CEA-GO-17-11/1/2023-NRPC

I/52747/2025

सत्यमेव जयते

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

विषय: प्रचालन समन्वय उप-समिति की 234 वीं बैठक की कार्यसूची ।

Subject: Agenda of the 234th OCC meeting.

प्रचालन समन्वय उप-समिति की **234 वीं** बैठक का आयोजन वीडियो कॉन्फ्रेंसिंग के माध्यम से दिनांक **14.08.2025** को **10:30** बजे से किया जायेगा । उक्त बैठक की कार्यसूची उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट http://164.100.60.165 पर उपलब्ध है ।

बैठक में सम्मिलित होने के लिए लिंक व पासवर्ड सभी सदस्यों को ई-मेल द्वारा प्रदान किया जाएगा।

कृपया बैठक में उपस्थित होने की सुविधा प्रदान करें।

The **234th** meeting of the Operation Co-ordination sub-committee will be conducted through Video Conferencing on **14.08.2025** from **10:30 Hrs**. The agenda of this meeting has been uploaded on the NRPC web-site http://164.100.60.165.

The link and password for joining the meeting will be e-mailed to respective e-mail IDs in due course.

Kindly make it convenient to attend the meeting.

(डी. के. मीना) 12/8/25
अधीक्षण अभियंता (प्रचालन)

सेवा में : प्रचालन समन्वय उप समिति के सभी सदस्य।
To : All Members of OCC

List of addressee (via mail)

OCC Members for FY 2025-26			
S. No.	**OCC Member**	**Category**	**E-mail**
1	NLDC	National Load Despatch Centre	nomination awaited (susha@grid-india.in)
2	NRLDC	Northern Regional Load Despatch Centre	somara.lakra@grid-india.in
3	CTUIL	Central Transmission Utility	sandeepk@powergrid.in
4	PGCIL	Central Government owned Transmission Company	rtamc.nr1@powergrid.in rtamcjammu@powergrid.in cpcc.nr3@powergrid.in
5	NTPC	Central Generating Company	RAMESHSINGH@NTPC.CO.IN
6	BBMB		powerc@bbmb.nic.in
7	THDC		ravindrasrana@thdc.co.in
8	SJVN		sjvn.cso@sjvn.nic.in
9	NHPC		surendramishra@nhpc.nic.in
10	NPCIL		df@npcil.co.in
11	Delhi SLDC	State Load Despatch Centre	gmsldc@delhisldc.org
12	Haryana SLDC		cesocomml@hvpn.org.in
13	Rajasthan SLDC		ce.ld@rvpn.co.in
14	Uttar Pradesh SLDC		cepso@upsldc.org
15	Uttarakhand SLDC		se_sldc@ptcul.org
16	Punjab SLDC		ce-sldc@pstcl.org
17	Himachal Pradesh SLDC		cehpsldc@gmail.com
18	DTL	State Transmission Utility	bl.gujar@dtl.gov.in
19	HVPNL		cetspkl@hvpn.org.in
20	RRVPNL		ce.ppm@rvpn.co.in
21	UPPTCL		smart.saxena@gmail.com
22	PTCUL		ce_oandmk@ptcul.org
23	PSTCL		ce-tl@pstcl.org
24	HPPTCL		gmprojects.tcl@hpmail.in
25	IPGCL	State Generating Company	ncsharma@ipgcl-ppcl.nic.in
26	HPGCL		seom2.rgtpp@hpgcl.org.in
27	RRVUNL		ce.ppmcit@rrvun.com
28	UPRVUNL		cgm.to@uprvunl.org
29	UJVNL		gm_engg_ujvn@yahoo.co.in
30	HPPCL		gm_generation@hppcl.in
31	PSPCL	State Generating Company & State owned Distribution Company	ce-ppr@pspcl.in
32	DHBVN	State owned Distribution Company (alphabetical rotational basis/nominated by state govt.)	nomination awaited (md@dhbvn.org.in)
33	Ajmer Vidyut Vitran Nigam Ltd.		nomination awaited (md.avvnl@rajasthan.gov.in)
34	Purvanchal Vidyut Vitaran Nigam Ltd.		nomination awaited (mdpurvanchalvvnl@gmail.com)

35	UPCL		cgmupcl@yahoo.com
36	HPSEB		cesysophpsebl@gmail.com
37	Prayagraj Power Generation Co. Ltd.	IPP having more than 1000 MW installed capacity	sanjay.bhargava@tatapower.com
38	Aravali Power Company Pvt. Ltd		amit.hooda01@apcpl.co.in
39	Apraave Energy Ltd.,		niraj.gupta@apraava.com
40	Talwandi Sabo Power Ltd.		ravinder.thakur@vedanta.co.in
41	Nabha Power Limited		Durvesh.Yadav@larsentoubro.com
42	MEIL Anpara Energy Limited		arun.tholia@meilanparapower.com
43	Rosa Power Supply Company Ltd		Suvendu.Dey@relianceada.com
44	Lalitpur Power Generation Company Ltd		avinashkumar.ltp@lpgcl.com
45	MEJA Urja Nigam Ltd.		rsjuneja@ntpc.co.in
46	Adani Power Rajasthan Limited		manoj.taunk@adani.com
47	JSW Energy Ltd. (KWHEP)		roshan.zipta@jsw.in
48	Transition Cleantech Services Private Limited	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)	nomination awaited (kswamidoss@evrenenergy.com)
49	UT of J&K	From each of the Union Territories in the region, a representative nominated by the administration of the Union Territory concerned out of the entities engaged in generation/ transmission/ distribution of electricity in the Union Territory.	sojpdd@gmail.com
50	UT of Ladakh		cepdladakh@gmail.com
51	UT of Chandigarh		seelo-chd@nic.in
52	Tata Power Delhi Distribution Limited	Private Distribution Company in region (alphabetical rotational basis)	nomination awaited (sandeep.k@tatapower-ddl.com)
53	Gurgaon Palwal Transmission Limited	Private transmission licensee (nominated by central govt.)	(samriddhi.gogoi@indigrid.com)
54	PTC India Limited	Electricity Trader (nominated by central govt.)	nomination awaited (bibhuti.prakash@ptcindia.com)

Contents

खण्ड-क: उ.क्षे.वि.स. Part-A: NRPC

A.1. Confirmation of Minutes

233rd OCC meeting was held on 15.07.2025. Minutes of the meeting were issued vide letter dt. 09.08.2025. No comments received till date.

Decision required from Forum:

Forum may approve the minutes of 233rd OCC meeting.

A.2. Status of action taken on decisions of 233rd OCC meeting of NRPC

A.2.1. Status of action taken on decisions of 233rd OCC meeting is attached as **Annexure- A.I**.

A.3. Review of Grid operations

A.3.1. **Power Supply Position (Provisional) for July 2025**

Anticipated Power Supply Position v/s Actual Power Supply Position (Provisional) of Northern Region during the month of July-2025 is as under:

State / UT	Req. / Avl.	Energy (MU)			Peak (MW)		
		Anticipated	Actual	% Variation	Anticipated	Actual	% Variation
CHANDIGARH	(Avl)	220	212	-3.8%	430	399	-7.2%
	(Req)	248	212	-14.6%	465	399	-14.2%
DELHI	(Avl)	5994	4226	-29.5%	8376	7568	-9.6%
	(Req)	4600	4227	-8.1%	8200	7568	-7.7%
HARYANA	(Avl)	7550	7946	5.2%	14496	14084	-2.8%
	(Req)	8857	7948	-10.3%	15558	14084	-9.5%
HIMACHAL PRADESH	(Avl)	1256	1131	-10.0%	1688	1835	8.7%
	(Req)	1277	1136	-11.1%	1693	1835	8.4%
J&K and LADAKH	(Avl)	2000	1621	-19.0%	3370	2729	-19.0%
	(Req)	1810	1622	-10.4%	2839	2729	-3.9%
PUNJAB	(Avl)	8910	9595	7.7%	16950	16670	-1.7%
	(Req)	10915	9595	-12.1%	16950	16670	-1.7%
RAJASTHAN	(Avl)	9820	8567	-12.8%	19220	14685	-23.6%
	(Req)	9920	8567	-13.6%	17500	14685	-16.1%
UTTAR PRADESH	(Avl)	17515	16891	-3.6%	32000	30818	-3.7%
	(Req)	17360	16895	-2.7%	32000	30818	-3.7%

UTTARAKHAND	(Avl)	1528	1555	1.8%	2476	2673	8.0%
	(Req)	1550	1560	0.7%	2500	2673	6.9%
NORTHERN REGION	(Avl)	54792	51743	-5.6%	98300	81600	-17.0%
	(Req)	56537	51761	-8.4%	95300	81600	-14.4%

As per above, negative / significant variation (≥5%) in Actual Power Supply Position(Provisional) vis-à-vis Anticipated figures is observed for the month of July-2025 in terms of Energy Requirement for Chandigarh, Delhi, Haryana, HP, UTs of J&K and Ladakh, Punjab, Rajasthan, UP, and in terms of Peak Demand similar variation is noted for Chandigarh, Delhi, Haryana, HP, UTs of J&K and Ladakh, Punjab, Rajasthan, UP, and Uttarakhand. These states/UTs are requested to submit reason for such variations so that the same can be deliberated in the meeting.

All SLDCs are requested to furnish provisional and revised power supply position in prescribed formats on NRPC website portal by 2nd and 15th day of the month respectively for the compliance of Central Electricity Authority (Furnishing of Statistics, Returns and Information) Regulations, 2007.

A.4. Maintenance Programme of Generating Units and Transmission Lines

A.4.1. Maintenance Programme for Generating Units

The meeting on proposed maintenance programme for Generating Units for the month of September-2025 is scheduled on 13-August-2025 via Video Conferencing.

A.4.2. Outage Programme for Transmission Elements

The meeting on proposed outage programme of Transmission elements for the month of September -2025 is scheduled on 13- August -2025 via Video conferencing.

A.5. Planning of Grid Operation

A.5.1. Anticipated Power Supply Position in Northern Region for September 2025

The Anticipated Power Supply Position in Northern Region for September 2025 is as under:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
CHANDIGARH	Availability	190	420	No Revision submitted
	Requirement	200	434	

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	Surplus / Shortfall	-10	-14	
	% Surplus / Shortfall	-5.0%	-3.2%	
DELHI	Availability	3520	8420	No Revision submitted
	Requirement	3860	7617	
	Surplus / Shortfall	-340	803	
	% Surplus / Shortfall	-8.8%	10.5%	
HARYANA	Availability	6750	14430	No Revision submitted
	Requirement	7106	14097	
	Surplus / Shortfall	-356	333	
	% Surplus / Shortfall	-5.0%	2.4%	
HIMACHAL PRADESH	Availability	1145	1545	08-Aug-2025
	Requirement	1130	1560	
	Surplus / Shortfall	15	-15	
	% Surplus / Shortfall	1.3%	-1.0%	
J&K and LADAKH	Availability	1570	3360	No Revision submitted
	Requirement	1698	3429	
	Surplus / Shortfall	-128	-69	
	% Surplus / Shortfall	-7.5%	-2.0%	
PUNJAB	Availability	8420	16630	No Revision submitted
	Requirement	8986	16206	
	Surplus / Shortfall	-566	424	
	% Surplus / Shortfall	-6.3%	2.6%	
RAJASTHAN	Availability	8810	18940	No Revision submitted
	Requirement	10516	18536	
	Surplus / Shortfall	-1706	404	
	% Surplus / Shortfall	-16.2%	2.2%	
UTTAR PRADESH	Availability	15450	31000	07-Aug-2025
	Requirement	15300	31000	
	Surplus / Shortfall	150	0	
	% Surplus / Shortfall	1.0%	0.0%	
UTTARAKHAND	Availability	1490	2555	05-Aug-2025
	Requirement	1500	2575	

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	Surplus / Shortfall	-10	-20	
	% Surplus / Shortfall	-0.7%	-0.8%	
NORTHERN REGION	Availability	47345	97000	
	Requirement	50296	88900	
	Surplus / Shortfall	-2951	8100	
	% Surplus / Shortfall	-5.9%	9.1%	

SLDCs are requested to update the anticipated power supply position of their respective state / UT for the month of September-2025 and submit the measures proposed to be taken to bridge the gap between demand & availability, as well to dispose-off the surplus, if any, in the prescribed format.

A.6. Follow-up of issues from previous OCC Meetings- Status update.

The updated status of agenda items is enclosed at **Annexure-A.II**.

All utilities are requested to update the status.

A.7. NR Islanding scheme

Latest status of Islanding Scheme of NR is attached as **Annexure-A.III.**

Members may kindly deliberate.

A.8. Coal Supply Position of Thermal Plants in Northern Region

A.8.1 In 186th OCC meeting, it was agreed that coal stock position of generating stations in northern region may be reviewed in the OCC meetings on the monthly basis.

A.8.2 Accordingly, coal stock position of generating stations in northern region during current month (till 08th August 2025) is as follows:

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd. (Days)	Actual Stock (Days)
ANPARA C TPS	1200	0.83	16	9.8
ANPARA TPS	2630	0.82	16	22.6
BARKHERA TPS	90	0.00	24	52.4
DADRI (NCTPP)	1820	0.42	24	25.1
GH TPS (LEH.MOH.)	920	0.89	24	20.8
GOINDWAL SAHIB TPP	540	0.69	24	21.9
HARDUAGANJ TPS	1265	0.40	24	44.4

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd. (Days)	Actual Stock (Days)
INDIRA GANDHI STPP	1500	0.46	24	47.2
KAWAI TPS	1320	0.70	24	25.0
KHAMBARKHERA TPS	90	0.00	24	49.8
KOTA TPS	1240	0.48	24	27.9
KUNDARKI TPS	90	0.00	24	43.9
LALITPUR TPS	1980	0.71	24	21.0
MAHATMA GANDHI TPS	1320	0.72	24	31.2
MAQSOODPUR TPS	90	0.00	24	55.8
MEJA STPP	1320	0.70	24	22.0
OBRA TPS	1094	0.36	24	12.9
PANIPAT TPS	710	0.54	24	41.5
PARICHHA TPS	1140	0.64	24	17.3
PRAYAGRAJ TPP	1980	0.77	24	28.4
RAJIV GANDHI TPS	1200	0.68	24	36.4
RAJPURA TPP	1400	0.90	24	24.5
RIHAND STPS	3000	0.87	16	23.3
ROPAR TPS	840	0.62	24	33.4
ROSA TPP Ph-I	1200	0.68	24	30.4
SINGRAULI STPS	2000	0.82	16	14.6
SURATGARH TPS	1500	0.27	24	27.8
TALWANDI SABO TPP	1980	0.72	24	22.8
TANDA TPS	1760	0.55	24	32.1
UNCHAHAR TPS	1550	0.72	24	27.5
UTRAULA TPS	90	0.00	24	42.5
YAMUNA NAGAR TPS	600	0.60	24	26.9
CHHABRA-I PH-1 TPP	500	0.38	24	28.5
KALISINDH TPS	1200	0.36	24	23.1
SURATGARH STPS	1320	0.47	24	31.3
CHHABRA-I PH-2 TPP	500	0.79	24	21.6
CHHABRA-II TPP	1320	0.65	24	28.6
JAWAHARPUR STPP	660	0.06	24	27.9

A.9. Periodic testing of generators and FACTS/HVDC Devices (Agenda by NRPC Sectt.)

A.9.1. Regulation 40 (1) of CERC (IEGC) Regulations, 2023 stipulate that there shall be periodic tests, as required under clause (3) of this Regulation, carried out on power

system elements for ascertaining the correctness of mathematical models used for simulation studies as well as ensuring desired performance during an event in the system.

A.9.2. The tests shall be performed once every five (5) years or whenever major retrofitting is done. If any adverse performance is observed during any grid event, then the tests shall be carried out even earlier, if advised by SLDC/RLDC/NLDC/RPC, as the case may be.

A.9.3. Further, Regulation 40(1)(b) stipulate that "All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule. In case of any change in the schedule, the owners shall inform the concerned RPC in advance."

Extract of IEGC 2023 clause 40,

"40. PERIODIC TESTING

(1) There shall be periodic tests, as required under clause (3) of this Regulation, carried out on power system elements for ascertaining the correctness of mathematical models used for simulation studies as well as ensuring desired performance during an event in the system.

(2) General provisions

(a) The owner of the power system element shall be responsible for carrying out tests as specified in these regulations and for submitting reports to NLDC, RLDCs, CEA and CTU for all elements and to STUs and SLDCs for intra-State elements.

(b) ***All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule****. In case of any change in the schedule, the owners shall inform the concerned RPC in advance.*

(c) The tests shall be performed once every five (5) years or whenever major retrofitting is done. If any adverse performance is observed during any grid event, then the tests shall be carried out even earlier, if so advised by SLDC, RLDC, NLDC, or RPC, as the case may be.

(d) The owners of the power system elements shall implement the recommendations, if any, suggested in the test reports in consultation with NLDC, RLDC, CEA, RPC and CTU.

(3) Testing requirements

The following tests shall be carried out on the respective power system elements:

TABLE 9 : TESTS REQUIRED FOR POWER SYSTEM ELEMENTS

Power System Elements	Tests	Applicability
Synchronous Generator	(1) Real and Reactive Power Capability assessment. (2) Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity (3) Model Validation and verification test for the complete Generator and Excitation System model including PSS. (4) Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions. (5) Testing of Governor performance and Automatic Generation Control.	Individual Unit of rating 100MW and above for Coal/lignite, 50MW and above gas turbine and 25 MW and above for Hydro.
Non synchronous Generator (Solar/Wind)	(1) Real and Reactive Power Capability for Generator (2) Power Plant Controller Function Test (3) Frequency Response Test (4) Active Power Set Point change test. (5) Reactive Power (Voltage / Power Factor / Q) Set Point change test	Applicable as per CEA Technical Standards for Connectivity.
HVDC/FACTS Devices	(1) Reactive Power Controller (RPC) Capability for HVDC/FACTS (2) Filter bank adequacy assessment based on present grid condition, in consultation with NLDC. (3) Validation of response by FACTS devices as per settings.	To all ISTS HVDC as well as Intra-State HVDC/FACTS, as applicable

A.9.4. In 73 NRPC meeting, NRPC forum asked all Generators and HVDC/FACT owners to furnish the Testing schedule for 2024-25 and 2025-26 to NRPC/NRLDC at the earliest. However, the same is still pending.

A.9.5. In 230th OCC meeting, MS NRPC asked Generators and HVDC/FACT owners to furnish Testing schedule for 2025-26 in the format attached at **Annexure-A.IV.a** to seo-nrpc@nic.in.

A.9.6. In view of the above Generators and HVDC/FACT owners are requested to furnish Testing schedule for 2025-26 in the format attached as **Annexure-A.IV.a to seo-nrpc@nic.in .**

A.9.7. List of Generating station from which information is received is attached as **Annexure-A.IV.b**

Utilities to update status.

A.10. Flexible Operation of Coal Based Thermal Power Plants (Agenda by NRPC Secretariat)

A.10.1. As per the CEA Gazette Notification dated January 30, 2023, coal-based thermal power generating units shall have flexible operation capability with a minimum power level 55%, along with specified ramp rates by January 2024. Additionally, a phased implementation plan for achieving a 40% minimum technical load (MTL) has been notified, with specific targets and timelines for compliance.

A.10.2. The status of MTDL achieved in intra-state thermal generating stations of Punjab, Rajasthan and Haryana noted in 223rd OCC meeting of NRPC is attached at **Annexure-A.V**.

A.10.3. NRPC Secretariat vide letter dated 31.07.2025 **(Annexure-A.VI)** had requested thermal generating stations mentioned at **Annexure-A.V** are requested to submit the reasons for not achieving 55% Technical Minimum Level.

Members may kindly deliberate.

A.11. Unit-wise Planned Maintenance schedule of Generating Units for the year 2026-27

(Agenda by NRPC Secretariat)

A.11.1. Central Electricity Authority vide mail dated 10.07.2025 has sought information regarding the Unit Wise Planned Maintenance schedule for the year 2026-27.

A.11.2. NRPC Secretariat vide letter dated 22.07.2025 (**Annexure-A.VII**) had requested respective SLDC's of Northern Region to co-ordinate with IPPs and State Generating Companies within their control area and submit the data as per **Annexure-A.VIII**. Further, Central Generating utilities are also requested to submit the abovementioned data as per **Annexure-A.VIII**.

A.11.3. All generating stations of NR are requested to submit Unit Wise Planned Maintenance schedule for the year 2026-27 in the format **Annexure-A.VIII** attached by email to seo-nrpc@nic.in by the 31st August 2025.

Members may kindly deliberate.

A.12. Approval of SPS at 400kV substation Bareilly (Agenda by UPSLDC)

A.12.1. UP SLDC has submitted that during peak load condition, ICTs at 400 kV substation Bareilly are observed to be N-1 noncompliant.

A.12.2. Meeting regarding identification of feeders for load shedding, logic of SPS and over current setting was held on 25.07.2025.

A.12.3. Based on discussion, UPSLDC has finalized SPS logic, which are enclosed as **Annexure-A.IX.**

A.12.4. UPSLDC has requested approval for its implementation of SPS.

Members may kindly deliberate.

A.13. Approval of SPS at 400 kV substation Panki (Agenda by UPSLDC)

A.13.1. UP SLDC has submitted that during peak load condition, ICTs at 400 kV S/S Panki are observed to be N-1 non-compliant. SPS for ICTs at 400 kV S/S Panki has been finalized by UPSLDC.

A.13.2. Agenda for approval of the same was put up in 232nd OCC Meeting wherein OCC forum found the SPS logic technically in order as per requirement. However, forum advised that Over Current settings may be reviewed in Protection Sub-Committee Meeting of NRPC.

A.13.3. UP SLDC has informed that over current settings at 400kV substation Panki has been implemented on 15.07.2025 as per NRPC Protection philosophy. The same

was communicated to NRLDC and NRPC vide e-mail on dated 16.07.2025 & 30.07.2025 respectively.

A.13.4. SPS logic and over current settings are attached as **Annexure-A.X.**

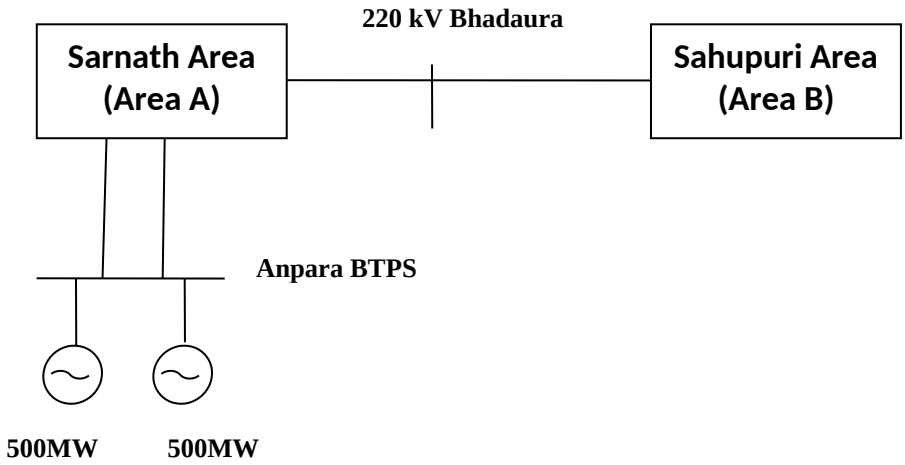
A.13.5. Therefore, UPSLDC has requested approval for its implementation of SPS.

Members may kindly deliberate.

A.14. Agenda on Varanasi Islanding Scheme (Agenda by UPSLDC)

A.14.1. UPSLDC has submitted that it has conducted steady state load flow study of Varanasi Islanding Scheme using generation of Anpara BTPS (2X500MW).

A.14.2. 400 kV Anpara BTPS is connected to 400 kV S/S Sarnath through 400 kV double circuit lines.



A.14.3. Study was conducted in various scenarios which are given as follows:-

Sl. No.	Case	Area	Number of Machine	Generation	Load	Remarks
1	Case-1	A and B	2	874 MW	806 MW (Summer Peak)	Not Feasible
2	Case-2	A and B	2	442 MW	435 MW (Winter Peak)	Not Feasible
3	Case-3	A	1	452 MW	440 MW (Summer Peak)	Feasible
4	Case-4	A	1	310 MW	305 MW (Summer Off Peak)	Feasible
5	Case-5	A and B	1	409 MW	402 MW (Winter Peak)	Feasible
6	Case-6	A and B	1	326 MW	322 MW (Winter Off Peak)	Feasible

A.14.4. As per the study, Islanding Scheme does not seem feasible in cases 1, due to under voltage observed at various node when 2 machine are taken considering area A & B

both, while in case 2 the load of area A & B is less than technical minimum of 2x500 MW units at Anpara BTPS for Winter scenario.

A.14.5. In case no. 3 and 4, one machine has been taken with load form Area A for summer scenario. Voltages and loading of transmission lines are within limit. However, for winter scenario, the load of area A is less than technical minimum of 1x500 MW units at Anpara BTPS. Therefore, to ensure technical minimum of unit, load of area A and B both has been taken in case no 5 and 6 for winter scenario. Study report is attached as **Annexure-A.XI.**

A.14.6. Therefore, UPSLDC has proposed that:-

i. Varanasi Islanding is to be planned with one machine.

ii. For Summer and Winter seasons, two different island areas i.e. Area A for Summer season and Area A & B for Winter season is to be considered.

iii. Decision may be taken whether dynamic study is required or not.

Members may kindly deliberate.

A.15. SOP for diversion of RPC approved spare Transformers/Reactors to constituents/state transmission utilities (Agenda by Powergrid NR-1)

A. Background

A.15.1. In line with the recommendations of committee formed under the direction of CERC in Petition No. 38/TT/2017, requirement of regional spare transformers and reactors is being assessed by POWERGRID and agreed in RPCs based on the population of existing transformers and reactors in POWERGRID substations.

A.15.2. POWERGRID procures and maintains the RPC approved transformers and reactors as regional spares to meet any contingency in it's existing substations for ensuring grid reliability and minimize downtime.

A.15.3. These spares are primarily for use in POWERGRID ISTS substations however, in some cases requests are being received by POWERGRID from constituents/state utilities to divert regional spare transformer(s)/reactor(s) on temporarily basis for their use in case of contingency to maintain power continuity and ensuring grid reliability. Further in past following ICTs has been provided to state constituents after approval of RPC forum: -

S. No.	ICT provided to other Utilities	Diverted from	Diverted to	Date	Tariff mech
1	BHEL Make 315 MVA 400/220 KV ICT	Ludhiana (POWERGRID)	Mundka (DTL)	Apr-23	RPC Spare
2	BHEL Make 315 MVA 400/220 KV ICT	Ludhiana (POWERGRID)	Jodhpur GSS - Surpura (RVPN)	Nov-23	RPC Spare
6	Toshiba make 500 MVA 400/220 KV ICT	Panchkula (POWERGRID)	Nakodar (PSTCL)	May-23	RPC Spare

A.15.4. Considering the diversion of above regional spare to state utilities and prolong delays in returning, severe shortage of spare ICTs has been observed by POWERGRID to meet any contingent situation in it's GRID Substations. Agenda for mechanisms to devise rental charges for ICT provided on loan basis was put up by POWERGRID in 78th NRPC meeting wherein following was decided by NRPC forum.

"Forum decided that the agenda may be discussed in the next Commercial Sub Committee meeting/special meeting for preparing draft mechanism to devise rental charges for ICT provided on loan basis"

Accordingly following SOP is put up for consideration by POWERGRID: -

B. General Conditions

As Regional spares are approved primarily for use of POWERGRID in its ISTS Substations, its diversion to regional state transmission utility may be considered under exceptional circumstances considering the gravity of requirement to the constituent and its beneficiaries on expeditious replenishment basis. Further, Inter Regional diversion of equipment to the constituent shall not be considered

C. Utilities eligible for diversion:

I. State Transmission Utility: Diversions can be considered in case of failure of existing equipment in use and diversion required in the interest of Grid security and reliability. It is clarified that under normal circumstances, a regional spare shall not be diverted for commissioning of new assets.

II. Other Utilities: For utilities other than State Transmission Utilities, under normal circumstances, such diversions are not envisaged. However, if agreed by RPC forum, such diversions may be allowed only under the exceptional circumstances.

D. Diversion Modalities of Regional spare transformer(S) / reactor(s) to State Transmission Utility:

1. In case of requirement of Regional spare transformer/ reactor by the Borrower i.e. State Transmission Utility, the requirement shall be put up for consent of the respective RPC forum, including:

I. Contingency situations describing the requirement of spare equipment from POWERGRID.
II. Action plan along with timeline for return/ replenishment of the spare equipment to POWERGRID

2. Decision of diversion along with associated terms and conditions for diversion will be based on the agreement reached in RPC Forum after considering the merit of the request. It is clarified that regional spare transformer/ reactor can be diverted only in case of restoration of failed equipment and not for commissioning of new equipment.

3. Upon approval in the RPC, the Spare transformer/ reactor shall be diverted to the Borrower only on replenishment basis and the same shall not be sold to the Borrower under any circumstances.

E. Signing of agreement

Upon approval in the RPC Forum & before diversion of Regional spare transformer/reactor, an agreement shall be signed between POWERGRID and the Borrower in the presence of Member Secretary of concerned RPC. The agreement shall cover the terms and conditions for the diversion of equipment in line with this SOP and as discussed below broadly;

a) Time period:

The Borrower shall return the Spare transformer/ reactor within the timeframe agreed by the RPC which in all cases shall not exceed a maximum of 24 months from the date of diversion. The spare transformer/ reactor is to be lifted within 3 months of RPC approval. Failing which the consent for diversion as agreed in the RPC shall be deemed to be withdrawn.

RPC secretariat shall monitor the list of such diverted equipment and coordinate to ensure that the replenishment by the borrower is done as per agreed timeframe.

b) Cost implications:

The equipment shall be diverted on zero cost basis/ cost neutral basis to POWERGRID. On account of the diversion, POWERGRID shall remain revenue neutral i.e. there shall be no change in CERC approved tariff or its sharing due to diversion of the concerned regional spare transformer/ reactor. The sharing of cost of the asset shall be as per Sharing Regulations. Further, if decided by RPC, tariff of the asset shall be borne by the requestor for the period of usage and charges of the asset shall be recovered bilaterally and adjusted back to pool.

c) Borrower Responsibilities:

1) The Borrower shall be responsible for dismantling, to & fro transportation, transit insurance, statutory expenses, erection, testing & commissioning charges (including at POWERGRID station after return) etc., any other incidental expenditure associated with the diversion of equipment or any loss to POWERGRID on account of diversion and all such charges shall be borne by the Borrower.

2) Borrower shall verify the condition of equipment at POWERGRID substation before taking the equipment on loan basis. After verification, the equipment shall be handed over to the Borrower.

3) Before diversion, the Borrower shall submit the Bank Guarantee (BG) equivalent to prevailing cost of diverted equipment. Borrower shall maintain BG valid until the diverted equipment is taken over by POWERGRID in healthy condition.

4) The Borrower shall be responsible for transportation/ erection/ commissioning/operation & maintenance.

5) The Borrower shall be responsible to maintain the equipment in healthy condition as per the standard maintenance practices.

6) The Borrower shall be responsible to ensure that the equipment is returned to POWERGRID in healthy condition as per the commitment/ action plan agreed prior to diversion.

7) Any damage/failure of the equipment shall be the responsibility of the Borrower till the equipment is taken over by POWERGRID in healthy condition.

8) In case of failure/ breakdown of equipment during transportation/ erection/commissioning/ operation & maintenance or during any other activity, the Borrower shall return the equipment after repair/ refurbishment of the same from OEM as per the POWERGRID specification. Alternatively, new equipment matching with the POWERGRID specifications shall be replenished. All cost for repair/ refurbishment/ replacement as applicable shall be borne by the Borrower.

9) After returning of equipment, all pre-commissioning tests shall be jointly performed at POWERGRID station to ascertain healthiness. In case of any deviation, POWERGRID shall take up the repair of equipment and cost of the repair shall be borne by the Borrower.

d) Return of equipment:

In case of any exigency or if required in the interest of the Grid, POWERGRID reserves the right to demand the diverted Spare from the Borrower prior to the time period as agreed in the RPC after intimation to RPC. Once consented in RPC Forum, Borrower shall return the diverted spare to POWERGRID on immediate basis.

e) Penalty clause:

In case of delay of return/ replenishment of spare equipment to POWERGRID beyond agreed time (maximum 24 months from the date of diversion), a penalty @15% of the approved tariff of diverted equipment for the delayed period to be imposed on the Borrower as one time charge.

A.16. Installation of 315 MVA 400/220kV Synthetic Ester Oil based Transformer in Delhi-NCR (Agenda by Powergrid NR-1)

A.16.1. Powergrid NR-1 has submitted that it has developed one number Synthetic Ester Oil based 315 MVA 400 / 220 Transformer in association with M/s Hitachi which is a first-of-its-kind, highlighting technological progress in the field of 400kV class Power Transformer in India due to following advantages:

- **Fire Safety**: Synthetic esters have a **high flash point (275–315°C)** and **fire point (317–355°C)**, significantly reducing fire risk compared to mineral oils.
- **Environmental Safety**: These fluids are **readily biodegradable** and **non-toxic**, minimizing ecological damage in case of leaks or spills.

- **Moisture Tolerance**: Synthetic esters can absorb more moisture without compromising insulation, which helps **extend transformer life** and **reduce aging of cellulose insulation**

A.16.2. It is pertinent to mention that for ease of designing and adoptability, said transformer does not have OLTC due to fact that type tested OLTC with ester oil was not available during engineering stage.

A.16.3. To have a close monitoring of performance of the Transformer, it is felt prudent to commission the transformer in Bhiwadi in place of existing operational transformer (ICT-2) for the following reason:

i. Bhiwadi is near to Delhi and it has a state of art oil testing laboratory. Hence, close monitoring and analysis of oil can be undertaken in exhaustive manner. Further, the data collected during testing may be used in future for fine tuning the design and specifications.
ii. ICT-2 at Bhiwadi exhibits high fault gases and is vulnerable which may affect the reliable power supply
iii. Further, it is to mention that there is no OLTC operations at Bhiwadi for the last 5 years

A.16.4. Powergrid NR-1 has proposed to replace 315 MVA 400/220kV ICT-2 with 315 MVA 400/220kV Synthetic Ester Oil based Transformer at Bhiwadi without any cost implication to constituents. Further the outage period for replacement to be considered as deemed available.

Members may kindly deliberate.

A.17. Operational Reliability Concerns Arising from Frequent Switching of MSR/MSC Circuit Breakers in STATCOMs at Renewable Energy Complexes (Agenda by Powergrid NR-1)

A.17.1. Powergrid NR-1 has submitted that a recent failure of the 245kV circuit breaker associated with the 125 MVAR Mechanically Switched Reactor (MSR) of STATCOM-1 at Bikaner-2 on 20.07.2025 has raised significant reliability and operational concerns. The failure resulted in extensive collateral damage, including failure of BPI units, MSC capacitor, and chipping in smoothening reactors. Presently, CB operation counters of MSR / MSC at Bikaner-2 are in range of 3000.

A.17.2. STATCOMs installed at RE complexes (Bikaner-2, Bhadla-2, Fatehgarh-2) are experiencing high switching frequency of MSR/MSC circuit breakers — averaging 5 to 6 operations per day — leading to accelerated wear and potential failure. Similar failures have already been observed in at other STATCOM sites of Eastern Region such as Jeypore, Kishanganj, and Ranchi etc.

A.17.3. During the initial design and application stage, POWERGRID had anticipated only 1-2 switching operations per day for MSRs in STATCOM applications, based on switching experience of Bus Reactors in 400kV System. A circuit breaker specifically designed for frequent inductive switching observed in STATCOMs installed in RE complex is not available, and the one in use is a compromise solution.

A.17.4. Circuit breakers currently deployed are not specifically rated for such frequent high-current inductive switching, and are operating beyond originally anticipated limits. OEMs have indicated higher TRVs and arcing stress due to such applications. Given the current switching frequency, periodic testing and health assessment of the circuit breakers is essential every two years & may necessitate overhauling, in line manufacturer guidelines. This will result in increased outage durations and the need for spare components and assemblies to replace damaged parts.

A.17.5. Given the current switching frequency, periodic testing and health assessment of the circuit breakers is essential every two years & may necessitate overhauling, in line manufacturer guidelines. This will result in increased outage durations and the need for spare components and assemblies to replace damaged parts.

A.17.6. Technical Concern:

a) Increased TRV due to frequent switching and high X/R ratio.
b) Premature degradation of arcing contacts and DCRM deviation.
c) Elevated maintenance requirements, potential outages, and risk of catastrophic failure.

A.17.7. Proposal for Deliberation:

1. Review and rationalization of MSC/MSR switching logic/settings to minimize unnecessary operations.
2. Consideration for periodic health assessment and mandatory overhauling of MSR breakers every two years.
3. Approval to claim replacement/major overhaul cost of MSR breakers under Add-Cap in case of high daily switching requirements.

A.17.8. Powergrid NR-1 has requested that members may deliberate on the matter and advise on suitable modifications in STATCOM operational logic and approval of Add-Cap expenditure, wherever applicable.

Members may kindly deliberate.

A.18. Regarding frequent/repetitive faults in 220KV Lines (Agenda by Powergrid NR-2)

A.18.1. Powergrid NR-2 has submitted that frequent faults are incurred in various lines, especially 220KV Network, and line is cleared for charging without fault finding. Further after charging the line, no corrective action is taken to rectify the fault resulting in repetition of the faults. Frequent faults in 220KV Lines are resulting in stress to POWER Transformers.

A.18.2. In last year, 01 No 400/220/33KV 315MVA Transformer had failed while feeding faults in 220KV Lines

A.18.3. Some of the best practices followed by POWERGRID in maintenance of the Lines are as under:

i. After each tripping, proper patrolling like ground patrolling/Tower top patrolling is done till identification of the fault
ii. Replacement of porecelain insulators with Polymer insulators

iii. Jumper clearance measurement and rectification in case of jumper flashover
iv. Measurement of Tower footing impedance and based on the results, additional earthing is done
v. In case of tripping due to lightening, installation of Line LAs has provided better results

A.18.4. Powergrid NR-2 has mentioned that it has analysed faults of various 220KV lines and most of the faults found to be of repetitive nature

Members may kindly deliberate.

A.19. Rectification of Normal-Intermediate-Transfer scheme of 400kV RASRA-MAU transmission line at RASRA UPPTCL end (Agenda by Powergrid NR-3)

A.19.1. Powergrid NR-3 has submitted that Powergrid owned transmission assets are installed within premises of State utilities. While their maintenance is managed by Powergrid, operational activities such as shutdowns or shifting to Transfer Bus Coupler (TBC) are under the purview of the respective State utility.

A.19.2. Sometimes, it observed that element/TL tripping had occurred due to wrong scheme implemented at state utility control Panel. In this regards Powergrid contacted concerned utilities numbers of time but issue is persisting.

A.19.3. Similar incidence occurred in 400 kV MAU-RASRA transmission line, the said line tripped at 11:58 hrs on date 17.01.2025 due to a DT (Direct Trip) signal received at the RASRA (UP) end.

A.19.4. Despite repeated requests made through the letter dated 18.01.2025, the email dated 12.02.2025 referencing the letter dated 28.07.2025, and the Minutes of Meeting (MoM) dated 21.01.2025, the issue has not yet been rectified by UPPTCL as per the directions outlined in the MoM.

A.19.5. Powergrid NR-3 has requested to kindly instruct to M/s UPPTCL for resolution of the above issue on Priority.

Members may kindly deliberate.

A.20. Shutdown of 500kV HVDC Rihand-Dadri CKT- I&II for Construction 765kV Bareilly-Neemrana D/C line for Power line crossing work (Agenda by Powergrid NR-3)

A.20.1. Powergrid NR-3 has submitted shutdown of 500kV HVDC Rihand-Dadri CKT- I&II for Power line crossing work towards under construction 765kV Bareilly-Neemrana D/C lines was proposed in 231st OCC meeting (in May’25) for the month of June’25. In the meeting shutdown was not approved by the forum due prevailing high-power demand.

A.20.2. Shutdown for the lines was then proposed in 232nd OCC meeting for the month July’25. The forum has approved the shutdown. However, in real time when shutdown was proposed from 24.07.2025 to 26.07.2025 (07:00 hrs to 19:00 hrs), it was rejected by RLDC mentioning that “To be availed in less NR demand period and with Unit outage at Rihand scheduled from 6th Aug”.

A.20.3. In line with RLDC's comment, shutdown of the HVDC lines (also approved in 233rd OCC) were further applied in real time from 06-08-2025 06:00 - 08-08-2025 19:00 (during the outage period of Rihand(NTPC)'s Generation unit). However, the same has been rejected again by RLDC mentioning that "In view of High generation at Rihand. At least 2 unit to be under shutdown in order to facilitate the shutdown".

A.20.4. Due to multiple time rejection of the shutdown since June'25, progress of construction work for 765kV Bareilly-Neemrana D/C line has been critically hampered.

A.20.5. Powergrid NR-3 has requested forum to look into matter to provide shutdown of above-mentioned lines in Aug'25.

Members may kindly deliberate.

खण्ड-ख: उ.क्षे.भा.प्रे.के. Part-B: NRLDC

B.1. NR Grid Highlights for July 2025

Demand met details of NR

S.No	Constituents	Max Demand met (in MW)	Date & Time of Max Demand met	Max Consumption (in MUs)	Date of Max Consumption	Average Demand met (in Mus)
1	Chandigarh	399	25.07.25 at 15:00	7.9	26.07.25	6.8
2	Delhi	7568	25.07.25 at 15:11	152.7	28.07.25	135.7
3	Haryana	14084	05.07.25 at 15:00	292.7	26.07.25	256.2
4	H.P.	1835	23.07.25 at 09:00	40.0	26.07.25	36.6
5	J&K	2729	04.07.25 at 12:00	57.0	04.07.25	52.3
6	Punjab	16670	05.07.25 at 13:45	355.9	27.07.25	311.8
7	Rajasthan	14685	25.07.25 at 22:45	311.7	25.07.25	276.2
8	UP	30818	24.07.2	600.6	24.07.25	545.6

			5 at 22:45			
9	Uttarakhand	2673	26.07.25 at 22:00	54.9	26.07.25	50.7
10	Northern Region	81583	26.07.25 at 22:00	1820.6	28.07.25	1672.0

***As per SCADA**

- In July'25, the Maximum energy consumption of Northern Region was **1820.6 MUs** on 28th July'25 and it was 5.18% lower than July'24 (1920 MU 30th July'24)

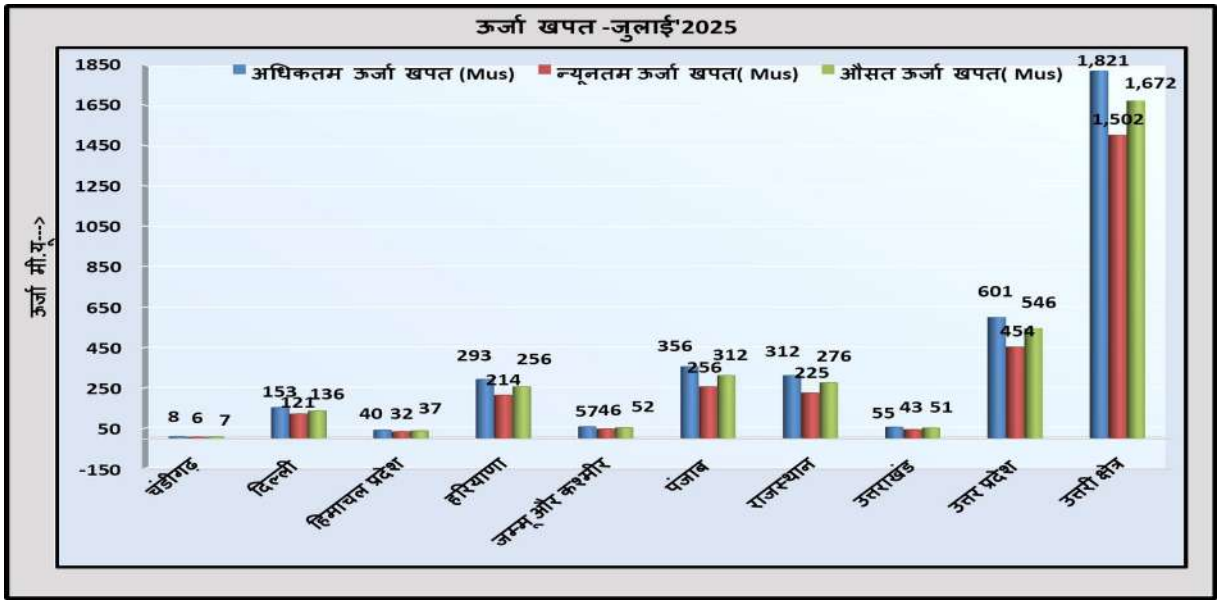
- In July'25, the Average energy consumption per day of Northern Region was **1672 MUs** and it was 4.83% lower than July'24 (1757 MUs/day)

- In July'25, the Maximum Demand met of Northern Region was **81583 MW** on 26th July'25 @22:00 hours as compared to 88085 MW on 30th Jul'24 @12:40 hours.

Comparison of Average Energy Consumption (MUs/Day) - July'24 vs July'25

क्षेत्र/राज्य	जून- 2024	जून - 2025	% अंतर
चंडीगढ़	7.7	6.8	-11.3%
दिल्ली	141.0	135.7	-3.7%
हिमाचल प्रदेश	38.1	36.6	-3.9%
हरियाणा	269.3	256.2	-4.9%
जम्मू और कश्मीर	53.0	52.3	-1.4%
पंजाब	335.5	311.8	-7.1%
राजस्थान	310.6	276.2	-11.1%
उत्तराखंड	50.3	50.7	0.7%
उत्तर प्रदेश	551.3	545.6	-1.0%
उत्तरी क्षेत्र	1756.8	1672.0	-4.8%

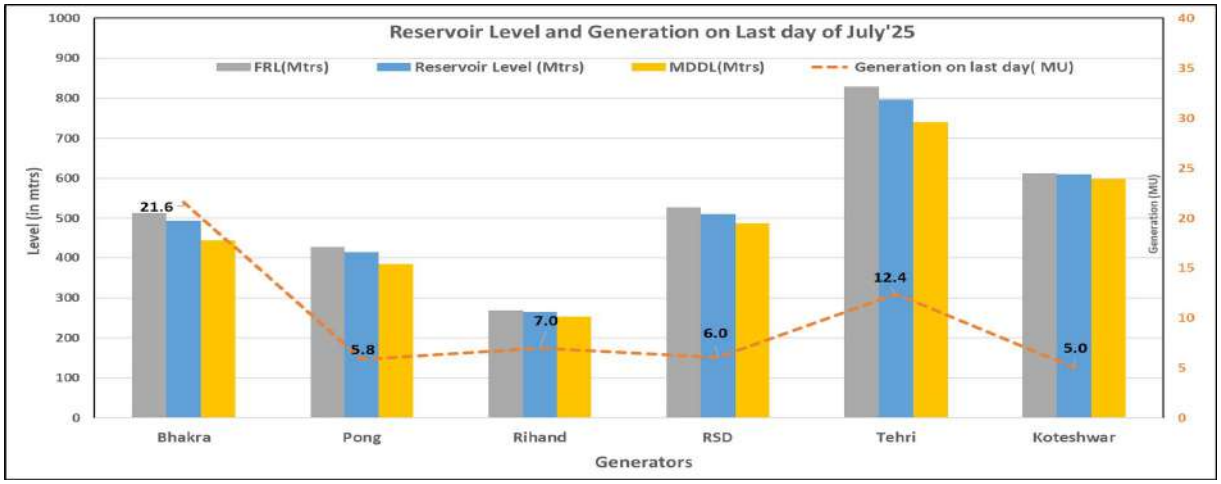
Energy Consumption



Frequency profile

Month	Avg. Freq. (Hz)	Max. Freq. (Hz)	Min. Freq. (Hz)	<49.90 (% time)	49.90 – 50.05 (% time)	>50.05 (% time)
July'25	50.003	50.400 (27.07.25 at 14:02:00 hrs)	49.504 *(26.07.25 at 14:53:20 hrs)*	6.65	72.89	20.46
July'24	50.00	50.37 (06.07.24 at 13:12:20 hrs)	49.64 (20.07.24 at 15:24:40 hrs)	6.4	78.4	15.2

Reservoir Level and Generation on Last Day of Month



Reservoir Level on last day of July month (Low: -ve) (High: +ve)

Year	Bhakra	Pong	Rihand HPS	RSD	Tehri	Koteshwar
2025	495	414	265	510	797	610
2024	490	403	260	491	794	611
Diff (in m)	4.5	11.2	4.5	19.2	3.3	-0.8

Detailed presentation on grid highlights of July'2025 will be shared by NRLDC in OCC meeting.

