find attached the tentative activity schedule at the respective locations(subject o site constraints -if any) as submitted by our partner. The coordination of these activities will be handled by our Mohindergarh Station Head, Mr. Abhishek Singh, in collaboration with M/s Commtel. Mr. Singh can be reached at Mobile # 9671306831 for any immediate coordination.

We seek the support of each utility and your esteemed office to facilitate the activities to be carried out by M/s Commtel at the respective locations. As this involves the replacement of existing hardware with new ones, we require the return of the existing

material for necessary commercial formalities. We kindly request your support in clearing the same for M/s Commtel to carry back.

Additionally, we will need the configuration of E1 channels identified along with M/s PGCIL between Mohindergarh and the respective locations and allocation of two Optical ports at the Tejas SDH (TJ 1400) installed at the Mohendragarh Control Room for the communication setup and to execute commands and feedbacks.

Sincere Thanks for your cooperation and support.

Regards,
Sumeet Sharma

From: NRLDC SO 2 <nrlcso2@grid-india.in>
Sent: Thursday, October 30, 2025 5:45 PM
To: Sumeet Sharma <Sumeet.Sharma@adani.com>
Cc: seo-nrpc <seo-nrpc@nic.in>; Sunil Kumar Raval <Sunil.Raval@adani.com>; Namandeep Matta <Namandeep.Matta@adani.com>; Kali Charan Sahu <Kalicharan.Sahu@adani.com>; RAVINDRA ATALE <Ravindra.Atale@adani.com>; Nihar Raj <nihar.raj@adani.com>; Milan Popat <Milan.Popat@adani.com>; Abhishek Kukreja <Abhishek.Kukreja@adani.com>; Naman Vyas <Namany.Vyas@adani.com>; Abhishek Kumar Singh <Abhishekk.Singh@adani.com>; Nikhil Singh <Nikhil.Singh1@adani.com>; Narendra Kumar Ojha <Narendran.Ojha@adani.com>; Afak Pothiawala <afak.pothiawala@adani.com>; Mahesh M. Mehendale (महेश एम. मेहंदले) <mehendale@grid-india.in>; somara.lakra <somara.lakra@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Sugata Bhattacharya (सुगाता भट्टाचार्या) <sugata@grid-india.in>; deepak.kr <deepak.kr@grid-india.in>; aen.com <xen.prot.alwar@rvpn.co.in>; m.alwar@rvpn.co.in; aen.mpt&s.rtg@rvpn.co.in; aen.comm.ratangarh@rvpn.co.in; aen.subslcd.bhl@rvpn.co.in; xen.mpts.bhl@rvpn.co.in; aen.prot.mertacity@RVPN.CO.IN; aen.comm.merta@RVPN.CO.IN; nainwal@powergrid.in; vinaykumargupta@powergrid.in; ravindra_kumar@powergrid.in; smahajan1999@powergrid.in; rkagrawal83@powergrid.in; dharmendrameena@powergrid.in; vineet@powergrid.in; bhakalramjash@powergrid.in; dhanonda400kv@gmail.com; sse220kvlulaahir@hvpn.org.in; sse220kvrwr@hvpn.org.in; sse132kvdadri@hvpn.org.in; ae-220kvg1-mgg@pstcl.org; sse-pm-lalton@pstcl.org; sse-pm-mlrk@pstcl.org; eeetdshamli@upptcl.org; ee400mrd2@upptcl.org; aeoprotection@upslcd.org; ase-sldcop@pstcl.org; bl.gujar@dtl.gov.in; ce.ld@rvpn.co.in; ce-sldc <ce-sldc@pstcl.org>; dtldata@yahoo.co.in; dtlscheduling@gmail.com; eesldccontrol@upslcd.org; ldrvpn1@rvpn.co.in; ldshutdown@gmail.com; ldshutdown@rvpn.co.in; paritosh.joshi@dtl.gov.in; pccont@bbmb.nic.in; pc-sldcop@pstcl.org; rajbir-walia79@yahoo.com; rtamc.nr1@powergrid.in; pankaj.jha@powergrid.in; neerajk@powergrid.in; se.mpts.udr@rvpn.co.in; se.prot.engg@rvpn.co.in; se.sold@rvpn.co.in; sera@upslcd.org; sesc@upslcd.org; sesldcop@hvpn.org; se-sldcop <se-sldcop@pstcl.org>; setncmrt@upptcl.org; sldcdata@gmail.com; sldcharyanacr@gmail.com; sldcmintoroad@gmail.com; system.uppcl@gmail.com; xenemtcbhpp2@bbmb.nic.in; xenmpccggn@hvpn.org; xenplgss@hvpn.org

