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 242 वीं बैठक की कार्यसूची ।

Subject: Agenda of the 242nd OCC meeting.

प्रचालन समन्वय उप-समिति की **242 वीं** बैठक का वीडियो कॉन्फ्रेंसिंग के माध्यम से दिनांक **13.04.2026** को **10:30** बजे से किया जायेगा । उक्त बैठक की कार्यसूची उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट https://nrpc.gov.in 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 **242nd** meeting of the Operation Co-ordination sub-committee will be conducted through Video Conferencing on **13.04.2026** from **10:30 Hrs**. The agenda of this meeting has been uploaded on the NRPC web-site https://nrpc.gov.in.

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.

DHARMENDER KUMAR MEENA
Digitally signed by DHARMENDER KUMAR MEENA
Date: 2026.04.09 16:50:21 +05'30'

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

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

OCC Members for FY 2026-27			
S. No.	**OCC Member**	**Category**	**E-mail**
1	NLDC	National Load Despatch Centre	nomination awaited (mkagarwal@grid-india.in)
2	NRLDC	Northern Regional Load Despatch Centre	ashokkr@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		bhagatsingh@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	UHBVN	State owned Distribution Company (alphabetical rotational basis/nominated by state govt.)	nomination awaited (md@uhbvn.org.in)
33	Jaipur Vidyut Vitran Nigam Ltd.		nomination awaited (md@jvvnl.org)
34	Dakshinanchal Vidyut Vitaran Nigam Ltd.		nomination awaited (md@dvvnl.org)
35	UPCL		cgmupcl@yahoo.com

OCC Members for FY 2026-27			
36	HPSEB		cesysophpsebl@gmail.com
37	Adani Power Rajasthan Limited	IPP having more than 1000 MW installed capacity	Raguvendral.Dewra@adani.com
38	Apraava Energy Private Limited		niraj.gupta@apraava.com
39	Aravali Power Company Pvt. Ltd		amit.hooda01@apcpl.co.in
40	JSW Hydro Energy Limited		roshan.zipta@jsw.in
41	Lalitpur Power Generation Company Ltd		avinashkumar.ltp@lpgcl.com
42	MEIL Anpara Energy Limited		arun.tholia@meilanparapower.com
43	MEJA Urja Nigam Ltd.		amitkumarmaithil@ntpc.co.in
44	Nabha Power Limited		Durvesh.Yadav@larsentoubro.com
45	Neyveli Uttar Pradesh Power Limited (NUPPL) Ghatampur		ceo.nuppl@nlcindia.in
46	Prayagraj Power Generation Co. Ltd.		anurag.shukla@tatapower.com
47	Rosa Power Supply Company Ltd		Suvendu.Dey@relianceada.com
48	Talwandi Sabo Power Ltd.		arun.kumar@vedanta.co.in
49	XL Xergi Power Pvt. Ltd.	IPP having less than 1000 MW installed capacity (alphabetical rotational basis)	nomination awaited (vineet.singh@o2power.in)
50	UT of J&K	From each of the Union Territories in the region, a representative nominated by the administration of the Union Territory concerned out of the entities engaged in generation/ transmission/ distribution of electricity in the Union Territory.	sojpdd@gmail.com
51	UT of Ladakh		cepdladakh@gmail.com
52	UT of Chandigarh		seelo-chd@nic.in
53	NVVN	Nodal Agency appointed by the Government of India for coordinating cross-border power transactions	ceonvvn@ntpc.co.in
54	BRPL	Private Distribution Company in region (alphabetical rotational basis)	nomination awaited (sanjay.srivastav@reliancegroupindia.com)
55	NRSS-XXIX Transmission Ltd	Private transmission licensee (nominated by central govt.)	(lokendra.ranawat@indigrid.com)

OCC Members for FY 2026-27			
56	Shree Cement Limited	Electricity Trader (nominated by central govt.)	nomination awaited (shyam.khandelwal@shreecement.com)
57	Adani Green Energy Limited	RE Generating Company having more than 1000 MW installed capacity	sanjay.bhatt@adani.com
58	Avaada Energy Private Limited		kishor.nair@avaada.com
59	Azure Power India Pvt. Limited		sunil.gupta@azurepower.com
60	NTPC Green Energy Limited		ceongel@ntpc.co.in
61	ReNew Power Private Limited		sumant@renew.com
62	SJVN Green Energy		ceo.sgel@sjvn.nic.in

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खण्ड-क: उ.क्षे.वि.स. Part-A: NRPC

A.1. Confirmation of Minutes

241st OCC meeting was held on 16.03.2026. Minutes of the meeting were issued vide letter dt. 09.04.2026. No comments received till date.

Decision required from Forum:

Forum may approve the minutes of 241st OCC meeting.

A.2. Status of action taken on decisions of 241st OCC meeting of NRPC

A.2.1. Status of action taken on decisions of 241st OCC meeting is attached as **Annexure- A.I**.

A.3. Review of Grid operations

A.3.1. **Power Supply Position (Provisional) for March 2026**

Anticipated Power Supply Position v/s Actual Power Supply Position (Provisional) of Northern Region during the month of March-2026 is as under:

State / UT	Req. / Avl.	Energy (MU)			Peak (MW)		
		Anticipated	Actual	% variation	Anticipated	Actual	% variation
CHANDIGARH	(Avl)	120	115	-4.4%	350	228	-34.9%
	(Req)	133	115	-13.7%	308	228	-26.0%
DELHI	(Avl)	3060	2531	-17.3%	6590	4588	-30.4%
	(Req)	2450	2531	3.3%	4650	4592	-1.3%
HARYANA	(Avl)	5450	4797	-12.0%	9595	8822	-8.1%
	(Req)	4774	4798	0.5%	9100	8822	-3.1%
HIMACHAL PRADESH	(Avl)	1136	1039	-8.6%	2271	2060	-9.3%
	(Req)	1147	1042	-9.1%	2158	2060	-4.5%
J&K and LADAKH	(Avl)	1150	1682	46.3%	2520	3188	26.5%
	(Req)	2063	1685	-18.3%	3913	3188	-18.5%
PUNJAB	(Avl)	5100	4889	-4.1%	10310	11127	7.9%
	(Req)	5300	4917	-7.2%	10322	11127	7.8%
RAJASTHAN	(Avl)	9200	8491	-7.7%	19340	17264	-10.7%
	(Req)	10000	8491	-15.1%	18500	17264	-6.7%
UTTAR PRADESH	(Avl)	10360	11968	15.5%	22500	22314	-0.8%
	(Req)	10276	11968	16.5%	22500	22314	-0.8%
UTTARAKHAND	(Avl)	1209	1239	2.5%	2250	2315	2.9%
	(Req)	1232	1248	1.3%	2275	2315	1.8%
NORTHERN REGION	(Avl)	36785	36752	-0.1%	79400	63300	-20.3%
	(Req)	37375	36796	-1.6%	70500	63300	-10.2%

As per above, negative / significant variation (≥5%) in Actual Power Supply Position (Provisional) vis-à-vis Anticipated figures is observed for the month of March-2026 in terms of Energy Requirement for Chandigarh, 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, Ladakh, Punjab, Rajasthan and UP. 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 May-2026 is scheduled on 9-April-2026 via Video Conferencing.

A.4.2. Outage Programme for Transmission Elements

The meeting on proposed outage programme of Transmission elements for the month of May-2026 is scheduled on 9-April-2026 via Video conferencing.

A.5. Planning of Grid Operation

A.5.1. Anticipated Power Supply Position in Northern Region for May 2026

The Anticipated Power Supply Position in Northern Region for May 2026 is as under:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
CHANDIGARH	Availability	220	510	No Revision submitted
	Requirement	207	487	
	Surplus / Shortfall	13	23	
	% Surplus / Shortfall	6.1%	4.7%	
DELHI	Availability	4660	10960	No Revision submitted
	Requirement	4258	8757	
	Surplus / Shortfall	402	2203	
	% Surplus / Shortfall	9.5%	25.2%	
HARYANA	Availability	7610	16150	No Revision submitted
	Requirement	6616	13606	
	Surplus / Shortfall	994	2544	
	% Surplus / Shortfall	15.0%	18.7%	
HIMACHAL PRADESH	Availability	1330	3350	No Revision submitted
	Requirement	1274	2063	
	Surplus / Shortfall	56	1287	

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	% Surplus / Shortfall	4.4%	62.3%	
J&K and LADAKH	Availability	2330	4310	No Revision submitted
	Requirement	1708	3024	
	Surplus / Shortfall	622	1286	
	% Surplus / Shortfall	36.4%	42.5%	
PUNJAB	Availability	6980	15720	No Revision submitted
	Requirement	6987	15110	
	Surplus / Shortfall	-7	610	
	% Surplus / Shortfall	-0.1%	4.0%	
RAJASTHAN	Availability	10520	22580	No Revision submitted
	Requirement	10202	18752.52456	
	Surplus / Shortfall	318	3827	
	% Surplus / Shortfall	3.1%	20.4%	
UTTAR PRADESH	Availability	15750	30600	6-Apr-26
	Requirement	15750	30600	
	Surplus / Shortfall	0	0	
	% Surplus / Shortfall	0.0%	0.0%	
UTTARAKHAND	Availability	1581	2770	4-Apr-26
	Requirement	1612	2875	
	Surplus / Shortfall	-31	-105	
	% Surplus / Shortfall	-1.9%	-3.7%	
NORTHERN REGION	Availability	50981	98800	
	Requirement	48615	88000	
	Surplus / Shortfall	2366	10800	
	% Surplus / Shortfall	4.9%	12.3%	

SLDCs are requested to update the anticipated power supply position of their respective state / UT for the month of May-2026 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.8.1In 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 06th April 2026) is as follows:

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd. (Days)	Actual Stock (Days)
ANPARA C TPS	1200	0.51	17	1.1
ANPARA TPS	2630	0.83	17	22.0
BARKHERA TPS	90	0.68	26	43.2
DADRI (NCTPP)	1820	0.32	26	26.2
GH TPS (LEH.MOH.)	920	0.82	26	38.8
GOINDWAL SAHIB TPP	540	0.62	26	34.6
HARDUAGANJ TPS	1265	0.37	26	31.8
INDIRA GANDHI STPP	1500	0.21	26	27.3
KAWAI TPS	1320	0.85	26	7.7
KHAMBARKHERA TPS	90	0.67	26	45.3
KOTA TPS	1240	0.30	26	26.4
KUNDARKI TPS	90	0.67	26	48.5
LALITPUR TPS	1980	0.75	26	22.7
MAHATMA GANDHI TPS	1320	0.23	26	30.8
MAQSOODPUR TPS	90	0.67	26	42.1
MEJA STPP	1320	0.42	26	27.6
OBRA TPS	1094	0.72	26	20.5
PANIPAT TPS	710	0.78	26	48.3
PARICHHA TPS	1140	0.42	26	15.6
PRAYAGRAJ TPP	1980	0.53	26	25.4
RAJIV GANDHI TPS	1200	0.64	26	38.5
RAJPURA TPP	1400	0.83	26	26.6
RIHAND STPS	3000	0.58	17	17.0
ROPAR TPS	840	0.54	26	45.4
ROSA TPP Ph-I	1200	0.72	26	35.9
SINGRAULI STPS	2000	0.44	17	14.9
SURATGARH TPS	1500	0.10	26	16.9
TALWANDI SABO TPP	1980	0.37	26	18.0
TANDA TPS	1760	0.38	26	24.2
UNCHAHAR TPS	1550	0.34	26	33.9
UTRAULA TPS	90	0.57	26	47.5

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd. (Days)	Actual Stock (Days)
YAMUNA NAGAR TPS	600	0.19	26	45.3
CHHABRA-I PH-1 TPP	500	0.79	26	26.7
KALISINDH TPS	1200	0.66	26	18.6
SURATGARH STPS	1320	0.67	26	21.7
CHHABRA-I PH-2 TPP	500	0.80	26	18.2
CHHABRA-II TPP	1320	0.43	26	18.0
JAWAHARPUR STPP	660	0.05	26	21.5

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 view of the above Generators and HVDC/FACT owners are requested to furnish Testing schedule for 2026-27 in the format attached as **Annexure-A.IV.a** to seo-nrpc@nic.in **.**

A.9.5. List of Generating station from which information is received is attached as **Annexure-A.IV.b.**

A.9.6. List of Generating station from which information is not received is attached as **Annexure-A.IV.c.**

Generating Utilities to update status.

A.10. Monthly Review of LGBR for the next 11 months (Availability & Requirement)

(Agenda by NRPC Secretariat)

A.10.1. In 236th OCC meeting matter regarding monthly Review of LGBR for the next 11 months (Availability & Requirement) was discussed and it was agreed that NR States/UTs shall submit the data for the monthly Review of LGBR for the next 11 months including the break-up of sources through which demand is proposed to be met, such as ISGS, internal generation, bilateral arrangements, DAM/RTM transactions, or other contracts, shall also be provided.

A.10.2. In 237th OCC meeting, OCC forum requested NR States/UT's to submit the data for monthly Review of LGBR for the next 11 months in the google sheet to be shared by NRPC Secretariat.

A.10.3. Accordingly, NR States/UTs are requested to update the data for the monthly Review of LGBR for the next 11 months (May'26 to Mar'27) in the google sheet. Link to access the google sheet is mentioned below:

https://docs.google.com/spreadsheets/d/1LmYwSHcFCaRAniwHUIpoiWFwaFCmKnQjlPqFDvWYy1k/edit?usp=sharing

SLDC's to update status.

A.11. Data Collection for Monitoring Pan-India Captive Generating Capacity (Agenda by NRPC Secretariat)

A.11.1 GM division, CEA has informed that in the meeting taken by Secretary (Power) on 17.12.2025, it was decided that the State Chief Electrical Inspectors (CEIs) / State Load Despatch Centres (SLDCs) shall act as the nodal agencies for collection of Captive Generation & Open Access data for their respective States.

A.11.2 It was further decided that the Regional Power Committees (RPCs) shall act as the nodal coordinating agencies for consolidation and compilation of the data at the regional level and shall forward the same to the GM Division, CEA for All-India level compilation on monthly basis.

A.11.3 In this regard all the SLDCs of NR Region are hereby requested to kindly submit the requisite details (in attached format) for each month (starting from December 2025 onwards) by 7th of the following month in the format attached at **Annexure-A.V** to the NRPC Secretariat at seo-nrpc@nic.in .

SLDC's to update status.

A.12. Analysis of Partial Outages of Thermal Power Plants (Agenda by NRPC Secretariat)

A.12.1 A meeting was taken by Member (GO&D), CEA on 28th Jan, 2026 to discuss the partial outages of thermal power plants and its related issues.

A.12.2 In the said meeting, RPC's were directed to monthly review in the OCC meeting the station-wise major incidences of partial outages in last month and seek remedial measures form the concerned generating stations.

A.12.3 Details of generating stations in NR that had reported incidences of partial outage in March'26 is attached as **Annexure-A.VI.**

A.12.4 Generating Utilities as per above mentioned list to submit reasons for partial outages of thermal power plants and the remedial measures taken by utilities to mitigate the partial outages.

Generating Utilities to update status.

A.13. Requirement of 240MVAr line reactor (Non Switchable) at Phagi end after LILO of 765kv Phagi-Gwalior D/c line at Dausa S/s (Agenda by CTUIL)

A.13.1. CTUIL has informed that Powergrid vide their mails in Feb/Mar'26 communicated that Line Length of 765kV Gwalior Phagi (RRVPNL) line was 310km with total 480 MVAr line reactors { 240 MVAr (Non Switchable) at Phagi, RRVPNL + 240 MVAr at Gwalior S/s }. Recently, LILO of 765kV Gwalior Phagi (RRVPNL) ckt-1&2 lines was carried out at new 765kV Dausa Substation. After implementation of this LILO arrangement, new Line Length is :

1. 765kV Phagi (RRVPNL) Dausa ckt-1&2 line = 91 KM & same has shunt compensation of total 240 MVAr { 240 MVAr (Non Switchable) at Phagi, RRVPNL }.

2. 765kV Dausa Gwalior ckt-1&2 line = 283 KM & same has shunt compensation of total 480 MVAr { 240 MVAr at Dausa S/s + 240 MVAr at Gwalior S/s}.

A.13.2. With new Line length of 91kM of 765kV Phagi (RRVPNL) Dausa ckt-1&2 line seems to be over-compensated Line { due to presence of "Non Switchable" 240 MVAr, 765kV Line Reactor at Phagi, RRVPNL} & undesirable problem of Ferro-resonance condition may occur in this short line in case of occurrence of any Line fault / AR condition.

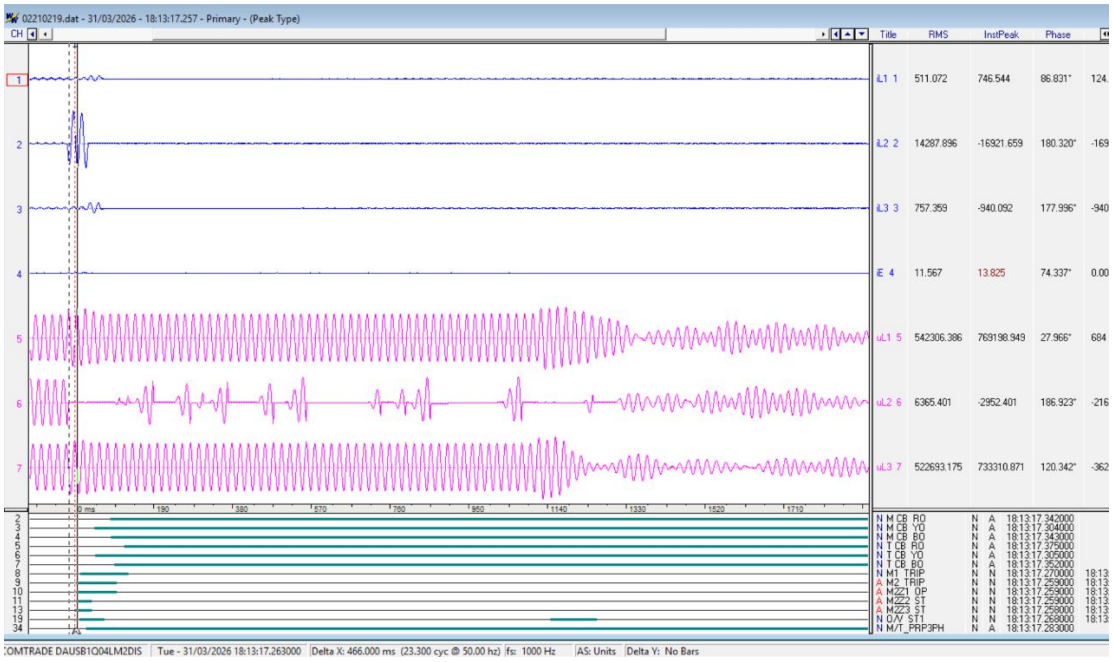
A.13.3. Powergrid requested CTUIL to review & confirm the following in new Lines (after LILO) for ensuring healthiness of 765kV Switchyard Elements :

1. Whether existing 765kV 240 MVAR Line Reactor at 765kV Phagi Substation needs **to be kept "in service" or to be taken "out of service"** (to avoid probable ferro-resonance) in new 765kV Phagi (RRVPNL) Dausa ckt-1&2 lines ?

2. Whether 765kV 240 MVAR Line Reactor at 765kV Phagi Substation needs **to converted "Non-Switchable" to "Switchable"** by installation of new 765kV circuit breaker at 765kV Phagi Substation?

A.13.4. Powergrid also informed that as per preliminary study, space is available for installation of 765kV Circuit Breaker for the above conversion.

A.13.5. As informed by Powergrid, recently during occurrence of Single phase to ground (Y-E) fault in new 765kV Phagi (RRVPNL) Dausa ckt-2 line at 31/03/2026, 18:13:17 hrs, undesirable situation of Ferro-resonance condition was seen & same lead to presence of High system voltage (542 kV or 122% of Vph-E) in phase - R, B. Such High system voltage (542 kV or 122% of Vph-E) may prove to be detrimental for life of substation equipments.



A.13.6. Powergrid requested CTU to take up the matter with NLDC for taking 765kV ,240 MVAR Line Reactor in 765kV Dausa ckt-1 & Ckt-2 lines out of service at Phagi end to avoid re-occurrence of undesirable situation of Ferro-resonance condition & high system voltage (122%) during Line Fault / Auto-reclosing condition in new 765kV Phagi (RRVPNL) Dausa ckt-1 line & ckt-2 line.

A.13.7. CTU has requested that RVPN to provide space availability and their views to convert 765kV 240 MVAR Line Reactor at 765kV Phagi Substation from "Non-Switchable" to "Switchable". Further feasibility to use line reactors as bus reactor at Phagi S/s in future may also be deliberated.

Members may kindly deliberate.

A.14. Compensation for Technical Minimum Load (TML) (Agenda by RVUNL):

A.14.1. RVUNL has submitted that in compliance to Clause No. 5(3) of the CEA (Flexible Operation of Coal based Thermal Power Generating Units) Regulations, 2023, the SLDC issued schedule generation up to 55 % Technical Minimum Load (TML) to SSCTPS, Suratgarh units from 25 Oct 2024. However, no compensation was granted in truing-up of ARR of FY 2024-25 for loss in Station Heat Rate (SHR), Auxiliary Power Consumption (APC) and Specific Oil Consumption (SOFC) arising due to partial loading of machines on account of SLDC backdown.

A.14.2. The Central Electricity Regulatory Commission (CERC) has allowed compensation for deterioration in SHR, APC and SOFC on account of load dispatch (LD) backdown with effect from 01.04.2024. Accordingly, RVUNL has requested the Rajasthan Electricity Regulatory Commission (RERC) to allow similar compensation for losses due to partial loading on account of SLDC back down in the state of Rajasthan, in line with CERC regulations.

A.14.3. After continuous follow-up with the regulator for granting compensation in SHR, APC and SOFC for losses due to LD backdown, RERC has issued an order dated 06.03.2026 titled **"Compensation for Part Load Operation for the Generating Stations Below the Normative Level of Operation."** This order provides for compensation for losses due to partial loading of machines on account of SLDC backdown in Rajasthan, in line with CERC regulations.

A.14.4. It is pertinent to mention that RVUNL plants (SSCTPP, CSCTPP, and KaTPP) have been operating continuously at 55% load since 25.10.2024, whereas compensation, as per the RERC order, shall be allowed only after 06.03.2026. Relevant extract from RERC Order dated 06.03.2026 (Page No. 12, Point No. 49) is reproduced below:

*"**The Commission clarifies that it is a well-settled principle of law that generally compensation, taxes, or levies should not be given retrospective effect. Accordingly, the date of applicability of such compensation shall be expressly specified in the procedure to be issued by the SLDC after due approval of the Commission**".*

A.14.5. However, CERC has allowed similar compensation for generating stations vide Gazette Notification dated 04.02.2025 with retrospective effect, i.e., from 01.04.2024. In contrast, RERC has not permitted such compensation on a retrospective basis.

A.14.6. In view of the above, RVUNL has requested that any order issued by CEA/NRPC for improving grid stability or performance of generating stations, which is also applicable to State Electricity Boards, may kindly include a provision that implementation by SLDC should be undertaken only after approval/acceptance by the respective State Regulator, i.e., RERC.

Members may kindly deliberate.

A.15. Ramp Rate - Stablization period between two blocks (Agenda by RVUNL)

A.15.1. RVUNL has informed that the provisions of the RERC (Rajasthan Electricity Grid Code) Regulations, 2024, related to ramp rates (similar to the IEGC Regulations, 2023, as specified under Regulation Nos. 24(3)(b)(ii & iv) and 45(9)(a)(i)), are reproduced below:

"Definitions: 'Ramp Rate' means rate of change of a generating station output expressed in %MW per minute;"

"29.3.2 (ii) Ramp-up from fifty-five (55) percent of MCR to MCR at a ramp rate of at least one (1) percent of MCR per minute, in one step or two steps (with stabilization period of 30 minutes between two steps) and sustained operation at MCR for one (1) hour".

"29.3.2 (iv) Ramp-down from MCR to fifty (55) percent of MCR at a ramp rate of at least one (1) percent of MCR per minute, in one or two steps (with stabilization period of 30 minutes between two steps)".

"50.4.2 Coal or lignite fired plants shall declare a ramp up or ramp down rate of not less than 1% of ex-bus capacity corresponding to MCR on bar per minute;"

A.15.2. As per the above-referred Regulation Nos. 29.3.2(ii), 29.3.2(iv), and 50.4.2 of the RERC (Rajasthan Electricity Grid Code) Regulations, 2024, a ramp-up/ramp-down rate of 12.5 MW per minute (considering an ex-bus capacity of 1250.7 MW of SSCTPS Units) is applicable during the ramp-up process from fifty-five percent (55%) of MCR to MCR and during the ramp-down process from MCR to fifty-five percent (55%) of MCR, with a stabilization period of 30 minutes between two consecutive steps.

A.15.3. Presently, SLDC is issuing directions for ramp-up/ramp-down in three consecutive blocks. For example, SSCTPS units are operating at 700 MW (under back down), and ramp-up instructions issued by LD are to increase generation to 887.5 MW after the first block (from 700 MW), 1075 MW after the second block, and 1250.7 MW after the third block (within 45 minutes). This indicates that no stabilization period is being provided between successive steps. Due to this, significant thermal stress is imposed on the units, and the inability to meet the requirements results in substantial penalties.

A.15.4. Sometimes SLDC give schedule of Ramp down and ramp up in consecutive 6 block like 1250.7 MW to 627 MW in 45 min and then 627 MW to 1250.7 MW in 45 Min. On dated 03.04.2026, SLDC give schedule as mentioned below-

S No.	Block No.	Block time	Ex-bus energy (MW)
1	88	21:45 to 22:00	1250.7
2	89	22:00 to 22:15	1064
3	90	22:15 to 22:30	877
4	91	22:30 to 22:45	690
5	92	22:45 to 23:00	627
6	93	23:00 to 23:15	814.6
7	94	23:15 to 23:30	1002.2
8	95	23:30 to 23:45	1189.8
9	96	23:45 to 24:00	1250.7

A.15.5. To implement flexible operation in line with CEA gazette notification, RVUN float tender to achieve 40% TML and desired ramp rates in consecutive blocks but M/s BHEL submit deviation that “these trials will be conducted with a maximum load change of 3% per minute for 5 minutes in a single ramp test due to manual addition and removal of mills. Sufficient stabilization time will be provided between each ramp trials. No addition and withdrawal of mills should be attempted during ramps.” From BHEL offer it is also clear that stabilization period is required after each one block / Ramp up/down even after modifications

A.15.6. RVUNL has requested that necessary directions may kindly be issued to SLDC, Rajasthan, to implement a 30-minute hold between two consecutive steps as a stabilization period during scheduling of ramp-up/ramp-down at the STOMS (Eltrix) portal for RRVUNL units.

A.15.7. Further, it is to bring to your kind notice that as per definition of ramp rate given in CERC/RERC grid regulations **'Ramp Rate' means rate of change of a generating station output expressed in %MW per minute**. Accordingly, in the case of SSCTPS Suratgarh units (2 × 660 MW), if the station is delivering 1000 MW ex-bus power to the grid in the current time block, then at a 1% ramp rate, the ex-bus energy is presently being calculated based on the scheduled generation at the end of the block—i.e., 1187.5 MW in case of ramp-up. However, this is not practically achievable, as the average load during the block would be approximately 1093.75 MW. However SLDC gives the Scheduled Generation (SG) 1187.5 MW instead of 1093.75 MW for that particular block. A similar issue arises in the case of ramp-down conditions.

A.15.8. Therefore, RVUNL has requested that the scheduled generation (energy) for such blocks should be calculated based on the actual/real average MW value during the block, rather than considering the end-of-block generation value.

A.15.9. RVUNL has further requested that necessary directions may also kindly be issued to SLDC, Rajasthan, to consider mean value of energy for scheduling of block for ramp rate as per definition of ramp rate mentioned in CERC/RERC regulations.

Members may kindly deliberate.

A.16. 40% TML of unit#8 of SSCTPP (Agenda by RVUNL)

A.16.1. RVUNL has submitted that the 660 MW Unit-8 of Suratgarh Supercritical Power Plant, operated by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL), has been identified for participation in the pilot project for operating thermal units at 40% of rated load in line with national flexibility enhancement initiatives.

A.16.2. In pursuance of the directives, RVUNL has undertaken detailed technical assessments to enable stable operation of the unit at such low loads. During these assessments, several technical constraints and operational challenges have been identified, particularly concerning boiler stability, combustion system limitations, milling system constraints, emissions compliance, and control system tuning at reduced loads. Operating the unit at 40% load in the current configuration poses risks to equipment health, safety, and reliability.

A.16.3. To address these issues, RVUNL has consulted the Original Equipment Manufacturer (OEM). The OEM has submitted a detailed proposal outlining the necessary engineering modifications, retrofits, and control system upgrades required for safe and sustainable operation of the unit at 40% load. As per the proposal, the tender has been floated, and a deviation has been received from the OEM, M/s BHEL. The same has been examined and is currently at the stage of finalization. The only pending issue pertains to the booking of expenditure. As per CEA guidelines, the expenditure may be allowed as part of the capital cost; however, as per the recent decision of CERC, any expenditure incurred prior to approval shall not be admissible.

Accordingly, the matter has already been taken up with RERC, and upon approval, the work order will be issued.

A.16.4. At present, both units are operating continuously at around 51–52% load, as against the targeted 40% for Unit-8 and 55% for Unit-7. Supercritical units are designed to operate continuously at the Benson point plus 5% of TMCR load (for BHEL units, the Benson point is around 40%; therefore, the minimum feasible operating load is approximately 45%). Without modifications, the units are presently operating at around 51–52% of rated capacity.

A.16.5. The bid has been received, and RVUNL is in the process of finalizing a time-bound implementation plan in coordination with the OEM. The modification works involve major system interventions and will require planned shutdowns, procurement cycles, installation, testing, and performance validation. The tentative timeframe for completion of the modification package is 12 months from the date of commencement.

A.16.6. Considering the above, and in order to prevent any operational risks or equipment damage, it is not feasible to operate the unit at 40% load until completion of the OEM-recommended modifications. In view of this, it is requested that an extension of 12 months from the date of approval may kindly be granted, and Order No. 1194 dated 13.10.2025 may please be withdrawn for SSCTPS, Suratgarh Unit-8. This will help avoid the imposition of daily penalties for generation exceeding scheduled limits. Typically, the scheduled generation is around 627 MW, whereas the units are achieving approximately 645–650 MW.

A.16.7. RVUNL assures that, upon completion of the modification works, the unit will fully participate in the pilot project and extend all necessary cooperation to CEA in achieving the national objective of enhancing operational flexibility of thermal power units.

A.16.8. RVUNL has therefore requested for kind consideration and approval of the above and allowed at least 12 months.

Members may kindly deliberate.

A.17. Support for supply of 500 MVA ICT at Jind Sub Station against the CTUIL Intimation for grant of 99 MW GNARE as a Bulk Customer to connect to ISTS directly at 400/220 kV Jind (PG) S/s in Haryana (Agenda by PGHPL)

A.17.1. M/s PGHPL has submitted that CTUIL has issued the intimation for grant of 99 MW GNARE to M/s Panipat Green Hydrogen Private Limited (PGHPL) as a Bulk Customer seeking to connect to ISTS directly at 400/220 kV Jind (PG) S/s in Haryana vide its Intimation Order dated 27.03.2026.

A.17.2. As per Regulation 12.5 of CERC GNA Regulations, 2022; the augmentation of 1X500 MVA, 400/220 kV ICT at Jind (PG) S/s is under the scope of PGHPL. Our target Commissioning schedule of the Green Hydrogen Plant is by March 2027 for which the construction and commissioning of transmission line from Jind (PG) Substation is planned as below:

Sr. No.	Activity	Target Completion Date

1	Check Survey	April, 2026
2	Tower Foundation – Initial 50%	April - May, 2026
3	Tower Foundation – Final 50%	October - November, 2026
4	Tower Erection	December, 2026
5	Conductor Stringing	February, 2027
6	Commissioning and Final Charging	February, 2027
7	Generation of Green Hydrogen	March, 2027

A.17.3. In pursuance of the directives, RVUNL has undertaken detailed technical assessments to enable stable operation of the unit at such low loads. During these assessments, several technical constraints and operational challenges have been identified, particularly concerning boiler stability, combustion system limitations, milling system constraints, emissions compliance, and control system tuning at reduced loads. Operating the unit at 40% load in the current configuration poses risks to equipment health, safety, and reliability.

A.17.4. In order to meet the project timelines, we request your kind support in facilitating allocation of 1 × 500 MVA ICT from the existing Order pool, with delivery aligned by December 2026, to enable timely execution of the required augmentation works.

A.17.5. The Project is of strategic national importance, being **India's first mega-scale Green Hydrogen project** under the National Green Hydrogen Mission and is expected to contribute significantly towards the national objectives under the **Panchamrit commitments** of the Hon'ble Prime Minister. **Timely commissioning of the Project is therefore critical.**

A.17.6. In view of the above, PGHPL has requested to facilitate allocation of the ICT for augmentation at the Jind (Powergrid) substation by PGHPL.

Members may kindly deliberate.

A.18. Retrospective revision of Deemed GNA of Tanakpur HEP from 94 MW to 94.2 MW (Agenda by NHPC)

A.18.1. NHPC has informed that as per Clause 18.1(g) of the GNA Regulations, 2022, deemed GNA equivalent to the installed capacity was to be granted to Central Generating Stations (CGS). In line with the above, CTUIL had published the list of CGS entities along with the proposed deemed GNA on its website in October 2022 and April 2023 (after notification of the 1st amendment). The installed capacity of Tanakpur HEP was considered as 94 MW, as per NRPC CGS allocation orders. Accordingly, deemed GNA of 94 MW was proposed by CTUIL and communicated to NHPC vide letter dated 31.10.2022. The matter was further deliberated in the 22nd CMETS (NR) meeting held on 21.08.2023. Subsequently, based on stakeholder consultations, the list of deemed GNA grantees was finalised, and CTUIL vide letter dated 25.09.2023 granted deemed GNA of 94 MW to Tanakpur HEP.

A.18.2. As per Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (First Amendment) Regulations, 2023 publication date 07.02.2023 (effective date 01.10.23) Amendment to Regulation 12 of the Principal Regulations:

For a generating station including ESS and captive generating plant, transmission deviation shall be net metered ex-bus injection, in a time block in excess of GNA of such entity.

A.18.3. Since the above amendment became effective from 01.10.2023 (lean hydro season), the initial variation in regional transmission charges was marginal and was considered negligible. However, over time, it was observed that the variation was attributable to the consideration of GNA as 94 MW instead of the actual installed capacity of 94.2 MW.

A.18.4. Thereafter, NHPC vide email dated 11.09.2025 requested CTUIL for revision of deemed GNA from 94 MW to 94.2 MW, citing the installed capacity as per CEA letter dated 20.09.1996. Further, the matter was deliberated in the 41st CMETS (NR) meeting held on 10.10.2025, wherein it was decided to revise the deemed GNA to 94.2 MW. Accordingly, CTUIL revised the deemed GNA to 94.2 MW vide letter dated 12.11.2025, with effectiveness from the date of issuance of the letter i.e. 12.11.2025.

A.18.5. NHPC further pursued the matter for revision of the effective date of GNA corresponding to the installed capacity; however, CTUIL advised that the issue may be taken up with NRPC for consideration.

A.18.6. The installed capacity of a generating station is a fundamental technical and regulatory parameter that forms the basis for grant of connectivity, allocation of General Network Access (GNA), scheduling, energy accounting, and transmission planning and commercial settlement. Even a marginal deviation in the recorded capacity can lead to inconsistencies in operational planning, commercial settlements, and regulatory compliance. In the present case, the actual installed capacity of Tanakpur HEP is 94.2 MW, as authenticated by CEA and consistently reflected in all NRPC records.

A.18.7. Further, since the regulatory framework for transmission deviation became effective from 01.10.2023, alignment of GNA with the correct installed capacity from this date is technically justified and regulatory consistent. The delay in correction has led to avoidable financial and accounting discrepancies, which may also attract audit observations.

A.18.8. **Proposal for Consideration**

In view of the above, NHPC has proposed that:

1. The installed capacity of Tanakpur Power Station may be considered as 94.2 MW for all GNA-related purposes.
2. The deemed GNA may be treated as 94.2 MW w.e.f. 01.10.2023 (i.e., from the effective date of the relevant CERC amendment), instead of 12.11.2025, to ensure consistency and avoid audit observations.

Members may kindly deliberate.

A.19. Replacement of 420kV 80MVAR Line reactor of 400kV Ballabgarh-Kanpur-1 line at Ballabgarh end under Add-Cap 2024-2029 (Agenda by PGCIL)

A.19.1. PGCIL has informed that 400/220kV Ballabhgarh (PG) is connected to 400/220kV Kanpur (PG) through 01 No. 400kV S/C Kanpur (PG)-Ballabgarh (PG) CKT-1 (Line Length- 386.307Km) and 01 No. 400kV D/C Kanpur Ballabgarh CKT-2 & 3 (Line

Length- 372.536Km each). Due to the longer lines, all 3 Circuit have been provided with non-switchable 80MVAr Line Reactors at both ends.

A.19.2. 400kV, 80MVAR, MELCO (Japan) Make Line Reactor installed in 400kV S/C Ballabgarh-Kanpur-1 line at Ballabgarh end is commissioned since 03.10.1988 (Year of Manufacture– 1987) in the above line. After serving a life of more than 35 years, rise in fault gases is being observed in DGA samples from 2021 onwards. The DGA of the above is being done on three monthly basis & gases are showing increasing trend. Ethane (C2H6) is very high as compared to the permissible limit of 65ppm (Result of last few DGA samples enclosed).

A.19.3. Further the 400 kV Bushings (OIP type) used in above reactor is non standard and similar spares is not available due to obsolescence. It is also pertinent to mention that approval for replacement of 400kV S/C Ballabgarh-Kanpur-1 line at Kanpur end due to rising trend of DGA gases has been provided in 70th NRPC meeting held in Nov'23.

A.19.4. As aforementioned line reactor has already completed 35 years of service life and based on current DGA, there are chances of its sudden failure. 400kV S/C Kanpur Ballabhgarh Line is a long line and operation of the same without line reactor at each end is very difficult and could result in overvoltage conditions in the line.

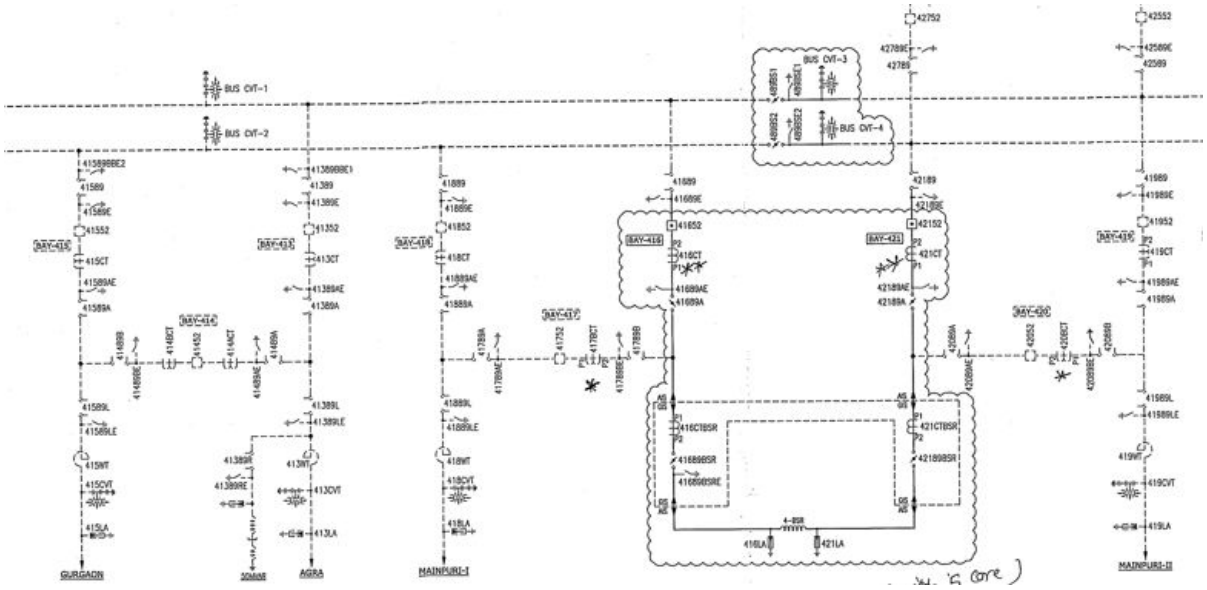
A.19.5. In view of the above and to avoid major failure & to prevent consequential damage, POWERGRID proposed to replace the existing 420kV 80MVAR MELCO make reactor with new reactor under Add-Cap 2024-2029.

Members may kindly deliberate.

A.20. Upgradation of existing 2000 Amps rated 420 kV isolators & CTs with 3150 Amps in 400 kV Bus Series Reactor Dia at Ballabgarh Substation (Agenda by PGCIL)

A.20.1. PGCIL has informed that 400 kV, 225 MVAR Bus Series Reactor (rated for 2500 Amps) has been commissioned at Ballabgarh for reducing the short circuit fault level by splitting 400 kV Bus-1 &2 at Ballabgarh SS in 2018. The Bus Series reactor has been installed in 400 kV Mainpuri-1 & 2 Dia at Ballabgarh which was having provision of future bay prior to implementation of Bus Series Reactor. The 400 kV Delhi Ring main lines i.e. 400 kV Ballabgarh-Dadri Ckt-1,400 kV Ballabgarh-Nawada and 400 kV Ballabgarh-Tughlakabad Ckt-1&2 are connected on either side of Bus Series Reactor resulting in current flow in tune of 1200-1800 Amps through Bus Series Reactor.