B.2. State-wise transmission constraints in monsoon 2025 and SPS proposals

During the high demand season, the transmission system in Northern region remains heavily loaded. Transmission constraints observed in the grid during high demand period are regularly being highlighted in OCC meetings. Same is also being submitted to CTUIL and CEA through quarterly operational feedback.

Even after several follow-ups, it is observed that progress of several transmission elements are not up to the mark and expeditious actions from transmission utilities are required so that minimal issues are observed at transmission level during the high demand season.

State-wise anticipated issues and measures required thereof are listed below. Concerned transmission utilities are requested to provide update and ensure that these transmission elements are possibly commissioned before the high demand season.

Punjab:

During 233 OCC meeting,

NRLDC representative stated that the loading of 400/220kV ICTs supplying power to Punjab state is within the N-1 limits when import is close to the ATC limits and suggested that Punjab SLDC further reviews the ATC/TTC assessment for paddy 2025 for any further enhancement also considering other constraints at 220kV level.

Punjab SLDC informed that the studies for review of ATC/TTC enhancement of Punjab state control area is under progress.

NRLDC representative further asked Punjab SLDC to study/review any intrastate constraints being observed in 220kV network as maximum demand of Punjab has also crossed 17000MW recently.

Punjab SLDC assured that no major transmission constraints are being observed in intrastate level even when demand crossed 17000MW. Further, studies after review of ATC/TTC enhancement of Punjab will be submitted to NRLDC at the earliest.

Subsequently, NRLDC vide email dated 01.08.2025 has mentioned that 400/220kV ICT-4 at Nallagarh has also been recently commissioned by POWERGRID. Punjab draws power from 220kV Nallagarh via 220kV Nallagarh-Mohali D/c lines. Accordingly, with ICT augmentation at Nallagarh, additional margin would be created for power drawl by Punjab state. Accordingly, Punjab SLDC was asked to review ATC/TTC limits of Punjab state control area for any further increase.

Punjab SLDC may provide update.

Haryana:

During 233 OCC meeting, NRLDC representative requested HVPN regarding:

NRLDC representative highlighted that schedule as well as actual drawl by HVPNL is crossing the ATC/TTC limits during several time blocks.

After revival of 400kV Mahendragarh-Bhiwani D/C and 400kV Bhiwani-Babai D/C lines, following are present ATC/TTC limits of Haryana state:

- 10200/10500MW

After implementation of SPS at 765/400kV Bhiwani(PG) and 400/220kV Hissar(PG), following would be tentative ATC/TTC limits:

- 10600/10900MW

As POWERGRID has confirmed via e-mail that SPS has been implemented at 765/400kV Bhiwani(PG), ATC/TTC of Haryana state control area has been revised to 10400/10700 MW w.e.f. 07th Aug 2025.

SPS proposals in Haryana

For SPS at 400/220kV Hissar(PG) ICTs: Haryana SLDC wanted to wire 220kV Hissar(BBMB)-220kV Sangrur D/C (supplying power to Punjab) and 220kV Hissar-Chirawa (supplying power to Rajasthan) lines in SPS. Punjab SLDC was assured from NRLDC side that there would not be impact on state ATC/TTC in case these feeders are wired, however, Punjab SLDC will need to take measures for managing loading of 220kV lines. Rajasthan SLDC agreed for wiring 220kV Hissar-Chirawa line in SPS logic.

POWERGRID informed that PLCC channel is not available for transferring signal from 220kV Hissar(PG)--->220kV Hissar(IA-HVPNL)--->220kV Hissar(BBMB) and it would require procurement of DTPC coupler for implementation of SPS. It was discussed that new 500MVA ICT is approved at Hissar(PG) but it may not be commissioned before next paddy season. Further, there are also loading issues in 220kV Hissar(PG)---220kV Hissar(IA-HVPNL)---220kV Hissar(BBMB) for most part of the year. Accordingly, SPS for N-1 contigency of 400/220kV Hissar(PG) ICTs and 220kV Hissar(PG)---220kV Hissar(IA-HVPNL)---220kV Hissar(BBMB) ckts is required. HVPNL and BBMB were asked to check at their respective substations regarding space for DTPC panel and also confirm feasibility of SPS implementation.

As a short term measure (till implementation of SPS at Hissar-PG), in case loading of 400/220kV Hissar(PG) ICTs crosses 90% of rated capacity, then NRLDC in consultation with BBMB, Haryana SLDC, Punjab SLDC and Rajasthan SLDC may ask BBMB to open 220kV Hissar(BBMB)-220kV Sangrur D/C (supplying power to Punjab) and 220kV Hissar-Chirawa (supplying power to Rajasthan) lines. Punjab SLDC and Rajasthan SLDC to ensure supply of these stations from other stations before disconnection from Hissar(BBMB).

For SPS at 400/220kV Panipat ICTs: Haryana SLDC was asked by NRLDC to review the requirement of SPS as continuous N-1 violation is being observed in June 2025. Further, BBMB was asked to expedite new ICT approval/implementation process. Haryana SLDC assured that after LILO of 2nd ckt of 220kV Samalkha-Mohana at 400/220kV Sonepat(PG), loading would be under limits. NRLDC suggested to review the loading as soon as 2nd ckt is LILOed and take necessary actions in case loading is not within N-1 limit.

During 233 OCC meeting,

NRLDC representative stated that loading of 400/220kV Panipat is still beyond the N-1 limits even after LILO of 2nd ckt of 220kV Samalkha-Mohana at 400/220kV Sonepat(PG). It was requested that Haryana SLDC may review requirement of SPS at 400/220kV Panipat (BBMB) in view of continuous N-1 violations of ICT loading.

BBMB representative informed that site has verbally confirmed space availability for DTPC at Hissar (BBMB) end. It was further informed that HVPNL would be implementing new ICT at 400/220kV Panipat(BBMB).

NRLDC and CTUIL representatives asked BBMB to share MoM/ consent from HVPNL regarding commissioning of new ICT at 400/220kV Panipat(BBMB).

HVPNL representative confirmed space availability in case of requirement of DTPC coupler positioning for SPS at 220kV Hissar-IA.

NRLDC representative further requested that Haryana SLDC may further explore shifting of some load from 400/220kV Panipat to 400/220kV Sonepat(PG).

Haryana SLDC may provide update.

Rajasthan:

Constrained location	Status as available with NRLDC
N-1 contingency of 3*315=945 MVA ICT at Bhiwadi(PG)	Additional 500MVA ICT approved in 29 CMETS on 17.05.2024
N-1 contingency of 2*315+500=1130 MVA ICT at Bassi(PG)	Additional 500MVA ICT has been approved. Same is anticipated by 14.12.2025.
N-1 contingency of 315+500=815 MVA ICT at Neemrana(PG)	Additional 500MVA ICT has been approved in 36 NR CMETS held on 15.01.2025.
N-1 contingency of 2*500=1000	Additional 500MVA ICT has been approved

MVA ICT at Jaipur South(PG)	in 36 NR CMETS held on 15.01.2025.
N-1 contingency of 2*315+500=1130 MVA ICT at Sikar(PG)	Additional 500MVA ICT has been approved in 38 NR CMETS held on 28.05.2025..
N-1 contingency of 3*315=945 MVA ICT at Kankroli(PG)	ICT-4 has been approved and is expected to be commissioned by 22.09.2025.
N-1 contingency of 2*315=630 MVA ICT at Kotputli(PG)	Augmentation by 400/220 kV 500 MVA (3rd) ICT at Kotputli (PG) is expected by 31.12.2025
N-1 contingency of 2*315=630 MVA ICT at Deedwana(RVPN)	As per latest status shared by Rajasthan SLDC order for 10 no. ICT has been placed recently. New 500MVA ICTs are expected to be commissioned at 400/220kV Merta, Ajmer and Bikaner by Sep 2025. SPS has been implemented as temporary measure for some of the stations such as Chittorgarh (RVPN), Ajmer (RVPN), Merta (RVPN), Bikaner (RVPN), Jodhpur (RVPN), Suratgarh(RVPN), Ratangarh(RVPN)
N-1 contingency of 3*250+315=1065 MVA ICT at Heerapura(RVPN)	
N-1 contingency of 3*315 =945 MVA ICT at Chittorgarh (RVPN)	
N-1 contingency of 2*315 =630 MVA ICT at Ajmer (RVPN)	
N-1 contingency of 2*315 =630 MVA ICT at Merta (RVPN)	
N-1 contingency of 2*315 =630 MVA ICT at Bikaner (RVPN)	
N-1 contingency of 2*315 =630 MVA ICT at Jodhpur (RVPN)	
N-1 contingency of 2*315=630 MVA ICT at Suratgarh(RVPN)	
N-1 contingency of 3*315=945 MVA ICT at Ratangarh(RVPN)	
N-1 contingency of 1*500+1*315 =815 MVA ICT at Bhilwara (RVPN)	

In 232 OCC meeting, RRVPNL representative informed that:

- Work order has been placed for improvement of condition of 400kV Bhadla-Bikaner D/C and also upgradation of terminal equipment. Work is expected to be completed by Dec 2025.
- Proposal of upgradation of terminal equipment for other lines is being prepared and order would be placed shortly.
- Supply of 100 no. total 5.43MVAr capacitors has been done and in next 1-2 months all the supplied capacitors would be commissioned.

- Proposal of 100no.s capacitor banks through PSDF funding are under development.
- Jaipur and Jodhpur DISCOMs have directly applied for PSDF funding. Ajmer DISCOM has already included proposal for capacitor under RDSS Scheme and is not going for additional capacitor banks
- New 500MVA ICTs are expected to be commissioned at 400/220kV Merta, Ajmer and Bikaner by Sep 2025.

In 233 OCC meeting,

RRVPNL representative informed that:

- Proposal of upgradation of terminal equipment for other lines is being prepared. Bidding document are under preparation for Akal and Kankani. Estimate has been prepared for switchgear upgradation at Jaisalmer.
- Work order has been placed for improvement of condition of 400kV Bhadla-Bikaner D/C and also upgradation of terminal equipment. Work is expected to be completed by Dec 2025.
- Supply of 100 no. total 5.43MVAr capacitors has been done and in next 1-2 months all the supplied capacitors would be commissioned.
- Supply of additional 50 no. capacitors is further expected from Aug 2025 onwards.
- Jaipur and Jodhpur DISCOMs have also been asked to expedite capacitor commissioning.

NRLDC representative stated that peak demand season of Rajasthan starts from mid Nov onwards and accordingly any shutdown requirement of 400kV Bhadla-Bikaner for condition improvement may be taken up timely and work may preferably be completed by mid Nov so that line remains available during peak demand and high MVAR drawl season of Rajasthan.

SPS proposals in Rajasthan

Majority of 400/220kV ICTs in Rajasthan state (both interstate as well as intrastate are N-1 non-compliant).

For intrastate substations, where SPS have not been planned and implemented, the same may be taken up. List of N-1 non-compliant substations is shown below:

Constrained location	SPS Status as available with NRLDC
3*315=945 MVA ICT at Bhiwadi(PG)	Not planned
2*315+500=1130 MVA ICT at Bassi(PG)	Not planned
315+500=815 MVA ICT at Neemrana(PG)	Not planned
2*500=1000 MVA ICT at Jaipur South(PG)	Not planned
2*315+500=1130 MVA ICT at Sikar(PG)	Not planned
3*315=945 MVA ICT at Kankroli(PG)	Not planned
2*315=630 MVA ICT at Kotputli(PG)	Not planned
2*315=630 MVA ICT at Deedwana(RVPN)	Not planned
3*250+315=1065 MVA ICT at Heerapura(RVPN)	Not planned
3*315 =945 MVA ICT at Chittorgarh (RVPN)	Implemented
2*315 =630 MVA ICT at Ajmer (RVPN)	Implemented

2*315 =630 MVA ICT at Merta (RVPN)	Implemented
2*315 =630 MVA ICT at Bikaner (RVPN)	Implemented
2*315 =630 MVA ICT at Jodhpur (RVPN)	Implemented
2*315=630 MVA ICT at Suratgarh(RVPN)	Implemented
3*315=945 MVA ICT at Ratangarh(RVPN)	Implemented
1*500+1*315 =815 MVA ICT at Bhilwara (RVPN)	Implemented

Subsequently, NRLDC vide email dated 01.08.2025 had communicated to share simulation studies carried out at RRVPNL side for feeders identified for SPS at the earliest. Further, it was mentioned that NRLDC has also simulated feeders for SPS and need further discussion for feeders identified for Bassi SPS.

Rajasthan SLDC may provide update.

Uttar Pradesh:

In 233 OCC meeting,

POWERGRID representative stated that 500MVA ICT-4 at Allahabad is expected to be commissioned by Sep 2025.

UP SLDC informed that SPS logic of 400/220kV Panki S/s was approved from NRPC and OCC side. However, there were certain recommendations to modify the overcurrent settings for ICTs. The revised settings are under implementation at 400/220KV Panki S/s. Further, SPS at 400/220kV Panki is expected to be commissioned at the earliest.

It was also informed that 240MVA ICT at Obra is expected to be revived by Sep 2025 whereas 315MVA ICTs at Obra would be revived after some time due to requirement of procurement of ICTs.

UP SLDC may provide update on implementation of SPS at 400/220kV Panki S/s.

SPS proposals in Uttar Pradesh

NRLDC also received a request from UP SLDC vide email dated 24.05.2025 regarding implementation of SPS at 400/220kV Agra(PG) ICTs. During 232 OCC meeting, UP SLDC stated that they will shortly convene a meeting with participation from POWERGRID and STU in next week and submit agenda for SPS proposal at 400/220kV Agra(PG) in upcoming Protection subcommittee meeting of NRPC.

During 233 OCC meeting, MS NRPC suggested that NRLDC may prepare SPS logic for 400/220kV Agra(PG) ICTs and share with UPPTCL and POWERGRID. Thereafter, SPS logic can be discussed in next OCC meeting.

NRLDC vide email dated 29.07.2025 had proposed SPS logic for 400/220kV Agra(PG) ICTs. UP SLDC thereafter provided their comments on the SPS proposal. Revised SPS logic taking into account comments from UPPTCL side is attached as **Annexure-B.I** for comments of OCC members.

As discussed in previous OCC meetings, it is once again requested that:

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

Further, it may be noted that CERC vide their order dated 29.09.2023 has granted approval of "'Detailed Procedure for Allocation of Transmission Corridor for Scheduling of General Network Access and Temporary General Network Access under Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022" which requires SLDCs to submit network data as well as PSSE basecases on M-12, M-6, M-1 basis. The monitoring of submission of these data by SLDCs is being done in OCC meetings on monthly basis where response of some of the states needs improvement.

March 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (April-25)		M-12 (March-26)		M-6 (September-25)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	Yes	Yes	No	No
Haryana	No	No	Yes	Yes	No	No
Himachal	Yes	No	Yes	No	Yes	No
J &K	Yes	No	Yes	Yes	Yes	No
Ladakh	No	No	No	No	No	No
Punjab	Yes	Yes	Yes	Yes	Yes	Yes
Rajasthan	Yes	Yes	Yes	Yes	Yes	Yes
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

April 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (May-25)		M-12 (April-26)		M-6 (October-25)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	Yes	Yes	No	No
Haryana	Yes	Yes	Yes	Yes	Yes	Yes
Himachal	Yes	No	Yes	No	Yes	No
J &K	Yes	Yes	Yes	Yes	Yes	Yes
Ladakh	No	No	No	No	No	No
Punjab	Yes	Yes	Yes	Yes	Yes	Yes
Rajasthan	Yes	Yes	Yes	Yes	Yes	Yes
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

May 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (June-25)		M-12 (May-26)		M-6 (November-25)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	Yes	Yes	No	No
Haryana	No	No	Yes	Yes	Yes	Yes
Himachal	Yes	No	Yes	No	Yes	No
J &K	Yes	Yes	Yes	Yes	Yes	Yes
Ladakh	No	No	No	No	No	No
Punjab	Yes	Yes	Yes	Yes	Yes	Yes
Rajasthan	No	No	No	No	No	No
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

June 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (July-25)		M-12 (June-26)		M-6 (December-25)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	Yes	Yes	No	No
Haryana	Yes	Yes	Yes	Yes	Yes	Yes
Himachal	Yes	Yes	Yes	Yes	Yes	Yes
J &K	Yes	Yes	Yes	Yes	Yes	Yes
Ladakh	No	No	No	No	No	No
Punjab	Yes	Yes	Yes	Yes	Yes	Yes
Rajasthan	Yes	Yes	Yes	Yes	Yes	Yes
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

Submitted with one month delay

July 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (August-25)		M-12 (July-26)		M-6 (January-26)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	Yes	Yes	No	No
Haryana	No	No	No	No	No	No
Himachal	Yes	Yes	Yes	Yes	Yes	Yes
J &K	Yes	Yes	Yes	Yes	Yes	Yes
Ladakh	No	No	No	No	No	No
Punjab	Yes	Yes	Yes	Yes	Yes	Yes
Rajasthan	Yes	Yes	Yes	Yes	Yes	Yes
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

August 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Sep-25)		M-12 (August-26)		M-6 (February-26)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh						
Delhi						
Haryana						
Himachal						
J &K	Yes	Yes	Yes	Yes	Yes	Yes
Ladakh						
Punjab	Yes	Yes				
Rajasthan						
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand						

Haryana, HP, Delhi, Rajasthan and Uttarakhand SLDCs are requested to provide update.

ATC/TTC limits of states for the month of September 2025 are attached as Annexure-B.II. Utilities are requested to go through these limits and provide comments.

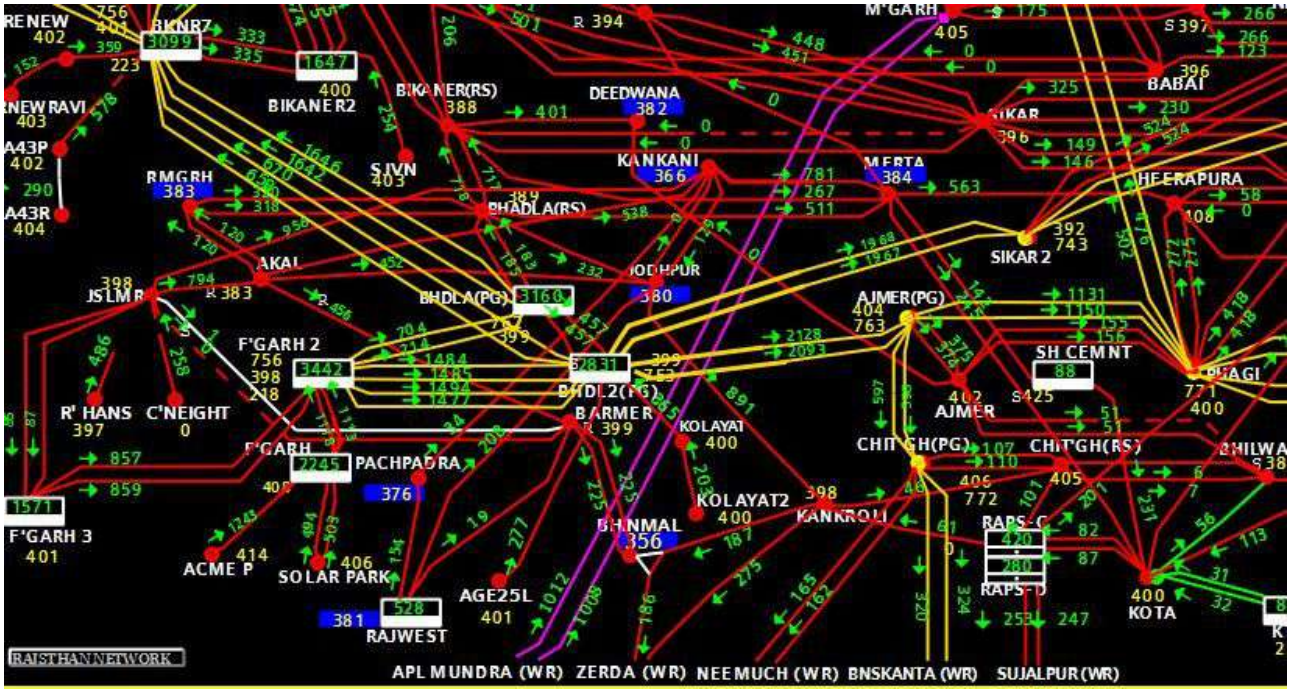
Members may please discuss.

B.3. Delay in revival of 400kV Jaisalmer-Barmer D/C and issues during present high wind season

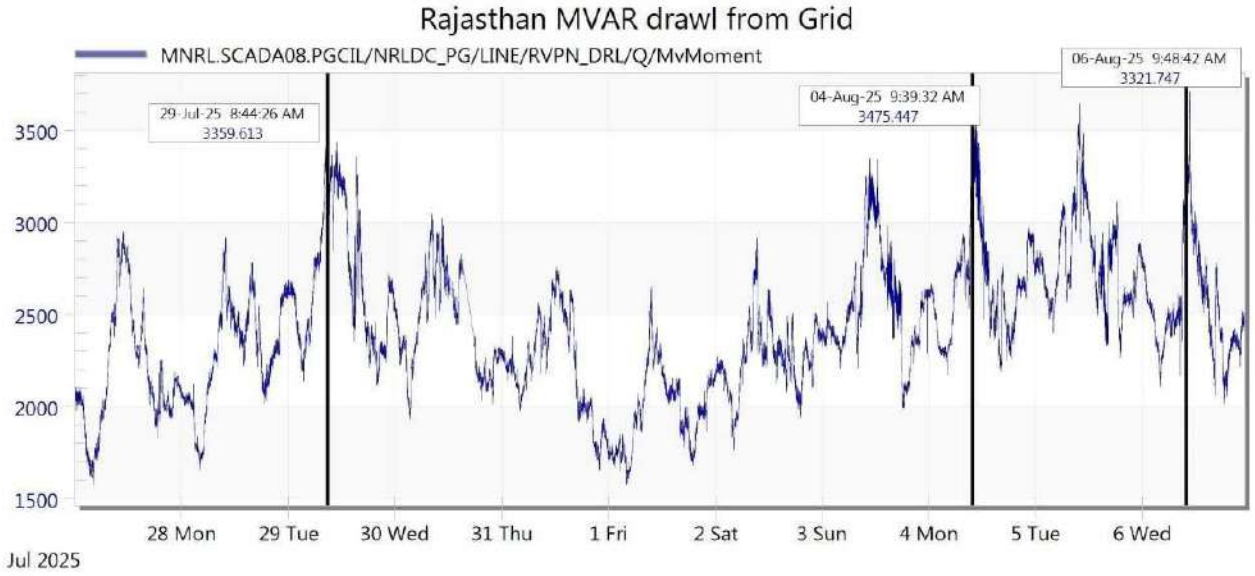
Rajasthan Control Area has been drawing huge MVAR from the ISTS grid. Regular emails and messages from NRLDC Control Room have been issued to Rajasthan SLDC and also conveyed telephonically to minimize MVAR drawl and facilitate in

keeping grid voltage profile of Rajasthan power network within safe limits. MVAR drawl from the grid by Rajasthan has reached alarming levels of 3200-3500 MVAR in the past first week of August due to high wind season and is posing serious challenge in safe and reliable grid operation.

The Wind generation in Rajasthan is on the higher side and low voltages are observed when high wind generation is coinciding with peak solar hours. It has also been time and again emphasized to maintain grid voltage profile ~ 1 p.u. particularly in Western Rajasthan complex-dominated by the Renewables. Network snapshot during peak solar hours is shown below:



Huge MVAR drawl even when the demand is on lower side has been observed in the past few days (MVAR requirement reaching almost 30 percent of demand met in MW).



While MVAR support from the ISGS RE plants in Western Rajasthan is being taken on daily basis during peak solar hours, MVAR support from conventional and RE generators in state control area is not adequate. In fact, MVAR drawl at RE pooling stations viz. Bhadla(Raj),Bikaner(Raj) etc. are being observed on daily basis and has been flagged at various NRPC/OCC forums also. The issues being faced in Western Rajasthan Grid are broadly summarised as below:

1. Long outage of 400 KV Barmer(Raj)-Jaisalmer(Raj) D/C line (Outage on tower collapse from 01.05.2025)
   Consequences-High loading, low voltages and low SCR particularly in the ongoing High Wind season

2. Loading restriction on 400 KV Bhadla(Raj)-Bikaner(Raj) D/C line-750 MW instead of ~ 1700 MW each ckt. (Damaged conductors and underrated terminal equipment)
   Consequences-One of the major limiting constraints in RE evacuation and leading to restricted NOC of ISGS RE plants to the tune of ~ 4000 MW in peak solar hours. Opening of both 400 KV Bikaner(Raj)-Sikar PG D/C lines to control line loading as per above restriction.

3. Inadequate support from Renewable and Conventional plants in Rajasthan Control Area
   Consequences-Low Voltage in the network. Voltage oscillations observed in peak solar hours.

4. High Wind Generation-drawl of MVAR from grid (High Solar coinciding with high wind-old plants without PPC Control)
   Consequences- High wind generation in peak solar hours causing lowering of SCR and Voltage fluctuations in the depleted network.

5. Non-Availability of Dynamic devices in Rajasthan RE network.
   Consequences-Rajasthan Wind -Solar generation ~ 7000 MW observed in peak solar hours without any dynamic compensation installed in state Control area-leading to vulnerable grid operation.

Voltage oscillations to the tune of 70-80 KV and higher have been observed in the Western Rajasthan complex in this ongoing High Wind season with depleted network during the peak solar hours. It has already been suggested earlier and also intimated through regular mails from NRLDC Control Room to restrict Rajasthan Wind + Solar generation up to 6000 MW in view of the forced outage of 400 KV Barmer-Jaisalmer D/C line and restriction on loading capacity of 400 KV Bhadla(Raj)-Bikaner(Raj) D/C line-(750 MW only).

NRLDC had to curtail solar generation in real time at few occasions to mitigate Voltage oscillations as Rajasthan continued high amount of reactive power drawl from the grid.

Rajasthan SLDC is once again suggested to take following measures to maintain grid parameters within safe limits:

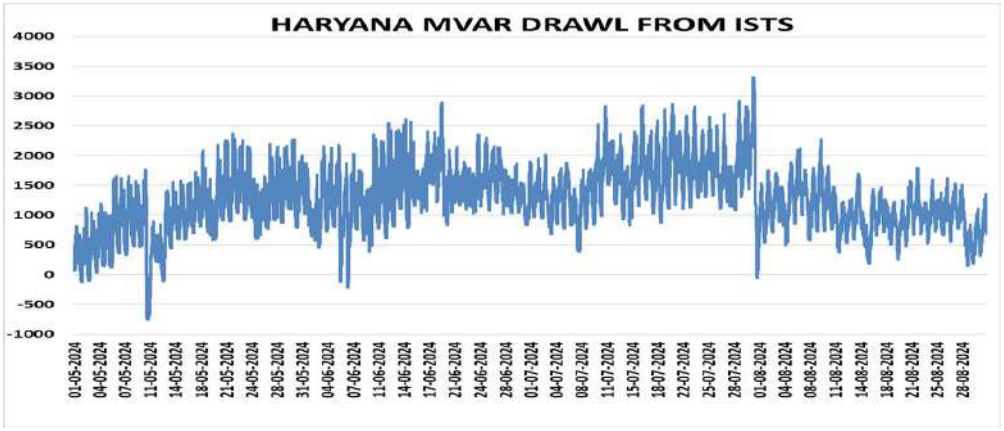
1. Maintain Bus Voltages particularly in RE complex around normative values by taking adequate support from RE as well as conventional plants thus avoiding huge MVAR drawl from grid.
2. Restrict RE generation (Wind + Solar) to around 6000 MW during the outage of 400 KV Barmer (Raj)-Jaisalmer (Raj) D/C line.
3. Expedite installation of capacitor banks giving priority to the nodes where bus voltages are on alarmingly lower side. Also, expediting installation of dynamic compensation devices.
4. Operators at SLDC and REMC Control Room in Rajasthan to take timely actions in maintaining grid parameters viz. Voltage profile etc. so that rise in generation is matched with adequate MVAR support. Day-ahead forecast may also be referred for actions to be taken beforehand to avoid delay.

Rajasthan SLDC may provide update. Members may please discuss.

B.4. SPS for Champa-Kurukshetra HVDC and SOP actions in case of tripping

During high demand period of Northern region, NR imports high power from Western and Eastern region. To optimize flows on AC paths, HVDC power orders are accordingly modulated. Power order of Champa-Kurukshetra HVDC is also kept on the higher side in summer months due to less demand in Western region and high demand in Northern region. However, there have been reliability issues related to Champa-Kurukshetra HVDC since long time. There have been events of simultaneous pole outages also, which creates stressful condition for grid and number of issues are observed in real-time. These effects are more pronounced when Champa-Kurukshetra poles trip simultaneously carrying huge power in antecedent condition. This switches out filter banks, increases power flow on parallel AC lines, increased loading reduces the grid voltages, further, due to increased distance for power to travel, the reactive power support requirement increases tremendously. This may lead to sudden dips in voltage and further load loss due to stalling of induction motor type load.

NRLDC has been continuously pursuing with NR states to take measures for reactive power support at local level so that reactive power exchange from ISTS is minimal. However, as per discussions held in 229-232 OCC meetings, no progress is being reported. From the plots presented by NRLDC in OCC meetings, it can be clearly seen that there is huge MVAR drawl by some of the states such as Haryana, Rajasthan, HP and UP during May-Sep months. These huge MVAR drawl leads to low voltages in the grid especially during the day-time as there is high agricultural as well as cooling load requirement during this time.


HARYANA MVAR DRAWL FROM ISTS
4000
3500
3000
2500
2000
1500
1000
500
0
-500
-1000
01-05-2024
04-05-2024
07-05-2024
11-05-2024
14-05-2024
18-05-2024
21-05-2024
24-05-2024
28-05-2024
31-05-2024
04-06-2024
07-06-2024
11-06-2024
14-06-2024
17-06-2024
21-06-2024
24-06-2024
28-06-2024
01-07-2024
04-07-2024
08-07-2024
11-07-2024
15-07-2024
18-07-2024
22-07-2024
25-07-2024
28-07-2024
01-08-2024
04-08-2024
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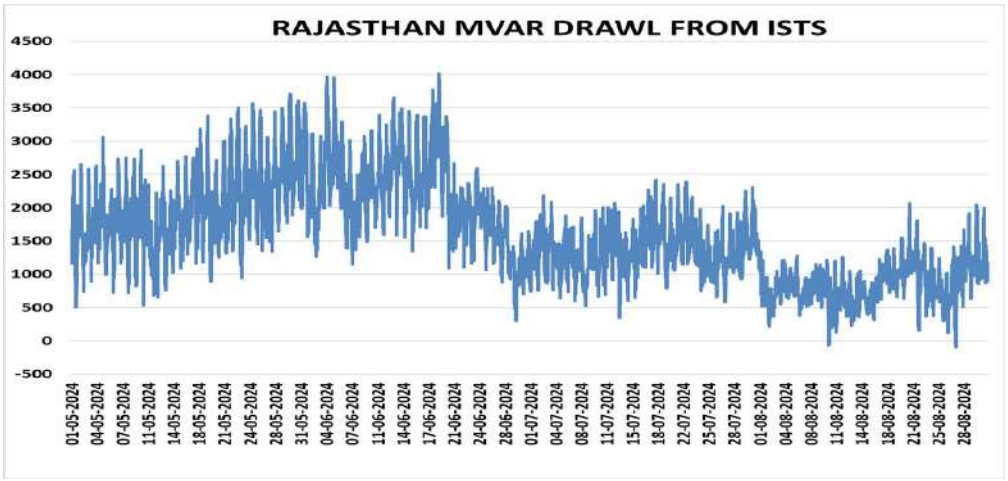
28-08-2024


RAJASTHAN MVAR DRAWL FROM ISTS
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-500
01-05-2024
04-05-2024
07-05-2024
11-05-2024
14-05-2024
18-05-2024
21-05-2024
24-05-2024
28-05-2024
31-05-2024
04-06-2024
07-06-2024
11-06-2024
14-06-2024
17-06-2024
21-06-2024
24-06-2024
28-06-2024
01-07-2024
04-07-2024
08-07-2024
11-07-2024
15-07-2024
18-07-2024
22-07-2024
25-07-2024
28-07-2024
01-08-2024
04-08-2024
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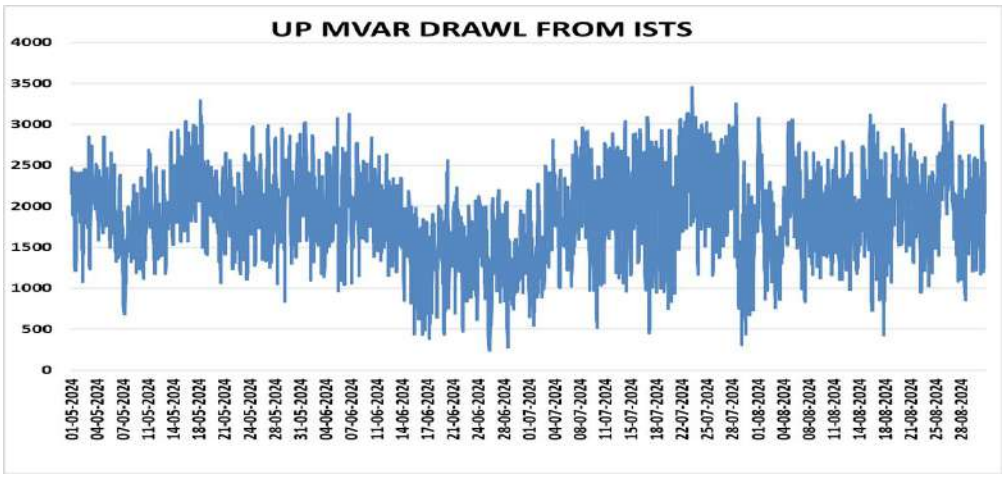
18-08-2024
21-08-2024
25-08-2024
28-08-2024


UP MVAR DRAWL FROM ISTS
4000
3500
3000
2500
2000
1500
1000
500
0
01-05-2024
04-05-2024
07-05-2024
11-05-2024
14-05-2024
18-05-2024
21-05-2024
24-05-2024
28-05-2024
31-05-2024
04-06-2024
07-06-2024
11-06-2024
14-06-2024
17-06-2024
21-06-2024
24-06-2024
28-06-2024
01-07-2024
04-07-2024
08-07-2024
11-07-2024
15-07-2024
18-07-2024
22-07-2024
25-07-2024
28-07-2024
01-08-2024
04-08-2024
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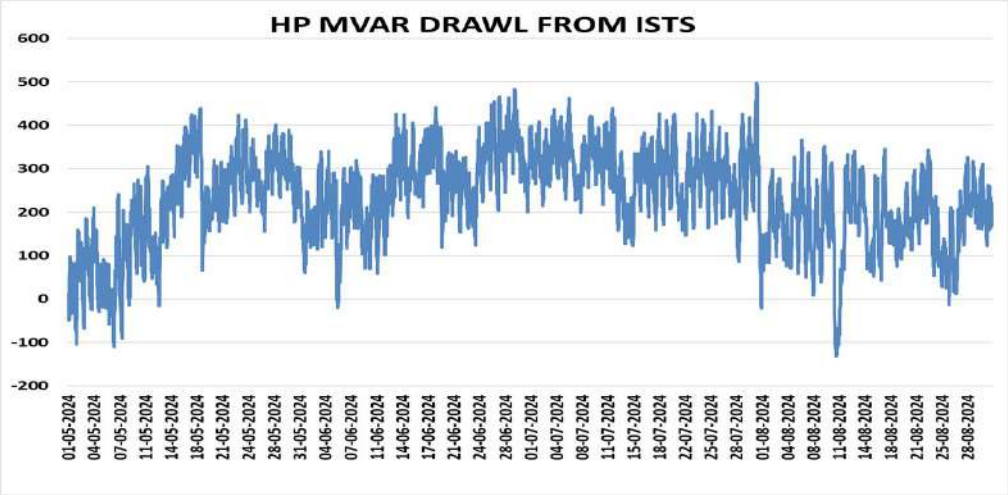
28-08-2024



There have been two major events involving load loss with simultaneous all poles outage of Champa-Kurukshetra HVDC in last two years:

1. 16.5GW load loss event on 17.06.2024 due to tripping of Champa-Kurukshetra all poles carrying 4000MW with NR total load as 89.4GW
2. 0.9GW load loss event on 09.06.2025 due to tripping of Champa-Kurukshetra all poles carrying 4300MW with NR total load as 82.6GW

This year NR demand has been slightly on the lower side due to favorable weather conditions, however, prolonged dry spell may lead to sudden surge in demand and NR demand may again cross 85GW. It is expected that any incident of simultaneous outage of HVDC Champa-Kurukshetra poles may cause emergency conditions in the Grid. It is possible that voltages in NR stations may reach extremely low values as witnessed during similar incident which occurred on 17th Jun 2024.

Accordingly, it is proposed to implement a SPS scheme which can shed loads in case of simultaneous outage of all poles of HVDC Champa-Kurukshetra. Since, identification and wiring of new load groups may be difficult for implementation in short time frame and further utilities have also expressed concerns in identifying further new feeders for UFR or other load shedding schemes, it is suggested to utilise the wired loads of existing Agra-Gwalior or Rihand-Dadri SPS scheme. Signal of multiple HVDC pole outage can be extended from Kurukshetra station to Dadri/Agra SPS scheme and some load relief can be obtained. The automatic disconnection of wired loads post outage of multiple HVDC Poles at Kurukshetra may provide some relief and may help in containing the voltages till suitable static and dynamic compensation devices are commissioned.

List of feeders for Agra-Gwalior/ Rihand-Dadri SPS scheme is attached as **Annexure-B.III**. Concerned states are requested to verify the load quantum mentioned against each feeder. NRLDC will then carry out simulation studies and in consultation with SLDCs/NLDC propose SPS logic for Champa-Kurukshetra HVDC. As some load is proposed to be shed in SPS scheme, corresponding generation backing down will also need to be taken up in Western region.

This feeder review exercise becomes important as on 21.05.2025, at 20:21 hrs, 500kV HVDC Rihand-Dadri D/C tripped on commutation failure. Multiple elements tripped at

400kV Dadri(NTPC) during the event due to multiple faults. 500kV HVDC Rihand-Dadri D/C was carrying ~1150 MW before tripping.

As per SPS of 500kV HVDC Rihand-Dadri, Case-2 of SPS which is "Tripping of any or both poles resulting in power order reduction by 750 MW and above" operated during the event. As per SPS case-2 action, immediate load shed in load groups A, B, C & D and generation backdown at Singrauli / Rihand TPS by 500 MW should occur. However, no major load relief was observed based on demand pattern of states.

During 233 OCC meeting, NRLDC representative stated that SLDCs may share any comments from their side for feeders wired for Agra-Gwalior SPS or Rihand-Dadri SPS scheme by 31.07.2025.

MS NRPC stated that the agenda was also discussed in recent NPC meeting and it was agreed that separate committee would be formed under Member Power System, CEA to look into frequent tripping of Champa-Kurukshetra and suggest remedial measures. The committee would also include members from NLDC, NRLDC, WRLDC, WRPC, NRPC, CTUIL and POWERGRID.

OCC asked all SLDCs to share any comments from their side for feeders wired for Agra-Gwalior SPS or Rihand-Dadri SPS scheme by 31.07.2025. However, comments from NR states are pending. Members may please discuss.

B.5. Minimizing deviation against scheduled drawl by state control area

It has been observed that some of the NR states have been under drawing from the grid in June 2025. The under drawl in Energy terms has reached 8-12 MUs on daily basis as per the Daily Operation Report published by NRLDC. With inclement weather leading to load crash and lower demand, high frequency grid operation has been observed recently. NRLDC has been advising constituents to maintain load generation balance and messages are also regularly issued from Real time operators to the under-drawing constituents. Further, NRLDC has been pro-actively carrying out hydro moderation of ISGS plants in addition to TRAS down support from NLDC to arrest high frequency.

The details of Grid frequency remaining above 50.05 Hz (above IEGC band), maximum frequency of the day, daily under-drawl (MU) and max. under-drawl based on 5 minutes average telemetered data i.r.o. Rajasthan state control area is given below:

Rajasthan Deviation and grid frequency

Date	Deviation/UI [Overdrawl (+) Underdrawl (-)] MUs	Max Under-drawl (in MW) during high frequency time	% of time frequency above 50.05 Hz (above IEGC band)
04.08.2025	-7.81	1270 MW / 50.13 Hz at 09:00 Hrs	17.3%
03.08.2025	-9.28	1816 MW / 50.17Hz at 13:03Hrs	14.9%
02.08.2025	-12.63	906 MW / 50.28 Hz at 07:58 Hrs	15.0%

01.08.2025	-9.14	840 MW / 50.27 Hz at 14:03 Hrs	19.3%
31.07.2025	-6.55	260 MW / 50.20 Hz at 13:12 Hrs	21.8%
30.07.2025	-5.48	1050 MW / 50.18 Hz at 11:06 Hrs	21.0%
29.07.2025	-13.28	2419 MW / 50.26 Hz at 13:05 Hrs	23.2%
28.07.2025	-9.15	693 MW / 50.21 Hz at 13:04 Hrs	22.3%
27.07.2025	-2.76	1494 MW / 50.28 Hz at 16:06 Hrs	22.0%
26.07.2025	-8.21	577 MW / 50.25 Hz at 11:34 Hrs	20.7%
25.07.2025	-2.47	837 MW / 50.11 Hz at 09:11 Hrs	12.8%
24.07.2025	-2.61	839 MW / 50.13 Hz at 18:31 Hrs	15.0%
23.07.2025	-7.02	541 MW / 50.25 Hz at 13:03 Hrs	20.4%

Plots attached as Annexure-B.IV.

Such large deviations from schedule and high frequency operation are a threat to the system security.

To avoid continuous high frequency operation in the grid, following actions may be ensured during real-time grid operation and maintain their drawl close to schedule:

- Portfolio management through sale/purchase of power in T-GNA
- Lifting of planned load shedding, curtailments, if any
- Generation backing down in coal fired thermal stations to 55% of Maximum Continuous Rating (MCR) loading of the units on bar at the generating station after deducting the normative Auxiliary Energy Consumption plus Auxiliary Energy Consumption compensation as per the provisions of the Grid Code as per merit order based on variable charges
- Downward revision of requisitions from ISGS as per merit order on request of beneficiaries
- Generation reduction at hydro stations having storage capability

During 233 OCC meeting held on 15.07.2025,

Rajasthan SLDC representative stated the state demand has reduced drastically during Jun 2025 compared to previous year. Intrastate Thermal generation is being backed down to technical minimum level as well as requisitions from ISGS are being revised to revise net schedule of state from ISTS. Moreover, as a last resort, RE curtailment has also been done on few occasions to maintain state drawl from the grid.

CGM NRLDC highlighted that all available measures are being taken at GRID-INDIA level to manage frequency during day-time and all ISGS thermal generating stations are operating at 55% of their MCR during peak solar period. In view of lack of support from intrastate thermal generators in backing down of generation, under Emergency condition, TRAS down was implemented on several days from 25.05.2025 in ISTS RE solar generating stations having installed capacity of 250 MW or more. Accordingly, decisions regarding closing and bringing intrastate machines on bar need to be taken swiftly by SLDCs.

However, as per recent analysis at NRLDC end there is lot of scope for further improvement in load generation balancing and maintaining drawl close to schedule by Rajasthan SLDC. Rajasthan SLDC may please provide update.

B.6. Delay in return of shutdown of Transmission elements and prolonged outage of elements affecting grid operation

The shutdown of 765 KV Meerut-Koteshwar ckt.1 was approved from 11.07.2025 to 20.07.2025 for NHAI diversion works. Grid-India concerns regarding the N-1 non-compliance status during the shutdown period was strongly put up during the meeting called by NRPC with PGCIL, NHAI, GRID-INDIA, Tehri Hydro and SLDCs for facilitating the said shutdown. The generation evacuation of Tehri Hydro, Tehri PSP and Koteshwar Hydro was through the only available path i.e. 765 KV Meerut-Koteshwar ckt. 2. The shutdown was facilitated with the condition that the timeline of the shutdown would be strictly adhered.

However, there was inordinate delay in restoration of the said transmission line, and it has come to notice that the shutdown was taken despite of unresolved Right of Way issues which was already known to NHAI/PGCIL and ultimately the line was revived on 29.07.2025.

The tripping of 765 KV Meerut-Koteshwar ckt. 2 at 19:46 hours on 22.07.2025 on phase to Earth fault (B-N) led to loss of the only available evacuation path for generators at Tehri HEP, Tehri PSP and Koteshwar HEP. Generation loss of 1436 MW was observed due to the above line tripping. (Tehri HEP- 846 MW, Tehri PSP- 200 MW and Koteshwar HEP-390 MW). The transmission line could only be revived by 11:00 hrs of 23.07.2025 and the whole Tehri-Koteshwar generation complex was unavailable for generation during the said period.The non-utilisation of Hydro resources during this high demand period and spillage of Koteshwar hydro due to loss of evacuation path is a matter of concern and leads to challenges in maintaining grid parameters within safe and reliable limits.

Apart from this there are several other transmission elements whose shutdown was returned with delay from various utilities. It may be noted that Northern Region demand is on the high side with peak demand of the day in the range of 80-82 GW driven by Agriculture/paddy load along with hot and humid conditions. Further, various hydro units in the Northern Region are forced to go under outage due to high silt condition on short notice.