Subject: Re: Status of Corrective actions for healthiness of 500kV Mundra-Mahindergarh SPS

***CAUTION:** This mail has originated from outside Adani. Please exercise caution with links and attachments.*

महोदय / महोदया,

In reference of the trailing mail, it is requested to kindly share the update regarding FAT which was supposed to be completed by 30.09.2025 and further following the FAT, the material are to be shipped to various sites and installed by 30th October 2025.

In view of above, it is requested to kindly update the present status and future action plan.

सादर धन्यवाद/ Thanks & Regards
प्रणाली संचालन-II/ System Operation-II
उ०क्ष०भा०प्रे०के०/ NRLDC

1/8/26, 10:04 AM

Mail - sugata@grid-india.in

ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड/ Grid Controller of India Limited

Formerly known as

पोसोको / POSOCO



भारत 2023 इंडिया

समृद्धिं कुरुतुवन्तम्

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Annexure-B.VIII

| S.No | Name of the Line | Circuit ID | Proposed Over Voltage protection setting by Committee | | | | | | | | Status of Implementation (Yes / NO) | Modified Over Voltage protection setting (If any) | | | | | | | | Remarks for modification required / done |
|---|--------------------------------|------------|---|----------|---------------------|----------|--------------------|----------|---------------------|----------|-------------------------------------|---|----------|---------------------|----------|--------------------|----------|---------------------|---|--|
| | | | End I | | | | End II | | | | | End I | | | | End II | | | | |
| | | | stage I pick up(%) | time (s) | stage II pick up(%) | time (s) | stage I pick up(%) | time (s) | stage II pick up(%) | time (s) | | stage I pick up(%) | time (s) | stage II pick up(%) | time (s) | stage I pick up(%) | time (s) | stage II pick up(%) | time (s) | |
| 1. 765KV Transmission Line | | | | | | | | | | | | | | | | | | | | |
| A. POWERGRID | | | | | | | | | | | | | | | | | | | Confirmation received from POWERGRID | |
| 1 | Agra-Aligarh | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 2 | Agra-Fatehpur | 1 | 107 | 5 | 150 | 0.1 | 107 | 5 | 150 | 0.1 | | | | | | | | | | |
| 3 | Agra-Fatehpur | 2 | 108 | 9 | 150 | 0.1 | 108 | 9 | 150 | 0.1 | | | | | | | | | | |
| 4 | Agra-Gwallior IR | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 5 | Agra-Gwallior IR | 2 | 109 | 9 | 150 | 0.1 | 109 | 9 | 150 | 0.1 | | | | | | | | | | |
| 6 | Agra-Jhatikara | 1 | 106 | 5 | 140 | 0.1 | 106 | 5 | 140 | 0.1 | 108 | 6 | 140 | 0.1 | 106 | 5 | 140 | 0.1 | On request of POWERGRID(NR-3) after tripping of line on OV two(02) number of times. | |
| 7 | Ajmer(PG)-Bhadla_2(PG) | 1 | 109 | 8 | 140 | 0.1 | 109 | 8 | 140 | 0.1 | | | | | | | | | | |
| 8 | Ajmer(PG)-Bhadla_2(PG) | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 9 | Ajmer(PG)-Chittorgarh(PG) | 1 | 110 | 9 | 140 | 0.1 | 110 | 9 | 140 | 0.1 | | | | | | | | | | |
| 10 | Ajmer(PG)-Chittorgarh(PG) | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 11 | Ajmer(PG)-Phagi(RS) | 1 | 108 | 7 | 140 | 0.1 | 108 | 7 | 140 | 0 | | | | | | | | | | |
| 12 | Ajmer(PG)-Phagi(RS) | 2 | 110 | 12 | 140 | 0.1 | 110 | 12 | 140 | 0 | | | | | | | | | | |