A.20.2. During installation of Bus series reactor the equipment were provided with current rating of 3150A in main bay only, while the other equipment in the dia i.e. Tie bay and Mainpuri -I & II line main bay were continued with old equipment having current rating of 2000 A(Mainpuri line bays commissioned in 2005). It has been observed in last 02-03 years that frequent hot spots are observed in existing 2000 Amps isolators installed in Mainpuri-1 & 2 main/tie bays at Ballabgarh due to increased loading through Bus Series Reactor. The SLD of effected portion if illustrated below :-



A.20.3. Considering the increased load flow through Mainpuri-1&2 Dia due to installation of Bus Series Reactor by splitting of 400 kV Bus, upgradation of existing equipment's of 400 kV Mainpuri main & tie bays is necessary for smooth operation of Ballabgarh Substation. Following equipment's installed in 400 kV Mainpuri Dia at Ballabgarh is proposed to be replaced from existing 2000 Amp continuous rating to 3150 Amp rating

Sr no	Equipment	Nos	Rate (in Lakhs including GST)	Amount
1	420 kV 2000 Amp Isolator	08 (Sets)	30	240
2	420 kV 2000 Amps CTs	12 (nos)	10.5	126
Total cost estimate for bay equipment upgradation				366

A.20.4. **Proposal :-** Considering the increased load flow through Mainpuri-1&2 Dia due to installation of Bus Series Reactor by splitting of 400 kV Bus, upgradation of existing equipments of 400 kV Mainpuri main & tie bays at estimated cost of Rs 3.66 Cr (inclusive of GST) under Additional Capitalisation is put up for deliberation of the forum please.

Members may kindly deliberate.

A.21. Augmentation of Transformation capacity at 400 KV Sikar-1 substation by 400/220 KV 500 MVA 4th ICT along with associated bay (Agenda by PGCIL)

A.21.1. PGCIL has submitted that :

1) For Augmentation of transformation capacity at Sikar-1 substation, 01 nos. 400/220 KV 500 MVA transformer along with associated bays has been approved.

2) Due to space constraint in 220 KV switchyard, it is not possible to construct any additional bays at 220 KV level at Sikar substation.
3) Presently 02 nos. of line bays i.e. bay no. 211 and 212 which are commissioned in year 2012 are available at Sikar SS and are presently on no load due to non availability of line.
4) For installation of subject ICT, out of these two 220 kV line bays, one line bay may be converted to ICT bay for installation of ICT

Proposal

A.21.2. Considering the space constraint, it is proposed to consider for conversion 01 Nos. 220 KV line bay (idle charged on load) into transformer bay.

Members may kindly deliberate.

A.22. High loading on 400 kV Jhatikara–Bamnauli line during the peak demand period in the summer months (Agenda by NRPC Secretariat)

A.22.1. NRLDC vide letter dated 25.03.2026 (attached at **Annexure-A.VII**) informed that as summer is approaching, it is anticipated that electricity demand in Delhi may cross 9GW during the upcoming summer months. Considering this high demand scenario, load flow study for Delhi power system has been carried out jointly by Delhi SLDC and NRLDC based on the following assumptions:

1. Delhi demand crossing 9000 MW in the day-time.
2. 1500 MVA-05th ICT at Jhatikara PG would be commissioned by May 2026.

A.22.2. Following are the observations as per the result of the load flow study:

1. The loading of 400 KV Jhatikara-Bamnauli line is reaching up to 2200 MW under N-1 condition of 400 IXV Jhatikara-Dwarka line during the day peak hours.
2. The additional ICT at Jhatikara PG relieves the existing N-1 non-compliance issue (Jhatikara — Bamnauli/Dwarka section).

A.22.3. Even though the existing N-1 non-compliance issue of Jhatikara lCTs (Jhatikara — Bamnauli/Dwarka section) is getting relieved with commissioning of additional ICT, the loading on 400 KV Jhatikara-Bamnauli line would further increase and tripping of this line may lead to cascade tripping in Delhi area.

A.22.4. Also, the sensitivity of Delhi load on 400 KV Jhatikara-Bamnauli line loading is observed to be approx. 12%. Under no gas generation scenario in Delhi, the TTC/ATC for the upcoming summer months is assessed to be 7600/7450 MW, without considering for the N-1 non-compliance of 400 KV Jhatikara-Bamnauli line. If the N-1 non-compliance of 400 KV Jhatikara-Bamnauli line is considered, the TTC/ATC of Delhi would reduce drastically to 4750/4650 MW.

A.22.5. Further, if the existing SPS for take care of N-1 contingency of transformers at Jhatikara PG is mapped to manage the loading of 400 KV Jhatikara-Bamnauli line, it would provide limited relief, increasing the TTC/ATC to 5900/5800 MW (increase of 1150 MW).

A.22.6. In view of the above constraints, Delhi SLDC is requested to take immediate measures viz. deployment of SPS, load re-arrangement etc. for facilitating in maintaining the drawl capacity of Delhi in the upcoming summer months.

Members may kindly deliberate.

A.23. Special Protection Scheme (SPS) for 220/ 132 kV Tahliwal Substation (LILO of 220 kV Bhakra—Jamalpur line) (Agenda by HPPTCL)

A.23.1. HPPTCL has informed that they are constructing the 220/132 kV Tahliwal Substation in District Una, Himachal Pradesh through LILO of the 220 kV Bhakra—Jamalpur D/C line to cater the grouping load demand of Una and upcoming Bulk Drug Pharma Park. The total load requirement of the Pharma Park has been assessed at about 120 MVA, whereas the drawal through the proposed LILO arrangement is constrained. Further, HPPTCL has planned a long-term solution through construction of a 220 kV D/C transmission line from Nehrian to Una (-35 km) with source from 400/220 kV Hamirpur substation; however, the said system is expected to take 2-3 years for implementation. In the interim, an immediate load requirement of about 50 MVA (40 MVA for Pharma Park and 10 MVA load growth) is required to be met in a time-bound manner, necessitating early commissioning of Tahliwal substation with controlled drawal.

A.23.2. The scheme of Tahliwal substation and associated LILO has been deliberated in various forums, and the requirement of SPS has been mandated in the 148th BBMB PSC meeting and approved in the 69th NRPC meeting. Further, PSTCL has accorded concurrence to the scheme subject to implementation of SPS to ensure adherence to drawal limits and to prevent any inadvertent power flow under contingency conditions, thereby making SPS an essential pre-requisite for operationalization of the substation.

A.23.3. In line with the above, HPPTCL has formulated the SPS philosophy to ensure secure and compliant operation of the system, wherein (i) automatic tripping of 220/132 kV ICT at Tahliwal shall be initiated in case of outage of the 220 kV Bhakra—Tahliwal circuit to prevent any drawal from Jamalpur side, (ii) alarm shall be generated at 45 MVA loading to enable operator intervention for Managing Load, and (iii) tripping of the 132 kV side of ICT shall be enforced in case of violation of the 55 MVA loading limit for more than 1 Minute.

A.23.4. HPPTCL has requested for deliberation and decision so that the same can be implemented prior to commissioning of the Tahliwal Substation.

Members may kindly deliberate.

A.24. Proposal for Installation of STATCOM / Filter Bank for Voltage Control at Kurukshetra Substation or Nearby Station (Agenda by PGCIL)

A.24.1. PGCIL has informed that the 400 kV Kurukshetra Substation is experiencing frequent and significant voltage fluctuations due to varying reactive power demand, changing network configurations, and operational switching conditions, particularly associated with HVDC power flow variations.

A.24.2. Despite the availability of multiple reactive power compensation devices, including 500 MVAR TCR, 2×125 MVAR reactors, and 80 MVAR reactor, the voltage profile continues to remain highly dynamic and often exceeds permissible operating limits. These variations are adversely affecting system stability, equipment life, and operational reliability.

A summary of recent operational data is presented below:

Sr. No	Date	Min. Voltage	Max. Voltage	HVDC Load	Thyristor Controlled Reactor	(125*2)MVAR Reactor	80MVAR Reactor	Switching OU 400kV Line
1	02-Jan-26	400kV	427kV	(1500-4000)MW	540MVAR	IN	IN	3
2	03-Jan-26	400kV	421kV	(2000-3000)MW	530MVAR	IN	IN	4
3	04-Jan-26	404kV	430kV	(1000-2000)MW	530MVAR	IN	IN	4
4	05-Jan-26	398kV	425kV	(1000-4000)MW	290MVAR	IN	IN	4
5	06-Jan-26	400kV	426kV	(2000-4000)MW	290MVAR	IN	IN	3
6	07-Jan-26	394kV	422kV	(2000-4000)MW	250MVAR	IN	IN	4
7	11-Feb-26	401kv	424kV	(2000-4000)MW	431MVAR	IN	IN	4
8	12-Feb-26	407kV	427kV	3000MW	471MVAR	IN	IN	4
9	14-Feb-26	396kv	424kV	(2000-5000)MW	490MVAR	IN	IN	4
10	19-Feb-26	401kV	427kV	(2000-4500)MW	566MVAR	IN	IN	4
11	20-Feb-26	404kV	426kV	(1000-2500)MW	567MVAR	IN	IN	3
12	21-Feb-26	391kV	421kV	(2000-4000)MW	498MVAR	IN	IN	4
13	25-Feb-26	397kV	423kV	(2000-4000)MW	531MVAR	IN	IN	4
14	18-Nov-25	404kV	426kV	2000MW	539MVAR	IN	IN	4

A.24.3. It is evident that even with maximum reactive absorption and line outages during off-peak hours, voltage remains difficult to control. These fluctuations frequently lead to unwanted alarms, operational constraints, and difficulties in filter bank switching, impacting overall system performance.

A.24.4. To address these issues, it is proposed to install a Static Synchronous Compensator (STATCOM) along with suitable harmonic filter banks at Kurukshetra or at a strategically selected nearby node.

Objective

- Maintain voltage within permissible grid limits under all operating conditions
- Provide fast and dynamic reactive power compensation
- Improve voltage stability and system reliability
- Reduce frequent switching of transmission lines and reactive devices
- Enhance power quality and minimize harmonic disturbances

Existing System Challenges

- Voltage variation in the range of ~394 kV to 430 kV
- Continuous operation of 500 MVAR TCR at full capacity, indicating reactive power imbalance
- Ineffectiveness of existing shunt reactors even under full utilization
- Frequent switching of 400 kV lines for voltage control, leading to:
    - Increased stress on GIS equipment
    - Higher maintenance requirements for circuit breakers and dis-connectors

- Operational issues such as:
    - Spurious alarms
    - Inhibition of harmonic filter switching (e.g., D-Type filter bank ~165 MVAR)
- Voltage instability during varying HVDC loading conditions

Proposed Solution

Installation of STATCOM (Preferred Solution)

- Proposed Rating: ±300 to ±500 MVAR (subject to detailed studies)
- Location: Kurukshetra Substation or nearby electrically strong node

Key Features:

- Fast response time (<1 cycle)
- Continuous and smooth reactive power control
- Effective operation under both high and low voltage conditions
- Capability to provide both capacitive and inductive compensation
- Improved transient and dynamic voltage stability

Technical Benefits

- Stabilization of voltage at 400 kV bus within statutory limits
- Reduction in dependency on:
    - TCR operation
    - Transmission line switching
- Enhanced life and reliability of GIS equipment
- Improved coordination and availability of filter banks
- Reduction in transmission losses
- Compliance with grid code requirements for voltage and harmonics
- Prevention of HVDC pole tripping due to voltage/reactive power disturbances

Implementation Plan

- Conduct detailed studies:
    - Load flow analysis
    - Transient stability studies
    - Harmonic analysis
- Finalization of STATCOM rating and configuration
- Identification of optimal installation location (Kurukshetra or nearby node)
- Site survey and space availability assessment

A.24.5. Considering the persistent voltage fluctuations, limitations of existing compensation systems, and increasing operational challenges, installation of a STATCOM along with suitable harmonic filter banks is strongly recommended at Kurukshetra or a nearby substation. This solution will provide fast, dynamic, and reliable voltage control, reduce operational constraints, and significantly enhance grid stability. It will

also minimize unnecessary switching operations and prevent undesirable HVDC pole tripping and voltage-related disturbances, ensuring secure and efficient system operation.

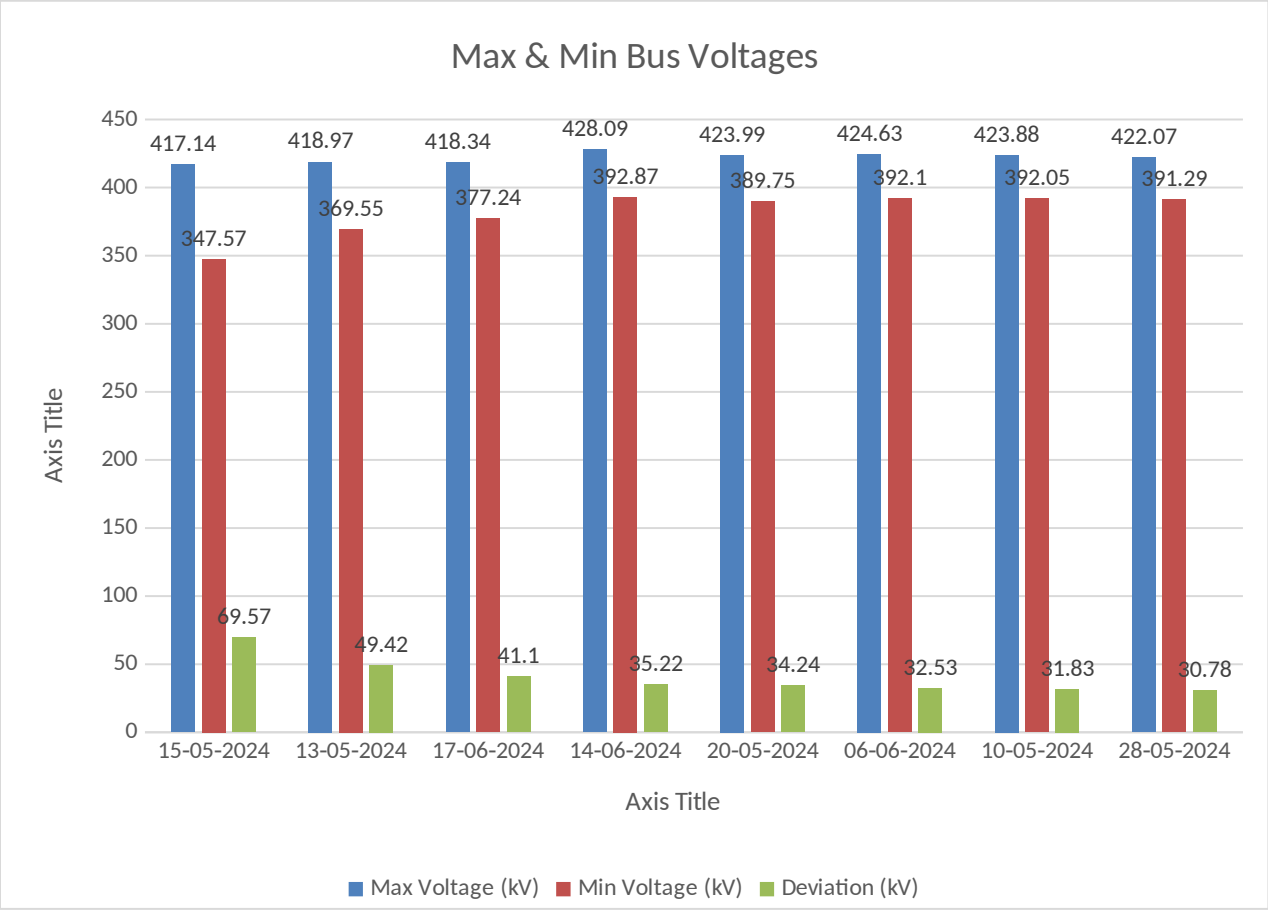
Members may kindly deliberate.

A.25. Proposal for suitable Rated Dynamic Reactive Power Compensation at 400 kV Bhiwadi Substation (Agenda by PGCIL)

A.25.1. PGCIL has informed that the 400 kV Bhiwadi–Khetri D/C transmission line, charged on 25.06.2023, serves as an evacuation corridor for renewable energy (RE) generation from Rajasthan. After commissioning of this line, 400 kV Bhiwadi substation has been experiencing considerable voltage variations under varying system conditions, particularly during summer months with high RE injection.

A.25.2. SCADA voltage trend analysis reveals frequent and wide voltage fluctuations at the 400 kV Bhiwadi bus, as indicated in the attached trend graph. These fluctuations are predominantly observed during daytime hours corresponding to peak solar generation. The existing fixed reactive compensation has limited capability to address rapid and large voltage variations, resulting in repeated voltage excursions beyond specified limits and posing operational challenges.

May-June-2024



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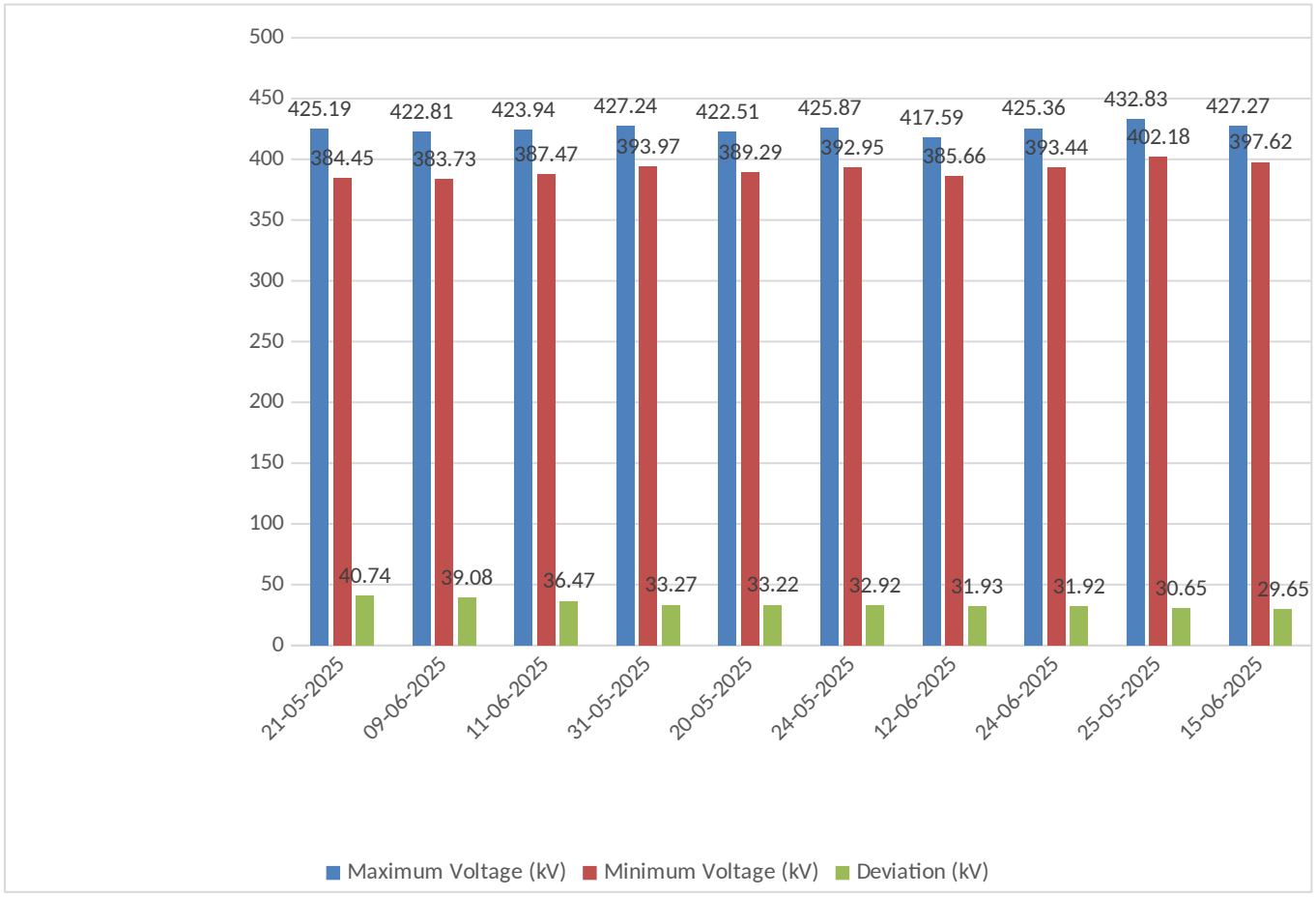
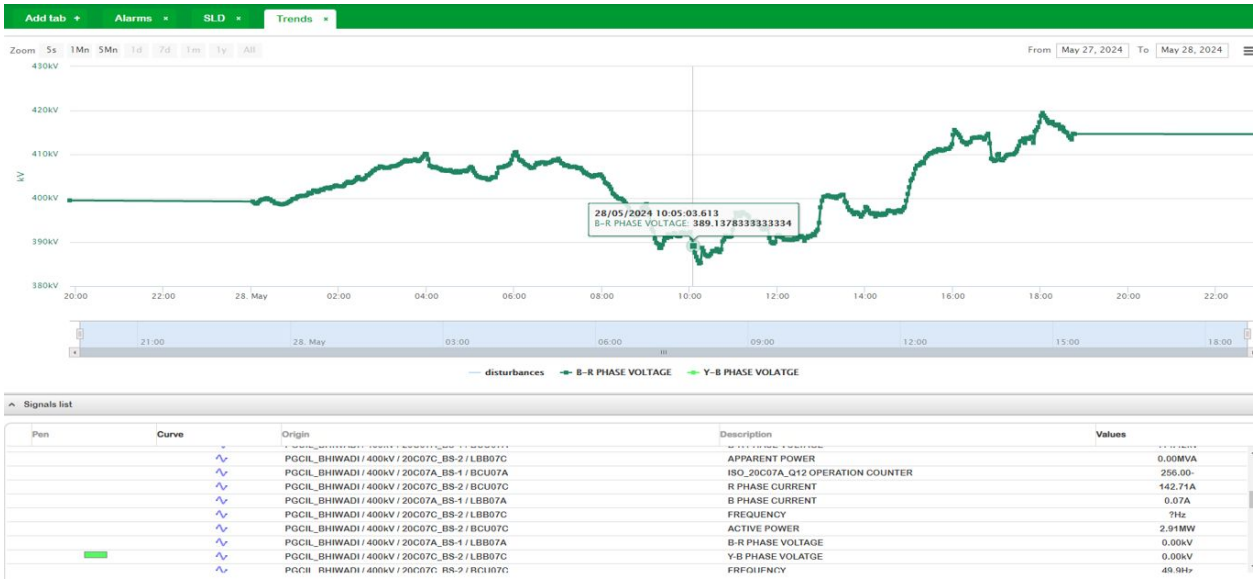


Day wise fluctuation is shown below



Constraints in HVDC Operation due to wide voltage variations: -

A.25.3. The wide voltage variations at 400 kV bus at Bhiwadi results in operational constraints of HVDC. The brief of contrainsts is provided below: -

(i) Auxilary power is critical requirement of HVDC system for valve cooling, ventialltion, converter transformer colling etc. The voltage variation results in excessive reactive power consumption in auxiliary loads resulting in further voltage drop/increase in inductive current leading to trigger of overload protection. The HVDC poles are vulnerable due to dependency on auxiliary supply voltages and few instances of HVDC pole trippings has been observed due to activation of thermal overload/overvoltage in valve/transformer cooling system.

(ii) The wide voltage variations result in excessive operations for on load tap changers leading to wear & tear and ageing

A.25.4. In order to ensure grid security and compliance with specified voltage limits, provision of dynamic reactive power support at 400 kV Bhiwadi substation is essential. A fast acting device capable of both reactive power absorption and injection is required to effectively manage voltage fluctuations arising from intermittent RE generation.

A.25.5. PGCIL has proposed that the requirement of installation of a suitable-rated STATCOM at 400 kV Bhiwadi substation may be reviewed and discussed by the Hon'ble NRPC Forum. Installation of STATCOM shall enable continuous and rapid voltage control, improve overall system stability, and mitigate over-voltage / under-voltage issues associated with RE-connected transmission corridors. ***Members may kindly deliberate.***

A.26. LILO of 400 kV Delhi Ring main Ckt. at 400 kV switchyard of 765/400 kV Narela Substation for relieving the load of 765/400 kV Jhatikra Substation (Agenda by PGCIL)

A.26.1. PGCIL has informed that at present, 765/400 kV Jhatikra Substation Caters approx. 55-65% of total Delhi load through 04 Nos. of 400KV Lines namely 02 Nos. of Mundka, 01 No. of Dwarka and 01 No. of Bamnauli line. With complete commissioning of 765/400 kV Narela Substation including 04 ckts to Maharanibagh Substation, the loading situation at Jhatikra Substation in not going to reduce significantly. Further any major outage incident at Jhatikra 765 kV level may result in significant load loss in Delhi in peak solar hours.

A.26.2. To increase reliability of power transmission to Delhi & reduce dis proportionate loading of Jhatikra, LILO of 400 kV Delhi Ring main ckt at 400 kV Switchyard at Narela may be considered for discussion. 400 kV Mundka-Bawana Line (part of 400 kV Delhi Ring main unit) is passing approximately 11 kms from Narela Substation. Additionally, 400 kV Bawana-Bahadurgarh & 400 kV Bawana-Bhiwani D/C line is passing approximately 04 kms from Narela Substation. Space for LILO of 400 kV D/C line is available at Narela Substation.

A.26.3. LILO of any of the above D/C lines (400 kV Mundka-Bawana D/c and 400 kV Bawana-Bahadurgarh & 400 kV Bawana-Bhiwani D/C line) at Narela will result in

alternate RE power injection in Delhi 400 kV Ring main ckt resulting in increase of reliability of power transmission to Delhi Above agenda was deliberated in 236th OCC meeting held in Oct'25 and following was decision of forum: -

"OCC forum asked CTUIL to study the proposal in coordination with CEA, DTL and NRLDC before the next OCC meeting. Further, the forum requested DTL to provide their comments on the proposal in writing"

A.26.4. **Proposal:-** Considering the criticality of load relieving of Jhatikra Substation, the decision on above may be expedited by the forum.

Members may kindly deliberate.

A.27. Enhancement of capacity of 400 kV Hissar-BBMB-Bawana transmission system by replacement of existing moose conductor with HTLS conductor (Agenda by PGCIL)

A.27.1. PGCIL has informed that 400 kV Hissar-BBMB-Bawana transmission system with 400 kV Hissar-Bawana & 400 kV Hissar-BBMB & 400 kV BBMB- Bawana system was commissioned in 1995 under Moga-Hissar-Bhiwani Transmission system. All the 400 kV transmission system lines were commissioned as twin moose configuration with power transmission capacity (thermal loading of 800 MW on each circuit).

A.27.2. Subsequently, the original transmission system has been LILO at several grid substations with enhancement of grid networks. The 400 kV Hissar-Bawana line has been LILO at Bhiwani Substation and 400 BBMB-Bawana Line has been LILO at Kabulpur & Bahadurgarh Substation. The connection of grid substations in the transmission corridor has resulted in increased power flow through the above transmission system

A.27.3. This transmission system passes through heavily polluted areas having brick kilns throughout the route resulting in heavy chemical deposition on insulators & hardware fittings. The porcelain insulators have been replaced with polymer insulators around 15 years ago however pollution effect has weakened hardware fittings, conductors and mid span joint severely.

A.27.4. Above pollution effect along with ageing and increased power flow has resulted in frequent breakdown of above transmission system feeding power to Delhi. Around 08 no breakdown due to hardware fittings & conductor failure has been reported in above line in last year which makes the system less reliable. As the reasons of failure is beyond reasonable control (ageing of conductors and towers due to pollution), replacement of existing corridor with HTLS conductor and replacement of defective towers at cost estimate of Rs 197 Crores is proposed to be considered for approval

A.27.5. Above agenda has been put up in 233rd OCC meeting in July'25 and following was decision of forum: -

"OCC forum asked CTU to conduct the study within 15 days and thereafter the agenda may be taken up in the upcoming CMETS meeting"

A.27.6. **Proposal :-** Considering the repeated disruption in transmission elements connected to Delhi, status of above may be deliberated by forum

Members may kindly deliberate.

A.28. Implementation of 220kV Ring system by M/s DTL for redundancy in power transmission system (Agenda by PGCIL)

A.28.1. PGCIL has informed that interconnection of 220kV transmission in 220 kV ring mode is essential for ensuring smooth power transmission in Delhi. The 400 kV transmission system for Delhi is already connected in ring main with quad bersimis transmission lines and availability of 220 kV ring main system in Delhi is essential for ensuring power transmission in case of any inadvertent outage of 400 kV Grid substation.

A.28.2. **Proposal: -** Availability of 220 kV ring main system in Delhi in upcoming summers may be ensured by DTL.

Members may kindly deliberate.

A.29. Returning of spare 400/220 kV 315 MVA ICT provided by POWERGRID to DTL & RVPNL. (Agenda by PGCIL)

A.29.1. PGCIL has informed that 04 nos 400/220 kV 315 MVA ICTs has been provided to DTL by POWERGRID in last 05 years as per request of DTL for ensuring load management in National Capital Delhi. 03 out of 04 ICTs provided were POWERGRID assets and 01 no ICT is RPC spare to meet regional contingencies. All the ICTs provided to DTL were on non-chargeable basis in view of critical situation of maintaining uninterrupted power supply in National Capital Delhi.

A.29.2. In additional to DTL, ICTs has been provided to other Utilities on non-chargeable basis. The present details of ICTs provided to other utilities is provided below: -

S. No.	ICT provided to other Utilities	Diverted from	Diverted to	Date	Status
1	BHEL Make 315 MVA 400/220 KV ICT	Ludhiana (POWERGRID)	Mundka (DTL)	Apr-23	Not returned.
2	BHEL Make 315 MVA 400/220 KV ICT	Ludhiana (POWERGRID)	Jodhpur GSS - Surpura (RVPNL)	Nov-23	Not returned.
3	CGL Make 315 MVA 400/220 KV ICT	Mandola (POWERGRID)	Bawana (DTL)	Jan-22	Not returned.
4	BHEL Make 315 MVA 400/220 KV ICT	Mandola (POWERGRID)	Tikrikalan (DTL)	Feb-20	Not returned.
5	BHEL Make 315 MVA 400/220 KV ICT	Ballabgarh (POWERGRID)	Tikrikalan (DTL)	Mar-24	Not returned.
6	BHEL Make 315 MVA 400/220 KV ICT	Bawana (POWERGRID)	Bamnauli (DTL)	Mar-26	Under transit to Bamnauli

A.29.3. In addition to ICTs provided to DTL, 01 no 400/220 kV 315 MVA ICT was provided to RVPNL from Ludhiana in Nov'23 as per request of RVPNL for ensuring load management in Western Rajasthan.

A.29.4. POWERGRID Northern Region operation encompasses approximately 58,805 Ckt Kms of Transmission lines, 96 substations and transformation capacity of 2,11, 327 MVA. The Northern Region is critically important with substantial renewable capacity of around 69.9 GW. At present due to diversion of majority of spare 315 MVA ICT to DTL and other utilities, there are nio spare transformer of similar capacity in Northern Region -I.This situation poses serious concern regarding the availability & reliability of ISTS Grid.

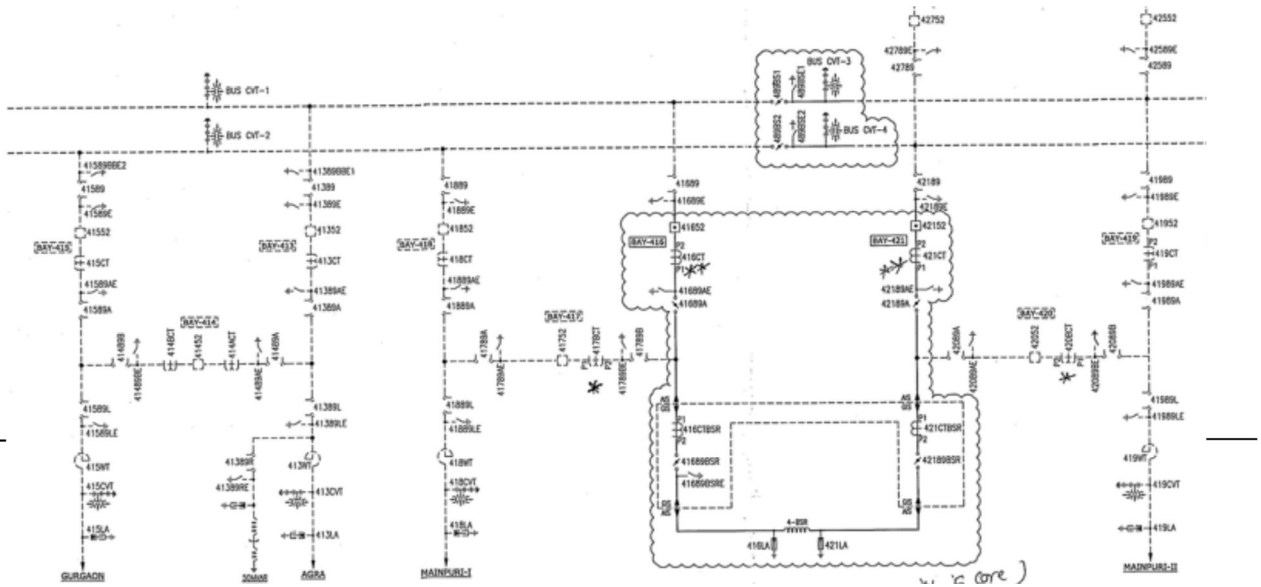
A.29.5. In the above context PGCIL has requested that returning of 05 nos 400/220 kV 315 MVA ICTs provided to DTL & 01 no 400/220 kV 315 MVA ICT provided to RVPNL may be deliberated by forum for ensuring available of availability of spares for smooth operation of Northern Grid.

Members may kindly deliberate.

A.30. Upgradation of existing 2000 Amps rated 420 kV isolators & CTs with 3150 Amps in 400 kV Bus Series Reactor Dia at Ballabgarh Substation (Agenda by PGCIL)

A.30.1. PGCIL has informed that 400 kV, 225 MVAR Bus Series Reactor (rated for 2500 Amps) has been commissioned at Ballabgarh for reducing the short circuit fault level by splitting 400 kV Bus-1 &2 at Ballabgarh SS in 2018. The Bus Series reactor has been installed in 400 kV Mainpuri-1 & 2 Dia at Ballabgarh which was having provision of future bay prior to implementation of Bus Series Reactor. The 400 kV Delhi Ring main lines i.e. 400 kV Ballabgarh-Dadri Ckt-1,400 kV Ballabgarh-Nawada and 400 kV Ballabgarh-Tughlakabad Ckt-1&2 are connected on either side of Bus Series Reactor resulting in current flow in tune of 1200-1800 Amps through Bus Series Reactor.

A.30.2. The future bays of 400 kV Mainpuri Dia were installed with equipment rating of 3150 Amps during commissioning of Bus Series Reactor however remaining bay equipment rating of 400 kV Mainpuri Dia is 2000 Amps (commissioned in 2005). It has been observed in last 02-03 years that frequent hot spots are observed existing 2000 Amps isolators installed in Mainpuri-1 & 2 main/tie bays at Ballabgarh due to



increased loading through Bus Series Reactor. The SLD of effected portion if illustrated below :-

A.30.3. Considering the increased load flow through Mainpuri-1&2 Dia due to installation of Bus Series Reactor by splitting of 400 kV Bus, upgradation of existing equipment's of 400 kV Mainpuri main & tie bays is necessary for smooth operation of Ballabgarh Substation. Following equipment's installed in 400 kV Mainpuri Dia at Ballabgarh is proposed to be replaced from existing 2000 Amp continuous rating to 3150 Amp rating

Sr. no.	Equipment	Nos	Rate (in Lakhs including GST)	Amount
1	420 kV 2000 Amp Isolator	08 (Sets)	30	240
2	420 kV 2000 Amps CTs	12 (nos)	10.5	126
Total cost estimate for bay equipment upgradation				366

04 nos 420 2000 Amps CBs (non PIR) has already been replaced with 3150 Amp (with PIR) rating in 2024 due to repeated failures of the CB.

A.30.4. **Proposal: -** Considering the increased load flow through Mainpuri-1&2 Dia due to installation of Bus Series Reactor by splitting of 400 kV Bus, PGCIL has proposed upgradation of existing equipments of 400 kV Mainpuri main & tie bays at estimated cost of Rs 3.66 Cr (inclusive of GST) under Additional Capitalisation.

Members may kindly deliberate.

A.31. N-1 Contingency Violation at 400/220 kV Dehradun Substation and Requirement of Additional ICT(500MVA) (Agenda by PGCIL)

A.31.1. PGCIL has informed that Dehradun 400/220 kV Substation is presently installed two numbers of 400/220 kV, 315 MVA Interconnecting Transformers. As per the prevailing planning and operational criteria, under N-1 contingency, the loading on the ICTs should remain within its rated capacity of 315 MVA.

A.31.2. Analysis of the ICT loading pattern (enclosed) indicates that during summer peak conditions, the combined loading on the two ICTs frequently exceeds 315 MVA. In the event of an N-1 contingency (outage of one ICT), the entire station load would be transferred to the remaining ICT, resulting in overloading beyond permissible limits and thereby leading to violation of the N-1 criterion.

A.31.3. Further, continuous load growth is being observed at Dehradun Substation, particularly during summer months, owing to increasing demand . In addition, 220 kV D/C Mori–Dehradun transmission line (232 ckm) is planned in future by PITCUL, which, upon commissioning, is expected to further increase power flow and demand at Dehradun Substation.

A.31.4. At present, the N-1 reliability criterion is not being met at Dehradun Substation during peak demand periods. This has rendered the substation highly vulnerable to transformer outages, posing a significant risk to system reliability and continuity of supply.

A.31.5. Considering existing summer peak loading pattern, Persistent N-1 non-compliance, Projected load growth, and Upcoming transmission additions, PGCIL has proposed one additional 400/220 kV, 500 MVA ICT at Dehradun Substation to meet future capacity requirements and ensure compliance with the N-1 contingency criterion.

Members may kindly deliberate.

A.32. Review of LC Ferro-Resonance Condition in 765kV Dausa Phagi (RRVPNL) ckt-1 & ckt-2 lines: (Agenda by PGCIL)

A.32.1. PGCIL has informed that after recent LILO (in March-2026) of old 765kV Gwalior Phagi (RRVPNL) D/c lines at 765kV Dausa substation, new 765kV Dausa Phagi (RRVPNL) ckt-1&2 lines has become over-compensated Line {having Line length of 94 kM & shunt compensation of Non-Switchable 240 MVAr, 765kV Line Reactor at Phagi end}.

A.32.2. Recently during occurrence of Single phase to ground (Y-E) fault in new 765kV Phagi (RRVPNL) Dausa ckt-2 line at 18:13:17 hrs, 31/03/2026; undesirable situation of LC Ferro-resonance condition had occurred & same lead to sudden rise of High system voltage (542 kV or 122% of Vphase-Earth) in other healthy phases - R, B. Such High system voltage (542 kV or 122% of Vphase-Earth) may prove to be detrimental for life of substation equipments.

A.32.3. In view of following proposal may be considered:

i) Converting the “Non-Switchable” 765kV, 240 MVAR shunt Line Reactor to “Switchable” shunt Reactor at Phagi, RRVPNL end.

ii) Whether installation of new NGR Bypassing scheme (by installing new 145 kV CB) is required or Dismantling of existing NGR, LA of NGR is required for “Non-switchable” 765kV, 240 MVAR Line Reactor at Phagi, RRVPNL end ?

A.32.4. It is mentioned that as per preliminary study, space is available for installation of new 765kV Circuit Breaker & 145 kV Circuit Breaker for “NGR Bypassing scheme” for the above conversion. However, Confirmation of availability of space from RRVPNL may be provided for above conversion.

A.32.5. Layout Drawing of 765 kV Phagi (RRVPNL) Switchyard is enclosed for reference.

A.32.6. Till finalisation of above matter, PGCIL has proposed taking “Non-switchable” 765kV, 240 MVAR Line Reactor in 765kV Dausa ckt-1 & Ckt-2 lines “out of service” at Phagi end to avoid re-occurrence of undesirable situation of LC Ferro-

resonance condition & subsequent high system voltage during Line Fault / Auto-reclosing condition in new 765kV Phagi (RRVPNL) Dausa ckt-1 line & ckt-2 line.

Members may kindly deliberate.

A.33. Review of LC Ferro-Resonance Condition in 400kV JAIPUR South Dausa ckt-1 & ckt-2 lines (Agenda by PGCIL)

A.33.1. PGCIL has informed that after LILO (in March-2026) of 400kV JAIPUR South Agra D/c lines at 765/400kV Dausa substation, new 400kV JAIPUR South Dausa ckt-1&2 lines has become over-compensated Line {having Line length of 71 kM & shunt compensation of Non-Switchable 50 MVAr, 400kV Line Reactor at JAIPUR South end}.