List of transmission elements wherein there was delay in return of shutdown by utilities is shown below:

SL. No	Element Name	Approved Shutdown (From)	Approved Shutdown (To)	Actual revival date	Reason	Remarks
1	400 KV Bawana CCGTB(DTL)-Bahadurgarh(PG) (PG) Ckt-1	24.07.2025	03.08.2025	06.08.2025	for NHAI diversion works	
	400 KV Bawana CCGTB(DTL)-Bhiwani(PG) (PG)			06.08.2025		
2	765 KV KOTESHWAR-MEERUT (PG) CKT-1	11.07.2025	20.07.2025	29.07.2025	for NHAI diversion works.	Generation loss of approx 1400MW due to tripping of remaining ckt 2 on 22.07.2025/19:46Hrs
3	400 KV BHADLA-MERTA (RS) CKT-1	03.05.2025/15:00	05.05.2025/06:00	09.05.2025	To facilitate the work of Shifting / Height raising work	Re curtailment of 600MW during shutdown
	400 KV BHADLA-JODHPUR (RS) CKT-1					
4	400 KV RAJWEST(RW)-GSS PACHPADRA (RS) CKT-1	19.03.2025	31.03.2025	19.04.2025	Height Raising and Shifting work	
	400 KV RAJWEST(RW)-JODHPUR (RS) CKT-1					
5	400 KV KAITHAL-MALERKOTLA (PG) CKT-1	12.03.2025	22.03.2025	26.03.2025	for NHAI diversion work.	
6	400 KV JODHPUR-KANKANI (RS) CKT-1	21.12.2024	31.12.2024	14.01.2025	For Height Raising work	
	400 KV MERTA-KANKANI (RS) CKT-1					

Several important transmission lines in the Northern Region are under prolonged outage due to tower collapse. The extended non-availability of these elements is impacting grid reliability, load transfer capability, and in some cases RE evacuation.

Sr. No.	Element	Owner	Outage Date	No. of Days Out	Reason
1	220 kV Gazipur (DTL) – Sahibabad (UP)	UPPTCL	30-04-2022	1158	Bending of tower no. 4
2	220kV Gazipur(DTL)-Noida Sec. 62				Tower tilted at location no. 10

3	220 kV Kishenpur (PG) – Mir Bazar (PDD) Ckt-1	JKPTCL	21-06-2024	375	Tower foundation damaged at loc. no. KP-196
4	400 kV Jaisalmer – Barmer (RS) Ckt-2	RRVPNL	01-05-2025	61	Tower collapse at 12 locations (Loc. no. 70–81)
5	400 kV Jaisalmer – Barmer (RS) Ckt-1		01-05-2025	61	

Further, number of other transmission elements are also under prolonged outage such as:

S. No.	**Element Name**	**Owner**	**Date**	**Reason / Remarks**
1	400/220 kV 315 MVA ICT 1 at Muradnagar_1(UP)	UPPTCL	13-03-2020	Buccholz relay alarm and Local Breaker Backup protection operated.
2	400/220 kV 240 MVA ICT 3 at Moradabad(UP)	UPPTCL	13-12-2021	Due to high DGA values, Hydrogen gas is above permissible limit.
3	400 KV Noida Sec 148-Noida Sec 123 (UP) Ckt-2	UPPTCL	09-03-2023	Flashover Y-phase earth switch compartment at Noida Sector-148.

Number of Fixed Series capacitors (FSCs) are also under prolonged outage such as:

Name of Elements (Owner: POWERGRID)	Outage time/date	Reason of tripping
FSC of 400 KV Fatehpur-Mainpuri (PG) Ckt-1 at Mainpuri (PG)	21:07 / 24.10.21	BHEL breaker hydraulic pressure could not be developed in B phase and (loss of N2 pressure) doesn't allow the FSC-1 taken into service as reported by CPCC3. OEM support stopped
FSC of 400 KV Fatehpur-Mainpuri (PG) Ckt-2 at Mainpuri (PG)	08:25 / 29.10.21	VME protection system was blocking the FSC back in service as reported by CPCC3. OEM support stopped
FSC(40%) of 400 KV Kanpur-Ballabhgarh (PG) Ckt-2 at Ballabhgarh (PG)	10:25 / 23.09.22	DC earth fault in main power supply. Safety clearance required.
FSC(45%) of 400 KV Bareilly-Unnao (UP) Ckt-1 at Unnao(UP)	19:50 / 03.01.24	Problem in GTE card of R phase and also unbalancing of one capacitor of B phase.
FSC (40%) of 400 KV Kanpur-Ballabhgarh (PG) Ckt-3 at Ballabhgarh (PG)	11:58 / 14.02.25	For attending the capacitor unbalance alarm

All transmission utilities are advised to strictly adhere to the approved timelines so that grid operation is not affected and other shutdown requests are also timely allowed. Further, it is requested to update likely revival date for these in the NRLDC outage portal and expedite revival of these transmission elements.

Members may please discuss.

B.7. Demand forecasting and resource adequacy related

Hon'ble CERC In the matter of Planning for safe, secure, and reliable integrated operation of the power system during critical periods arising on account of seasonal variations wherein the electricity demand increases rapidly by undertaking specific measures to mitigate the risks on the power system, under clause (h) of sub-section (1) of Section 79 of the Electricity Act, 2003 and the Regulation 31 of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023 has issued suo-motto order 9/SM/2024 dated 07.10.2024.

Subsequently, a meeting was taken by Hon'ble CERC on 14.02.2025 with all NR SLDCs, NRLDC and NRPC to review the actions being taken at SLDC end on measures related to resource adequacy.

It is to be noted that CERC has also released "Report on Planning for safe, secure, and reliable integrated operation of the power system during critical periods arising on account of seasonal variations wherein the electricity demand increases rapidly by undertaking specific measures to mitigate the risks on the power system under Order dated 07.10.2024 in Suo-Moto Petition No. 9/SM/2024" on 29.04.2025.

In the report following actions have been suggested:

Area	Key Action
Power Procurement	Advance contracts, banking arrangements
Forecasting	Tool access, RLDC coordination, automation incase of manpower issue, Feedback from DISCOM,
Manpower	Approvals as per MoP guidelines, training
Reserve Management	Enforce obligations, clarify reserve norms
Thermal Generation	Enable operation at MTL, regulatory support from SERC
SAMAST	Ensure implementation within strict timelines

With reference to the Clause 31(2) of Central Electricity Regulatory Commission-IEGC Regulations, 2023 and the Operating Procedure of NRLDC prepared in accordance with the same, each SLDC has to furnish the demand estimation for day ahead, week ahead, month ahead (with time block wise granularity) and demand estimation for year ahead (with hour granularity). The sub-clause 31(2) (h) of IEGC-2023 states the following timeline for the submission of demand estimate data to RLDC.

Type of Demand Estimation	**Timeline**
Daily	10:00 hours of previous day
Weekly	First working day of previous week
Monthly	Fifth day of previous month
Yearly	30th September of previous year

Status of Day Ahead Forecasting, week ahead, month-ahead and year-ahead submission status for Aug-2025 as per Clause 31(4) (a) & (b) of IEGC-2023 is shown below:

State/Entity	Day Ahead	Week Ahead	Month Ahead	Year-Ahead
Punjab	As per Format	As per Format	As per Format	Not received
Haryana	Demand and Resource not as per format	Only demand & irregular	Not received	Not received
Delhi	Demand and Resource not as per format	As per Format	As per Format	Only Demand
Rajasthan	As per Format but irregular	As per Format	Not received	Not received
Uttar Pradesh	As per Format	As per Format	As per Format	As per Format
Uttarakhand	Demand and Resource not as per format and irregular	As per Format	As per Format	Not received
Himachal Pradesh	Demand and Resource not as per format	As per Format	As per Format	As per Format
J&K and Ladakh (UT)	Demand and Resource not as per format & irregular	Not received	Not received	Not received
Chandigarh (UT)	As per Format	Not received	Not received	Not received

In accordance with above, all SLDCs are requested to timely furnish the demand estimation data along with generation adequacy data as per the formats available at *https://drive.google.com/drive/folders/1KWY4G9gTBLV5wTJkhGEIeRptKP-QbhjL?usp=drive_link* to NRLDC through mail (nrldcmis@grid-india.in) and FTP as per above timeline.

All SLDCs need to take actions at their end for timely submission of demand forecasting and resource adequacy data on day-ahead, week-ahead, month ahead and year ahead basis.

It may be noted that timeline for submission of year ahead data of 2026-27 is 30th Sep 2025.

Further, NRLDC has also carried out month ahead resource adequacy analysis on regional basis for Sep 2025 as per data available at NRLDC through PRAS software. The results are attached as Annex B.V. The major inferences from results are:

NRLDC had also organized training program for NR SLDCs on 29.07.2025 regarding Demand Forecast, RA Planning & Reserve Assessment for SLDCs of Northern Region

Self-audit related:

As per IEGC Clause 56.2(c), 'The self-audit reports by users, QCAs, and SNAs shall be submitted to the concerned RLDC or SLDC, as the case may be.' Failure to submit the self-audit report within the stipulated timeframe would be considered a non-compliance with IEGC regulations.

During the 228th OCC meeting, CGM, NRLDC, reiterated the importance of conducting the self-audit exercise within the timelines mandated by regulations. He informed that NRLDC has already submitted its self-audit report to CERC and urged all stakeholders to do the same.

Self-audit report has been received from NHPC and Koteshwar THDC for F.Y. 2023-24.

During 233 OCC meeting,

NRLDC representative stated that:

- Data on day ahead basis received from some of the states (as shown in table) is not as per NRLDC format. It was further mentioned that NRLDC is in process of developing a code/program for automation of day-ahead resource adequacy. In case data is not received in formats circulated by NRLDC, it would not be possible to map/utilize the data submitted by states in the internal program being developed at NRLDC end.
- Self-audit report has been received from NHPC and Koteshwar THDC only for F.Y. 2023-24. As F.Y. 2024-25 has also completed recently, all utilities in Northern region are requested to carry out self-audit exercise and share report with NRLDC as per IEGC Clause 56.2(c).

As 31.07.2025 has already past, it is requested that all concerned users of NRLDC may carry out their self-audit and submit report to NRLDC at the earliest. List of NRLDC users is attached as **Annex B.VI**.

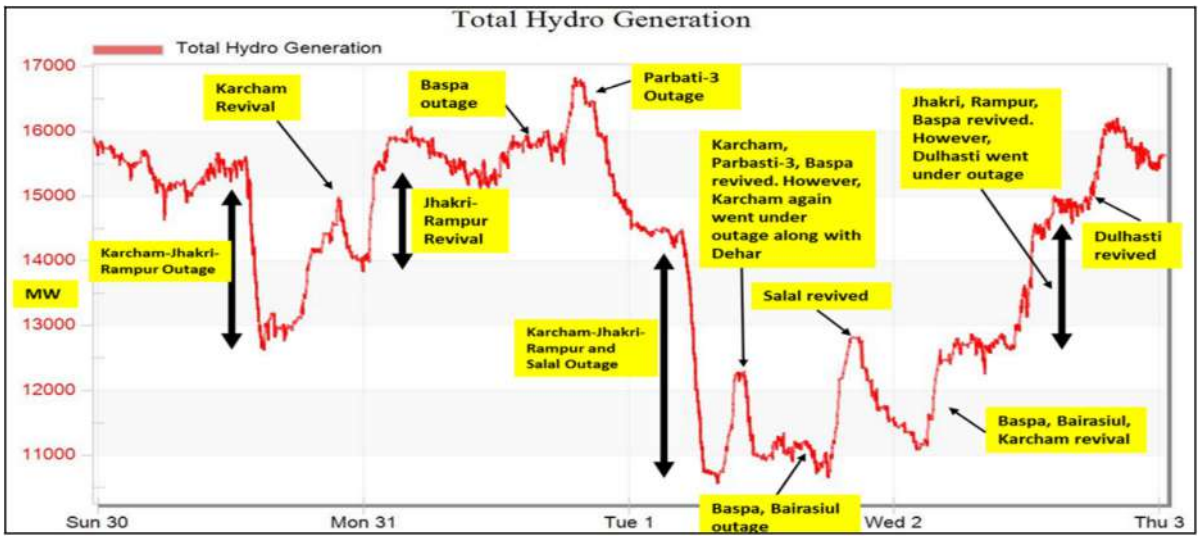
OCC asked all the states to take actions at their end to ensure compliance of all regulations and guidelines w.r.t. resource adequacy framework. OCC forum asked all concerned utilities to carry out self-audit exercise as per IEGC Clause 56.2(c), and submit the report to NRLDC.

All concerned are requested to provide update. Members may please discuss.

B.8. Near real-time monitoring of silt at NRLDC for hydro generating stations

Availability of near real time silt measurement data to NRLDC/ SLDCs is helpful for real time system operation in view of frequent hydro generation outage due to silt. PPM numbers are being punched directly from the site/control room at NRLDC server providing silt measurement at NRLDC control room. During previous years also, for Nathpa Jhakri, Baspa, Karcham and other small HEPs of Uttarakhand, trends of silt data were made available at NRLDC & being monitored by system operators in real-time.

Sample plot showing outage of hydro generating stations due to high silt level leading sudden outage of hydro generating stations in Northern region is shown below:



Large hydro outage in short duration during monsoon on silt is a common phenomenon and the associated challenges have been highlighted in regular OCC/TCC meeting. The agreed action based on deliberation in various meetings are given below:

- Action for Generator
  - Silt monitoring/Silt forecasting for planned hydro outage [Advance information]
  - Reduction of Generation/Tripping of Units as per protocol (Staggering of units)
  - Slow ramping down of generation on the units to be closed as per protocol.

- Action by SLDC/Constituents
  - Generation reserve to be maintained
    - Own Generation
    - Contracted Generation from Other State/Traders
  - Load management to be planned
  - Optimization of Hydro generation as per demand requirement

In view of upcoming silt scenario, all hydro stations are requested to furnish the silt forecast data (near-real time silt measurement) for operational planning measures to control centers (RLDCs/SLDCs) as this would help them gain some lead-time for better tackling of hydro generator outage on silt.

NRLDC has also developed a portal for sharing of silt-data by hydro generating stations with NRLDC. Login credentials have been shared with all hydro generating stations for sharing of the data with NRLDC. NRLDC also demonstrated the portal in 233 OCC meeting on 15.07.2025.

Still, it is being observed that number of NR hydro plants are regularly not sharing the silt data with NRLDC control room.

Further, it is observed that even after repeated messages some states such as HP continue to overdraw from the grid in case of outage of hydro generating units on silt. Multiple violation messages were sent from NRLDC side on 21.07.2025 and 22.07.2025 to HP which was continuously overdrawing on 21.07.2025 during evening hours between 18:30 Hours to 23:00 Hours from the Grid. Further, the grid frequency was very low and minimum frequency recorded was 49.59 Hz. During this low frequency period, HP state control area was continuously overdrawing in the range of 610 to 650 MW and total over drawl quantum was 1.60 MUs on 21.07.2025. Such significant over-drawl during low frequency regime causes a serious threat to Grid stability and exposes the system to heightened contingency risk. It is further to be noted that HP state had not purchased the required quantum of power in RTM and was already selling in DAM. Similar, overdrawl by HP state was once again observed on 05.08.2025.

Himachal Sell in RTM and UI from Grid for 05.08.2025

OCC forum may advise all hydro stations to timely share silt related information with NRLDC on newly developed portal and also follow protocol as approved by NRPC for taking units out in staggered manner in case of high silt.

B.9. Mock testing of islanding scheme and simulation studies

Following four islanding schemes are operational in the Northern Region: NAPP Islanding Scheme (Uttar Pradesh), RAPP Islanding Scheme (Rajasthan), Bawana Islanding Scheme (Delhi), and Unchahar Islanding Scheme (Uttar Pradesh).

During 233 OCC meeting, NRLDC representative presented the latest status of actions required on various islanding schemes.

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

It was also discussed that there have been recent directions from NPC and MoP also for islanding testing.

POWERGRID representative stated that pending testing of UFR at POWERGRID will be carried out shortly.

NRLDC asked DTL to share comprehensive testing report of islanding scheme after completion of testing exercise of Delhi islanding scheme.

MS NRPC expressed concern on delay in UFR testing of Delhi islanding scheme and asked all concerned to take necessary actions at the earliest and submit report to NRLDC/NRPC.

It was highlighted from NRLDC side that although SCADA displays have been made for islanding schemes, telemetry of site data to NRLDC is poor and most of the time, some or other data is missing. UFR testing report has been submitted by UP SLDC for Unchahar islanding scheme, however, basecase details and SCADA display are yet to be received at NRLDC end.

UP SLDC representative stated that SCADA display of Unchahar islanding scheme is available at UP SLDC and would be shared with NRLDC also.

Concerned SLDCs are requested to provide update.

B.10. Multiple element tripping events in Northern region in the month of July 2025:

A total of 21 grid events occurred in the month of July 2025 of which 14 are of GD-1 category 02 are of GI-2 Category and 05 are of GI-1 Category. The tripping report of all the events have been issued from NRLDC. A list of all these events along with the status of DR/EL & tripping detail submission is attached at **Annexure-B.VII.**

Maximum delayed clearance of fault observed in event of tripping event at 220/33kV RSDCL PSS2 RE station at 13:46 hrs on 04th July 2025 (As per PMU at Bhadla2(PG), R-Y phase to phase fault with delayed fault clearing time of 1200 msec is observed).

Delayed clearance of fault (more than 100ms for 400kV and 160ms for 220kV system) observed in total 06 events out of 21 grid events occurred in the month. In 05 (no.) of grid event, there was no fault in the grid.

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.

It is observed that DR/EL & tripping report of most of the grid events are not being submitted as per timeline specified in IEGC 2023. Non availability to tripping details further hampers the grid event analysis at RLDC level.

Members may take necessary preventive measures to avoid such grid incidents / disturbances in future and share the report of actions taken by respective utilities. 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 IEGC clause 37.2 (c) & (e).

Members may like to discuss.

B.11. Status of submission of DR/EL and tripping report of utilities for the month of July 2025:

The status of receipt of DR/EL and tripping report of utilities for the month of **July 2025** is attached at **Annexure-B.VIII**. It is to be noted that as per the IEGC provision under clause 37.2 (c), the tripping report along with DR/EL has to be furnished within 24 hrs of the occurrence of the event. However, it is evident from the submitted data that reporting status of RE stations, SLDC-HR, SLDC-PS, SLDC-J&K, SLDC-HP, SLDC-Delhi, BBMB, NTPC, NHPC and RAPS is not satisfactory and needs improvement.

Members may please note and advise the concerned for timely submission of the information. It is requested that DR/EL of all the trippings shall be **uploaded on Web Based Tripping Monitoring System "https://postda.nrldc.in/Default.aspx"** within 24 hours of the events as per IEGC clause 37.2(c) and clause 15.3 of CEA grid standard. Apart from prints of DR outputs, the corresponding COMTRADE files (.cfg/.dat) may please also be submitted in tripping portal.

Members may like to discuss.

B.12. Frequency response performance for the reportable events of month of July 2025:

In the month of June 2025, 2 no. of reportable events were notified by NLDC for which FRC/ FRP need to be calculated. Description of the event is as given in the Table below:

S. No.	Event Date	Time (In hrs.)	Event Description	Starting Frequency (in Hz)	Nadir Frequency (in Hz)	End Frequency (in Hz)	*Δf(Hz)*	NR FRP during the event
1	22-July-25	19:46 hrs	As reported, at 19:46 hrs on 22nd July 2025, generation loss event of 1437MW occurred at Tehri, Koteshwar Hydro generation complex in NR. Hence generation loss of 1437 MW is considered for FRC/FRP Calculation.	49.942	49.832	49.874	-0.068	1.31
2	29-July-25	14:55 hrs	As reported, at 14:55 hrs on 29th July 2025, generation loss event of 1100 MW occurred at ACME_Fatehgarh_I in Rajasthan RE complex . Hence, generation loss of 1100 MW is considered for FRC/FRP Calculation.	50.145	50.044	50.075	-0.70	0.95

As per IEGC 2023 Clause 30.8, "The primary response of the generating units shall be verified by the Load Despatch Centres (LDCs) during grid events. The concerned generating station shall furnish the requisite data to the LDCs within two days of notification of reportable event by the NLDC."

As per IEGC 2023 Clause 30.10.(n), "Each control area shall assess its frequency response characteristics and share the assessment with the concerned RLDC along with high resolution data of at least 1 (one) second for regional entity generating stations and energy storage systems and 10 (ten) seconds for the state control area."

As per sub-clause (a(v)) of clause (9) of IEGC 2023 Annexure-2, "All the SLDCs shall work out FRC for all the intra-state entities (for events indicated by the Regional Load Despatch Centres) based on the HDR available at their respective SLDCs and submit the same to respective RLDC within six (6) working days after the event. (Format as per Table-B)."

As per sub-clause (a(vi)) of clause (9) of IEGC 2023 Annexure-2, "All regional entity generating stations shall also assess the FRC for their respective stations and submit the same to respective RLDC within six (6) working days. (Format as per Table-B). The high-resolution data (1 second or better resolution) of active power generation and frequency shall also be shared with RLDC."

Status of details received from constituents as on 05th August 2025 is:

FRC computation and data submission status

S. No	Control Area	Event Date	
		22-07-2025	29-07-2025
1	Punjab	Received	Not Received
2	Haryana	Received	Not Received
3	Rajasthan	Received	Received
4	Delhi	Received	Not Received
5	Uttar Pradesh	Received	Received
6	Uttarakhand	Not Received	Not Received
7	Chandigarh*	NA	NA
8	Himachal Pradesh	Received	Received
9	J&K(UT) and Ladakh(UT)	Not Received	Not Received
10	Dadri -1 (TH)	Received	Received
11	Dadri -2 (TH)	Received	Received
12	Jhajjar (TH)	Received	Received
13	Rihand-1 (TH)	Received	Received
14	Rihand-2 (TH)	Received	Received
15	Rihand-3 (TH)	Received	Received
16	Shree Cement (TH)	Not Received	Not Received
17	Singrauli (TH)	Not Received	Not Received
18	Tanda-2 (TH)	Received	Received
19	Unchahar-I (TH)	Received	Received
20	Unchahar-II (TH)	Received	Received
21	Unchahar-III (TH)	Received	Received
22	Unchahar-IV (TH)	Received	Received
23	Anta (G)	Not Received	Received
24	Auraiya (G)	Not Received	Not Received
25	Dadri (G)	Not Received	Not Received
26	AD Hydro (H)	Received	Received
27	Bairasiul (H)	Received	Received
28	Bhakra (H)	Not Received	Not Received
29	Budhil (H)	Not Received	Not Received
30	Chamera-1 (H)	Received	Received
31	Chamera-2 (H)	Not Received	Received
32	Chamera-3 (H)	Not Received	Not Received
33	Dehar (H)	Not Received	Not Received
34	Dhauliganga (H)	Received	Not Received
35	Dulhasti (H)	Received	Received
36	Karcham (H)	Received	Received
37	Kishenganga	Received	Received
38	Koldam (H)	Received	Received
39	Koteshwar (H)	NA	Received
40	Malana-2 (H)	NA	NA
41	Nathpa Jhakri (H)	Received	Received
42	Parbati-2 (H)	Not Received	Not Received
43	Parbati-3 (H)	Received	Received
44	Pong (H)	Not Received	Not Received
45	Rampur (H)	Received	Received
46	Sainj (H)	Not Received	Not Received
47	Salal (H)	Received	Received

48	Sewa-II (H)	Not Received	Received
49	Singoli Bhatwari (H)	Not Received	Not Received
50	Sorang (H)	Not Received	Not Received
51	Tanakpur (H)	Received	Received
52	Tehri (H)	NA	Received
53	Uri-1 (H)	Received	Received
54	Uri-2 (H)	Not Received	Not Received

Members are requested to share the FRC/FRP computation of their respective control area as per the timeline specified in IEGC 2023.

Frequency Response Performance (FRP) of generating stations for each reportable event are calculated based on the submitted high resolution data from generating stations. However, the generating stations for which data is not received till 05th August 2025, FRC/FRP as per NRLDC HDR data is used for computation of Average Monthly Frequency Response Performance, Beta 'β' for Generating Stations.

FRP values as considered (as per NRLDC HDR data) for the event of July 2025 is as follows:

Frequency response Performance			
S. No	Control Area	Event Date	
		22-07-2025	29-07-2025
1	Punjab	0.87	0.84
2	Haryana	2.60	-0.29
3	Rajasthan	1.75	1.58
4	Delhi	2.90	1.00
5	Uttar Pradesh	2.24	-0.14
6	Uttarakhand	-1.02	-0.31
7	Chandigarh*	NA	NA
8	Himachal Pradesh	0.96	-1.04
9	J&K(UT) and Ladakh(UT)	-0.34	-0.34
10	Dadri -1 (TH)	4.63	0.18
11	Dadri -2 (TH)	16.24	1.02
12	Jhajjar (TH)	0.00	0.70
13	Rihand-1 (TH)	11.47	-0.08
14	Rihand-2 (TH)	4.33	0.37
15	Rihand-3 (TH)	4.90	0.52
16	Shree Cement (TH)	2.86	16.17
17	Singrauli (TH)	0.75	0.02
18	Tanda-2 (TH)	-0.68	-0.07
19	Unchahar-I (TH)	10.79	0.00
20	Unchahar-II (TH)	0.02	6.41
21	Unchahar-III (TH)	5.01	0.99
22	Unchahar-IV (TH)	3.18	1.26
23	Anta (G)	3.13	No Gen
24	Auraiya (G)	1.04	No Gen
25	Dadri (G)	10.35	No Gen
26	AD Hydro (H)	0.00	2.38

27	**Bairasiul (H)**	0.00	0.00
28	**Bhakra (H)**	-0.28	0.09
29	**Budhil (H)**	No Gen	0.35
30	**Chamera-1 (H)**	-1.31	0.08
31	**Chamera-2 (H)**	No Gen	4.09
32	**Chamera-3 (H)**	0.00	0.00
33	**Dehar (H)**	1.28	0.76
34	**Dhauliganga (H)**	5.51	8.33
35	**Dulhasti (H)**	0.28	2.48
36	**Karcham (H)**	No Gen	9.10
37	**Kishenganga**	-0.21	-0.07
38	**Koldam (H)**	0.09	-0.43
39	**Koteshwar (H)**	Affected plant	0.00
40	**Malana-2 (H)**	NA	NA
41	**Nathpa Jhakri (H)**	No Gen	3.44
42	**Parbati-2 (H)**	No Gen	No Gen
43	**Parbati-3 (H)**	0.00	1.79
44	**Pong (H)**	0.43	-0.52
45	**Rampur (H)**	No Gen	6.72
46	**Sainj (H)**	No Gen	No Gen
47	**Salal (H)**	-0.55	-0.29
48	**Sewa-II (H)**	0.00	0.00
49	**Singoli Bhatwari (H)**	-0.43	No Gen
50	**Sorang (H)**	0.20	0.19
51	**Tanakpur (H)**	-2.05	-3.20
52	**Tehri (H)**	Affected plant	No Gen
53	**Uri-1 (H)**	0.65	0.74
54	**Uri-2 (H)**	-2.45	-1.43

From the FRP data, it is observed that FRP of many of the control areas are not satisfactory. Therefore, it is requested to review the FRC/FRP, governor actions of your respective control area, necessary actions may be taken for improvement in the FRC/FRP.

ISGS were requested to confirm whether FGMO as per IEGC 2023 has been implemented at their respective stations or not. Updated sheet on the basis of details receicved is as follows:

Sl. No.	Entity	Capacity(MW)	Governor Mode (FGMO as per IEGC 2023) Yes or No	Droop setting (%)	Remarks (if any)
1	Dadri-1 (TH)	4*200			
2	Dadri -2 (TH)	2*490			
3	Jhajjar (TH)	3*500			
4	Rihand-1 (TH)	2*500	Yes	5.0	Under Implementation
5	Rihand-2 (TH)	2*500	Yes	5.0	Under Implementatio

					n
6	Rihand-3 (TH)	2*500	Yes	5.0	Under Implementation
7	Shree Cement (TH)	(2 * 150)			
8	Singrauli (TH)	2*500+5*200			
9	Tanda-2 (TH)	2*660			
10	Unchahar stg-4 (TH)	1*500			
11	Unchahar (TH)	2*210			
12	Anta (G)	(1 * 153.2 + 3 * 88.71)			
13	Auraiya (G)	(2 * 109.3 + 4 * 111.19)			
14	Dadri (G)	(2 * 154.51 + 4 * 130.19)			
15	AD Hydro (H)	(2 * 96)	YES	4.0	-
16	Bairasiul (H)	(3 * 60)	Yes	4.0	
17	Bhakra (H)	(5 * 126 + 5 * 157)			
18	Budhil (H)	(2 * 35)			
19	Chamera-1 (H)	(3 * 180)	Yes	5.0	
20	Chamera-2 (H)	(3 * 100)	Yes	5.0	
21	Chamera-3 (H)	(3 * 77)	Yes	4.0	
22	Dehar (H)	(6 * 165)			
23	Dhauliganga (H)	(4 * 70)	Yes	5.0	
24	Dulhasti (H)	(3 * 130)	Yes	5.0	
25	Karcham (H)	(4 * 261.25)	Yes	5.0	
26	Kishenganga	(3 * 110)	Yes	4.0	
27	Koldam (H)	(4 * 200)	Yes	4.0	
28	Koteswar (H)	(4 * 100)	Yes	4.0	
29	Malana-2 (H)	(2 * 50)			
30	Nathpa Jhakri (H)	(6 * 250)	Yes	5.5	
31	Parbati-2 (H)	(4 * 200)			
32	Parbati-3 (H)	(4 * 130)	Yes	4.0	
33	Pong (H)	(6 * 66)			
34	Rampur (H)	(6 * 68.67)			
35	Sainj (H)	(2 * 50)			
36	Salal (H)	(6 * 115)	Yes	3.0	
37	Sewa-II (H)	(3 * 40)	Yes	4.0	
38	Singoli Bhatwari (H)	(3 * 33)			
39	Sorang (H)	(2 * 50)			
40	Tanakpur (H)	(1 * 31.42 + 2 * 31.4)	Yes	4.0	
41	Tehri (H)	(4 * 250)	Yes	4.0	
42	Uri-1 (H)	(4 * 120)	Yes	6.0	
43	Uri-2 (H)	(4 * 60)	Yes	5.0	

Constituents are requested to share the details of the droop w.r.t. their generating stations.

Memebers are requested to analyse the frequency response of their respective control area and share the FRC/FRP analysis of generating stations along with unit wise 01 sec data as per timeline for ensuring IEGC compliance.

Members may like to discuss.

B.13. Mock testing of System Protection Schemes (SPS) in Northern Region

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.''

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.''

There are 56 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. Revised version of the document is available on the NRLDC website in Document section and can be accessed at below link: https://newnr.nrldc.in/documents/Documents.

In this regard, communication was sent to constituents through NRLDC letter dated 01.05.2024, 21.02.2025 & 05.03.2025 for conducting mock testing of SPS in their control area and continuous follow up is also being done in OCC & PSC meeting since May 2024.

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 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 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.

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

SLDC-Rajasthan may confirm whether SPS mock testing of Bhilwara S/s SPS has been conducted or not. Schedule for mock testing of SPS was 10.7.2025.

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, some issues were identified. SPS of HVDC Rihand-Dadri operated recently on 21.05.2025 during incident of outage of both poles. Desired SPS

actions were not observed at some of the stations. NRLDC vide letter dated 02.07.2025, requested POWERGRID to take necessary remedial measure and make complete SPS system healthy.

During 233 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 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.

NRLDC representative requested NTPC Singrauli and POWERGRID to coordinate and make SPS system healthy at Singrauli TPS.

NTPC may share the details of actions taken / planned to be taken to make the SPS system at Singrauli TPS healthy.

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 233 OCC meeting, SLDC-Rajasthan representative informed that study has been conducted in this regard and the case shall be put up in next OCC meeting for approval.

RVPNL may share the updates in this regard.

iii. **SPS of N.Jhajkri, 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.

iv. **SPS of HVDC Mundra-Mahendragarh: Continuous follow up is being done since 51st PSC meeting. As informed by ADANI, word order has been placed and SPS will be made healthy by end of December 2025.**

In view of high demand scenario and criticality of SPS of HVDC Mundra-Mahindergarh in case of any contingency, ADANI is requested to expedite the corrective actions and share the present status.

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.**

Further, during 60th PSC meeting, forum also decided to not disable the SPS where ICTs are now N-1 compliant after augmentation. It was decided that SPS may be kept enabled with logic based on loading instead of ICT tripping. Members are requested to share the confirmation in this regard.

Members may like to discuss.

B.14. Voltage oscillations observed in the Rajasthan RE complex – Revision of NOC restriction for Northern Region ISGS RE plants whose GNA is yet to be effective and being scheduled under deemed T-GNA.

As on 06.08.2025, total **22509 MW** of ISGS RE generation in Rajasthan have been commissioned and being scheduled. Out of **22509 MW**, **14343 MW** is having GNA effective (Complete ATS commissioned), and **8166 MW** is having Non-effective GNA (Complete ATS not yet commissioned).
It is pertinent to mention that total **8166 MW** of ISGS RE capacity is being given NOC for evacuation of Power under deemed T-GNA as GNA is yet to get effective (Complete ATS not yet commissioned). Out of **8166 MW** deemed T-GNA, **4042 MW** is being evacuated, and **4124 MW** is being restricted during Solar peak hrs (10:30-14:30hrs) due to non-availability of transmission system.

RE capacity commissioned (MW)	Effective GNA quantum (MW) (Complete ATS commissioned)	Non-effective GNA (T-GNA) quantum (MW) (Complete ATS not yet commissioned)	NOC allowed for evacuation under deemed T-GNA during Peak Solar hours (10:30hrs-14:30hrs) (MW)	Non-effective GNA (T-GNA) quantum restricted for evacuation during Peak Solar hours (10:30hrs-14:30hrs)

				(MW)
22509	**14343**	**8166**	**4042**	**4124**

Further, to facilitate the evacuation and to accommodate the ISGS RE generation whose GNA is yet to be effective (Complete ATS not yet commissioned) time block wise margin for deemed T-GNA have been given. NOC have been given for part capacity and part capacity have been restricted time block wise to accommodate & evacuate the maximum ISGS RE capacity with ensuring the Security & Reliability of the Grid in Rajasthan RE complex. Maximum Allowable capacity (MW) that can be scheduled and margin under deemed T-GNA for evacuation of ISGS RE generation whose GNA is yet to be effective (Complete ATS not yet commissioned) is tabulated below;

Table-1: Margin for evacuation of NR ISGS RE capacity under deemed T-GNA whose ATS not yet commissioned

Margin for evacuation of NR ISGS RE capacity under deemed T-GNA				
S. No.	**Time Block (hrs)**	**Maximum Allowable capacity that can be scheduled (MW)**	**T-GNA Margin (MW)**	**Remarks**
1	Before 09:30 hrs	22509	**8166**	Full Requested NOC (Further RE addition can also be accommodated)
2	09:30 – 09:45	21378	**7035**	Need to be restricted because ISGS RE generation is reaching **~86%** of Total Capacity being scheduled (in clear weather condition).
3	09:45-10:00	20500	**6157**	Need to be restricted because ISGS RE generation is reaching **~90%** of Total Capacity being scheduled (in clear weather condition).
4	**10:00-10:15**	**19769**	**5426**	Need to be restricted because ISGS RE generation is reaching **~93%** of Total Capacity being scheduled (in clear weather condition).
5	**10:15-10:30**	**19000**	**4657**	Need to be restricted because ISGS RE generation is reaching **~97%** of Total Capacity being scheduled (in clear weather condition).
6	**10:30-14:30**	**18385**	**4042**	Solar Peak hrs, Generation is reaching ~100% after 10:30hrs

				and before 14:30 hrs, restricted NOC.
7	**14:30-14:45**	**19000**	**4657**	Need to be restricted because ISGS RE generation is reaching **~97%** of Total Capacity being scheduled (in clear weather condition).
8	**14:45-15:00**	**19769**	**5426**	Need to be restricted because ISGS RE generation is reaching **~93%** of Total Capacity being scheduled (in clear weather condition).
9	15:00-15:15	20500	**6157**	Need to be restricted because ISGS RE generation is reaching **~90%** of Total Capacity being scheduled (in clear weather condition).
10	15:15-15:30	21378	**7035**	Need to be restricted because ISGS RE generation is reaching **~86%** of Total Capacity being scheduled (in clear weather condition).
11	15:30-15:45	21378	**7035**	Need to be restricted because ISGS RE generation is reaching **~86%** of Total Capacity being scheduled (in clear weather condition).
12	After 15:45 hrs	22509	**8166**	Full Requested NOC (Further RE addition can also be accommodated)

Revision in NOC w.e.f. 08.08.2025 for evacuation of ISGS RE generation under deemed T-GNA whose associated Transmission system not yet commissioned:

- Earlier NOC restriction under deemed T-GNA started from 10:00 hrs with restriction in steps from 10:00-10:15 hrs & 10:15-10:30 hrs in staggered manner, 10:30-14:30 hrs flat and subsequently restriction lifted from 14:30 hrs with restriction lifted in steps from 14:30-1445 hrs & 14:45-15:00 hrs in staggered manner, and Full requested NOC quantum before 10:00 hrs and after 15:00 hrs.

- Now, NOC restriction under deemed T-GNA has been started from 09:30 hrs with restriction in steps from 09:30-10:30 hrs in staggered manner for each 15 min time block, 10:30-14:30 hrs flat and subsequently restriction lifted from 14:30 hrs with restriction lifted in steps from 14:30 hrs-15:45 hrs in staggered manner for each 15 min time block, and Full requested NOC quantum before 09:30 hrs and after 15:45 hrs (As given in **Table-1**).

Transmission Constraint which are causing bottlenecking of RE power in Rajasthan REZ:

1. Loading on 400kV Bhadla(RS)-Bikaner(RS) D/C line exceeding 750MW each ckt (750 MW: safe loading limit of each ckt) and reaching 780MW each ckt despite opening of both the Ckts of 400kV Bikaner(RS)-Sikar(PG) D/C line, hotspot comes beyond 780-800MW each ckt due to poor condition of line conductor, can't load more than 800 MW otherwise cascade tripping may occur.
2. Next (2nd) constraint is 765kV Bhadla-II-Ajmer D/C line angular separation under N-1 Contingency.
3. Issue of low SCR at Fatehgarh-II Pooling S/s, 4.1 at 400kV Fatehgarh-II (PG). Further RE penetration with this low SCR would cause oscillation in the complex. Sever Voltage oscillation observed on 02.08.2025 @14:35hrs (ISGS RE: 19373 MW), on 03.08.2025 @10:24hrs (ISGS RE: 18954 MW), on 03.08.2025 @14:35hrs (ISGS RE: 19629 MW), on 04.08.2025 @10:13hrs (ISGS RE: 18621 MW).
4. N-1 Non-compliance issue at 400kV Fatehgarh-III PS, as only 5 nos. of 500 MVA ICTs are there to evacuate 2190 MW of RE capacity connected at 220kV. N-1 loading limit of 5*500 MVA ICTs at Fatehgarh-III PS is 2090 MW.

The reasons for extended period of NOC restriction under deemed T-GNA are as follows:

1. As RE generation is exceeding the 18385 MW quantum even before 10:30 hrs and after 14:30 hrs near boundary of 10:00hrs and 15:00hrs boundary. Hence, restriction on already issued NOC were reviewed and based on injection profile (under clear sky days), deemed T-GNA quantum is revised time block wise to keep total ISGS RE Injection below 18385 MW at any time to avoid any Voltage oscillation issues in Rajasthan RE complex and for ensuring the security of the Grid. Further, staggering has been done b/w 09:30-10:30hrs and 14:30-15:45 hrs also to accommodate more RE capacity and making the Solar ramping up/down smoother to avoid any sudden change in the system.

2. *High Wind scenario and continuous violation of Rajasthan:* Solar+Wind injection of ~6800MW against limit of 6000 MW despite several follow-up by NRLDC C/R but no actions from Rajasthan, left no options for C/R operator except managing at ISTS level.

3. Increase in Wind generation and thereby increase in Reactive power drawl by Rajasthan system resulting low voltage issue. With Active power drawl of merely 2600-3000 MW, Rajasthan is drawing ~3600 MVAr from the Grid (ISTS). Huge Reactive power drawl by Rajasthan system is being managed by opening the Bus Reactors at nearby Substations and by increasing Reactive power from ISGS RE plant to ensure voltage stability of the complex.

4. *Coinciding of Solar and Wind generation:* Due to high Wind in morning & after-noon hours, net penetration of RE (Solar + Wind) in the Rajasthan RE complex becomes high (~22-23 GW) resulted depletion in SCR of the system during coinciding Solar & Wind penetration during morning & after-noon hours

5. Outage of 400kV Jaisalmer-Barmer D/C line in this High Wind season (Jul'25-Sept'25), Rajasthan earlier submitted the tentative deadline of 30.07.2025, revised tentative timeline for revival is 20.08.2025 as reported by Rajasthan.

6. Issue of STATCOM i.e. aggravation of Low amplitude high frequency oscillation into High amplitude high frequency oscillation under Low SCR scenario is yet to be resolved, on both 02.08.2025 & 03.08.2025, oscillation died out after taking STATCOM in Manual fixed-Q mode.

7. Due to fast ramping of Wind and any sudden change in system, lesser time left with C/R operator to take necessary measure if system is already on margin this results in severe voltage oscillation in the Rajasthan RE complex.

Members may like to deliberate.

Annexure-A.I

Status of action taken on decision of 233rd OCC meeting of NRPC

S.N.	Agenda	Decision of 233rd OCC meeting of NRPC	Status of action taken
1	Agenda. Rectification of the breaker and charging of the 220kV Sunam (PS)-Patran (IndiGrid) Circuit (Agenda by Punjab SLDC)	IndiGrid representative apprised that replacement is in process and expected to be done shortly. MS, NRPC mentioned that owner of the asset may give application to electrical inspector for permission to commence or recommence supply after such installation has been disconnected for six months as per Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023.	IndiGrid to update the status.
2	A.11 MoU between Powergrid and NTPC for O&M of 400 kV D/C Dadri – Harsh Vihar transmission lines and 400 kV Panipat-2 bays (Agenda by NTPC)	OCC Forum asked Powergrid to deliberate the matter bilaterally with NTPC and convey their decision on the matter to NTPC in the next 15 days.	Powergrid to update the status.
3	A.15 Shifting of 220kV Patti-Verpal Single Circuit from Verpal end to 400kV PGCIL Amritsar (Agenda by PSTCL)	OCC forum asked CTU to finalize the connectivity agreement within 15 days.	CTU to update the status.
4	A.21 Shutdown consent/Approval of Bus-1 & 2 at 400kV Ballabhgarh and 220kV	OCC forum asked Powergrid to bilaterally have a meeting with HVPNL and DTL to deliberate the	Powergrid NR-1 to update the status.

	System at Hisar for Jack Bus Replacement work (Agenda by Powergrid NR-I)	matter and plan the shutdown with consent of HVPNL and DTL.	
5	Table agenda No. 2 - Controlling overloading of 400kV Jhatikra – Bamnauli Line (Agenda by DTL)	OCC forum directed POWERGRID and DTL to submit the signed report of the joint site visit to CEA within 15 days, clearly stating the scope of work to be undertaken for the removal of the LILO of the 400 kV Jhatikara–Bamnauli line at 400 kV Dwarka.	Powergrid NR-1 and DTL to update the status.

Follow up issues from previous OCC meetings

Annexure-A.II

1	Down Stream network by State utilities from ISTS Station	Augmentation of transformation capacity in various existing substations, addition of new substations along with line bays as well as requirement of line bays by STUs for downstream network are under implementation at various locations in Northern Region. Further, 220kV bays have already been commissioned at various substations in NR. For its utilization, downstream 220kV system needs to be commissioned.	List of downstream networks is enclosed in **Annexure-A.II.I.**
2	Progress of installing new capacitors and repair of defective capacitors	Information regarding installation of new capacitors and repair of defective capacitors is to be submitted to NRPC Secretariat.	Data upto following months, received from various states / UTs: ◎ CHANDIGARH: Sep-2019 ◎ DELHI: Jul-2025 ◎ HARYANA: Apr-2025 ◎ HP: Mar-2025 ◎ J&K and LADAKH: Not Available ◎ PUNJAB: Apr-2025 ◎ RAJASTHAN: Jun-2025 ◎ UP: Jun-2025 ◎ UTTARAKHAND: Jul-2025 All States/UTs are requested to update status on monthly basis.
3	Healthiness of defence mechanism: Self-certification	Report of mock exercise for healthiness of UFRs carried out by utilities themselves on quarterly basis is to be submitted to NRPC Secretariat and NRLDC. All utilities were advised to certify specifically, in the report that “All the UFRs are checked and found functional”.	Data upto following months, received from various states / UTs: ◎ CHANDIGARH: Not Available ◎ DELHI: Jul-2025 ◎ HARYANA: Jun-2025 ◎ HP: Jun-2025 ◎ J&K and LADAKH: Not Available ◎ PUNJAB: Jun-2025 ◎ RAJASTHAN: Dec-2024 ◎ UP: Jun-2025 ◎ UTTARAKHAND: Jul-2025 ◎ BBMB: Jun-2025 All States/UTs are requested to update status for healthiness of UFRs on monthly basis for islanding schemes and on quartely basis for the rest.
		In compliance of NPC decision, NR states/constituents agreed to raise the AUFR settings by 0.2 Hz in 47th TCC/49th NRPC meetings.	Status: ◎ CHANDIGARH: Not Available ◎ DELHI: Increased ◎ HARYANA: Increased ◎ HP: Increased ◎ J&K and LADAKH: Increased ◎ PUNJAB: Increased ◎ RAJASTHAN: Increased ◎ UP: Increased ◎ UTTARAKHAND: Increased ◎ BBMB: Increased

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<tr><td>4</td><td>Status of Automatic Demand Management System in NR states/UT's</td><td>The status of ADMS implementation in NR, which is mandated in clause 5.4.2 (d) of IEGC by SLDC/SEB/DISCOMs is presented in the following table:</td><td>The status of ADMS implementation in NR is enclosed in Annexure-A.II.II.<table><tr><td>◎</td><td>DELHI</td><td>Scheme Implemented but operated in manual mode.</td></tr><tr><td>◎</td><td>HARYANA</td><td>Scheme not implemented</td></tr><tr><td>◎</td><td>HP</td><td>Scheme not implemented</td></tr><tr><td>◎</td><td>PUNJAB</td><td>Scheme not implemented</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Under implementation.</td></tr><tr><td>◎</td><td>UP</td><td>Scheme implemented by NPCIL only</td></tr><tr><td>◎</td><td>UTTARAKHAND</td><td>Scheme not implemented</td></tr></table></td></tr>
<tr><td>5</td><td>Status of availability of ERS towers in NR</td><td>As per the decesion of 68th NRPC and 211th OCC meeting, ERS availability monitoring is being taken as rolling/follow-up agenda in OCC meetings for regular monitoring of ERS under different utilities in Northern region.</td><td>As per the information received from different utilities in Northern region, updated status of availability of ERS towers in Northern Region attached as Annexure-A.II.III.</td></tr>
<tr><td>6</td><td>Submission of breakup of Energy Consumption by the states</td><td>All states/UTs are requested to submit the requisite data as per the billed data information in the format given as under:<table><tr><td>Category→</td><td>Consumption by Domestic Loads</td><td>Consumption by Commercial Loads</td><td>Consumption by Agricultural Loads</td><td>Consumption by Industrial Loads</td><td>Traction supply load</td><td>Miscellaneous / Others</td></tr><tr><td><Month></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table></td><td>Status of the information submission (month) from states / utilities is as under:<table><tr><td></td><td>State / UT</td><td>Upto</td></tr><tr><td>◎</td><td>CHANDIGARH</td><td>Not Submitted</td></tr><tr><td>◎</td><td>DELHI</td><td>Jun-25</td></tr><tr><td>◎</td><td>HARYANA</td><td>May-25</td></tr><tr><td>◎</td><td>HP</td><td>Jul-25</td></tr><tr><td>◎</td><td>J&K and LADAKH</td><td>JPDCL- Mar'24
KPDCL- Not Submitted</td></tr><tr><td>◎</td><td>PUNJAB</td><td>Apr-25</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Apr-25</td></tr><tr><td>◎</td><td>UP</td><td>Feb-25</td></tr><tr><td>◎</td><td>UTTARAKHAND</td><td>Jan-25</td></tr></table>Chandigarh is requested to submit the requisite data w.e.f. April 2018 as per the billed data information in the given format</td></tr>
<tr><td>7</td><td>Status of FGD installation vis-à-vis installation plan at identified TPS</td><td>List of FGDs to be installed in NR was finalized in the 36th TCC (special) meeting dt. 14.09.2017. All SLDCs were regularly requested since 144th OCC meeting to take up with the concerned generators where FGD was required to be installed.
Further, progress of FGD installation work on monthly
basis is monitored in OCC meetings.</td><td>Status of the information submission (month) from states / utilities is as under:<table><tr><td>◎</td><td>HARYANA</td><td>Jun-2024</td></tr><tr><td>◎</td><td>PUNJAB</td><td>Feb-2025</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Feb-2025</td></tr><tr><td>◎</td><td>UP</td><td>Jan-2024</td></tr><tr><td>◎</td><td>NTPC</td><td>Mar-2025</td></tr></table>FGD status details are enclosed as Annexure-A.II.IV.
All States/utilities are requested to update status of FGD installation progress on monthly basis.</td></tr>
<tr><td>8</td><td>Information about variable charges of all generating units in the Region</td><td>The variable charges detail for different generating units are available on the MERIT Order Portal.</td><td>All states/UTs are requested to submit daily data on MERIT Order Portal timely.</td></tr>
</table>

9	Reactive compensation at 220 kV/ 400 kV level at 7 substations			
	State / Utility	Substation	Reactor	Status
i	DTL	Peeragarhi	1x50 MVAr at 220 kV	1x50 MVAr Reactor at Peeragarhi has been commissioned on dated 18.09.2023
ii	DTL	Harsh Vihar	2x50 MVAr at 220 kV	2x50 MVAR Reactor at Harsh Vihar has been commissioned on dated 31th March 2023.
iii	DTL	Mundka	1x125 MVAr at 400 kV & 1x25 MVAr at 220 kV	Bay work completed on 25.03.2023. Reactor part tender is dropped and at present same is under revision.
iv	DTL	Bamnauli	2x25 MVAr at 220 kV	Bay work completed on 25.03.2023. Reactor part tender is dropped and at present same is under revision.
v	DTL	Indraprastha	2x25 MVAr at 220 kV	Bay work completed on 07.11.2023. Reactor part tender is dropped and at present same is under revision.
vi	DTL	Electric Lane	1x50 MVAr at 220 kV	Under Re-tendering due to Single Bid
vii	PTCUL	Kashipur	1x125 MVAR at 400 kV	The Letter of Award for "Procurement of 125 MVAR Reactor, Online DGA, ODS, NIFPS along with its accessories at 400 KV Sub-station Kashipur" against Tender Specification no. PTCUL/E-Tender/C&P-II/SS-12/2024-25 has been issued to M/s Bharat Heavy Electricals Limited, New Delhi on 26.06.2025.