| 13 | Aligarh(PG)-Sikar_2(PSTL) | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 14 | Aligarh(PG)-Sikar_2(PSTL) | 2 | 108 | 9 | 150 | 0.1 | 108 | 9 | 150 | 0.1 | | | | | | | | | | |
| 15 | Aligarh-G.Noida | 1 | 109 | 7 | 150 | 0.1 | 109 | 7 | 150 | 0.1 | | | | | | | | | | |
| 16 | Balia-Gaya IR | 1 | 108 | 7 | 150 | 0.1 | 108 | 7 | 150 | 0.1 | | | | | | | | | | |
| 17 | Balia-Lucknow_2(PG) | 1 | 108 | 9 | 150 | 0.1 | 108 | 9 | 150 | 0.1 | | | | | | | | | | |
| 18 | Bhadla_III(PG)-Sikar_2(PG) | 1 | 109 | 6 | 150 | 0.1 | 109 | 6 | 150 | 0.1 | | | | | | | | | | |
| 19 | Bhadla_III(PG)-Sikar_2(PG) | 2 | 110 | 15 | 150 | 0.1 | 110 | 15 | 150 | 0.1 | | | | | | | | | | |
| 20 | Bhawanishikara | 1 | 109 | 10 | 140 | 0.1 | 109 | 10 | 140 | 0.1 | | | | | | | | | | |
| 21 | Bhawan-Meerut | 1 | 109 | 7 | 140 | 0.1 | 109 | 7 | 140 | 0.1 | | | | | | | | | | |
| 22 | Bhawan-Phagi | 1 | 109 | 5 | 140 | 0.1 | 109 | 5 | 140 | 0 | | | | | | | | | | |
| 23 | Bhawan-Phagi | 2 | 109 | 7 | 140 | 0.1 | 109 | 7 | 140 | 0 | | | | | | | | | | |
| 24 | Bikaner(PG)-Bhadla(PG) | 1 | 109 | 8 | 140 | 0.1 | 109 | 8 | 140 | 0.1 | | | | | | | | | | |
| 25 | Bikaner(PG)-Bhadla(PG) | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 26 | Bikaner(PG)-Bhadla_2(PG) | 1 | 108 | 7 | 140 | 0.1 | 108 | 7 | 140 | 0.1 | | | | | | | | | | |
| 27 | Bikaner(PG)-Bhadla_2(PG) | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 28 | Bikaner(PG)-Moga | 1 | 108 | 5 | 140 | 0.1 | 108 | 5 | 140 | 0.1 | | | | | | | | | | |
| 29 | Bikaner(PG)-Moga | 2 | 110 | 13 | 140 | 0.1 | 110 | 13 | 140 | 0.1 | | | | | | | | | | |
| 30 | Chittorgarh(PG)-Banaskantha IR | 1 | 110 | 9 | 140 | 0.1 | 110 | 9 | 140 | 0.1 | | | | | | | | | | |
| 31 | Chittorgarh(PG)-Banaskantha IR | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 32 | Fatehpur-Sasaram IR | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 33 | Fatehpur_2(PG)-Bhadla_2(PG) | 1 | 109 | 9 | 140 | 0.1 | 109 | 9 | 140 | 0.1 | | | | | | | | | | |
| 34 | Fatehpur_2(PG)-Bhadla_2(PG) | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 35 | Fatehpur_2(PG)-Bhadla_2(PG) | 3 | 107 | 5 | 140 | 0.1 | 107 | 5 | 140 | 0.1 | | | | | | | | | | |
| 36 | Fatehpur_2(PG)-Bhadla_2(PG) | 4 | 108 | 8 | 140 | 0.1 | 108 | 8 | 140 | 0.1 | | | | | | | | | | |
| 37 | Jhatikara-Aligarh | 1 | 107 | 7 | 140 | 0.1 | 107 | 7 | 140 | 0.1 | | | | | | | | | | |
| 38 | Jhatikara(PG)-Khetri(PKTSL) | 1 | 108 | 5 | 140 | 0.1 | 108 | 5 | 140 | 0.1 | | | | | | | | | | |
| 39 | Jhatikara(PG)-Khetri(PKTSL) | 2 | 109 | 6 | 140 | 0.1 | 109 | 6 | 140 | 0.1 | | | | | | | | | | |
| 40 | Kanpur(G)-Aligarh | 1 | 109 | 9 | 150 | 0.1 | 109 | 9 | 150 | 0.1 | | | | | | | | | | |
| 41 | Lucknow_2(PG)-Bareilly_2(PG) | 1 | 109 | 5 | 150 | 0.1 | 109 | 5 | 150 | 0.1 | | | | | | | | | | |
| 42 | Meerut-G.Noida | 1 | 109 | 7 | 140 | 0.1 | 109 | 7 | 140 | 0.1 | | | | | | | | | | |
| 43 | Meerut-Koteshwar(PG) | 1 | 107 | 7 | 140 | 0.1 | 107 | 7 | 140 | 0.1 | | | | | | | | | | |
| 44 | Meerut-Koteshwar(PG) | 2 | 109 | 9 | 140 | 0.1 | 109 | 9 | 140 | 0.1 | | | | | | | | | | |
| 45 | Moga-Bhawan(PG) | 1 | 109 | 5 | 140 | 0.1 | 109 | 5 | 140 | 0.1 | | | | | | | | | | |
| 46 | Moga-Meerut | 1 | 108 | 5 | 140 | 0.1 | 108 | 5 | 140 | 0.1 | | | | | | | | | | |
| 47 | Orai-Aligarh | 1 | 107 | 5 | 150 | 0.1 | 107 | 5 | 150 | 0.1 | | | | | | | | | | |