A.33.2. During opening operation (for voltage regulation) of 400 kV Jaipur South–Dausa Ckt-1 line at 22:59:39 hrs on 06/Oct/2025, oscillating voltage of ~120 kV was observed in R & B phases, causing voltage imbalance & flow of unbalance current as 30 A current in R & B phase, 7A in Y phase & 17 A in neutral of windings of 400kV Line Reactor. This condition, arising from over-compensation of the shortened line. This further led to resulting in operation of NGR Bypassing Protection Scheme & closing of NGR Bypassing isolator of Non-Switchable 50 MVAr, 400kV Line Reactor at JAIPUR South end.

A.33.3. After review of matter, NRLDC control room advised that the concerned Non-switchable 400kV Line reactors may be kept “out of service” at Jaipur South end to avoid Ferro-resonance phenomenon. Accordingly, Non-Switchable 50 MVAr, 400kV Line Reactor of 400kV Dausa ckt-1 & ckt-2 lines at JAIPUR South end are kept in “out of service” condition since 11.10.2025 as per NRLDC Instruction.

A.33.4. In view of this PGCIL has proposed following for consideretaion:

i) Converting the “Non-Switchable” 400kV, 50 MVAR shunt Line Reactor to “Switchable” (if required for Voltage regulation) shunt Reactor at JAIPUR South end.
ii) Providing “Deemed availability” of said 02 no. of 400kV, 50 MVAR Line Reactors at JAIPUR South end.

A.33.5. PGCIL has mentioned that as per preliminary study, space is available for installation of new 400kV Circuit Breaker & 145 kV Circuit Breaker for “NGR Bypassing scheme” for the above conversion.

Members may kindly deliberate.

A.34. Post facto approval for Shutdowns 765 kV Phagi–Gwalior Ckt-1 &2 related to LILO at Dausa: (Agenda by PGCIL)

A.34.1. PGCIL has informed that shutdown of following lines were taken for the tapping work of 765 kV Phagi–Gwalior Ckt-1 &2 related to LILO at Dausa approved in 5th NCT meeting dated 02.09.2021

Name of the Element	Shutdown Time	Restoration Time	Reason of Outage	Remarks
765KV Phagi-Gwalior Ckt-1	28.12.2025 09:36	06.01.2026 00:18	to complete the LILO tapping point work at Dausa LILO approved in 5th NCT meeting dated 02.09.2021	LILO work as per approved scheme commissioned on 00:18 hrs/06.01.2026. Shutdown was initially approved upto 31.12.25 and Post facto extension approval is requested upto 06.01.2026 due to adverse weather and site constraint
765KV Phagi-Gwalior Ckt-2	27.02.2026 11:15	10.03.2026 02:34	to complete the LILO tapping point work at Dausa LILO approved in 5th NCT meeting dated 02.09.2021	LILO work as per approved scheme commissioned on 02:34 hrs/10.03.2026.Shutdown was initially approved upto 02.03.2026, extension approval accorded upto 10.03.2026

A.34.2. PGCIL has requested for the post facto approval for Shutdowns 765 kV Phagi–Gwalior Ckt-1 &2 related to LILO work at Dausa.

Members may kindly deliberate.

A.35. Revision of Delhi islanding scheme (Agenda by NRPC Secretariat)

A.35.1. In 241st OCC meeting it was decided that revised Delhi Islanding Scheme to be implemented from Dadri TPS. Further, it was decided that A meeting to be conducted by NRPC with NRLDC, NTPC, DTL Delhi SLDC and POWERGRID to finalize the proposal of revised Delhi Islanding Scheme.

A.35.2. Accordingly, a meeting was held on meeting held on 20.03.2026 (15:00 hrs) to deliberate upon and finalize the operational framework and implementation roadmap for the Delhi Islanding Scheme based on Dadri-II generation (Minutes of the meeting is attached at **Annexure-A.VIII**). In this meeting it wsa decided that

i. NTPC Dadri, DTL, and SLDC Delhi to submit requisite technical details\ simulation file to NRLDC by 25 March 2026.

ii. DTL, POWERGRID, and NTPC to examine healthiness of existing UFR relays and feasibility of revising UFR feeder tripping settings from 47.9 Hz to 48.1 Hz for all feeders except feeder at 400kV Maharanibagh - Ballabhgarh line (to be tripped at 47.9 Hz) and submit details to NRLDC by 25th March, 2026.

iii. RLDC to carry out dynamic stability studies within four working days of receipt of inputs and propose updated islanding logic and relevant technical details\simulation files for review and finalization at RPC forum.

iv. Upon approval of finalized logic by RPC forum, concerned utilities shall implement the islanding scheme on or before 20th April, 2026.

A.35.3. Thereafter, DTL had submitted proposal of revised Delhi islanding scheme which was again discussed in a meeting held on 08.04.2025 with NRLDC, NLDC, DTL, Delhi SLDC, NTPC and PGCIL.

A.35.4. In the said meeting, SLDC Delhi raised concerns regarding island stability in case of Dadri unit operating at technical minimum under high load conditions and suggested provisioning of additional ~30 MW load for UFR-based shedding post island formation.

A.35.5. DTL agreed to identify and wire the requisite load at 220 kV Lodhi Road substation. NRLDC/NLDC concurred that the same will improve the probability of successful island formation.

A.35.6. Subsequently, has submitted Draft Revised Delhi Islanding Scheme after incorporating additional load shedding of 30MW in post-islanding scenario as suggested in above meeting.

Members may kindly approve revised Delhi islanding scheme.

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

B.1. NR Grid Highlights for March 2026

B.1.1. Demand met and Consumption details of NR

S.No.	Constituents	Max Demand met (in MW)	Date & Time of Max Demand met	All time Max. Demand	Date & Time of All time Max Demand met
1	Chandigarh	228	10-03-2026 19:00	482	18-06-2024 at 15:28
2	Delhi	4580	13-03-2026 12:00	8656	19-06-2024 at 15:06
4	Haryana	8822	02-03-2026 09:45	14662	31-07-2024 at 14:30
3	H.P.	2060	18-03-2026	2310	09-01-2026 at

			08:00		09:15
5	J&K	3188	03-03-2026 19:00	3362	07-01-2026 at 10:00
6	Punjab	11127	06-03-2026 12:00	16754	28-06-2025 at 15:00
7	Rajasthan	17264	02-03-2026 09:30	19282	09-01-2026 at 09:00
9	U.P.	22314	29-03-2026 20:24	31486	11-06-2025 at 00:45
8	Uttarakhand	2315	28-03-2026 19:00	2910	11-06-2025 at 22:00
10	**Northern Region**	**63286**	**07-03-2026 10:00**	**91234**	**19-06-2024 at 14:37**

S.No.	Constituents	Max Consumption (in MUs)	Date of Max Consumption	Average Demand met (in Mus)	All time Max consumption	Date of All time Max Consumption
1	Chandigarh	4.3	10-03-2026	3.7	9.3	12.06.2025
2	Delhi	93.4	13-03-2026	82.6	177.7	18.06.2024
4	Haryana	181.3	10-03-2026	33.7	293.4	30.07.2024
3	H.P.	38.3	18-03-2026	154.9	42.9	04.02.2026
5	J&K	59.5	20-03-2026	54.3	70.3	04.02.2025
6	Punjab	185.3	11-03-2026	158.6	366.8	21.07.2024
7	Rajasthan	327.7	07-03-2026	273.8	388.0	11.06.2025
9	U.P.	432.7	10-03-2026	40.6	658.7	17.06.2024
8	Uttarakha	44.9	10-03-	387.6	62.1	14.06.2024

	nd		2026			
10	**Northern Region**	**1338.5**	**10-03-2026**	**1189.9**	**2022.9**	**12.06.2025**

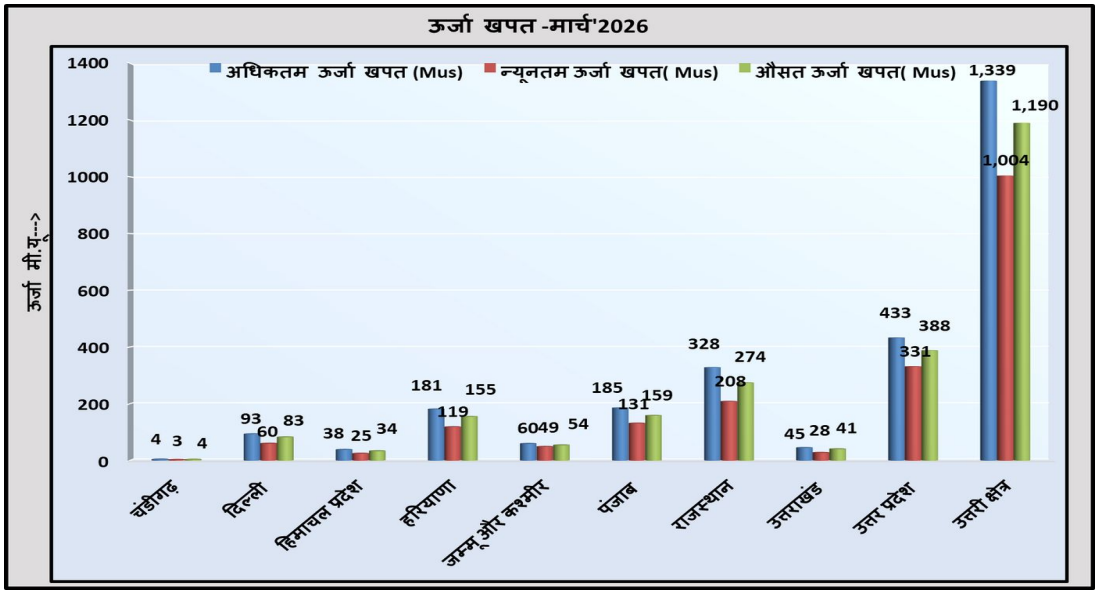
B.1.2. In March'26,

- Maximum energy consumption of Northern Region was 1338.5 MUs on 10th March'26 and it was 3.3% higher than March'25 (1296 MUs on 11th Mar'25).
- Average energy consumption per day of Northern Region was 1189.9 MUs and it was 0.41% higher than March'25 (1185 MUs/day)
- Maximum Demand met of Northern Region was 63286 MW on 07th March'26 @10:00 Hrs as compared to 65384 MW on 10th Mar'25 @10:00 Hrs.

Comparison of Average Energy Consumption (MUs/Day) – March '25 vs March '26

क्षेत्र/राज्य	फ़रवरी- 2025	फ़रवरी - 2026	% अंतर
चंडीगढ़	3.5	3.7	5.7%
दिल्ली	74.9	82.6	10.3%
हिमाचल प्रदेश	33.2	33.7	1.5%
हरियाणा	146.7	154.9	5.6%
जम्मू और कश्मीर	59.5	54.3	-8.8%
पंजाब	159.1	158.6	-0.3%
राजस्थान	299.3	273.8	-8.5%
उत्तराखंड	39.7	40.6	2.3%
उत्तर प्रदेश	369.1	387.6	5.0%
उत्तरी क्षेत्र	**1184.8**	**1189.9**	**0.4%**

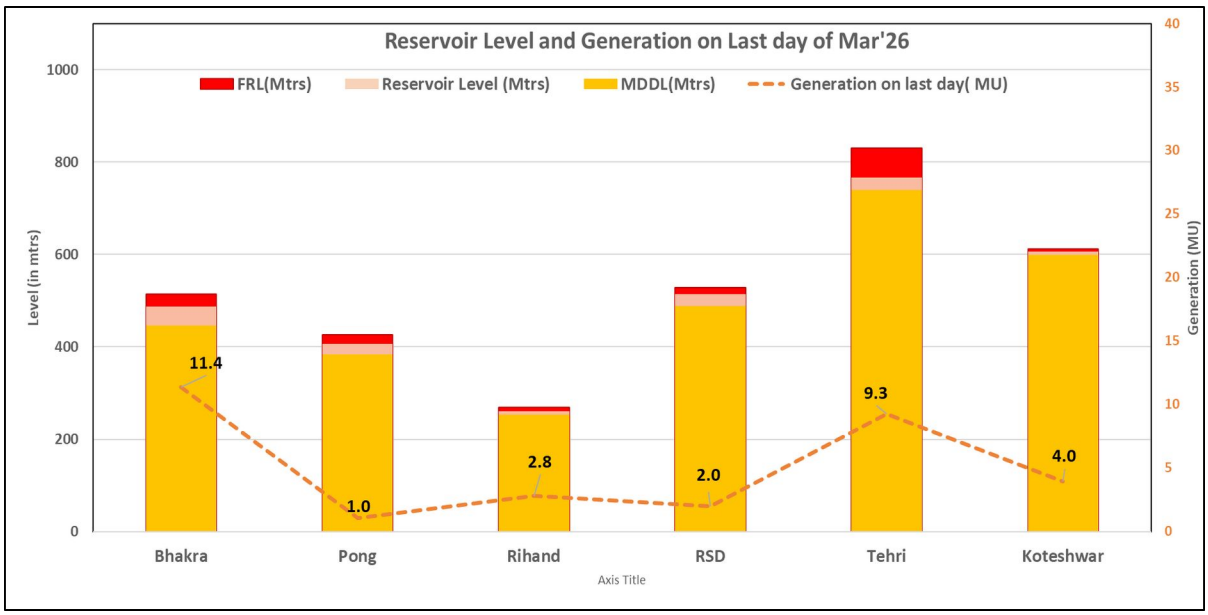
Energy Consumptions



Frequency profile

Month	Avg. Freq. (Hz)	Max. Freq. (Hz)	Min. Freq. (Hz)	<49.90 (% time)	49.90 – 50.05 (% time)	>50.05 (% time)
Mar'26	50.004	50.497 (13.03.26 at 13:01:40 hrs)	49.420 (03.03.26 at 18:52:20 hrs)	6.22	74.26	19.52
Mar'25	50.001	50.456 (05.03.25 at 13:11:40 hrs)	49.618 (30.03.25 at 00:07:10 hrs)	5.32	77.89	16.79

Reservoir Level and Generation on Last Day of Month



Reservoir Level on last day of February month				(Low: -ve)		(High: +ve)
Year	**Bhakra**	**Pong**	**Rihand HPS**	**RSD**	**Tehri**	**Koteshwar**
2026	487.39	411.56	260.87	514.48	766.36	606.65
2025	473	395	259	495	764	611
Diff (in m)	14.39	16.56	1.87	19.48	2.36	-4.35

Detailed presentation on grid highlights of Mar'2026 will be shared by NRLDC in OCC meeting.

B.2. SPS proposals in Rajasthan and review of SPS for Chhabra-Kawai Kalisindh complex

B.2.1. As discussed in previous OCC meetings, majority of 400/220kV ICTs in Rajasthan state (both interstate as well as intrastate) are N-1 non-compliant during high demand season. As the implementation of additional ICT at some of ISTS locations is not envisaged in near future, it was decided to implement SPS at these locations. List of N-1 non-compliant ISTS substations is shown below:

Constrained location	SPS Status as available with NRLDC
3*315=945 MVA ICT at Bhiwadi(PG)	Approved and to be implemented
2*315+500=1130 MVA ICT at Bassi(PG)	Approved and to be implemented
315+500=815 MVA ICT at Neemrana(PG)	Approved and to be implemented
2*315+500=1130 MVA ICT at Sikar(PG)	Approved and to be implemented
3*315=945 MVA ICT at Kankroli(PG)	Approved and to be implemented
2*315=630 MVA ICT at Kotputli(PG)	Implemented
2*315=630 MVA ICT at Deedwana(RVPN)	Not planned

B.2.2. During 241 OCC meeting,

- POWERGRID representative informed that SPS has been implemented at 400/220kV Kotputli(PG), Bhiwadi(PG) and Neemrana(PG). SPS shall be implemented at other substations of POWERGRID by end of Mar 2026.
- OCC asked POWERGRID to submit mock-testing report for 3no. SPS implemented.
- OCC forum asked POWERGRID to expedite the works.

POWERGRID may provide update.

<u>Review of SPS for Chhabra-Kawai Kalisindh complex</u>

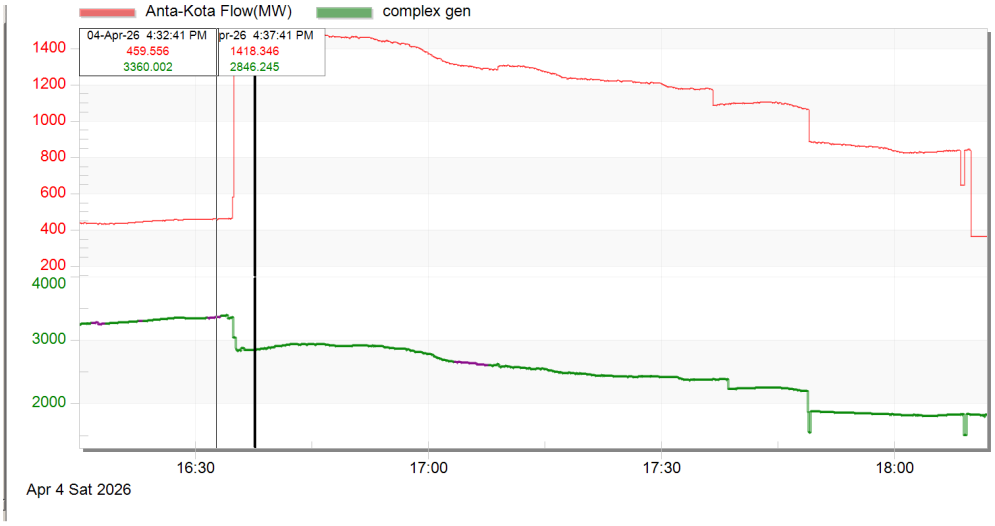
B.2.3. A major grid event was observed on 04.04.2026 wherein multiple transmission element tripping was observed in Anta-Chhabra complex. Firstly, 400 KV Hindaun-Chhabra Ckt tripped at 15:42 hrs due to inclement weather as reported by Rajasthan SLDC. Thereafter, 765 KV Anta-Phagi Ckt-1 tripped on B-N fault at 16:29 hrs from Anta end only and 765/400 KV 1500 MVA ICT 1, 2 and 3 at ANTA(RS) tripped at 16:34 hrs. Due to tripping of all 3 ICTs at 765 kV Anta (RS), SPS operated, leading to tripping of 660 MW Chhabra SCTPS unit-2.

B.2.4. Outage of 400 kV Hindaun-Chhabra Ckt and subsequent tripping all ICTs at 765/400 kV Anta led to over-loading of remaining evacuation lines i.e. 400 KV Bhilwara-Chhabra Ckt and 400kV Chhabra-Anta(bypass)-Kota line operating beyond thermal limit. Preliminary report as prepared by NRLDC control room is attached as Annexure-B.I.

B.2.5. Following actions were taken by NRLDC and SLDC Rajasthan after the event:

- Backing down generation at Chhabra-Kawai-Kalisindh complex immediately to control over-loading of 400 KV Bhilwara-Chhabra Ckt and 400kV Chhabra-Anta(bypass)-Kota line.
- Subsequently generation of all units operating on-bar in the complex were reduced to technical minimum.
- 250 MW Chhabra U-3 and 660 MW Kalisindh U-1 were taken off bar by Rajasthan at 17:37 hrs and 17:49 hrs respectively.

B.2.6. Plot below shows the line loading of 400kV Chhabra-Anta(bypass)-Kota line after the event, wherein it can be clearly seen that the line loading exceeded its thermal limit for significant duration of time and line was operated at very high loading (loading increased from 450MW to more than 1400MW). Telemetry of 400kV Chhabra-Bhilwara line for the given period is not available at NRLDC end.



Following is the existing SPS logic in the complex:

Chhabra, Kawai and Kalisindh TPS Complex

1. **Case-1:** N-1-1/N-2 of 765/400 kV Anta ICTs

   Action: Trip one unit of 660 MW at Chhabra SCTPS to limit the flow on the remaining ICT with in safe range

2. **Case-2**: N-1 of Anta-Phagi 1 & 2

   Action: No action required

3. **Case-3:** N-1-1/ N-2 of Anta-Phagi 1 & 2

   Action-1: One unit each at Kawai, Chhabra, Kalisindh and Chhabra SCTPS shall be tripped through SPS.
   Action-2: Automatic load shedding of 750 MW in Rajasthan control area (to avoid overloading of WR-NR corridor as well as to avoid over drawl by Rajasthan)

B.2.7. As per the grid event, 3 no. 765/400kV Anta ICTs has tripped for which system has not been planned nor SPS was enabled. However, given the possibility of such instances in future and the load flow after tripping of 3 no. 765/400kV Anta ICTs being similar to N-2 contingency of 765kV Anta-Phagi D/C line, the condition of N-3 contingency of 765/400kV Anta ICTs may be wired as Case-3 of already existing logic.

B.2.8. Further, SPS with monitoring loading of 400kV lines from Chhabra such as Chhabra-Hindaun/ Chhabra-Anta-Kota/ Chhabra-Bhilwara in real-time and tripping units/necessary backdown till 400kV lines loading is less than 850MW may be designed by RRVPNL and Rajasthan SLDC.

Members may please discuss.

B.3. Huge deviation by Rajasthan state control area

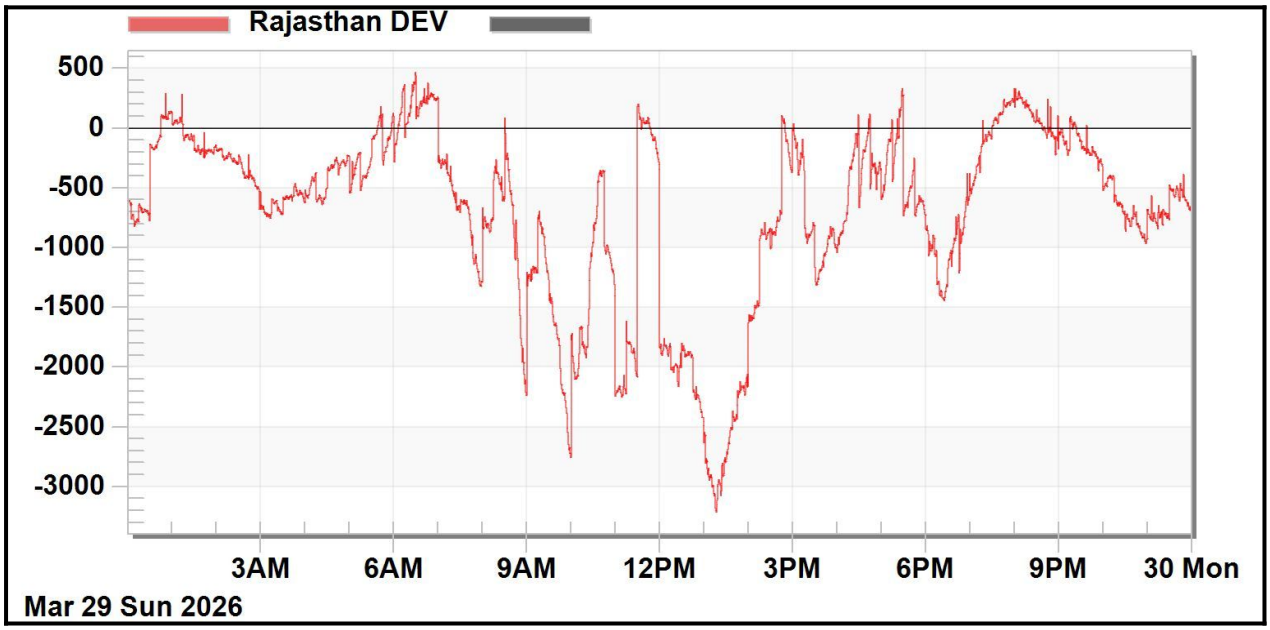
B.3.1. As per IEGC clause 44.3(c), State Load Despatch Centre in discharge of its functions under the Act and for stable, smooth and secure operation of the integrated grid, shall be responsible for balancing demand and supply to minimize Area Control Error (ACE) for the State. NRLDC has also been asking constituents to maintain load generation balance and messages are also regularly issued from Real time operators to the under-drawing/ over-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.

B.3.2. However, it is being observed that Rajasthan state due to less state demand in March 2026 is heavily under drawing during the day-time when solar generation is high. The details of daily under-drawl (MU) and max. under-drawl based on 5 minutes average telemetered data i.r.o. Rajasthan state control area for few days of March 2026 is given below:

Rajasthan Deviation and grid frequency for March 2026

Date	Deviation/UI [Overdrawl (+) Under drawl (-)] MUs	Max Under-drawl (in MW) during 09-15 hrs of day
29-03-2026	-16.64	3192
04-03-2026	-12.08	1876
22-03-2026	-11.75	2867
20-03-2026	-11.54	2226
15-03-2026	-11.35	1720
19-03-2026	-10.49	2506

B.3.3. Plots for deviation by Rajasthan state control area for 29-03-2026 (most recent event) are shown below wherein it can be clearly seen that Rajasthan state was heavily under drawing from the grid during the day time.



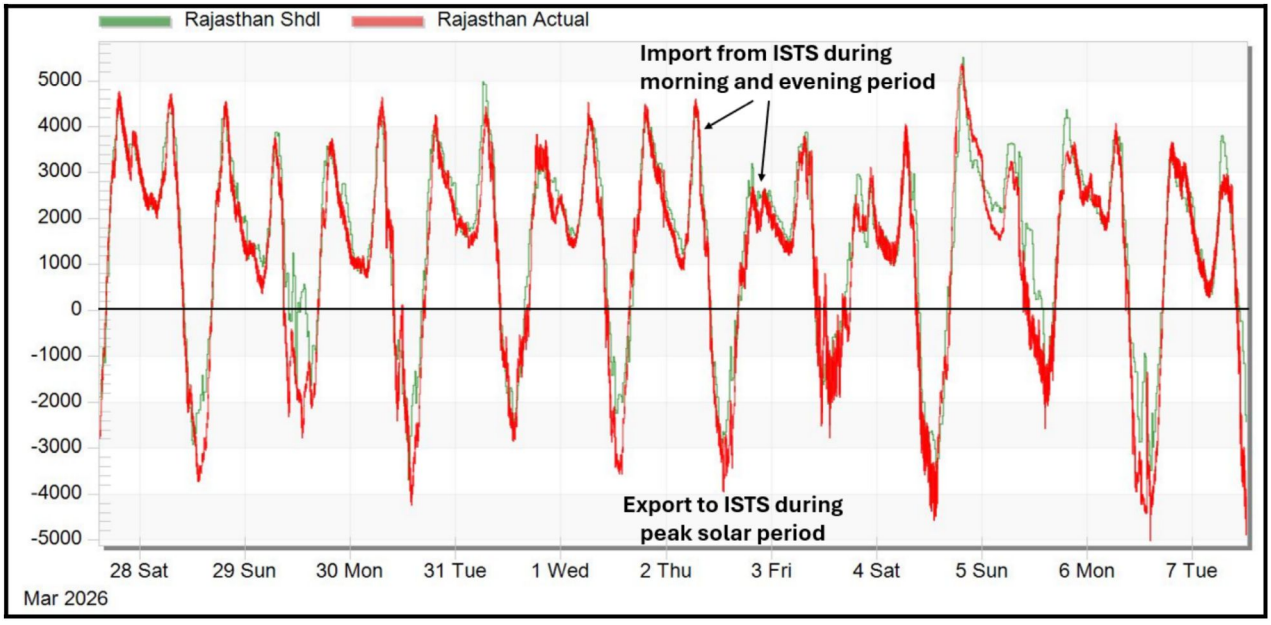
B.3.4. Such large deviations from schedule and high-frequency operation of grid are a threat to the system security.

B.3.5. To avoid continuous high frequency operation in the grid, following actions may be ensured during real-time grid operation and maintaining drawl close to schedule:

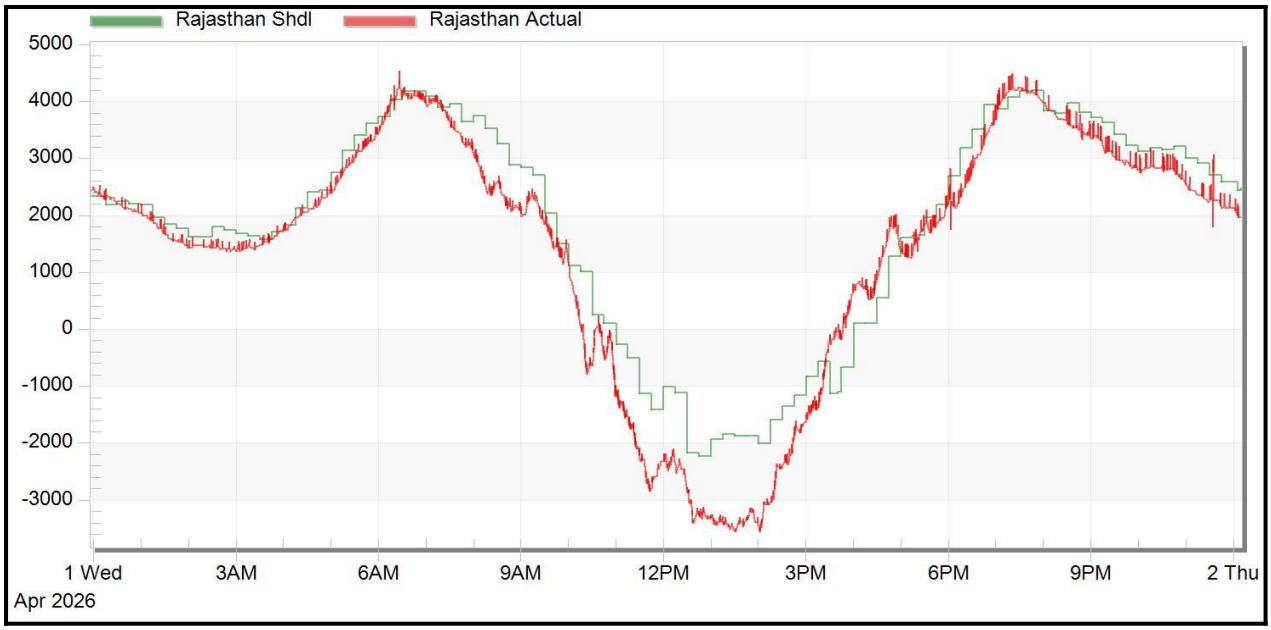
- Generation backing down in coal fired thermal stations to 55% of Maximum Continuous Rating (MCR) loading of the units on bar at the generating station after deducting the normative Auxiliary Energy Consumption plus Auxiliary Energy Consumption compensation as per the provisions of the Grid Code as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

B.3.6. There is need for further improvement in load generation balancing and maintaining drawl close to schedule by Rajasthan SLDC.

B.3.7. Due to the concentration of huge RE power in Rajasthan the state is exporting power to the ISTS system during day-time. Rajasthan state needs to carry out study for adopting a balanced energy mix strategy—combining renewable and conventional sources—to meet rising power demand and ensuring grid stability.



Diurnal schedule and actual drawl by Rajasthan from ISTS for sample day (1st April 2026) is shown below:



Rajasthan SLDC may please share actions being taken at their end.

B.4. Shifting of Rihand-III to NR for maximising NR import during high demand

season

B.4.1. The agenda for opening of 400kV Singrauli-Anpara line and shifting of Rihand Stage-III generating units to Northern region was discussed in 50th TCC & 74th NRPC meetings held in Raipur on 28.06.2024 & 29.06.2024 respectively. Forum decided that joint meeting would be convened with participants from NRPC, WRPC, CEA-PSPA I, CTUIL, NRLDC, WRLDC, NLDC, NTPC, POWERGRID, UP SLDC, UPPTCL, UPRVUN and Lanco Anpara. After detailed deliberations in meeting on 09.07.2024, all members agreed that to enhance NR import ATC/TTC limit during high demand season, Rihand-III generation to be evacuated from:

- Rihand-III connected to NR: May-Sep
- Rihand-III connected to WR: Rest of the months of the year

B.4.2. Shifting of Rihand-III generation to Northern region reduces loading of 765kV Vindhaychal-Varanasi D/C, due to which NR was able to import higher power from WR without major constraint. ATC/TTC limits on WR-NR corridor and NR import are increased after shifting exercise which facilitates NR states to import higher power during summer months.

Sl No	Corridor	Time Period	Increase in TTC due to shifting of Rihand from WR to NR (MW)
1	NR Import	00-09	2700
		09-15	400
		15-16	0
		16-24	2700
2	WR->NR	00-09	2450
		09-15	400
		15-16	0
		16-24	2450

B.4.3. As similar demand and line loading pattern is expected when NR imports high power from WR during summer 2025 & summer 2026 months especially during non-solar hours, it was discussed (in the meeting held on 09.07.2024) that there may be requirement of such changeovers for next 2-3 high demand seasons till approved transmission system of establishment of 765/400kV Prayagraj and 765/400kV Robertsganj is implemented. (approved by 52nd TCC & 77th NRPC Meeting held on 27-28 December 2024)

B.4.4. Rihand-III generation was evacuated through Northern region from 14.08.2024 till Oct 2024. Thereafter, when demand of Northern region reduced and shutdown of HVDC Rihand-Dadri was to be provided Rihand-III generation was shifted back to Western region on 04.11.2024.

B.4.5. Similarly, Rihand-III generation was evacuated through NR from 27.05.2025 till Oct 2025. Thereafter, when demand of Northern region reduced and shutdown of

HVDC Rihand-Dadri was to be provided Rihand-III generation was shifted back to Western region on 22.11.2025.

Accordingly, it is requested that OCC forum may grant approval for shifting of Rihand-III to NR during summer/monsoon 2026 in May 2026 so that, the exercise is carried out swiftly for the benefit of NR states.

B.5. Sharing of ATC/TTC assessment and basecase with NRLDC

B.5.1. All NR states except Chandigarh UT are sharing basecase and ATC/TTC assessment with NRLDC. OCC has advised all states to timely declare TTC/ATC for prospective months and revise the figures as per requirement.

B.5.2. 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".

Detailed roles and responsibilities for State Load Dispatch Centers in various timelines of the approved procedure are provided in the table below.

Purpose	***S No***	***Action of Stakeholder***	***Responsibility***	***Submission to***	***Data/ Information Submission Time line***
1. Revision 0 TTC/ATC Declaration for Month 'M'	*1 (a)*	*Submission of node wise Load and generation data along with envisaged scenarios for assessment of transfer capability Assessment of TTC/ATC of the import/export capability of the state and intra-state system and sharing of updated network simulation models*	*SLDC*	*RLDC*	*10th Day of 'M-12' month*
	1 (b)	*Declaration of TTC/ATC of the intra- state system by SLDC in consultation with RLDC*			*26th Day of 'M-12' month*
2. Interconnection Studies for elements to be integrated in the month 'M'	*2 (a)*	*Submission of node-wise load and generation data & sharing of network simulation models for intra-state elements coming in the next six months*	*SLDC*	*RLDC*	*8th Day of 'M- 6' month*
	2 (b)	*Sharing of inter-connection study results*			*21st Day of 'M-6' month*
3.	*3*	*Submission of node wise Load*	*SLD*	*RLD*	*8th Day of*

Month Ahead TTC/ATC Declaration & Base case for Operational Studies for Month 'M'	*(a)*	*and generation data along with envisaged scenarios for assessment of transfer capability*	*C*	*C*	*'M- 1' month*
		Assessment of TTC/ATC of the intra- state system and sharing of updated network simulation models			
	3 (b)	*Declaration of TTC/ATC of the intra- state system in consultation with RLDC*	*SLD C*	*RLD C*	*22nd Day of 'M-1' month*

5.1 ATC/TTC assessment sharing 11 months in advance

The procedure mentions that:

B.5.3."SLDCs in consultation with RLDCs shall declare the import and export TTC, ATC, and TRM of the individual control/bid areas within the region in accordance with Regulation 44 (3) of the Grid Code 2023. RLDCs shall assess the import and export TTC, TRM and ATC for the group of control/bid areas within the region (if required). The computed TTC, TRM and ATC figures shall be published on the website of respective SLDCs and RLDCs, along with the details of the basis of calculations, including assumptions, if any, at least eleven (11) months in advance. The specific constraints indicated in the system study shall also be published on the website."

5.2 Sharing of Data and study results for interconnection studies

As per **Regulation 33 of IEGC 2023,**

(9) Each SLDC shall undertake a study on the impact of new elements to be commissioned in the intra-state system in the next six (6) months on the TTC and ATC for the State and share the results of the studies with RLDC.

(10) Each RLDC shall undertake a study on the impact of new elements to be commissioned in the next six (6) months in (a) the ISTS of the region and (b) the intra-state system on the inter-state system and share the results of the studies with NLDC.

(11) NLDC shall undertake study on the impact of new elements to be commissioned in the next six (6) months in (a) inter-regional system, (b) cross-border link and (c) intra-regional system on the inter-regional system.

B.5.4.In line with above, utilities are required to share the list of elements/LGB data/interconnection study results etc as per the approved procedure which are expected to be commissioned within next six months. This needs to be practised as monthly exercise on regular basis.

5.3 TTC/ATC of state control areas for (M-1) basis

B.5.5.As discussed in previous OCC meetings, most of the NR states except Ladakh and Chandigarh U/Ts are sharing basecase and ATC/TTC assessment with NRLDC.

B.5.6.OCC has advised all states to timely declare TTC/ATC for prospective months and revise the figures as per requirement. ATC/TTC limits of states for the month of

May 2026 are attached as **Annexure-B.II** of agenda. Utilities are requested to go through these limits and provide comments.

B.5.7. To encourage participation from SLDCs regarding basecase preparation and ATC/TTC assessment, two workshops have been conducted from Grid-India/NRLDC side. One workshop was conducted 31.08.2023 before the finalization of the procedure and another on 10.01.2024 to involve further participation from SLDCs. Subsequently, workshop was organized on 9-11 December 2024 at NRLDC for all SLDCs under initiative by FOLD.

B.5.8. Although all SLDCs are now involved in preparation of basecase & ATC/TTC assessment, it is seen that the timelines as per CERC approved procedure are not being followed and number of times basecases are not received from SLDC side.

Still, it is being observed that response from some SLDCs is not as per desired levels. Latest status till March 2026 is shown below:

October 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Nov-25)		M-12 (October-26)		M-6 (April-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	Yes	Yes	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

November 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Dec-25)		M-12 (Nov-26)		M-6 (May-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	Yes	Yes	No	Yes	No	No
Himachal	No	No	No	No	No	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	Submitted only Solar peak and evening peak case	No	No	No	No

December 2025 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Jan-26)		M-12 (Dec-26)		M-6 (June-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	Yes	Yes	Yes	Yes	No	No
Himachal	No	No	No	No	No	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	No	No	No	No
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

January 2026 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Feb-26)		M-12 (Jan-27)		M-6 (July-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	Yes	Yes	Yes	Yes	No	No
Himachal	No	No	No	No	No	No
J &K	Yes	Yes	Yes	Yes	Yes	Yes
Ladakh	No	No	No	No	No	No
Punjab	Yes	Yes	Yes	Yes	Yes	Yes
Rajasthan	Submitted only Solar peak case	Submitted only Solar peak case	No	No	No	No
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

February 2026 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Mar-26)		M-12 (Feb-27)		M-6 (August-26)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	No	No	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	No	No	No	No	No	No
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

March 2026 Mails						
	ATC/TTC Declaration				Interconnection Studies	
	M-1 (Apr-26)		M-12 (Mar-27)		M-6 (Sep-26)	
	Data Values	Basecases	Data Values	Basecases	Data Values	Basecases
Chandigarh	No	No	No	No	No	No
Delhi	No	No	No	No	No	No
Haryana	Yes	Yes	Yes	Yes	Yes	Yes
Himachal	No	No	No	No	No	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	No	Yes	No
Uttar Pradesh	Yes	Yes	Yes	Yes	Yes	Yes
Uttarakhand	No	No	No	No	No	No

Submitted after 8th of current month

Submitted in next month

From the above table it can be seen that:

- HP, Delhi and Uttarakhand SLDCs are not regularly submitting PSSe basecases and need to regularly share the updated basecases
- Other states such as J&K, Punjab, Rajasthan and UP are regularly sharing the basecases but are submitting after the mandated timeline dates on few occasions.

B.5.9. Accordingly, all SLDCs are requested to share basecase as well as ATC/TTC assessment as per CERC approved procedure timelines. Utilities are requested to go through the ATC/TTC limits for May 2026 and provide comments.

Members may please discuss.

B.6. SPS for Champa-Kurukshetra HVDC

B.6.1. There have been unplanned load loss that has taken place in two events related to simultaneous all poles outage of HVDC Champa-Kurukshetra namely,

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

B.6.2. The recommendations of Committee formed under Member (GO&D), CEA] to analyse 17th June 2024 are attached as Annexure-B.III. 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 OCC meetings, no major progress is being reported. There is huge MVAR drawl by NR states during May-Sep months.

B.6.3. Accordingly, in 233 OCC meeting it was agreed 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 was suggested to utilise the wired loads of existing Agra-Gwalior SPS scheme. Signal of multiple HVDC pole outage can be extended from Kurukshetra station to 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.

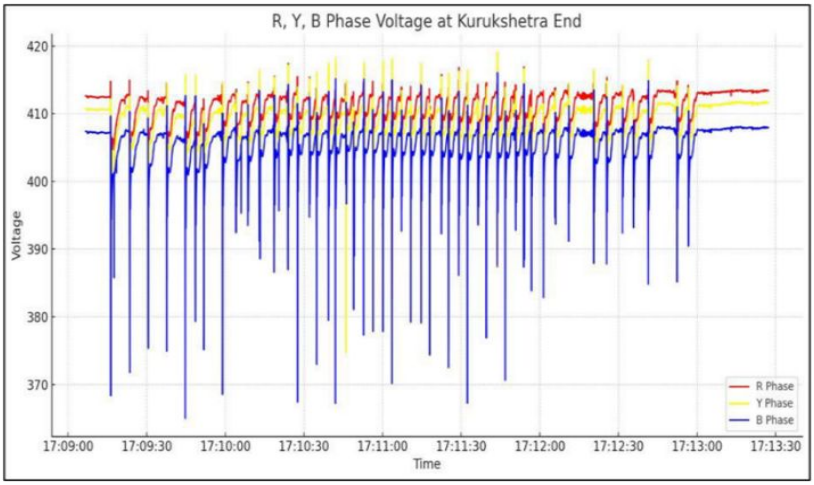
Based on discussion in 240 OCC meeting, following tentative logics for SPS were proposed:

- Voltage in all 3-phases at Kurukshetra fall below 380kV and more than 50kV for 250ms: Shed load in Groups C and D
- Voltage in all 3-phases at Kurukshetra fall below 360kV and more than 50kV for 250ms: Shed load in all Groups

(Time delay increased considering LBB protection timing)

Voltage >50kV is being proposed so that SPS does not operate in case of any CVT data error.

Moreover, it was observed that bus voltages at Kurukshetra were reaching below 380kV during frequent commutation failures observed on 21.05.2025.



B.6.4. Accordingly, it is important that SPS logic resets immediately, so that in case of multiple voltage dip and recovery events, any maloperation of SPS may be avoided.

B.6.5. During 241 OCC meeting, OCC forum asked all utilities to provide actions taken at their end in compliance to recommendations of MoP Committee constituted under Member (GO&D), CEA to analyse 17th June 2024. OCC forum approved the proposed SPS logic and asked POWERGRID to implement it at the earliest.

POWERGRID to provide present implementation status of SPS. NR states may share their preparedness for avoiding low voltage issued during Jun-Jul months. Members may please discuss.

B.7. Maximising availability of ERS in summer 2026

B.7.1. Several important transmission lines in the Northern Region remain under prolonged outage due to tower collapse in Apr-Jun months during windstorm events reported during the summer season. The extended non-availability of these transmission lines impacts grid reliability, load transfer capability, and in some cases RE evacuation.

B.7.2. As per the CERC Standards of Performance, the restoration of transmission lines in plain terrain is to be completed within 30 days whereas it shall not exceed 12 days when restoration is through Emergency Restoration System (ERS). However, in many cases, these timelines are significantly exceeded.

B.7.3. Further, as per information available with NRLDC, following transmission lines are in service through ERS since long time. Accordingly, it is requested that concerned transmission utilities may plan for revival of transmission lines on normal towers so that ERS set is available for other contingencies that may happen in near future.

SL No	Name of the Transmission Line	Revival Date/Time through ERS	Expected Restoration to Permanent tower as submitted in 241 OCC meeting

1	765 KV BAREILLY_2.LUCKNOW_2 (PG) CKT.1 (ERS tower at location 566)	21:13/20.09.25	
2	765 KV KOTESHWAR.MEERUT (PG) CKT.1 (ERS tower at location 142)	19:38/03.09.25	
3	400 KV RAMPUR HEP(SJ).NALLAGARH(PG) (PG) CKT.1 & 2 (ERS tower at location number 343)	19:48/15.09.25	30th April 2026
4	400 KV CHAMERA_2(NH).KISHENPUR(PG) (PG) CKT.1 (ERS tower at location number 238)	22:10/18.09.25	31st May 2026
5	220 KV SALAL(NH).JAMMU(PDD) (PG) CKT.2 (ERS tower at location 48)	22:23/11.09.25	30th April 2026
6	400 KV JALANDHAR(PG).SAMBA(PG) (NRSS XXIX) CKT.1 (04 Nos ERS at tower location 235 to 238)	18:40/30.09.25	
7	400 KV JALANDHAR(PG).SAMBA(PG) (NRSS XXIX) CKT.2 (02 Nos ERS at tower location 236)	17:20/16.10.25	31st May 2026
s8	400 KV KOLDAM(NT)-PARBATI POOLING BANALA(PG) (PKTCL) CKT-1 (01 Nos ERS at tower location 42)	23:37/22.11.25	
9	220 KV KISHENPUR(PG)-RAMBAN(PDD) (PDD) CKT-1 (03 Nos of ERS Towers (01 Nos ERS towers between KP-61 and KP-63, 02 Nos ERS towers between KP-75 and KP-82))	10:03/19.12.25	31st May 2026

B.7.4. To ensure timely revival of critical transmission infrastructure, immediate restoration plans should be finalized and shared by the respective transmission licensees. The use of ERS should be prioritized wherever feasible to enable interim restoration and minimize prolonged outages. Additionally, transmission

licensees must focus on strengthening tower foundation designs, particularly in regions vulnerable to shifting sand dunes or weak soil conditions. Enhanced patrolling and preventive maintenance practices must also be adopted to proactively identify and address structural vulnerabilities.

B.7.5. During 241 OCC meeting,

- MS NRPC expressed concern on the same and asked all concerned transmission utilities to free ERS tower which have been in service for long time.
- CGM NRLDC also highlighted that there have been directions from MoP in this regard that all ERS towers presently in use shall be made free and maximum ERS availability for any contingency during summer 2026 shall be ensured.
- All transmission utilities were 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 was requested to update likely revival date for these in the NRLDC outage portal and expedite revival of these transmission elements before summer 2026.

Concerned transmission utilities are requested to share plan for revival of transmission lines on normal towers so that ERS set is available for other contingencies that may happen in next few months due to dust storms/ wind storms.

Members may please discuss.

B.8. Mock testing of islanding scheme and simulation studies

B.8.1. 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).

- NAPP Islanding scheme (UP)
- RAPP Islanding scheme (Raj)
- Bawana Islanding scheme (Delhi)
- Unchahar Islanding scheme(UP)

There have been recent directions from NPC and MoP also for islanding testing.

B.8.2. As per Clause 29.10 and 29.11 of the IEGC:

"(10) RPCs shall prepare the islanding schemes in accordance with the CEA Grid Standards for identified generating stations, cities and locations and ensure their implementation. The islanding schemes shall be reviewed and augmented depending on the assessment of critical loads at least once a year or earlier, if required.

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

The required mock testing data is still awaited for the following islanding scheme:

- RAPP Islanding Scheme (basecase last received on 21.03.2025)

Mock testing data has been received for:

- NAPP Islanding Scheme (UFR testing report received, updated base case awaited) (basecase last received on 30.01.2025)
- Lucknow–Unchahar Islanding Scheme (UFR testing report received, updated base case awaited, basecase last received on 16.03.2025)

Further, the status of other schemes is as follows:

- Delhi Islanding Scheme – under review/modification
- RSD Pathankot Islanding Scheme – not presently in service.

B.8.3. The SOP for mock testing of islanding schemes in the Northern Region was approved during the 223rd OCC meeting held in September 2024.

B.8.4. In compliance with the above provisions of the IEGC, it was requested to submit the requisite data and report, as stipulated in the approved SOP, to facilitate successful conduct of mock testing of islanding schemes for FY 2025–26 at the earliest.

B.8.5. Communication have already been sent from NRLDC side vide email dated 16.02.2026 & 03.03.2026.

B.8.6. In case of non-availability of gas generation at Bawana, other islanding scheme with generation of Dadri NTPC / IGSTPP NTPC (Jhajjar) is being explored for maximizing the chances of survival of critical loads in Delhi. Separate islanding scheme with Bawana generation is also under review.

Concerned SLDCs are requested to provide update on field testing and simulation-based testing of each islanding scheme.

B.9. Frequent tripping of 800kV HVDC Champa-Kurukshetra inter-regional link:

B.9.1. It has been observed that frequency of tripping of 800kV HVDC Champa-Kurukshetra inter-regional link has increased in recent past. **There are 11 no. of tripping instances has been observed in this link since March 2026.** List of all the tripping of HVDC Champa-Kurukshetra is attached as **Annexure-B.IV.** The tripping of this high capacity link may cause overloading of other parallel transmission lines and further tripping may cause cascade tripping.

B.9.2. It is also well known that, paddy season is going to start in Haryana & Punjab and on account of summer, the Northern Region load would remain high till September and therefore, high import requirement exists for the Northern Region. Thus, the HVDC Champa-Kurukshetra inter-regional link is a very important link for fulfilling the Northern Region demand requirement.

B.9.3. It has been observed that major fault is either due to DC line fault, filter protection, software issues, protection mal-operation etc. The reason of most of the tripping seems similar indicating the repetitive nature of fault/tripping.

POWERGRID(NR-1) is requested to elaborate on the issues and status of remedial measures taken/to be taken to avoid frequent tripping of this inter-regional link.

Member may like to discuss.

B.10. Multiple element tripping events in Northern region in the month of March 2026:

B.10.1. A total of 24 grid events occurred in the month of March 2026 of which 12 are of GD-1 category, 10 are of GI-2 Category and 02 are of GI-1 Category. The tripping report of all the events have been issued from NRLDC. A list of all these events is attached at Annexure-B.V.

B.10.2. Maximum delayed clearance of fault observed in multiple element tripping event at 400/220kV Ajmer(RS) at 14:50 hrs on 02nd March 2026 (As per PMU at Ajmer(PG), R-N phase to earth fault with unsuccessful A/R was observed with fault clearing time of 80 ms and 1560 ms (delayed) respectively).

B.10.3. Delayed clearance of fault (more than 100ms for 400kV and 160ms for 220kV system) observed in total 05 events out of 24 grid events occurred in the month. In 08 (no.) of grid events, 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.

B.10.4. 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 March 2026:

B.11.1. The status of receipt of DR/EL and tripping report of utilities for the month of **March 2026** is attached at **Annexure-B.VI.** 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-Delhi, Dadri-NT, INDIGRID, BBMB and RAPS is not satisfactory and needs improvement.

B.11.2. 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 March 2026:

B.12.1. During the month of **March 2026, 1 reportable** event was 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	03-Mar-26	11:42 hrs	As reported, at 11:42 hrs on 03.03.2026, generation loss event of 1197 MW occurred in RE generation complex, NR. Hence generation loss of 1197 MW is considered for FRC/FRP Calculation.	50.027	49.910	49.958	-0.069	0.53

B.12.2. 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."

B.12.3. 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."

B.12.4. 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)."

B.12.5. 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."

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

B.12.6. 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 01st April 2026**, FRC/FRP as per NRLDC HDR data is used for computation of Average Monthly Frequency Response Performance, Beta 'β' for Generating Stations.

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.

B.12.7. Status of details received from constituents and FRP values as considered for the events of **March 2026** are attached as **Annexure-B.VII.**

B.12.8. ISGS were requested to confirm whether FGMO as per IEGC 2023 has been implemented at their respective stations or not. Updated list on the basis of details received is as follows:

Sl. No.	Entity	Governor Mode (FGMO as per IEGC 2023) Yes or No	Droop setting (%)	Remarks (if any)

1	**Dadri -1 (TH)**	Yes	6%	
2	**Dadri -2 (TH)**	Yes	6%	
3	**Jhajjar (TH)**	Yes	5%	
4	**Rihand-1 (TH)**	Yes	5%	
5	**Rihand-2 (TH)**	Yes	5%	
6	**Rihand-3 (TH)**	Yes	5%	
7	**Shree Cement (TH)**			
8	**Singrauli (TH)**	Yes	5%	
9	**Tanda-2 (TH)**	Yes	6%	
10	**Unchahar-I (TH)**	Yes	5%	
11	**Unchahar-II (TH)**	Yes	5%	
12	**Unchahar-III (TH)**	Yes	5%	
13	**Unchahar-IV (TH)**	Yes	5%	
14	**Anta (G)**			
15	**Auraiya (G)**			
16	**Dadri (G)**			
17	**AD Hydro (H)**	Yes	4%	
18	**Bairasiul (H)**	Yes	4%	
19	**Bhakra (H)**			
20	**Budhil (H)**			
21	**Chamera-1 (H)**	Yes	5%	
22	**Chamera-2 (H)**	Yes	5%	
23	**Chamera-3 (H)**	Yes	4%	
24	**Dehar (H)**			
25	**Dhauliganga (H)**	Yes	5%	
26	**Dulhasti (H)**	Yes	5%	
27	**Karcham (H)**	Yes	5%	
28	**Kishenganga**	Yes	4%	
29	**Koldam (H)**	Yes	9%	
30	**Koteshwar (H)**			
31	**Malana-2 (H)**			
32	**Nathpa Jhakri (H)**	Yes	9%	
33	**Parbati-2 (H)**	Yes	4%	
34	**Parbati-3 (H)**	Yes	4%	
35	**Pong (H)**			
36	**Rampur (H)**			
37	**Sainj (H)**			
38	**Salal (H)**	Yes	5%	
39	**Sewa-II (H)**	Yes	4%	
40	**Singoli Bhatwari (H)**			
41	**Sorang (H)**	No	4%	ROR, no storage
42	**Tanakpur (H)**	Yes	4%	
43	**Tehri (H)**	Yes	4%	
44	**Uri-1 (H)**	Yes	6%	
45	**Uri-2 (H)**	Yes	5%	

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

Members 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 trial run and testing of black start facilities at generating stations in Northern Region

B.13.1. As per Indian Electricity Grid Code (IEGC) clause 34.3

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

B.13.2. Hydro and gas-based plants are capable of self-black-start. Conducting periodic mock black start exercises are extremely important to ensure the healthiness of black start facilities and also to build awareness as well as confidence among the system operators.

B.13.3. In view of above, regional entity generating stations shall conduct the dead bus charging of their units on rotation basis as per availability of schedule under intimation to the NRLDC. Testing of Diesel generator sets and other standalone auxiliary supply source to be used for black start shall also be done on a weekly basis. SLDC shall also ensure the same in their respective control area. This will ensure the healthiness of blackstart facility at generating stations. Further, NRLDC shall coordinate with the ISGS and states to conduct the mock black start exercise of subsystems.

B.13.4. Therefore, regional entity generating stations and SLDCs are requested to share the annual schedule plan for conducting dead bus charging / mock black start exercise of generating stations /sub-systems during 2026-27. The present status of mock black start of generating units is attached as **Annexure-B.VIII.** Constituents are also requested to share the test report of diesel generators / auxiliary supply on a quarterly basis.

Mock black start exercised conducted during FY 2025-26 are as follows:

Sr. No.	Name of Generating station	Date of Mock Black Start Exercise conducted
1.	Bhakra (L)	22-12-2025

2.	Bhakra (R)	19-12-2025
3.	Pong	14-03-2026
4.	Bairasuil	30-01-2026
5.	Chamera HPS-I	30-01-2026
6.	Chamera HPS-II	06-02-2026
7.	Dhauliganga	05-02-2026
8.	Kishanganga	31-01-2026
9.	Parbati-2	26-05-2025
10.	Parbati-3	17-05-2025
11.	Sewa-II	16-05-2025. 30-01-2026
12.	Tanakpur HPS	28-01-2026
13.	URI-I	24-01-2026
14.	URI-II	26-01-2026
15.	Nathpa-Jhakri	11-03-2026
16.	Rampur	11-03-2026
17.	Tehri	11-11-2025
18.	Koteshwar	25-03-2026
19.	Ranjit Sagar (Thein Dam)	01-12-2025
20.	Ramgarh GPS	11-05-2025
21.	Rihand (H) or Pipri	02-06-2025
22.	Obra(H)	02-06-2025

Therefore, ISGS and SLDCs are requested to take following actions:

- **To share the tentative schedule of mock black start exercise of generating stations in their respective control area.**
- **SLDCs are requested to share the tentative schedule plan of mock black start exercise of generating stations in their respective control area.**
- **To conduct dead bus charging after self-starting the generating station if schedule with load is not available.**
- **To share the test report of mock black start exercise conducted along with weekly DG testing on monthly/quarterly basis.**

Members may like to discuss.

Status of action taken on decision of 241st OCC meeting of NRPC

S.N.	Agenda	Decision of 241st OCC meeting of NRPC	Status of action taken
1.	A.13. Approval of Temporary Operational Arrangement for 220 kV Adhydro-Phozal-Nalagarh Circuits (Agenda by ADHPL)	OCC forum agreed for the temporary arrangement proposed by ADHPL subject to the consent of HPPTCL.	ADHPL and HPPTCL to update 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 — Feb-2026 ◎ HARYANA — Dec-2025 ◎ HP — Oct-2025 ◎ J&K and LADAKH — Not Available ◎ PUNJAB — Dec-2025 ◎ RAJASTHAN — Dec-2025 ◎ UP — Jan-2026 ◎ UTTARAKHAND — Mar-2026 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 — Mar-2026 ◎ HARYANA — Mar-2026 ◎ HP — Jan-2026 ◎ J&K and LADAKH — Not Available ◎ PUNJAB — Dec-2025 ◎ RAJASTHAN — Dec-2025 ◎ UP — Jan-2026 ◎ UTTARAKHAND — Mar-2026 ◎ BBMB — Dec-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

tripping report

<table>
<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>Oct-25</td></tr><tr><td>◎</td><td>HARYANA</td><td>Feb-26</td></tr><tr><td>◎</td><td>HP</td><td>Jan-26</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>Jan-26</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Aug-25</td></tr><tr><td>◎</td><td>UP</td><td>Jan-26</td></tr><tr><td>◎</td><td>UTTARAKHAND</td><td>Oct-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>
</table>

9	Reactive compensation at 220 kV/ 400 kV level at 5 substations			
	State / Utility	Substation	Reactor	Status
i	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.
ii	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.
iii	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.
iv	DTL	Electric Lane	1x50 MVAr at 220 kV	Under Re-tendering due to Single Bid
v	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	Commissioned	Updated by HVPNL in 235th OCC.
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.	Jan'26	Line work already completed. Signing of Connectivity agreement with CTU is under process. Likely to be commissioned by end of January-2026 as intimated in 239th OCC by HVPNL.
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	Mar'26	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 234th 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	Mar'26	220kV Jind PG - Jind D/C line commissioned. Further, 220kV Jind PG - Nain (HVPNL) D/C will be commissioned after completion of new 220kV Substation Nain (HVPNL) which is under construction. And likely to be comissioned by 15.03.2026.
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	Mar'26	Line work completed, Substation is under construction. 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	Mar'26	Contract awarded on 08.08.23 to M/s Skipper with completion in December 25.Likely date of commissioning of the project has been revised as 31.03.2026 due to slow progress of the work by the firm. Updated in 238th 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	Mar'26	Issue related to ROW. Likely date of commissioning of the project has been revised as 31.03.2026 due to slow progress of the work by of the firm.
				• Prithla - Sector 89 Faridabad 220kV D/c line	Mar'26	Stringing is in progress at TL No.25 to 35 of Prithla - Sector 78 section as updated in 238th 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	Commissioned	Commissioned on dated 02.12.2025
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 is under consideration with upcoming CMETS-NR as updated by PSTCL in 238th 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.
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	Jan'26	Revised target date as confirmed by concerned XEN TS, Panchkula.Updated in 234th OCC by HVPNL

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
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	31.01.2026	Commissioning of 220kv S/C Amritsar -Patti S/c and 220kV Amritsar – Rashiana S/c may be done by 31.01.2026. Updated in 238th 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)	31.01.2026	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 238th 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	30.06.2026	Updated in 234th 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.
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 patiala.. as updated by PSTCL in 233th OCC meeting

Status of ADMS implementation in NR:

Sl. No.	State / UT	Status	Remarks
1	DELHI	Scheme Implemented but operated in manual mode.	In 236th OCC meeting, Delhi SLDC representative stated that as informed by BRPL and BYPL, SCADA upgradation work of would be completed by Mar'26. Further, SCADA upgradation work of TPDDL would be completed by Dec'26.
2	HARYANA	Scheme not implemented	Haryana SLDC intimated that ADMS software has already been taken under project work of upgradation of SCADA-EMS in Haryana. As per already decided methodology, the current status of ADMS Project is as under: - i. Part-1 i.e. Control with HVPNL Any hindrances/delay in execution of PART-I which is covered under upgradation of SCADA-EMS system (ULDC Phase-III of Northern Region) being delivered by M/s GE Vernova, completion timelines etc. ii. PART-II: Control with Distribution Utility Communication with DISCOMs, identification of feeders, status of retrofitting of 33kV & 11kV substations of DISCOMs to handle the automation, hiring of consultant on the pattern of Rajasthan etc. In this regard, the matter has already been taken up with Discoms to provide the lists of 11kV & 33kV feeders to prepare the DPR of the same.
3	HP	Scheme not implemented	In 237th OCC meeting, HPSDLC representative informed that vide letter dated 25.10.2025 they have requested HPSEBL to expedite the feeder list. However, reply of HPSEBL is awaited. Further, they have also requested MD, HPSEBL for a suitable date for a meeting in this regard.
4	PUNJAB	Scheme not implemented	In 238th OCC meeting, Punjab SLDC representative informed that testing of SCADA upgradation under ULDC phase III is underway. All the material may be commissioned by March-26 and implementation of logic of ADMS may be executed by Sept-26.Punjab has submitted list of feeders vide mail dated 16.01.2026
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 351 nos. of circuit breakers have been mapped to ADMS, all 351 circuit breakers tested upto yard individually. Total 650CBs are to be mapped in phased manner. In 241st OCC Meeting, RVPN representative informed that 400 no. of feeders have been identified and the logic needs to be reviewed before ADMS implementation.
6	UP	Scheme implemented by NPCIL only	In 236th OCC meeting, UP SLDC representative stated that 300 No. of 132 KV Substations have been integrated with SCADA. SCADA upgradation under ULDC phase III is likely to be completed in the next 3 to 4 months. List of 33kV feeders to be mapped under ADMS is required from the Discoms. In the meeting held in Aug'25, UPSLDC had requested Discoms to provide the feeders list. Reminders were also sent to Discoms. However, 33 kV feeder list is still pending from the Discoms. MS, NRPC asked UPSLDC to have meeting with Discoms in its control areas and finalize of feeder list before next OCC meeting. In the 241st OCC Meeting, UPSLDC representative informed that 466 feeders have been identified and that the same would be updated to the NRPC after receiving consent from the DISCOMs and parallel testing of feeders at SLDC level is being carried out.
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	Delhi (DTL)	220kV	915.498	NIL	1	400kV Bamnauli Sub station	2 ERS tower available.
		400kV	249.19	02 Sets (32 towers)	1		
2	Himachal Pradesh (HPPTCL)	220 kV	659	NIL	1		
		400 kV	75.7	NIL	1		
3	Haryana (HVPNL)						ERS towers (6 nos tension and 6 nos suspension type 400kv level) in Haryana have been procured and already dispatched to 220kv Substation karnal and DD store Hisar.
4	Punjab (PSTCL)	400 kV	1666.43	2	3		
		220 kV	7921.991				
5	Rajasthan (RVPN)	132 kV	20706.876	1	4	01 No. ERS available at 220 kV GSS Heerapura, Jaipur	1 ERS set is available and work order has been placed for 3 more Sets.
		220 kV	16429.022		3		
		400 kV	8416.434		2		
		765 kV	425.498		1		
6	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				
7	Uttarakand (PTCUL)	400kV	418.394	NIL	1		Tender has been scraped due to single bidder.
		220kV	1045.135	NIL	1		
8	JKPTCL	132 kV	1040.63	8		Z Mohr, Kanispora Pathla T141 D/C, Kalanpora Delina Railway station T 3 & T4, Bagh-i Wahpoh	1 No. LILO USHP-I Kangan Line, 2 No. In Sheeri LJHP Line, 2 No. Delina Baramulla Railway Line, 1 No. Bagh-i Wanpoh (KPTL) and 2 No. Lying at the stores
		220 kV	419.34				
9	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		

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
10	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		
11	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		
12	PARBATI KOLDAM TRANSMISSION COMPANY LIMITED	400kV	457	NIL	1		Procurement under process.
13	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.
14	NRSS-XXIX TRANSMISSION LTD	400kV	853	NIL	1		
15	GURGAON PALWAL TRANSMISSION LTD	400kV	272	NIL	1		
16	RAPP Transmission Company Limited.	400kV	402	NIL	1		
17	NRSS XXXVI Transmission Limited	400kV	301.924/225.004	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.
18	POWERLINKS TRANSMISSIONLIMITED (PTL)	400 kV	1485				
19	POWERGRID HIMACHAL TRANSMISSION LTD	400 kV	454				
20	Powergrid Ajmer Phagi Transmission Limited	765 KV	269				
21	Powergrid Fatehgarh Transmission Limited	765 KV	372				
22	POWERGRID KALA AMB TRANSMISSION LTD	400 kV	2.38				
23	Powergrid Unchahar Transmission Ltd	400 kV	106.744				
24	Powergrid Khetri Transmission Limited	765 KV	292				
		400 kV	156.16				
25	POWERGRID VARANASI TRANSMISSION SYSTEM LTD	765 KV	379				
26	POWERGRID ALIGARH SIKAR TRANSMISSION LIMITED	765 KV	514				
27	ADANI TRANSMISSION INDIA LIMITED	400 kV	110	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.
28	Bikaner Khetri Transmission Limited (Adani)	765 KV	482				
29	Fatehgarh Bhadla Trasmission Limited (Adani)	765 kV HVAC 400 kV HVAC	282 10				
30	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.
31	AD Hydro Power Limited (Renew)	400 kV	360				
32	ARAVALI POWER COMPANY PVT LTD	400 kV	132				
33	POWEGRID BHADLA TRANSMISSION LIMITED	765 KV	405				
34	POWERGRID BIKANER TRANSMISSION SYSTEM LIMITED	400 kV	1353				
35	POWERGRID RAMGARH TRANSMISSION LIMITED	400 kV	188				
36	POWERGRID SIKAR TRANSMISSION LIMITED	765 KV	619				
		400 kV	267				

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

*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.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		Yes	Yes	Scheme under revision
3	Delhi IS	Delhi	Under revision				Scheme is being reviewed due to planned connectivity of 400kV Narela to Maharanibagh and removal of LILO of 400kV Mandola-Bawana at Maharanibagh. Delhi SLDC to submit the base case.
4	Lucknow-Unchahar IS	UP	Implemented				UPPTCL representative apprised forum that 132 KV S/S Husainganj --- line is on H-pole therefore OPGW laying is not possible on this line. However, the data of 132 KV S/S Husainganj is made available through GPRS.UPPTCL representative informed that the mock testing report have been submitted in June'25 and simulation files have also been submitted.

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 236th OCC meeting MS, NRPC asked PSTCL to get the designing aspect of both the islanding schemes in Punjab control area vetted by Punjab SLDC and thereafter submit the proposal to NRPC with the undertaking that earlier PSDF funding was not availed for these schemes. In the 240th OCC meeting, the Punjab SLDC representative informed that they have taken up with STUs for updated DPRs considering the latest applicable rates as per current FY.		-	-	-	-	-	-	-	-	-	-
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. In 235th OCC meeting, UPPTCL representative informed the forum that the proposal has been resubmitted to the PSDF Secretariat for funding under PSDF, following approval 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 236th OCC meeting MS, NRPC asked PSTCL to get the designing aspect of both the islanding schemes in Punjab control area vetted by Punjab SLDC and thereafter submit the proposal to NRPC with the undertaking that earlier PSDF funding was not availed for these schemes.In the 239th OCC meeting, the Punjab SLDC representative informed that the DPRs for both schemes had been received from PSTCL and are under examiantion.In 240th OCC Meeting Punjab SLDC representative informed that they have taken up with STUs for updated DPRs considering the latest applicable rates as per current FY.		-	-	-	-	-	-	-	-	-	-
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. In the 237th OCC meeting, the HPSLDC representative informed that HPSEBL has awarded the tender for implementation of both schemes on 27.10.2025, with a work completion period of six months.		-	-	-	-	-	-	-	-	-	-
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. In the 237th OCC meeting, the HPSLDC representative informed that HPSEBL has awarded the tender for implementation of both schemes on 27.10.2025, with a work completion period of six months.											

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/yyyy)	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																	

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		
							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
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	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	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	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	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	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	Yes	Jan-Feb 2026	3/1/2018	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
61	Rampur HPS, SJVNL	1	25 MW								SJVN	Power/Energy	NRLDC	June. 2023	Yes	June. 2028	June. 2023	Yes	June. 2028	June. 2023	Yes	June. 2028	Nov. 2023	Yes	Nov. 2028	Nov. 2023	Yes	Nov. 2028			
62		2	25 MW								SJVN		NRLDC	June. 2024	Yes	June. 2028	June. 2024	Yes	June. 2028	June. 2024	Yes	June. 2028	Nov. 2023	Yes	Nov. 2028	Nov. 2023	Yes	Nov. 2028			
63		3	25 MW								SJVN		NRLDC	June. 2025	Yes	June. 2028	June. 2025	Yes	June. 2028	June. 2025	Yes	June. 2028	Nov. 2023	Yes	Nov. 2028	Nov. 2023	Yes	Nov. 2028			
64		4	25 MW								SJVN		NRLDC	June. 2026	Yes	June. 2028	June. 2026	Yes	June. 2028	June. 2026	Yes	June. 2028	Jun. 2022	Yes	Jan. 2027	Jun. 2022	Yes	Jan. 2027			
65		5	25 MW								SJVN		NRLDC	June. 2027	Yes	June. 2028	June. 2027	Yes	June. 2028	June. 2027	Yes	June. 2028	Jun. 2022	Yes	Jan. 2027	Jun. 2022	Yes	Jan. 2027			
66		6	25 MW								SJVN		NRLDC	June. 2028	Yes	June. 2028	June. 2028	Yes	June. 2028	June. 2028	Yes	June. 2028	Jun. 2022	Yes	Jan. 2027	Jun. 2022	Yes	Jan. 2027			
67	Karcham Wangtoo Hydro-Electric Plant	1	261.25 MW								JSW Hydro	Power/Energy	NRLDC		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027			
68		2	261.25 MW								JSW Hydro		NRLDC		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027			
69		3	261.25 MW								JSW Hydro		NRLDC		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027			
70		4	261.25 MW								JSW Hydro		NRLDC		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027		Yes	Dec 2026 to Feb 2027			
71	AD Hydro Power Ltd.	Unit-1	96MW	106.667 MVA	BHEL BHOPAL	16.09.2010	11kv/ 220kv	135MVA	4/9	ROR	AD Hydro Power Ltd.	Power/ Energy	NRLDC			Nov 26			Nov 26	2/9/2021		Nov 26	7/10/2021		Nov 26	N.A	N.A	N.A	N.A	N.A	N.A
72	AD Hydro Power Ltd.	Unit-2	96MW	106.667 MVA	BHEL BHOPAL	18.09.2010	11kv/ 220kv	135MVA	4/9	ROR	AD Hydro Power Ltd.	Power/ Energy	NRLDC			Nov 26			Nov 26	2/9/2021		Nov 26	7/10/2021		Nov 26	N.A	N.A	N.A	N.A	N.A	N.A
	Notice: 1. Only PSS RG Mo testing done in 2021 2. AGC not implemented																															
73	MPCL	Unit-1	43MW	57.5 MVA	BHEL BHOPAL	05.07.2001	11kV/ 132kV	58MVA	3/9	ROR	MPCL	Power/ Energy	HPSLDC			Nov 26			Nov 26	6/11/2023		Nov 26			Nov 26	N.A	N.A	N.A	N.A	N.A	N.A
74	MPCL	Unit-2	43MW	57.5 MVA	BHEL BHOPAL	05.07.2001	11kV/ 132kV	58MVA	3/9	ROR	MPCL	Power/ Energy	HPSLDC			Nov 26			Nov 26	6/11/2023		Nov 26			Nov 26	N.A	N.A	N.A	N.A	N.A	N.A
75	Singoli Bhatwari HEP	1	33	36.67	Voith	19.11.2020	11/220 KV	42	6-Mar		ReNew Jal Urja Private Limited	Power/Energy	NR		YES	31.03.2026		YES	31.03.2026		YES	31.03.2026		YES	31.03.2026		YES	31.03.2026	N.A	N.A	N.A
		2	33	36.67	Voith	29.12.2020	11/220 KV	42	6-Mar																							
		3	33	36.67	Voith	01.01.2021	11/220 KV	42	6-Mar	ROR																							
77	Vishnuprayag Hydro Electric Plant	1	100 MW	111.1 MVA	Alstom (Now GE)	6/17/2006	13.8 kV/400 kV (in bank)	Single Phase 3 X 41 MVA	3 Total TAPS -	RoR	JPVL	Private	UPSLDC, Uttar Pradesh							2/6/2021		Jan-Feb, 2027	16.04.2021		Feb.-March 2027						
		2	100 MW	111.1 MVA	Alstom (Now GE)	7/14/2006	13.8 kV/400	Single Phase	Present TAP -	RoR	JPVL	Private								4/6/2021			17.04.2021		Feb.-March						
		3	100 MW	111.1 MVA	Alstom (Now GE)	8/31/2006	13.8 kV/400	Single Phase	Present TAP -	RoR	JPVL	Private								4/6/2021			16.04.2021		Feb.-March						
		4	100 MW	111.1 MVA	Alstom (Now GE)	10/13/2006	13.8 kV/400	Single Phase	Present TAP -	RoR	JPVL	Private					Not Applicable			2/5/2021			14.04.2021		Feb.-March				Not Applicable		
78	Baspa II HPS	1	100 MW								JSW Hydro											Dec-26 to Feb-27			Dec-26 to Feb-27						Dec-26 to Feb-27
		2	100 MW								JSW Hydro																					
		3	100 MW								JSW Hydro																					
	Notice: 1. Only RG Mo testing done in 2023 2. AGC not implemented																															
79	Bhaba Power House	3	120	132	Bhel	May-89	11/220 KV	50	08/13	Hydro	HPSEBL	SSGS	HP Control Area	5/17/2021	No	Nov-26	1989	yes	Nov-26	5/17/2021	No	Nov-26	5/17/2021	no	Nov-26	5/17/2021	no	Nov-26	5/17/2021	no	Nov-26
80	Giri power House	Unit-1	30MW	33.4	BHEL Haridwar	16.04.1978	11/132KV	40MVA	4:05	R.O.R	HPSEBL	SSGS	HP Control Area	-	Yes	25.02.2026	-	Yes	25.02.2026	-	Yes	25.02.2026	-	Yes	25.02.2026	-	Yes	25.02.2026	-	Yes	25.02.2026
		Unit-2	30MW			30.06.1978	11/132KV	40MVA	4:05	R.O.R	HPSEBL			-	Yes	25.05.2026	-	Yes	25.05.2026	-	Yes	25.05.2026	-	Yes	25.05.2026	-	Yes	25.05.2026	-	Yes	25.05.2026
81	Malana-I HEP	2	86	47.78	BHEL	7/5/2001	11/132	58	3/9	Hydro	MPCL	IPP	HP Control Area	-	No	12/21/2026	-	No	12/21/2026	11/5/2023	No	12/21/2026	-	No	12/21/2026	11/5/2023	No	11/5/2028	11/5/2023	No	11/5/2028
82	Malana-II HEP	1	50 MW	55.56 MVA	DEC China	12.07.2012	11/132 KV	63.9 Mva	11/132 Kv (4 No/ 6 No)	Hydro Electric Project	Everest Power Pvt. Ltd.	Private (IPP)	HP Control	3/8/2011	Yes	28/02/2026	3/8/2011	Yes	28/02/2026	3/8/2011	Yes	28/02/2026	3/8/2011	Yes	28/02/2026	3/8/2011	Yes	28/02/2026	3/8/2011	Yes	28/02/2026

82	Shahnehar HEP	2	50 MW	55.56 MVA	DEC China	12.07.2012	11/132 KV	63.9 Mva	11/132 Kv (4 No/ 6 No)	Hydro Electric Project	Everest Power Pvt. Ltd.	Private (IPP)	Area	12/8/2011	Yes	15/03/2026	12/8/2011	Yes	15/03/2026	12/8/2011	Yes	15/03/2026	12/8/2011	Yes	15/03/2026	12/8/2011	Yes	15/03/2026	12/8/2011	Yes	15/03/2026
83	Bajoli Holi HEP	1	60	66.67	GE Hydro	28.03.2022	11/220 kV	81 MVA	2.95	Hydro	Bajoli Holi Hydro Power Pvt. Ltd.	IPP	HP Control Area	05.04.2022	No	Mar-27	30.03.2022	No	Mar-27	30.03.2022	No	Mar-27	30.03.2022	No	Mar-27	30.03.2022	No	Mar-27	30.03.2022	No	Mar-27
		2	60	66.67	GE Hydro									09.04.2022																	
		3	60	66.67	GE Hydro									02.04.2022																	
84	Naitwar Mori Hydro Power Station	UNIT-I	30 MW	35.290 MVA	VOITH	24/11/23	11kV/220kV	3 x 13 MVA	Tap Ratio - 4/5	RoR	RoR	SJVN	HP Control Area	21/11/23	NO	NA	18/11/23	NO	NA	21/11/23	NO	NA	19/11/23	NO	NA	12/3/2023	NA	NA	12/3/2023	NA	NA
	Naitwar Mori Hydro Power Station	UNIT-II	30 MW	35.290 MVA	VOITH	12/04/23	11kV/220kV	3 x 13 MVA	Tap Ratio - 4/5		RoR	SJVN		12/05/23	NO	NA	12/02/23	NO	NA	12/05/23	NO	NA	12/03/23	NO	NA	11/19/2023	NA	NA	11/19/2023	NA	NA
85	Sawra Kuddu HEP	I	37	41.1	ANDRITZ Hydro Pvt Ltd	21.01.2021	220/11kV	45 MVA	Tap 9b/Tap 17	Hydro	HPPCL	SSGS	HP Control Area	Nov-20	YES	Nov-26	Nov-20	YES	Nov-26	Nov-20	YES	Nov-26	Dec-21	YES	Nov-26	Dec-21	YES	Nov-26	Dec-21	YES	Nov-26
		II	37	41.1										Nov-20	YES	Nov-26	Nov-20	YES	Nov-26	Nov-20	YES	Nov-26	Dec-21	YES	Nov-26	Dec-21	YES	Nov-26	Dec-21	YES	Nov-26
		III	37	41.1										Nov-20	YES	Nov-26	Nov-20	YES	Nov-26	Nov-20	YES	Nov-26	Dec-21	YES	Nov-26	Dec-21	YES	Nov-26	Dec-21	YES	Nov-26
86	Kashang HEP	3	195	72.2	ANDRITZ Hydro	01.09.2016	11 KV / 220/√3 KV	26.5	Ratio - 01 (09 & Total -17 Nos)	Hydro	HPPCL	SSGS	HP control area	During 2016	Yes	Dec-26	During 2016	Yes	Dec-26	During 2016	Yes	Dec-26	During 2016	Yes	Dec-26	During 2016	Yes	Dec-26	During 2016	Yes	Dec-26
87	Uhl Stage-III,HEP, Chullah	1	33.33MW	34MVA	BHEL	08.02.2025	11KV/132KV	41 MVA	5/13	Hydro Electric Power Generating Station	BVPCL/HPSEBL	SSGS	HP control area	21.02.2025	No	21.02.2030	21.02.2025	No	21.02.2030	04.02.2025 to 07.02.2025	No	11.02.2030	29.01.2025 to 03.02.2025	No	13.02.2030	03.01.2025 TO 10.02.2025	No	10.02.2030	03.01.2025 TO 10.02.2025	No	10.02.2030
		2	33.33MW	34MVA		28.01.2025	11KV/132KV	41 MVA	5/13		BVPCL/HPSEBL	SSGS		20.02.2025	No	20.02.2030	20.02.2025	No	20.02.2030	24.01.2025 to 27.01.2025	No	21.01.2030	19.01.2025 to 23.01.2025	No	23.01.2030	03.01.2025 TO 19.01.2025	No	19.01.2030	03.01.2025 TO 19.01.2025	No	19.01.2030
		3	33.33MW	34MVA		18.02.2025	11KV/132KV	41 MVA	5/13		BVPCL/HPSEBL	SSGS		20.02.2025	No	20.02.2030	20.02.2025	No	20.02.2030	14.02.2025 to 17.02.2025	No	19.02.2030	09.02.2025 to13.02.2025	No	21.02.2030	29.01.2025 TO 17.02.2025	No	17.02.2030	29.01.2025 TO 17.02.2025	No	17.02.2030
88	Koldam	1	200								NTPC Limited	Central	NRLDC			12/20/2027			12/20/2027			12/20/2027			12/20/2027			12/20/2027		12/20/2027
89	Koldam	2	200								NTPC Limited	Central	NRLDC			12/22/2027			12/22/2027			12/22/2027			12/22/2027			12/22/2027		12/22/2027
90	Koldam	3	200								NTPC Limited	Central	NRLDC			12/20/2028			12/20/2028			12/20/2028			12/20/2028			12/20/2028		12/20/2028
91	Koldam	4	200								NTPC Limited	Central	NRLDC			12/22/2028			12/22/2028			12/22/2028			12/22/2028			12/22/2028		12/22/2028
92	Singrauli Hydro	1	4								NTPC Limited	Central	NRLDC			12/20/2028			12/20/2028			12/20/2028			12/20/2028			12/20/2028		12/20/2028
93	Singrauli Hydro	2	4								NTPC Limited	Central	NRLDC			12/22/2028			12/22/2028			12/22/2028			12/22/2028			12/22/2028		12/22/2028
94	3*42MW Larji HEP	3	126	138	BHEL Haridwar	Unit I: 19.02.2007 Unit II: 12.10.2006 Unit III: 25.09.2006	11/132 KV	52 MVA	05/13	HPSEBL	SSGS	HP Control Area	Hydro	UnitI: Jan - 2007 UnitII: Sep - 2006 UnitIII: August - 2006	Yes	Aug-27	2006	yes	2027	2024-25 (Excitation system upgraded with latest BHEL excitation system during capital maintenance and upgradation) UnitI : April 2024 UnitII: July 2024 UnitIII: December 2024	Yes	UnitI: March 2029 UnitII: Febuary 2029 UnitIII: October 2029	2025-26 (G-40 Governor is replaced with latest servo valve based HMC Governor including PP set, MIV HCP and ECP during capital maintenance and upgradation) **UnitI: May 2025 UnitII: Not yet UnitIII: Not yet**	Yes	UnitI: April 2030 UnitII: Febuary 2026 UnitIII: March 2026	2025-26 (G-40 Governor is replaced with latest servo valve based HMC Governor including PP set, MIV HCP and ECP during capital maintenance and upgradation) **UnitI: May 2025 UnitII: Not yet UnitIII: Not yet**	Yes	UnitI: April 2030 UnitII: Febuary 2026 UnitIII: March 2026	2025-26 (G-40 Governor is replaced with latest servo valve based HMC Governor including PP set, MIV HCP and ECP during capital maintenance and upgradation) **UnitI: May 2025 UnitII: Not yet UnitIII: Not yet**	Yes	UnitI: April 2030 UnitII: February 2026 UnitIII: March 2026

Thermal Generators

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		
							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
1	Rosa Power Supply Co Ltd	I	300 MW	353	Shanghai Electric Co Ltd, China	12.03.2010 00:00 Hrs	20KV / 220 KV	370 OFAF	5	Non-Pit Head	Rosa Power Supply Co Ltd	Private	Reliance Power	Coal Based	Real and Reactive Power Capability assessment was completed during unit commisioning.All units are runing with dual channel auto mode AVR with governor in auto control mode.		FY 2028-29	Reactive Power Control Capability as per CEA Technical Standards for connectivity was completed during unit commisioning		FY 2028-29	24.09.2024		FY 2028-29	Turbine/Governor and Load Control or Active Power/frequency Control Functions are enabled & working fine in all units.Load correction in auto as per frequency variation is enabled & same has been verified by UPSLDC.		FY 2028-29	Governor performance testing done during comissioning of the units , also all units are runing in auto governor mode.		FY 2028-29
2	Rosa Power Supply Co Ltd	II	300 MW	353	Shanghai Electric Co Ltd, China	30.06.2010	20KV / 220 KV	370 OFAF	5	Non-Pit Head	Rosa Power Supply Co Ltd	Private	Reliance Power	Coal Based			FY 2028-29			FY 2028-29	15.01.2022		FY 2028-29			FY 2028-29			FY 2028-29
3	Rosa Power Supply Co Ltd	III	300 MW	353	Shanghai Electric Co Ltd, China	01.01.2012 24:00 hrs	20 KV / 400 KV	370 OFAF	5	Non-Pit Head	Rosa Power Supply Co Ltd	Private	Reliance Power	Coal Based			FY 2028-29			FY 2028-29	Not Tested		FY 2028-29			FY 2028-29			FY 2028-29
4	Rosa Power Supply Co Ltd	IV	300 MW	353	Shanghai Electric Co Ltd, China	31.03.2012 24:00 hrs	20 KV / 400 KV	370 OFAF	5	Non-Pit Head	Rosa Power Supply Co Ltd	Private	Reliance Power	Coal Based			FY 2028-29			FY 2028-29	05.10.2021		FY 2028-29			FY 2028-29			FY 2028-29
7	LPGCL	1	660	777	BHEL	1-Oct-15	800/√3/21/√3	3x275	0\0\5	Railway	LPGCL, Lalitpur	Private	Northen region		Not applicable		10/25/2026	Not applicable		10/25/2026	Not applicable		10/25/2026	Not applicable		10/25/2026	Not applicable		10/25/2026
8	LPGCL	2	660	777	BHEL	14-Oct-16	800/√3/21/√3	3x275	0\0\5	Railway	LPGCL, Lalitpur	Private	Northen region		Not applicable		1/20/2027	Not applicable		1/20/2027	Not applicable		1/20/2027	Not applicable		1/20/2027	Not applicable		1/20/2027
9	LPGCL	3	660	777	BHEL	23-Dec-16	800/√3/21/√3	3x275	0\0\5	Railway	LPGCL, Lalitpur	Private	Northen region		Not applicable		12/15/2027	Not applicable		12/15/2027	Not applicable		12/15/2027	Not applicable		12/15/2027	Not applicable		12/15/2027
10	PPGCL	I	660 MW	777	BHEL	29.02.2016	KV	3X275	4 out of 5	Head	PPGCL, Prayagraj	IPP	SLDC Lucknow	STU	-	-	2026	-	-	2026	Nov 2022	No	27-Nov	13-11-2024	-	-	9/15/2025	-	-
11	PPGCL	II	660 MW	777	BHEL	10.09.2016	KV	3X275	4 out of 5	Head	PPGCL, Prayagraj	IPP	SLDC Lucknow	STU	-	-	2027	-	-	2027	Nov 2022	No	27-Nov	14-11-2024	-	-	9/15/2025	-	-
12	PPGCL	III	660 MW	777	BHEL	26.05.2017	KV	3X275	4 out of 5	Head	PPGCL, Prayagraj	IPP	SLDC Lucknow	STU	-	-	2026	-	-	2026	Nov 2022	No	27-Nov	-	Yes	26-Nov	9/15/2025	-	-
13	GATP	1	270	315	BHEL	4/5/2016	235KV/16.5KV	315	13/17	THROUGH RAIL	GATP	POWER/ENERGY	PSPCL	CRITICAL	NOT DONE			NOT DONE	YES	Dec-26	NOT DONE	YES	Dec-26	NOT DONE	YES	Dec-26	NOT DONE	YES	Dec-26
14	GATP	2	270	315	BHEL	4/15/2026	235KV/16.5KV	315	13/17	THROUGH RAIL	GATP	POWER/ENERGY	PSPCL	CRITICAL	NOT DONE			NOT DONE	YES	Dec-26	NOT DONE	YES	Dec-26	NOT DONE	YES	Dec-26	NOT DONE	YES	Dec-26
15	APCPL-IGSTPS Jhajjar	1															Jan-2026 13-02-2027						13-02-2027			14-02-2027			Dec-26
16	APCPL-IGSTPS Jhajjar	2															FEB-2026 25-10-2025			25-10-2025			26-10-2025						Dec-26
17	APCPL-IGSTPS Jhajjar	3															May-2026 30-01-2026			30-01-2026			31-01-2026						Dec-26
18	TSPL	Unit-2	660MW	MVA	SEPCO	5th July-2014	22 /420 KV	3*270	3/5	TSPL	IPP	SLDC Punjab	STU	07.05.2022		25-Nov	Same as PSS Schedule			22.10.2021									
19	TSPL	Unit-1	660MW	MVA	SEPCO	16-Aug	22 /420 KV	3*270	3/5	TSPL	IPP	SLDC Punjab	STU	25.12.2023		26-Nov	Same as PSS Schedule			24.10.2021									
20	TSPL	Unit-3	660MW	MVA	SEPCO	15-Nov	22 /420 KV	3*270	3/5	TSPL	IPP	SLDC Punjab	STU	25.12.2024		27-Feb	Same as PSS Schedule			15.12.2021									
21		1	660 MW	776.471	GE	21.02.2024	22kV/765kV	825	3					Thermal	12.08.2024	No	11.08.2029	12.08.2024	No	11.08.2029	12.08.2024	No	11.08.2029	Not done	Yes	Feb, 2026	Not done	Yes	Feb, 2026
22	Jawaharpur Thermal Power Station	2	660MW	776.471	GE	25.12.2024	22kV/765kV	825	3	Non Pit Head	UPRVUNL	Power	UP	Thermal	02.12.2024	No	01.12.2029	02.12.2024	No	01.12.2029	02.12.2024	No	01.12.2029	Not done	Yes	March, 2026	Not done	Yes	March, 2026
23		4	500 MW	589	Toshiba	01.03.1994	21KV/420 KV	200MVA	2.5%(3/5)	Pit head	UPRVUNL	Power	N-2	Thermal	Data not available	Yes	26-Nov	Data not available	Yes	26-Nov	2014	Yes	26-Nov	Data not available	Yes	26-Nov	Not applicable		
24	BTPS Anpara Thermal power project	5	500 MW	589	Toshiba	01.10.1994	21KV/420 KV	200MVA	2.5%(3/5)	Pit head	UPRVUNL	Power	N-2	Thermal	Data not available	Yes	26-Nov	Data not available	Yes	26-Nov	23-Apr	Yes	26-Apr	Data not available	Yes	26-Nov	Not applicable		
25		1	210 MW	247	BHEL	1983	15.75/400KV	250	3	Pit Head	UPRVUNL	Power	N-2	Thermal	Data not Available	Yes	2027	Data not Available	Yes	2027	24-Mar	Yes	2027	Data not Available	Yes	2027			
26		2	210 MW	247	BHEL	1983	15.75/400KV	250	3	Pit Head	UPRVUNL	Power	N-2	Thermal	Data not Available	Yes	26-Dec	Data not Available	Yes	26-Dec	23-Oct	Yes	26-Dec	Data not Available	Yes	26-Dec			
27	ANPARA	3	210 MW	247	BHEL	1983	15.75/400KV	250	3	Pit Head	UPRVUNL	Power	N-2	Thermal	Data not Available	Yes	2027	Data not Available	Yes	2027	23-Jan	Yes	2027	Data not Available	Yes	2027	N/A		
28	Raipura TPP	1	700	828	L&T MHI	2/1/2014	20 / 420	3*283	3/5	Non Pit head	Nabha Power Ltd	Thermal	(PSTCL)	IPP		NA			NA		3/8/2022			Yes	2026			
29	Raipura TPP	2	700	828	L&T MHI	7/10/2014	20 / 420	3*283	3/5	Non Pit head	Nabha Power Ltd	Thermal	(PSTCL)	IPP		NA			NA		11/15/2021			Yes	2026			
30	Barsingsar Thermal Power Station	1	125	147	BHEL	20.01.2012	230/10.5	150	7/9	Pit Head	JdVVNL, AVVNL, JVVNL	Distribution	SLDC	SLDC		Yes	30.06.2026		Yes	30.06.2026		Yes	30.06.2026		Yes	30.06.2026		Yes	30.06.2026
31		2	125	147	BHEL	29.12.2011	230/10.5	150	7/9	Pit Head	JdVVNL, AVVNL, JVVNL	Distribution	SLDC	SLDC		Yes	30.06.2026		Yes	30.06.2026		Yes	30.06.2026		Yes	30.06.2026		Yes	30.06.2026
	Remarks by Barsingsar Thermal Power Station										Remarks: As per OEM (BHEL) recommendations, above tests may be completed by 30.06.2026													Remarks: As per OEM (BHEL) recommendations, as the modelling procedure to carry out the above tests is under development, and may be available after April-25, the above tests may be completed by 30.06.2026			Remarks: AGC is not a part of the original Main plant Erection package, hence the same may be excluded from the list of tesing to be carried out by BTPS. However possibilities will be explored for completion of Testing of Governer performance by 30.06.2026		
32	Singrauli	1	200							Coal	NTPC Limited	Central	NRLDC	Thermal			3/19/2028						3/19/2028			3/19/2028			3/19/2028
33	Singrauli	2	200							Coal	NTPC Limited	Central	NRLDC	Thermal			3/21/2028						3/21/2028			3/21/2028			3/21/2028
34	Singrauli	3	200							Coal	NTPC Limited	Central	NRLDC	Thermal			3/23/2028						3/23/2028			3/23/2028			3/23/2028
35	Singrauli	4	200							Coal	NTPC Limited	Central	NRLDC	Thermal			3/25/2028						3/25/2028			3/25/2028			3/25/2028
36	Singrauli	5	200							Coal	NTPC Limited	Central	NRLDC	Thermal			3/27/2028						3/27/2028			3/27/2028			3/27/2028
37	Singrauli	6	500							Coal	NTPC Limited	Central	NRLDC	Thermal			3/29/2028						3/29/2028			3/29/2028			3/29/2028
38	Singrauli	7	500							Coal	NTPC Limited	Central	NRLDC	Thermal			3/31/2028						3/31/2028			3/31/2028			3/31/2028
39	Rihand	1	500	588.235	GEC	01.01.1990	20/400 KV	3X201.67 MVA	14/19	Coal	NTPC Limited	Central	NRLDC	Thermal			18.11.2026			18.11.2026	03.03.2017	Yes	18.11.2026			3/21/2028			3/21/2028
40	Rihand	2	500	588.235	GEC	01.01.1991	20/400 KV	3X201.67 MVA	2R & 2B- 4/9 2Y- 12/19	Coal	NTPC Limited	Central	NRLDC	Thermal			9/30/2027			9/30/2027	02.07.2016	Yes	9/30/2027			3/23/2028			3/23/2028
41	Rihand	3	500	588	BHEL	15.08.2005	21/400 KV	3X200 MVA	6/9	Coal	NTPC Limited	Central	NRLDC	Thermal			03.08.2026			03.08.2026	15.08.2015	Yes	03.08.2026			3/25/2028			3/25/2028
42	Rihand	4	500	588	BHEL	01.04.2006	21/400 KV	3X200 MVA	6/9	Coal	NTPC Limited	Central	NRLDC	Thermal			28.02.2026			10/31/2025	25.05.2017	yes	28.02.2026			3/27/2028			3/27/2028
43	Rihand	5	500	588	BHEL	19.11.2012	21/400 KV	3X200 MVA	6/9	Coal	NTPC Limited	Central	NRLDC	Thermal			2/28/2026			2/28/2026	11.12.2014	Yes	2/28/2026			3/29/2028			3/29/2028
44	Rihand	6	500	588	BHEL	27.03.2014	21/400 KV	3X200 MVA	6/9	Coal	NTPC Limited	Central	NRLDC	Thermal			3/31/2027			3/31/2027	11.12.2014	Yes	18.11.2026			3/31/2028			3/31/2028
45	Tanda	5	660	776.50	GE					Coal	NTPC Limited	Central	NRLDC	Thermal			1/15/2027			1/15/2027			1/15/2027			3/29/2028			3/29/2028
46	Tanda	6	660	776.50	GE					Coal	NTPC Limited	Central	NRLDC	Thermal			4/15/2026			4/15/2026			4/15/2026			3/31/2028			3/31/2028
47	Unchahar	1	210	247	BHEL		15.75/242	250	4/5	Coal (Non-Pit head)	NTPC Limited	Central	NRLDC	Thermal			2/23/2026			2/23/2026			2/23/2026			3/21/2028			3/21/2028
48	Unchahar	2	210	247	BHEL		15.75/242	250	4/5	Coal (Non-Pit head)	NTPC Limited	Central	NRLDC	Thermal			2/24/2026			2/24/2026			2/24/2026			3/23/2028			3/23/2028
49	Unchahar	3	210	247	BHEL		15.75/237	250	3/5	Coal (Non-Pit head)	NTPC Limited	Central	NRLDC	Thermal			2/25/2026			2/25/2026			2/25/2026			3/25/2028			3/25/2028
50	Unchahar	4	210	247	BHEL		15.75/237	250	3/5	Coal (Non-Pit head)	NTPC Limited	Central	NRLDC	Thermal			2/26/2026			2/26/2026			2/26/2026			3/27/2028			3/27/2028
51	Unchahar	5	210	247	BHEL		15.75/237	250	3/5	Coal (Non-Pit head)	NTPC Limited	Central	NRLDC	Thermal			2/27/2026			2/27/2026			2/27/2026			3/29/2028			3/29/2028
52	Unchahar	6	500	588	BHEL		21/(420/√3)	3X200	4/9	Coal (Non-Pit head)	NTPC Limited	Central	NRLDC	Thermal			2/28/2026			2/28/2026			2/28/2026			3/31/2028			3/31/2028
53	Dadri Thermal	1	210							Coal	NTPC Limited	Central	NRLDC	Thermal			3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
54	Dadri Thermal	2	210							Coal	NTPC Limited	Central	NRLDC	Thermal			6/30/2026			9/30/2027			6/30/2026			6/30/2026			6/30/2026
55	Dadri Thermal	3	210							Coal	NTPC Limited	Central	NRLDC	Thermal			6/30/2026			10/31/2026			6/30/2026			6/30/2026			6/30/2026
56	Dadri Thermal	4	210							Coal	NTPC Limited	Central	NRLDC	Thermal			6/30/2026			3/31/2027			6/30/2026			6/30/2026			6/30/2026

57	Dadri Thermal	5	490							Coal	NTPC Limited	Central	NRLDC	Thermal			3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
58	Dadri Thermal	6	490							Coal	NTPC Limited	Central	NRLDC	Thermal			12/30/2026			12/30/2026			12/30/2026			12/30/2026			12/30/2026
59	APCPL-Jhajjar	1	500	588	BHEL	05.03.2011	409.5/21	3X200	409.5/21KV, 9	Non Pit Head	APCPL	Central	NRLDC	Thermal		Yes	31/01/2026		Yes	31/01/2026		Yes	31/01/2026			3/27/2028			3/27/2028
60	APCPL-Jhajjar	2	500	588	BHEL	21.04.2012	409.5/21	3X200	409.5/21KV, 9	Non Pit Head	APCPL	Central	NRLDC	Thermal	31/10/2025	No		31/10/2025	No		31/10/2025	No				3/29/2028			3/29/2028
61	APCPL-Jhajjar	3	500	588	BHEL	26.04.2013	409.5/21	3X200	409.5/21KV, 9	Non Pit Head	APCPL	Central	NRLDC	Thermal		Yes	31/01/2026		Yes	31/01/2026		Yes	31/01/2026			3/31/2028			3/31/2028

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.		
				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
	Rihand - Dadri LCC																							Mar'26
	Champa-Kurukshetra LCC																							Apr'26
	Ballia-Bhiwadi LCC																							Apr'26
	Vindhyachal BtB																							Sep'26

Tentative schedule for Periodic testing of HVDC/Facts Devices iro NR-III Region of POWERGRID

Sr. No.	HVDC Link/ FACTS	Proposed date of periodic testing
1	Rihand - Dadri LCC	Mar'26
2	Ballia-Bhiwadi LCC	Apr'26
3	NEA LCC	Aug'25
4	Vindhyachal BtB	Sep'26
5	Lucknow STATCOM	Apr'26

Gas Based Generators

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		
			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
						NTPC Limited	Central	NRLDC				3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				3/31/2026			3/31/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				6/7/2028			6/5/2028			6/6/2028			6/6/2028			6/6/2028
						NTPC Limited	Central	NRLDC				6/10/2028			6/8/2028			6/9/2028			6/9/2028			6/9/2028
						NTPC Limited	Central	NRLDC				6/14/2028			6/12/2028			6/13/2028			6/13/2028			6/13/2028
						NTPC Limited	Central	NRLDC				6/17/2028			6/15/2028			6/16/2028			6/16/2028			6/16/2028
						NTPC Limited	Central	NRLDC				6/22/2028			6/20/2028			6/21/2028			6/21/2028			6/21/2028
						NTPC Limited	Central	NRLDC				6/25/2028			6/23/2028			6/24/2028			6/24/2028			6/24/2028
						NTPC Limited	Central	NRLDC				7/31/2026			4/30/2026			3/31/2026			3/31/2026			3/31/2026
						NTPC Limited	Central	NRLDC				8/28/2026			10/31/2026			12/24/2026			12/24/2026			12/24/2026
						NTPC Limited	Central	NRLDC				10/30/2026			9/30/2026			11/27/2026			11/27/2026			11/27/2026
						NTPC Limited	Central	NRLDC				4/30/2026			4/30/2026			4/30/2026			4/30/2026			4/30/2026
						NTPC Limited	Central	NRLDC				2/15/2027			2/15/2027			2/15/2027			2/15/2027			2/15/2027
						NTPC Limited	Central	NRLDC				12/30/2026			12/30/2026			12/30/2026			12/30/2026			12/30/2026
						NTPC Limited	Central	NRLDC				12/25/2027			12/25/2027			12/25/2027			12/25/2027			12/25/2027

Annexure-I

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	Remarks
												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	
1	Clean Solar Power Bhadl_R-1 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	15-02-20	Clean Solar Power Bhadl_R-1 Pvt Ltd	MNRE		Huawei	SUN2000- 95KTL	Siemens	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25	15-02-20	Yes	Dec-25		
2	Clean Solar Power Bhadl_R-2 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	28-02-20	Clean Solar Power Bhadl_R-2 Pvt Ltd	MNRE		Huawei	SUN2000- 95KTL	Siemens	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25	28-02-20	Yes	Dec-25		
3	Clean Solar Power Bhadl_R-3 Pvt Ltd	220 KV SUCRL PSS-2	100	Solar	10-12-19	Clean Solar Power Bhadl_R-3 Pvt Ltd	MNRE		Huawei	SUN2000- 95KTL	Adaptive	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25	10-12-19	Yes	Dec-25		
4	Clean Solar Power Jodhpur Pvt Ltd	220 KV CSPJ PSS	250	Solar	21-04-22	Clean Solar Power Jodhpur Pvt Ltd	MNRE		Sungrow	SG250HX-IN & SG2500HV	Adaptive	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27	21-04-22	NO	20-04-27		
5	Amplus AGES	220 KV Bikaner-2 GSS	100		8/2/2024								NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		
6	GRIAN	220 KV Bikaner-2 GSS	100		6/2/2024								NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		
7	Onevolt	220 KV Bikaner-2 GSS	100		2/2/2024								NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		NO	31-12-2029		
8	Avaada Sunce Energy Pvt. Ltd.	PGCIL, Bikaner 1	350 MW	Solar	8-Apr-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	EP-3125-HA-UD	Adaptive Engineering Pvt. Ltd.	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027		
9	Avaada Sustainable RJ Project Pvt. Ltd.	PGCIL, Bikaner 1	300 MW	Solar	11-May-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	EP-3125-HA-UD	Adaptive Engineering Pvt. Ltd.	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027		
10	Avaada RJHN Pvt. Ltd.	PGCIL, Bikaner 1	240 MW	Solar	11-May-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	EP-3125-HA-UD: 137.5 MW SP-250K-INH: 102.5 MW	Adaptive Engineering Pvt. Ltd.	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027	22-Aug	No	1/18/2027		
11	Avaada Sunrays Energy Private Limited	Bhadla-II (PG)	320 MW	Solar	10-Dec-22	Avaada Energy Private Limited	Power	MCR / PPC	Sineng Electric	SP-250K-INH	Armax Automation	23-May	No	1/17/2028	23-May	No	1/17/2028	23-May	No	1/17/2028	23-May	No	1/17/2028	23-May	No	1/17/2028		
12	Singrauli Solar		15	Solar		NTPC Limited	Central	NRLDC						12/22/2028						12/22/2028			12/22/2028				
13	Unchahar Solar		10	Solar		NTPC Limited	Central	NRLDC						12/23/2028						12/23/2028			12/23/2028				
14	Dadri Solar		5	Solar		NTPC Limited	Central	NRLDC						12/24/2028						12/24/2028			12/24/2028				
15	Auraiya Solar		20	Solar		NTPC Limited	Central	NRLDC						12/25/2028						12/25/2028			12/25/2028				
16	Auraiya Floating Solar		20	Solar		NTPC Limited	Central	NRLDC						12/26/2028						12/26/2028			12/26/2028				
17	Faridabad Solar		5	Solar		NTPC Limited	Central	NRLDC						12/27/2028						12/27/2028			12/27/2028				
18	Anta Solar		90	Solar		NTPC Limited	Central	NRLDC						12/28/2028						12/28/2028			12/28/2028				
19	Nokh Solar-1		167	Solar		NTPC Limited	Central	NRLDC						12/29/2028						12/29/2028			12/29/2028				
20	Nokh Solar-2		245	Solar		NTPC Limited	Central	NRLDC						12/30/2028						12/30/2028			12/30/2028				
21	Nokh Solar-3		245	Solar		NTPC Limited	Central	NRLDC						12/31/2028						12/31/2028			12/31/2028				
22	TPREL (Chhayan)	PGCIL Bhadla-1	300	Solar	8/24/2021	TPREL	Power		TMEIC (TVH-L2500EQ-2)/Sungrow (SG3125HV-20)	TMEIC (TVH-L2500EQ-2)/Sungrow (SG3125HV-20)	ABB/Schneider		Yes	Aug-26		Yes	Aug-26	9/10/2025	No	Aug-26		Yes	Aug-26		Yes	Aug-26		
23	TATA POWER GREEN ENERGY	PGCIL Bikaner-1	225	Solar	8/2/2022	TPREL	Power		Sungrow (SG3125HV-32)	Sungrow (SG3125HV-32)	Schneider		Yes	Jul-27		Yes	Jul-27	9/3/2025	No	Jul-27		Yes	Jul-27		Yes	Jul-27		
24	TP Saurya Limited	PGCIL Bikaner-1	110	Solar	6/1/2023	TPREL	Power		Sungrow (SG3125HV-32)	Sungrow (SG3125HV-32)	Schneider	Dec-23	No	Mar-28	Dec-23	No	Mar-28	4/9/2025	No	Mar-28	Dec-23	No	Mar-28	Dec-23	No	Mar-28		
25	Banderwala TP Saurya Limited	PGCIL Bikaner- 2	300	Solar	10/31/2025	TPREL	Power		Sungrow (SG4400UD-20)	Sungrow (SG4400UD-20)	Schneider	Sep-25	No	Sep-30	Sep-25	No	Sep-30	Feb-25	No	Sep-30	Sep-25	No	Sep-30	Sep-25	No	Sep-30		
26	ReNew Solar Power Private Limited	Bhadla	50											Oct-26						Oct-26			Oct-26				
27	ReNew Solar Power Private Limited	Bikaner	250											Nov-26						Nov-26			Nov-26				
28	ReNew Solar Energy Jharkhand 3 Pvt Ltd	SECI-IV Karada	300											Dec-26						Dec-26			Dec-26				
29	ReNew Surya Ravi Private Limited	Bikaner B2B	300											Apr-28						Apr-28			Apr-28				
30	ReNew Surya Vihaan Pvt Ltd. + Renew Surya Pratap Private Limited	SECI-IX 100MW + B2B Amazon 200MW	100+200											May-29						May-29			May-29				
31	ReNew Surya Roshni Pvt Ltd.	RTC 400MW	400											May-29						May-29			May-29				
32	Neemba ReNew Surya Vihan Pvt Ltd	SECI-VIII 200 MW	200											May-30						May-30			May-30				
33	ReNew Surya Jyoti Pvt. Ltd	D-2 210 MW	210											May-30						May-30			May-30				

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.		
						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
1	Bhadla-2	STATCOM-1&2	.+/- 600 MVAr, 400kV	POWERGRID	SIEMENS	July-2023.	NO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	July-2023.	NO	NOT APPLICABLE
2	Fatehgarh-2	STATCOM-1&2	.+/- 600 MVAr, 400kV	POWERGRID	SIEMENS	Oct-2023.	NO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Oct-2023.	NO	NOT APPLICABLE
3	Bikaner-2	STATCOM	.+/- 300 MVAr, 400kV	POWERGRID	SIEMENS	Aug-2023.	NO	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Aug-2023.	NO	NOT APPLICABLE
4	KANKROLI	SVC	.+400 MVAr, -300MVAr, 400kV	POWERGRID	SIEMENS	Dec-2016.	YES	Nov-2025.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	Dec-2016.	YES	Nov-2025.
5	Nalagarh	STATCOM											YES	Oct-25
6	Ludhiana	SVC											YES	Oct-25
7	New Wanpoh	SVC											YES	Oct-25
8	Lucknow	STATCOM											YES	26-Apr

Annexure-A.IV.C

List of generators who have not furnished the testing schedule for FY 2026-2027

Operator	Generating Unit	Installed Capacity	Tests for which schedule is to be furnished
ADANI POWER LTD.	KAWAI TPS (ADANI POWER) Unit 1	660	No schedule given
ADANI POWER LTD.	KAWAI TPS (ADANI POWER) Unit 2	660	No schedule given
ADPCL	ALLAIN DUHANGAN HPS Unit 1	96	No schedule given
ADPCL	ALLAIN DUHANGAN HPS Unit 2	96	No schedule given
AHPCL	ALAKNANDA HPS Unit 1	82.5	No schedule given
AHPCL	ALAKNANDA HPS Unit 2	82.5	No schedule given
AHPCL	ALAKNANDA HPS Unit 3	82.5	No schedule given
AHPCL	ALAKNANDA HPS Unit 4	82.5	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-1	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-2	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-3	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-4	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit L-5	126	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-1	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-2	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-3	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-4	157	No schedule given
BBMB	BHAKRA LEFT & RIGHT HPS Unit R-5	157	No schedule given
BBMB	GANGUWAL HPS Unit 1	27.99	No schedule given
BBMB	GANGUWAL HPS Unit 2	24.2	No schedule given
BBMB	GANGUWAL HPS Unit 3	24.2	No schedule given
BBMB	KOTLA HPS Unit 1	28.94	No schedule given
BBMB	KOTLA HPS Unit 2	24.2	No schedule given
BBMB	KOTLA HPS Unit 3	24.2	No schedule given
BBMB	DEHAR HPS Unit 1	165	No schedule given
BBMB	DEHAR HPS Unit 2	165	No schedule given
BBMB	DEHAR HPS Unit 3	165	No schedule given
BBMB	DEHAR HPS Unit 4	165	No schedule given
BBMB	DEHAR HPS Unit 5	165	No schedule given
BBMB	DEHAR HPS Unit 6	165	No schedule given
BBMB	PONG HPS Unit 1	66	No schedule given
BBMB	PONG HPS Unit 2	66	No schedule given
BBMB	PONG HPS Unit 3	66	No schedule given
BBMB	PONG HPS Unit 4	66	No schedule given
BBMB	PONG HPS Unit 5	66	No schedule given
BBMB	PONG HPS Unit 6	66	No schedule given
CLP India	MAHATMA GANDHI TPS (CLP JHAJJAR) Unit 1	660	Periodic testing is scheduled tentatively in Oct'28
CLP India	MAHATMA GANDHI TPS (CLP JHAJJAR) Unit 2	660	Periodic testing is scheduled tentatively in Oct'28
GAMA INFRAPROP PVT.	GAMA CCPP Unit GT-1	75	No schedule given
GAMA INFRAPROP PVT.	GAMA CCPP Unit GT-2	75	No schedule given
GAMA INFRAPROP PVT.	GAMA CCPP Unit ST	75	No schedule given
Greenko	BUDHIL HPS Unit 1	35	No schedule given
Greenko	BUDHIL HPS Unit 2	35	No schedule given
HP Sorang	HP SORANG HPS Unit 1	100	No schedule given
HPGCL	PANIPAT TPS Unit 6	210	No schedule given
HPGCL	PANIPAT TPS Unit 7	250	No schedule given
HPGCL	PANIPAT TPS Unit 8	250	No schedule given
HPGCL	RAJIV GANDHI TPS HISAR Unit 1	600	No schedule given
HPGCL	RAJIV GANDHI TPS HISAR Unit 2	600	No schedule given
HPGCL	DCR TPS YAMUNA NAGAR Unit 1	300	No schedule given
HPGCL	DCR TPS YAMUNA NAGAR Unit 2	300	No schedule given
HPPCL	SAINJ HPS Unit 1	50	No schedule given
HPPCL	SAINJ HPS Unit 2	50	No schedule given
JAYPEE	CHURK TPS (JAYPEE) Unit NA	90	No schedule given
JKSPDC	BAGLIHAR HPS Unit 1	150	No schedule given

JKSPDC	BAGLIHAR HPS Unit 2	150	No schedule given
JKSPDC	BAGLIHAR HPS Unit 3	150	No schedule given
JKSPDC	BAGLIHAR II HPS Unit 1	150	No schedule given
JKSPDC	BAGLIHAR II HPS Unit 2	150	No schedule given
JKSPDC	BAGLIHAR II HPS Unit 3	150	No schedule given
JKSPDC	LOWER JHELUM HPS Unit 1	35	No schedule given
JKSPDC	LOWER JHELUM HPS Unit 2	35	No schedule given
JKSPDC	LOWER JHELUM HPS Unit 3	35	No schedule given
JKSPDC	UPPER SINDH-II HPS Unit 1	35	No schedule given
JKSPDC	UPPER SINDH-II HPS Unit 2	35	No schedule given
JKSPDC	UPPER SINDH-II HPS Unit 3	35	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 1	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 2	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 3	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 4	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 5	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 6	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 7	135	No schedule given
JSW ENERGY LTD.	JSW ENERGY (BARMER) TPP Unit 8	135	No schedule given
MEIL	ANPARA C TPS (LANCO) Unit 1	600	No schedule given
MEIL	ANPARA C TPS (LANCO) Unit 2	600	No schedule given
NLC+UPRVUNL	GHATAMPUR TPP Unit 1	660	No schedule given
NLC+UPRVUNL	GHATAMPUR TPP Unit 2	660	No schedule given
NLC+UPRVUNL	GHATAMPUR TPP Unit 3	660	No schedule given
NTPC	MEJA STPP Unit 1	660	No schedule given
NTPC	MEJA STPP Unit 2	660	No schedule given
NTPC	TANDA TPS Unit 1	110	No schedule given
NTPC	TANDA TPS Unit 2	110	No schedule given
NTPC	TANDA TPS Unit 3	110	No schedule given
NTPC	TANDA TPS Unit 4	110	No schedule given
PPCL	PPS-III BAWANA Unit GT-1	216	No schedule given
PPCL	PPS-III BAWANA Unit GT-2	216	No schedule given
PPCL	PPS-III BAWANA Unit GT-3	216	No schedule given
PPCL	PPS-III BAWANA Unit GT-4	216	No schedule given
PPCL	PPS-III BAWANA Unit ST-1	253.6	No schedule given
PPCL	PPS-III BAWANA Unit ST-2	253.6	No schedule given
PPCL	PPS-I PPCL Unit GT-1	104	No schedule given
PPCL	PPS-I PPCL Unit GT-2	104	No schedule given
PPCL	PPS-I PPCL Unit ST	122	No schedule given
PSPCL	ANANDPUR SAHIB-I HPS Unit 1	33.5	No schedule given
PSPCL	ANANDPUR SAHIB-II HPS Unit 2	33.5	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 1	210	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 2	210	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 3	250	No schedule given
PSPCL	GHTPS (LEHRA MOHBBAT) Unit 4	250	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 1	150	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 2	150	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 3	150	No schedule given
PSPCL	RANJIT SAGAR DAM HPS Unit 4	150	No schedule given
PSPCL	GGSSTP ROPAR Unit 3	210	No schedule given
PSPCL	GGSSTP ROPAR Unit 4	210	No schedule given
PSPCL	GGSSTP ROPAR Unit 5	210	No schedule given
PSPCL	GGSSTP ROPAR Unit 6	210	No schedule given
RRVUNL	CTPP CHHABRA Unit 1	250	No schedule given
RRVUNL	CTPP CHHABRA Unit 2	250	No schedule given
RRVUNL	CTPP CHHABRA Unit 3	250	No schedule given
RRVUNL	CTPP CHHABRA Unit 4	250	No schedule given
RRVUNL	CSCTPP CHHABRA Unit 5	660	No schedule given
RRVUNL	CSCTPP CHHABRA Unit 6	660	No schedule given
RRVUNL	DHOLPUR CCPP (DCCPP) Unit GT-1	110	No schedule given
RRVUNL	DHOLPUR CCPP (DCCPP) Unit GT-2	110	No schedule given
RRVUNL	DHOLPUR CCPP (DCCPP) Unit ST	110	No schedule given
RRVUNL	JAWAHAR SAGAR HPS Unit 1	33	No schedule given
RRVUNL	JAWAHAR SAGAR HPS Unit 2	33	No schedule given
RRVUNL	JAWAHAR SAGAR HPS Unit 3	33	No schedule given
RRVUNL	KALISINDH TPS (KATPP) Unit 1	600	No schedule given

RRVUNL	KALISINDH TPS (KATPP) Unit 2	600	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 1	110	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 2	110	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 3	210	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 4	210	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 5	210	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 6	195	No schedule given
RRVUNL	KOTA TPS (KSTPS) Unit 7	195	No schedule given
RRVUNL	MAHI-I HPS BANSWARA Unit 1	25	No schedule given
RRVUNL	MAHI-I HPS BANSWARA Unit 2	25	No schedule given
RRVUNL	MAHI-II HPS BANSWARA Unit 1	45	No schedule given
RRVUNL	MAHI-II HPS BANSWARA Unit 2	45	No schedule given
RRVUNL	R P SAGAR HPS Unit 1	43	No schedule given
RRVUNL	R P SAGAR HPS Unit 2	43	No schedule given
RRVUNL	R P SAGAR HPS Unit 3	43	No schedule given
RRVUNL	R P SAGAR HPS Unit 4	43	No schedule given
RRVUNL	RAMGARH CCPP Unit GT-1	35.5	No schedule given
RRVUNL	RAMGARH CCPP Unit GT-2	37.5	No schedule given
RRVUNL	RAMGARH CCPP Unit ST-1	37.5	No schedule given
RRVUNL	RAMGARH CCPP Unit GT-3	110	No schedule given
RRVUNL	RAMGARH CCPP Unit ST-2	50	No schedule given
RRVUNL	SSTPS SURATGARH Unit 1	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 2	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 3	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 4	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 5	250	No schedule given
RRVUNL	SSTPS SURATGARH Unit 6	250	No schedule given
RRVUNL	SSCTPP SURATGARH Unit 7	660	No schedule given
RRVUNL	SSCTPP SURATGARH Unit 8	660	No schedule given
SRAVANTHI ENERGY	KASHIPUR CCPP (SRAVANTHI ENERGY) Unit GT-1	75	No schedule given
SRAVANTHI ENERGY	KASHIPUR CCPP (SRAVANTHI ENERGY) Unit GT-2	75	No schedule given
SRAVANTHI ENERGY	KASHIPUR CCPP (SRAVANTHI ENERGY) Unit ST	75	No schedule given
THDC	KOTESHWAR HPS Unit 1	100	No schedule given
THDC	KOTESHWAR HPS Unit 2	100	No schedule given
THDC	KOTESHWAR HPS Unit 3	100	No schedule given
THDC	KOTESHWAR HPS Unit 4	100	No schedule given
THDC	KHURJA TPP Unit 1	660	No schedule given
THDC	KHURJA TPP Unit 2	660	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 1	60	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 2	60	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 3	60	No schedule given
UJVNL	CHIBRO (YAMUNA) HPS Unit 4	60	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 1	36	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 2	36	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 3	36	No schedule given
UJVNL	CHILLA POWER HOUSE Unit 4	36	No schedule given
UJVNL	KHODRI HPS Unit 1	30	No schedule given
UJVNL	KHODRI HPS Unit 2	30	No schedule given
UJVNL	KHODRI HPS Unit 3	30	No schedule given
UJVNL	KHODRI HPS Unit 4	30	No schedule given
UJVNL	MANERI BHALI-I HPS TILOTH Unit 1	30	No schedule given
UJVNL	MANERI BHALI-I HPS TILOTH Unit 2	30	No schedule given
UJVNL	MANERI BHALI-I HPS TILOTH Unit 3	30	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 1	76	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 2	76	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 3	76	No schedule given
UJVNL	MANERI BHALI-II HPS DHARASU Unit 4	76	No schedule given
UJVNL	RAMGANGA POWER HOUSE Unit 1	66	No schedule given
UJVNL	RAMGANGA POWER HOUSE Unit 2	66	No schedule given
UJVNL	RAMGANGA POWER HOUSE Unit 3	66	No schedule given
UJVNL	VYASI HEP Unit 1	60	No schedule given
UJVNL	VYASI HEP Unit 2	60	No schedule given
UPJVNL	OBRA HPS Unit 1	33	No schedule given
UPJVNL	OBRA HPS Unit 2	33	No schedule given
UPJVNL	OBRA HPS Unit 3	33	No schedule given
UPJVNL	RIHAND HPS Unit 1	50	No schedule given

UPJVNL	RIHAND HPS Unit 2	50	No schedule given
UPJVNL	RIHAND HPS Unit 3	50	No schedule given
UPJVNL	RIHAND HPS Unit 4	50	No schedule given
UPJVNL	RIHAND HPS Unit 5	50	No schedule given
UPJVNL	RIHAND HPS Unit 6	50	No schedule given
UPRVUNL	ANPARA TPS Unit 6	500	No schedule given
UPRVUNL	ANPARA TPS Unit 7	500	No schedule given
UPRVUNL	HARDUAGANJ TPS Unit 7	110	No schedule given
UPRVUNL	HARDUAGANJ TPS Unit 8	250	No schedule given
UPRVUNL	HARDUAGANJ TPS Unit 9	250	No schedule given
UPRVUNL	OBRA TPS Unit 9	200	No schedule given
UPRVUNL	OBRA TPS Unit 10	200	No schedule given
UPRVUNL	OBRA TPS Unit 11	200	No schedule given
UPRVUNL	OBRA TPS Unit 12	200	No schedule given
UPRVUNL	OBRA TPS Unit 13	200	No schedule given
UPRVUNL	OBRA-C STPP Unit 1	660	No schedule given
UPRVUNL	OBRA-C STPP Unit 2	660	No schedule given
UPRVUNL	PARICHHA TPS Unit 3	210	No schedule given
UPRVUNL	PARICHHA TPS Unit 4	210	No schedule given
UPRVUNL	PARICHHA TPS Unit 5	250	No schedule given
UPRVUNL	PARICHHA TPS Unit 6	250	No schedule given
UPRVUNL	HARDUAGANJ EXT-II TPS Unit 10	660	No schedule given
UPRVUNL	PANKI TPS EXTENSION Unit 1	660	No schedule given

ANNEXURE-A.V(A)

Captive Power Plant Generation (to be furnished by State Entity)							
S.No.	Name of State/Uts	Installed Capactiy of Captive Power Plants	Gross Generation	Net Generation	Electricity Utilization		
					Power Drawl from Grid	Injection of power to Grid	Captive Consumption
			(kwh)	(kwh)	(kwh)	(kwh)	(kwh)
1							
2							

ANNEXURE-A.V(B)

Open Access Details			
S.No.	**Name of State/UTs**	**Open Access Consumption**	
		Included in Energy Requirement of State	**Not included in Energy Requirement of State**
		(kWh)	**(kWh)**
1			
2			

Plant in partial outage due to scheduling reasons					
S.No	**Station Name**	**Avg outage in MW**	**Rated capacity**	**% of outage wrt rated capacity**	**Outage reason as stated by the station to NRLDC**
1	GURU GOBIND SINGH TPS (ROPAR)(4 * 210)	149.13	840	17.75	As per demand and schedule.
2	PANIPAT TPS(1 * 210 + 2 * 250)	34.92	710	4.92	As per demand and schedule.
3	GURU HARGOBIND SINGH TPS (LEHRA MOHABBAT)(2* 210 + 2 * 250)	59.76	920	6.5	As per demand and schedule.
4	CHHABRA TPS(2 * 660 + 4 * 250)	157.20	2320	6.78	As per demand and schedule.
5	KOTA TPS(2 * 110 + 2 * 195 + 3 * 210)	73.38	1240	5.92	As per demand and schedule.
6	RAJWEST (IPP) LTPS(8 * 135)	104.34	1080	9.66	As per demand and schedule.
7	BARSINGSAR (IPP) LTPS(2 * 125)	18.35	250	7.34	As per demand and schedule.
8	VSLPP (IPP)(1 * 135)	43.53	135	32.25	As per demand and schedule.
9	HARDUAGANJ-E TPS (1 * 660)	9.05	660	1.37	As per demand and schedule.
10	PARICHA-C TPS (2 * 250)	83.14	500	16.63	As per demand and schedule.
11	ANPARA-A TPS (3*210)	60.99	630	9.68	As per demand and schedule.
12	JAWAHARPUR TPS (1 * 660)	66.26	1320	5.02	As per demand and schedule.
13	GOINDWAL(GVK)(2 * 270)	30.97	540	5.73	As per demand and schedule.
14	KALISINDH TPS(2 * 600)	70.36	1200	5.86	As per demand and schedule.
15	BARA PPGCL TPS(3 * 660)	42.63	1980	2.15	As per demand and schedule.
16	DADRI-II TPS(2 * 490)	104.78	980	10.69	As per demand and schedule.
17	DADRI-I TPS(4 * 210)	125.61	840	14.95	As per demand and schedule.
18	UNCHAHAR III TPS(1 * 210)	8.91	210	4.24	As per demand and schedule.
19	UNCHAHAR II TPS(2 * 210)	15.38	420	3.66	As per demand and schedule.
20	UNCHAHAR I(2 * 210)	13.43	420	3.2	As per demand and schedule.
21	UNCHAHAR IV TPS(1 * 500)	9.74	500	1.95	As per demand and schedule.
22	TANDA TPS STAGE-II(2 * 660)	23.20	1320	1.76	As per demand and schedule.
23	TANDA TPS (4 * 110)	440.00	440	100	due to PPA Contract Expired on 14-01-2025

Plant in partial outage due to technical reasons					
S.No	**Station Name**	**Avg outage in MW**	**Rated capacity**	**% of outage wrt rated capacity**	**Outage reason as stated by the station to NRLDC**
1	RAJPURA(NPL) TPS(2 * 700)	73.67	1400	5.26	MS line drain steam leakage
2	SURATGARH TPS (6 * 250 + 2 * 660(SSCTPS))	166.87	2820	5.92	due to extraction pressure problem.
3	OBRA TPS (5 * 200)	301.49	1000	30.15	Unit 9 and 10 low PA header, unit 12 feeding restrictions due to low mill performance, unit 13 ID fan margin low and low PA header
4	PARICHA-B TPS (2 * 210)	113.33	420	26.98	DC reduced due to Retro fitting work of ESP.
5	ANPARA-B TPS (2 * 500)	65.16	1000	6.52	DC reduce due to turbine rotor problem.
6	OBRA C TPS (2 * 660)	54.72	1320	4.15	DC reduce due to U#1 Mill not Available
7	TALWANDI SABO TPS(3 * 660)	258.51	1980	13.06	Unit#1 PA FAN-B Not available

Plant in partial outage due to Fuel quality issues					
S.No	**Station Name**	**Avg outage in MW**	**Rated capacity**	**% of outage wrt rated capacity**	**Outage reason as stated by the station to NRLDC**
1	RGTPP(KHEDAR)(2 * 600)	147.56	1200	12.3	Due to backing down & poor coal quality.
2	HARDUAGANJ-D TPS (2 * 250)	24.16	500	4.83	DC reduce due to poor coal quality
3	GHATAMPUR TPS (1 * 660)	74.07	1320	5.61	DC reduce due to coal quality low

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

संदर्भ सं°: उ0क्षे0भा0प्रे0कें0/प्र0सं0/151/ //8. **दिनांक** : 25-03-2026

To

The General Manager
SLDC Delhi
33 KV S/Stn. Bldg., Minto Road, New Delhi-110002

विषय : दिल्ली में आगामी गर्मी के महीनों के दौरान पीक मांग अवधि में 400 kV Jhatikara-Bamnauli **लाइन पर उच्च लोडिंग के विषय में।**

महोदय / महोदया,

जैसे-जैसे गर्मी का मौसम नज़दीक आ रहा है, यह अनुमान है कि आगामी महीनों में दिल्ली में विद्युत मांग 9 GW से अधिक हो सकती है। इस उच्च मांग परिदृश्य को ध्यान में रखते हुए, दिल्ली पावर सिस्टम का Load flow अध्ययन दिल्ली SLDC और NRLDC द्वारा निम्नलिखित मान्यताओं के आधार पर संयुक्त रूप से किया गया है:

1. दिन के समय दिल्ली की मांग 9000 MW से अधिक होना।
2. 1500 MVA-05वाँ ICT, Jhatikara PG में मई 2026 तक चालू हो जाना।

Load flow अध्ययन के परिणामों के अनुसार निम्नलिखित अवलोकन हैं:

1. 400 kV Jhatikara-Bamnauli लाइन पर लोडिंग, 400 kV Jhatikara- Dwarka लाइन के **N-1** स्थिति में, दिन के peak समय के दौरान **2200 MW** तक पहुँच रही है।
2. Jhatikara PG में अतिरिक्त ICT के जुड़ने से मौजूदा N-1 अनुपालन की समस्या (Jhatikara–Bamnauli/Dwarka section) में राहत मिलती है।

As summer is approaching and it is anticipated that electricity demand in Delhi may cross 9GW during the upcoming summer months. Considering this high demand scenario, load flow study for Delhi power system has been carried out jointly by Delhi SLDC and NRLDC based on the following assumptions:

1. Delhi demand crossing 9000 MW in the day-time.
2. 1500 MVA-05th ICT at Jhatikara PG would be commissioned by May 2026.

Following are the observations as per the result of the load flow study:

1. The loading of 400 KV Jhatikara-Bamnauli line is reaching up to **2200 MW** under **N-1** condition of 400 KV Jhatikara-Dwarka line during the day peak hours.
2. The additional ICT at Jhatikara PG relieves the existing N-1 non-compliance issue (Jhatikara – Bamnauli/Dwarka section).

हालाँकि, अतिरिक्त ICT के चालू होने से Jhatikara ICTs की मौजूदा N-1 अनुपालन समस्या में राहत मिल रही है, फिर भी 400 KV Jhatikara-Bamnauli लाइन पर लोडिंग और बढ़ेगी, और इस लाइन के ट्रिप होने पर दिल्ली क्षेत्र में कैस्केड ट्रिपिंग की संभावना हो सकती है।

Even though the existing N-1 non-compliance issue of Jhatikara ICTs (Jhatikara – Bamnauli/Dwarka section) is getting relieved with commissioning of additional ICT, the loading on 400 KV Jhatikara-Bamnauli line would further increase and tripping of this line may lead to cascade tripping in Delhi area.

इसके अलावा, 400 KV Jhatikara-Bamnauli लाइन की लोडिंग पर दिल्ली लोड की संवेदनशीलता लगभग 12% पाई गई है। दिल्ली में गैस आधारित उत्पादन न होने की स्थिति में, आगामी गर्मी के महीनों के लिए TTC/ATC का आकलन 7600/7450 MW किया गया है, जिसमें 400 kV झटीकरा–बामनौली लाइन के N-1 अनुपालन को शामिल नहीं किया गया है। यदि इस लाइन के N-1 अनुपालन को ध्यान में रखा जाए, तो दिल्ली का TTC/ATC घटकर लगभग 4750/4650 MW रह जाएगा।

Also, the sensitivity of Delhi load on 400 KV Jhatikara-Bamnauli line loading is observed to be approx. 12%. Under no gas generation scenario in Delhi, the TTC/ATC for the upcoming summer months is assessed to be 7600/7450 MW, without considering for the N-1 non-compliance of 400 KV Jhatikara-Bamnauli line. If the N-1 non-compliance of 400 KV Jhatikara-Bamnauli line is considered, the TTC/ATC of Delhi would reduce drastically to 4750/4650 MW.

आगे, यदि Jhatikara PG में ट्रांसफॉर्मरों के N-1 आपातकालीन स्थिति के लिए मौजूदा SPS को 400 KV Jhatikara-Bamnauli लाइन की लोडिंग को नियंत्रित करने के लिए उपयोग किया जाए, तो इससे सीमित राहत मिलेगी, जिससे TTC/ATC बढ़कर 5900/5800 MW (लगभग 1150 MW की वृद्धि) हो जाएगा।

Further, if the existing SPS for take care of N-1 contingency of transformers at Jhatikara PG is mapped to manage the loading of 400 KV Jhatikara-Bamnauli line, it would provide limited relief, increasing the TTC/ATC to 5900/5800 MW (increase of 1150 MW).

उपरोक्त सीमाओं को ध्यान में रखते हुए, यह अनुरोध किया जाता है कि आगामी गर्मी के महीनों में दिल्ली की drawl क्षमता बनाए रखने हेतु त्वरित उपाय किए जाएँ, जैसे कि SPS की तैनाती, लोड का पुनर्विन्यास आदि।

In view of the above constraints, it is requested to take immediate measures viz. deployment of SPS, load re-arrangement etc. for facilitating in maintaining the drawl capacity of Delhi in the upcoming summer months.

सादर धन्यवाद

भवदीय

23/3/26

अशोक कुमार
मुख्य महाप्रबंधक (प्रणाली संचालन)
उत्तरी क्षेत्र भार प्रेषण केंद्र, नई दिल्ली

विनम्र सूचनार्थ :

1. कार्यपालक निदेशक, उत्तरी क्षेत्र भार प्रेषण केंद्र, नई दिल्ली
2. कार्यपालक निदेशक, राष्ट्रीय भार प्रेषण केंद्र, नई दिल्ली
3. सदस्य सचिव, उत्तरी क्षेत्र विद्युत् समिति, नई दिल्ली
4. निदेशक (ऑपरेशन), दिल्ली ट्रांसको लिमिटेड, नई दिल्ली

Annexure-A.VIII

सत्यमेव जयते

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

विषय: Minutes of the Meeting to deliberate upon and finalize the operational framework and implementation roadmap for the Delhi Islanding Scheme based on Dadri-II generation -reg.

Kindly find attached minutes of the meeting held on **20.03.2026 (15:00 hrs)** to deliberate upon and finalize the operational framework and implementation roadmap for the Delhi Islanding Scheme based on Dadri-II generation.

Encl: As above

DHARMENDER KUMAR MEENA
Digitally signed by DHARMENDER KUMAR MEENA
Date: 2026.03.25 17:26:40 +05'30'

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

सेवा में,

List of Participants (as attached)

Minutes of the Meeting to deliberate upon and finalize the operational framework and implementation roadmap for the Delhi Islanding Scheme based on Dadri-II generation

MS, NRPC welcomed all the participants from NRLDC, NLDC, Delhi SLDC, DTL, NTPC and POWERGRID to the meeting. She informed that this meeting is held to deliberate upon and finalize the operational framework and implementation roadmap for the Delhi Islanding Scheme based on Dadri-II generation. List of Participants is attached as **Annexure-P**.

1. DTL presented the revised islanding proposal as attached as **Annexure-A**. During the discussion on the proposal it was suggested that at 400kV Dadri Stage-II Bus islanding is to be achieved through selective tripping of circuit breakers. It was discussed that one generating unit of Dadri along with the 400kV **Dadri–Maharani Bagh transmission line (on one 400kV bus)** would form part of the island, while other network elements would remain outside the islanded system (on other 400kV Bus). Further, at **400 kV Maharani Bagh substation**, all connected elements except the 400kV Dadri Maharani Bagh line and 4 X 400/220 kV ICTs are proposed to be tripped to facilitate island formation.
2. NTPC Dadri was requested to provide detailed technical inputs:
    a. Generator frequency protection settings (both electrical and mechanical),
    b. Ramp-down and ramp-up capabilities from the operating point both via normal ramp as well las governor action. Max load reduction by HP-LP bypass arrangements and time to achieve that.
    c. Auxiliary load requirements,
    d. Feasibility of auxiliary load segregation after island formation,
    e. Provisions for modification of control loop parameters under island mode operation.
3. Delhi SLDC/DTL was advised to immediately share **validated PSSE base cases for summer peak and off-peak conditions**, along with feeder-wise load profiles within the proposed island boundary. It was also requested to furnish feeder loading data corresponding to summer peak and off-peak scenarios for feeders equipped with **df/dt protection schemes**.
4. GRID-INDIA suggested for proper assessment of reliability and island success probability load generation imbalance profile of the island to be studied.
5. DTL and POWERGRID confirmed the **healthiness of existing UFR relays**, which are intended to be utilized for the proposed islanding scheme. It was also clarified that no separate grid defence mechanism linked to UFR operation exists on the identified feeders.
6. Considering that the island would involve **ISGS generation catering to state distribution load**, it was suggested that **SLDC Delhi should assume primary responsibility for monitoring and operational control of the island**, with

necessary real-time monitoring displays to be developed at SLDC and replicated at RLDC and NLDC control centres.

7. GRID-INDIA highlighted the operational challenges associated with simultaneous tripping of a large number of feeders at **47.9 Hz** and suggested staggered feeder disconnection by initiating certain feeder trippings at **48.1 Hz** as preparatory action.
8. GRID–INDIA also suggested for increasing the probability of successful island formation, centralized islanding scheme may be designed for dynamic load balancing in different operational scenarios.
9. **Action Points and Timeline**
    - NTPC Dadri, DTL, and SLDC Delhi to submit requisite technical details\ simulation file to NRLDC by **25 March 2026**.
    - DTL, POWERGRID, and NTPC to examine **healthiness of existing UFR relays** and feasibility of revising **UFR feeder tripping settings from 47.9 Hz to 48.1 Hz for all feeders except feeder at 400kV Maharanibagh - Ballabhgarh line (to be tripped at 47.9 Hz) and submit details to NRLDC by 25th March, 2026**.
    - RLDC to carry out **dynamic stability studies within four working days** of receipt of inputs and propose updated islanding logic and relevant technical details\simulation files for review and finalization at RPC forum.
    - Upon approval of finalized logic by RPC forum, concerned utilities shall **implement the islanding scheme on or before 20th April, 2026.**
10. The meeting concluded with emphasis on close coordination among stakeholders, timely submission of technical inputs, and expeditious completion of system studies to ensure reliable and secure implementation of the Delhi Islanding Scheme.
11. The meeting concluded with a vote of thanks to the Chair.

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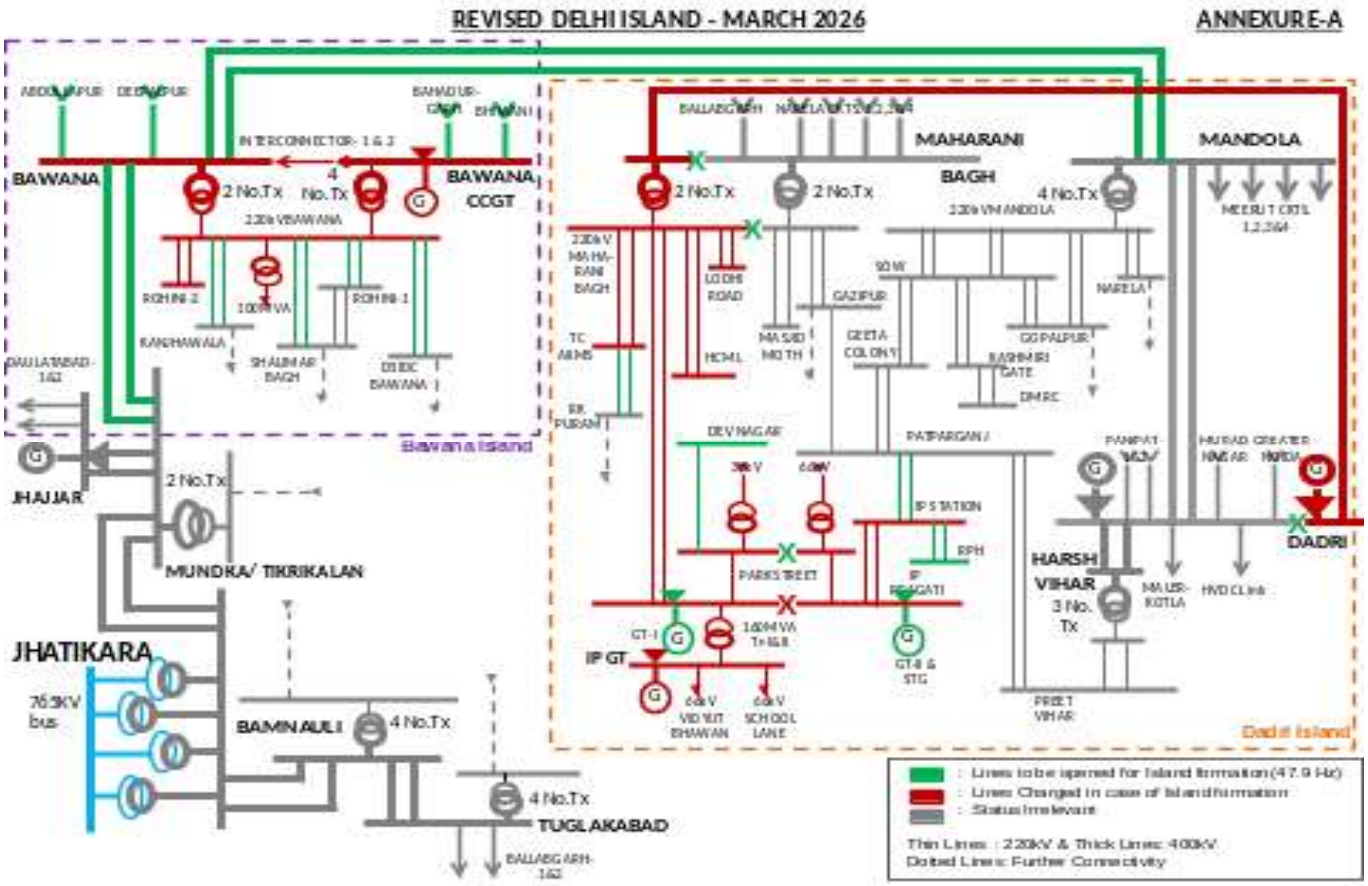

REVISED DELHI ISLAND - MARCH 2026
ANNEXURE-A
BAWANA
2 No.Tx
4 No.Tx
BAWANA CCGT
220kV BAWANA
ROHINI-2
100MVA
ROHINI-1
KANJHAWALA
SHALIMAR BAGH
DSIIDC BAWANA
Bawana Island
JHAJJAR
2 No.Tx
MUNDKA/ TIKRIKALAN
JHATIKARA
765kV bus
BAMNAULI
4 No.Tx
4 No.Tx
TUGLAKABAD
MAHARANI BAGH
2 No.Tx
2 No.Tx
4 No.Tx
220kV MAHARANI BAGH
LODHI ROAD
HCML
GAZIPUR
MASJID MOTH
GEETA COLONY
TC AIIMS
RR PUSHP
DEV NAGAR
PARK STREET
IP STATION
RPH
IP
PRAGATI
GT-I
160MVA
IP GT
GT-II & STG
66kV VIDYUT BHAWAN
66kV SCHOOL LANE
MANDOLA
220kV MANDOLA
MEERUT CKTS
SGW
NARELA
KASHMERI GATE
GOPALPUR
DMRC
PATPARGANJ
PANIPAT-MDJV
HISAR
DADRI
HARSH VIHAR
3 No. Tx
MAU-SR-KOTLA
HVDC Link
PREET VIHAR
Dadri Island
: Lines to be opened for Island formation(47.9 Hz)
: Lines Charged in case of Islandformation
: Status Irrelevant
Thin Lines : 220kV & Thick Lines: 400kV
Dotted Lines: Further Connectivity

Annexure-P

List of Participants of the Meeting to deliberate upon and finalize the operational framework and implementation roadmap for the Delhi Islanding Scheme based on Dadri-II generation -reg				
S. No.	**Name**	**Designation**	**Organization**	**E-mail**
1	Rishika Sharan	Member Secretary	NRPC	ms-nrpc@nic.in
2	D. K. Meena	Suprintending Engineer (O&P)	NRPC	seo-nrpc@nic.in;
3	Omkishor	Executive Engineer	NRPC	omkishor.sahu@gov.in;
4	Vipul Kumar	Executive Engineer	NRPC	vipul.cea@gov.in
5	Bikas Kr. Jha	Deputy General Manager	NRLDC	bikaskjha@grid-india.in
6	Gaurav Singh	Chief Manager	NRLDC	gauravsingh@grid-india.in
7	Gaurav Malviya	Chief Manager	NRLDC	gauravmalviya@grid-india.in
8	Saibal Ghosh	Chief Manager	NLDC, Grid-India	saibal@grid-india.in
9	Pankaj Kumar Jha	Chief Manager	POWERGRID	pankaj.jha@powergrid.in
10	Arun Kumar Sharma	Deputy General Manager	NTPC Dadri	arunkrsharma@ntpc.co.in
11	Paritosh Joshi	DGM(T)	DTL	paritoshjoshi2013@gmail.com
12	Ramneet Chanana	Manager (T) Prot.	DTL	chanana.ramneet15@gmail.com
13	Naveen Kumar	Manager (T)	SLDC, Delhi	sldcgd2.reports@gmail.com
14	Himanshu Bharadwaj	AM (T)	SLDC, Delhi	himanshu.dtl@gmail.com
15	Gurmeet Singh	Asst. VP	BRPL	gurmeet.deogen@reliancegroupindia.com

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

Flash report of Tripping at 765 kV Anta (RS)

1. **Date and Time of the Grid Event (ग्रिड घटना की तिथि और समय)**: 16:34 Hrs/04-04-2026.

2. **Location/Control Area (स्थान/नियंत्रण क्षेत्र):** Rajasthan

3. **Name of the Substation/Generating Station/Pooling Station Affected (सब-स्टेशन का नाम):** 765 kV Anta (RS)

4. **Antecedent Conditions (पूर्ववर्ती स्थिति):**

	Frequency (Hz)	NR Demand (MW)	Rajasthan Demand(MW)
Pre-Event (घटना पूर्व)	50.16	47608	9247
Post Event (घटना के बाद)	50.112	47710	9322

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है	400 KV HINDAUN(RS)-CHHABRA(RVUN) (RS) CKT-1 tripped at 15:42 hrs
Weather Condition (मौसम स्थिति)	Inclement weather

5. **Generation Loss/Load loss (MW) (उत्पादन/भार क्षति):** As per SCADA, approx. 537 MW generation loss was observed due to tripping of 660 MW Chhabra SCTPS unit-2 on SPS operation. As per Rajasthan SLDC, no load loss was observed.

6. **Brief Details of the Grid Event (ग्रिड घटना का संक्षिप्त विवरण)**:
   - As reported by SLDC Rajasthan, 765 KV ANTA-PHAGI (RS) CKT-1 tripped on B-N fault at 16:29 hrs from Anta end only and 765/400 KV 1500 MVA ICT 1, 2 and 3 at ANTA(RS) tripped at 16:34 hrs. Due to tripping of all 3 ICTs at 765 kV Anta (RS), SPS operated leading to tripping of 660 MW Chhabra SCTPS unit-2. A generation loss of 537 MW was observed.
   - Outage of 400 kV HINDAUN(RS)-CHHABRA(RVUN) (RS) CKT-1 and subsequent tripping all ICTs at 765 kV Anta led to over-loading of remaining evacuation lines i.e. 400 KV Bhilwara(RS)-Chhabra(RVUN) (RS) Ckt-1 and 400 KV Kota(PG)-Chhabra(RVUN) (RS) Ckt-1 operating near thermal limit.

7. **Transmission/Generation element Tripped during the event (संचरण लाइन / विधुत उत्पादन इकाईं जो घटना के दौरान बंद हो गयी)**:

S.No. (क्र० सं०)	Transmission/Generation element name (संचरण लाइन / विधुत उत्पादन इकाईं का नाम)	Trip Time (बंद होने का समय)	Restoration time (वापस आने का समय)	Reason/ Relay Indication (कारण/रिले संकेत)
1.	765 KV ANTA-PHAGI (RS) CKT-1	16:29		Phase-B, Dist.- M1: -1.419 KM, Ia:825.6 A, Ib:4.103KA, Ic:8.673 KA, IN:2.693 KA due to BAD WEATHER
2.	765/400 KV 1500 MVA ICT 1 AT ANTA(RS)	16:34	18:09	Due to Over-loading
3	765/400 KV 1500 MVA ICT 2 AT ANTA(RS)			Details awaited
4	765/400 KV 1500 MVA ICT 3 AT ANTA(RS)			

7. Action Taken by NRLDC (उ०क्षे०भा०प्रे०के० के द्वारा की गयी कार्रवाई):

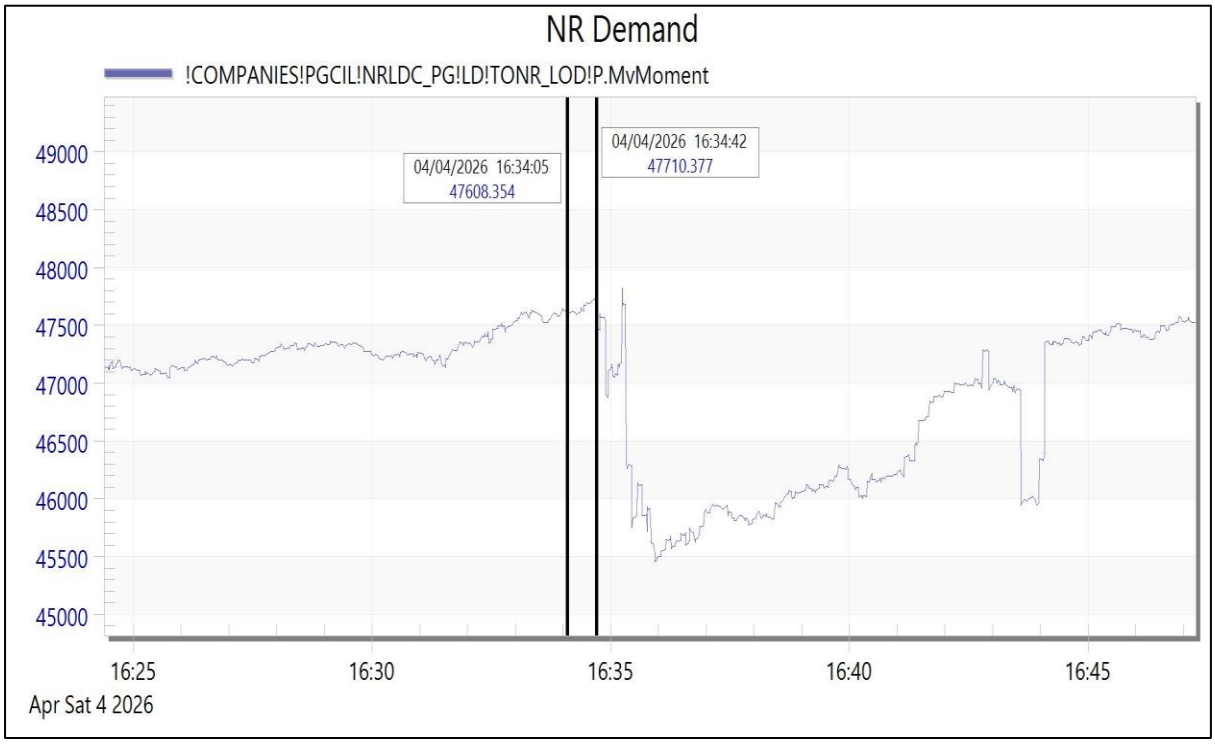
- Immediately contacted SLDC Rajasthan for tripping details and early restoration of elements.
- Instructed SLDC Rajasthan to back down generation at Chhabra-Kawai-Kalisindh complex immediately to control over-loading of 400 KV Bhilwara(RS)-Chhabra(RVUN) (RS) Ckt-1 and 400 KV Kota(PG)-Chhabra(RVUN) (RS) Ckt-1.
- Subsequently generation of all units operating on-bar in the complex were reduced to technical minimum.
- Further, 250 MW Chhabra U-3 and 660 MW Kalisindh U-1 were taken off bar by Rajasthan at 17:37 hrs and 17:49 hrs respectively.
- 765/400 KV 1500 MVA ICT 1 AT ANTA(RS) got revived at 18:09 hrs.

Shift-In Charge, NRLDC
पाली प्रभारी, उ०क्षे०भा०प्रे०के०

प्रतिलिपि :

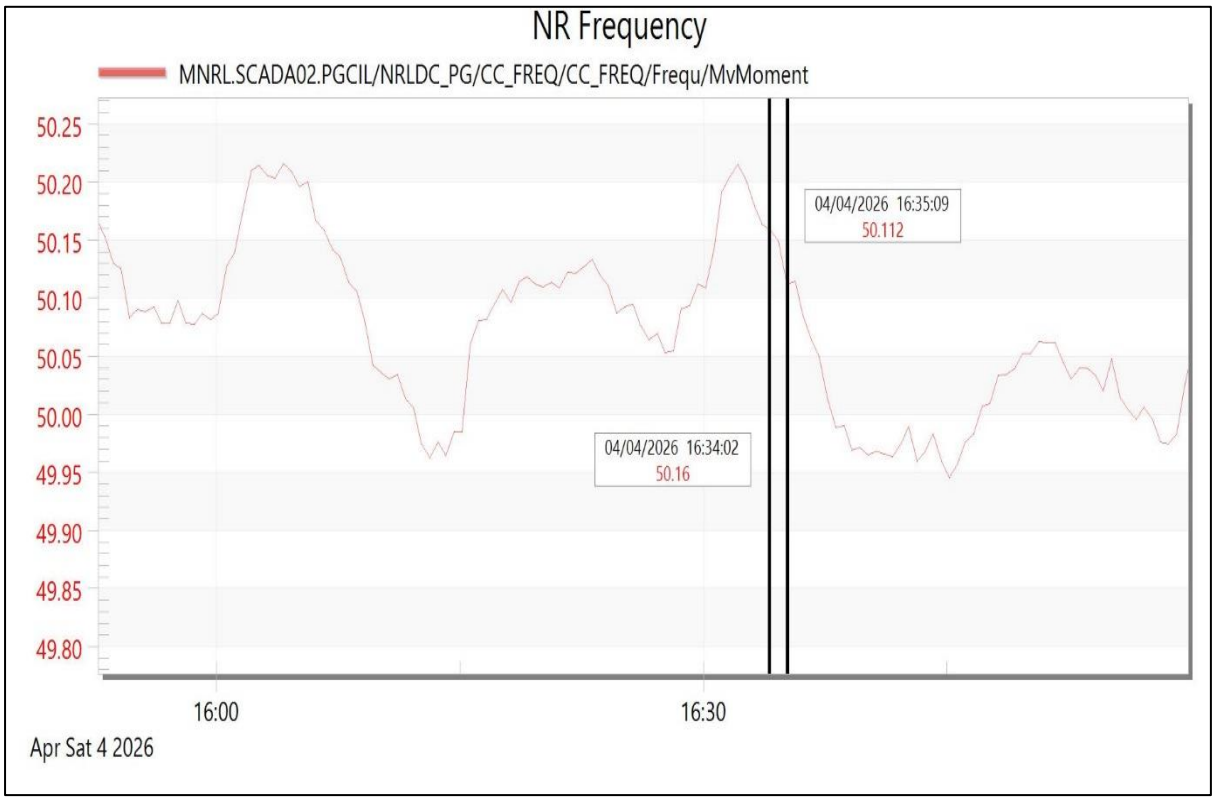
1. **Shift-in charge, NLDC (पाली प्रभारी, रा०भा०प्रे०के०)**
2. **Affected utilities / user (घटना से प्रभावित सभी यूसर/यूटिलिटि)**
3. **MS, RPC (सदस्य सचिव, क्षेत्रीय विधुत समिति)**
4. **'cenpccea@gmail.com', 'cenpc-cea@gov.in**

1. NR Demand

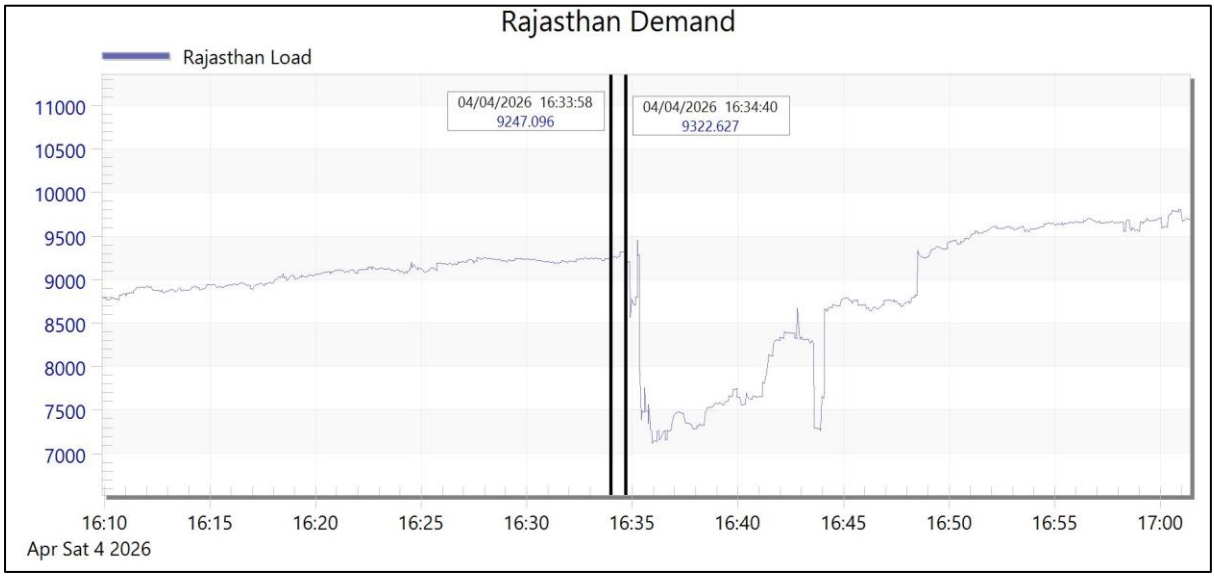


***Error in SCADA data after 16:34 hrs**

2. Frequency Plot



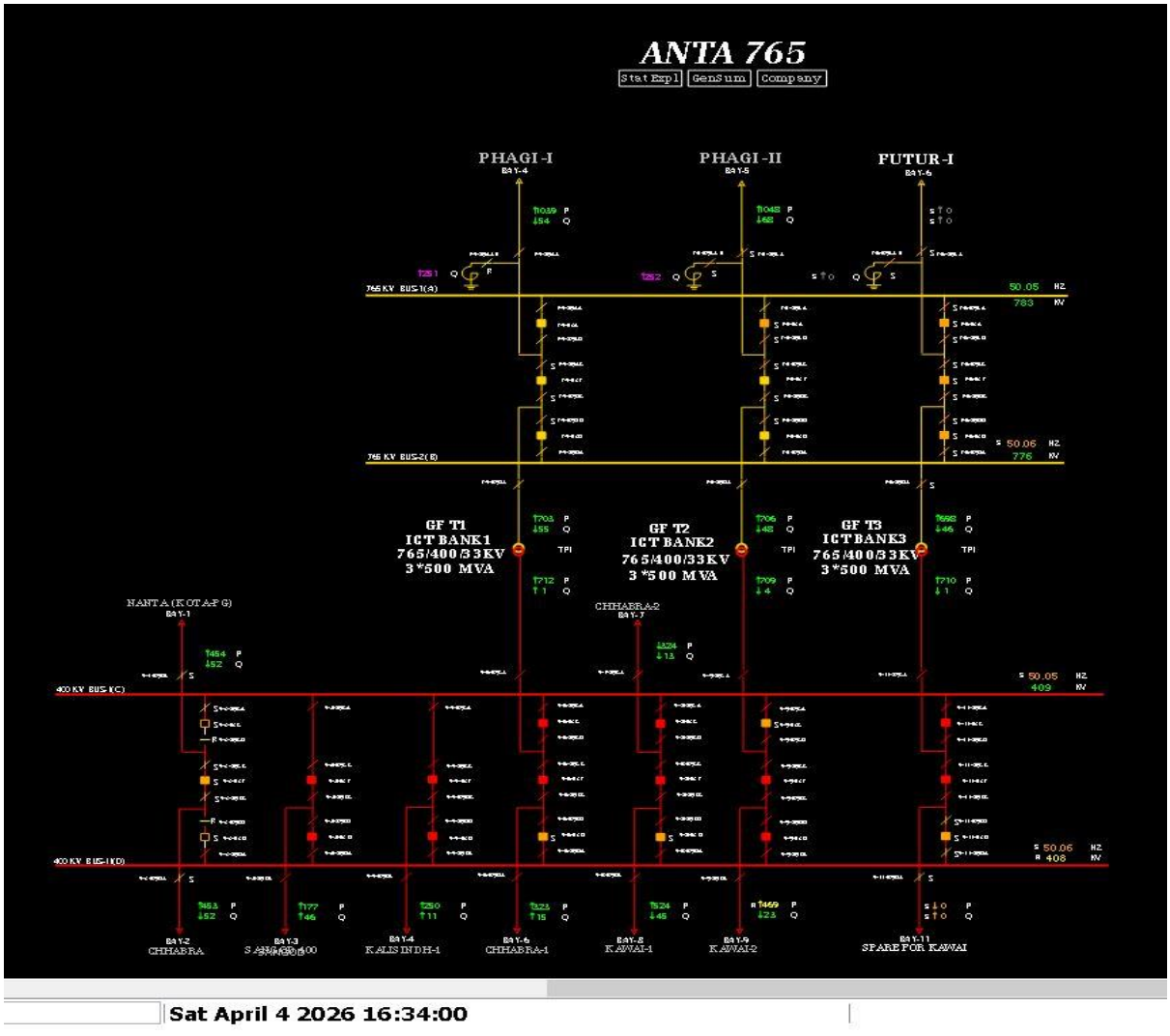
3. Rajasthan Demand:



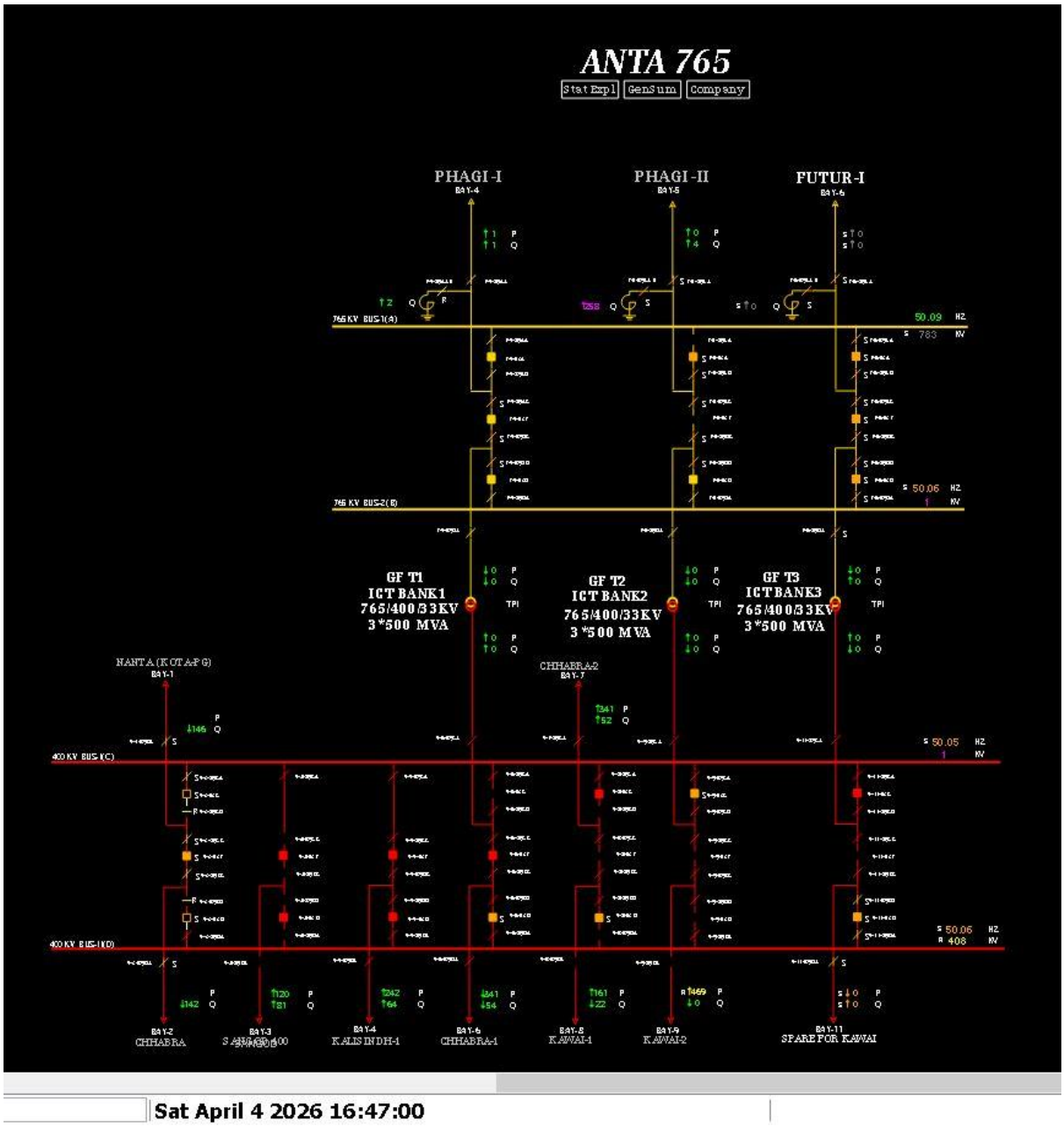
***Error in SCADA data after 16:34 hrs**

4. SLD of 765 KV Anta (RS)

Before:



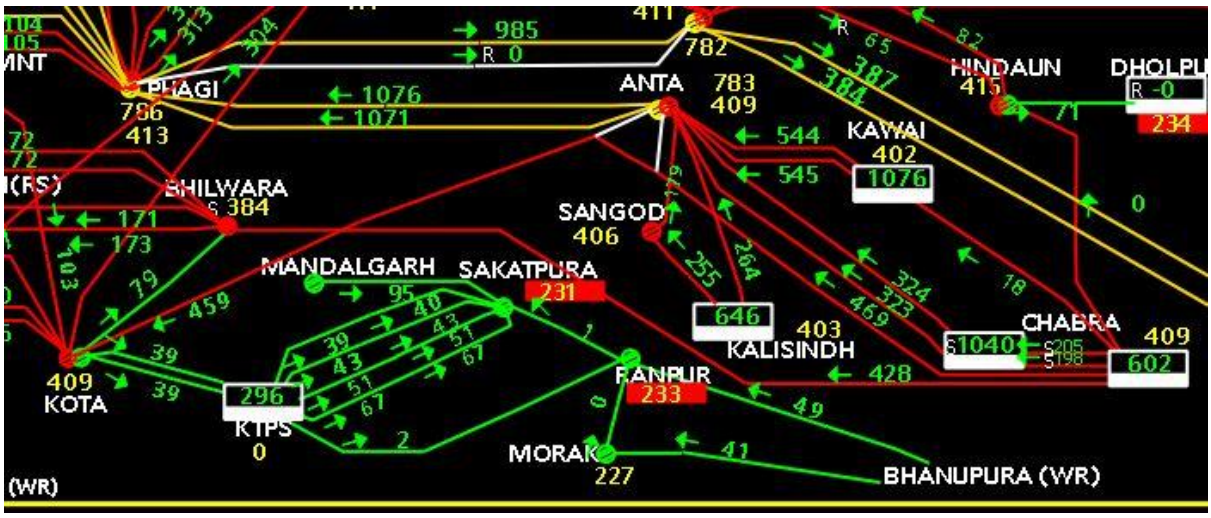
After:



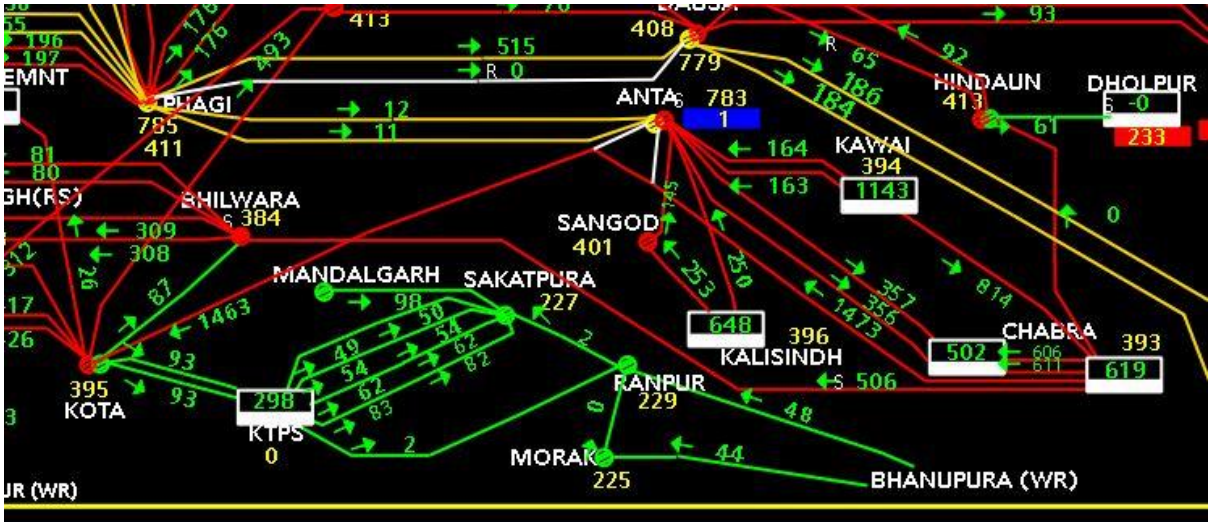
***SCADA data was stuck after 16:34 hrs**

5. Network Diagram:

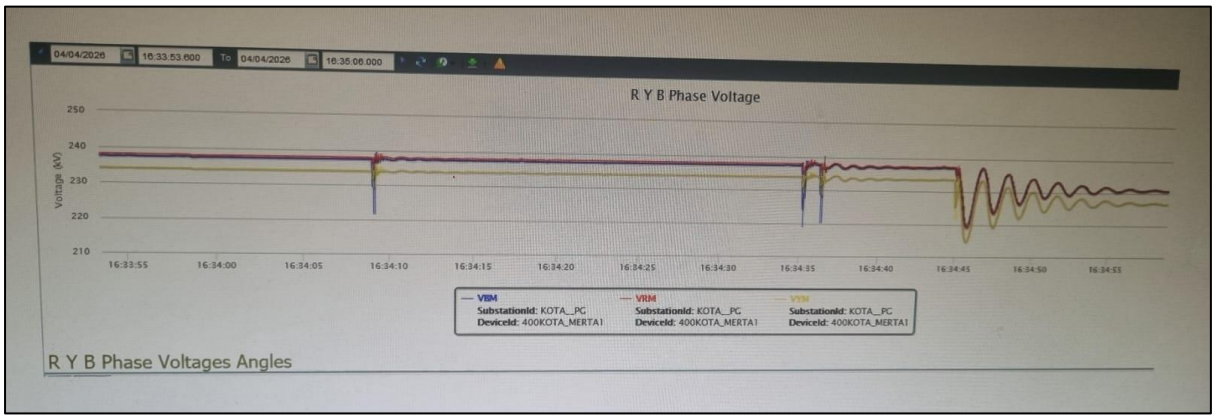
Before:



After:



6. PMU Voltage of Kota (PG):



7. SPS details: Case 1 operated

Chhabra, Kawai and Kalisindh TPS Complex

1. **Case-1:** N-1-1/N-2 of 765/400 kV Anta ICTs

   Action: Trip one unit of 660 MW at Chhabra SCTPS to limit the flow on the remaining ICT with in safe range

2. **Case-2**: N-1 of Anta-Phagi 1 & 2

   Action: No action required

3. **Case-3:** N-1-1/ N-2 of Anta-Phagi 1 & 2

   Action-1: One unit each at Kawai, Chhabra, Kalisindh and Chhabra SCTPS shall be tripped through SPS.
   Action-2: Automatic load shedding of 750 MW in Rajasthan control area (to avoid overloading of WR-NR corridor as well as to avoid over drawl by Rajasthan)

National Load Despatch Centre
Import Capability of Punjab for May 2026

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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 May 2026 to 31 May 2026	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 May 2026

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 May 2026 to 31 May 2026	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, Agra(PG), Lucknow (PG), Sohawal(PG) ICTs							

National Load Despatch Centre
Import Capability of Haryana for May 2026

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 May 2026 to 31 May 2026	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 May 2026

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 May 2026 to 31 May 2026	00-24	7600	600	7000	5755	1245		https://sldc.rajasthan.gov.in/rrvpnl/scheduling/downloads
Limiting Constraints	N-1 contingency of 400/220kV Jodhpur, Bikaner, Ajmer, Merta, Hindaun and Ratangarh ICTs							

National Load Despatch Centre
Import Capability of Delhi for May 2026

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 May 2026 to 31 May 2026	00-24	7600	300	7300	4810	2490		https://www.delhisldc.org/resources/atcttcreport.pdf
Limiting Constraints	N-1 contingency of 400/220kV HarshVihar and Mandola ICTs.							

National Load Despatch Centre
Import Capability of Uttarakhand for May 2026

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 May 2026 to 31 May 2026	00-24	1990	100	1890	1402	488		https://uksldc.in/ttc-atc
Limiting Constraints		N-1 contingency of 400/220kV Rishikesh and Kashipur ICTs. High loading of 220kV Roorkee-Roorkee and 220kV CBGanj-Pantnagar lines						

National Load Despatch Centre
Import Capability of HP for May 2026

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 May 2026 to 31 May 2026	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 May 2026

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 May 2026 to 31 May 2026	**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 May 2026

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 May 2026 to 31 May 2026	00-24	480	20	460	342	118		
Limiting Constraints		N-1 contigency of 220kV Nallagarh-Kishengarh						

Chapter 10: Recommendations

The following remedial measures are recommended to avoid recurrence of such grid events:

10.1 Reactive Power Management (Dynamic/Static):

In order to maintain voltage stability, reactive power support is desired from all grid connected utilities without leaning over each other so as to ensure minimum reactive exchange at different voltage levels.

a. Generators

- The generating units including those near load centre stations shall keep their PSS/AVR in service for dynamic reactive power support and stability during contingencies.
- The generating stations, both conventional as well as renewable, shall provide their P-Q capability curve for 0.95 per unit and 1.05 per unit voltage along with the curve based on 1 (one) p.u. terminal voltage. The voltage-dependent reactive support shall be assessed based on the submitted voltage-dependent capability curves.

b. Transmission

- The transmission system shall be planned and commissioned to ensure reactive power balance at all voltage levels in the grid. For this, different operating scenarios shall be studied to identify the reactive power requirement. Any deficit so identified shall be followed by augmenting the dynamic/static reactive power sources by transmission system planners (CEA/CTU/STUs).
- The placement and sizing of STATCOM/SVC shall be planned in such a way that the dynamic reactive support from STATCOM/SVC are not utilized in steady-state. It will ensure that in case of grid contingencies, full dynamic range is available for the grid support.
- Also, the design philosophy of future STATCOMs may be adopted so as to ensure the availability of dynamic reactive reserve for any contingency.
- State-wise reactive power compensation requirement (Dynamic & Static) may be studied in a holistic manner so that states do not lean over the ISTS system for reactive power support.

c. Load Centres

- Adequate static/dynamic reactive devices may be planned at the distribution level near loads so that there is minimum drawl from reactive sources at the transmission (STU) level. States may explore the deployment of capacitor banks at lower voltage levels for meeting the reactive support required by loads having poor power factor.
- The dynamic reactive power sources shall be commissioned near load centre stations based on the composition and quantum of individual load type.
- System studies for appropriate locations and suitable size of switchable capacitor banks, STATCOM/SVG etc. may be carried out. Early action on deployment and installation is needed.
- As shown in the study results, the behaviour of the system is entirely different with different load models viz. composite and ZIP load model. Hence, accurate load modelling is very important to properly capture the right behaviour of the system in the operational planning phase. Same may be considered in the planning stage studies as well as while assessing the TTC/ATC of control areas.
- It is recommended that a suitable SPS scheme may be planned which shall operate after outage of HVDC Champa – Kurukshetra Bipole to obtain relief in the voltage.

- The load centres (non-pit head locations) usually experience low voltage-related issues during peak demand periods. The presence of thermal generators near the load centres may significantly improve the voltage profile and can provide dynamic reactive power support in case of contingencies improving the stability.

10.2 Reliable operation of HVDC Champa - Kurukshetra:

a. Between January to June 2024, there have been more than 30 instances of tripping of HVDC Champa-Kurukshetra poles (list enclosed as **Annexure – 13**). Detailed fault analysis of the 800 kV HVDC Champa-Kurukshetra link and other affected components is essential to understand the root cause of the event. Implementing remedial measures based on this analysis can prevent recurrence and enhance the reliability of this critical interregional link.

b. All trippings have been analyzed by POWERGRID in consultation with OEM and it has been concluded that trippings have occurred mainly due to mal-operation of DCCT, T-zone protection mal-operation, 5005/5008 card failure, system failure issue and de-paralleling failure issue. Based on the identification of issues, necessary modification of software and hardware is already in process and under trial. POWERGRID to expedite the implementation of measures at the earliest.

c. HVDC Champa-Kurukshetra tripping took place due to a transmission line fault at location 1805 (falling under Village - Chamarra, Block -Panwari, Distt- Mahoba, Uttar Pradesh) caused by flashover between jumper conductor and tower body under localised storm/heavy wind condition. Even though this is the only line fault that took place during the last one year in this line and no record of fault at this location since commissioning, it is very important that further improvements in O&M of the transmission line may be done in view of the criticality of HVDC line. In order to control the jumper swing use of additional pilot insulators, addition of counterweight and insulation sleeve on the jumper conductor and DMR wherever required may also be deployed. Increased line patrolling during summer and at vulnerable locations need to be ensured to check infringements and foreign materials.

d. As per existing configuration, both DMR-1 & DMR-2 is connected together electrically at both terminals of HVDC through disconnectors. Online isolation of DMR during power flow or fault condition is not possible. To improve the reliability of system under DMR fault condition auto-isolation of DMRs and NBGS after discussion with OEM of HVDC may be explored in consultation with HVDC OEMs.

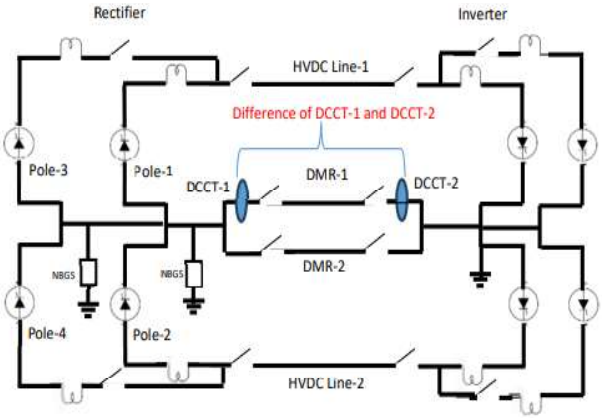

Figure 94:DMR current differential protection

e. As DMR-1 was available, an assessment is needed to determine if Pole-1 & 3 could have remained operational with DMR-1, given the power order was not excessively high (~1100 MW total). The periodic review of healthiness of DMR is important to assess the healthiness

of HVDC lines. Protocol for periodic healthiness checking of DMR may be formulated by the utility.

f. Standard DMR line fault protection philosophy may be incorporated in RfP Document for future HVDC projects in consultation with OEM i.e. The closing of NBGS may be reviewed (in consultation with OEMs) for DMR line protection sequence during Bipolar operation for future HVDC projects.
g. HVDC systems have huge number of filter banks which provides MVAR support in addition to serve the basic purpose of harmonics filtration. It may be beneficial to get benefit of filter banks for MVAR support during low voltage condition subject to technical feasibility without compromising the safety of HVDC system as such.
h. A SPS scheme can be explored where filter banks of HVDC are tripped in succession after blocking of HVDC poles, this would help in limiting the dip in voltage after blocking of HVDC poles.
i. However, the immediate protective removal of filters is highly required in existing LCC HVDC during blocking of bipoles to avoid sudden voltage overshoot at connected AC BUS. In order to mitigate abrupt voltage rise/fall during filter switching, the filter switching scheme of HVDC in case of protective pole tripping should be based on antecedent AC bus voltage. If the voltage is lower/higher than a set value, the switching of filter bank/ part of filter bank may be avoided until the voltage recovers to that level.

10.3 Implementation of Overvoltage protection setting:

It was also observed that better over-voltage protection settings are required specially when there is sharp rise in voltage. In such cases voltage based time grading need to be carried out on different lines based on various factors. A review of overvoltage stage-1 protection settings on all 765KV lines emanating from northern region substations was carried out. Based on the deliberations, following is recommended for implementing overvoltage Stage-I protection settings:

a. Pick up voltage & time delay setting of Antitheft lines to be kept low with sufficient time gap from other lines at S/s
b. Parallel lines grading to be done such that one line should trip early by setting at low voltage and other line should trip last by keeping setting at high voltage.
c. Highly loaded lines should be given last priority in tripping.
d. Net MVAr relief (based on line charging MVAr & MVAr compensation in line) based on the simulation to be considered for arriving at the priority of line tripping. Lines providing high net MVAr relief to be tripped early.
e. Grading to be done in such a manner that one major incoming and outgoing line shall remain connected after tripping of lines at any node.
f. Protection setting of remote end station of a line need to be coordinated so as to avoid tripping of line from other end.
g. Drop-off to pick-up ratio of Relays implemented for overvoltage protection shall be more than 99.5%.

10.4 Frequency Response by Generating Units

a. The performance of primary response by generating units in this event underscores significant concerns regarding the inadequate governor response being provided by generators.

b. It is recommended that the performance of generating units where inadequate primary response was observed shall be discussed at RPC level. The remedial measures shall be explored including carrying out of onsite primary response testing.

10.5 Compliance of CEA Standards by Renewable Generating Plants:

a. Protection settings of inverters/WTG shall be coordinated in such a way that it accounts for the voltage rise/drop between inverter/WTG terminal & Point of interconnection (POI). Overvoltage /undervoltage trip settings should be configured accordingly.
b. The reactive power controller settings (droop, deadband, power factor, operating modes) in inverters/WTGs should be configurable and shall be set in consultation with the respective load dispatch centre.
c. The protection settings of elements in collector system viz. transformers, cables etc. shall such that it allows RE plants to ensure the compliance of CEA standards at POI.
d. RE plants shall ensure that the event records shall be shared with SLDC/RLDC within the stipulated time for event analysis. All such data shall be retained in a retrievable format in a suitable archival system.

10.6 Compliance of Standards by Load Serving Machines

a. The motors serving load shall be compliant with IS/IEC, this shall ensure following:
    i. Limiting MVAR drawl during low voltage period.
    ii. Avoiding unwanted tripping due to voltage fluctuations.
    iii. Improved power factor
b. It is suggested that the protection settings of 1-ph AC compressors, 3-ph HVAC compressors in large commercial complexes, mall etc., agricultural motors etc. may be reviewed and suitable standard for the same may be notified.

10.7 Amendments in Existing Regulations

With the envisaged large-scale addition of different emerging types of loads i.e. electrolyzers, data centres and other power electronic interfaced loads, it is important that the suitable provisions for ensuring reliable operation may be added in the existing CEA standards.

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S.No	Element Name	Outage		Revival		Reason / Remarks
		Date	Time	Date	Time	
1	800 KV HVDC Kurukshetra(PG) Pole-2	01-03-2026	08:11	01-03-2026	15:43	Blocked by operation of VESDA due to valve hall fire detection at Champa end.
2	800 KV HVDC Kurukshetra(PG) Pole-1	18-03-2026	09:57	18-03-2026	14:10	Tripped from Champa end due to VESDA (Smoke detection) protection operated
3	800 KV HVDC Kurukshetra(PG) Pole-2	18-03-2026	14:42	18-03-2026	15:53	Tripped due to Filter bank communication issue.
4	800 KV HVDC Kurukshetra(PG) Pole-1	18-03-2026	14:42	18-03-2026	16:03	Tripped due to Filter bank communication issue.
5	800 KV HVDC Kurukshetra(PG) Pole-3	18-03-2026	14:47	18-03-2026	16:16	Tripped due to Filter bank communication issue.
6	800 KV HVDC Kurukshetra(PG) Pole-4	18-03-2026	14:47	18-03-2026	16:25	Tripped due to Filter bank communication issue.
7	800 KV HVDC Kurukshetra(PG) Pole-1	18-03-2026	18:39	18-03-2026	20:06	Tripped due to non availability of minimum filters
8	800 KV HVDC Kurukshetra(PG) Pole-2	18-03-2026	18:39	18-03-2026	20:24	Tripped due to non availability of minimum filters
9	800 KV HVDC Kurukshetra(PG) Pole-1	30-03-2026	15:11	30-03-2026	21:58	Blocked due to VESDA alarm from Champa end.
10	800 KV HVDC Kurukshetra(PG) Pole-2	04-04-2026	19:21	04-04-2026	23:31	DC Line Fault. FLR- Kurukshetra: 362.1kM, Champa: 925.1kM. Tower no.- 2483
11	800 KV HVDC Kurukshetra(PG) Pole-4	04-04-2026	19:21	05-04-2026	00:14	DC Line Fault. FLR- Kurukshetra: 362.1kM, Champa: 925.1kM. Tower no.- 2483

Grid Event summary for March 2026

S.No.	Category of Grid Incident/ Disturbance (GI-1 to GD-V)	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage Date	Outage Time	Revival Date	Revival Time	Duration (hh:mm)	Event (As reported)	Energy Unserved due to Generation loss (MU)	Energy Unserved due to Load loss (MU)	Loss of generation / loss of load during the Grid Disturbance: Generation Loss(MW)	Loss of generation / loss of load during the Grid Disturbance: Load Loss (MW)	% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance: % Generation Loss(MW)	% Loss of generation / loss of load w.r.t Antecedent Generation/Load in the Regional Grid during the Grid Disturbance: % Load Loss (MW)	Antecedent Generation/Load in the Regional Grid: Antecedent Generation (MW)	Antecedent Generation/Load in the Regional Grid: Antecedent Load (MW)	Fault Clearance time (in ms)
1	GI-2	1) 400 KV Ajmer(RS)-Deedwana(MTS) (RS) Ckt 2) 400 KV Ajmer(RS)-Ajmer(PG) (PG) Ckt-1 3) 400 KV Ajmer(RS)-Ajmer(PG) (PG) Ckt-2 4) 400 KV Phagi-Ajmer (RS) Ckt-1 5) 400 KV Phagi-Ajmer (RS) Ckt-2 6) 400/220 kV 315 MVA ICT 1 at Ajmer(RS) 7) 400/220 kV 315 MVA ICT 3 at Ajmer(RS)	Rajasthan	RVPNL, PGCIL	2-Mar-26	14:50	2-Mar-26	15:51	01:01	i)400/220kV Ajmer(RS) has one and half breaker scheme at 400kV level and double main and transfer bus scheme at 220kV level. ii)As reported, at 12:42 hrs, 400 KV Ajmer(RS)-Deedwana(MTS) (RS) Ckt auto-reclosed from both the ends on transient fault. iii)Further, at 14:50 hrs, 400 KV Ajmer(RS)-Deedwana(MTS) (RS) Ckt tripped on R-N phase to earth fault with fault distance of 14.69km from Ajmer(RS) end and 84.9km from Deedwana end. During patrolling, some burnt bushes were found between Tower No. 38-39 and same were cleared from line range. iv)As per DR at Ajmer(RS) end of 400 KV Ajmer(RS)-Deedwana(MTS) (RS) Ckt, B-N Phase to earth fault (phase sequence issue at Ajmer(RS)) with unsuccessful A/R was observed with fault current of ~11.06 kA from Ajmer(RS) end. Delayed fault clearing time=~1.5 sec. Zone-1 distance protection operated at Ajmer(RS) end. v)During the same time, 400 KV Ajmer(RS)-Ajmer(PG) (PG) Ckt-1 & 2 also tripped sensing this fault (delayed clearance) in zone-3 at Ajmer(PG) end. vi)As per DR, 400 KV Phagi-Ajmer (RS) Ckt-1 tripped on over-voltage stage-1 operation at Phagi(RS) end (Voltage reached 1.11 pu at Phagi end) and 400 KV Phagi-Ajmer (RS) Ckt-2 tripped sensing this fault (delayed clearance) in zone-3 at Phagi(RS) end (Fault current, Ir=~1.374kA from Phagi end). vii)Due to delayed clearance of fault, 400/220 kV 315 MVA ICT 1 & 3 at Ajmer(RS) also tripped on O/C E/F (51N) and Directional E/F (67N) protection operation respectively at the same time. viii)As per PMU at Ajmer(PG), R-N phase to earth fault with unsuccessful A/R was observed with fault clearing time of 80 ms and 1560 ms (delayed) respectively. ix)As per SCADA, change in demand of approx. 920 MW was observed in Rajasthan control area. However, as reported by SLDC Rajasthan, load loss of approx. 375 MW occurred.	0	0.38	0	375	0.000	0.728	56682	51512	1560
2	GI-1	1) 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1 2) 220 KV Ranpur-KTPS (RS) Ckt-1 3) 220 KV Kota Saketpura-KTPS (RS) Ckt-3 4) 210 MW Kota TPS - UNIT 5 5) 195 MW Kota TPS - UNIT 7 6) 220 kV Bus-3 at KTPS(RS) 7) 220 kV Bus-5 at KTPS(RS)	Rajasthan	RVPNL, PGCIL	4-Mar-26	01:44	4-Mar-26	04:01	02:17	i)220kV KTPS(RS) has 6 buses at 220kV level. Bus 3 and Bus 5 are connected through an isolator. Bus 2 and Bus 4 are connected without any isolator or bus coupler. Bus 1 is connected to Bus 3 via a bus sectionalizer, Bus 3 is connected to Bus 4 via a bus coupler and Bus 5 is connected to Bus 6 via a bus coupler. ii)During antecedent condition, 220 KV Ranpur-KTPS (RS) Ckt-1, 220 KV Kota Saketpura-KTPS (RS) Ckt-3 & 210 MW Kota TPS - UNIT 5 were connected to 220 kV Bus-3 at KTPS(RS) and 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1 & 195 MW Kota TPS - UNIT 7 were connected to 220 kV Bus-5 at KTPS(RS). As per SCADA, 210 MW Kota TPS - UNIT 5 and 195 MW Kota TPS - UNIT 7 were generating approx. 172 MW and 190 MW respectively. iii)As reported, at 01:44 hrs, 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1 tripped on B-N phase to earth fault with fault distance of 6.5 km and fault current of 5.037 kA from Kota(PG) end. As per DR, (Zone-2 Start + Carrier received) at Kota(PG) end. iv)Due to some problem in the line CB at KTPS end of 220 KV Kota(PG)-KTPS(RVUN) (RS) Ckt-1, LBB operated at KTPS(RS) resulting in the tripping of 220 kV Bus-3 & 5 at KTPS(RS). As per DR, voltage became zero after 200 ms of opening of CB at Kota(PG) end ensuring LBB operation at KTPS end. v)This led to tripping of all the elements connected to 220 kV Bus-3 & 5 at KTPS(RS) and both the buses became dead. vi)As per PMU at KTPS(RS), B-N phase to earth fault was observed with delayed fault clearing time of 320 ms. vii)As per SCADA, generation loss of approx. 362 MW was observed at KTPS(RS).	0	0	362	0	0.993	0.000	36442	38356	320
3	GI-1	1) 220 kV Barsingsar(NLC)-Nagaur (RS) Ckt 2) 220 kV Barsingsar(NLC)-Bikaner Ckt 3) 125 MW Barsingsar(NLC) - Unit 2	Rajasthan	RVPNL	7-Mar-26	13:23	7-Mar-26	13:47	00:24	i)220kV Barsingsar(NLC) has double main and transfer bus scheme at 220kV level. ii)During antecedent condition, 125 MW Barsingsar(NLC) - Unit 1 & 2 were generating approx. 122 MW and 124 MW respectively. iii)As reported, at 13:23 hrs, 220 kV Barsingsar(NLC)-Nagaur (RS) Ckt tripped on Y-B phase to phase fault (as per PMU) with fault distance of 25 km from Nagaur end; fault sensed in zone-1 at Nagaur end. iv)During the same time, 220 kV Barsingsar-Bikaner ckt and 125 MW Barsingsar(NLC) - Unit 2 also tripped (exact reason of tripping along with nature of protection operation yet to be shared). v)As per PMU at Kota(PG), Y-B phase to phase fault was observed with fault clearing time of 120 ms. vi)As per SCADA, at 13:23 hrs, generation loss of approx. 124 MW occurred at Barsingsar(NLC) and change in Rajasthan solar generation of approx. 210 MW was observed.	0	0	334	0	0.577	0.000	57929	56300	120
4	GD-1	1) 220 kV Barsingsar(NLC)-Khinwsar (RS) Ckt 2) 220 kV Barsingsar(NLC)-Baap (RS) Ckt 3) 125 MW Barsingsar(NLC) - Unit 1	Rajasthan	RVPNL	7-Mar-26	13:34	7-Mar-26	13:45	00:11	i)Further, at 13:34 hrs, 220 kV Barsingsar-Khinwsar ckt, 220 kV Barsingsar-Baap ckt and 125 MW Barsingsar(NLC) - Unit 1 tripped (exact reason of tripping along with nature of protection operation yet to be shared). ii)As per SCADA SOE, 220 kV Baap-Phalodi(RS) ckt also tripped during the same time (exact reason of tripping along with nature of protection operation yet to be shared). iii)Due to this, complete blackout occurred at 220 kV Barsingsar(NLC) and 220/132/33kV Baap(RS) S/s. iv)As per PMU at Kota(PG), no fault was observed in the system. v)As per SCADA, at 13:34 hrs, generation loss of approx. 122 MW occurred at Barsingsar(NLC) and change in Rajasthan solar generation of approx. 270 MW & change in demand of approx. 70 MW were observed in Rajasthan control area.	0	0.013	392	70	0.687	0.123	57083	56782	NA
5	GD-1	1) 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt	Rajasthan	PGCIL, JGCPL	7-Mar-26	14:01	7-Mar-26	15:34	01:33	i)Generation of 220kV Juniper Green(JGCPL)(IP) station evacuates through 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt. ii)During antecedent condition, 220kV Juniper Green(JGCPL)(IP) station was generating approx. 104 MW (as per PMU and SCADA). iii)As reported, at 14:01 hrs, 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt tripped on B-ph line differential protection operation at JGCPL end (exact reason, nature and location of fault yet to be shared). iv)Due to tripping of 220 KV Bikaner_2 (PBTSL)-JGCPL_SL_BIK2_PG (Juniper_NEPL) Ckt, complete blackout occurred at 220kV Juniper Green(JGCPL)(IP) due to loss of evacuation path. v)As per PMU at Bikaner-2(PG), B-N phase to earth fault was observed with fault clearing time of 80 ms. vi)As per PMU and SCADA, solar generation loss of approx. 104 MW was observed at 220kV Juniper Green(JGCPL)(IP).	0	0	104	0	0.178	0.000	58416	57852	80
6	GD-1	1) 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-1 2) 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-2 3) 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-3 4) 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-4 5) 220 KV Mohana(HV)-Sampla (HVPNL) Ckt-1 6) 220 KV Mohana(HV)-Sampla (HVPNL) Ckt-2 7) 220/132kV 100 MVA ICT-2 at Mohana(HV)	Haryana	HVPNL, PGCIL	7-Mar-26	20:08	7-Mar-26	22:22	02:14	i)220/132kV Mohana(HV) has double main bus scheme at 220kV level. ii)During antecedent condition, 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-1, 2, 3 & 4 were connected to 220kV Bus-1 at Mohana(HV) and 220 KV Mohana(HV)-Sampla (HVPNL) Ckt-1 & 2 and 220/132kV 100 MVA ICT-2 at Mohana(HV) were connected to 220kV Bus-2 at Mohana(HV). iii)As reported, at 20:08 hrs, B-Ph CT of 220/132kV 100 MVA ICT-2 at Mohana(HV) burst occurred. iv)During the same time, 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-1, 2, 3 & 4 also tripped from Sonipat(PG) end only. As per DR, fault sensed in zone-2 (delayed fault clearance of ~400ms) for 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-1 & 2 and in zone-3 (delayed fault clearance of ~840ms) for 220 KV Mohana(HV)-Sonipat(PG) (HVPNL) Ckt-3 & 4 from Sonipat(PG) end. v)As per SCADA SOE, 220 KV Sonipat(PG)- IMT Kharkhoda A (HVPNL) Ckt-1 and 220 KV Mohana(HV)-Sampla (HVPNL) Ckt-1 & 2 also tripped during the same time (exact reason of tripping and nature of protection operation yet to be shared). vi)Due to tripping of all the 220kV lines from Mohana(HV), complete blackout occurred at 220/132kV Mohana(HV) S/s. vii)As per PMU at Sonipat(PG), B-N fault followed by B-N fault converted to Y-B-N fault was observed with fault clearing time of 80 ms and 840 ms (delayed) respectively. viii)As per SCADA, change in demand of approx. 450 MW was observed in Haryana control area.	0	1.005	0	450	0.000	0.775	50189	58053	840
7	GI-2	1) 400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1 2) 250 MW Chhabra TPS - UNIT 4	Rajasthan	RVPNL	9-Mar-26	14:37	9-Mar-26	17:46	03:09	i)During antecedent condition, 400 kV Bhilwara (RS) – Chhabra (RVUN) Ckt-1 was already under planned shutdown since 11:29 hrs. 250 MW Chhabra Unit-1, 2, 3 & 4 were running and generating approx. 154 MW, 145 MW, 144 MW and 162 MW respectively (as per SCADA). ii)As reported, at 14:37 hrs, 400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1 tripped on R-N Phase to earth fault with fault distance of 269.7 km from Hindaun end and 27.4 km from Chhabra TPS end. iii)As per DR, fault current was 1.268 kA from Hindaun end and 8.896 kA from Chhabra TPS end; fault sensed in zone-1 at Chhabra end and in zone-2 at Hindaun end. iv) As reported by SLDC Rajasthan, in case of N-1-1/N-2 contingency of 400 kV Chhabra-Hindaun & Chhabra-Bhilwara, if total generation at Chhabra TPS is >550 MW but <750 MW, then only one unit of Chhabra TPS will trip and if total generation at Chhabra TPS is >750 MW, then two units of Chhabra TPS will trip. v)Due to tripping of 400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1 with 400 kV Bhilwara (RS) – Chhabra (RVUN) Ckt-1 under outage, 250 MW Chhabra Unit-4 tripped on SPS operation as per SPS logic related to Safe evacuation of generation of Chhabra TPS (Case-3). vi)As per PMU at Bassi(PG), R-N Phase to earth fault with unsuccessful A/R was observed with fault clearing time of 80 ms. vii)As per SCADA, generation loss of approx. 162 MW was observed at Chhabra TPS(RS).	0	0	162	0	0.273	0.000	59321	59366	80
8	GD-1	1) 220 KV Bhadla(PG)-ACME Solar(ACM) (ACME) Ckt-1	Rajasthan	PGCIL, ACME	10-Mar-26	12:47	10-Mar-26	15:05	02:18	i)220kV ACME Solar RE station connected at Bhadla(PG) at 220kV level and its generation evacuates through 220kV Bhadla(PG)-ACME Solar(IP) line. During antecedent condition, 220kV ACME RE station was generating ~249MW. ii)As reported at 12:47 hrs, 220 KV BHADLA(PG)-ACME Solar(ACME) line tripped on R-N phase to earth fault. Fault occurred due to snapping of R-Ph Jumper. iii)Due to tripping of line, complete generation of ACME Solar i.e., ~249 MW lost due to loss of evacuation path. iv)As per PMU at Bhadla(PG), voltage dip in R & B phase is observed. v)As per DR of Bhadla(PG) end of the line, R-N fault with fault current of ~14.1 kA and 3-ph trip without A/R operation is observed. vi)As per SCADA, change in NR solar generation of ~200 MW is observed.	0	0	249	0	0.423	0.000	58828	59099	80
9	GD-1	1) 400 KV AGE2SL SL_BHD2_PG-Bhadla_2 (PG) (AGE2SL) Ckt-1	Rajasthan	RVPNL, PGCIL	10-Mar-26	15:37	10-Mar-26	18:10	02:33	i)400kV AGE2SL RE station is connected at Bhadla2(PG) at 400kV level and its generation evacuates through 400kV Bhadla2(PG)-AGE2SL(IP) line. During antecedent condition, 400kV AGE2SL RE station was generating ~495MW. ii)As reported at 15:37 hrs, 400 KV Bhadla2(PG)-AGE2SL line tripped on overvoltage stage-1 protection from Bhadla2(PG) end. DT received at AGE2SL end. iii)Due to tripping of line, complete generation of AGE2SL i.e., ~495 MW lost due to loss of evacuation path. iv)As per PMU at Bhadla2(PG), voltage dip of ~8kV in all three phases is observed. v)As per SCADA data, antecedent bus voltage at 400kV Bhadla2(PG) and AGE2SL was ~415kV which was in safe limit. vi)As per SCADA, change in NR solar generation of ~880 MW (solar generation was in ramping down state) is observed.	0	0	495	0	0.851	0.000	58165	57869	NA
10	GD-1	1) 220kV KTPS-Bundi(RS) Ckt-1 2) 220kV KTPS-Bundi(RS) Ckt-2 3) 220 KV Ajmer-Beawer Ckt 4) 220 kV Ajmer-Kishangarh Ckt 5) 220 kV Ajmer-Bherunda Ckt-1 6) 220 kV Ajmer-Bherunda Ckt-2 7) 400/220 kV 315 MVA ICT 1 at Ajmer(RS) 8) 400/220 kV 315 MVA ICT 3 at Ajmer(RS)	Rajasthan	RVPNL	10-Mar-26	14:44	10-Mar-26	15:00	00:16	i)During antecedent condition, 400/220 kV 315 MVA ICT 1 & 3 at Ajmer(RS) were carrying approx. 217 MW and 226 MW respectively. ii)As reported by SLDC Rajasthan, at 14:44 hrs, 220kV KTPS-Bundi(RS) Ckt-1 & 2 tripped on B-N phase to earth fault (exact reason, nature and location of fault yet to be shared). iii)Consequently, 220 KV GSS Bundi(RS) was left with a single power source i.e. 220 KV Gulabpura(RS). 220 KV Gulabpura was being supplied by 220 KV Beawar and 220 KV Jethana, both of which were connected to the 400 KV GSS Ajmer(RS). iv)This led to over-loading of 400/220 kV 315 MVA ICT 1 & 3 at Ajmer(RS) triggering the SPS for Transformers at 400KV Ajmer(RVPNL) substation. v)Due to SPS operation, 220 kV Ajmer-Beawer Ckt, 220 kV Ajmer-Kishangarh Ckt and 220 kV Ajmer-Bherunda Ckt-1 & 2 tripped (as per logic). vi)However, the load from 220 KV GSS Bundi(RS), 220 KV Gulabpura(RS) and 220 KV Jethana along with 220kV GSS Ajmer(RS) continued to persist on both 400/220 kV 315 MVA ICT 1 & 3 at Ajmer(RS) and ultimately both the ICTs tripped on overloading. vii)Complete blackout occurred at 220 kV Kishangarh, 220 kV Bherunda, 220 kV Beawar, 220 KV Bundi(RS), 220 KV Gulabpura(RS) and 220 KV Jethana S/s. viii)As per SCADA SOE, 220/132kV ICT-2 at Ras(RS) also tripped during the same time (exact reason of tripping and nature of protection operation yet to be shared). ix)As per PMU at Ajmer(PG), Two consecutive B-N Phase to earth faults within A/R reclaim time were observed with fault clearing time of 80 ms each. x)As per SCADA, change in demand of approx. 440 MW was observed in Rajasthan control area. As reported by SLDC Rajasthan, load loss of approx. 400 MW occurred in Rajasthan control area.	0	0.107	0	400	0.000	0.678	60018	58961	80
11	GI-2	1) 400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1 2) 250 MW Chhabra TPS - UNIT 4	Rajasthan	RVPNL	10-Mar-26	13:55	10-Mar-26	17:22	03:27	i)During antecedent condition, 400 kV Bhilwara (RS) – Chhabra (RVUN) Ckt-1 was already under planned shutdown. 250 MW Chhabra Unit-1, 2, 3 & 4 were running and generating approx. 159 MW, 148 MW, 154 MW and 180 MW respectively (as per SCADA). ii)As reported, at 13:55 hrs, 400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1 tripped on R-N Phase to earth fault with fault distance of 271.1 km from Chhabra TPS end. 26.3 km from Chhabra TPS end. iii)As per DR, fault current was 1.312 kA from Hindaun end and 8.985 kA from Chhabra TPS end; fault sensed in zone-1 at Chhabra end and in zone-2 at Hindaun end. iv) As reported by SLDC Rajasthan, in case of N-1-1/N-2 contingency of 400 kV Chhabra-Hindaun & Chhabra-Bhilwara, if total generation at Chhabra TPS is >550 MW but <750 MW, then only one unit of Chhabra TPS will trip and if total generation at Chhabra TPS is >750 MW, then two units of Chhabra TPS will trip. v)Due to tripping of 400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1 with 400 kV Bhilwara (RS) – Chhabra (RVUN) Ckt-1 under outage, 250 MW Chhabra Unit-4 tripped on SPS operation as per SPS logic related to Safe evacuation of generation of Chhabra TPS (Case-3). vi)As per PMU at Bassi(PG), R-N Phase to earth fault with unsuccessful A/R was observed with fault clearing time of 80 ms. vii)As per SCADA, generation loss of approx. 180 MW was observed at Chhabra TPS(RS).	0	0	180	0	0.307	0.000	58544	57680	80
12	GD-1	1) 220 KV Moga(PG)-Mehal Kalan(PS) (PSTCL) Ckt-1 2) 220 KV Moga(PG)-Mehal Kalan(PS) (PSTCL) Ckt-2 3) 220 KV Pakhwal-Mehal Kalan (PS)(PSTCL) CKT-1 4) 220 kV Pakhwal-Mehal Kalan (PS)(PSTCL) CKT-2 5) 220kV Bus-1 at Mehal Kalan(PS) 6) 220kV Bus-2 at Mehal Kalan(PS) 7) 220/66kV 100MVA ICT 1 at Mehal Kalan(PS) 8) 220/66kV 100MVA ICT 2 at Mehal Kalan(PS)	Punjab	PSTCL, PGCIL	10-Mar-26	10:39	10-Mar-26	10:54	00:15	i)220/66KV Mehal Kalan(PS) has double main bus scheme at 220kV level. ii)As reported, at 10:39 hrs, B-ph CT of 220 KV Moga(PG)-Mehal Kalan(PS) (PSTCL) Ckt-2 blast occured which further led to bus bar protection operation at Mehal Kalan(PS). iii)Due to busbar operation, all the elements connected to 220kV Bus-1 & 2 at Mehal Kalan(PS) tripped and complete blackout occurred at 220/66KV Mehal Kalan(PS). iv)As per PMU at Jalandhar(PG), B-N phase to earth fault is observed with fault clearing time of 560 ms. v)As per SCADA, change in demand of approx. 10 MW is observed in Punjab control area.	0	0.0025	0	10	0.000	0.016	58799	62079	560
13	GD-1	1) 220 KV Bhadla(PG)-ACME Solar(ACM) (ACME) Ckt-1	Rajasthan	PGCIL, ACME	11-Mar-26	10:56	11-Mar-26	12:49	01:53	i)220kV ACME Solar RE station connected at Bhadla(PG) at 220kV level and its generation evacuates through 220kV Bhadla(PG)-ACME Solar(IP) line. During antecedent condition, 220kV ACME RE station was generating ~227MW. ii)As reported at 10:56 hrs, 220 KV BHADLA(PG)-ACME Solar(ACME) line tripped on R-N phase to earth fault. Exact reason of occurrence of fault not received. iii)Due to tripping of line, complete generation of ACME Solar i.e., ~227 MW lost due to loss of evacuation path. iv)As per PMU at Bhadla(PG), voltage dip in R & B phase is observed. v)As per DR of Bhadla(PG) end of the line, R-N fault with fault current of ~16.9 kA and 3-ph trip without A/R operation is observed. As per event logger of Bhadla(PG) end, fault location was ~3.6km from Bhadla(PG) end. vi)As per SCADA, change in NR solar generation of ~235 MW is observed.	0	0	227	0	0.371	0.000	61239	62684	80

S.No.	Category of Grid Incident/ Disturbance	Name of Elements (Tripped/Manually opened)	Affected Area	Owner/ Agency	Outage		Revival		Duration (hh:mm)	Event (As reported)	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)
	(GI-1 to GD-V)				Date	Time	Date	Time					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)	
14	GI-2	1) 220KV Bikaner(RS)-Nokha Ckt 2) 220KV Bikaner(RS)-Sri Dungargarh Ckt 3) 400/220 KV 315 MVA ICT 1 at Bikaner(RS) 4) 400/220 KV 315 MVA ICT 2 at Bikaner(RS)	Rajasthan	RVPNL	11-Mar-26	11:41	11-Mar-26	12:12	00:31	i)400/220kV Bikaner(RS) has one and half breaker scheme at 400kV level and double main and transfer bus scheme at 220kV level. ii)During antecedent condition, active power loading on 400/220 KV 315 MVA ICT 1 & 2 at Bikaner(RS) were 215 MW and 224 MW respectively from 220kV level to 440kV level and reactive power loading were 139 MVAr and 136 MVAr respectively from 400kV level to 220kV level (as per SCADA). iii)As reported, at 11:41 hrs, there was an immediate surge in generation due to tripping of 220 kV Badnu-Tehandesar Ckt. The generation from 220 kV GSS Badnu was diverted via 220 kV GSS Bikaner(RS) to 400 kV GSS Bikaner(RS) which led to overloading of 400/220 KV 315 MVA ICT 1 & 2 at Bikaner(RS). iv)Due to overloading of ICTs at Bikaner(RS), "SPS for Transformers at 400KV Bikaner (RVPNL)" operated and load feeders, e.g., 220KV Bikaner(RS)-Nokha Ckt & 220KV Bikaner(RS)-Sri Dungargarh Ckt tripped on SPS operation as per logic. v)Tripping of 220KV Bikaner(RS)-Nokha Ckt & 220KV Bikaner(RS)-Sri Dungargarh Ckt further caused overloading of 400/220 KV 315 MVA ICT 1 & 2 at Bikaner(RS) and both the ICTs tripped due to overloading. vi)As per PMU at Bikaner(IP), no fault was observed in the system, however fluctuation in voltage was present. vii)As per SCADA, change in NR total solar generation and Rajasthan solar generation of approx. 405 MW and change in demand of approx. 65 MW in Rajasthan control area were observed.	0	0.0336	405	65	0.674	0.105	60085	62000	NA
15	GD-1	1) 400 KV Behman Jassa Singh (PS)-HMEL (PS) (PSTCL) Ckt-1 2) 400 KV Behman Jassa Singh (PS)-HMEL (PS) (PSTCL) Ckt-2 3) 400 KV Behman Jassa Singh (PS)-Moga(PG) (PSTCL) Ckt-1 4) 400/66 kV 250 MVA ICT 1 at HMEL (PS) 5) 400/66 kV 250 MVA ICT 2 at HMEL (PS)	Punjab	PSTCL, PGCIL	12-Mar-26	16:23	12-Mar-26	18:19	01:56	i)During antecedent condition, 400/66kV 250 MVA ICT 1 & 2 at HMEL (PS) were only in service and active power loading on ICTs were 64 MW and 62 MW respectively. ii)As reported, at 16:23 hrs, DT was sent from Behman Jassa Singh (PS) end due to PLCC maloperation during testing work. iii)Due to this, 400 KV Behman Jassa Singh (PS)-HMEL (PS) (PSTCL) Ckt-1 & 2 and 400 KV Behman Jassa Singh (PS)-Moga(PG) (PSTCL) Ckt-1 tripped respectively from HMEL(PS) and Moga(PG) end only. As per DR, DT received at HMEL(PS) and Moga(PG) end. iv)During the same time, 400/66 kV 250 MVA ICT 1 & 2 at HMEL (PS) also tripped (exact reason and nature of protection operation yet to be shared). This led to complete blackout at 400 kV HMEL(PS). v)As per PMU at Moga(PG), no fault was observed in the system. vi)As per SCADA, change in demand of approx. 122 MW was observed in Punjab control area.	0	0.236	0	122	0.000	0.217	53333	56118	NA
16	GI-2	1)800 KV HVDC Agra(PG) Pole-1 2)800 KV HVDC Agra(PG) Pole-2	Uttar Pradesh	PGCIL	15-Mar-26	12:00	19-Mar-26	01:55	85:55:00	i)During antecedent condition, 800 KV HVDC Agra-BNC Pole-1 & 2 was carrying total 500 MW power from Agra to BNC (250 MW on each Pole). Pole-3 & Pole-4 at Agra & APD was out on Voltage Regulation. ii)As reported, at 12:00:49 hrs, DC Line Fault Level was detected in 800kV HVDC Agra-BNC Line-1. Subsequently, one restart attempt was taken by control system at full voltage as per implemented HVDC control logic. Line could not hold as fault did not clear during restart due to persistent fault & the control system blocked the converters at both ends. As per line fault locator, fault distance was 298.4 km from Agra(PG) at Tower no. 3631/A-8 (136/5) (under Lucknow TLM jurisdiction). iii)Further, at 12:00:55 hrs, DC Line Fault Level was detected in 800kV HVDC Agra-BNC Line-2 also. Subsequently, one restart attempt was taken by control system at full voltage as per implemented HVDC control logic. Line could not hold as fault did not clear during restart due to persistent fault & the control system blocked the converters at both ends. As per line fault locator, fault distance was 296.5 km from Agra(PG) at Tower no. 3636/A-8 (under Lucknow TLM jurisdiction). iv)As per PMU at Agra(PG), no fault was observed in the system; however fluctuation in voltage was present. v)As per SCADA, power order changed from 500 MW to 0 MW. No load loss or generation loss was observed in UP control area.	0	0	0	0	0.000	0.000	53800	45732	NA
17	GI-2	1) 800 KV HVDC Kurukshetra(PG) Pole-1 2) 800 KV HVDC Kurukshetra(PG) Pole-2 3) 800 KV HVDC Kurukshetra(PG) Pole-3 4) 800 KV HVDC Kurukshetra(PG) Pole-4	Haryana	PGCIL	18-Mar-26	14:42	18-Mar-26	15:53	01:11	i)During antecedent condition, 800kV HVDC Champa-Kurukshetra was carrying total 1500 MW power from Champa to Kurukshetra (375 MW on each Pole). ii)As reported, to address suspect signal (NTAMC) from IEDs installed on 500 MVAR TCR Network Ring, it was identified that fiber port-15 of EFS-2 is low and the fiber was manually shifted to another port. iii)However, this action caused all SAS ring devices to turn suspect simultaneously, resulting in multiple filter bank DBI (Data Bit Invalid) alarms. Consequently, a "minimum filter unavailable" alarm was triggered on both Bipoles. iv)Further, at 14:42:18.616 hrs and 14:45:54.692 hrs respectively, Bipole-1 & 2 Filter Control Blocking was initiated due to filter power limit. v)After restoring the fiber to its original port, device reporting gradually returned to normal. However, several BCUs remained unresponsive. vi)A physical inspection revealed that these BCUs were in a hung state, which had contributed to the DBI alarms. Normal operation was restored after restarting the affected BCUs. vii)Further investigation identified an IP address conflict: the IP of the TCR EFS-1 switch was found to be the same as that of CK-1 Gateway-2 (10.22.91.4). viii)As per PMU at Kurukshetra(PG), no fault was observed in the system, however reduction in 3-ph voltage at 14:42 hrs and rise in 3-ph voltage at 14:46 hrs occurred. ix)As per SCADA, Change in demand of approx. 84 MW at 14:42 hrs and no change in demand at 14:46 hrs were observed in Haryana control area. Power order reduced from 1500 MW to 0 MW.	0	0.0994	0	84	0.000	0.163	44878	51581	NA
18	GI-2	1) 800 KV HVDC Kurukshetra(PG) Pole-1 2) 800 KV HVDC Kurukshetra(PG) Pole-2	Haryana	PGCIL	18-Mar-26	18:39	18-Mar-26	20:06	01:27	i)During antecedent condition, 800kV HVDC Champa-Kurukshetra was carrying total 700 MW power from Champa to Kurukshetra (175 MW on each Pole). In Bipole-1, filters sub banks HACQ21 and HACQ31 (Type-A), HACQ12 (Type-B), and HACQ15 (Type-D) were in service. ii)As reported, at 18:38:25.347 hrs, the status of the Type-A filter HACQ31 became suspect, prompting the HVDC control system to generate a DBI (Data Bit Invalid) alarm. Despite this, Bipole-1 continued operating with a filter configuration of 1A + 1B + 1D in service. iii)As per earlier operating practice, the loss of any A/B/C-type filter was typically mitigated by switching in a D-type filter to avoid Bipole tripping. Following this approach, the operator brought one additional D-type filter into service. However, this action triggered the "Filter Control TOVC Inhibit Filter Switch-in" alarm as the bus voltage was around 422kV. This inhibits the Filter switching in as the Bus voltage reaches beyond 425kV. iv)Subsequently, the Reactive Power Controller recalculated the minimum filter requirement as 2A + 1B. Since the available configuration (1A + 1B) did not meet this requirement, Bipole-1 was blocked on the Minimum Filter Requirement criterion. v)The primary cause of Bipole tripping is the lack of sufficient redundancy in Type-A and Type-B filters at both terminals of the Champa-Kurukshetra link. For bipolar operation, even at minimum load, a minimum configuration of 2A + 1B filters must remain energized; failure to meet this requirement results in Bipole tripping. Currently, only one redundant Type-A and one redundant Type-B filter are available at each terminal. In the event of a filter outage, if the corresponding standby filter fails to energize due to control command issues, protection malfunctions, or circuit breaker failures (mechanical/electrical), the Bipole is likely to trip. vi)Further, as reported, till date Reactive Power Controller in Champa-Kurukshetra HVDC is having limitation in provided control logic which restrict the switching IN/OUT of essential filters when any of the D-type filter is switched IN in manual mode even when the essential filters and Reactive Power Controller are in AUTO mode. Matter has been taken up with M/s GE for Root Cause Analysis and necessary modifications in Reactive Power Controller Logic. vii)As per PMU at Kurukshetra(PG), no fault was observed in the system, however reduction in 3-ph voltage occurred. viii)As per SCADA, no change in demand in Haryana control area and no change in power order was observed. The power order of Pole-3 & 4 ramped up to compensate the Power of Pole 1 & Pole 2.	0	0	0	0	0.000	0.000	48358	53986	NA
19	GD-1	1) 220 KV Bhiwadi(PG)-Rewari(HV) (HVPNL) CKT-1 2) 220 KV Bhiwadi(PG)-Rewari(HV) (HVPNL) CKT-2 3) 220 KV Lullaahir(HV)- Rewari(HV) (HVPNL) CKT-1	Haryana	PGCIL, HVPNL	18-Mar-26	22:29	19-Mar-26	00:50	02:21	i)220/132kV Rewari(HV) has double main bus scheme at both 132kV and 220kV level. ii)As reported, at 22:29 hrs, during trial of 33kV feeder to Jonawas from Rewari, heavy flashover occurred which led to R-N phase to earth fault. iii)220 KV Bhiwadi(PG)-Rewari(HV) (HVPNL) CKT-1 & 2 sensed this fault and both lines tripped in zone-2 protection operation from Bhiwadi(PG) end (Why protection not operated at Rewari end?). As per DR, fault currents were 5.62 kA and 5.45 kA respectively for 220 KV Bhiwadi(PG)-Rewari(HV) (HVPNL) CKT-1 & 2 from Bhiwadi(PG) end. iv)During the same time, 220 KV Lullaahir(HV)- Rewari(HV) (HVPNL) CKT-1 also tripped (exact reason of tripping and nature of protection operation yet to be shared). v)Due to tripping of both 220 KV Bhiwadi(PG)-Rewari(HV) (HVPNL) CKT-1 & 2 and 220 KV Lullaahir(HV)- Rewari(HV) (HVPNL) CKT-1, complete blackout occurred at 220/132kV Rewari(HV) S/s. vi)As per SCADA SOE, 400kV Bhiwadi-Hissar (PG) Ckt-1 also tripped at the same time (exact reason of tripping and nature of protection operation yet to be shared). vii)As per PMU at Bhiwadi(PG), R-N phase to earth fault was observed with delayed fault clearing time of 400 ms. viii)As per SCADA, change in demand of approx. 37 MW was observed in Haryana control area.	0	0.087	0	37	0.000	0.079	38836	46570	400
20	GI-2	1) 660 MW Unit-1 at Bara TPS(UP) 2) 765/400kV 1500 MVA ICT-2 at Bara(UP)	Uttar Pradesh	UPPTCL	20-Mar-26	07:16	20-Mar-26	10:31	03:15	i)765/400kV Bara TPS(UP) has oner and half breaker scheme at both 765kV and 400kV level. ii)During antecedent condition, 660 MW Unit-1, 2 & 3 at Bara TPS(UP) were in running condition and generating approx. 590 MW each (as per SCADA). iii)As reported, at 07:16 hrs, 765kV Bara-Mainpuri(UP) Ckt-2 auto-reclosed successfully on transient Y-N phase to earth fault with fault distance 53.2 m from Bara(UP) end. As per DR, fault current was 16.8 kA from Bara(UP) end; fault sensed in zone-1 at Bara(UP) end. iv)During A/R dead time, 765/400kV 1500 MVA ICT-2 tripped on differential and REF protection operation (as per DR) sensing this fault (exact reason of tripping need to be shared). v)During the same time, 660 MW Unit-1 at Bara TPS(UP) also tripped on LSR (Load Surge Relay) operation (exact reason of tripping need to be shared). vi)As per PMU at Mainpuri(PG), Y-N phase to earth fault was observed with fault clearing time of 80 ms. vii)As per SCADA, generation loss of approx. 590 MW was observed at Bara TPS (UP).	0	0.087	590	0	1.337	0.000	44132	44800	80
21	GD-1	1) 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-1 2) 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-2 3) 400 KV Alaknanda GVK(UPC)-Vishnuprayag(JP) (UP) Ckt-1 4) 400 KV Alaknanda GVK(UPC)-Muzaffarnagar (UP) Ckt-1 5) 82.5 MW Alaknanda GVK (UPC) Unit-2	Uttar Pradesh, Uttarakhand	UPPTCL, PTCUL	23-Mar-26	10:10	23-Mar-26	12:09	01:59	i)400kV Alaknanda(UP) has one and half breaker scheme at 400kV level. ii)During antecedent condition, only one bus was in service at 400kV Alakhnanda(UP) and all the elements were connected to the same bus. Only 82.5 MW Alaknanda GVK (UPC) Unit-2 was in running condition through tie CB and was generating approx. 80 MW (as per SCADA). There was no generation at 220KV Singoli Bhatwari HEP and 220 KV Singoli Bhatwari (Singoli(LTUHP))- Srinagar (UK) (PTCUL) Ckt-1 and Ckt-2 were in unloaded condition. iii)As reported, at 10:10 hrs, Bi-Ph CT flashover occurred at 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-2 which led to busbar protection operation at 400 KV Alakhnanda(UP). iv)As per DR at Srinagar(UK) end of of 400 KV Alaknanda GVK(UPC)-Srinagar(UK) (UK) Ckt-2, B-N phase to earth fault was observed with fault current of ~2.379kA from Srinagar end and line CB ta Srinagar end tripped on sensing the fault in zone-2 with carrier received from Alaknanda end. v)Due to bus bar operation all transmission elements connected to 400 KV Alaknanda(UP) along with 82.5 MW Alaknanda GVK (UPC) Unit-2 tripped and complete blackout occurred at 400kV Alaknanda(UP) S/s. vi)As per PMU at Koteshwar(PG), B-N Phase to earth fault was observed with fault clearing time of 80 ms. vii)As per SCADA, change in demand of approx. 85 MW was observed in Uttarakhand control area. Generation loss of approx. 80 MW occurred at Alakhnanda HEP.	0	0.168	80	85	0.151	0.174	53024	48726	80
22	GD-1	1) 220 KV Bhadla_2 (PG)-RSDCL(PSS1)_SL_BHD2_PG (RSDCL) Ckt 2) 220 KV Bhadla_2 (PG)-RSDCL(PSS2)_SL_BHD2_PG (RSDCL) Ckt 3) 220 KV Bhadla_2 (PG)-RSDCL(PSS3)_SL_BHD2_PG (RSDCL) Ckt	Rajasthan	RSDCL(NTPC RE), PGCIL	24-Mar-26	15:14	24-Mar-26	17:18	02:04	i)220KV RSDCL-1, 2 &3 (IP) were connected at Bhadla2(PG) at 220KV level and their generation evacuate through 220 KV Bhadla_2 (PG)-RSDCL(PSS1)_SL_BHD2_PG (RSDCL) Ckt, 220 KV Bhadla_2 (PG)-RSDCL(PSS2)_SL_BHD2_PG (RSDCL) Ckt and 220 KV Bhadla_2 (PG)-RSDCL(PSS3)_SL_BHD2_PG (RSDCL) Ckt respectively. ii)During antecedent condition, 220kV RSDCL-1, 2 &3 (IP) were generating approx. 228 MW (as per PMU, SCADA data freezed), 205 MW (as per SCADA, PMU data not available) and 197 MW (as per PMU, SCADA data freezed) resepectively with a cumulative total generation of approx. 630 MW. iii)As reported at 15:14 hrs, 220 KV Bhadla_2 (PG)-RSDCL(PSS2)_SL_BHD2_PG (RSDCL) Ckt tripped on Y-N phase to earth fault with fault distance of 11.91 km From RSDCL-2 end due to Y-phase jumper broken; fault sensed in zone-1 at RSDCL-2 end. iv)During the same time, 220 KV Bhadla_2 (PG)-RSDCL(PSS1)_SL_BHD2_PG (RSDCL) Ckt and 220 KV Bhadla_2 (PG)-RSDCL(PSS3)_SL_BHD2_PG (RSDCL) Ckt also tripped from RSDCL end (exact reason of tripping and nature of protection operated yet to be shared). v)Due to tripping of these evacuating lines, complete blackout occurred at 220kV RSDCL-1, 2 &3 (IP). vi)As per PMU at Bhadla2(PG), Y-N phase to earth fault was observed with fault clearing time of 80 ms. vii)As per PMU & SCADA, Total generation loss of approx. 630 MW was observed at RSDCL 1 (~228 MW), RSDCL 2 (~205 MW) & RSDCL 3 (~197 MW).	0	0	630	0	1.252	0.000	50312	43150	80
23	GI-2	1) 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1 2) 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt-1	Rajasthan	RVPNL	27-Mar-26	15:32	27-Mar-26	18:20	02:48	i)400/220kV Bikaner(RS) has one and half breaker scheme at 400kV level and double main and transfer bus scheme at 220kV level. ii)During antecedent condition, 400 KV Bikaner(RS)-Deedwana(MTS) (RS) Ckt-1 and 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt-1 were carrying 482 MW & 92 MW respectively. iii)As reported, at 14:28 hrs, fire incident occurred in 125 MVAr Bus reactor-2 due to internal fault and bus reactor tripped on Differential protection. It took around 4-5 hours to get fire extinguished. iv)Due to fire incident in Bus Reactor, at 15:32 hrs, 400kV Suratgarh(RVUN)- Bikaner(RS) (RS) CKT-1 and 400 KV Bikaner(RS)-Deedwana(MTS) (RS) CKT-1 tripped on Y-B fault. Bikaner(RS) end distance protection of 400 kV Bikaner(RS)-Deedwana(MTS) (RS) CKT-1 sensed the fault in Z-1 (~242 meter) and fault currents were Iy=19.1 kA, Ib=18.44 kA from Bikaner end and distance-123.6km (Z-Z), Iy=1.5kA, Ib=2.5kA from Deedwana(RS) end. Reason of tripping of 400kV Suratgarh(RVUN)- Bikaner(RS) (RS) CKT-1 not received yet. v)As per PMU at Bhadla(PG), Y-B phase to phase fault was observed with fault clearing time of 80 msec. vi)At the same time, change in NR total solar generation of approx. 1166 MW and ~255 MW in Rajasthan Solar generation (as per SCADA) is observed. Out of 1166 MW, approx. 520 MW total NR solar generation recovered within 01 minute of the occurrence of event. No change in demand in Rajasthan control area was observed.	0	0	1166	0	2.095	0.000	55664	44698	80
24	GI-2	1) 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 2) 500 KV HVDC Balia-Bhiwadi (PG) Ckt-2	Uttar Pradesh	PGCIL	28-Mar-26	00:52	28-Mar-26	02:58	02:06	i)During antecedent condition, 500kV HVDC Balia-Bhiwadi Pole-1 & 2 was carrying total 300 MW power from Balia to Bhiwadi (150 MW on each Pole). ii)As reported, at 00:52:19 hrs, 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 &2 tripped from Balia end on "RPC No AC Filter" due to DC and AC mixing. iii)As per DC station control configuration, if the number of connected sub banks is below the minimum configuration (1 for monopole, 2 for Bipole) the message "RPC NO AC FILTER" will be generated, and a delay of two seconds is provided to give time for the automatic AC filter control switching on a substitute sub bank. After that two second delay, tripping of the converters is initiated. iv)As reported by power grid, filter 10CF11 and 10CF22 were in service and next filter to be with switched was 10CF21. At 00:52:14:786 hrs, Transformer L1 AC supply fault had appeared, and a sequence of event of changing filter breaker and disconnector status was generated. At 00:52:15:371, filter 10CF11, 10CF13, 10CF21, 10CF22, automatic status was dropped (it means filters won't be able to switch automatically). At 00:52:15:648, AC Filter fence key area tripped alarm was generated which suggests mixing of AC & DC source. At 00:52:17:37, "RPC no filter" Emergency alarm was generated which did not get reset and after 2 sec, Poles were blocked by DC station control. v)As per PMU at Balia (PG), no fault was observed in the system; however, fluctuation in voltage was present. vi)As per SCADA, power order of 500 KV HVDC Balia-Bhiwadi (PG)) changed from 300 MW to 0 MW from Balia to Bhiwadi. vii)At 02:58 hrs Bipole 500 KV HVDC Balia-Bhiwadi (PG) Ckt-1 & 2 was restored with Bipole Power.	0	0	0	0	0.000	0.000	37525	46815	NA

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

Time Period: 1st March 2026 - 31st March 2026

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	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
2	ACME SIKAR SOLAR PRIVATE LIMITED(ASSPL)	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
3	ACME SOLAR HOLDINGS LIMITED	3	0	0	0	1	0	0	1	0	0	0	0	Details received
4	ACME_HEERGARH	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
5	AD HYDRO	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
6	ADANI	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
7	ADANI GREEN ENERGY TWENTY FIVE LIMITED	1	0	0	0	0	0	0	0	0	0	0	0	Details received
8	ADANI SOLAR ENERGY BARMER ONE LIMITED(ASEB1L)	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
9	AHEJ3L	2	0	0	0	1	0	0	0	0	0	0	0	Details received
10	ANTA-NT	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
11	APL	3	0	0	3	0	0	3	0	0	3	0	0	Details received
12	AURAIYA-NT	3	3	100	0	0	0	0	0	0	1	0	33	DR, EL & Tripping report not submitted
13	BAIRASUIL-NH	5	4	80	4	0	80	4	0	80	4	0	80	DR, EL & Tripping report not submitted
14	BBMB	25	8	32	9	6	47	9	6	47	10	2	43	DR, EL & Tripping report not submitted
15	BUDHIL	1	1	100	1	0	0	1	0	0	1	0	100	DR, EL & Tripping report not submitted
16	CHAMERA-III-NH	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
17	CPCC1	77	1	1	13	16	21	8	19	14	9	0	12	DR, EL & Tripping report not submitted
18	CPCC2	44	17	39	17	3	41	18	1	42	17	1	40	DR, EL & Tripping report not submitted
19	CPCC3	26	0	0	2	6	10	2	5	10	1	0	4	DR, EL & Tripping report not submitted
20	DADRI-NT	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
21	INDIGRID	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
22	JHAJJAR	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
23	JUNIPER GREEN COSMIC PRIVATE LIMITED	1	0	0	0	0	0	0	0	0	0	0	0	Details received

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

Time Period: 1st March 2026 - 31st March 2026

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		%	
24	JUNIPER GREEN STELLAR PRIVATE LIMITED	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
25	KARINSAR SOLAR PLANT NHPC LTD(KSP_NHPC)	2	0	0	0	0	0	2	0	100	2	0	100	DR, EL & Tripping report not submitted
26	KHURJA STPP	4	1	25	1	0	25	1	0	25	1	0	25	DR, EL & Tripping report not submitted
27	KISHENGANGA-NH	1	0	0	0	0	0	0	0	0	0	0	0	Details received
28	NJPC	1	0	0	0	0	0	0	0	0	0	0	0	Details received
29	PARBATI-II-NH	2	2	100	2	0	100	2	0	100	2	0	100	DR, EL & Tripping report not submitted
30	RAPPA	7	0	0	2	3	50	3	0	43	3	0	43	DR, EL & Tripping report not submitted
31	RAPPB	3	3	100	3	0	100	3	0	100	3	0	100	DR, EL & Tripping report not submitted
32	RAPPC	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
33	RENEW SURYA ROSHNI PRIVATE LIMITED	1	0	0	0	0	0	0	0	0	0	0	0	Details received
34	RSDCL	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
35	SINGOLI	4	4	100	4	0	100	4	0	100	4	0	100	DR, EL & Tripping report not submitted
36	SINGRAULI-NT	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
37	SLDC-DV	15	7	47	12	0	80	12	0	80	12	0	80	DR, EL & Tripping report not submitted
38	SLDC-HP	12	2	17	9	0	75	9	0	75	3	0	25	DR, EL & Tripping report not submitted
39	SLDC-HR	19	19	100	18	0	95	18	0	95	18	0	95	DR, EL & Tripping report not submitted
40	SLDC-JK	9	5	56	5	4	100	5	4	100	5	2	71	DR, EL & Tripping report not submitted
41	SLDC-PS	33	10	30	22	4	76	21	4	72	25	1	78	DR, EL & Tripping report not submitted
42	SLDC-RS	110	9	8	28	0	25	28	0	25	38	0	35	DR, EL & Tripping report not submitted
43	SLDC-UK	16	1	6	7	0	44	7	0	44	2	0	13	DR, EL & Tripping report not submitted
44	SLDC-UP	94	37	39	36	6	41	37	9	44	39	3	43	DR, EL & Tripping report not submitted
45	SORANG	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
46	TANAKPUR-NH	1	0	0	0	0	0	0	0	0	0	0	0	Details received
47	TANDA-NT	1	0	0	0	0	0	0	0	0	0	0	0	Details received
48	TEHRI	6	0	0	0	5	0	0	0	0	0	0	0	Details received
49	TPGEL_SL	6	0	0	0	0	0	0	0	0	1	2	25	DR, EL & Tripping report not submitted

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

Time Period: 1st March 2026 - 31st March 2026

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		%	
50	UNCHAHAR-NT	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
51	URI-II-NH	1	1	100	1	0	100	1	0	100	1	0	100	DR, EL & Tripping report not submitted
Total in NR Region		**569**	**165**	**29**	**229**	**55**	**45**	**228**	**49**	**44**	**235**	**11**	**42**	

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

Annexure-B.VII

FRC computation and data submission status		
S. No	Control Area	Event Date
		03-03-2026
1	Punjab	Received
2	Haryana	Received
3	Rajasthan	Not Received
4	Delhi	Not Received
5	Uttar Pradesh	Received
6	Uttarakhand	Not Received
7	Chandigarh*	NA
8	Himachal Pradesh	Received
9	J&K(UT) and Ladakh(UT)	Not Received
10	Dadri -1 (TH)	Received
11	Dadri -2 (TH)	Received
12	Jhajjar (TH)	Received
13	Rihand-1 (TH)	Received
14	Rihand-2 (TH)	Received
15	Rihand-3 (TH)	Received
16	Shree Cement (TH)	Not Received
17	Singrauli (TH)	Not Received
18	Tanda-2 (TH)	Received
19	Unchahar-I (TH)	Received
20	Unchahar-II (TH)	Received
21	Unchahar-III (TH)	Received
22	Unchahar-IV (TH)	Received
23	Anta (G)	Not Received
24	Auraiya (G)	Not Received
25	Dadri (G)	Not Received
26	AD Hydro (H)	Received
27	Bairasiul (H)	Received
28	Bhakra (H)	Received
29	Budhil (H)	Not Received
30	Chamera-1 (H)	Received
31	Chamera-2 (H)	Received
32	Chamera-3 (H)	Received
33	Dehar (H)	Received
34	Dhauliganga (H)	Received
35	Dulhasti (H)	Received
36	Karcham (H)	Received
37	Kishenganga	Received
38	Koldam (H)	Received
39	Koteshwar (H)	Received
40	Malana-2 (H)	NA
41	Nathpa Jhakri (H)	Received
42	Parbati-2 (H)	Received
43	Parbati-3 (H)	Received
44	Pong (H)	Received
45	Rampur (H)	Received
46	Sainj (H)	Not Received
47	Salal (H)	Received
48	Sewa-II (H)	Not Received
49	Singoli Bhatwari (H)	Not Received
50	Sorang (H)	Not Received
51	Tanakpur (H)	Not Received
52	Tehri (H)	Not Received
53	Uri-1 (H)	Received
54	Uri-2 (H)	Not Received

Frequency response Performance		
S. No	Control Area	Event Date
		03-03-2026
1	Punjab	0.33
2	Haryana	-0.08
3	Rajasthan	-1.56
4	Delhi	-3.02
5	Uttar Pradesh	0.13
6	Uttarakhand	-0.30
7	Chandigarh*	NA
8	Himachal Pradesh	-0.85
9	J&K(UT) and Ladakh(UT)	0.44
10	Dadri -1 (TH)	0.87
11	Dadri -2 (TH)	-1.31
12	Jhajjar (TH)	1.23
13	Rihand-1 (TH)	-2.37
14	Rihand-2 (TH)	-0.06
15	Rihand-3 (TH)	-3.71
16	Shree Cement (TH)	-0.32
17	Singrauli (TH)	-1.02
18	Tanda-2 (TH)	3.47
19	Unchahar-I (TH)	9.65
20	Unchahar-II (TH)	3.30
21	Unchahar-III (TH)	3.37
22	Unchahar-IV (TH)	6.41
23	Anta (G)	No Gen
24	Auraiya (G)	No Gen
25	Dadri (G)	No Gen
26	AD Hydro (H)	No Gen
27	Bairasiul (H)	No Gen
28	Bhakra (H)	-0.24
29	Budhil (H)	No Gen
30	Chamera-1 (H)	No Gen
31	Chamera-2 (H)	No Gen
32	Chamera-3 (H)	No Gen
33	Dehar (H)	No Gen
34	Dhauliganga (H)	No Gen
35	Dulhasti (H)	0.40
36	Karcham (H)	No Gen
37	Kishenganga	0.11
38	Koldam (H)	No Gen
39	Koteshwar (H)	4.43
40	Malana-2 (H)	NA
41	Nathpa Jhakri (H)	No Gen
42	Parbati-2 (H)	No Gen
43	Parbati-3 (H)	No Gen
44	Pong (H)	0.05
45	Rampur (H)	No Gen
46	Sainj (H)	No Gen
47	Salal (H)	0.17
48	Sewa-II (H)	No Gen
49	Singoli Bhatwari (H)	0.06
50	Sorang (H)	0.07
51	Tanakpur (H)	-0.16
52	Tehri (H)	No Gen
53	Uri-1 (H)	0.00
54	Uri-2 (H)	0.00

FRP>=1
0.85<=FRP<1
0.75<=FRP<0.85
0.5<=FRP<0.75
FRP<0.5

S.No.	Power Station	Sector	Ownership	Fuel Type	Black Start Source	Capacity of Black Start Source	Date of last mock drill before FY 25-26	Date of mock drill during FY 25-26	Remarks
1	Bhakra (L)	Central	BBMB	Hydro	DG Set		08-11-2024	22-12-2025	
2	Bhakra (R)	Central	BBMB	Hydro	DG Set	500kVA	08-11-2024	19-12-2025	
3	Pong	Central	BBMB	Hydro	DG Set	500kVA, 380kVA	09.11.2024	14-03-2026	
4	Bairasuil	Central	NHPC	Hydro	DG Set	2X1010 KVA	14-12-2024	30-01-2026	
5	Chamera HPS-I	Central	NHPC	Hydro	DG Set	1X1010 KVA & 2x1000 KVA	12-12-2024	30-01-2026	
6	Chamera HPS-II	Central	NHPC	Hydro	DG Set	2x1250 KVA	02-12-2022	06-02-2026	
7	Chamera HPS-III	Central	NHPC	Hydro	DG Set	2x725 KVA	04-12-2017		Evacuating line was not available
8	Dhauliganga	Central	NHPC	Hydro	DG Set	2x625 KVA	13-12-2024	05-02-2026	
9	Kishanganga	Central	NHPC	Hydro	DG Set	2x1010 KVA	09-11-2024	31-01-2026	
10	Parbati-2	Central	NHPC	Hydro	DG Set	2x1000 KVA	22-12-2020	26-05-2025	
11	Parbati-3	Central	NHPC	Hydro	DG Set	2x1010 KVA	-	17-05-2025	
12	Salal Stage-I	Central	NHPC	Hydro	DG Set	2X875 KVA	16-12-2024		
13	Salal Stage-II	Central	NHPC	Hydro	DG Set	3X1020 KVA	16-12-2024		
14	Sewa-II	Central	NHPC	Hydro	DG Set	2x500 KVA	-	16-05-2025. 30-01-2026	
15	Tanakpur HPS	Central	NHPC	Hydro	DG Set	2X625 KVA & 1X312.5 KVA	19-12-2024	28-01-2026	
16	URI-I	Central	NHPC	Hydro	DG Set	2x1000 KVA	20-12-2016	24-01-2026	
17	URI-II	Central	NHPC	Hydro	DG Set	2x1010 KVA	20-12-2016	26-01-2026	Readiness from J&K for availbility of load not received
18	Anta GPS	Central	NTPC	Gas	DG Set	2.968 MW	29-02-2024		
19	Auraiya GPS	Central	NTPC	Gas	DG Set	2900 kVA	Not conducted		Because of railway line connection
20	Dadri GPS	Central	NTPC	Gas	DG Set	2.4 MW	15-12-2023		
21	Faridabad GPS	Central	NTPC	Gas	DG Set	3.3 MW / 4.125 MVA	25-11-2024		
22	Koldam HEP	Central	NTPC	Hydro	DG Set	2X1250 KVA	14-03-2024		
23	Nathpa-Jhakri	Central	SJVNL	Hydro	DG Set	2*750kVA	08-12-2024	11-03-2026	
24	Rampur	Central	SJVNL	Hydro	DG Set	2*1010kVA	08-12-2024	11-03-2026	
25	Tehri	Central	THDC	Hydro	DG Set	2*1000kVA	13-11-2024	11-11-2025	
26	Koteshwar	Central	THDC	Hydro	DG Set	2*1010kVA	27-11-2024	25-03-2026	
27	AD Hydro	IPP	AD Hydro Power Ltd.	Hydro	DG Set	2*750kVA	27-01-2023		
28	Malana-II	IPP	Everest Power Company Ltd.	Hydro	DG Set	725kVA	27-01-2023		
29	Budhil	IPP	Greenco	Hydro	DG Set	2*800kVA	Not conducted		
30	Alaknanda IPP	IPP	GVK (UP)	Hydro			Not conducted		Due to unavailability of load. Unit is at 400kV level.
31	I.P. Gas Turbine (IPGCL G.T.)	State	IPPGCL/Delhi Gencos	Gas	DG Set	500kVA	10-04-2024		
32	Vishnu Prayag IPP	IPP	Jaiprakash power Venture Ltd. (UP)	Hydro			Not conducted		Due to unavailability of load. Unit is at 400kV level.
33	Baghlihar-I	State	Jammu & Kashmir	Hydro			Not conducted		No update received from SLDC-J&K
34	Baghlihar-II	State	Jammu & Kashmir	Hydro			Not conducted		No update received from SLDC-J&K
35	Lower Jhelum	State	Jammu & Kashmir	Hydro			20-12-2016		No update received from SLDC-J&K
36	Upper Sindh	State	Jammu & Kashmir	Hydro			20-12-2016		No update received from SLDC-J&K
37	Karcham Wangtoo	IPP	JSW	Hydro	DG Set	2*1500kVA	29-12-2021		Scheduled in 2024-25, however couldn't performed due to SCADA upgradation work at Station.
38	Baspa	IPP	JSW	Hydro	DG Set	2*625kVA	29-12-2021		Scheduled in 2024-25, however couldn't performed due to SCADA upgradation work at Station.
39	Singoli Bhatwari	IPP	L&T	Hydro	DG set	2*500kVA	Not conducted		Due to non availability of load
40	Ranjit Sagar (Thein Dam)	State	Punjab	Hydro	DG Set	2*500kVA	07-05-2024	01-12-2025	
41	Ramgarh GPS	State	Rajasthan	Gas	DG Set	625kVA	-	11-05-2025	
42	Mahi Bajaj Sagar I	State	Rajasthan	Hydro	DG Set	200kVA	20-03-2025		
43	Mahi Bajaj Sagar II	State	Rajasthan	Hydro	DG Set	2*200kVA	21-03-2025		
44	Rana Pratap Sagar(RPS)	State	Rajasthan	Hydro	DG Set	250kVA	16-01-2011		All 4 Units got submerged in 2019. Units were restored in phases. Last unit revived in March 2025. Remainig 3 units revived by 2022 however, AVR systme is not there. Mock testing of 4th unit may be performed during 2025-26.
45	Rihand (H) or Pipri	State	Uttar Pradesh	Hydro	DG Set	2*320kVA	13-02-2025	02-06-2025	
46	Obra(H)	State	Uttar Pradesh	Hydro	DG Set	1*320kVA & 1*250kVA	16-02-2024	02-06-2025	
47	Khara HEP	State	Uttar Pradesh	Hydro			Not conducted		Due to unavailability of nearby load
48	Matatila	State	Uttar Pradesh	Hydro	DG Set	2*190kVA	Not conducted		
49	Khodri	State	Uttrakhand	Hydro	DG Set	2*500kVA	Not conducted		Due to issue in governing system(old units, R&M work is proposed).
50	Chibro	State	Uttrakhand	Hydro	DG Set	2*500kVA	Not conducted		