Annexure-A-II.I

1. Down Stream network by State utilities from ISTS Station:

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
1	400/220kV, 3x315 MVA Samba	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• Network to be planned for 2 bays.	-	02 No. of bays shall be utilized for LILO-II of 220kV Jatwal-Bishnah Transmission Line, the work of which is expected to begin on 16th July 2025. Updated in 233rd OCC by JKPTCL.
2	400/220kV, 2x315 MVA New Wanpoh	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• 220 kV New Wanpoh - Alusteng D/c Line	Mar'25	02 No. of bays are to be utilized for connecting 220kV New Wanpoh-Alusteng D/c Line. RoW issues persisting; At present new-wampoh-mirbazar 5km and harwan-alstung 16km have been completed, expected date of completion is Mar 2025 subject to availability of funds and resolving of RoW issues), Updated in 214th OCC by JKPTCL.
				• 220 kV New Wanpoh - Mattan D/c Line	End of 2024	02 No. of bays are to be utilized for connecting 220kV New Wanpoh-Mattan D/c Line. The funding source for the project is being identified and the project is expected to be completed by ending 2024. Updated in 204th OCC by JKPTCL.
3	400/220kV, 2x315 MVA Amargarh	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• 220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri	End of 2024	02 No. of bays are proposed to be utilized for connecting 220/132 kV GSS Loolipora. The funding source for the project is being identified and the project is expected to be completed by ending 2024. Updated in 204th OCC by JKPTCL.
4	400/220kV, 2x500 MVA Kurukshetra (GIS)	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• 220kV Bhadson (Kurukshetra) – Ramana Ramani D/c line	Contractual completion date on 04.08.2025.	Under construction.Updated in 230rd OCC by HVPNL
5	400/220 kV, 2x315 MVA Dehradun	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• Network to be planned for 4 bays	-	PTCUL to update the status.
6	Shahjahanpur, 2x315 MVA 400/220 kV	Commissioned: 6 Approved/Under Implementation:1	Utilized: 7	• 220 kV D/C Shahajahanpur (PG) - Gola line	Commissioned	Energization date: 26.10.2023 updated by UPPTCL in 215th OCC
				• LILO of Sitapur – Shahjahanpur 220 kV SC line at Shahjahanpur (PG)	Commissioned	Energization date: 25.02.2022 updated by UPPTCL in 196th OCC
7	Hamirpur 400/220 kV Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• 220 kV Hamirpur-Dehan D/c line	Commissioned	HPPTCL has commissioned the Planned 220kV Dehan-Hamirpur TL utilizing 2 No. 220kV Bays.Commisioned date: 09.06.2022. Updated in 198th OCC by HPPTCL
				• Network to be planned for 4 bays	-	HPPTCL to update the status.
8	Sikar 400/220kV, 1x 315 MVA S/s	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• LILO of 220 kV Sikar (220 kV GSS)-Dhod S/c line at Sikar (PG)	Commissioned	LILO of 220 kV S/C Sikar-Dhod line at 400 kV GSS PGCIL, Sikar has been charged on dt. 31.03.2022
				• Network to be planned for 2 bays.	-	Against the 3rd ICT at 400 kV GSS Sikar, only 2 bays were constructed and same has been utilized by RVPN by constructing LILO of 220 kV S/C Sikar – Dhod line as updated by RVPNL in 195th OCC
9	Bhiwani 400/220kV S/s	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• 220 kV D/C line Bhiwani (PG) – Bhiwani (HVPNL) line	Commissioned	Updated in 202nd OCC by HVPNL
				• 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line.	-	Issue related to ROW as intimated in 228th OCC by HVPNL. **Status:** Work was stalled since 29.07.2021 due to ROW issues and farmers agitation and further restarted on 9.10.2023 with the help of district administration. Now, work was again stalled since30.11.2023 due to severe ROW issues. Expected to be completed by 31.03.2025. Foundation 209/212. Erection 193/212. Stinging 37.8/50.3 km
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	Oct'25	Line work awarded to M/s R S Infra Projects Pvt. Ltd. Noida, Uttar Pardesh on dated 09.03.2024. Work of route plan and route alignment has been started by the firm as intimated in 218th OCC by HVPNL.
10	Jind 400/220kV S/s	Commissioned: 4 Approved:4 Total: 8	Utilized: 4 Unutilized: 0	• LILO of both circuits of 220 kV Jind HVPNL to PTPS D/C line at 400 kV substation PGCIL Khatkar (Jind) with 0.5 sq inch ACSR conductor	Oct'25	Erection and stringing work completed.The signing of Connection agreement amongst the Utilities is pending. Updated in 230th OCC by HVPNL.
11	400/220kV Tughlakabad GIS	Commissioned: 6 Under Implementation: 4	Utilized: 6 Unutilized: 0	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line – March 2023.	Commissioned	Updated in 216th OCC by DTL
				• Masjid Mor – Tughlakabad 220kV D/c line.	Commissioned	Updated in 216th OCC by DTL
12	400/220kV Kala Amb GIS (TBCB)	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 2 Under Implementation:2	• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Kala Amb S/s	Commissioned	Energization date: 31.05.2024 updated by HPPTCL in 220th OCC
				• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Giri S/s	-	Tendering process is yet to be started.Updated in 219th OCC by HPPTCL
				• Network to be planned for 2 bays	-	HPPTCL to update the status.
13	400/220kV Kadarpur Sub-station	Commissioned: 8 Total: 8	Utilized: 0 Unutilized: 8	• D/C line Kadarpur - Pali D/C line Kadarpur - Sec-65	Commissioned	Updated in 232nd OCC by HVPNL **Status:-** A-formats for FTC of line submitted on FTC portal of NRLDC on dated 09.04.25.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
14	400/220kV Sohna Road Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• LILO of both circuits of 220kV D/c Sohna-Rangla Rajpur at Roj Ka Meo line at 400kV Sohna Road	Oct'25	Line work completed, but commissioning of 220kV substation Roj ka Meo is pending till now.. However, this arrangement will not lead to usage of additional bays i.e. no of utilitsed bays at Sohna road will remain same.Updated in 230th OCC by HVPNL
				• LILO of both circuits of 220kV D/c Badshahpur-Sec77 line at 400kV Sohna Road	-	The matter is subjudice in Hon'ble Punjab & Haryana High court, Chandigarh Updated in 228th OCC by HVPNL. **Status:-** Earlier 02 nos 220 kV line bays were to be utilized for the 220 kV GIS S/Stn. Sec-77, Gurugram but due to denotification of land of the 220 kV GIS S/Stn. Sec-77 the said substation is now going to be dismantled and a new substation is proposed at Sec-75A, Gurugram. Now, these 02 no. 220 kV line bays may be utilized at 220 kV GIS S/Stn Sec-75A, Gurugram.
15	400/220kV Prithla Sub-station	Commissioned: 8 Aprroved: 2 Total: 10	Utilized: 4 Unutilized: 4 Under Implementation:2	• 220kV D/C line from Prithla to Harfali with LILO of one circuit at 220kV Meerpur Kurali	Dec'25	Contract awarded on 08.08.23 to M/s Skipper with completion in December 25.Updated in 230th OCC by HVPNL
				• LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line	Commissioned	Energization date: 31.12.2021. Updated in 198th OCC by HVPNL
				• 220kV D/C for Sector78, Faridabad	31.07.2025	Issue related to ROW and Pending crossing approval from Northern Railways and DFCCIL. as intimated in 228th OCC by HVPNL.
				• Prithla - Sector 89 Faridabad 220kV D/c line	Jul'25	The work for construction of 220kV D/C Prithla-Sector-78 Faridabad line on multi circuit towers is delayed mainly due to severe resistance by local villagers & ROW problem at site during construction. Due to delay in construction of 220kV D/C Prithla-Sector-78 Faridabad line, the work for construction of 220kV D/C Prithla-Sector 89 Faridabad line might delay..Updated in 230th OCC by HVPNL
16	400/220kV Sonepat Sub-station	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 2 Unutilized: 4 Under Implementation:2	• LILO of both circuits of 220kV Samalkha - Mohana line at Sonepat	Commissioned	Commissioned as updated by HVPNL in 233rd OCC
				• Sonepat - HSIISC Rai 220kV D/c line	Commissioned	Energization date: 31.05.2024 updated by HVPNL in 220th OCC
				• Sonepat - Kharkhoda Pocket A 220kV D/c line	31.07.2025	Updated in 232nd OCC by HVPNL. **Status:** Work order has been issued to M/s R.S Infra on dated 09.08.2023 by O/o CE/PD&C, Panchkula for construction of line. Both bays are under construction and erection of electrical equipment is under progress.
17	400/220kV Neemrana Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• LILO of Bhiwadi - Neemrana 220kV S/c line at Neemrana (PG)	-	Work is under progres. Stub Setting: 14/2017. Permission for Highway is awaited from concerned department as updated in 218th OCC by RVPNL.
18	400/220kV Kotputli Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Kotputli - Pathreda 220kV D/c line	-	Date of bid opening has been extended up to 30.04.2024 as updated in 218th OCC by RVPNL.
19	400/220kV Jallandhar Sub-station	Commissioned: 10 Total: 10	Utilized: 8 Unutilized: 2	• LILO of 220 kV BBMB Jalandhar - Butari line at 400 kV PGCIL Jalandhar	-	LILO of 220 kV BBMB Jalandhar - Butari line at 400 kV PGCIL Jalandhar being planned. Route plan and estimate of work sanctioned, DNIT has been sent to float tender as updated by PSTCL in 227th OCC
20	400/220kV Roorkee Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Roorkee (PG)-Pirankaliyar 220kV D/c line	Commissioned	Roorkee (PG)-Pirankaliyar 220kV D/c line commissioned in 2020 as intimated by PTCUL in 197th OCC
21	400/220kV Lucknow Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• Network to be planned for 2 bays	Commissioned	• Lucknow -Kanduni, 220 kV D/C line work energized on 05.10.2023. Updated in 212th OCC by UPPTCL. _____ • No planning for 2 no. of bays upated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.
22	400/220kV Gorakhpur Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Network to be planned for 2 bays	Commissioned	• Gorakhpur(PG)- Maharajganj, 220 kV D/C line energized on 27.09.2023 updated by UPPTCL in 212th OCC
23	400/220kV Fatehpur Sub-station	Commissioned: 8 Under Implementation:2 Total: 10	Utilized: 6 Unutilized: 2 Under Implementation:2	• Network to be planned for 2 bays	-	• UPPTCL intimated that 02 no. of bays under finalization stage. In 201st OCC, UPPTCL intimated that it is finalized that Khaga s/s will be connected (tentative time 1.5 years). _____ • No planning for 2 no. of bays updated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
24	400/220kV Abdullapur Sub-station	Commissioned: 10 Under Implementation:2 Total: 12	Utilized: 10 Unutilized: 0 Under Implementation:2	• Abdullapur – Rajokheri 220kV D/c line	Commissioned	Ckt-1 commissioned at 16:13hrs on dated 06.08.24 & Ckt-2 commissioned at 20:10 hrs on dated 05.08.24. Updated in 223rd OCC by HVPNL
25	400/220kV Pachkula Sub-station	Commissioned: 8 Under tender:2 Total: 10 Out of these 10 nos. 220kV	Utilized: 2 Unutilized: 4 Under Implementation:2	• Panchkula – Pinjore 220kV D/c line	Commissioned	Updated in 218th OCC by HVPNL
				• Panchkula – Sector-32 220kV D/c line	Commissioned	Energization date: 24.05.2024 updated by HVPNL in 220th OCC
				• Panchkula – Raiwali 220kV D/c line	Commissioned	Updated in 194th OCC by HVPNL
				• Panchkula – Sadhaura 220kV D/c line: Sep'23	Jun'25	Revised target date as confirmed by concerned XEN TS, Panchkula.Updated in 230th OCC by HVPNL
26	400/220kV Amritsar S/s	Commissioned:7 Approved in 50th NRPC- 1 no. Total: 8	Utilized: 6 Under Implementation:2	• Amritsar – Patti 220kV S/c line	-	Draft connectivity agreements for 220kV Rashiana-Amritsar has been received from CTU and the same under processing. Draft connectivity agreements for 220kV Patti-Amritsar line is under consideration by CTU. CTU is processing the agreement and PSTCL has provided with the requisite inputs/data to CTU. Updated in 232nd OCC by PSTCL.
				• Amritsar – Rashiana 220kV S/c line (2 bays shall be required for above lines. However, 1 unutilized bay shall be used for Patti and requirement of one additional bay approved for Rashiana by NRPC)	-	Draft connectivity agreements for 220kV Rashiana-Amritsar & 220kV Patti-Amritsar lines are under consideration by CTU. CTU is processing the agreement and PSTCL has provided with the requisite inputs/data to CTU. Updated in 232nd OCC by PSTCL.
27	400/220kV Bagpat S/s	Commissioned: 8 Total: 8	Utilized:6 Unutilized: 2	• Bagpat - Modipuram 220kV D/c line	Commissioned	Updated in 201st OCC by UPPTCL
28	400/220kV Bahardurgarh S/s	Commissioned: 4 Approved: 4 Total: 8	Utilized:2 Unutilized: 2	• LILO of 220 kV Nunamajra- Daultabad S/c line at 400 kV Bahadurgarh PGCIL	-	Proposal turned down by CEA.Updated in 230th OCC by HVPNL.
				• Bahadurgarh - METL 220kV D/c line (Deposit work of M/s METL)	15.06.2026	Updated in 230th OCC by HVPNL. **Status:** The work stands awarded to the M/s KRR and the execution work has been started at site. Partial route stands approved by the competant authority of the HVPNL. Further, 06 no. Foundation has been casted.
				• Bahadurgarh - Kharkhoda Pocket B 220kV D/c line	30.06.2025	Updated in 230th OCC by HVPNL. **Status:** RoW issues which are being resolved with the help of Duty Magistrate.
29	400/220kV Jaipur (South) S/s	Commissioned: 4 Total: 4	Utilized:2 Unutilized: 2	• LILO of 220 kV S/C Dausa – Sawai Madhopur line at 400 kV GSS Jaipur South (PG)	06.10.2025	Work order has been issued on 06.10.2023, work under progress as updated by RVPNL in 215th OCC
30	400/220kV Sohawal S/s	Commissioned: 8 Total: 8	Utilized: 8	• Sohawal - Barabanki 220kV D/c line	Commissioned	Energization date: 14.04.2018 updated by UPPTCL in 196th OCC
				• Sohawal - New Tanda 220kV D/c line	Commissioned	Energization date: 28.05.2019 updated by UPPTCL in 196th OCC
				• Network to be planned for 2 bays	Commissioned	• Sohawal - Gonda 220kV S/c line (Energization date: 27.04.2020) updated by UPPTCL in 196th OCC • Sohawal - Bahraich 220kV S/c line (Energization date: 15.02.2021) updated by UPPTCL in 196th OCC
31	400/220kV, Kankroli	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• 220 kV D/C Kankroli(PG) - Nathdwara line	-	Standard bid document has been finalized on 13.08.2024 and bid is under preparation as updated by RVPN in 222nd OCC.
32	400/220kV, Manesar	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• Network to be planned for 2 bays	-	Status:- A proposal is being prepared for the creation of another 220kV D/C line from the 400kV substation Panchgaon (PG) to the 220kV substation Panchgaon (HVPNL), along with the LILO of one circuit of the 220kV D/C Panchgaon (PG) – Mau line at the 220kV substation Panchgaon to utilize two bays at the 400kV substation Panchgaon. The load flow study for this has already been completed.
33	400/220kV, Saharanpur	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 6 Unutilized: 0 Under Implementation:2	• Network to be planned for 2 bays	Commissioned	Saharanpur(PG)-Devband D/c line (Energization date: 20.04.2023) updated by UPPTCL in 207th OCC
34	400/220kV, Wagoora	Commissioned: 10 Total: 10	Utilized: 6 Unutilized: 4	• Network to be planned for 4 bays	-	PDD, J&K to update the status.
35	400/220kV, Ludhiana	Commissioned: 9 Total: 9	Utilized: 8 Unutilized: 1	• Network to be planned for 1 bay	Commissioned	Direct circuit from 220 kV Lalton Kalan to Dhandari Kalan to be diverted to 400 kV PGCIL Ludhiana. Work completed , final agrrement is expected to be signed by May'24. Updated in 218th OCC by PSTCL.
36	400/220kV, Chamba (Chamera Pool)	Commissioned: 3 Under tender:1 Total: 4	Utilized:3 Unutilized: 0 Under tender:1	• Stringing of 2nd ckt of Chamera Pool – Karian 220kV D/c line	Commissioned	Stringing of 2nd Circuit of Chamera Pool-Karian Tansmission line has been completed & terminal bay at 400/220 kV chamera pooling substation (PGCIL) is commissioned on 20.01.2024. Updated in 217th OCC by HPPTCL.
37	400/220kV, Mainpuri	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 6 Unutilized: 0 Under Implementation:2	• Network to be planned for 2 bays	-	• 02 no. of bays under finalization stage updated by UPPTCL in 196th OCC. Mainpuri S/s planned. Land is not finalized, therefore timeline not available as intimated by UPPTCL in 201st OCC.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
38	400/220kV, Patiala	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• 400 kV PGCIL Patiala - 220 kV Bhadson (D/C)	-	2 Nos. bays for 400 kV PGCIL Patiala - 220 kV Bhadson (D/C) line being planned. Construction of boundary wall has started at 220 kv ss bhadson.yard work could not be started as approval for dismantaling existing 517 no tress is pending at district level committee which is competent for giving approval of dismantling of trees. Chairman of committee is DC pataiala.. as updated by PSTCL in 233th OCC meeting

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks

Status of ADMS implementation in NR:

Sl. No.	State / UT	Status	Remarks
1	DELHI	Scheme Implemented but operated in manual mode.	Revised Standard Operating Procedure (SOP) of Automatic Demand Management Scheme (ADMS) in NCT of Delhi has been approved in 51st TCC and 76th NRPC meeting. In OCC meeting, DTL intimated that TPPDL has informed that they have engaged SCADA OEM for the implementation of ADMS. However, OEM has confirmed that incorporation of ADMS logic into the current SCADA system is not feasible and it would require an upgrade or refresh of the system, necessitating additional expenditure for which DERC has been approached. The complete implementation cycle is expected to be within 2 years. However, in the meantime considering the criticality, their in-house team is working to develop a trigger notification/alarm system for manual operation of breaker triggering from the control room and thereafter exploring the possibility of automatically triggering the breaker using the trigger notification. TPPDL has stated that they expect to complete it by August 2025, if materialized. BRPL and BYPL have informed that their existing SCADA system is obsolete and it is in the up-gradation phase by OEM. After the up-gradation of SCADA system, the ADMS is expected to be implemented in BRPL & BYPL by Oct 25.
2	HARYANA	Scheme not implemented	Haryana SLDC intimated that as per Joint Roadmap of implementation of ADMS in Haryana supplied to NRPC vide memo dated 17.10.2023 (Annexure-II), the implementation plan was proposed to be carried out in two parts, as mentioned below: PART-I: Control with Transmission Utility PART-II: Control with Distribution Utility It is pertinent to mention that as part of upcoming SCADA-EMS system i.e. upgradation of SCADA-EMS system, a feature in the name of LSS (Load Shedding Software)/ ADMS is part of the Technical Specification of project to be delivered. Therefore, the functionalities of ADMS application will be covered under 'Part-I: Control with Transmission Utility' will already be covered using the RTUs available at select substations along with the ADMS software being delivered by M/s GE under SCADA upgradation project. Hence, there is no need to acquire a separate ADMS application & associated hardware for data centre for implementation of PART-I. Further for Part -II a committee has been constituted for further finalization of the ADMS module with control with Discoms is under discussions for preparation of DPR.
3	HP	Scheme not implemented	HPSDLC has kept the provision of ADMS in upgradation/replacement of SCADA system under ULDC Phase-III scheme for operating the feeders automatically through ADMS functionality. HP SLDC mentioned that logic regarding implementation of Automatic Demand Management System in HP Control Area has been finalized and finalization of feeders to give this load relief is pending. HPSEB had intimated that initially 142 Nos. of feeders were identified for operation under ADMS functionality but most of these feeders were from same sub-station. Therefore, now they have increased the no. of sub-station and identified the non-critical feeders. Load relief to be given through these feeders is under finalization. The revised feeder list from HPSEBL is awaited as intimated by HPSLDC.
4	PUNJAB	Scheme not implemented	i. A committee comprising of following officers of PSPCL & PSTCL has been constituted to finalize the logic regarding implementation of Automatic Demand Management System in Punjab Control Area. A meeting in this regard was held on dated 26-02-2024 at PSLDC Complex, Patiala. The committee deliberated various loading scenarios and proposed the following logic for the management of demand: 1. If the frequency sustains below 49.90 Hz for duration of 3 minutes, the Automatic Demand Management System will initiate a 50% reduction in the Over Drawl. 2. In case the frequency falls further below 49.85 Hz, the Over Drawl will be reduced to zero. 3. The software at the SLDC end for ADMS shall be available with ULDC phase –III SCADA system which is under implementation. ii. In 222nd OCC, MS NRPC asked Punjab to co-ordiante with Powergrid for integration of their propsoed logic with the ULDC phase-III SCADA system for timely implementation.
5	RAJASTHAN	Under implementation	RVPN has pilot tested the logic of ADMS which is to be implemented for Rajasthan. In 232th OCC meeting, RVPN informed that 286 nos. of circuit breakers have been mapped to ADMS, all 286 circuit breakers tested upto yard individually. Total 650CBs are to be mapped in phased manner.

6	UP	Scheme implemented by NPCIL only	i. A meeting regarding ADMS was held on 15.01.2023 with the UPPCL under the chairmanship of MD UPPTCL ii. A committee formed for identification of load at 33 kV level under the chairmanship of Director (Distribution), UPPCL. iii. Another committee under the chairmanship of Director UPSLDC shall identify the technical and operational requirement for ADMS implementation iv. The software at the SLDC end for ADMS shall be available with ULDC phase –III SCADA system which is under implementation and likely to be commissioned by March 2025.(it is delayed) v. In order to operate identified 33 kV feeders under ADMS scheme, integration of 132 kV substations with SCADA system is under implementation in the Reliable Communication Scheme. vi. MS, NRPC apprised forum that a letter has been written to Director, SLDC for co-odinatng with Director (Distribution), UPPCL for expediting the finalization of feeder list at 33kV for ADMS implementation. vii. Response from UPPCL regarding the finalization of feeder list at 33kV for ADMS implementation is awaited. ix. In 230th OCC meeting UP SLDC representative informed that feeder list at 33kV level for ADMS is awaited from UPPCL.
7	UTTARAKHAND	Scheme not implemented	i. UPCL has prepared a system architecture in which all the non-monitored sub-stions have been selected and 11kV feeders have been considered for ADMS operation. For the scheme, discom has also done group-wise selection of feeders and quantum of MW relief to be given for automatic demand response at 11kV level has also been decided. UPCL has awarded the tender for implementation of the aforementioned scheme to M/s Metergy Pvt.Ltd. ii. As per the status report submitted by M/s Metergy Pvt.Ltd, the survey work of 30 nos. incomer sites have been completed and order has been placed by UPCL for hardware equipments. iii. Uttarakhand SLDC informed that feeder list at 11kV level has been finalized and logic of ADMS implementation is under finalization. iv. Uttarakhand has intimated that It is bring to your notice that installation MFT(Multi Function Transducers) at various interstate points at PTCUL Substations under ADRS Project of UPCL is in progress. v. First Phase- Data Acquisition of 32 interstate points completed. vi. Second Phase-95 distribution side Substation work is on progress. vii In 230th OCC meeting Uttarakhand SLDC representative informed that Harbour installation and communication establishment has been done on 35 11kV feeders out of total 195 11kV feeders. The work is expected to be completed by December, 2025.

Annexure-A.II.III.

Status of availability of ERS towers in NR

Sl. No.	Transmission Utility	Voltage Level (220kV/400kV/765kV/ 500 kV HVDC etc.)	Length of the transmission lines owned by the Utility (Ckt. Kms.)	Number of ERS Sets (towers) available (Nos.)	ERS Set (towers) required as per the Govt. norms.	Location	Remarks
1	PTCUL	400kV	418.394	NIL	1		Tender has been scraped due to single bidder.
		220kV	1045.135	NIL	1		
2	Powergrid NR-1	220 KV	1842.88	NIL	1		
		400 KV	11074.26	12 Towers	3	All 400kV ERS at Ballabhgarh	make-Lindsey
		765 KV	4721.85	15 Towers	1	All 765kV ERS at Meerut	Make-SBB
		500 KV HVDC	653.88	NIL	1		
		800 KV HVDC	416.58	NIL	1		
3	Powergrid NR-2	66 KV	37.56	Nil	1		ERS tower available for 400KV rating can be used in place of lower as well as higher voltage Towers. In case used for 765KV Line, No of towers can be erected will reduce due to increase in Tower Hight.
		132 KV	262.7	Nil	1		
		220 KV	2152	Nil	1		
		400 KV	8097.3	02 Set (32 Towers)	2	Kishenpur & Jalandhar	
		765 KV	337.5	Nil	1		
4	Powergrid NR-3	800KV HVDC	2205	NIL	1		400KV ERS will be also be used in other voltage level lines
		500KV HVDC	2566	NIL	1		
		765KV	4396	NIL	1		
		400KV	12254	26 Towers	3	Kanpur	
		220KV	1541	NIL	1		
		132KV	207	NIL	1		
5	PARBATI KOLDAM TRANSMISSION COMPANY LIMITED	400kV	457	NIL	1		Procurement under process.
6	PATRAN TRANSMISSION COMPANY LTD	400kV	0.4	NIL	1	It is kept in Bhopal and on need basis is moved across region	Not available, will tie up based on the requirements in future. However the parent company IndiGrid owns one set of ERS for all five regions.
7	NRSS-XXIX TRANSMISSION LTD	400kV	853	NIL	1		
8	GURGAON PALWAL TRANSMISSION LTD	400kV	272	NIL	1		
9	RAPP Transmission Company Limited.	400kV	402	NIL	1		
10	NRSS XXXVI Transmission Limited	400kV	301.924	NIL	1		Element I - Operational comprising of 3 kms. Element II - Work Under Progress comprising of 221.924 kms. Element II - Work Under Progress comprising of 77 kms.
11	HPPTCL	220 kV	659	NIL	1		
		400 kV	75.7	NIL	1		
12	RVPN	132 kV	18969.958	1	4	01 No. ERS available at 220 kV GSS Heerapura, Jaipur	ERS proposed : 01 Set at 400 kV GSS, Jodhpur. 01 set at 400 kV GSS Ajmer
		220 kV	16227.979		3		
		400 kV	6899.386		2		
		765 kV	425.498		1		

Sl. No.	Transmission Utility	Voltage Level (220kV/400kV/765kV/ 500 kV HVDC etc.)	Length of the transmission lines owned by the Utility (Ckt. Kms.)	Number of ERS Sets (towers) available (Nos.)	ERS Set (towers) required as per the Govt. norms.	Location	Remarks
13	DTL	220kV	915.498	NIL	1	400kV Bamnauli Sub station	ERS tower available for 400KV rating can also be used for lower voltage lines as well
		400kV	249.19	02 Sets (32 towers)	1		
14	JKPTCL						JKPTCL, Jammu: being procured JKPTCL, Kashmir:10 tower procured (out of which 3 on loan to JKPTCL, Jammu)
15	HVPN						HVPN has apprised that purchase order for procurement of 2 sets of Emergency Restoration System (ERS) in HVPNL has been issued to M/s Jost's Engineering Company Ltd., Mumbai
16	PSTCL	400 kV	1666.43	2	2		
		220 kV	7921.991				
17	UPPTCL 1- Meerut	132KV	27508.321	24 Nos(15 Running+9 Angle)		400 kV S/s Gr. Noida	ERS will be also be used in other voltage level lines.
		220KV	14973.453				
		400KV	6922.828				
	UPPTCL 2-Prayagraj	765KV	839.37	24 Towers		220 kv S/s phulpur	ERS will also be used in other voltage lines.
		400KV	1804.257				
		220KV	2578.932				
		132KV	4714.768				
18	POWERLINK						
19	POWERGRID HIMACHAL TRANSMISSION LTD						
20	Powergrid Ajmer Phagi Transmission Limited						
21	Powergrid Fatehgarh Transmission Limited						
22	POWERGRID KALA AMB TRANSMISSION LTD						
23	Powergrid Unchahar Transmission Ltd						
24	Powergrid Khetri Transmission Limited						
25	POWERGRID VARANASI TRANSMISSION SYSTEM LTD						
26	ADANI TRANSMISSION INDIA LIMITED		2090	1 Set (12 towers)	1 set (12 towers)	Sami (Gujarat)	Make-Lindsey ERS set available for 400KV & 500KV rating can be used for lower as well as higher voltage Towers. In case used for 765KV Line, No of towers can reduce due to increase in Tower Height & nos of conductors.
27	BIKANER KHETRI TRANSMISSION LIMITED		482				
28	FATEHGARH BHADLA TRANSMISSION LIMITED	500 kV HVDC 400 kV HVAC	291				
29	NRSS-XXXI(B) TRANSMISSION LTD	400 kV	577.74	Not Available	Not Available		Tied up with M/s INDIGRID for providing ERS on need basis.
30	ARAVALI POWER COMPANY PVT LTD	765 kv HVAC					

*The transmission Utility with line length less than 500 ckt kms (of 400 KV lines) may be given option either to procure ERS or have agreement with other transmission utilities for providing ERS on mutually agreed terms, when need arises. (As per MoP directions)

Annexure-A.II.IV

FGD COMMISSIONING STATUS						
S.No.	Utility	Plant Name	Unit	Target Commissioning Date (As updated by utility in OCC)	If commissioned , Actual Date of Commissioning	If not commissioned , Target Date of Commissioning
1	Adani Power Ltd.	KAWAI TPS	1	31-Dec-24		31-Dec-29
2			2	31-Dec-24		31-Dec-29
3	APCPL	INDIRA GANDHI STPP	1		3-May-24	
4			2	30-Sep-23	27-Jan-25	
5			3	30-Jun-23		31-May-25
6	GVK	GOINDWAL SAHIB	1	30-Apr-20	INFO NOT RECEIVED	
7			2	29-Feb-20		
8	NTPC	DADRI NCTPP	1	31-Dec-20	31.12.2019,(DSI - Dry FGD)	
9			2	31-Oct-20	27.12.2019,(DSI - Dry FGD)	
10			3	31-Aug-20	27.07.2020,(DSI - Dry FGD)	
11			4	30-Jun-20	14.07.2020,(DSI - Dry FGD)	
12			5	30-Jun-22	15-Jun-22	
13			6	31-Mar-23	8-Feb-24	
14		RIHAND STPS	1	31-Dec-24		30-Nov-26
			2	30-Jun-26		31-Aug-26
			3	31-Dec-24		31-Dec-26
			4	31-Mar-25		30-Sep-26
			5	30-Jun-25		30-Jun-26
15			6	31-Mar-25		31-Mar-25
16		SINGRAULI STPS	1	31-Dec-24		30-Sep-25
17			2	31-Dec-24		30-Sep-25
18			3	31-Dec-24		30-Sep-25
19			4	31-Dec-24		31-Dec-25
20			5	31-Mar-25		31-Dec-25
21			6	30-Jun-24		31-Aug-25
22			7	31-Mar-24	Hot Gas In completed on 26.03.2025	30-Jun-25
23		UNCHAHAR TPS	1	31-Dec-23	22-Feb-25	
24			2	31-Dec-23	22-Feb-25	
25			3	30-Sep-23		30-May-25
26			4	30-Sep-23		30-May-25
27			5	30-Sep-23		30-May-25
28			6	31-Aug-22	11-Oct-22	
29		MEJA STAGE- 1	1	31-Oct-23	16-Jan-25	
30			2	30-Jun-23	28-Feb-25	
31		TANDA STAGE -1	1	No FGD		
			2	No FGD		
			3	No FGD		
32			4	No FGD		
33		TANDA STAGE -2	5	31-Mar-23	28-Nov-24	
34			6	30-Sep-23		30-May-25
35	L&T POWER DEVELOPMENT	NABHA TPP (RAJPURA TPP)	1	30-Apr-21	NPL has completed construction of FGD units for	
36			2	28-Feb-21	both of its units, which have been ready for	
37	TALWANDI SABO POWER LTD.	TALWANDI SABO TPP	1	28-Feb-21	INFO NOT RECEIVED	
38			2	31-Dec-20		
39			3	31-Oct-20		
40	HGPCL	PANIPAT TPS	6	31-Dec-25		
41			7	31-Dec-25		
42			8	31-Dec-25		
43		RAJIV GANDHI TPS	1	31-Aug-27		
44			2	31-Aug-27		
45		YAMUNA NAGAR TPS	1	31-Aug-27		
46			2	31-Aug-27		
47	Lalitpur Power Gen. Company Ltd.	LALITPUR TPS	1	31-Dec-26		
48			2	30-Sep-26		
49			3	30-Jun-26		
50	Lanco Anpara Power Ltd.	ANPARA C TPS	1	31-Dec-25		
51			2	31-Dec-25		
52	Prayagraj Power Generation Company Ltd.	PRAYAGRAJ TPP	1	31-Dec-26		
53			2	31-Dec-26		
54			3	31-Dec-26		
55	PSPCL	GH TPS (LEH.MOH.)	1	31-Dec-26		
56			2	31-Dec-26		
57			3	31-Dec-26		
58			4	31-Dec-26		
59		GGSSTP, Ropar	3	31-Dec-26		
60			4	31-Dec-26		
61			5	31-Dec-26		
62			6	30-Dec-26		
63	Rosa Power Supply Company	ROSA TPP PH-I	1	31-Dec-26		
64			2	31-Dec-26		
65			3	31-Dec-26		
66			4	31-Dec-26		
67			5	30-Nov-25		

68	RRVUNL	KOTA TPS	6	30-Nov-25		
69			7	30-Nov-25		
70		SURATGARH TPS	1	31-Dec-29		
71			2	31-Dec-29		
72			3	31-Dec-29		
73			4	31-Dec-29		
74			5	31-Dec-29		
75			6	31-Dec-29		
76		SURATGARH SCTPS	7	28-Feb-26		
77			8	28-Feb-26		
78		CHHABRA TPP	1	31-Dec-29		
79			2	31-Dec-29		
80			3	31-Dec-29		
81			4	31-Dec-29		
82		CHHABRA SCPP	5	28-Feb-26		
83			6	28-Feb-26		
84		KALISINDH TPS	1	28-Feb-26		
85			2	28-Feb-26		
86	UPRVUNL	ANPARA TPS	1	31-Dec-25		
87			2	31-Dec-25		
88			3	31-Dec-25		
89			4	31-Dec-25		
90			5	31-Dec-25		
91			6	31-Dec-25		
92			7	31-Dec-25		
93		HARDUAGANJ TPS	8	31-Dec-26		
94			9	31-Dec-26		
95		OBRA TPS	9	31-Dec-26		
96			10	31-Dec-26		
97			11	31-Dec-26		
98			12	31-Dec-26		
99			13	31-Dec-26		
100		PARICHHA TPS	3	31-Dec-26		
101			4	31-Dec-26		
102			5	31-Dec-26		
103			6	31-Dec-26		

Annexure-A.III

MIS Report for Status of Islanding Schemes

Implemented Schemes

Sl. No.	Islanding Scheme	SLDC	Status	Submission of Self Certification of Healitheness	SOP	SCADA Display Page	Remarks
1	NAPS IS	UP	Implemented	Yes (08-10-2021)	Yes	Yes	-
2	RAPS IS	Rajasthan	Implemented	16-Aug-21	Yes	Yes	List of officials in-charge, format for generation, islanding scheme sld and relays in RAPP IS submitted by RVPN on 04.12.2021.
3	Delhi IS	Delhi	Implemented				
4	Lucknow-Unchahar IS	UP	Implemented				The data of 132 kV S/s Hussainganj is not available at UPSLDC due to lack of OPGW. The work of laying OPGW cable is under progress and same shall be completed by end of July 2025.

Under Implementation/ Newly Proposed/Under Discussion

Sl. No.	Islanding Scheme	SLDC	Status	Details of progress	DPR for PSDF funding (Required / Not Required)	Timelines Status - Proposed/Actual									
						Study		Design		Approval		Procurement		Commissioning	
						Proposed	Actual	Proposed	Actual	Proposed	Actual	Proposed	Actual	Proposed	Actual
1	Pathankot-RSD IS	Punjab	Dismantled	In 231st OCC meeting Punjab SLDC informed that the Pathankot-RSD islanding scheme has been dismantled during works of control room extension.		-		-	-	-	-	-	-	-	-
2	Agra IS	UP	Under Implementation	Scheme has been approved in 71th NRPC meeting held on 29.01.2024. In 228th OCC, UPPTCL representative apprised forum that management is of view that procurement of UFRs for the Lalitpur-Agra islanding scheme should be explored through PSDF funding. During the meeting held on 07.03.2025, PSDF Secretariat raised some queries regarding the scheme and UPPTCL was asked to submit their board approval. UPPTCL is currently preparing responses to the PSDF Secretariat's queries and will resubmit the proposal once it has been approved by the UPPTCL board.		-		-	-	-	-	-	-	-	-
3	Jodhpur-Barmer-Rajwest IS	Rajasthan	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. In 228th OCC, RRVPNL representative mentioned that they have submitted their proposal of Jodhpur-Barmer-Rajwest islanding scheme to PSDF Secretariat on 16.01.2025 for PSDF funding. During the meeting held on 07.03.2025, PSDF Secretariat raised some queries regarding the scheme. In 232nd OCC, RRVPNL representative informed that responses to these queries have been replied on 30.05.2025.	-	-		-	-	-	-	-	-	-	-
4	Suratgarh IS	Rajasthan	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. In 228th OCC, RRVPNL representative mentioned that DPR for implementation of Suratgarh islanding scheme would be submitted after confirmation of status of PSDF funding from PSDF Sectt for Jodhpur-Barmer Rajwest IS.	-	-		-	-	-	-	-	-	-	-
5	Patiala-Nabha Power Rajpura IS	Punjab	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. In 227th OCC, Punjab SLDC apprised forum that they have submitted their proposal to PSDF Secretariat . During the meeting held on 07.03.2025, PSDF Secretariat raised some observations regarding the scheme which has been replied by Punjab.		-		-	-	-	-	-	-	-	-
6	Kullu-Manali-Mandi IS	HP	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. In 231st OCC, HPSLDC representative informed that the Monitoring committee of State PSDF has provided approval for State PSDF funding for implementation of proposed UFR scheme for Kullu- Manali islanding scheme in the meeting held on 22nd April, 2025. He further stated that the procurement of UFRs will be undertaken by HPSEBL. The tentative timeline for the implementation of the schemes will be obtained from HPSEBL and shared with the forum in due course.		-		-	-	-	-	-	-	-	-
7	Shimla-Solan IS	HP	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. In 232nd OCC, HPSLDC representative informed that HPSEBL has done the testing and requisite frequency settings of their generators for Shimla-Solan islanding scheme. HPSLDC representative further informed that the Monitoring committee of State PSDF has provided approval for State PSDF funding for implementation of proposed UFR scheme for Shimla-Solan islanding scheme in the meeting held on 22nd April, 2025. He further stated that the procurement of UFRs will be undertaken by HPSEBL. The tentative timeline for the implementation of the schemes will be obtained from HPSEBL and shared with the forum in due course.											

Thermal Generators

Annexure-A.IV.a

S. No.	Name of Plant	Unit	Installed Capacity	MVA Rating	Make of Units	COD	GT Details			Mode of Fuel Transport (Pit Head/Non Pit-head)	Name of Utility	Sector	Control Area	Type	Real and Reactive Power Capability assessment.			Assessment of Reactive Power Control Capability as per CEA Technical Standards for connectivity			Model Validation and verification test for the complete Generator and Excitation System model including PSS.			Model Validation and verification of Turbine/Governor and Load Control or Active Power/frequency Control Functions.			Testing of Governor performance and Automatic Generation Control			Revised Simulation Models		
							Voltage Ratio	GT MVA Capacity	Tap Ratio of GT (Present Tap/Total Taps)						Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks	
1																																
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																

Hydro Generators

S. No.	Name of Plant	Unit	Installed Capacity	MVA Rating	Make of Units	COD	GT Details			Type (Pondage/RoR etc.)	Name of Utility	Sector	Control Area	Real and Reactive Power Capability assessment.			Assessment of Reactive Power Control Capability as per CEA Technical Standards for connectivity			Model Validation and verification test for the complete Generator and Excitation System model including PSS.			Model Validation and verification of Turbine/Governor and Load Control or Active Power/frequency Control Functions.			Testing of Governor performance and Automatic Generation Control			Revised Simulation Models		
							Voltage Ratio	GT MVA Capacity	Tap Ratio of GT (Present Tap/Total Taps)					Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks	
1	Mahi Power House-I	UNIT-I	25 MW	27.778 MVA	BHEL, Bhopal	22/01/1986	11kV/132kV	31.5 MVA	3/5	RoR	RVUN	Power/ Energy																			As per guidelines the OEM representative must remain present at the time of Generator periodic testing hence looking to the age and present status of Units at Mahi PH-I, Letters Dated 12/07/2024 and 19/12/2024 have been sent to the OEM M/s BHEL, Bhopal, and accordingly the plan may be scheduled .
2	Mahi Power House-I	UNIT-II	25 MW	27.778 MVA	BHEL, Bhopal	06/02/1986	11kV/132kV	31.5 MVA	3/5	RoR	RVUN	Power/ Energy																			

Nuclear Generators

S. No.	Name of Plant	Unit	Installed Capacity	MVA Rating	Make of Units	COD	GT Details			Type	Name of Utility	Sector	Control Area	Type	Real and Reactive Power Capability assessment.			Assessment of Reactive Power Control Capability as per CEA Technical Standards for connectivity			Model Validation and verification test for the complete Generator and Excitation System model including PSS.			Model Validation and verification of Turbine/Governor and Load Control or Active Power/frequency Control Functions.			Testing of Governor performance and Automatic Generation Control			Revised Simulation Models		
							Voltage Ratio	GT MVA Capacity	Tap Ratio of GT (Present Tap/Total Taps)						Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks	

Gas Based Generators

S. No.	Name of Plant	Unit	Installed Capacity	MVA Rating	Make of Units	COD	GT Details			Name of Utility	Sector	Control Area	Type	Real and Reactive Power Capability assessment.			Assessment of Reactive Power Control Capability as per CEA Technical Standards for connectivity			Model Validation and verification test for the complete Generator and Excitation System model including PSS.			Model Validation and verification of Turbine/Governor and Load Control or Active Power/frequency Control Functions.			Testing of Governor performance and Automatic Generation Control			Revised Simulation Models	
							Voltage Ratio	GT MVA Capacity	Tap Ratio of GT (Present Tap/Total Taps)					Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks

Renewable Energy Plants

S. No.	Name of Plant	Pooling Station Name	Installed Capacity	Type (Solar/Wind)	COD	Owner	Sector	Control Area	Inverter/ WTG Make	Inverter/ WTG Model	PPC Make	Real and Reactive Power Capability for Generator			Power Plant Controller Function Test			Frequency Response Test			Active Power Set Point change test			Reactive Power (Voltage / Power Factor / Q) Set Point change test			Revised Simulation Models		
												Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks	

HVDC Links

S. No	Name of Link	Type (LCC/VSC/Back-to-Back)	HVDC_Voltage (kV)	Converter-1		Converter-2		Master Converter Station	Pole_number	Length (km)	Capacity (MW)	Owner	Forward Direction			Reverse Direction			Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC.			Revised Simulation Models		
				Station Name	Region	Station Name	Region						Maximum Capacity	Minimum Capacity	Ground_return_capacity	Maximum Capacity	Minimum Capacity	Ground_return_capacity	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks	
1			500	APL-Mundra	WR	Mohindargarh	NR		1	989	1,250	ATIL	150	500	1250					Due			Due			
2			500	APL-Mundra		Mohindargarh			2	989	1,250	ATIL	150	500	1250					Due			Due			
3		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	1	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			
4		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	2	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			
5		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	3	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			
6		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	4	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			

STATCOMs/SVCs

S.No	Station	Statcom	Capacity (MVAR)	Owner	Make	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.			Revised Simulation Models	
						Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks
1	Kurukshetra	TCR	500	POWERGRID	GE Vernova T&D	NA	NA	NA	NA	NA	NA	Nov-2023	No	Sep-2028		
2	Fatehgarh-2	STATCOM	.+/-600	POWERGRID	SIEMENS	Oct-2023	No	Sep-2028	NA	NA	NA	Oct-2023	No	Sep-2028		
3	Bhadla-2	STATCOM	.+/-600	POWERGRID	SIEMENS	Jun-2023	No	May-2028	NA	NA	NA	Jun-2023	No	May-2028		
4	Bikaner-2	STATCOM	.+/-300	POWERGRID	SIEMENS	Jul-2023	No	Jun-2028	NA	NA	NA	Jul-2023	No	Jun-2028		

FSCs/TCSCs

S. No	End 1	End 2	Line No.	Compensator Location	Make	Fixed Compensation	Variable Compensation Positive	Variable Compensation Negative	Agency	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.			Revised Simulation Models	
										Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks

Series Reactor

S.No	End 1	End 2	Line No.	End	Capacity	Make	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.			Revised Simulation Models	
							Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks
1																	
2																	

Annexure-A.IV.b

Hydro Generators

S. No.	Name of Plant	Unit	Installed Capacity	MVA Rating	Make of Units	COD	GT Details			Type (Pondage/RoR etc.)	Name of Utility	Sector	Control Area	Real and Reactive Power Capability assessment.			Assessment of Reactive Power Control Capability as per CEA Technical Standards for connectivity			Model Validation and verification test for the complete Generator and Excitation System model including PSS.			Model Validation and verification of Turbine/Governor and Load Control or Active Power/frequency Control Functions.			Testing of Governor performance			Automatic Generation Control			Revised Simulation Models	
							Voltage Ratio	GT MVA Capacity	Tap Ratio of GT (Present Tap/Total Taps)					Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks
1	Bairasiul	UNIT-I	60 MW	67 MVA	M/S BHEL	18.05.1980	11kV/220kV	25 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
2	Bairasiul	UNIT-II	60 MW	67 MVA	M/S BHEL	19.05.1980	11kV/220kV	25 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
3	Bairasiul	UNIT-III	60 MW	67 MVA	M/S BHEL	13.09.1981	11kV/220kV	25 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
4	Salal	UNIT-I	115 MW	127.8 MVA	M/S BHEL	November'87	11kV/220kV	43.33 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
5	Salal	UNIT-II	115 MW	127.8 MVA	M/S BHEL	November'87	11kV/220kV	43.33 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
6	Salal	UNIT-III	115 MW	127.8 MVA	M/S BHEL	November'87	11kV/220kV	43.33 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
7	Salal	UNIT-IV	115 MW	127.8 MVA	M/S BHEL	March'93	11kV/220kV	43.33 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
8	Salal	UNIT-V	115 MW	127.8 MVA	M/S BHEL	May'94	11kV/220kV	43.33 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
9	Salal	UNIT-VI	115 MW	127.8 MVA	M/S BHEL	February'95	11kV/220kV	43.33 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
10	Tanakpur	UNIT-I	31.4 MW	45 MVA	M/S BHEL	31.03.1992	11kV/220kV	49.5 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
11	Tanakpur	UNIT-II	31.4 MW	45 MVA	M/S BHEL	06.04.1992	11kV/220kV	49.5 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
12	Tanakpur	UNIT-III	31.4 MW	45 MVA	M/S BHEL	04.04.1992	11kV/220kV	49.5 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
13	Chamera-I	UNIT-I	180 MW	200 MVA	GE, Canada	28.04.1992	13.8KV/400 KV	75 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
14	Chamera-I	UNIT-II	180 MW	200 MVA	GE, Canada	25.04.1993	13.8KV/400 KV	75 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
15	Chamera-I	UNIT-III	180 MW	200 MVA	GE, Canada	22.04.1994	13.8KV/400 KV	75 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
16	Uri-I	UNIT-I	120 MW	136 MVA	ABB	10.04.1997	13.8KV/400 KV	50 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
17	Uri-I	UNIT-II	120 MW	136 MVA	ABB	27.01.1997	13.8KV/400 KV	50 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
18	Uri-I	UNIT-III	120 MW	136 MVA	ABB	03.03.1997	13.8KV/400 KV	50 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
19	Uri-I	UNIT-IV	120 MW	136 MVA	ABB	13.03.1997	13.8KV/400 KV	50 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
20	Chamera-II	UNIT-I	100 MW	111.1 MVA	GE	04.10.2003	11KV/400 KV	41 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
21	Chamera-II	UNIT-II	100 MW	111.1 MVA	GE	05.12.2003	11KV/400 KV	41 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
22	Chamera-II	UNIT-III	100 MW	111.1 MVA	GE	26.02.2004	11KV/400 KV	41 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
23	Dulhasti	UNIT-I	130 MW	145 MVA	GEC ALSTHOM	28.03.2007	11KV/400 KV	48.33 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
24	Dulhasti	UNIT-II	130 MW	145 MVA	GEC ALSTHOM	28.02.2007	11KV/400 KV	48.33 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
25	Dulhasti	UNIT-III	130 MW	145 MVA	GEC ALSTHOM	18.03.2007	11KV/400 KV	48.33 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
26	Dhauliganga	UNIT-I	70 MW	78 MVA	Alstom/GE	14.10.2005	11kV/220kV	29 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
27	Dhauliganga	UNIT-II	70 MW	78 MVA	Alstom/GE	01.09.2005	11kV/220kV	29 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
28	Dhauliganga	UNIT-III	70 MW	78 MVA	Alstom/GE	28.07.2005	11kV/220kV	29 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
29	Dhauliganga	UNIT-IV	70 MW	78 MVA	Alstom/GE	26.07.2005	11kV/220kV	29 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
30	Sewa-II	UNIT-I	40 MW	50 MVA	M/S BHEL	27.06.2010	11kV/132kV	50 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
31	Sewa-II	UNIT-II	40 MW	50 MVA	M/S BHEL	10.07.2010	11kV/132kV	50 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
32	Sewa-II	UNIT-III	40 MW	50 MVA	M/S BHEL	27.07.2010	11kV/132kV	50 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
33	Uri-II	UNIT-I	60 MW	67 MVA	Alstom	25.09.2013	11KV/400 KV	25 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
34	Uri-II	UNIT-II	60 MW	67 MVA	Alstom	25.11.2013	11KV/400 KV	25 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
35	Uri-II	UNIT-III	60 MW	67 MVA	Alstom	27.09.2013	11KV/400 KV	25 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
36	Uri-II	UNIT-IV	60 MW	67 MVA	Alstom	02.02.2014	11KV/400 KV	25 MVA		RoR	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				
37	Chamera-III	UNIT-I	77 MW	85.56 MVA	Alstom	27.06.2012	11kV/220kV	32 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026				

38	Chamera-III	UNIT-II	77 MW	85.56 MVA	Alstom	10.06.2012	11kV/220kV	32 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
39	Chamera-III	UNIT-III	77 MW	85.56 MVA	Alstom	07.06.2012	11kV/220kV	32 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
40	Parbati-III	UNIT-I	130 MW	145 MVA	M/S BHEL	17.02.2014	13.8KV/400 KV	53 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
41	Parbati-III	UNIT-II	130 MW	145 MVA	M/S BHEL	27.02.2014	13.8KV/400 KV	53 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
42	Parbati-III	UNIT-III	130 MW	145 MVA	M/S BHEL	15.03.2014	13.8KV/400 KV	53 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
43	Parbati-III	UNIT-IV	130 MW	145 MVA	M/S BHEL	22.05.2014	13.8KV/400 KV	53 MVA		Pondage	NHPC	Power/Energy	Northern		Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
44	Kishanganga	UNIT-I	110 MW	122.22 MVA	M/S BHEL	13.03.2018	13.8KV/220 KV	45 MVA		Pondage	NHPC	Power/Energy	Northern	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
45	Kishanganga	UNIT-II	110 MW	122.22 MVA	M/S BHEL	21.03.2018	13.8KV/220 KV	45 MVA		Pondage	NHPC	Power/Energy	Northern	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
46	Kishanganga	UNIT-III	110 MW	122.22 MVA	M/S BHEL	30.03.2018	13.8KV/220 KV	45 MVA		Pondage	NHPC	Power/Energy	Northern	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026	01-03-2018	Yes	Jan-Feb 2026			Jan-Feb 2026			Jan-Feb 2026
47	Parbati-II	UNIT-I	200 MW	222.22 MVA	M/S BHEL	01.04.2025	13.8KV/400 KV	82 MVA		Pondage	NHPC	Power/Energy	Northern	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030
48	Parbati-II	UNIT-II	200 MW	222.22 MVA	M/S BHEL	01.04.2025	13.8KV/400 KV	82 MVA		Pondage	NHPC	Power/Energy	Northern	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030
49	Parbati-II	UNIT-III	200 MW	222.22 MVA	M/S BHEL	01.04.2025	13.8KV/400 KV	82 MVA		Pondage	NHPC	Power/Energy	Northern	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030
50	Parbati-II	UNIT-IV	200 MW	222.22 MVA	M/S BHEL	16.04.2025	13.8KV/400 KV	82 MVA		Pondage	NHPC	Power/Energy	Northern	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030	March/April 2025	No	2030
51	Tehri HPP(4*250 MW)	1	250 MW	278 MVA	Power Machine	09.07.2007	420/15.75 kV	306	0.4 (2/5)		THDC India Limited	Power Generation	Northern	-	Yes	Mar-26	-	Yes	Mar-26	-	Yes	Mar-26	Apr-23	No	Mar-28	Apr-23	No	Mar-28	Mar-2021	Yes	Mar-26
52		2	250 MW	278 MVA		30.03.2007	420/15.75 kV	306	0.4 (2/5)																						
53		3	250 MW	278 MVA		09.11.2006	420/15.75 kV	306	0.4 (2/5)																						
54		4	250 MW	278 MVA		22.09.2006	420/15.75 kV	306	0.4 (2/5)																						
55	NJHPS	1	250 MW	278 MVA	EUCONA (Voith Siemens(Germany), GE Hydro (Oslo/Norway), Alstom(Germany), VA Tech(Italy), BHEL(India))	18.05.2004	15.75kV/ 400kV	3 x 102 MVA	Tap Ratio - 2/5	RoR	SJVN	Power/Energy	NRLDC	18.02.2023	No	-	18.02.2023	No	-	18.02.2023	No	-	05.05.2022	No	-	09.02.2021	Yes	08.02.2026	09.02.2021	Yes	08.02.2026
56	NJHPS	2	250 MW	278 MVA		06.05.2004					SJVN		NRLDC	28.02.2023	No	-	28.02.2023	No	-	28.02.2023	No	-	05.05.2022	No	-	09.02.2021	Yes	08.02.2026	09.02.2021	Yes	08.02.2026
57	NJHPS	3	250 MW	278 MVA		31.03.2004					SJVN		NRLDC	20.02.2023	No	-	20.02.2023	No	-	20.02.2023	No	-	05.05.2022	No	-	09.02.2021	Yes	08.02.2026	09.02.2021	Yes	08.02.2026
58	NJHPS	4	250 MW	278 MVA		30.03.2004					SJVN		NRLDC	19.02.2023	No	-	19.02.2023	No	-	19.02.2023	No	-	05.05.2022	No	-	09.02.2021	Yes	08.02.2026	09.02.2021	Yes	08.02.2026
59	NJHPS	5	250 MW	278 MVA		06.10.2003					SJVN		NRLDC	10.02.2023	No	-	10.02.2023	No	-	10.02.2023	No	-	05.05.2022	No	-	09.02.2021	Yes	08.02.2026	09.02.2021	Yes	08.02.2026
60	NJHPS	6	250 MW	278 MVA		02.01.2004					SJVN		NRLDC	11.02.2023	No	-	11.02.2023	No	-	11.02.2023	No	-	03.11.2023	No	-	09.02.2021	Yes	08.02.2026	09.02.2021	Yes	08.02.2026

HVDC Links

S. No	Name of Link	Type (LCC/VSC/Back-to-Back)	HVDC_Voltage (kV)	Converter-1		Converter-2		Master Converter Station	Pole_number	Length (km)	Capacity (MW)	Owner	Forward Direction			Reverse Direction			Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC.			Revised Simulation Models		
				Station Name	Region	Station Name	Region						Maximum Capacity	Minimum Capacity	Ground_return_capacity	Maximum Capacity	Minimum Capacity	Ground_return_capacity	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks	
1			500	APL-Mundra	WR	Mohindargarh	NR		1	989	1,250	ATIL	150	500	1250					Due			Due			
2			500	APL-Mundra		Mohindargarh			2	989	1,250	ATIL	150	500	1250					Due			Due			
3		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	1	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			
4		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	2	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			
5		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	3	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			
6		LCC	800	Champa_HVDC	WR	Kurukshetra	NR	Champa_HVDC	4	1,306	1,500	POWERGRID	150	1,500	DMR path	NA	NA	NA		Due	Apr-2025		Due			

STATCOMs/SVCs

S.No	Station	Statcom	Capacity (MVAR)	Owner	Make	Reactive Power Controller (RPC) Capability for HVDC/FACTS			Filter bank adequacy assessment based on present grid condition, in consultation with NLDC			Validation of response by FACTS devices as per settings.			Revised Simulation Models	
						Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Last tested on (dd/mm/yyyy)	Whether due?	Tentative Schedule date	Whether Revised Models Submitted?	Remarks
1	Kurukshetra	TCR	500	POWERGRID	GE Vernova T&D	NA	NA	NA	NA	NA	NA	Nov-2023	No	Sep-2028		
2	Fatehgarh-2	STATCOM	.+/-600	POWERGRID	SIEMENS	Oct-2023	No	Sep-2028	NA	NA	NA	Oct-2023	No	Sep-2028		
3	Bhadla-2	STATCOM	.+/-600	POWERGRID	SIEMENS	Jun-2023	No	May-2028	NA	NA	NA	Jun-2023	No	May-2028		
4	Bikaner-2	STATCOM	.+/-300	POWERGRID	SIEMENS	Jul-2023	No	Jun-2028	NA	NA	NA	Jul-2023	No	Jun-2028		

Annexure-A.V

Sr. No.	State	Organisation	Name of Project	Unit No	Total Capacity (MW)	Technical Minimum Load Status (%) achieved by the Unit as intimated in 223rd OCC	Reason for not achieving 55% Technical Minimum
1	Punjab	GPGSL (GVK)	GOINDWAL SAHIB	1	270.00	60%	
2	Punjab	GPGSL (GVK)	GOINDWAL SAHIB	2	270.00	60%	
3	Punjab	PSPCL	GH TPS (LEH.MOH.)	1	210.00	79%	
4	Punjab	PSPCL	GH TPS (LEH.MOH.)	2	210.00	79%	
5	Punjab	PSPCL	GH TPS (LEH.MOH.)	3	250.00	68%	
6	Punjab	PSPCL	GH TPS (LEH.MOH.)	4	250.00	68%	
7	Punjab	PSPCL	ROPAR TPS	3	210.00	75%	
8	Punjab	PSPCL	ROPAR TPS	4	210.00	75%	
9	Punjab	PSPCL	ROPAR TPS	5	210.00	75%	
10	Punjab	PSPCL	ROPAR TPS	6	210.00	75%	
11	Haryana	HPGCL	PANIPAT TPS	8	250.00	Inforamtion Not Available	
12	Haryana	HPGCL	PANIPAT TPS	7	250.00	Inforamtion Not Available	
13	Haryana	HPGCL	PANIPAT TPS	6	210.00	Inforamtion Not Available	
14	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	1	135.00	70%	
15	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	2	135.00	70%	
16	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	3	135.00	70%	
17	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	4	135.00	70%	
18	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	5	135.00	70%	
19	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	6	135.00	70%	
20	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	7	135.00	70%	
21	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	8	135.00	70%	
22	Rajasthan	RRVUNL	CHHABRA TPP	1	250.00	72.20%	
23	Rajasthan	RRVUNL	CHHABRA TPP	2	250.00	72.20%	
24	Rajasthan	RRVUNL	CHHABRA TPP	3	250.00	72.20%	
25	Rajasthan	RRVUNL	CHHABRA TPP	4	250.00	72.20%	
26	Rajasthan	RRVUNL	KALISINDH TPS	1	600.00	66.33%	
27	Rajasthan	RRVUNL	KALISINDH TPS	2	600.00	66.33%	
28	Rajasthan	RRVUNL	SURATGARH TPS	1	250.00	72.13%	
29	Rajasthan	RRVUNL	SURATGARH TPS	2	250.00	72.13%	
30	Rajasthan	RRVUNL	SURATGARH TPS	3	250.00	72.13%	
31	Rajasthan	RRVUNL	SURATGARH TPS	4	250.00	72.13%	
32	Rajasthan	RRVUNL	SURATGARH TPS	5	250.00	72.13%	
33	Rajasthan	RRVUNL	SURATGARH TPS	6	250.00	72.13%	
34	Rajasthan	RRVUNL	KOTA TPS	1	110.00	72.26%	
35	Rajasthan	RRVUNL	KOTA TPS	2	110.00	72.26%	
36	Rajasthan	RRVUNL	KOTA TPS	3	210.00	72.26%	
37	Rajasthan	RRVUNL	KOTA TPS	4	210.00	72.26%	
38	Rajasthan	RRVUNL	KOTA TPS	5	210.00	72.26%	
39	Rajasthan	RRVUNL	KOTA TPS	6	195.00	72.26%	
40	Rajasthan	RRVUNL	KOTA TPS	7	195.00	72.26%	
41	Rajasthan	NLC	BARSINGSAR LIGNITE	1	125.00	Inforamtion Not Available	
41	Rajasthan	NLC	BARSINGSAR LIGNITE	2	125.00	Inforamtion Not Available	
41	Rajasthan	RRVUNL	GIRAL TPS	2	125.00	Under is under shutdown from 2012 and likely to be scrapped as intimated by Rajasthasn SLDC	
41	Rajasthan	RRVUNL	GIRAL TPS	1	125.00	Under is under shutdown from 2012 and likely to be scrapped as intimated by Rajasthasn SLDC	

Annexure-A.VI

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

सेवा में,
As per attached list (via e-mail)

विषय: Status of MTDL achieved in intra-state thermal generating stations of Punjab Rajasthan and Haryana - reg.

महोदय/महोदया,

This is with reference to CEA's Gazette Notification issued on dated January 30, 2023, regarding the flexible operation of coal-fired thermal generating units, therein stating that all thermal generating units must have flexible operation capabilities with a minimum power level of 55% within one year of Notification, i.e.by January 2024 and with a minimum power level of 40 % (as per the Phasing Plan specified by the authority from time to time) at the following Ramp rate:

From	To	Ramp Rate
40%	55%	1%
55%	70%	2%
70%	100%	3%

2. CEA vide communication dated 30.05.2024 (**Annexure-I**) also had intimated that 55% flexible operation regulation is effective in the country from 1st February 2024.
3. The list of intra-state thermal generating stations of Punjab, Rajasthan and Haryana that have not achieved MTDL of 55% as per information noted in 223rd OCC meeting is attached at **Annexure-II**.
4. Concerned thermal generating stations mentioned at **Annexure-II** are requested to submit the reasons for not achieving 55% Technical Minimum Level.
5. SLDC's to co-ordinate with the intra-state thermal Plant (including IPP) of their respective control area for the requisite information.
6. It is requested the requisite information may kindly be provided latest by 10th August 2025 via email at **seo-nrpc@nic.in**.

This issues with the approval of Member Secretary, NRPC.

(डी. के. मीना)
अधीक्षण अभियंता (प्रचालन)

List of addressees:

1. Director (Generation), PSPCL (dir-generation@pspcl.in)
2. Director (Technical), RRVUNL (director.tech@rrvun.com)
3. Director (Technical), HPGCL, (dirtech@hpgcl.org.in)
4. Head of Plant, Goindwal Sahib, GVK (Bivashchandra.Ghosh@gvk.com)
5. Head of Plant, Rajwest Power Limited, JSW (vijay.chintala@jsw.in)
6. Head of Plant, Barsingsar Lignite, NLC (plan.btps@nlcindia.in)
7. Chief Engineer, Punjab SLDC (ce-sldc@pstcl.org)
8. Chief Engineer, Rajasthan SLDC (ce.ld@rvpn.co.in)
9. Chief Engineer, Rajasthan SLDC (cesocomml@hvpn.org.in)

Annexure-I

सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
तापीय परियोजना नवीनीकरण एवं आधुनिकीकरण प्रभाग
Thermal Project Renovation & Modernization Division

No. 2/3/TPRM/Flex./2024/ 484-572 Date: 30.05.2024

Subject: Minimum Technical Load of Coal based Power Plants–reg.

Ref: CEA (Flexible operation of coal Based Thermal Generating Units) Regulation, 2023

The increasing penetration of renewable generation in the grid is bringing various challenges in the power sector. The inconsistency of solar & wind power has to be managed by other sources of generation in order to ensure the grid security, reliability and stability. Hence, there is a demand of flexible power in the grid which is increasing day by day with growing capacity of solar and wind power. It is a fact that coal based power plants have the capability of providing flexible power in the grid by lowering minimum technical load and the cost is also comparatively low.

In view of the above CEA has issued a gazette notification dated January 30, 2023 for compulsory flexible operation of coal fired generating units with minimum technical load (MTL) of 55% and 40%. As per the CEA gazette notification extraordinary, part III, section 4, no. 61 (CG-DL-E-31012023-243299), the coal based thermal power generating units shall have flexible operation capability with minimum power level of 55% along with ramp rate of 2% per minute between 55% to 70% load and 3% per minute above 70% load within one year of notification of the above mentioned regulations i.e. by 31st Jan 2024. CEA has also notified phasing plans on 15.12.2023 for implementation of 40% minimum technical load (MTL) along with ramp rate of 1% per minute between 40% to 55%, 2% per minute between 55% to 70% load and 3% per minute above 70% load.

It may be noted that the 55% flexible operation regulation is effective in the country from 1st February, 2024. In this regard it is requested to kindly provide the status as per attached format at earliest.

Rohit 30/5/2024

(Rohit Yadav)
Deputy Director, TPRM

To:

1. Managing Director, Tenughat Vidyut Nigam Ltd .Hinoo, Doranda, Ranchi - 834002, Jharkhand, Fax 0651 -2507460, Email: info@tvnl.in
2. MD/CMD, JSW Centre, Bandra Kurla Complex, Near MMRDA Grounds, Bandra

East,Mumbai 400 051 Fax: +91 22 4286 3000, Email: contact@jsw.in

3. CMD, Bajaj Bhawan , Jamnalal Bajaj Marg, B-10, Sector-3, Noida-201 301, Uttar Pradesh Tel. 0120-4045100, Email: jkbajajtrust@gmail.com
4. The Durgapur Projects Limited , Dr B C Roy Avenue, Durgapur- 713201, West Bengal , India, Email: admin@dpl.net.in
5. CMD, TRN Energy Pvt. Ltd. / ACB India LTD., 7th Floor, Corporate Tower, Ambience Mall, NH.-8, Gurgaon -122002 , Ph . 0124-2719000, Fax: 0124-2719185, Email: legal.secretarial@acbindia.com
6. CMD, DB Power Ltd, 3rd Floor, Naman Corporate Link, Opposite Dena Bank, C-31 , Block G,Bandra Kurla Complex, Bandra (E), Mumbai- 400 051 ,Tel No +91-22-7156 6000, Fax No +91 -22-26590264, Email: sandeep.gurav@dbpower.in
7. CMD, Bharat Aluminium Company Limited , Aluminium Sadan, Core - 6, Scope Office Complex, Lodi Road , New Del hi – 110003, Email: north.aluminium@vedanta.co.in
8. CMD, Tata Power, Bombay House, 24, Homi Mody Street, Mumbai 400 001 , Tel: (91 22) 66658282, Fax: (91 22) 6665 8801, Email: tatapower@tatapower.com
9. CMD/ MD, Essar, Essar House, Opposite Gujarat College, Ellisbridge, Ahmedabad 380 006, Gujarat , India, Tel.: +91 -79-66086666 , Fax: +91-79-66086608, Email: powersec@essarpower.co.in
10. CMD, CESC Limited , CESC House, Chowringhee Square, Kolkata - 70000 I, Phone: 2225604049, Email: cesclimited@rp-sg.in
11. CMD, Larsen & Toubro Limited, L&T House, Ballard Estate P. 0. Box: 278, Mumbai 400001. Email: Infodesk@larsentoubro.com
12. MD, Haldia Energy Limited, 8, Chittaranjan Avenue, Barick Bhawan, 6th Floor, Kolkata 700072. Email: ranajit.haldiaenergy@rp-sg.in
13. CMD, Lalitpur Power Generation Company Limited, 106-107, Bajaj Bhawan , 10th Floor, Jamnalal Bajaj Marg, 226 Nariman Point, Mumbai -400021 ,Tel. +91-22-22049056 /58, Fax: +91 -22-22048681, Email: cs@lpgcl.com
14. Chairman, Reliance Centre, Santacruz, Near Prabhat Colony, Off. Western Express Highway, Santa Cruz (East), Mumbai 400 055 Tel: +91 22 3303 1000 Fax: +91 22 3303 3662, Email: reliancepower.investors@relianceada.com
15. CMD, Lanco Anpara Power Limited , Plot No. 397, Phase-III ,, Udyog Vihar, Gurgaon-122016, New Delhi Region - India, Phone +91 -124 - 4741 000,Fax +91 -124 - 4741 024, Email: info.power@lancogroup.com
16. MD, Talwandi Sabo Power Limited, Site Cum Regd. Office:,Village Banawala , Mansa - Talwandi Sabo Road, Distt. Mansa, Punjab - 15 1302 INDIA, Tel: +91 -1659-248000 Telefax: 01659-248083, Email: tspl.commercial@vedanta.co.in
17. CMD, GVK Power, Paigah House, 156-159, SP Road, Secunderabad 500003,Telangana, India.,Telephone +91 -40-27902663/4, Email: pvrs@gvk.com
18. CMD, Prayagraj Power Generation Co. Ltd, Khan Semra, Uttar Pradesh 212106, Email: ppgcl@ppgcl.co.in
19. Chairman, CSPDCL, Energy Info Tech Centre, Block No. 8, CS Power Companies Campus ,Daganiya, Raipur (CG), Pin – 492013, Email:
20. Sterlite power Transmission Limited , Director, F-1 Mira Corporate Suits, 1 &2 floor, Mathura Road , Ishwar Nagar New Delhi, Delhi, New Delhi, Delhi 110065 Email: amitabh.prasad@sterlite.com
21. Director, Adani Power Limited, Achalraj, Opp Mayor Bungalow, Law Garden, Ahmedabad-380006 ,Gujarat, lndia.,Tel:+91 79 2555 7555,Fax:+91 79 25557177 Email: deepak.pandya@adani.com
22. Director, Jaiprakash Power Ventures Limited, Complex of Jaypee Nigrie Super Thermal Power Plant, Tehsil Sarai, Nigrie, Singrauli , Madhya Pradesh - 486669 , India, Phone No: (7801) 286021 - 39, Fax: (780 I) 286020, Email: mm.sibbal@jalindia.co.in
23. CMD, NLC India Ltd., First Floor, No.8, Mayor Sathyamurthy Road, FSD, Egmore Complex of Food Corporation of India, Chetpet, Chennai-60003 I ,Tamil Nadu, India. Ph No. 044-28364613,614,615,616,617 Fax. 044-28364619 Email: cmd@nlcindia.com

24. CMD, The Singareni Collieries Company Ltd., Kothagudem Collieries, Bhadradri Kothagudem Dist , Telangana State PIN: 507101. Ph No 08744-242301 /02/03/04 Fax: 08744-242305, Email: dp@scclmines.com
25. CMD, Hinduja National Power Corporation Limited , Hinduja House, 171 , Dr. Annie Besant Road,, Worli , Mumbai - 40001 8, India, Phone : +91 -22-24960707, Fax : +91 - 22-24960747 Email: sunil.hnp@hindujagroup.com
26. CMD, R.K.M Powergen Private Limited , 14/45 Dr.Giriappa Road , T.Nagar,, Chennai - 600017, Tamil Nadu, India, Telephone : +91 -44-66291000, Email: m.malathi@rkmpowergen.in
27. Chairman, jhabua Power, Avantha Power & Infrastructure Limited, 6th floor, Vatika City Point, M.G. Road -Gurgaon - 122002, India, Tel: + (91 124) 439 2000, Fax: + (91 124) 437 6496, Email: communications@avanthapower.com
28. Chairman , KSK Energy Ventures Limited, 8-2-293/82/A/43 I/A, Road No:22 , Jubilee Hills, Hyderabad, Telangana 500033, India , Tel: 04023559922 /23/24/25 Fax: 04023559930, Email: info@ksk.co.in
29. Dy. General Manager, Mahatma Gandhi TPS, Jhajjar Power Ltd . (CLP India Co.), Tehsil Matenhail , Distt Jhajjar-124142, Email: rajiv.mishra @clpindia.in
30. Chairman, Adhunik Industries Ltd., Lansdowne Towers, 2/1 A, Sarat Bose Road Kolkata 700020, West Bengal , INDIA Tel: 033 3051 7100 Fax 033 22890285 Email: bharatagarwal@adhunikgroup.co.in
31. Chairman , Rattanlndia Power Limited, 5th Floor, Tower-8, World mark I , Aerocity,, New Delhi - 110037 Email: powersectt@rattanindia.com
32. CMD/MD, Taqa Neyveli Power Company Pvt Ltd, Uthangal, Tamil Nadu 607804, Email: raghu.nathan@taqaglobal.com
33. CMD/MD, Coastal Energy Pvt. Ltd , 5th Floor, Buhari Towers,4, Moores Road, Chennai - 600 006, INDIA Tel: +91 44 4397 4397. Fax: +91 44 2826 8316. Email: nadeem.ma@coastalenergen.com
34. MD/CMD, CLP India Private Limited, 7th Floor, FULCRUM , Sahar Road, Andheri (East), Mumbai - 400 099, Tel : +91 -22-6758 8888, Fax: +91 -22-6758 881 1/8833
35. MD/CMD, Dhariwal Infrastructure Limited., C-6, Tadali Growth Centre, MIDC Tadali, District: Chandrapur, Maharashtra – 442406, India., Phone:07172 645911/645912/645913, FAX : 07172 237992,Email : dhariwalinfrastructure@rp-sg.in
36. MD/CMD,Adhunik Group,14, N. S. Road, 2nd Floor, Kolkata 700001, West Bengal, INDIA
37. MD/CMD, Essar, Essar House, 11, Keshavrao Khadye Marg, Mahalaxmi, Mumbai 400034, Maharashtra, India Tel.: +91-22- 66601100Fax: +91-22-66601809
38. MD/CMD, Jindal Power Limited, Jindal Centre, 12, Bhikaiji Cama Place, New Delhi 110 066, India, Email: info@jindalpower.com
39. MD/CMD , Gujarat Mineral Development Corporation Limited , 132 feet - Ring Road, Vastrapur, Ahmedabad – 380052 Phone : 079-27913501, 27913200 Fax : 079-27913038 Email : contact@gmdcltd.com
40. MD/CMD, Gujarat Industries Power Company Ltd. , P.O. Petrochemical – 391346 Dist.: Vadodara, Gujarat – India Phone: +91-265-2232768 Fax: +91-265-2230029 Email: genbaroda@gipcl.com
41. MD/CMD Torrent Power Generation Ltd, Sola Road, Naranpura,Ahmedabad - 380 013 Ph +91 79 22551912 / 66551912 Email: connect.ahd@torrentpower.com
42. MD/CMD TAQA Neyveli Power Company Pvt. Ltd, 79 Kasturi Avenue, MRC Nagar, R A Puram, Chennai Pin:600028 India Tel: +91 44 4209 7811 Fax: +91 44 4209 7812
43. MD/CMD, M/S SKS ISPAT AND POWER LTD., B-501, Elegant Business Park, Andheri Kurla Road, J.B.Nagar, Andheri - (E), Mumbai - 400 059 Telephone: +91-22-3080 7000 Fax: +91-22-3080 7070 / 7080 E-Mail: corporateoffice@sksispat.com
44. MD/CMD , Sembcorp Energy India Limited, 5th floor, Tower C, Building No. 8, DLF Cybercity, Gurgaon 122002 Haryana, India Ph: (91) 12 4389 6700
    Email: cs.india@sembcorp.com
45. MD/CMD, Hindustan Power projects Private Ltd., 239, Okhla Industrial Estate, Phase-

III New Delhi-110020 Tel: +91-11-47624100, Fax: +91-11-47624229 Email: info.hpppl@hpppl.in

46. MD/CMD, JINDAL INDIA THERMAL POWER LIMITED , Plot No 12, Sector B-1, Local Shopping Complex , Vasant Kunj NEW DELHI 110 070 Tel: 011-26139256-65 Fax: 011-26125739, E-Mail: jitpl@jindalgroup.com
47. MD/CMD, Ind-Barath Power Infra Limited, Hyderabad, Plot No. 30-A, Road No. 1, Film Nagar, Jubilee Hills, Hyderabad - 500 096 , Andhra Pradesh, INDIA. Phone: +91-40-23553459 Fax: +91 40 23607522 Email: hyderabad@ibpil.com
48. MD/CMD, GMR Enterprises Private Limited, Third Floor, Old No.248/New No.114, Royapettah High Road, Royapettah, Chennai - 600 014 Email: Yogindu.Khajuria@gmrgroup.in
49. CMD, India Power Corporation Ltd., Plot No.X, 1, 2 & 3, Block – EP, Sector-V, Salt Lake City, Kolkata – 700091, Email: pr@indiapower.com, Fax: +91 33 2357 2452
50. Chairman/CMD, MAHAGENCO, Maharashtra State Power Generation Co. Ltd., Prakashgad, Plot No. G-9, Bandra (East) Mumbai-400 051
51. CMD/MD, East Coast Energy Pvt. Ltd., H. No. 7-1-50, Flat No. 203, Myneni Apartments, Dharam Karam Road, Ameerpet, Hyderabad TG 500016 Email: irp.eastcoast@bdo.in
52. MD/CMD, Lanco Amarkantak Pvt. Ltd., 397, Phase II, Udyog Vihar, Sector 20, Gurugram, Haryana 122008
53. MD/CMD, Vandana Vidyut Ltd., Vandana Bhawan M.G.Road, Raipur, Chhattisgarh 492001 Email: codinthree@rediffmail.com
54. MD/CMD, Visa Power Ltd., 8/10 Alipore Road, Kolkata, West Bengal 700027, Email ID: secretarial@visa-group.com
55. MD/CMD, Corporate Power Ltd., FE-83, SECTOR-III Salt Lake City, Ground Floor, Kolkata, West Bengal- 700106, Email : mcainfo@abhijeet.in
56. MD/CMD, Jinbhuvish Power Generation Pvt. Ltd., 101, E High Ct Rd, New Ramdaspeth, Ramdaspeth, Nagpur, Maharashtra 440010, Email: companylaw.info@gmail.com
57. MD/CMD, Shirpur Power Pvt. Ltd., 903, Shilp Building, Opposite Navrangpura Telephone Exchange, Ahmedabad, Gujarat- 380009, India,
    Email ID: nikunj.shah@shirpurpower.in
58. MD/CMD, D.B. Power (MP) Ltd., Office Block 1A,5th Floor, Corporate Block, DB City- Park, DB City, Arera Hills Opposite MP Nagar, Zone -I Bhopal, Madhya Pradesh-462016, Email : sandeep.gurav@dbpower.in
59. MD/CMD, Ind Barath TPP Odisha, Ind Barath Energy Utkal Ltd., H NO. 8-5-210/43, Plot No 44, Shiva Enclave old Bowenpally, Secunderabad, Rangareddi Telangana 500011, Email : brs@ibpil.com
60. MD/CMD, KVK Nilanchal, Plot No. 484/A, Road No. 36, Jubilee Hills, Hyderabad-500033, Email: srinivasaraoa@kvkenergy.com
61. MD/CMD, LBP Ltd., Lanco Babandh Thermal Power Plant, Plot # 4, Software Units Layout, HITEC City, Madhapur Hyderabad, Telangana 500081,
    Email: dheeraj.kumarmishra@lancogroup.com
62. MD/CMD, Monnet Power Company Ltd. (MPCL), Malibrahmani TPP, Monnet House, 11, Masjid Moth, Greater Kailash Part-II, New Delhi- 110048
63. MD/CMD, IBPIL- Tuticorin TPP (Ind- Barath), Plot No. 30-A, Road No. 1, Film Nagar, Jubilee Hills, Hyderabad - 500 096, Email: hyderabad@ibpil.com , chennai@ibpil.com
64. MD/CMD, SEPC Power Company Ltd., Tuticorin TPP Stage-IV, MEIL House, First Floor No 395 (Old No 280-A) Anna Salai, Teynampet, Chennai, Tamil Nadu 600018, Email ID: sepc.ppl@meilteam.in
65. MD/CMD, India Power Corporation (Haldia) Limited, Plot No. X1- 2 & 3, Block-EP, Sector - V, Salt Lake City, Kolkata - 700 091.
66. MD/CMD, Lanco Vidharbha Power Pvt. Ltd., 11th Milestone, Belgaon-Mandwa Road, PO Mandwa, Dist Wardha, Maharashtra -422001 Phone +91-715-2283715

67. MD/CMD, BLA Power Pvt. Ltd., 84 Maker Chambers III, Nariman Point, Mumbai, Maharashtra- 400021 Email: compsec@bla.co.in
68. MD/CMD, BRBCL (Bharatiya Rail Bijlee Company Ltd.), Bihar State Power Generation Company Ltd., 5th Floor, Vidyut Bhawan, Bailey Road, Patna-800001, Email ID : gmhrbspgcl@gmail.com
69. MD/CMD, Corporate Power Ltd., FE-83, Sector-III Salt Lake City, Ground Floor, Kolkata, West Bengal- 700106, Email ID : mcainfo@abhijeet.in
70. MD/CMD, Dishergarh Power Supply Company Ltd. (DPSCL), Plot No.- X-1, 2 & 3 Block EP Sector-V, Salt Lake, Kolkata 700091 Email: rpower.mcafiling@relianceada.com
71. MD/CMD, Essar Power Ltd., LGF, A-20, Kailash Colony, Hotel Conclave Complex, Block A, Kailash Colony, Greater Kailash, New Delhi, Delhi 110048 Email: Shailendra.saha@essarpower.co.in
72. CMD/MD, NTPC SAIL Power Company Ltd. (NSPCL), NBCC Tower, 15, 4th Floor, Bhikaji Cama Place, New Delhi
73. MD/CMD, Shirpur Power Pvt. Ltd., 903, Shilp Building, Opposite Navrangpura Telephone Exchange, Ahmedabad, Gujarat- 380009, India, Email ID: nikunj.shah@shirpurpower.in
74. Chairman, DVC, DVC Head Quarters, DVC Towers, VIP Rod, Kolkata-700054 Email id : chairman@dvc.gov.in
75. CMD/MD, Global Energy Pvt. Ltd. (GEPL), 2, Panchsheel Community Centre, New Delhi-110017 Email: gyansheel@globalenergy.net.in
76. Bishagarh, Email address: cmd.tsecl@rediffmail.com
77. NTEC , NTPC Tamil Nadu Energy Company Ltd. NTPC Tamil Nadu Energy Company Limited , Vallur Thermal Power Project, Vellivoyal chavadi, Ponneri Taluk, Thiruvallur, Tamil Nadu - 600 103
78. Vidarbha Industries Ltd. Subs of reliance Power, Email : rpower.mcafiling@relianceada.com
79. Korba West power Company Ltd., Avantha Power, Email: communications@avanthapower.com
80. MD/CMD, ITPCL, IL&FS Tamil Nadu Power Company Limited 4th Floor, KPR Tower, Old No. 21, New No. 2, 1st Street, Subba Rao Avenue,College Road, Chennai - 600 006, Email: info@itpclindia.com
81. Deputy General Manager (Electrical) Meenakshi Energy Pvt. Ltd. NSL ICON, Plot No. 1, 2, 3, 4 H-No-8-2-684/2/A, 2nd floor, Road No. 12, Banjara hills, Hyderabad-500034 Tel: 040-33872309/ 344/ 345 Fax: 040-33872323/ 23351530 Email: mepl@meenakshienergy.com
82. GM (O&M) Simhapuri Energy Pvt Ltd Madhucon Greenlands 6-3-866/2, 3rd Floor Begumpet, Hyderabad-500016 (AP) (T)- 040- 23412195/96, 23412297 (F)- 040 23412197, 23412298 , 08624- 213298/99 Email: info@simhapurienergy.com sme@simhapurienergy.com

Copy for information to:

1. Secretary (Power), MOP
2. Chairman, CEA
3. Member (Thermal), CEA
4. Member Secretary (NRPC/ERPC/SERPC/WRPC)

FORMAT

S. No	Details		Unit 1	Unit2	Unit3	-------
1	Name of Utility					
2	Plant Name and Address					
3	Capacity, MW					
4	Date of Commissioning					
5	Type of Unit: Supercritical/Subcritical/....					
6	Net Heat rate (i) Design Coal GCV (ii) Actual Coal GCV					
7	Maximum Ramp Rate Up (last 2 years)	Between 55%-70%				
		Between 70%-100%				
8	Maximum Ramp Rate Down (last 2 years)	Between 100%-70%				
		Between 70%-55%				
9	Whether 55% Minimum load Achieved (YES/NO) i. If YES, specify the duration and time i. If NO, specify the reason for the same and details of measures identified for implementation to achieve the same					
10	Whether desired ramp rates of 3% (100%-70%) and 2% (70%-55%) Achieved (YES/NO) If NO, specify the reason for the same and details of measures identified for implementation to achieve the same					
11	Tentative date of unit readiness for Sustainable running at 55% MTL with requisite ramp rates					
12	Any other details					

Annexure-II

Sr. No.	State	Organisation	Name of Project	Unit No	Total Capacity (MW)	Technical Minimum Load Status (%) achieved by the Unit as intimated in 223rd OCC	Reason for not achieving 55% Technical Minimum
1	Punjab	GPGSL (GVK)	GOINDWAL SAHIB	1	270.00	60%	
2	Punjab	GPGSL (GVK)	GOINDWAL SAHIB	2	270.00	60%	
3	Punjab	PSPCL	GH TPS (LEH.MOH.)	1	210.00	79%	
4	Punjab	PSPCL	GH TPS (LEH.MOH.)	2	210.00	79%	
5	Punjab	PSPCL	GH TPS (LEH.MOH.)	3	250.00	68%	
6	Punjab	PSPCL	GH TPS (LEH.MOH.)	4	250.00	68%	
7	Punjab	PSPCL	ROPAR TPS	3	210.00	75%	
8	Punjab	PSPCL	ROPAR TPS	4	210.00	75%	
9	Punjab	PSPCL	ROPAR TPS	5	210.00	75%	
10	Punjab	PSPCL	ROPAR TPS	6	210.00	75%	
11	Haryana	HPGCL	PANIPAT TPS	8	250.00	Inforamtion Not Available	
12	Haryana	HPGCL	PANIPAT TPS	7	250.00	Inforamtion Not Available	
13	Haryana	HPGCL	PANIPAT TPS	6	210.00	Inforamtion Not Available	
14	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	1	135.00	70%	
15	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	2	135.00	70%	
16	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	3	135.00	70%	
17	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	4	135.00	70%	
18	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	5	135.00	70%	
19	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	6	135.00	70%	
20	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	7	135.00	70%	
21	Rajasthan	RWPL (JSW)	JALIPA KAPURDI TPP	8	135.00	70%	
22	Rajasthan	RRVUNL	CHHABRA TPP	1	250.00	72.20%	
23	Rajasthan	RRVUNL	CHHABRA TPP	2	250.00	72.20%	
24	Rajasthan	RRVUNL	CHHABRA TPP	3	250.00	72.20%	
25	Rajasthan	RRVUNL	CHHABRA TPP	4	250.00	72.20%	
26	Rajasthan	RRVUNL	KALISINDH TPS	1	600.00	66.33%	
27	Rajasthan	RRVUNL	KALISINDH TPS	2	600.00	66.33%	
28	Rajasthan	RRVUNL	SURATGARH TPS	1	250.00	72.13%	
29	Rajasthan	RRVUNL	SURATGARH TPS	2	250.00	72.13%	
30	Rajasthan	RRVUNL	SURATGARH TPS	3	250.00	72.13%	
31	Rajasthan	RRVUNL	SURATGARH TPS	4	250.00	72.13%	
32	Rajasthan	RRVUNL	SURATGARH TPS	5	250.00	72.13%	
33	Rajasthan	RRVUNL	SURATGARH TPS	6	250.00	72.13%	
34	Rajasthan	RRVUNL	KOTA TPS	1	110.00	72.26%	
35	Rajasthan	RRVUNL	KOTA TPS	2	110.00	72.26%	
36	Rajasthan	RRVUNL	KOTA TPS	3	210.00	72.26%	
37	Rajasthan	RRVUNL	KOTA TPS	4	210.00	72.26%	
38	Rajasthan	RRVUNL	KOTA TPS	5	210.00	72.26%	
39	Rajasthan	RRVUNL	KOTA TPS	6	195.00	72.26%	
40	Rajasthan	RRVUNL	KOTA TPS	7	195.00	72.26%	
41	Rajasthan	NLC	BARSINGSAR LIGNITE	1	125.00	Inforamtion Not Available	
41	Rajasthan	NLC	BARSINGSAR LIGNITE	2	125.00	Inforamtion Not Available	
41	Rajasthan	RRVUNL	GIRAL TPS	2	125.00	Under is under shutdown from 2012 and likely to be scrapped as intimated by Rajasthasn SLDC	
41	Rajasthan	RRVUNL	GIRAL TPS	1	125.00	Under is under shutdown from 2012 and likely to be scrapped as intimated by Rajasthasn SLDC	

Annexure-A.VII

सत्यमेव जयते

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

विषय: Unit wise Outage Maintenance schedule for the year 2026-27-reg.

Central Electricity Authority vide its mail dated 10.07.2025 has sought information regarding the Unit Wise Planned Maintenance schedule for the year 2026-27. In this regard, please find enclosed herewith the data formats and the inputs desired:

1. Region-wise Unit Wise Planned Maintenance schedule for the year 2026-27 as per the format enclosed at **Annexure-I.**

Respective SLDC's of Northern Region are requested to co-ordinate with IPPs and State Generating Companies within their state and submit the data as per **Annexure-I**. Central Generating utilities are also requested to submit the abovementioned data as per Annexure-I.

The above information may kindly be submitted in the prescribed format by email to **seo-nrpc@nic.in** by 31st August 2025.

(डी.के. मीना) 22/7/25

अधीक्षण अभियंता (प्रचालन)

सेवा में,

1. **All Chief Engineer SLDC's of Northern Region States and UT's**
2. **Central Generating Stations of Northern Region**

Format for unit wise outage schedule of generating stations **Annexure-A.VII**

							Outage 1				Outage 2 of same unit				Outage 3 of same unit				Outage 4 of same unit				Outage 5 of same unit			
STATION NAME	UNIT NO.	STATION TYPE	REGION	STATE	ORGANIZATION/ UTILITY	CAPACITY	From_Date	To_Date	Outage_Reason	Remarks	From_Date	To_Date	Outage_Reason	Remarks	From_Date	To_Date	Outage_Reason_ID	Remarks	From_Date	To_Date	Outage_Reason_ID	Remarks	From_Date	To_Date	Outage_Reason	Remarks

Note: Please don't leave any cell blank in columns of STATION NAME,UNIT NO.,STATION TYPE,REGION,STATE,UTILITY.

Electricity Test & Commissioning Circle,Lucknow

Priority wise opening of feeders connected on SPS at 400KV Sub - stations Bareilly

Name of S/S	T/F Rating	Tripping Logic Stage		Tripping Logic Stage			
		% Setting	Time	%Setting	Time	Priority of Feeders for load cut off	Average Load in MW Load in MW
400KV S/S Bareilly	315MVA - I	100-110 (454-500 A)	5 Sec	Above 110% (>500 A)	1500 ms	1-220KV Amariya DC	32
						2-20KV Faridpur	20
						3-20KV Pilibhit DC	130
	315MVA - II	100-110 (454-500 A)	5 Sec	Above 110% (>500 A)	1500 ms	4- 220 KV Pantnagar	118
						5- 220 KV CB Ganj DC	84
	315MVA - III	100-110 (454-500 A)	5 Sec	Above 110% (>500 A)	1500 ms	6- 220 KV Dohna DC	70

Note: Delay as mentioned in the above Tripping logics I& II is for initiation of tripping command. After initiation of tripping command, feeders will continue to trip as per priority without any time delay untill loading on ICT recahes below 100%.

Overcurrent setting of ICTs at 400KV Sub - stations Bareilly		
Fault current with respect to full load (FL) current	Current in A	OC trip time (in Sec)
100% of FL	-	-
105% of FL	-	-
110% of FL pikup (500A)	501	1051
120% of FL	545	24
130% of FL	590	7.983
140% of FL	635	6.22

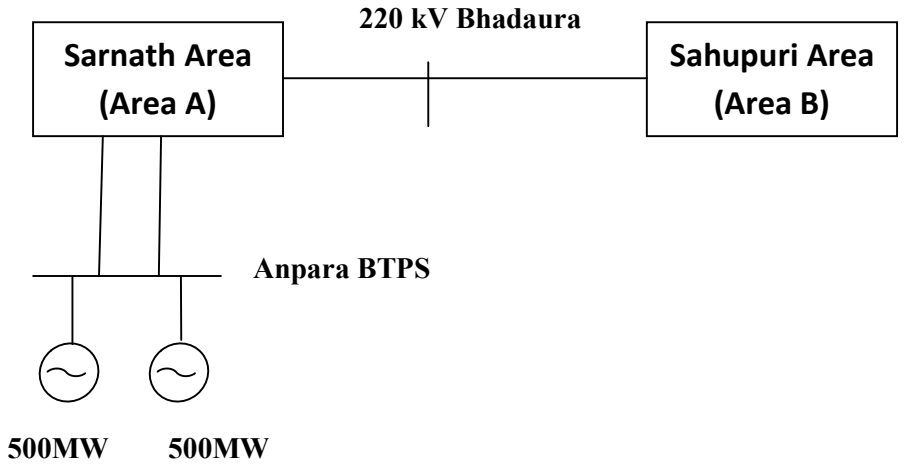
Logic for proposed SPS (System Protection Scheme) for ICTs at 400kV Substation Panki							
Name of Substation	ICT Rating	Tripping Logic-I			Tripping Logic-II		
		% Setting	Time Delay	Priority of feeder for load cut off	% Setting	Time Delay	Priority of feeder for load cut off
400kV Substation Panki	315MVA ICT- I	100-110% of rated current	5 sec	1. 220kV Chibramau 2. 220kV RPH 3. 220kV Bithoor 4. 220kV Raniya 5. 132kV Dibiyapur 6. 132kV Dadanagar 7. 132kV Azad Nagar Ckt I & II	Above 110% of rated current	1500 msec	1. 220kV Chibramau 2. 220kV RPH 3. 220kV Bithoor 4. 220kV Raniya 5. 132kV Dibiyapur 6. 132kV Dadanagar 7. 132kV Azad Nagar Ckt I & II
	500MVA ICT- II	100-110% of rated current	5 sec	1. 220kV Chibramau 2. 220kV RPH 3. 220kV Bithoor 4. 220kV Raniya 5. 132kV Dibiyapur 6. 132kV Dadanagar 7. 132kV Azad Nagar Ckt I & II	Above 110% of rated current	1500 msec	1. 220kV Chibramau 2. 220kV RPH 3. 220kV Bithoor 4. 220kV Raniya 5. 132kV Dibiyapur 6. 132kV Dadanagar 7. 132kV Azad Nagar Ckt I & II

Note: Delay as mentioned in the above Tripping logics I& II is for initiation of tripping command. After initiation of tripping command, feeders will continue to trip as per priority without any time delay untill loading on ICT recahes below 100%.

Overcurrent setting of ICTs at Panki	
Fault current with respect to full load (FL) current	OC trip time (in Sec)
100% of FL	-
105% of FL	-
110% of FL	Pickup
120% of FL	11.498
130% of FL	7.983
140% of FL	6.22

Study on Varanasi Islanding Scheme

Brief Description - Varanasi Islanding Scheme is proposed using generation from Anpara BTPS (2x500MW) and essential load of Varanasi Region.



- Following cases of Load- Generation scenario has been considered for steady state study:-

Sl. No.	Case	Area	Number of Machine	Generation	Load
1	Case-1	A and B	2	874 MW	806 MW (Summer Peak)
2	Case-2	A and B	2	442 MW	435 MW (Winter Peak)
3	Case-3	A	1	452 MW	440 MW (Summer Peak)
4	Case-4	A	1	310 MW	305 MW (Summer Off Peak)
5	Case-5	A and B	1	409 MW	402 MW (Winter Peak)
6	Case-6	A and B	1	326 MW	322 MW (Winter Off Peak)

- **In case number 1, 2, 5 and 6 larger Island (Considering Both A and B) is considered. List of the substations are as follows (Refer to Annexure-I)**

S.no	Name of Substation	S.no	Name of Substation
1	220kV Gajokhar (Only Bus Used)	10	132kV Raja Ka Talab
2	220 kV Bhelupur	11	132kV Sarnath
3	220kV Raja Ka Talab	12	132kV Manduadih
4	220kV Virapatti TSS	13	132kV Kaithi
5	220kV Sahupuri	14	132kV Aurihar TSS
6	132KV DLW (Only Bus Used)	15	132 KV Varanasi Cantt
7	132 KV BHU	16	132kV Bina
8	132kV Kursato	17	132 kV Alaipur
9	132kV Narainpur	18	132kV Leedopur

- **In case number 3 and 4 smaller Island (Considering A only) is considered. List of the substations are as follows (Refer to Annexure-II)**

S.no	Name of Substation	S.no	Name of Substation
1	220kV Gajokhar (Only Bus used)	6	132kV Manduadih
2	220kV Virapatti TSS	7	132 KV Varanasi Cantt
3	132KV DLW (Only Bus Used)	8	132kV Aurihar TSS
4	132 KV BHU	9	132kV Bina
5	132kV Leedopur		

1. **Case 1**
   - Actual Ex- bus Generation =874 (2x437)MW
   - Actual load met =806MW
   - **In this scenario of Load-Generation, low voltages are observed at many substations.**
   - **Voltage profile of various buses of island is as follows-**

Bus Number	Bus Name	Base kV	Voltage (pu)		Bus Number	Bus Name	Base kV	Voltage (pu)
151055	SAHUPR1	132	0.6462		151664	BHU	132	0.6277
151056	SARNATH1	132	0.6905		151793	SAHUPURI BII	132	0.6268
151069	ANPARA	132	1.0172		151884	ALAIPUR	132	0.6547
151113	CHUNNAR	132	0.6447		152065	SAHUPU_N	220	0.6423
151136	GAJOKHAR	132	0.6923		152066	SARNATH2	220	0.7957
151170	BINA	132	1.0111		152078	GAJOKHA	220	0.7635
151173	RAJAKATALAB	132	0.6422		152085	BHELUPUR	220	0.6381
151212	VARANSI CANT	132	0.6397		152169	BHADAURA	220	0.7122
151222	LEEDOPUR	132	0.6703		152173	RAJA KATALAB	220	0.6432
151267	MANDUADI	132	0.6316		152215	SAHUPURI BII	220	0.6423
151301	NARAINPU	132	0.6433		152236	BHADOHI	220	0.6433
151436	KURSATO	132	0.6422		152245	SAHUPURI_4_2	220	0.6421
151534	AURIHAR_TSS	132	0.6835		152279	VIRAPATTI	220	0.7908
151600	RAJAKATALB_2	132	0.6422		154014	ANPARA4	400	1.0300
151661	KAITHI	132	0.6874		154019	SARNATH4	400	0.8671
151662	DLW	132	0.6359					

   - **List of lines under overloading**

Sl. No.	Name of Transmission line	% Overloading
1.	132kV Varanasi Cantt-DLW line	135.7
2.	132kV Maduadih-DLW line	112.9
3.	132kV Sarnath-Leedopur line	114.9
4.	132kV Sarnath-Leedopur line	114.9
5.	132kV Sarnath-Sanath (220) line	116.3
6.	132kV Gajokhar-Kursato line	179.7
7.	132kV Leedopur –Alaipur line	109.4
8.	132kV Kursato –Raja ka Talab line	112.9

2. Case 2

- Actual Ex- bus Generation =442 (2x221)MW
- Actual load met =435MW
- **Steady state generation of units is less than technical minimum**
- No under voltage and over loading is observed.
- Voltage profile of various buses of island is as follows-

Bus Number	Bus Name	Base kV	Voltage (pu)		Bus Number	Bus Name	Base kV	Voltage (pu)
151055	SAHUPR1	132	0.9889		151664	BHU	132	0.9775
151056	SARNATH1	132	0.9913		151793	SAHUPURI BII	132	0.9774
151069	ANPARA	132	1.0219		151884	ALAIPUR	132	0.9851
151113	CHUNNAR	132	0.9918		152065	SAHUPU_N	220	0.9878
151136	GAJOKHAR	132	0.9904		152066	SARNATH2	220	1.0022
151170	BINA	132	1.0173		152078	GAJOKHA	220	0.9975
151173	RAJAKATALAB	132	0.9826		152085	BHELUPUR	220	0.9871
151212	VARANSI CANT	132	0.9798		152169	BHADAURA	220	0.9984
151222	LEEDOPUR	132	0.9871		152173	RAJA KATALAB	220	0.9871
151267	MANDUADI	132	0.9783		152215	SAHUPURI BII	220	0.9878
151301	NARAINPU	132	0.9906		152236	BHADOHI	220	0.9871
151436	KURSATO	132	0.9826		152245	SAHUPURI_4_2	220	0.9878
151534	AURIHAR_TSS	132	0.9916		152279	VIRAPATTI	220	1.0004
151600	RAJAKATALB_2	132	0.9826		154014	ANPARA4	400	1.0300
151661	KAITHI	132	0.9905		154019	SARNATH4	400	1.0080
151662	DLW	132	0.9790					

3. Case 3

- Actual Ex- bus Generation =452 (1X452)MW
- Actual load met =440 MW
- No over loading is observed.
- Under Voltage at some substations is observed.
- Voltage profile of various buses of island is as follows-

Bus Number	Bus Name	Base kV	Voltage (pu)		Bus Number	Bus Name	Base kV	Voltage (pu)
151056	SARNATH1	132	0.9098		151662	DLW	132	0.8818
151136	GAJOKHAR	132	0.9335		151664	BHU	132	0.8780
151170	BINA	132	1.0111		152066	SARNATH2	220	0.9569
151069	ANPARA	132	1.0172		152078	GAJOKHA	220	0.9498
151212	VARANSI CANT	132	0.8833		152279	VIRAPATTI	220	0.9529
151222	LEEDOPUR	132	0.8999		154014	ANPARA4	400	1.0300
151267	MANDUADI	132	0.8797		154019	SARNATH4	400	0.9783
151534	AURIHAR_TSS	132	0.9046					

4. Case 4

- Actual Ex- bus Generation =310 (1x310)MW
- Actual load met =305 MW
- No under voltage and over loading is observed.
- Voltage profile of various buses of Islanding is as follows-

Bus Number	Bus Name	Base kV	Voltage (pu)		Bus Number	Bus Name	Base kV	Voltage (pu)
151056	SARNATH1	132	0.9627		151664	BHU	132	0.9448
151136	GAJOKHAR	132	0.9770		151662	DLW	132	0.9470
151170	BINA	132	1.0111		152066	SARNATH2	220.0	0.9893
151069	ANPARA	132	1.0172		152078	GAJOKHA	220	0.9857
151212	VARANSI CANT	132	0.9478		152279	VIRAPATTI	220	0.9868
151222	LEEDOPUR	132	0.9570		154014	ANPARA4	400	1.0300
151267	MANDUADI	132	0.9458		154019	SARNATH4	400	1.0006
151534	AURIHAR_TSS	132	0.9578					

5. Case 5

- Actual Ex- bus Generation =409 (1x409)MW
- Actual load met =402 MW
- No under voltage and over loading is observed
- Voltage profile of various buses of Islanding is as follows-

Bus Number	Bus Name	Base kV	Voltage (pu)		Bus Number	Bus Name	Base kV	Voltage (pu)
151055	SAHUPR1	132	0.9747		151664	BHU	132	0.9636
151056	SARNATH1	132	0.9783		151793	SAHUPURI BII	132	0.9635
151069	ANPARA	132	1.0172		151884	ALAIPUR	132	0.9709
151113	CHUNNAR	132	0.9773		152065	SAHUPU_N	220	0.9741
151136	GAJOKHAR	132	0.9825		152066	SARNATH2	220	0.9954
151170	BINA	132	1.0111		152078	GAJOKHA	220	0.9908
151173	RAJAKATALAB	132	0.9698		152085	BHELUPUR	220	0.9732
151212	VARANSI CANT	132	0.9662		152169	BHADAURA	220	0.9880
151222	LEEDOPUR	132	0.9736		152173	RAJA KATALAB	220	0.9738
151267	MANDUADI	132	0.9647		152215	SAHUPURI BII	220	0.9741
151301	NARAINPU	132	0.9760		152236	BHADOHI	220	0.9739
151436	KURSATO	132	0.9698		152245	SAHUPURI_4_2	220	0.9740
151534	AURIHAR_TSS	132	0.9786		152279	VIRAPATTI	220	0.9930
151600	RAJAKATALB_2	132	0.9698		154014	ANPARA4	400	1.0300
151661	KAITHI	132	0.9774		154019	SARNATH4	400	1.0038
151662	DLW	132	0.9656					

6. Case 6

- Actual Ex- bus Generation =326 (1x326)MW
- Actual load met =322 MW
- No under voltage and over loading is observed
- Voltage profile of various buses of Islanding is as follows-

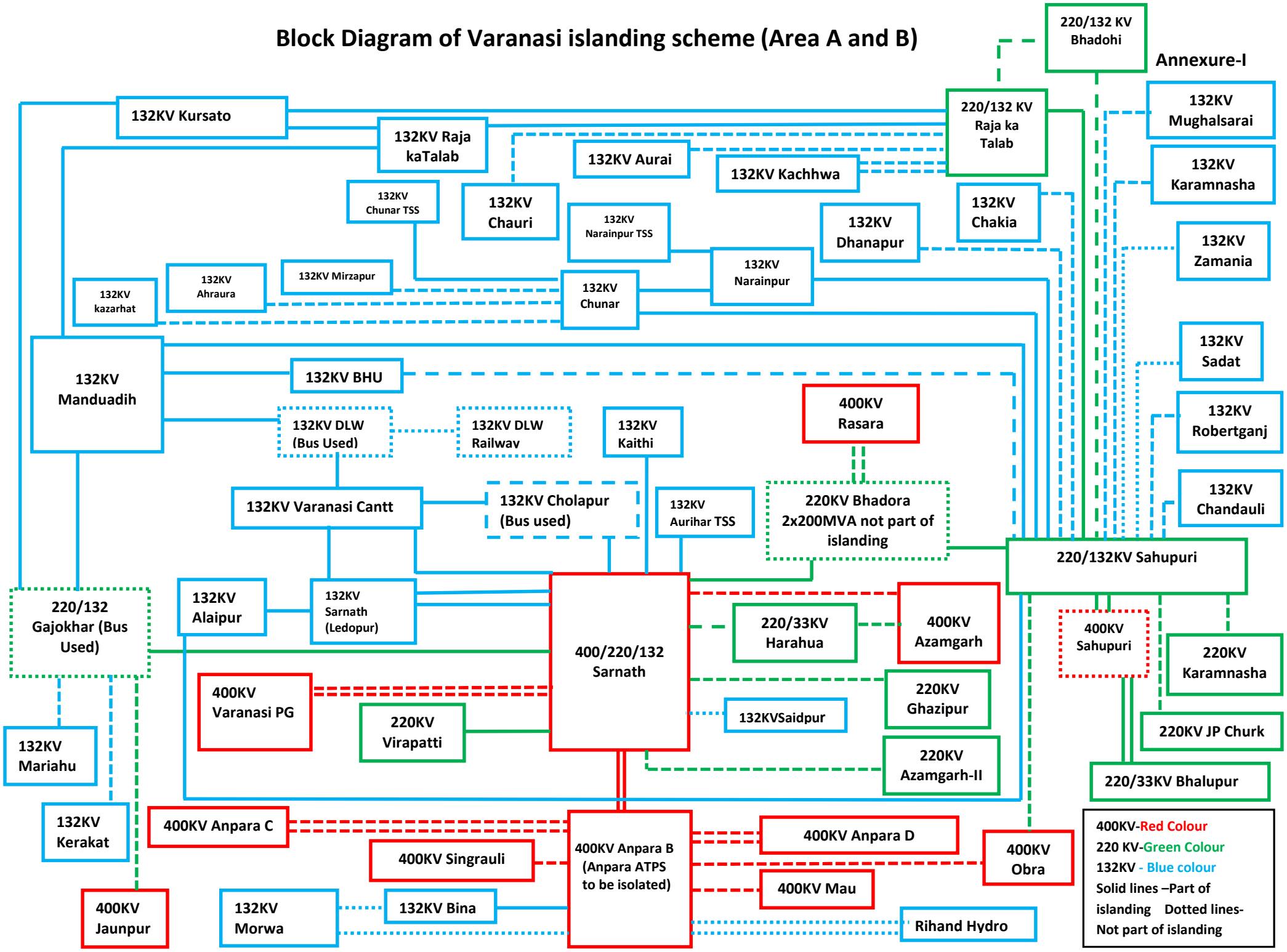
Bus Number	Bus Name	Base kV	Voltage (pu)		Bus Number	Bus Name	Base kV	Voltage (pu)
151055	SAHUPR1	132	1.0076		151664	BHU	132	0.9933
151056	SARNATH1	132	1.0041		151793	SAHUPURI BII	132	0.9931
151069	ANPARA	132	1.0172		151884	ALAIPUR	132	1.0032
151113	CHUNNAR	132	1.0110		152065	SAHUPU_N	220	1.0062
151136	GAJOKHAR	132	1.0079		152066	SARNATH2	220	1.0127
151170	BINA	132	1.0111		152078	GAJOKHA	220	1.0107
151173	RAJAKATALAB	132	1.0022		152085	BHELUPUR	220	1.0057
151212	VARANSI CANT	132	0.9958		152169	BHADAURA	220	1.0134
151222	LEEDOPUR	132	1.0019		152173	RAJA KATALAB	220	1.0061
151267	MANDUADI	132	0.9941		152215	SAHUPURI BII	220	1.0062
151301	NARAINPU	132	1.0099		152236	BHADOHI	220	1.0061
151436	KURSATO	132	1.0022		152245	SAHUPURI_4_2	220	1.0061
151534	AURIHAR_TSS	132	0.9994		152279	VIRAPATTI	220	1.0103
151600	RAJAKATALB_2	132	1.0022		154014	ANPARA4	400	1.0300
151661	KAITHI	132	1.0034		154019	SARNATH4	400	1.0158
151662	DLW	132	0.9951					

Final Observations:

1. As per the study, Islanding Scheme does not seem feasible in cases 1, due to under voltage observed at various node when 2 machine are taken considering area A & B both, while in case 2 the load of area A & B is less than technical minimum of 2x500 MW units at Anpara BTPS for Winter scenario.
2. In case no. 3 and 4, one machine has been taken with load form Area A for summer scenario. Voltages and loading of transmission lines are within limit. However, for winter scenario, the load of area A is less than technical minimum of 1x500 MW units at Anpara BTPS. Therefore, to ensure technical minimum of unit, load of area A and B both has been taken in case no 5 and 6 for winter scenario

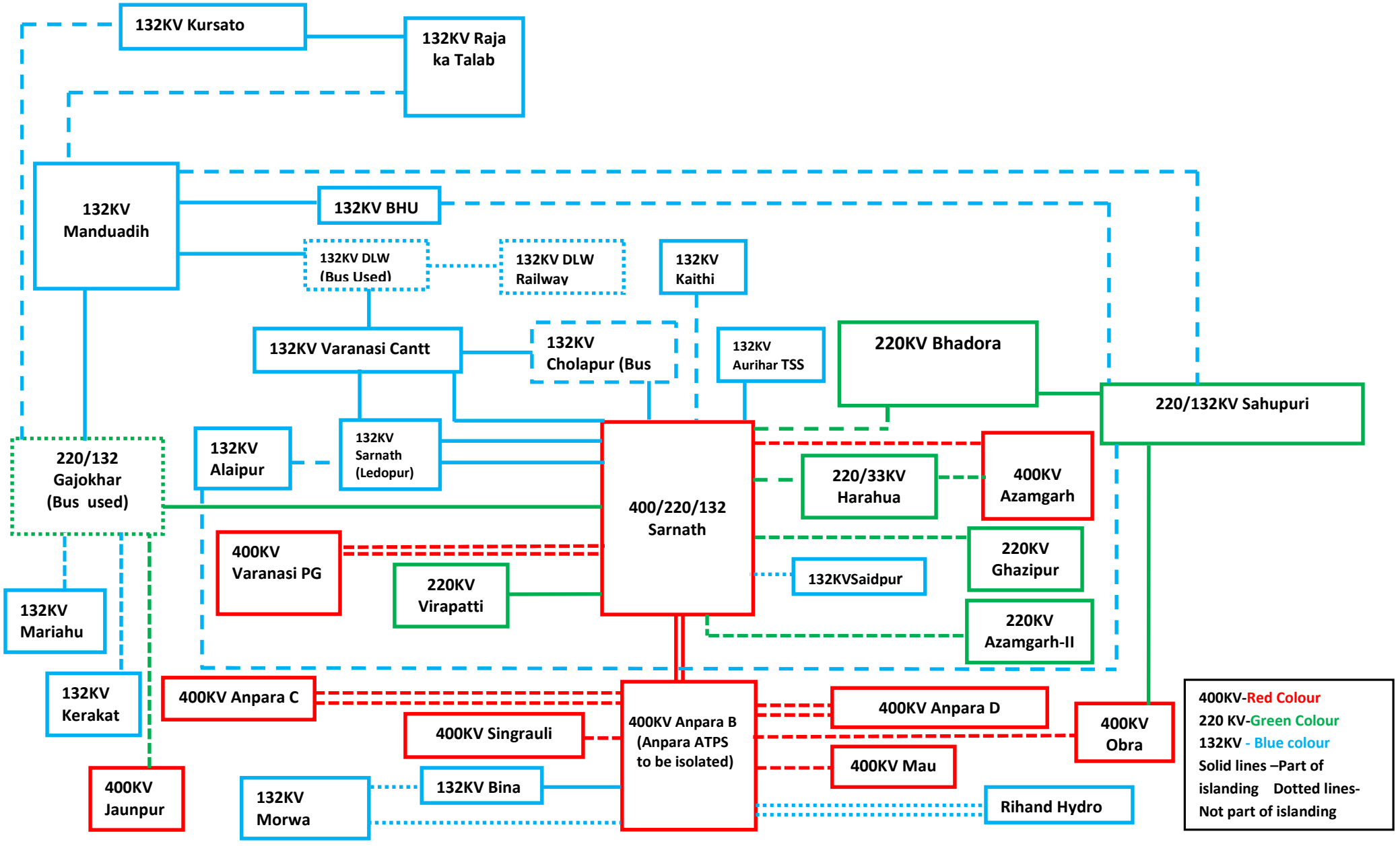
Block Diagram of Varanasi islanding scheme (Area A and B)

Annexure-I



Annexure-II

Block Diagram of Varanasi islanding scheme (Area A)



1. Time grading may be done in terms of severity of overloading as follows:

a) Loading > 95% of rated capacity - delay of 3 sec for activation of SPS.

b) Loading>110% of rated capacity - delay of 1500ms for activation of SPS

2. Once SPS gets activated, tripping of feeders (based on priority) should be done by SPS without any intentional delay until loading gets below 95% of rated capacity

3. Overcurrent pick up value must be coordinated in such a way that SPS comes into action before overcurrent protection.

Based on above comments, SPS logic recommended by UPSLDC is as follows:

Cases	% Setting	Time Delay	Priority of feeder for load cut off
Case-1	Loading on ICT >95% but less than 110% of rated current	3 sec	1. 220kV Kirawali 2. 220kV Samsabad 3. 220kV Bharatpur
Case-2	Loading on ICT>110% of rated current	1500 ms	1. 220kV Kirawali 2. 220kV Samsabad 3. 220kV Bharatpur

Note: Delay as mentioned in the above Tripping logics I& II is for initiation of tripping command. After initiation of tripping command, feeders will continue to trip as per priority without any time delay until loading on ICT recahes below 95%.

National Load Despatch Centre
Import Capability of Punjab for September 2025

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Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	10900	500	10400	5497	4903		https://www.punjabsldc.org/ATC_TTC.aspx
Limiting Constraints		N-1 contigency of 400/220KV ICT at Rajpura, Ludhiana, Jalandhar, Muktsar Loading close to N-1 contingency limits of 400/220kV Malerkotla and Patiala ICTs 220 kV underlying network at Jalandhar, Ludhiana and Amritsar						

National Load Despatch Centre
Import Capability of Uttar Pradesh for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	17700	600	17100	10165	6935		https://www.upsldc.org/documents/20182/0/ttc_atc_24-11-16/4c79978e-35f2-4aef-8c0f-7f30d878dbde
Limiting Constraints	N-1 contingency of 400/220kV Panki, Allahabad(PG), Agra(PG), Lucknow (PG) ICTs							

National Load Despatch Centre
Import Capability of Haryana for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	10700	300	10400	5418	4982		https://hvpn.org.in/#/atcttc
Limiting Constraints	N-1 contingency of 400/220kV ICT at Deepalpur, Hisar, Kabulpur and Panipat(BBMB)							

National Load Despatch Centre
Import Capability of Rajasthan for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	7600	600	7000	5755	1245		https://sldc.rajasthan.gov.in/rrvpnl/scheduling/downloads
Limiting Constraints	N-1 contingency of 400/220kV Heerapura, Jodhpur, Bikaner, Ajmer, Merta, Hindaun and Ratangarh ICTs							

National Load Despatch Centre
Import Capability of Delhi for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	7600	300	7300	4810	2490		https://www.delhisldc.org/resources/atcttcreport.pdf
Limiting Constraints	N-1 contingency of 400/220kV HarshVihar and Bawana (bus-split) ICTs.							

National Load Despatch Centre
Import Capability of Uttarakhand for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	1710	100	1610	1402	208		https://uksldc.in/ttc-atc
Limiting Constraints		N-1 contingency of 400/220kV Kashipur ICTs. High loading of 220kV Roorkee-Roorkee and 220kV CBGanj-Pantnagar lines						

National Load Despatch Centre
Import Capability of HP for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	2386	100	2286	1181	1105		https://hpsldc.com/mrm_category/ttc-atc-report/
Limiting Constraints		Overloading of 2*100MVA Giri transformers High loading of 220kV Nallagarh-Upernangal D/C						

National Load Despatch Centre
Import Capability of J&K for September 2025

Issue Date: - Issue Time: 1600 Revision No. 0

Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to	00-24	2800	100	2700	1977	723		
Limiting Constraints		N-1 contigency of 400/220KV ICTs at Amargarh, Kishenpur 220 kV underlying network at Amargarh, Wagoora Low voltages in J&K control area due to high MVAR drawl						

National Load Despatch Centre
Import Capability of Chandigarh for September 2025

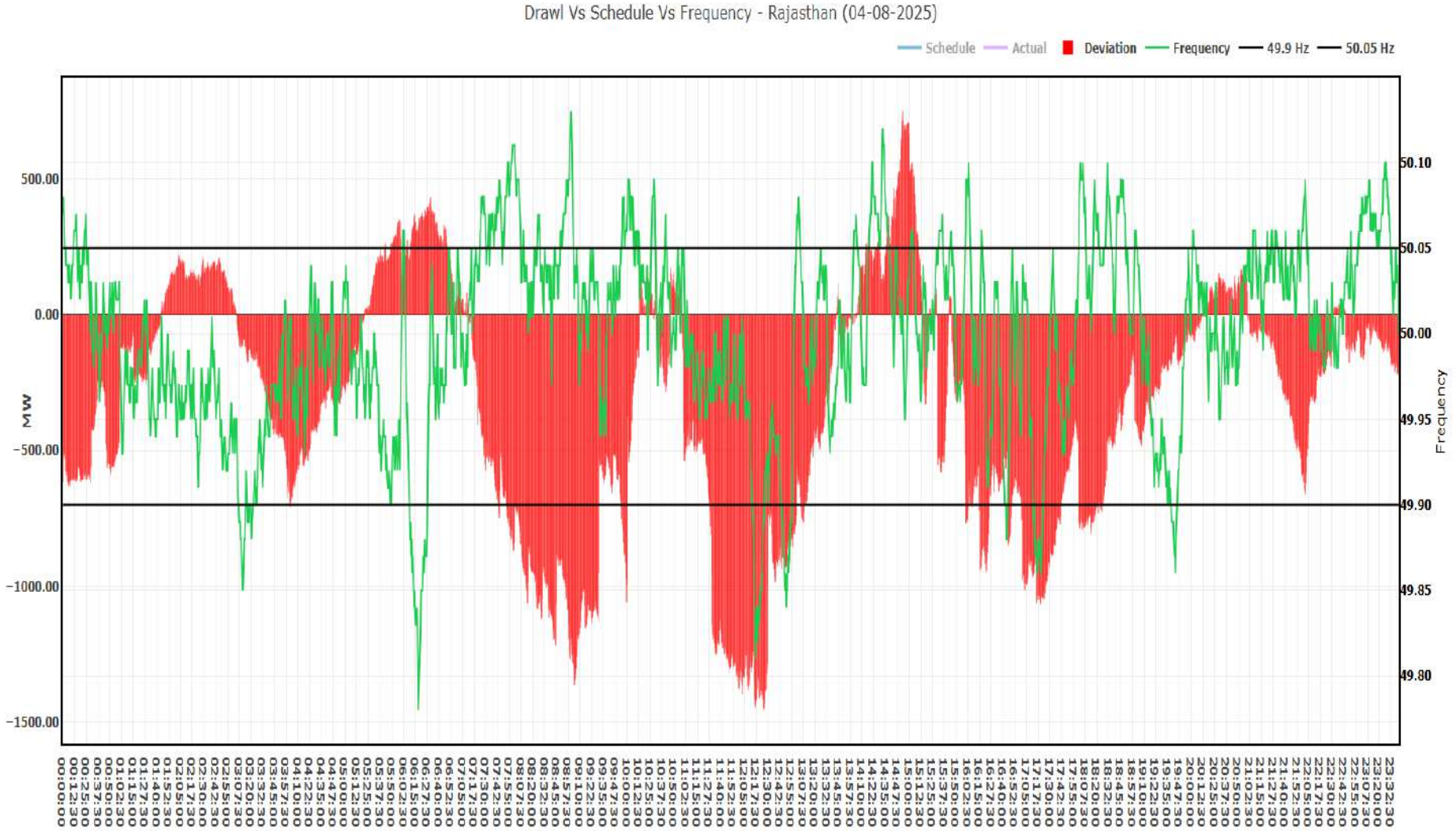
Issue Date: - Issue Time: 1600 Revision No. 0

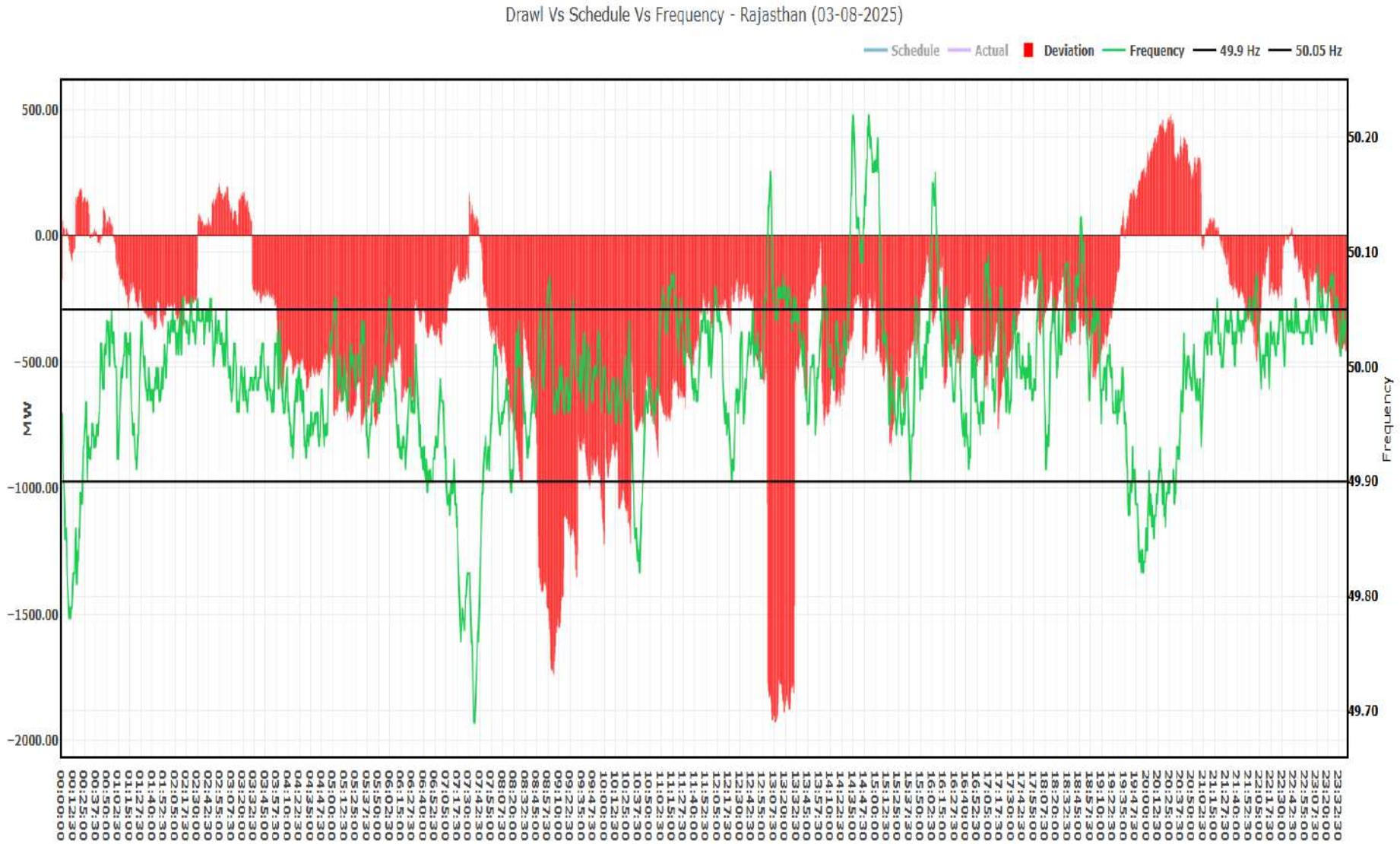
Date	Time Period in IST (hrs)	Total Transfer Capability (TTC) (MW)	Reliability Margin (MW)	Available Transfer Capability (ATC) (MW)	Approved General Network Access (MW)	Margin Available for Temporary General Network Access(MW)	Changes in TTC w.r.t. Last Revision	Comments
1 September 2025 to 30 September 2025	00-24	480	20	460	342	118		
Limiting Constraints		N-1 contigency of 220kV Nallagarh-Kishengarh						

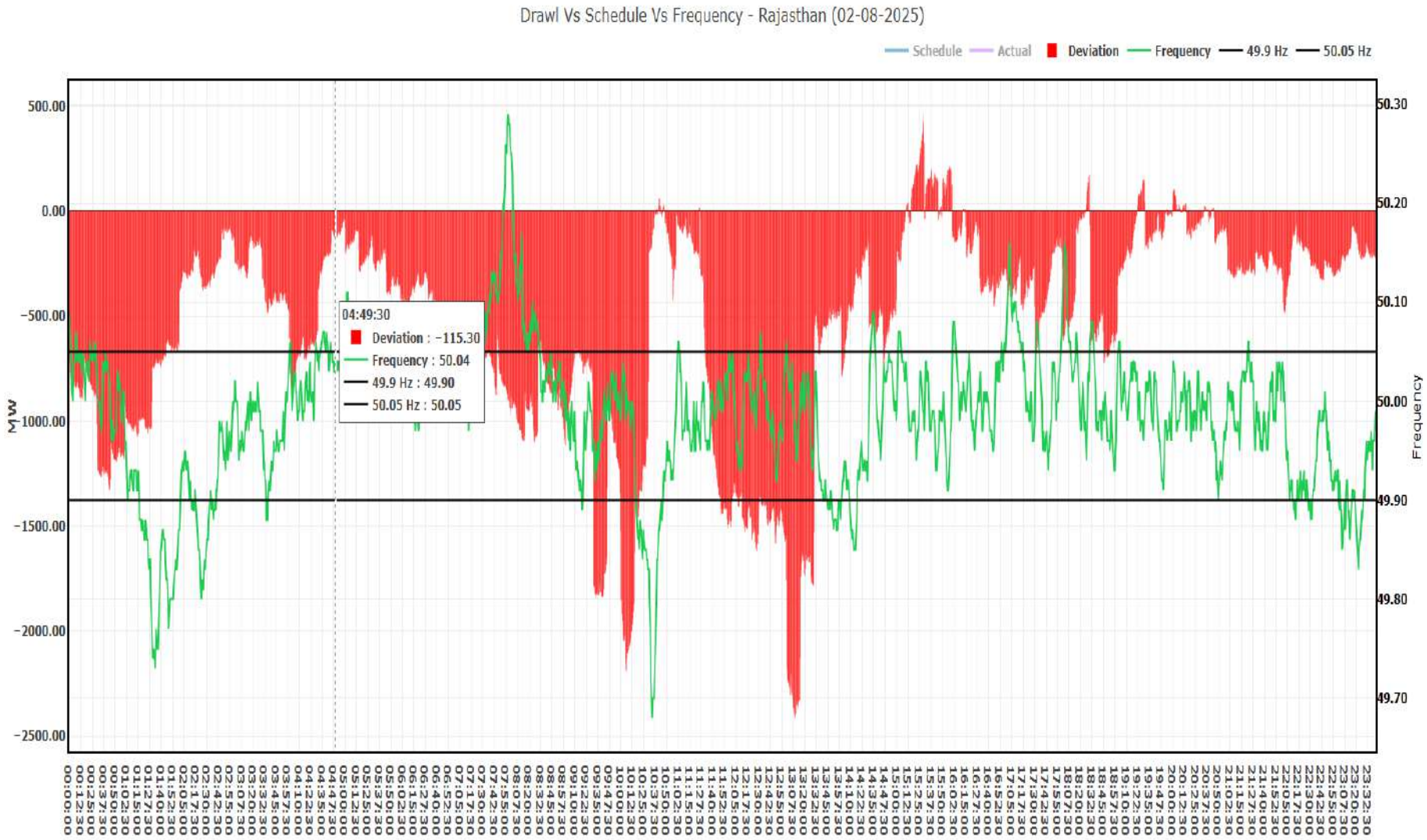
Northern Region SPS Details

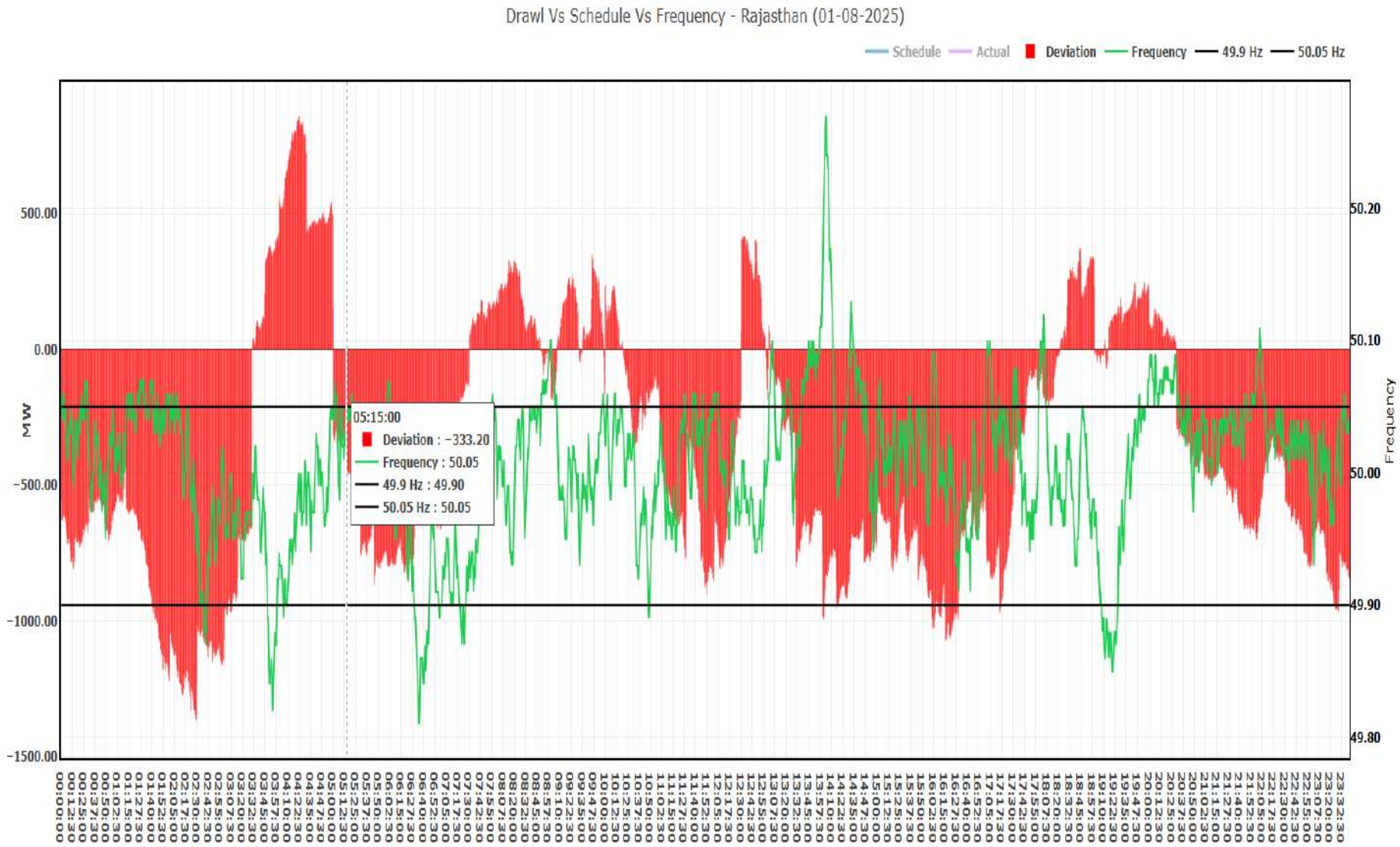
S. No.	Group	Delhi		UP		Rajasthan		Haryana		Punjab		
		Load	Planned Load (MW)	Load	Planned Load (MW)	Load	Planned Load (MW)	Load	Planned Load (MW)	Load	Planned Load (MW)	Group Total
1	Group-A	Mandola (PG)- 220 kV Narela D/C NSD-70D	150	Feeders from 220/132 kV Muradnagar old S/S 132 kV Niwai Road 132 kV Modi Steel 132 kV Morta 2*63 MVA X-Mer	100	220/132 kV Alwar- 132 kV GSS Pinan 400/220 kV Merta - 132 kV GSS Roon	25			220/66 kV Malerkotla 66 kV Malerkotla ckt 66 kV Naudhrani ckt	35	310
2	Group-B	Mandola (PG) - 220 kV Gopalpur D/C	200			220/132 kV Ratangarh - 132 kV Sardar Sahar	25	Panipat (BBMB) 100 MVA, 220/33 kV ICT	50			275
3	Group-C			Feeders from 220/132 kV Modipuram Sub-station. 132 KV Sardhana, Kankankhera, Kapsad, Kankankhera-2, 132/33kV 40MVA+ 63MVA ICT-2&3 33 kV Ladies Park, 33 kV Pallavpuram, 33 kV Siwaya	100	400/220 kV Merta - 132 kV GSS Merta City 132 kV GSS Lamba+ Gotan 132 kV GSS Kuchera	60	220kV Dhanoda- 220kV Lula Ahir Ckt-1 220kV Lula Ahir Ckt-2 (Load Relief: 220/132kV, 100MVA T/F + 220/33kV, 100MVA T/F) 220kV Charkhi Dadri- 220kV Lula Ahir (Load Relief: 3*100MVA 220/132kV Rewari)	91	220/66 kV Gobindgarh-1 66 kV Chourwala ckt-1, 66 kV Chourwala ckt-2, 66 kV Talwara ckt-1, 66 kV Talwara ckt-2 66 kV Focal Point	71	322
4	Group-D					220/132 kV Alwar- 132 kV GSS Bansoor 132 kV GSS Malakheda 132 kV Ramgarh	60	220kV Charkhi Dadri- 220kV Mohindergarh Ckt-1 (Radial load- 49MW) 220kV Mohindergarh Ckt-2 (Radial load of Narnaul- 38MW)	87	220/66 kV Lalitokalan- 66kV Gill Road ckt-1 66kV Gill Road ckt-2 66kV Ferozpur 66 kV Sarinh	114.25	261.25
5	Group-E			220 kV Mainpuri - 2 x 132/33 kV , 63 MVA T/F (20 MW -60 MW)	50	220/132kV Bhilwara- 132 kV GSS Gangapur, 132 kV GSS Devgarh+Kareda, 132 kV GSS Danta 220/132 kV Merta- (Spare DTPC)	105	132kV PTPS- 132kV Chandauli 132kV Munak 220kV Dhanoda- *220/132 kV 100 MVA X-Mer*	88	220 kV Jamsher- 66 kV Nakodar Road-1 66 kV Nakodar Road-2	100	343
6	Group-F			220 kV Nara- 132/33 kV , 40 MVA T/F 132/33 kV, 2*63 MVA T/F (32 MW -52 MW)	50	220/132 kV Alwar 132 kV GSS Alwar (Local Load) 220/132kV Kota- Kota local load (40/50MVA TF) 132 kV Nanta(Talera) 220/132 kV Beawar- 132 kV GSS Ber Jaitaran	100	Samaypur (BBMB) - 220 kV Palwal D/C (MW) (35MW) 220kV Narwana- 2*100MVA 220/132kV T/F at 220 kV Narwana	55	220 Mohali-1- 66 kV Mohali Phase-7 66 kV Mohali Phase-8B 66 kV Mohali Sector-71 66 kV Mohali Phase-1	100	305
7	Group-G					220/132 kV Ratangarh - 132 KV Ratangarh Inter-Connector 132 kV Fatehpur 220/132 kV Beawar- 132 kV GSS Masuda, 132 KV GSS Asind, Beawar Local Load	100	132kV Charkhi Dadri 132kV Dadri city, 132kV Matenhail, 132kV Kalanaur, 132kV Bahu 132/33kV T/F 20/25MVA 132/133V T/F 16/20 MVA	75	220 kV Ablowal- 66 kV Rakhra-I & II, 66 kV Rakhra-III & IV	100	275
8	Group-H					220/132kV Bhilwara- 132 KV Bhilwara Local Load	12	220kV Fatehabad(PGCIL)- 220kV Fatehabad Ckt-1 220kV Fatehabad Ckt-2 220kV Sirsa	45	220kV Ajitwal- 66 kV Galib ckt 66 kV Doudhar 66 kV Chogawan ckt-1 66 kV Chogawan ckt-2	15	72
9	Group-I			220kV Saharanpur- 220/132kV, 40MVA T/F-1 220/132kV, 40MVA T/F- 132kV Ambala Road 132 kV Gagalheri ckt	100	220/132 kV Ratangarh - 132kV GSS Momasar+ Patlisar	35	132kV Safidon- 220/132kV, 100MVA T/F-1 220/132kV, 100MVA T/F-2	50	220kV Dhandari-2- 66/11kV T-2 66/11kV T-4 66kV Sherpur Ckt-1 66kV Sherpur Ckt-2	109	294
10	Group-J			220kV Nanuta- 132/33kV, 63MVA T/F-1 132/33kV, 63MVA T/F-2 132kV Deoband ckt 132 kV Gangoh ckt 132 kV Rampur-Maniharan 132 kV Shamli-Shyamla	155	220/132 kV Debari- 132kV GSS Mavli 132kV GSS Bhatewar 132 kV Debari local load	90	220kV Hissar(PGCIL)- 220kV Sangwan Ckt-1 220kV Sangwan Ckt-2	45	Ablowal - 66kV Barn 66kV passiana-1 Bahadurgarh- 66kV Bahadurgarh-1 66kV Ghanour 66kV Patiala 66kV Barn-1 66kV Barn-2	153.1	443.1
11	Group-K	400/220kV Bamnauli- 220kV Pappankala Ckt-1 220kV Pappankala Ckt-2	200			220/132 kV Chittorgarh- 132 kV GSS Ajolia ka khera+Bassi 132 kV Senthi Chittorgarh local load	65	220kV Nunamajra- 220/132kV, 100MVA T/F-1 220/132kV, 100MVA T/F-2 220kV Prem Nagar Bhiwani (BBMB)- Bapora Ckt-1 Bapora Ckt-2	57	220 kV Mohali-1 (Sector-80) 66kV CHD-1 66kV CHD-2 66kV CHD-3 66kV CHD-4 66kV Incoming-1 66kV Incoming-2 66kV Incoming-3 220kV Gobindgarh-2 MGG 66kV Khanna Ckt-1 66kV Khanna Ckt-2 66kV Badinpur 66kV Central 66kV Grain Market 66kV Bhari 66/11kV T-2 66/11kV T-4 66/11kV T-6	90	412
		TOTAL	550		555		677		643		887.35	3312.4

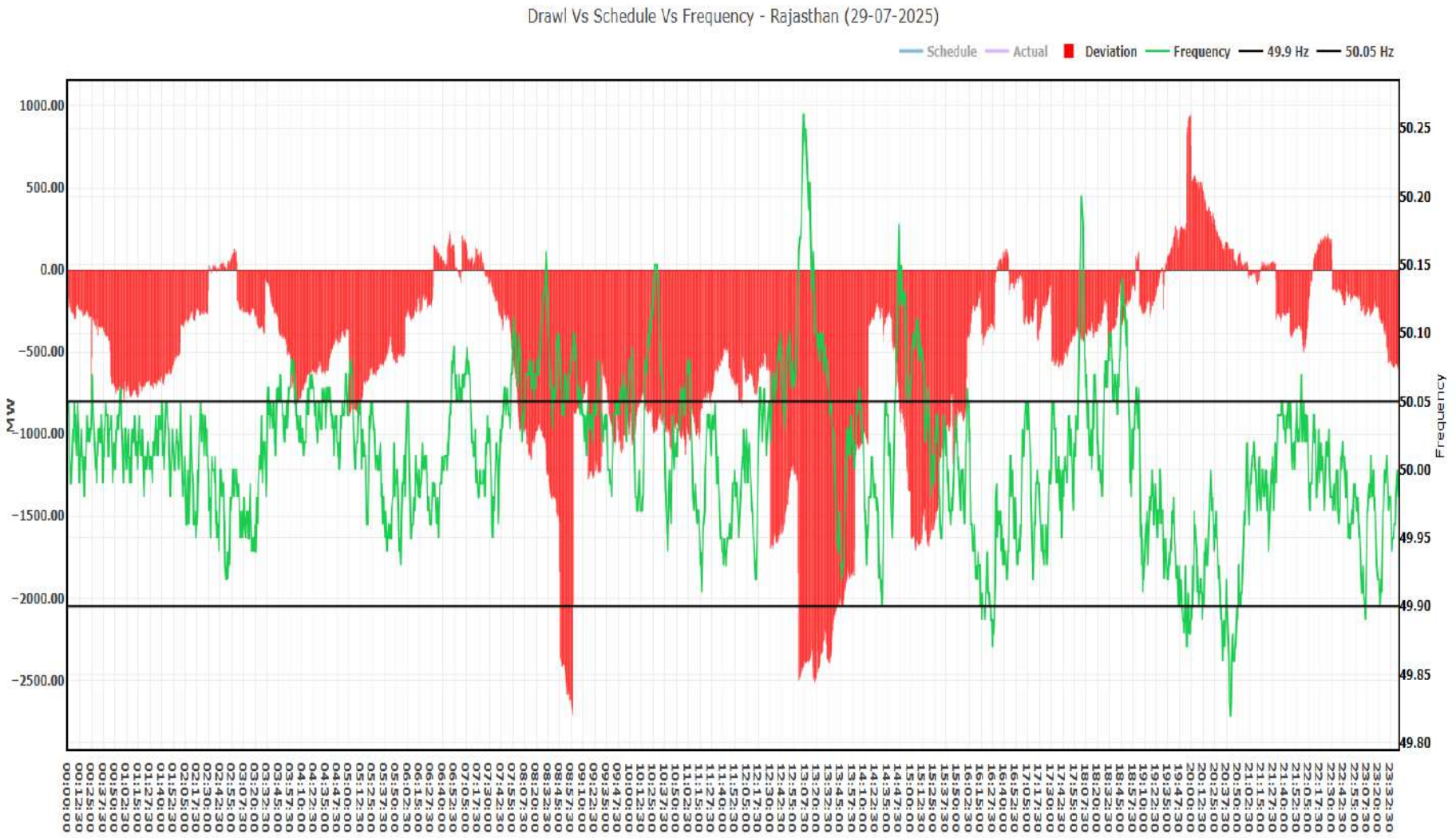
Fig-1: Load Details

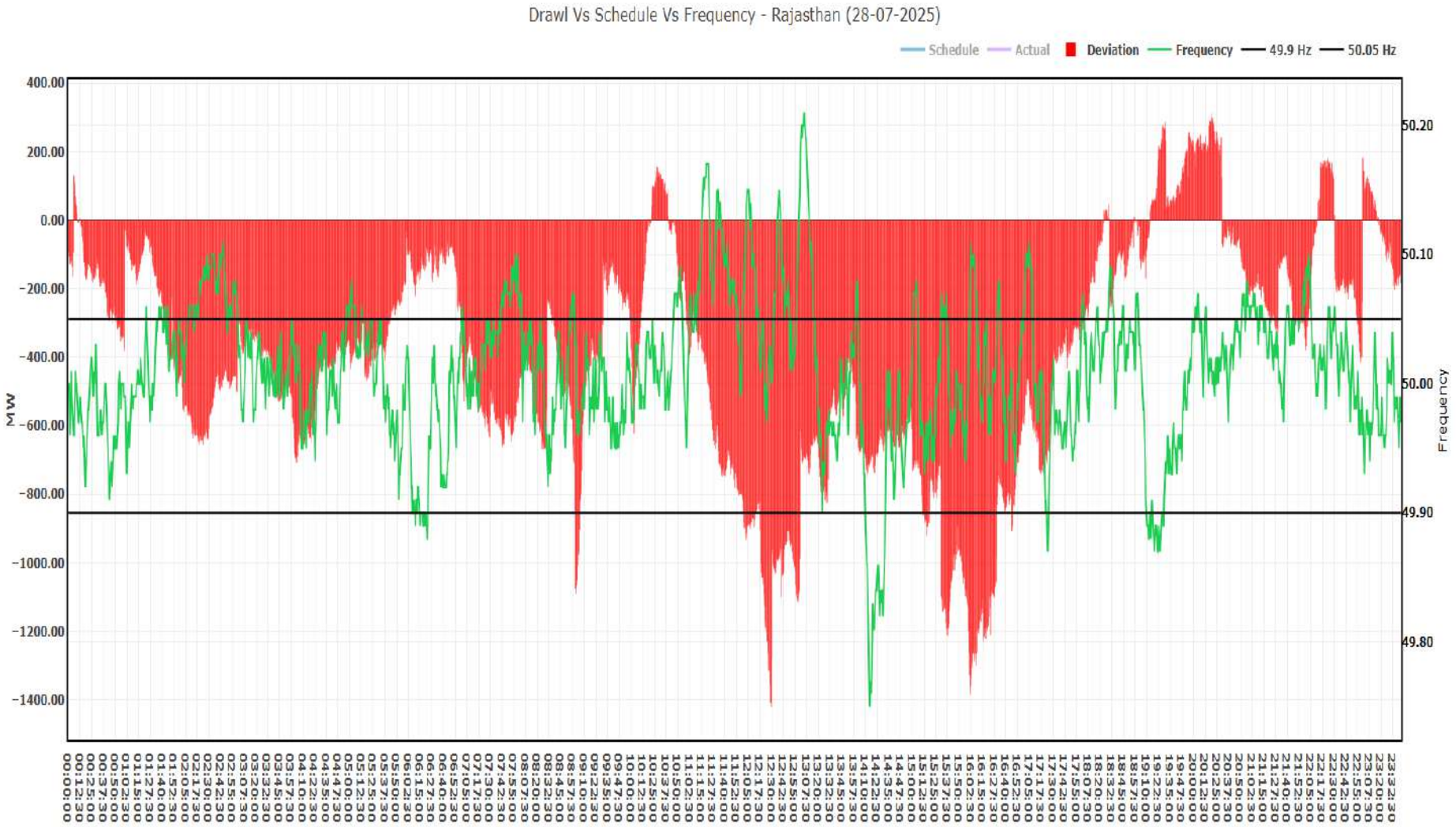

Drawl Vs Schedule Vs Frequency - Rajasthan (04-08-2025)
Schedule
Actual
Deviation
Frequency
49.9 Hz
50.05 Hz
MW
Frequency
500.00
0.00
-500.00
-1000.00
-1500.00
50.10
50.05
50.00
49.95
49.90
49.85
49.80


Drawl Vs Schedule Vs Frequency - Rajasthan (03-08-2025)
Schedule
Actual
Deviation
Frequency
49.9 Hz
50.05 Hz
MW
Frequency
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
50.20
50.10
50.00
49.90
49.80
49.70


Drawl Vs Schedule Vs Frequency - Rajasthan (02-08-2025)
Schedule
Actual
Deviation
Frequency
49.9 Hz
50.05 Hz
MW
Frequency
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
-2500.00
50.30
50.20
50.10
50.00
49.90
49.80
49.70
04:49:30
Deviation : -115.30
Frequency : 50.04
49.9 Hz : 49.90
50.05 Hz : 50.05


Drawl Vs Schedule Vs Frequency - Rajasthan (01-08-2025)
Schedule
Actual
Deviation
Frequency
49.9 Hz
50.05 Hz
MW
Frequency
500.00
0.00
-500.00
-1000.00
-1500.00
50.20
50.10
50.00
49.90
49.80
05:15:00
Deviation : -333.20
Frequency : 50.05
49.9 Hz : 49.90
50.05 Hz : 50.05


Drawl Vs Schedule Vs Frequency - Rajasthan (29-07-2025)
Schedule
Actual
Deviation
Frequency
49.9 Hz
50.05 Hz
MW
Frequency
1000.00
500.00
0.00
-500.00
-1000.00
-1500.00
-2000.00
-2500.00
50.25
50.20
50.15
50.10
50.05
50.00
49.95
49.90
49.85
49.80


Drawl Vs Schedule Vs Frequency - Rajasthan (28-07-2025)
Schedule
Actual
Deviation
Frequency
49.9 Hz
50.05 Hz
MW
Frequency
400.00
200.00
0.00
-200.00
-400.00
-600.00
-800.00
-1000.00
-1200.00
-1400.00
50.20
50.10
50.00
49.90
49.80

Resource Adequacy

PRAS results- Northern Region

Month ahead for Sep-2025

Resource Adequacy - PRAS

- The Probabilistic Resource Adequacy Study (PRAS) for the month of Sep 2025 has been carried out for the Northern Region to assess the sufficiency of available generation resources to meet the projected demand under varying scenarios. The study was conducted using 1000 probabilistic scenarios, with median results presented to reflect expected system behavior under typical conditions.
- To evaluate the net load that must be met by dispatchable thermal generation, the projected regional demand for Sep 2025 was first estimated. From this demand, the expected contribution from non-thermal resources **solar, wind, hydro, and nuclear** was subtracted, based on historical generation profiles observed for these sources during the same period in past years. This approach ensures that the inherent variability and diurnal patterns of renewable generation are accurately captured in the analysis.
- For thermal generation, a detailed availability assessment was carried out using the following assumptions:

Planned Outages:

Unit-wise planned outages for the month of Sep 2025 were incorporated as per the data available in the latest LGBR. This reflects scheduled maintenance and other operational constraints known in advance.

Forced Outages:

A Monte Carlo simulation approach was adopted to model forced outages of thermal generating units. This stochastic simulation utilized historical outage and revival rates specific to each unit and capacity. The probabilistic nature of this method allows for modeling of unplanned events, enhancing the robustness of the adequacy assessment.

Two distinct scenarios were modeled to analyze the role of inter-regional power exchanges in meeting regional adequacy requirements:

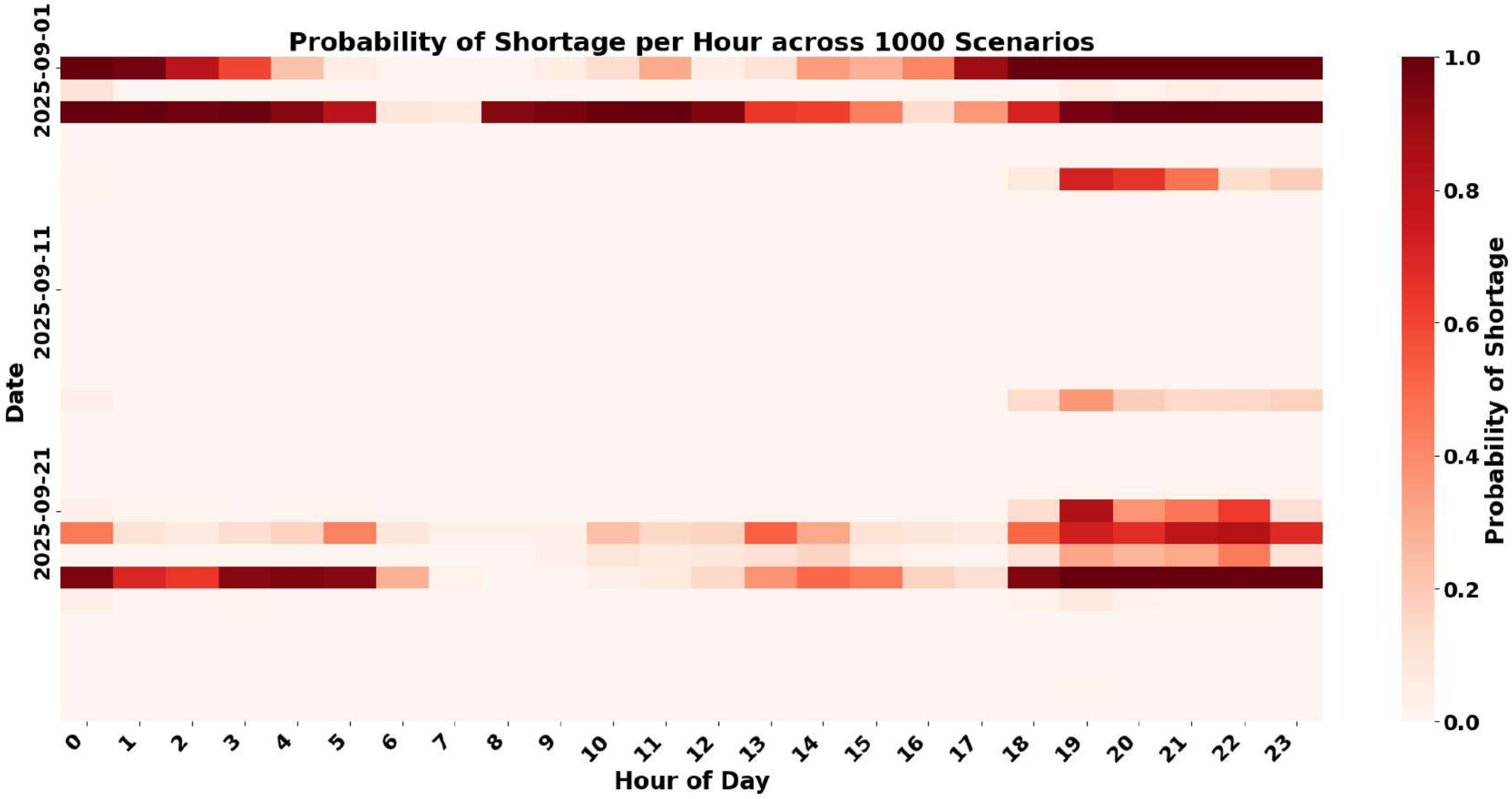
1. Scenario without Inter-Regional T-GNA Contracts

- In this base case scenario, no inter-regional transmission capacity contracted through T-GNA was modeled.
- Under this scenario, the study indicated higher Loss of Load Probability (LOLP) and increased Expected Unserved Energy (EUE), highlighting potential shortfalls due to the limited flexibility in accessing external generation.

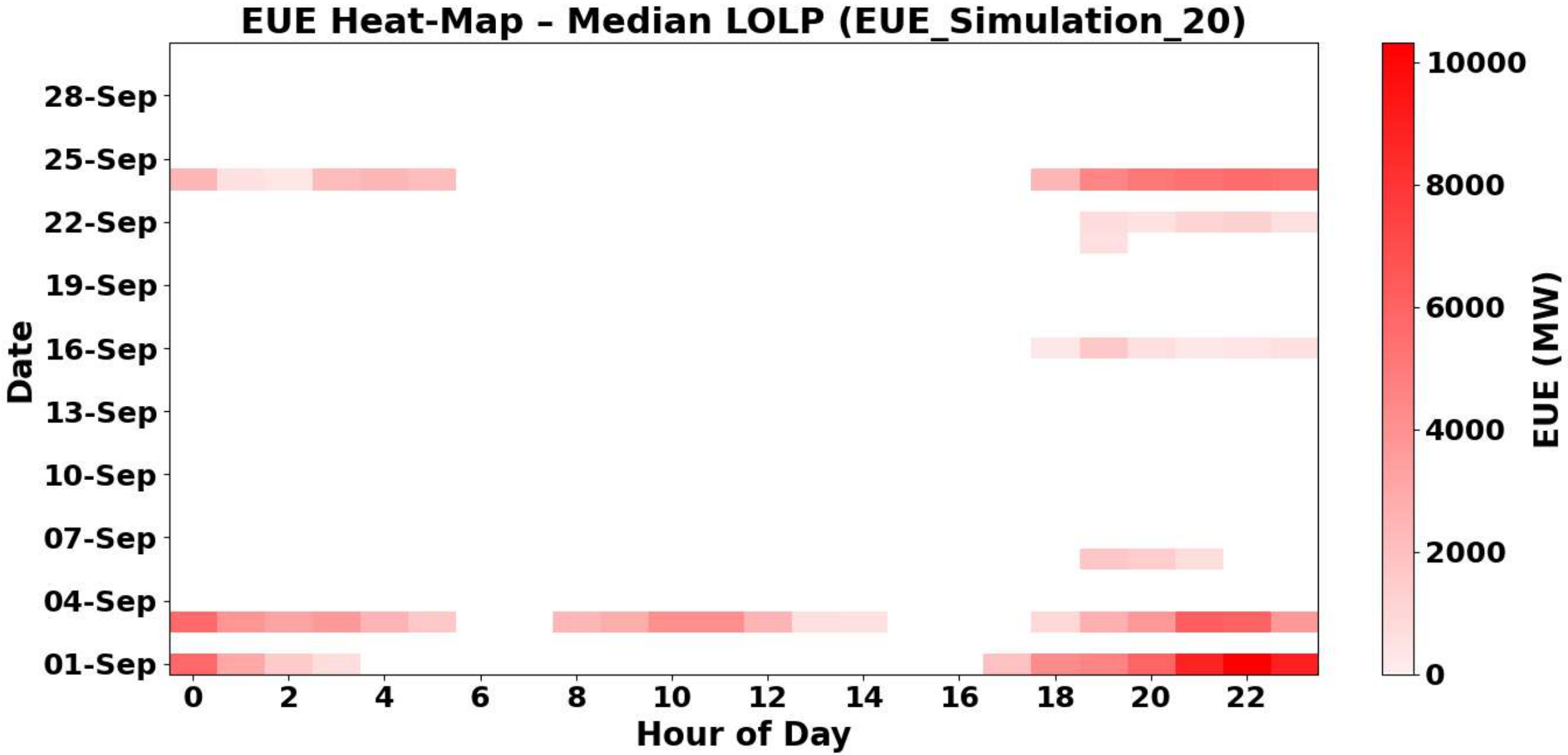
2. Scenario with Past-Year IR Flow Profile

- In the second scenario, the actual inter-regional power flow patterns from Sep 2024 were incorporated as a proxy for expected support in Sep 2025. This approach reflects realistic inter-regional exchange behavior under comparable seasonal conditions and operating constraints.
- This demonstrated a notable reduction in LOLP and EUE values, indicating enhanced adequacy due to the implicit support from neighboring regions.

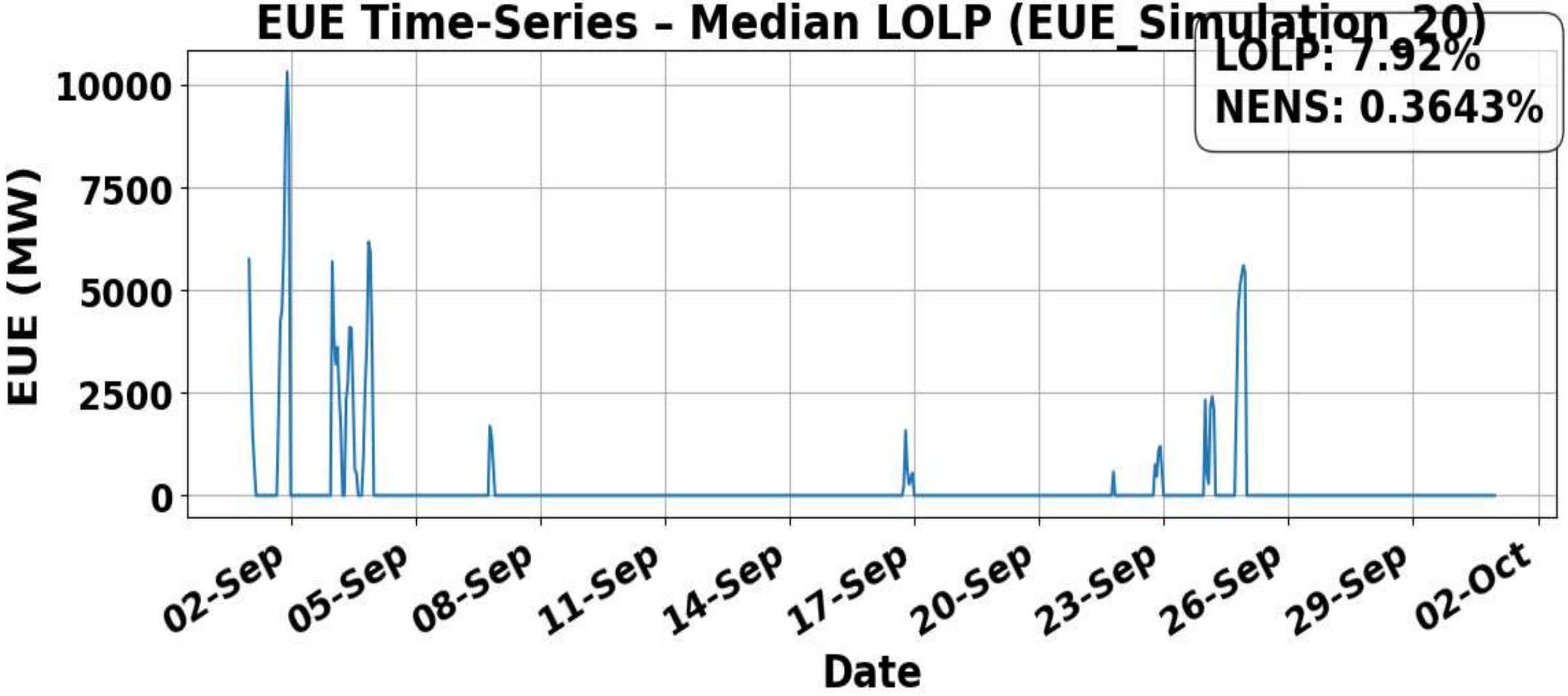
2. (A) Resource Adequacy results (with Sep 2024 IR schedule)



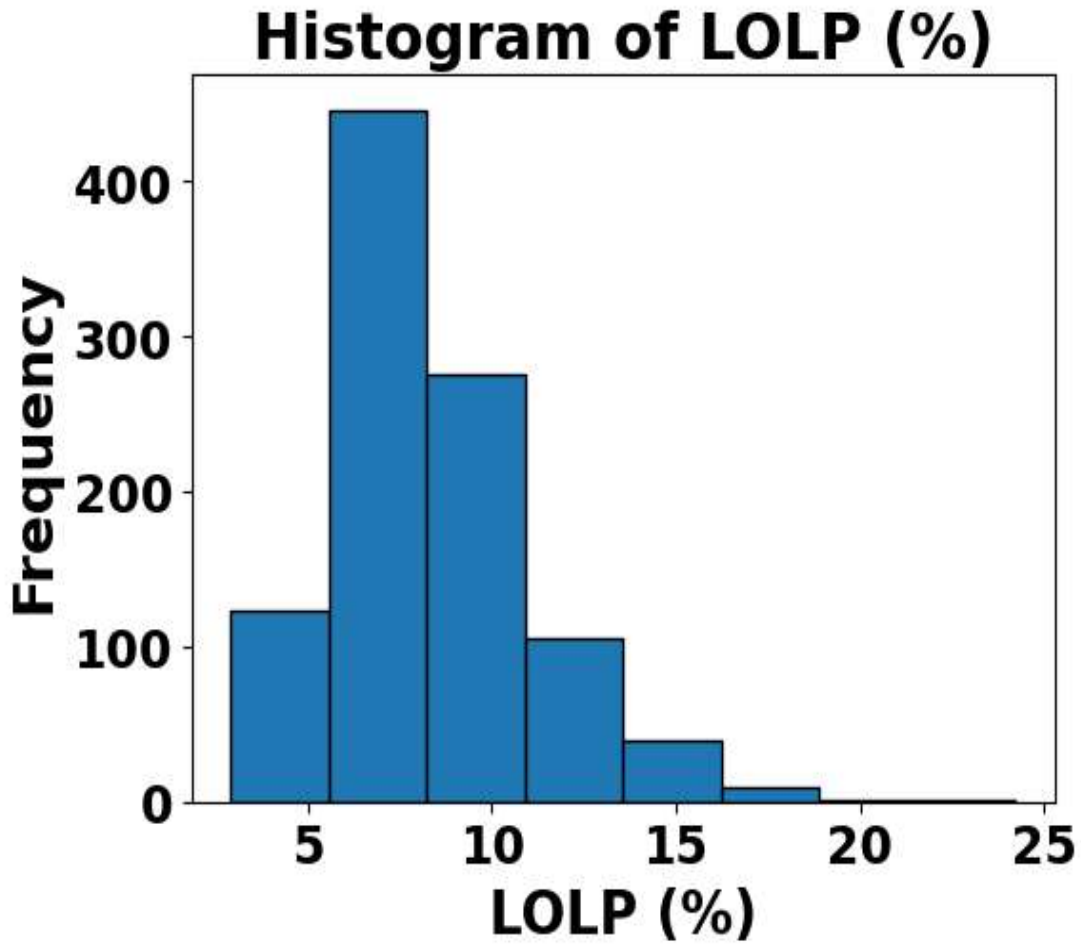
2. (B) Resource Adequacy results (with Sep 2024 IR schedule)

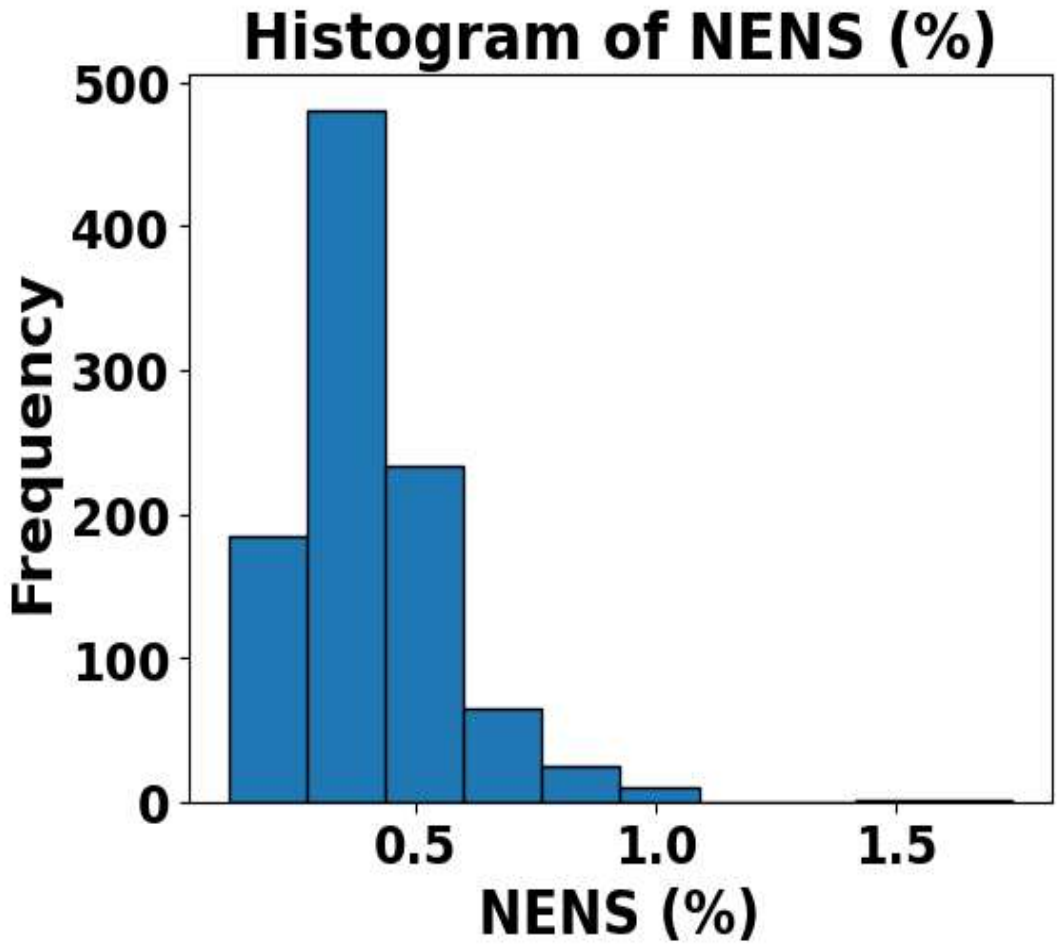


2.(C) Resource Adequacy results (with Sep 2024 IR schedule)



2. (D) Resource Adequacy results (with Sep 2024 IR schedule)

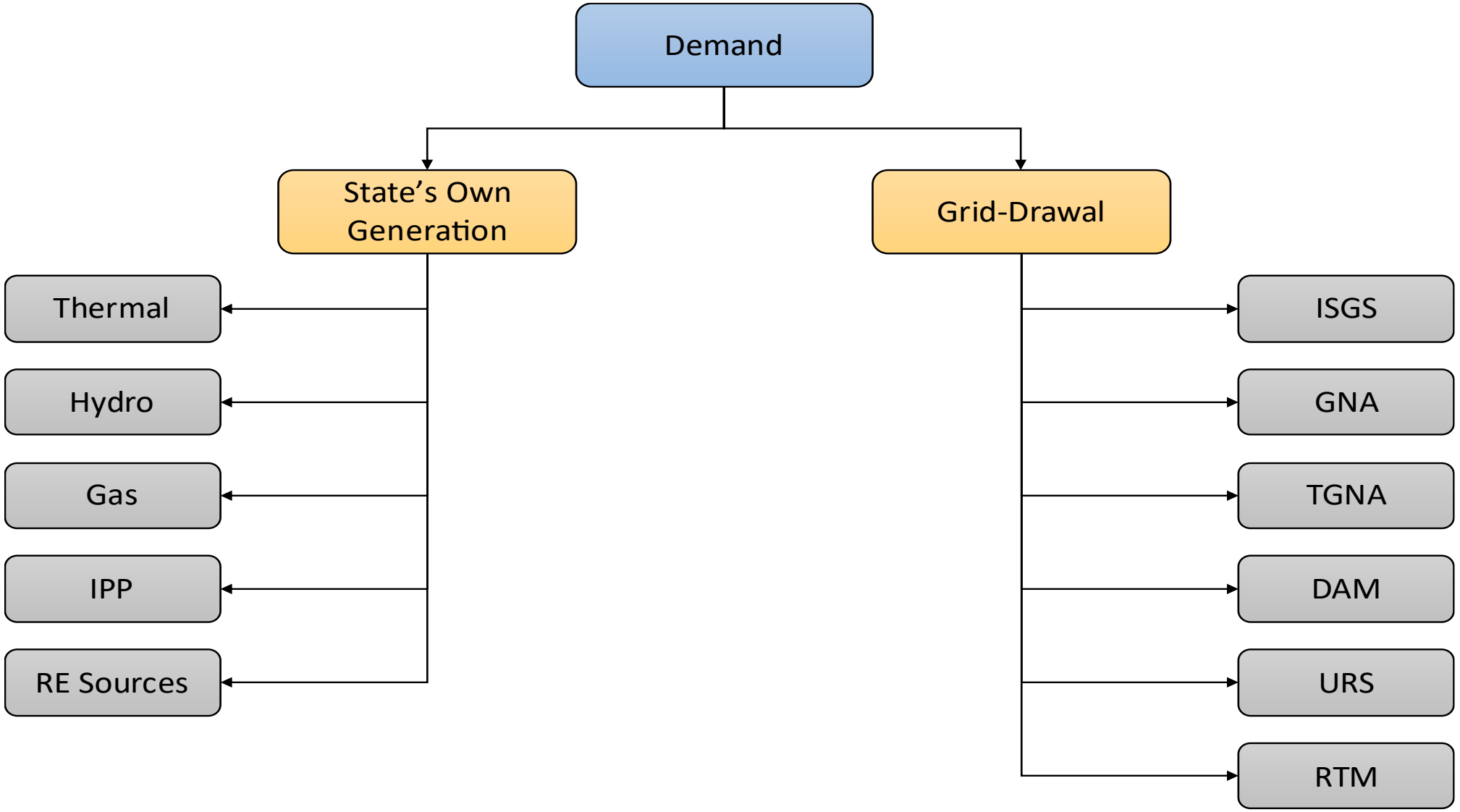




Way forward

- Inter-Regional Modeling will be undertaken by incorporating actual power flow data from WBES to improve the accuracy of inter-regional support estimation.
- Intra-Day and Day-Ahead Resource Adequacy Monitoring will be conducted using data submitted by the states, with integrated WBES data, as outlined in the subsequent slides.
- Month-Ahead PRAS Studies will be conducted at the state level.
- Week-Ahead and Year-Ahead PRAS Studies will be carried out at both regional and state levels.

RA Planning for Intra day and Day ahead



RA Planning for Intra day and Day ahead

The demand forecast and self-generation forecast, as currently submitted by the states via email, will be shifted to the designated portal in due course. For both day-ahead and intra-day monitoring, the drawl from the grid shall be considered as per WBES, as detailed below. Stacking of both demand and generation will provide a clear picture of shortage period.

ISGS	• Entitlement from each of the Generator in all the regions.
GNA	• Requisition Quantum of the buyer for each of the GNA Contracts (incl. REMC).
TGNA	• Scheduled Quantum from each of the T-GNA (including REMC) Contracts
DAM	• Net Scheduled Quantum from each of the Day-Ahead Market Exchange and Products (DAM, GDAM, HPDAM)
RTM	• Net Scheduled Quantum from each of the Real-Time Market Exchange.

Sl No	Entity Name	User Type	Registration No	Registration Date	Registered Capacity	Length	MVA Capacity
1	ACC Limited (Tikaria)	Buyer	NRRACT1BU	01-04-2025	0	0	0
2	ACC Limited (Unit-Gagal)	Buyer	NRRAC1BU	22-01-2025	0	0	0
3	Ambuja Cements Limited (Bathinda)	Buyer	NRRAM6BU	03-03-2025	0	0	0
4	Ambuja Cements Limited (Unit Roorkee)	Buyer	NRRAM7BU	03-03-2025	0	0	0
5	Ambuja Cements Limited (Unit-Marwar)	Buyer	NRRAM1BU	22-01-2025	0	0	0
6	Ambuja Cements Limited (Unit-Rabriyawas)	Buyer	NRRAM2BU	22-01-2025	0	0	0
7	Ambuja Cements Limited (Unit-Rauri)	Buyer	NRRACLBU	29-01-2025	0	0	0
8	Ambuja Cements Limited (Unit-Suli)	Buyer	NRRACLSBU	29-01-2025	0	0	0
9	Ambuja Cements Limited Ropar	Buyer	NRRAM5BU	03-03-2025	0	0	0
10	Asian Fine Cements Private Limited	Buyer	NRRAS1BU	03-03-2025	0	0	0
11	Delhi Buyer(DMRC Ltd)	Buyer	NRRDMRBY	26-02-2021	0	0	0
12	Delhi International Airport Limited	Buyer	NRRDE1BU	31-07-2023	0	0	0
13	Government of Himachal Pradesh _ Chamera1HEP	Buyer	NRRGO4BU	07-08-2024	0	0	0
14	Government of Himachal Pradesh _ Chamera3HEP	Buyer	NRRGO7BU	07-08-2024	0	0	0
15	Government of Himachal Pradesh_ CHAMERA2HEP	Buyer	NRRGO5BU	07-08-2024	0	0	0
16	Government of Himachal Pradesh_BairasuilHEP	Buyer	NRRGO2BU	07-08-2024	0	0	0
17	Government of Himachal Pradesh_Koldam HEP	Buyer	NRRGO1BU	07-08-2024	0	0	0
18	Government of Himachal Pradesh_NJHPS	Buyer	NRRGO8BU	07-08-2024	0	0	0
19	Government of Himachal Pradesh_Parbati3HEP	Buyer	NRRGO6BU	07-08-2024	0	0	0
20	Government of Himachal Pradesh_RampurHEP	Buyer	NRRGO3BU	07-08-2024	0	0	0
21	Government of Himanchal Pradesh_Parbati2HEP	Buyer	NRRGO9BU	29-04-2025	0	0	0
22	LINDE INDIA LIMITED	Buyer	NRRLI1BU	24-12-2024	0	0	0
23	National Fertilizers Limited, Nangal Punjab	Buyer	NRRNFNBY	26-03-2018	0	0	0
24	Northern Central Railway	Buyer	NRRRL1BY	20-05-2011	0	0	0
25	NVVN (SNA NEA-UP)	Buyer	NRRNE1BU	29-04-2024	0	0	0
26	NVVNL (SNA Nepal)	Buyer	NRRNVNBY	30-03-2020	0	0	0
27	PG-HVDC-NR	Buyer	NRRPGHBY	30-11-2023	0	0	0
28	Chandigarh Power Distribution Limited	Distribution Licensee	NRRCH1DL	27-02-2025	0	0	0
29	Delhi	Distribution Licensee	NRRDL1DS	02-07-2010	0	0	0
30	Haryana	Distribution Licensee	NRRHR1DS	21-09-2011	0	0	0
31	Himachal Pradesh	Distribution Licensee	NRRHP1DS	09-06-2011	0	0	0
32	Punjab	Distribution Licensee	NRRPU1DS	30-08-2010	0	0	0
33	Rajasthan	Distribution Licensee	NRRRJ1DS	10-08-2011	0	0	0
34	UT Chandigarh	Distribution Licensee	NRRCH1DS	10-08-2011	0	0	0
35	UT J&K	Distribution Licensee	NRRJK1DS	30-09-2011	0	0	0
36	Uttar Pradesh	Distribution Licensee	NRRUP1DS	15-07-2011	0	0	0
37	Uttarakhand	Distribution Licensee	NRRUA1DS	03-08-2011	0	0	0
38	ADHPL	Generating Station	NRRAD1SL	10-09-2010	192	0	0
39	Anta GPP	Generating Station	NRRAN1GN	09-06-2011	419	0	0
40	Auraiya GPP	Generating Station	NRRAU1GN	09-06-2011	663	0	0
41	Bairasiul HPS	Generating Station	NRRBS1GN	01-06-2011	180	0	0
42	Bhakra Complex	Generating Station	NRRBC1GN	05-02-2016	1568.73	0	0
43	Budhil, HPS	Generating Station	NRRBD1SL	22-05-2012	70	0	0
44	Chamera-I HPS	Generating Station	NRRCM1GN	04-06-2010	540	0	0
45	Chamera-II HPS	Generating Station	NRRCM2GN	09-06-2011	300	0	0
46	Chamera-III HPS	Generating Station	NRRCM3GN	26-03-2012	231	0	0
47	Dadri GPP	Generating Station	NRRDD1GN	05-05-2011	830	0	0
48	Dadri NCTPS	Generating Station	NRRDA1GN	07-04-2010	840	0	0
49	Dadri Stage-II NCTPS	Generating Station	NRRDA2GN	05-05-2011	980	0	0
50	Dehar HEP	Generating Station	NRRDE1GN	05-02-2016	990	0	0
51	Dhauliganga HPS	Generating Station	NRRDG1GN	29-06-2011	280	0	0
52	Dulhasti HPS	Generating Station	NRRDU1GN	09-05-2011	390	0	0
53	IGSTPS	Generating Station	NRRIG1GN	02-12-2010	1500	0	0
54	Khurja STPP	Generating Station	NRRKH1GN	06-09-2022	1320	0	0
55	Kishanganga HEP	Generating Station	NRRKG1GN	01-03-2018	330	0	0
56	Koteshwer HPS	Generating Station	NRRKT1GN	25-06-2011	400	0	0
57	KWHPS	Generating Station	NRRKW1GN	18-05-2011	1045	0	0
59	NAPS	Generating Station	NRRNA1GN	10-05-2011	440	0	0
60	Nathpa-Jhakri HPS	Generating Station	NRRNJ1GN	06-07-2010	1500	0	0
61	NTPC KOLDAM HYDRO ELECTRIC POWER PLANT	Generating Station	NRRKD1GN	08-04-2015	800	0	0
62	Parbati-II, HEP	Generating Station	NRRPB2GN	18-09-2018	800	0	0
63	Parbati-III, HEP	Generating Station	NRRPB3GN	22-08-2013	520	0	0
64	Pong HEP	Generating Station	NRRPO1GN	05-02-2016	396	0	0
65	Rampur HEP	Generating Station	NRRRS1GN	07-02-2014	412	0	0
66	RAPP-7&8, NPCIL	Generating Station	NRRRADGN	04-04-2019	1400	0	0
67	RAPS -B	Generating Station	NRRRABGN	09-05-2011	440	0	0
68	RAPS-C	Generating Station	NRRRACGN	27-05-2011	440	0	0
69	Rihand -I STPS	Generating Station	NRRRI1GN	27-11-2011	1000	0	0
70	Rihand -II STPS	Generating Station	NRRRI2GN	27-11-2011	1000	0	0
71	Rihand-III, STPS	Generating Station	NRRRI3GN	25-04-2012	1000	0	0
72	Sainj HEP	Generating Station	NRRSJ1GN	26-05-2017	100	0	0
73	Salal HPS	Generating Station	NRRSL1GN	20-05-2011	690	0	0
74	SCL Bewar	Generating Station	NRRBW1SL	12-04-2011	300	0	0
75	SEWA-II	Generating Station	NRRSW1GN	09-05-2011	120	0	0
76	Singoli-Bhatwari HEP	Generating Station	NRRSBHGN	19-10-2020	99	0	0
77	Singrauli Small Hydro Station	Generating Station	NRRSH1GN	29-08-2017	8	0	0
78	Singrauli STPS	Generating Station	NRRSI1GN	04-05-2011	2000	0	0
79	SORANG HEP	Generating Station	NRRSP1GN	23-09-2013	100	0	0
80	Tanakpur HPS	Generating Station	NRRTP1GN	01-06-2011	94	0	0
81	Tanda Stage II	Generating Station	NRRTN2GN	07-11-2019	1320	0	0
82	Tehri HPS	Generating Station	NRRTE1GN	20-04-2010	1000	0	0
83	Tehri PSP	Generating Station	NRRTE1GS	16-08-2024	1000	0	0
84	Unchahar-I TPS	Generating Station	NRRUN1GN	10-05-2017	420	0	0
85	Unchahar-II TPS	Generating Station	NRRUN2GN	10-05-2017	420	0	0
86	Unchahar-III TPS	Generating Station	NRRUN3GN	10-05-2017	210	0	0
87	Unchahar-IV TPS	Generating Station	NRRUN4GN	22-12-2016	500	0	0
88	URI 2 HEP	Generating Station	NRRUR2GN	14-03-2013	240	0	0
89	Uri HPS	Generating Station	NRRUR1GN	18-05-2011	480	0	0
90	UT J&K Seller	Generating Station	NRRJK1SL	23-07-2021	0	0	0
91	Adani Renewable Energy Park Rajasthan Limited Fatehgarh-I	Others (SPPD/ WPPD/ HPPD)	NRRAR1HPPD	15-11-2021	1406	0	0
92	Prerak Greentech Private Limited	Others (SPPD/ WPPD/ HPPD)	NRRPGSPPD	28-12-2023	400	0	0
93	Rajasthan Solar Park Development Company Limited	Others (SPPD/ WPPD/ HPPD)	NRRRS1SPPD	21-07-2023	190	0	0
94	Adani Renewable Energy Holding Five Limited	QCA	NRRAD1QCAA	21-03-2025	0	0	0
95	Emsys Energy Services Private Limited Bhadla-I	QCA	NRREM2QCAA	28-02-2025	0	0	0
96	Emsys Energy Services Private Limited Bikaner-I	QCA	NRREM1QCAA	31-01-2025	0	0	0
97	Emsys Energy Services Private Limited Bikaner-II	QCA	NRREM3QCAA	16-05-2025	0	0	0
98	Manikaran Analytics Limited (Fatehgarh II)	QCA	NRRMA3QCA	30-04-2025	0	0	0
99	Manikaran Analytics Limited Fatehgarh-I	QCA	NRRMA2QCA	06-03-2025	0	0	0

100	Manikaran Analytics Limited Fatehgarh-III	QCA	NRRMA1QCA	04-01-2025	0	0	0
101	ABC Renewable Energy (RJ-01) Private Limited	REGS	NRRABCGN	12-04-2022	300	0	0
102	ACME Chittorgarh Solar Energy Pvt Ltd	REGS	NRRAC1GN	03-10-2019	250	0	0
103	ACME Deoghar Solar Power Private Limited	REGS	NRRADSGN	02-04-2024	300	0	0
104	ACME Dhaulpur Powertech Private Limited	REGS	NRRADPGN	16-10-2024	300	0	0
105	ACME Heergarh Powertech Private Limited	REGS	NRRAC2GN	24-03-2022	300	0	0
106	ACME Phalodi Solar Energy Private Limited	REGS	NRRAPSGN	05-09-2024	300	0	0
107	ACME Raisar Solar Energy Private Limited	REGS	NRRARSGN	16-10-2024	300	0	0
108	ACME Sikar Solar Private Limited	REGS	NRRASSGN	12-02-2025	300	0	0
109	Adani Green Energy Twenty Five Limited	REGS	NRRAG25GN	14-08-2024	500	0	0
110	Adani Green Energy Twenty Four Limited	REGS	NRRAG24GN	19-11-2024	500	0	0
111	Adani Hybrid Energy Jaisalmer Four Limited Fatehgarh-I	REGS	NRRAH4GN	16-11-2021	1110.36	0	0
112	Adani Hybrid Energy Jaisalmer One Limited	REGS	NRRAH1GN	26-07-2021	461	0	0
113	Adani Hybrid Energy Jaisalmer Three Limited	REGS	NRRAH3GN	01-10-2021	375.8	0	0
114	Adani Hybrid Energy Jaisalmer Two Limited	REGS	NRRAH2GN	01-10-2021	375.8	0	0
115	Adani Renewable Energy (RJ) Limited Rawara	REGS	NRRAS1GN	13-04-2020	200	0	0
116	Adani Solar Energy Four Limited, Rawara	REGS	NRRKS1GN	13-04-2020	50	0	0
117	Adani Solar Energy Jaisalmer One Private Limited	REGS	NRRAJ1GN	13-10-2022	526.87	0	0
118	Adani Solar Energy Jaisalmer Two Private Limited	REGS	NRRSB3GN	11-08-2021	150	0	0
119	Adani Solar Energy Jaisalmer Two Private Limited (Project-2)	REGS	NRRSBP2GN	12-09-2023	150	0	0
120	Adani Solar Energy Jodhpur Five Private Limited Bhadla	REGS	NRRSB1GN	26-04-2019	200	0	0
121	Adani Solar Energy Jodhpur Six Private Limited	REGS	NRRAS6GN	26-06-2025	50	0	0
122	Adani Solar Energy Jodhpur Two Limited, Rawara	REGS	NRRAG1GN	06-07-2020	50	0	0
123	Adani Solar Energy RJ One Private Limited Bhadla	REGS	NRRSB6GN	07-05-2021	300	0	0
124	ADANI SOLAR ENRGY RJ TWO PRIVATE LIMITED	REGS	NRRAS2GN	17-01-2024	180	0	0
125	ADEPT RENEWABLE TECHNOLOGIES PRIVATE LIMITED	REGS	NRRARTGN	01-01-2024	110	0	0
126	Altra Xergi Power Private Limited	REGS	NRRAXPGN	05-12-2023	380	0	0
127	AMP ENERGY GREEN FIVE PRIVATE LIMITED	REGS	NRRAM5GN	28-03-2024	100	0	0
128	AMP ENERGY GREEN FOUR PRIVATE LIMITED	REGS	NRRAG4GN	16-10-2024	100	0	0
129	AMP Energy Green Six Private Limited	REGS	NRRAMPGN	31-10-2023	100	0	0
130	AMPLUS AGES PRIVATE LIMITED	REGS	NRRRAAGN	30-10-2023	100	0	0
131	Auraiya Solar Power Plant NTPC Ltd.	REGS	NRRAUSGN	28-09-2020	40	0	0
132	Avaada RJHN Private Limited Bikaner	REGS	NRRAV2GN	09-12-2021	240	0	0
133	Avaada Sunce Energy Private Limited Bikaner	REGS	NRRAV1GN	03-12-2021	350	0	0
134	Avaada Sunrays Energy Private Limited	REGS	NRRAV4GN	29-07-2022	320	0	0
135	Avaada Sustainable RJProject Private Limited Bikaner	REGS	NRRAV3GN	05-01-2022	300	0	0
136	Ayana Renewable Power One Private Limited, Bikaner	REGS	NRRAY1GN	30-12-2021	300	0	0
137	AYANA RENEWABLE POWER THREE PRIVATE LIMITED	REGS	NRRAY3GN	30-03-2024	300	0	0
138	Azure Power Forty One Private Limited Bhadla	REGS	NRRAZ4GN	07-07-2021	300	0	0
139	Azure Power Forty Three Private Limited	REGS	NRRAZ3GN	09-11-2020	600	0	0
140	AZURE POWER INDIA Pvt. Ltd., Bhadla (SPD)	REGS	NRRAB1GN	23-04-2019	200	0	0
141	Azure Power Maple Private Limited	REGS	NRRAZ5GN	27-09-2021	300	0	0
142	Azure Power Thirty Four Pvt. Ltd. Bhadla	REGS	NRRAZ2GN	29-08-2019	130	0	0
143	Banderwala Solar Plant TPSL	REGS	NRRTP2GN	01-02-2024	300	0	0
144	Clean Solar Power (Bhadla) Pvt. Ltd	REGS	NRRCB1GN	03-10-2019	300	0	0
145	Clean Solar Power (Jodhpur) Private Limited Bhadla	REGS	NRRCB2GN	09-02-2022	250	0	0
146	DADRI SOLAR PV POWER STATION	REGS	NRRDS1GN	06-02-2013	5	0	0
147	Devikot Solar Power Plant NGEL	REGS	NRRND1GN	10-11-2022	240	0	0
148	Eden Renewable Alma Private Limited	REGS	NRRERAGN	22-05-2025	300	0	0
149	Eden Renewable Cite Private Limited	REGS	NRRED1GN	31-05-2021	300	0	0
150	Gorbea Solar Private Limited	REGS	NRRGSPGN	13-01-2025	300	0	0
151	Grian Energy Private Limited	REGS	NRRRGEGN	30-10-2023	100	0	0
152	Juna Renewable Energy Private Limited	REGS	NRRJREGN	04-04-2025	335	0	0
153	JUNIPER GREEN COSMIC PRIVATE LIMITED	REGS	NRRJG1GN	06-08-2024	100	0	0
154	Juniper Nirjara Energy Private Limited	REGS	NRRJNEGN	07-02-2025	50	0	0
155	Karinsar Solar Plant NHPC Ltd	REGS	NRRKNHSPD	07-03-2025	300	0	0
156	Khidrat Renewable Energy Private Limited	REGS	NRRKREGN	15-04-2025	300	0	0
157	Kolayat Solar Power Plant NGEL	REGS	NRRNK1GN	06-06-2022	550	0	0
158	Mega Solis Renewables Private Limited	REGS	NRRMRSGN	04-02-2021	250	0	0
159	Mega Suryaurja Private Limited	REGS	NRRMS1GN	09-05-2022	250	0	0
160	Neemba Solar Plant Renew Surya Vihaan Private Limited	REGS	NRRRV2GN	21-03-2025	200	0	0
161	Nidan Solar Power Plant NGEL	REGS	NRRNSFGN	03-12-2021	296	0	0
162	Nokh Solar Power Plant NTPC Limited	REGS	NRRNSPGN	24-01-2025	735	0	0
163	Nokhra Solar Plant NGEL	REGS	NRRNN1GN	25-11-2022	300	0	0
164	NTPC ANTA SOLAR PV STATION	REGS	NRRASPGN	26-03-2024	90	0	0
165	Onevolt Energy Private Limited	REGS	NRROEPGN	11-09-2023	100	0	0
166	Phalodi Solar Plant ASERJ2PL	REGS	NRRAS3GN	27-03-2024	150	0	0
167	ReNew Solar Energy Jharkhand Three Pvt. Ltd.	REGS	NRRRF2GN	11-08-2021	300	0	0
168	Renew Solar Power Pvt Ltd, Bikaner (250MW)	REGS	NRRRB2GN	22-10-2019	250	0	0
169	RENEW SOLAR POWER Pvt. Ltd. Bhadla, (SPD)	REGS	NRRRB1GN	22-04-2019	50	0	0
170	ReNew Solar Urja Pvt Ltd	REGS	NRRRF4GN	22-11-2021	300	0	0
171	Renew Sun Bright Private Limited	REGS	NRRRF3GN	14-10-2021	300	0	0
172	Renew Surya Aayan Private Limited	REGS	NRRRSAGN	27-12-2023	300	0	0
173	Renew Surya Jyoti Private Limited	REGS	NRRRSJGN	20-03-2025	210	0	0
174	Renew Surya Pratap Private Limited	REGS	NRRRSPGN	08-12-2023	200	0	0
175	Renew Surya Ravi Private Limited Bikaner	REGS	NRRRB3GN	12-01-2022	300	0	0
176	Renew Surya Roshni Private Limited	REGS	NRRRSRGN	25-01-2024	423	0	0
177	Renew Surya Vihaan Private Limited	REGS	NRRRSVGN	12-12-2023	100	0	0
178	Rising Sun Energy (K) Private Limited	REGS	NRRRSEGN	21-07-2023	190	0	0
179	Serentica Renewables India 4 Private Limited	REGS	NRRSR4GN	07-03-2024	180	0	0
180	SERENTICA RENEWABLES INDIA 5 PVT LTD	REGS	NRRSR5GN	27-03-2024	220	0	0
181	SINGRAULI SOLAR PV POWER STATION	REGS	NRRSS1GN	26-12-2014	15	0	0
182	SJVN Green Energy Ltd (SGEL)	REGS	NRRSGEGN	05-03-2025	1000	0	0
183	Solar Power Plant of Ambuja Cements Limited	REGS	NRRACLGN	30-06-2025	150	0	0
184	Solzen Urja Private Limited	REGS	NRRRF1GN	23-07-2021	300	0	0
185	Tata Power Green Energy Limited	REGS	NRRTPGGN	04-07-2022	225	0	0
186	Thar Surya 1 Private Limited	REGS	NRRTS1GN	14-01-2022	300	0	0
187	TP Saurya Limited	REGS	NRRTPSGN	18-05-2023	110	0	0
188	TPREL (Chhayan)	REGS	NRRTC1GN	21-08-2019	300	0	0
189	TRANSITION CLEANTECH SERVICES PRIVATE LIMITED	REGS	NRRTCSGN	30-01-2024	24.4	0	0
190	TRANSITION ENERGY SERVICES PRIVATE LIMITED	REGS	NRRTESGN	08-01-2024	84.4	0	0
191	TRANSITION GREEN ENERGY PRIVATE LIMITED	REGS	NRRTGEGN	19-03-2024	100	0	0
192	TRANSITION SUSTAINABLE ENERGY SERVICES ONE PRIVATE LIMITED	REGS	NRRTS2GN	16-09-2024	55.6	0	0
193	TRANSITION SUSTAINABLE ENERGY SERVICES PRIVATE LIMITED	REGS	NRRTSEGN	19-03-2024	50	0	0
194	Unchahar Solar PV Plant	REGS	NRRUS1GN	27-03-2014	10	0	0
195	XL Xergi Power Private Limited	REGS	NRRXXPGN	11-04-2025	400	0	0
196	Delhi Seller(PPCL, Bawana)	Seller	NRRPPDSL	01-03-2021	274	0	0
197	Haryana Seller	Seller	NRRHR1SL	21-09-2011	124	0	0
198	HP Seller	Seller	NRRHP1SL	09-06-2011	217.1	0	0

200	Rajasthan Seller	Seller	NRRRJ1SL	10-08-2011	58	0	0
201	UP Seller (MUNPL)	Seller	NRRMU1SL	26-02-2021	0	0	0
202	AD Hydro Power Limited (ADHPL)	Transmission Licensee	NRRAD1TL	08-05-2023	0	353.3	0
203	Adani Transmission India Ltd.	Transmission Licensee	NRRAP1TL	23-09-2013	0	2528	0
204	Aravali Power Company Private Limited	Transmission Licensee	NRRAR1TL	02-04-2014	0	131.38	0
205	BIKANER-KHETRI TRANSMISSION LIMITED	Transmission Licensee	NRRBK1TL	23-04-2021	0	481.3	0
206	Fatehgarh Bhadla Transmission Limited	Transmission Licensee	NRRFB1TL	16-12-2020	0	291.94	0
207	Gurgoan Palwal Transmission Limited	Transmission Licensee	NRRGP1TL	26-04-2019	0	272.92	3000
208	NRSS XXIX Transmission Ltd.	Transmission Licensee	NRRN29TL	05-06-2015	0	853.62	630
209	NRSS XXXI (B) Transmission Ltd.	Transmission Licensee	NRR31BTL	23-11-2016	0	577.6	0
210	NRSS XXXVI Transmission Ltd.	Transmission Licensee	NRRN36TL	14-06-2017	0	225	0
211	Parbati Koldam Transmission Company LTD.	Transmission Licensee	NRRPK1TL	11-02-2014	0	457.92	0
212	PATRAN TRANSMISSION COMPANY LIMITED	Transmission Licensee	NRRPT1TL	07-05-2016	0	0.1	1500
213	Power Grid Corporation India Ltd.	Transmission Licensee	NRRPG1TL	09-06-2011	0	52875.64	155465
214	Power Transmission corporation of Uttarakhand Ltd.	Transmission Licensee	NRRUT1TL	29-09-2016	0	178.48	950
215	POWERGRID AJMER PHAGI TRANSMISSION LIMITED	Transmission Licensee	NRRPAPTL	07-03-2022	0	268.8	0
216	Powergrid Aligarh Sikar Transmission Limited	Transmission Licensee	NRRPASTL	08-08-2023	0	513.874	0
217	POWERGRID BEAWAR DAUSA TRANSMISSION LIMITED	Transmission Licensee	NRRPBDTL	10-06-2025	0	1365.89	3000
218	POWERGRID BHADLA SIKAR TRANSMISSION LIMITED	Transmission Licensee	NRRPBSTL	17-10-2024	0	0	0
219	Powergrid Bhadla Transmission Limited	Transmission Licensee	NRRPB2TL	27-04-2023	0	202.23	0
220	POWERGRID BIKANER TRANSMISSION SYSTEM LIMITED	Transmission Licensee	NRRPB1TL	14-09-2022	0	1353.32	4000
221	POWERGRID Fatehgarh Transmission Limited	Transmission Licensee	NRRPF1TL	13-07-2021	0	370.37	0
222	Powergrid Himachal Transmission Limited	Transmission Licensee	NRRJP1TL	16-05-2011	0	448.95	0
223	POWERGRID KALA AMB Transmission Ltd.	Transmission Licensee	NRRPGKTL	03-07-2017	0	2.47	630
224	Powergrid Khetri Transmission System Limited	Transmission Licensee	NRRKT1TL	26-07-2021	0	448.2	3000
225	POWERGRID NARELA TRANSMISSION LIMITED	Transmission Licensee	NRRPN1TL	02-02-2024	0	0	0
226	POWERGRID NEEMUCH TRANSMISSION LIMITED	Transmission Licensee	NRRPNTTL	20-02-2024	0	116.2	1000
227	POWERGRID RAMGARH TRANSMISSION LIMITED	Transmission Licensee	NRRPR1TL	27-06-2023	0	188.12	3500
228	POWERGRID SIKAR TRANSMISSION LIMITED	Transmission Licensee	NRRPS1TL	24-05-2024	0	885.544	3000
229	POWERGRID UNCHAHAR TRANSMISSION Ltd.	Transmission Licensee	NRRPU1TL	31-03-2017	0	106.74	0
230	Powergrid Varanasi Transmission System Limited	Transmission Licensee	NRRPV1TL	14-07-2021	0	189.42	0
231	POWERLINKS Transmission Limited	Transmission Licensee	NRRPL1TL	07-04-2010	0	1224.11	0
232	RAPP Transmission Company Ltd.	Transmission Licensee	NRRRA1TL	29-09-2015	0	201.6	0

Note :

1. Malana -II HPS (Registration No - NRRMA2SL) has been de- registered from 05.12.2019 due to change in control area from NRLDC to HP SLDC

2. Mahoba Solar (UP) Pvt Ltd. has been registered as Adani Renewable Energy (RJ) Limited Rawara (NRRAS1GN)

3. Name of Kilaj Solar (Maharashtra) Private Limited Rawara has been changed to Adani Solar Energy Four Private Limited. Rawara

4. Name of 'Jaypee Powergrid Limited' has been changed to ‘Powergrid Himachal Transmission Limited'

5. Name of 'SB ENERGY FOUR PRIVATE LIMTED, Bhadla,' has been changed to ‘Adani Solar Energy Jodhpur Five Private Limited' vide letter dated 12.04.2022

6. Name of 'SB Energy Six Private Limited (SPD)' has been changed to ‘Adani Solar Energy RJ One Private Limited' vide letter dated 12.04.2022 7. Name of "Adani Solar Energy Four Private Limited Rawara" has been changed to Adani Solar Energy Four Limited, Rawara on dated 07.09.2022

8. Name of "Devikot Solar Power Plant NTPC Ltd" has been changed to "Devikot Solar Power Plant NGEL" on dated 15.05.2023

9. Name of "Nidan Solar Power Plant NTPC LTD" has been changed to "Nidan Solar Power Plant NGEL" on dated 15.05.2023

10. Name of "Nokhra Solar Plant NTPC LTD" has been changed to "Nokhra Solar Plant NGEL" on dated 15.05.2023

11. Name of "Kolayat Solar Power Plant NTPC LTD" has been changed to "Kolayat Solar Power Plant NGEL" on dated 26.06.2023

12. Name of "SBSR Power Cleantech Eleven Private Limited, Bikaner" has been changed to "Adani Solar Energy Jaisalmer Two Private Limited” on dated 07.08.2023.

13. Name of " RENEW SUN WAVES PRIVATE LIMITED" has been changed to " Solzen Urja Private Limited” on dated 29.05.2025.

Annexure-B.VII

Grid Event summary for July 2025

S.No.	Category of Grid Incident/ Disturbance	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Energy Unserved due to Generation loss (MU)	Energy Unserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance		Antecedent Generation/Load in the Regional Grid		Fault Clearance time (in ms)	Compliance of Protocol/Standard			Remarks
	(GI-I to GD-V)				Date	Time			Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		Flash Report Submission (Y/N)	DR/EL Submission (Y/N)	Detail Tripping Report Submission (Y/N)	
1	GD-1	1) 220 KV Moga(PG)-Moga(PS) (PSTCL) Ckt-2 2) 220 KV Moga(PG)-Moga(PS) (PSTCL) Ckt-3 3) 220 KV Moga(PG)-Moga(PS) (PSTCL) Ckt-4 4) 220 KV Moga(PS)-Kotkaror (PSTCL) Ckt-1 5) 220 KV Moga(PS)-Kotkaror (PSTCL) Ckt-2 6) 220kV Moga(PS)-Sadiq Ckt 7) 220kV GHTP-Himmatpura (PS) Ckt-1 8) 220kV GHTP-Himmatpura (PS) Ckt-2 9) 220 KV Moga(PG)-Badhni kalan(PS) (PSTCL) Ckt-1 10) 220 KV Moga(PG)-Ajitwal(PS) (PSTCL) Ckt-1 11) 220kV Ajitwal-Himmatpura (PS) Ckt 12) 220kV Badhni kalan-Himmatpura (PS) Ckt	Punjab	PGCIL, PSTCL	1-Jul-25	11:06	0	0.446	0	582	0.000	0.880	59227	66112	240	Y(d)	Y(d)	Y	
2	GI-1	1) 220/33 kV 100 MVA ICT 2 at RSDCL(PSS2)_SL_BHD2_PG 2) 220/33 kV 100 MVA ICT 3 at RSDCL(PSS2)_SL_BHD2_PG	Rajasthan	RSDCL PSS2	3-Jul-25	11:21	0	0	165	0	0.271	0.000	60870	73042	NA	N	N	N	
3	GI-1	1) 220/33 kV 100 MVA ICT 1 at RSDCL(PSS2)_SL_BHD2_PG	Rajasthan	RSDCL PSS2	4-Jul-25	13:46	0	0	225	0	0.345	0.000	65126	78965	1200	N	N	N	
4	GI-1	1) 220 kV Patparganj-IPPOS (DTL) Ckt-1 2) 220 kV Patparganj-IPPOS (DTL) Ckt-2 3) 220 kV Patparganj-Geeta Colony (DTL) Ckt-1 4) 220 kV Patparganj-Geeta Colony (DTL) Ckt-2 5) 220 kV Patparganj-Ghazipur (DTL) Ckt 6) 220/66kV 100MVA ICT-1 at Patparganj(DTL) 7) 220/66kV 100MVA ICT-2 at Patparganj(DTL) 8) 220 kV Rajghat-IPPOS (DTL) Ckt-1 9) 220 kV Rajghat-IPPOS (DTL) Ckt-2 10) 104 MW GT-1 at Pragati (PPCL) 11) 122 MW STG at Pragati (PPCL)	Delhi	DTL, PPCL	9-Jul-25	17:31	0	0.045	184	270	0.333	0.394	55296	68469	120	Y(d)	N	N	
5	GD-1	1) 220 KV Bhadla(PG)-ESUCRL SL_BHD_PG (ESUCRL) (ESUCRL) Ckt-1	Rajasthan	ESUCRL, PGCIL	10-Jul-25	13:15	0	0	410	0	0.703	0.000	58326	63284	120	Y(d)(PG), N(ESUCRL)	Y(d)(PG), N(ESUCRL)	Y(d)(PG), N(ESUCRL)	
6	GI-1	1) 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-1 2) 220 KV Mandola(PG)-Narela(DV) (DTL) Ckt-2	Delhi	PGCIL, DTL	10-Jul-25	15:41	0	0.089	0	280	0.000	0.431	58212	64979	480	Y(d)	N	N	
7	GD-1	1) 220KV Bus 1 at Jamalpur(BB) 2) 220KV Bus 2 at Jamalpur(BB) 3) 220 KV Jalandhar-Jamalpur (BB) Ckt-1 4) 220 KV Jalandhar-Jamalpur (BB) Ckt-2 5) 220 KV Jamalpur(BB)-Sangrur(BB) (BBMB) Ckt-1 6) 220 KV Jamalpur(BB)-Sangrur(BB) (BBMB) Ckt-2 7) 220 KV Ganguwal-Jamalpur (BB) Ckt-1 8) 220 KV Ganguwal-Jamalpur (BB) Ckt-2 9) 220 KV Bhakra_R-Jamalpur (BB) Ckt-1 10) 220 KV Bhakra_R-Jamalpur (BB) Ckt-2	Punjab	BBMB	12-Jul-25	11:43	0	0.462	0	355	0.000	0.496	59924	71529	120	Y	N	N	
8	GD-1	1) 400 KV Bikaner_2 (PBTSL)-SJVN_GEL_SL_BKN2 (SJVNGEL_BKN2) Ckt	Rajasthan	PGCIL, SJVN GEL	12-Jul-25	15:41	0	0	270	0	0.441	0.000	61285	69260	NA	N	N	N	

S.No.	Category of Grid Incident/ Disturbance	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Energy Unserved due to Generation loss (MU)	Energy Unserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance		Antecedent Generation/Load in the Regional Grid		Fault Clearance time (in ms)	Compliance of Protection Protocol/Standard			Remarks
	(GI-I to GD-V)				Date	Time			Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		Flash Report Submission (Y/N)	DR/EL Submission (Y/N)	Detail Tripping Report Submission (Y/N)	
9	GD-1	1) 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-1 2) 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-2 3) 220 KV Khodri - Chhibro (UK) Ckt-1 4) 220 KV Khodri - Chhibro (UK) Ckt-2 5) 220 KV Sarsawan(UP)-Khodri(UK) (UP) Ckt 6) 220 KV Saharanpur(UP)-Khodri(UK) (UP) Ckt 7) 220/132 kV 100 MVA ICT at Khodri(UK) 8) 30 MW Unit-1 at Khodri(UK) 9) 30 MW Unit-2 at Khodri(UK) 10) 30 MW Unit-3 at Khodri(UK) 11) 30 MW Unit-4 at Khodri(UK) 12) 60 MW Unit-1 at Chhibro(UK) 13) 60 MW Unit-2 at Chhibro(UK) 14) 60 MW Unit-3 at Chhibro(UK) 15) 60 MW Unit-4 at Chhibro(UK)	Uttarakhand	PTCUL, HPPTCL, UPPTCL	15-Jul-25	12:28	0	0	290	0	0.483	0.000	60021	66509	240	Y(d)	Y(d)(Utt), Y(d)(HP) N(UP)	N (Partial details received)	Detailed report yet to be received from UJVUNL/PTCUL
10	GD-1	1) 220 KV Kishenpur(PG)- Salal(NH) (PG) Ckt-1 2) 220 KV Kishenpur(PG)-Salal(NH) (PG) Ckt-2 3) 220 KV Kishenpur(PG)- Salal(NH) (PG) Ckt-3 4) 220 KV Kishenpur(PG)-Salal(NH) (PG) Ckt-4 5) 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-1 6) 220 KV Salal(NH)-Jammu(PDD) (PG) Ckt-2 7) 115 MW Unit-1 at Salal HEP 8) 115 MW Unit-2 at Salal HEP 9) 115 MW Unit-3 at Salal HEP 10) 115 MW Unit-5 at Salal HEP 11) 115 MW Unit-6 at Salal HEP	Jammu and Kashmir	PGCIL, NHPC, PDD JK	15-Jul-25	11:17	0	0.125	395	175	0.663	0.266	59590	65841	80	Y(d)	Y(d)	Y(d)	
11	GD-1	1) 220 KV Alusteng-Drass (PG) Ckt	Jammu and Kashmir	PGCIL	16-Jul-25	13:42	0	0	62	0	0.101	0.000	61467	65038	80	Y(d)	Y(d)(PG), N(J&K)	Y(d)(PG), N(J&K)	
12	GI-2	1) 400 KV OBRA_C_TPS-OBRA_B (UP) CKT 2) 400 KV ANPARA-OBRA_B (UP) CKT 3) 400 KV OBRA_B-SULTANPUR (UP) CKT 4) 400 KV OBRA_B-ALLAHABAD REWA ROAD (UP) CKT 5) 200 MW UNIT-9 AT OBRA TPS 6) 200 MW UNIT-10 AT OBRA TPS 7) 200 MW UNIT-11 AT OBRA TPS 8) 200 MW UNIT-13 AT OBRA TPS	Uttar Pradesh	UPPTCL	16-Jul-25	17:05	0	0	355	0	0.625	0.000	56777	63505	NA	Y(d)	Y(d)	Y(d)	
13	GI-1	1) 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-1 2) 220 KV Khodri(UK)-Majri(HP) (UK) Ckt-2 3) 220 KV Khodri - Chhibro (UK) Ckt-2 4) 220 KV Saharanpur(UP)-Khodri(UK) (UP) Ckt 5) 220/132 kV 100 MVA ICT at Khodri(UK) 6) 30 MW Unit-2 at Khodri(UK) 7) 30 MW Unit-3 at Khodri(UK) 8) 30 MW Unit-4 at Khodri(UK) 9) 60 MW Unit-3 at Chhibro(UK)	Uttarakhand	PTCUL, HPPTCL, UPPTCL	20-Jul-25	18:44	0	0	114	0	0.218	0.000	52315	66401	160	Partial details received	Partial details received	Partial details received	
14	GD-1	1) 220 KV Bhadla_2 (PG)-RSDCL(PSS2)_SL_BHD2_PG (RSDCL) Ckt-1	Rajasthan	RSDCL PSS2, PGCIL	22-Jul-25	09:49	0	0	229	0	0.380	0.000	60273	68952	520	N	N	N	
15	GD-1	1) 765kV Koteshwar-Meerut (PG) ckt-2 2) 250 MW Tehri HEP Unit-1 3) 250 MW Tehri HEP Unit-2 4) 250 MW Tehri HEP Unit-3 5) 250 MW Tehri HEP Unit-4 6) 250 MW Tehri PSP HEP Unit-5 7) 100 MW Koteshwar HEP Unit-1 8) 100 MW Koteshwar HEP Unit-2 9) 100 MW Koteshwar HEP Unit-3 10) 100 MW Koteshwar HEP Unit-4	Uttarakhand	PGCIL, THDC	22-Jul-25	19:46	0	0	1435	0	2.705	0.000	53059	71591	80	Y(d)	Y(d)	Y(d)	
16	GD-1	1) 220KV Bus 2A at Panipat(BB) 2) 400/220kV 500 MVA ICT-2 at Panipat(BB) 3) 220 KV Panipat-Dhulkote(BB) Ckt-2 4) 220 KV Panipat(BB)-Panipat Th(HR) Ckt-2 5) 220 KV Panipat(BB)-Narela (DTL) Ckt-2 6) 220 KV Panipat(BB)-Charkhi Dadri Ckt 7) 220/66kV 60 MVA Transformer-2 at Panipat(BB) 8) 400/220kV 450 MVA ICT-1 at Panipat(BB) 9) 220 KV Ganguwal-Jagadhri Ckt	Haryana	HVPNL, BBMB, DTL	24-Jul-25	09:49	0	0.506	0	515	0.000	0.728	65937	70779	240	Y(d)	Y(d)	Y(d)	

S.No.	Category of Grid Incident/ Disturbance	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Energy Unserved due to Generation loss (MU)	Energy Unserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance		% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance		Antecedent Generation/Load in the Regional Grid		Fault Clearance time (in ms)	Compliance of Protection Protocol/Standard			Remarks
	(GI-I to GD-V)				Date	Time			Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)		Flash Report Submission (Y/N)	DR/EL Submission (Y/N)	Detail Tripping Report Submission (Y/N)	
17	GD-1	1) 220 KV Amargarh (INDIGRID)-Ziankote(JK) (PDD JK) Ckt-1 2) 220 KV Amargarh (INDIGRID)-Ziankote(JK) (PDD JK) Ckt-2	Jammu and Kashmir	INDIGRID, PDD JK	24-Jul-25	10:18	0	1.433	0	400	0.000	0.556	68479	71887	120	Y(d)	Y(d)(PG), N(J&K)	N	
18	GD-1	1) 400 KV Uri_2(NH)-Wagoora(PG) (PG) Ckt 2) 60 MW Uri-II HPS - UNIT 1 3) 60 MW Uri-II HPS - UNIT 2 4) 60 MW Uri-II HPS - UNIT 3 5) 60 MW Uri-II HPS - UNIT 4	Jammu and Kashmir	PGCIL, NHPC	25-Jul-25	13:44	0	0	240	0	0.357	0.000	67308	80494	NA	Y(d)	Y(d)	Y(d)	
19	GD-1	1) 220 KV DandhariKalanI(PS)-Ludhiana(PG) (PSTCL) Ckt-1 2) 220 KV DandhariKalanI(PS)-Ludhiana(PG) (PSTCL) Ckt-2	Punjab	PGCIL, PSTCL	26-Jul-25	12:05	0	0.455	0	220	0.000	0.290	64426	75949	120	Y(d)	N	N	DR/EL & tripping report not received from PSTCL
20	GD-1	1) 220kV Kangoo-Rarur(HP) Ckt 2) 220 KV Dehar(BB)-Kangoo(HP) (HP) Ckt 3) 132 KV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt 4) 220/132kV 80/100 MVA ICT at Kangoo(HP)	Himachal Pradesh	HPPTCL, BBMB	27-Jul-25	16:46	0	0.25	0	75	0.000	0.105	55959	71103	120	Y(d)(HP), N(BBMB)	N	N	
21	GI-2	1) 400 KV Vindhyachal(PG)-Vindhyachal(NT) (PG) Ckt-1 2) 400 KV Vindhyachal(PG)-Vindhyachal(NT) (PG) Ckt-2 3) 70 KV Vindhyachal(PG) Pole-1 4) 70 KV Vindhyachal(PG) Pole-2	Uttar Pradesh	PGCIL, NTPC	30-Jul-25	20:25	0	0	0	0	0.000	0.000	55429	75651	NA	Y	Y	Y	Tripping initiated from Vindhyachal(NTPC) end in WR.

Annexure-B.VIII

Status of submission of FIR/DR/EL/Tripping Report on NR Tripping Portal

Time Period: 1st July 2025 - 31st July 2025

S. No.	Utility	Total No. of tripping	First Information Report (Not Received)		Disturbance Recorder (Not Received)	Disturbance Recorder (NA) as informed by utility	Disturbance Recorder (Not Received)	Event Logger (Not Received)	Event Logger (NA) as informed by utility	Event Logger (Not Received)	Tripping Report (Not Received)	Tripping Report (NA) as informed by utility	Tripping Report (Not Received)	Remark
			Value	%	Value		%	Value		%	Value		%	
1	ACME SOLAR HOLDINGS LIMITED	1	1	100	1	0	100	1	0	100	1	0	100	
2	AD HYDRO	1	1	100	1	0	100	1	0	100	1	0	100	
3	ADANI GREEN ENERGY TWENTY FIVE LIMITED	1	1	100	1	0	100	1	0	100	1	0	100	
4	AHEJ4L	2	1	50	1	0	50	1	0	50	1	0	50	
5	AHEJOL	2	2	100	0	0	0	2	0	100	2	0	100	
6	ALTRA XERGI POWER PVT LTD	2	2	100	2	0	100	2	0	100	2	0	100	
7	ANTA-NT	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
8	AP43L	1	1	100	1	0	100	1	0	100	1	0	100	
9	AREPRL	1	1	100	1	0	100	1	0	100	1	0	100	
10	AURAIYA-NT	4	4	100	0	0	0	1	0	25	2	0	50	
11	BAIRASUIL-NH	2	2	100	2	0	100	2	0	100	2	0	100	
12	BANDERWALA_TPSL	1	0	0	0	0	0	1	0	100	1	0	100	
13	BBMB	99	9	9	10	54	22	12	51	25	10	6	11	
14	CPCC1	70	17	24	21	14	38	27	14	48	23	0	33	
15	CPCC2	30	0	0	0	13	0	0	12	0	0	1	0	Details received
16	CPCC3	51	0	0	0	11	0	1	9	2	0	6	0	
17	DADRI-NT	1	1	100	1	0	100	1	0	100	1	0	100	
18	DULHASTI-NH	1	1	100	1	0	100	1	0	100	1	0	100	
19	ESUCRL	3	3	100	3	0	100	3	0	100	3	0	100	
20	FBTL	2	1	50	1	0	50	1	0	50	1	0	50	
21	INDIGRID	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not

Status of submission of FIR/DR/EL/Tripping Report on NR Tripping Portal

Time Period: 1st July 2025 - 31st July 2025

S. No.	Utility	Total No. of tripping	First Information Report (Not Received)		Disturbance Recorder (Not Received)	Disturbance Recorder (NA) as informed by utility	Disturbance Recorder (Not Received)	Event Logger (Not Received)	Event Logger (NA) as informed by utility	Event Logger (Not Received)	Tripping Report (Not Received)	Tripping Report (NA) as informed by utility	Tripping Report (Not Received)	Remark
			Value	%	Value		%	Value		%	Value		%	
22	JHAJJAR	2	0	0	0	1	0	0	1	0	2	0	100	submitted
23	KARCHAM	1	1	100	1	0	100	1	0	100	1	0	100	
24	KHURJA STPP	2	2	100	2	0	100	2	0	100	2	0	100	
25	KOTESHWAR	6	6	100	6	0	100	6	0	100	6	0	100	
26	Mega_SuryaUrja	1	1	100	1	0	100	1	0	100	1	0	100	
27	NAPP	8	0	0	1	2	17	1	2	17	0	0	0	Details received
28	NJPC	1	0	0	1	0	100	1	0	100	0	0	0	
29	PARBATI-II-NH	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
30	RAMPUR	2	0	0	0	1	0	0	0	0	0	0	0	Details received
31	RAPPA	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
32	RAPPB	1	1	100	1	0	100	1	0	100	1	0	100	
33	RAPPC	1	1	100	1	0	100	1	0	100	1	0	100	
34	RENEW SUN BRIGHT (RSBPL)	1	0	0	0	0	0	0	0	0	0	0	0	Details received
35	RSDCL	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
36	SALAL-NH	7	1	14	1	4	33	1	0	14	1	0	14	
37	SEWA-2-NH	3	3	100	3	0	100	3	0	100	3	0	100	
38	SINGOLI	2	2	100	2	0	100	2	0	100	2	0	100	
39	SINGRAULI-NT	2	2	100	2	0	100	2	0	100	2	0	100	
40	SJVN GREEN ENERGY LIMITED	7	7	100	7	0	100	7	0	100	7	0	100	
41	SLDC-CHD	2	2	100	2	0	100	2	0	100	2	0	100	
42	SLDC-DV	21	5	24	9	6	60	9	6	60	10	0	48	
43	SLDC-HP	23	1	4	18	0	78	18	0	78	1	0	4	
44	SLDC-HR	25	15	60	15	4	71	15	4	71	16	0	64	

Status of submission of FIR/DR/EL/Tripping Report on NR Tripping Portal

Time Period: 1st July 2025 - 31st July 2025

S. No.	Utility	Total No. of tripping	First Information Report (Not Received)		Disturbance Recorder (Not Received)	Disturbance Recorder (NA) as informed by utility	Disturbance Recorder (Not Received)	Event Logger (Not Received)	Event Logger (NA) as informed by utility	Event Logger (Not Received)	Tripping Report (Not Received)	Tripping Report (NA) as informed by utility	Tripping Report (Not Received)	Remark
			Value	%	Value		%	Value		%	Value		%	
45	SLDC-JK	11	0	**0**	9	0	**82**	9	0	**82**	6	0	**55**	
46	SLDC-PS	33	8	**24**	26	3	**87**	26	1	**81**	30	1	**94**	
47	SLDC-RS	67	2	**3**	8	1	**12**	8	1	**12**	13	0	**19**	
48	SLDC-UK	21	2	**10**	4	4	**24**	5	2	**26**	2	0	**10**	
49	SLDC-UP	111	22	**20**	22	11	**22**	23	26	**27**	22	4	**21**	
50	STERLITE	5	3	**60**	2	1	**50**	2	1	**50**	2	3	**100**	
51	TANDA-NT	1	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	Details received
52	TEHRI	8	0	**0**	0	0	**0**	0	0	**0**	6	0	**75**	DR, EL & Tripping report not submitted
53	UNCHAHAR-NT	1	1	**100**	1	0	**100**	1	0	**100**	1	0	**100**	
54	URI-II-NH	5	0	**0**	0	4	**0**	0	0	**0**	0	0	**0**	Details received
Total in NR Region		**670**	**150**	**22**	**206**	**134**	**38**	**221**	**130**	**41**	**208**	**21**	**32**	

As per the IEGC provision under clause 37.2 (c), detailed tripping report along with DR & EL has to be furnished within 24 hrs of the occurrence of the event

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	Feb-26		
2	SPS for contingency due to tripping of HVDC Mundra-Mahendergarh	ADANI				SPS Unhealthy		As reported by ADANI, work order has been placed and action plan also have been rceived. Tentative timeline for revival of SPS is by December 2025.
3	SPS for high capacity 400 kV Muzaffarpur-Gorakhpur D/C Inter-regional tie-line related contingency	POWERGRID				Schedule awaited		Not conducted in 2024-25 also.
4	SPS for 1500 MW HVDC Rihand-Dadri Bipole related contingency	POWERGRID			19-03-2025 and 20-03-2025	Jan-26		During mock testing, issue identified at Singrauli, Malerkotla. During recent operation on 21.05.2025, non-operation of SPS at Muradnagar, Modipuram, Malerkotla, Singrauli observed.
5	System Protection Scheme (SPS) for HVDC Balia-Bhiwadi Bipole	POWERGRID				Sep-25		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		Case-6(i): Under implemetation stage (tentative by 15th August 2025), Case 6(ii): communication card issue at Wangtoo(HP)
7	SPS for Reliable Evacuation of Ropar Generation	PSTCL				SPS Unhealthy		As reported by PSTCL, SPS need to be reviewed whether it is requird or not.
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				Schedule awaited		Not conducted in 2024-25 also. As reported by UPPTCL, no SPS system is in service at Narora S/s.
10	SPS for evacuation of Kawai TPS, Kalisindh TPS generation complex	RVPNL			14-03-2025 (Partial)	conducted	26-04-2025	Study w.r.t. Automatic load shedding part has been done. Proposed Will be put up in 234 OCC
11	SPS for evacuation of Anpara Generation Complex	UPPTCL			08-10-2024 (unit-7) and 19-10-2024 (unit-6)	Schedule awaited		
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	Schedule awaited		As reported by HPPTCL, SPS at Lahal not required now.
15	SPS for Transformers at Ballabhgarh (PG) substation	POWERGRID				Schedule awaited		Not conducted in 2024-25 also. SPS. SPS may be kept with revised logic (logic based on the loading)
16	SPS for Transformers at Maharanibagh (PG) substation	POWERGRID				conducted	Apr-25	Mock test report received
17	SPS for Transformers at Mandola (PG) substation	POWERGRID				conducted	Apr-25	Mock test report received
18	SPS for Transformers at Bamnauli (DTL) Substation	DTL				Schedule awaited		Not conducted in 2024-25 also. SPS. SPS may be kept with revised logic (logic based on the loading)
19	SPS for Transformers at Moradabad (UPPTCL) Substation	Uttar Pradesh			20-04-2024	conducted	02-04-2025	Mock test report pending
20	SPS for Transformers at Muradnagar (UPPTCL) Substation	UPPTCL			27-03-2025	Mar-26		
21	SPS for Transformers at Muzaffarnagar(UPPTCL) Substation	UPPTCL			27-03-2025	Mar-26		
22	SPS for Transformers at Greater Noida(UPPTCL) Substation	UPPTCL				SPS Unhealthy		SPS Unhealthy; SPS may be kept with revised logic (logic based on the loading)
23	SPS for Transformers at Agra (UPPTCL) Substation	UPPTCL			21-03-2025	Schedule awaited		
24	SPS for Transformers at 400kV Sarojininagar (UPPTCL) Substation	UPPTCL			15-05-2024	Schedule awaited		
25	SPS for Transformers at 220kV Sarojininagar (UPPTCL) Substation	UPPTCL			06-06-2024	Schedule awaited		
26	SPS for Transformers at 400kV Unnao (UPPTCL) Substation	UPPTCL			19-05-2023	SPS made healthy on 27.05.2025		Mock test report pending
27	SPS for Transformers at 400kV Sultanpur (UPPTCL) Substation	UPPTCL				SPS made healthy on 05.05.2025		Mock test report pending

28	SPS for Transformers at 400kV Bareilly (UPPTCL) Substation	UPPTCL				SPS disabled without approval		Not conducted in 2024-25 also. SPS. SPS need to be enabled at the earliest. Case of SPS has been put up with transmission wing
29	SPS for Transformers at 400kV Azamgarh (UPPTCL) Substation	UPPTCL			06-05-2024	conducted	19-04-2025	Mock test report pending
30	SPS for Transformers at 400kV Mau (UPPTCL) Substation	UPPTCL			27-04-2024	conducted	21-04-2025	Mock test report pending
31	SPS for Transformers at 400kV Gorakhpur (UPPTCL) Substation	UPPTCL			27-04-2024	conducted	21-04-2025	Mock test report pending
32	SPS for Transformers at 400kV Sarnath (UPPTCL) Substation	UPPTCL			23-05-2024	conducted	01-04-2025	Mock test report received
33	SPS for Transformer at 400kV Rajpura (PSTCL) Substation	PSTCL			31-01-2025	Schedule awaited		
34	SPS for Transformers at 400kV Mundka (DTL) Substation	DTL			03-02-2025	Schedule awaited		
35	SPS for Transformers at 400kV Deepalpur (JKTPL) Substation	HVPNL				conducted	08-05-2025	Mock test report pending
36	SPS for Transformers at 400kV Ajmer (RVPN) Substation	RVPNL			10-09-2024	10-09-2025		
37	SPS for Transformers at 400kV Merta (RVPN) Substation	RVPNL			12-09-2024	12-09-2025		
38	SPS for Transformers at 400kV Chittorgarh (RVPN) Substation	RVPNL			31-08-2024 and 05-09-2024	05-09-2025		
39	SPS for Transformers at 400kV Jodhpur (RVPN) Substation	RVPNL			24-09-2024	24-09-2025		
40	SPS for Transformers at 400kV Bhadla (RVPN) Substation	RVPNL			27-09-2024	27-09-2025		
41	SPS for Transformers at 400kV Ratangarh (RVPN) Substation	RVPNL			20-09-2024	20-09-2025		
42	SPS for Transformers at 400kV Nehtaur(WUPPTCL) Substation	UPPTCL			11-01-2025	Schedule awaited		
43	SPS for Transformers at Obra TPS	UPPTCL			20-05-2024	Schedule awaited		
44	SPS for Transformers at 400KV Kashipur (PTCUL) substation	PTCUL			Septemeber 2024	Sep-25		
45	SPS for Transformers at 400KV Fatehgarh Solar Park (AREPRL)	ADANI				conducted	19-04-2025	Mock test report received.
46	SPS to relive transmission congestion in RE complex (Bhadla2)	POWERGRID				Schedule awaited		Not conducted in 2024-25 also
47	SPS for Transformers at 400kV Bikaner (RVPN) Substation	RVPNL			26-09-2024	26-09-2025		
48	SPS for Transformers at 400kV Bawana (DTL) Substation	DTL			04-01-2025	Dec-25		
49	SPS for Transformers at 400kV Bhilwara (RVPN) Substation	RVPNL			09-07-2024 and 10-07-2024	10-07-2025		
50	SPS for Transformers at 400kV Hinduan (RVPN) Substation	RVPNL			26-09-2024	26-09-2025		
51	SPS for Transformers at 400kV Suratgarh (RVPN) Substation	RVPNL			20-10-2024	20-10-2025		
52	SPS for Transformers at 400kV Babai(RS) Substation	RVPNL			20-10-2024	20-10-2025		
53	SPS for Transformers at 400kV Allahabad(PG) Substation	UPPTCL				Schedule awaited		Not conducted in 2024-25 also
54	SPS for Transformers at 400kV Jaunpur(UP) Substation	UPPTCL						Yet to be implemented
55	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	
56	SPS for Transformers at 765kV Bhiwani(PG) Substation	POWERGRID				SPS implemented		Mock test report received.