| 48 | Orai-Aligarh | 2 | 108 | 7 | 150 | 0.1 | 108 | 7 | 150 | 0.1 | | | | | | | | | | |
| 49 | Orai-Jabalpur IR | 1 | 107 | 5 | 150 | 0.1 | 107 | 5 | 150 | 0.1 | | | | | | | | | | |
| 50 | Orai-Jabalpur IR | 2 | 109 | 5 | 150 | 0.1 | 109 | 5 | 150 | 0.1 | | | | | | | | | | |
| 51 | Orai-Satna IR | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 52 | Orai-Gwallior IR | 1 | 108 | 6 | 150 | 0.1 | 108 | 6 | 150 | 0.1 | | | | | | | | | | |
| 53 | Phagi-Gwallior IR | 1 | 110 | 5 | 140 | 0.1 | 110 | 5 | 140 | 0.1 | 109 | 5 | 140 | 0.1 | 109 | 5 | 140 | 0.1 | On request of RVPNL & POWERGRID(NR-1) for incorporating voltage grading | |
| 54 | Phagi-Gwallior IR | 2 | 110 | 7 | 140 | 0.1 | 110 | 7 | 140 | 0.1 | 110 | 12 | 140 | 0.1 | 110 | 12 | 140 | 0.1 | | |
| 55 | Varanasi-Balia | 1 | 109 | 5 | 150 | 0.1 | 109 | 5 | 150 | 0.1 | | | | | | | | | | |
| 56 | Varanasi-Fatehpur | 1 | 109 | 5 | 150 | 0.1 | 109 | 5 | 150 | 0.1 | | | | | | | | | | |
| 57 | Varanasi-Gaya IR | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 58 | Varanasi-Gaya IR | 2 | 109 | 9 | 150 | 0.1 | 109 | 9 | 150 | 0.1 | | | | | | | | | | |
| 59 | Varanasi-Kanpur | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 60 | Varanasi-Kanpur | 2 | 110 | 5 | 150 | 0.1 | 110 | 5 | 150 | 0.1 | | | | | | | | | | |
| 61 | Varanasi-Vindhyachal Pooling | 1 | 108 | 5 | 150 | 0.1 | 108 | 5 | 150 | 0.1 | | | | | | | | | | |
| 62 | Varanasi-Vindhyachal Pooling | 2 | 109 | 9 | 150 | 0.1 | 109 | 9 | 150 | 0.1 | | | | | | | | | | |
| B. Adani Transmission India Ltd. (ATIL) (BKTL, FBTL) | | | | | | | | | | | | | | | | | | | | |
| 1 | Bikaner(PG)-Khetri(PKTSL) | 1 | 109 | 9 | 140 | 0.1 | 109 | 9 | 140 | 0.1 | | | | | | | | | | |
| 2 | Bikaner(PG)-Khetri(PKTSL) | 2 | 110 | 15 | 140 | 0.1 | 110 | 15 | 140 | 0.1 | | | | | | | | | | |
| 3 | Fatehpur_III(PG)-Bhadla(PG) | 1 | 108 | 6 | 140 | 0.1 | 108 | 6 | 140 | 0.1 | | | | | | | | | | |
| 4 | Fatehpur_III(PG)-Bhadla(PG) | 2 | 110 | 12 | 140 | 0.1 | 110 | 12 | 140 | 0.1 | | | | | | | | | | |
| C. UPPTCL | | | | | | | | | | | | | | | | | | | | |
| 1 | Agra Fatehabad-Ghatampur | 1 | 108 | 7 | 140 | 0.1 | 108 | 7 | 140 | 0.1 | | | | | | | | | | |
| 2 | Agra Fatehabad-G.Noida | 1 | 109 | 5 | 140 | 0.1 | 109 | 5 | 140 | 0.1 | | | | | | | | | | |
| 3 | Anpara C-Anpara D | 1 | 108 | 5 | 140 | 0.1 | 108 | 5 | 140 | 0.1 | | | | | | | | | | |
| 4 | Anpara C-Unnao | 1 | 109 | 5 | 140 | 0.1 | 110 | 7 | 140 | 0.1 | | | | | | | | | | |
| 5 | Anpara D-Obra_C | 1 | 110 | 7 | 140 | 0.1 | 110 | 7 | 140 | 0.1 | | | | | | | | | | |
| 6 | Bara-Mainpur | 2 | 108 | 7 | 140 | 0.1 | 108 | 7 | 140 | 0.1 | | | | | | | | | | |
| 7 | Ghatampur-Rampur_PRSTL | 1 | 109 | 5 | 140 | 0.1 | 109 | 5 | 140 | 0.1 | | | | | | | | | | |
| 8 | Hapur(UP)-Meerut_PMSTL | 1 | 110 | 7 | 140 | 0.1 | 110 | 7 | 140 | 0.1 | | | | | | | | | | |
| 9 | Hapur(UP)-Rampur_PRSTL | 1 | 108 | 5 | 140 | 0.1 | 108 | 5 | 140 | 0.1 | | | | | | | | | | |
| 10 | Hapur-Mainpur | 1 | 109 | 7 | 140 | 0.1 | 109 | 7 | 140 | 0.1 | | | | | | | | | | |
| 11 | Jawaharpur-G.NOIDA | 1 | 110 | 5 | 140 | 0.1 | 110 | 5 | 140 | 0.1 | | | | | | | | | | |
| 12 | Lalitpur - Agra Fatehabad | 1 | 108 | 5 | 140 | 0.1 | 108 | 5 | 140 | 0.1 | | | | | | | | | | |
| 13 | Lalitpur - Agra Fatehabad | 2 | | | | | | | | | | | | | | | | | | |

Annexure-B.IX

| State Name | Defense Scheme | Planned Relief (MW) | Mapped Relief (MW) | No. of Main feeders Planned | No. of Main feeders Telemetered | No. of Alternate feeders Telemetered |
|------------|----------------|---------------------|--------------------|-----------------------------|---------------------------------|--------------------------------------|
| UP | UFR | 5958.843 | | | | |
| | df/dt | 2561.92 | | | | |
| Rajasthan | UFR | 4055.282 | | | | |
| | df/dt | 776 | | | | |
| Punjab | UFR | 3008.19 | | | | |
| | df/dt | 1410 | | | | |
| Haryana | UFR | 2631.661 | | | | |
| | df/dt | 900 | | | | |
| Delhi | UFR | 1496.69 | | | | |
| | df/dt | 809.36 | | | | |
| HP | UFR | 486.231 | | | | |
| | df/dt | 190 | | | | |

| S.N. | Name of S/stn (including voltage level) | Name of feeder/transformer (including voltage level) | UFR Stage-wise Estimated Load relief (MW) | | | |
|------|---|--|---|---------|---------|---------|
| | | | 49.4 Hz | 49.2 Hz | 49.0 Hz | 48.8 Hz |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| S.N. | Name of S/stn (including voltage level) | Name of feeder/transformer (including voltage level) | df/dt Stage-wise Estimated Load relief (MW) | | |
|------|---|--|---|------------------|------------------|
| | | | 49.9 Hz; 0.1Hz/s | 49.9 Hz; 0.2Hz/s | 49.9 Hz; 0.3Hz/s |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |