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 214वीं बैठक की कार्यसूची।

Subject: Agenda of the 214th OCC meeting.

प्रचालन समन्वय उप-समिति की **214वीं** बैठक का आयोजन वीडियो कॉन्फ्रेंसिंग के माध्यम से दिनांक **19.12.2023** को **10:30** बजे से किया जायेगा । उक्त बैठक की कार्यसूची उत्तर क्षेत्रीय विद्युत् समिति की वेबसाइट http://164.100.60.165 पर उपलब्ध है ।

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

कृपया बैठक में उपस्थित होने की सुविधा प्रदान करें।

The **214th** meeting of the Operation Co-ordination sub-committee will be conducted through Video Conferencing on **19.12.2023** from **10:30 Hrs**. The agenda of this meeting has been uploaded on the NRPC web-site http://164.100.60.165.

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

Kindly make it convenient to attend the meeting.

Signed by Omkishor
Date: 14-12-2023 12:56:16
Reason: Approved

(ओमकिशोर)
कार्यपालक अभियंता (प्रचालन)

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

खण्ड-क: उ.क्षे.वि.स. Part-A: NRPC

1. Confirmation of Minutes

213th OCC meeting was held on 22.11.2023. Minutes of the meeting were issued vide letter dtd. 08.12.2023.

With regard to Agenda No. 6, HPSLDC requested OCC forum that Point 6.6 of the minutes para may be revised as under:

With regard to Shimla-Solan Islanding scheme representative from HPSLDC apprised that as informed by HPSEBL, BHEL has confirmed that the generator of Bhaba HEP is capable of working in the power and opening mode, however, the control system at governor end is of GE make therefore they have taken up the matter with GE. But the response of GE is still awaited. Further, NRPC advised HPSEBL to expediate the matter with GE.

Decision required from Forum:

Forum may approve the minutes of 213th OCC meeting.

2. Review of Grid operations

2.1 Power Supply Position (Provisional) for November 2023

Anticipated Power Supply Position v/s Actual Power Supply Position (Provisional) of Northern Region during the month of November-2023 is as under:

State / UT	Req. / Avl.	Energy (MU)			Peak (MW)		
		Anticipated	Actual	% Variation	Anticipated	Actual	% Variation
CHANDIGARH	(Avl)	110	102	-7.6%	270	208	-23.0%
	(Req)	110	102	-7.6%	280	208	-25.7%
DELHI	(Avl)	3268	2116	-35.3%	4563	4320	-5.3%
	(Req)	1900	2116	11.4%	4000	4320	8.0%
HARYANA	(Avl)	5340	3918	-26.6%	8577	7685	-10.4%
	(Req)	4023	3918	-2.6%	7858	7685	-2.2%
HIMACHAL PRADESH	(Avl)	1097	889	-19.0%	1895	1977	4.3%
	(Req)	1010	891	-11.7%	1938	1977	2.0%
J&K and LADAKH	(Avl)	1210	1568	29.6%	3920	2588	-34.0%
	(Req)	1800	1586	-11.9%	3230	2588	-19.9%
PUNJAB	(Avl)	4760	3955	-16.9%	10220	7572	-25.9%
	(Req)	4180	3955	-5.4%	7620	7572	-0.6%
RAJASTHAN	(Avl)	8080	8762	8.4%	17340	16409	-5.4%
	(Req)	9350	8763	-6.3%	16820	16409	-2.4%

UTTAR PRADESH	(Avl)	9300	9513	2.3%	18500	19033	2.9%
	(Req)	9450	9549	1.1%	18500	19033	2.9%
UTTARAKHAND	(Avl)	1136	1102	-3.0%	2080	2141	2.9%
	(Req)	1170	1105	-5.6%	2128	2141	0.6%
NORTHERN REGION	(Avl)	34301	31924	-6.9%	71100	56100	-21.1%
	(Req)	32993	31985	-3.1%	58700	56400	-3.9%

As per above, negative / significant variation (≥5%) in Actual Power Supply Position (Provisional) vis-à-vis Anticipated figures is observed for the month of November-2023 in terms of Energy Requirement for Chandigarh, Delhi, Haryana, HP, UTs of J&K and Ladakh, Punjab, Rajasthan, and Uttarakhand and in terms of Peak Demand similar variation is noted for Chandigarh, Delhi, Haryana, UTs of J&K and Ladakh, Punjab, Rajasthan. 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.

3. Maintenance Programme of Generating Units and Transmission Lines

3.1. Maintenance Programme for Generating Units

The meeting on proposed maintenance programme for Generating Units for the month of January-2024 is scheduled on 18-December-2023 via Video Conferencing

3.2. Outage Programme for Transmission Elements

The meeting on proposed outage programme of Transmission elements for the month of January-2024 is scheduled on 18-December-2023 via Video conferencing.

4. Planning of Grid Operation

4.1. Anticipated Power Supply Position in Northern Region for January 2024

The Anticipated Power Supply Position in Northern Region for January 2024 is as under:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
CHANDIGARH	Availability	110	270	No Revision submitted
	Requirement	150	300	
	Surplus / Shortfall	-40	-30	
	% Surplus / Shortfall	-26.7%	-10.0%	
DELHI	Availability	2080	5590	No Revision

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	Requirement	2528	5840	submitted
	Surplus / Shortfall	-448	-250	
	% Surplus / Shortfall	-17.7%	-4.3%	
HARYANA	Availability	5999	8064	08-Dec-23
	Requirement	4598	8817	
	Surplus / Shortfall	1401	-753	
	% Surplus / Shortfall	30.5%	-8.5%	
HIMACHAL PRADESH	Availability	1183	2101	08-Dec-23
	Requirement	1180	2110	
	Surplus / Shortfall	3	-9	
	% Surplus / Shortfall	0.2%	-0.4%	
J&K and LADAKH	Availability	1180	3920	No Revision submitted
	Requirement	1990	3120	
	Surplus / Shortfall	-810	800	
	% Surplus / Shortfall	-40.7%	25.6%	
PUNJAB	Availability	4970	10800	No Revision submitted
	Requirement	4743	9543	
	Surplus / Shortfall	227	1257	
	% Surplus / Shortfall	4.8%	13.2%	
RAJASTHAN	Availability	8650	19030	No Revision submitted
	Requirement	9801	18269	
	Surplus / Shortfall	-1151	761	
	% Surplus / Shortfall	-11.7%	4.2%	
UTTAR PRADESH	Availability	11470	22500	13-Dec-23
	Requirement	11160	22500	
	Surplus / Shortfall	310	0	
	% Surplus / Shortfall	2.8%	0.0%	
UTTARAKHAND	Availability	1333	2500	08-Dec-23
	Requirement	1349	2550	
	Surplus / Shortfall	-16	-50	
	% Surplus / Shortfall	-1.1%	-2.0%	
NORTHERN REGION	Availability	36975	70100	
	Requirement	37498	68400	
	Surplus / Shortfall	-524	1700	

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	% Surplus / Shortfall	-1.4%	2.5%	

SLDCs are requested to update the anticipated power supply position of their respective state / UT for the month of January-2024 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.

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

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

All utilities are requested to update the status.

6. NR Islanding scheme

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

Members may kindly deliberate.

7. Coal Supply Position of Thermal Plants in Northern Region

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

7.2 Accordingly, coal stock position of generating stations in northern region during current month (till 10th December 2023) is as follows:

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd (Days)	Actual Stock (Days)
ANPARA C TPS	1200	0.36	14	20.2
ANPARA TPS	2630	0.53	14	14.0
BARKHERA TPS	90	0.00	22	23.9
DADRI (NCTPP)	1820	0.56	22	8.0
GH TPS (LEH.MOH.)	920	0.64	22	19.4
GOINDWAL SAHIB TPP	540	0.51	22	**3.7**
HARDUAGANJ TPS	1265	0.24	22	7.8
INDIRA GANDHI STPP	1500	0.57	22	6.2
KAWAI TPS	1320	0.78	22	10.2
KHAMBARKHERA TPS	90	0.00	22	11.7
KOTA TPS	1240	0.33	22	8.2
KUNDARKI TPS	90	0.00	22	24.0
LALITPUR TPS	1980	0.42	22	10.5
MAHATMA GANDHI TPS	1320	0.80	22	7.7
MAQSOODPUR TPS	90	0.00	22	15.3
MEJA STPP	1320	0.37	22	6.2

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd (Days)	Actual Stock (Days)
OBRA TPS	1094	0.54	22	6.2
PANIPAT TPS	710	0.29	22	20.7
PARICHHA TPS	1140	0.45	22	13.5
PRAYAGRAJ TPP	1980	0.65	22	8.4
RAJIV GANDHI TPS	1200	0.21	22	7.0
RAJPURA TPP	1400	0.42	22	19.1
RIHAND STPS	3000	0.95	14	28.6
ROPAR TPS	840	0.42	22	22.0
ROSA TPP Ph-I	1200	0.62	22	**4.0**
SINGRAULI STPS	2000	0.86	14	13.7
SURATGARH TPS	1500	0.00	22	9.5
TALWANDI SABO TPP	1980	0.66	22	6.0
TANDA TPS	1760	0.68	22	5.8
UNCHAHAR TPS	1550	0.49	22	8.4
UTRAULA TPS	90	0.00	22	24.2
YAMUNA NAGAR TPS	600	0.18	22	37.2
CHHABRA-I PH-1 TPP	500	0.85	22	**2.2**
KALISINDH TPS	1200	0.32	22	6.3
SURATGARH STPS	1320	0.68	22	6.8
CHHABRA-I PH-2 TPP	500	0.76	22	**3.3**
CHHABRA-II TPP	1320	0.65	22	**2.8**

8. Status of availability of ERS towers in Northern Region (Agenda by NRPC Sectt.)

8.1 In the 68th meeting of NRPC issues arising due to non-availability of sufficient ERS were discussed and it was decided that ERS availability monitoring shall be taken as rolling/follow-up agenda in OCC meetings for regular monitoring of ERS under different utilities in Northern region.

8.2 Subsequently matter was deliberated in 211th OCC meeting wherein NRLDC representative briefed about the Requirement of ERS, recent experience in Northern Region, CEA Regulation on ERS, Govt. Guidelines and Present situation on ERS.

8.3 NRPC Sectt. vide letter dated 26.09.2023 requested all transmission utilities of NR to furnish the length of transmission line (ckt-kms) and number of ERS towers available with them at different voltage levels (e.g. 220 kV, 400 KV 765 KV and + -500 kV HVDC latest by 6th October 2023 via email at seo-nrpc@nic.in.

8.4 In this regard, inputs received from utilities are attached as **Annexure-A.III.**

Transmission utilities of NR to update status.

9. Planned Annual Maintenance Program of Transmission Elements for the financial year 2024-25-reg. (Agenda by NRPC Sectt.)

9.1. Clause (b) of Section 32(3) of Indian Electricity Grid Code (IEGC) 2023, stipulates for advance preparation of annual outage plan for the transmission elements by the concerned RPC.

9.2. In accordance with above provision, NRPC Sectt. vide letter dated 26.10.2023 and subsequent reminder dated 14.11.2023, 29.11.2023 and 07.12.2023 requested all State/Central Transmission utilities/ licensees related to Northern Region to submit their annual outage plan of transmission elements in the enclosed format (**Annexure-A.IV**) for the FY 2024-25 via email at **seo-nrpc@nic.in**.

Transmission utilities of NR to update status.

10. Zero Planned outages of Thermal (Coal) based units from March 2024 to June 2024 -reg. (Agenda by NRPC Sectt.)

10.1 A meeting was held under the chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023 to review the preparedness to meet the power demand in country (copy of MoM is attached as **Annexure-A.V**). In the said meeting, Hon'ble Minister of Power and NRE directed that all the maintenance work in Thermal plants must be completed by February, 2024 and no planned maintenance work should be undertaken during the period from March, 2024 to June, 2024.

10.2 In this regard, all thermal Generating Stations of NR whose planned maintenance was scheduled in the aforesaid period are requested to kindly review their maintenance program such that in compliance of direction of Ministry so that No planned maintenance should be undertaken during the period of March 2024 to June 2024.

10.3 NRPC Sectt. vide letter dated 06.12.2023 have asked generating utilities for review of planned maintenance which was originally scheduled in the month of March 2024 (copy of letter attached as **Annexure-A.VI**)

10.4 Further, MS NRPC vide letter dated 11.12.2023 (copy of letter attached as **Annexure-A.VII**) and 12.12.2023 (copy of letter attached as **Annexure-A.VIII**) have asked RRVUN and JSW Barmer Energy Limited respectively to review the planned maintenance program of their generating stations for FY 2024-25 to ensure zero planned maintenance for the period March-Jun 2024.

Members may kindly deliberate.

11. Proposed SPS for 400/200kV ICTs at RVPN's 400kV GSS Hindaun (Agenda by RVPN)

11.1 The cited agenda was deliberated in the 209th OCC meeting of NRPC wherein forum asked RVPN to submit the base case for the proposed SPS at RVPN's 400kV GSS Hinduan to NRLDC for its examination and thereafter the matter can be further deliberated in the next OCC meeting.

11.2 NRLDC has submitted following observation for proposed SPS for ICTs at 400kV GSS Hinduan:

The logic seems ok and it appears that some network rearrangement was done and few 132kV substations were added in the basecase. It is requested to confirm that all the s/s would be operated with this rearrangement during the high demand season as well.

After reviewing the SCADA data it was observed that ICT2 is sharing larger load as compared to ICT1 contrary to the information shared in SPS logic. It is advisable to confirm this once again to avoid any confusion while implementing the logic.

Further, it may be confirmed from field that tripping of 220kV line will take place before overcurrent protection of ICT is operated. Mock testing of same may be carried out afterwards.

11.3 RVPN vide mail dated 07.12.2023 has communicated its views on the observations of NRLDC which is as follows:

It is confirmed that all the s/s would be operated with the arrangement mentioned in study and tripping of 220kV lines will take place before overcurrent protection of ICT is operated.

Further regarding the issue of ICT2 sharing larger load as compared to ICT1 in SCADA, the issue of SCADA has been resolved now. Now in SCADA, it can be observed that ICT-1 is sharing larger load as compared to ICT2 as per the system in actual.

11.4 A copy of proposed SPS for ICTs at 400 kV GSS Hinduan is attached as **Annexure-A.IX**.

Members may kindly deliberate.

12. Non-fully utilization of Baddi Pinjore D/C Line due to internal transmission issues in Haryana System. (Agenda by HPSLDC)

12.1. HPSLDC vide mail letter dated 13.12.2023 (copy enclosed as **Annexure-A.X**) has stated that Baddi Pinjore D/C transmission line is connecting from 220 kV Baddi Station, Himachal Pradesh to 220 kV Pinjore Substation, Haryana. HPSLDC has also mentioned that Haryana SLDC only allows to draw the power range between 100 MW to 150 MW on these circuits due to the internal transmission issues in the Haryana System, which has resulted into non-fully utilization of the transmission Baddi Pinjore D/C Line. The said issue has persisted for more than 3 years, however, no necessary action as of now is taken by Haryana

Members may kindly deliberate.

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

13. NR Grid Highlights for November 2023

Demand met details of NR

S.No	Constituent	Max	Date &	Max	Date of Max	Averag

.	s	Demand met (in MW)	Time of Max Demand met	Consumption (in MUs)	Consumption	e Demand met (in Mus)
1	Chandigarh	208	29.11.23 at 07:00	3.6	10.11.2023	3.4
2	Delhi	4320	01.11.23 at 12:31	81.5	01.11.2023	70.5
3	H.P.	1977	25.11.23 at 07:00	35.0	09.11.2023	32.3
4	Haryana	7685	27.11.23 at 12:45	150.0	01.11.2023	131.7
5	J&K	2588	20.11.23 at 08:00	55.2	27.11.2023	52.3
6	Punjab	7572	29.11.23 at 09:30	142.8	29.11.2023	130.8
7	Rajasthan	16232	24.11.23 at 09:00	324.0	07.11.2023	292.0
8	Uttarakhand	2141	09.11.23 at 07:00	40.7	10.11.2023	37.1
9	U.P.	19033	08.11.23 at 18:27	348.6	01.11.2023	314.8
10	**Northern Region**	56126	08.11.23 at 18:00	**1165.3**	01.11.2023	**1064.8**

*As per SCADA

Northern Region all-time high value recorded in November'23:

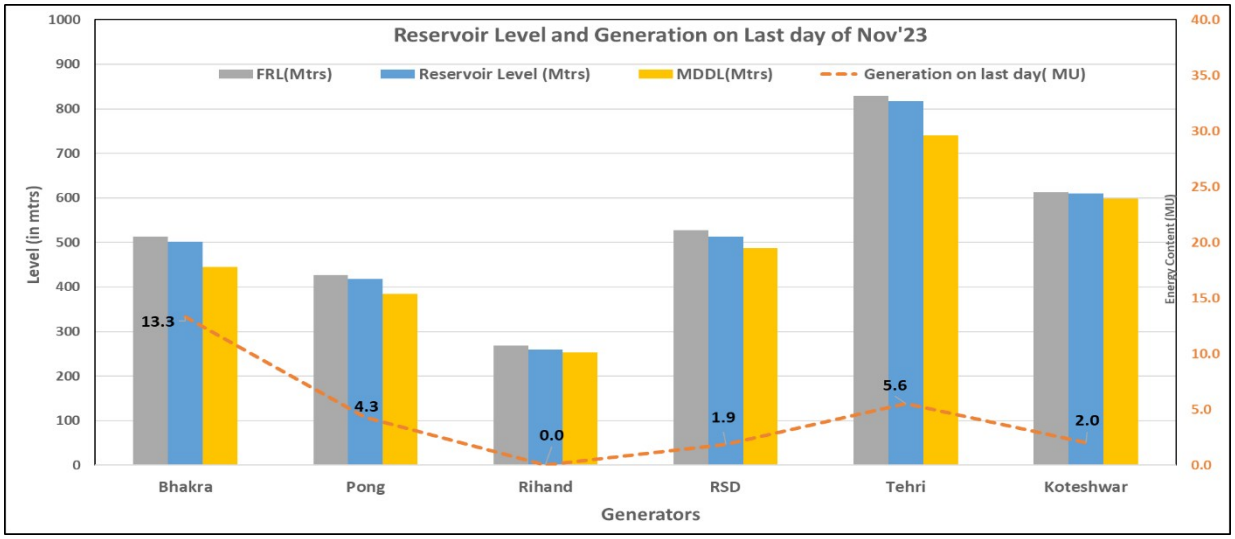
Nil

Frequency profile

Month	Avg. Freq. (Hz)	Max. Freq. (Hz)	Min. Freq. (Hz)	<49.90 (% time)	49.90 – 50.05 (% time)	>50.05 (% time)
Nov'2	50.00	50.39	49.55	6.83	74.36	18.81

3		27.11.23 at 00:02:00 hrs	25.11.23 at 14:17:10 hrs			
Nov'22	50.01	50.27	49.44	6.70	77.00	16.18

Reservoir Level and Generation on Last Day of Month



Detailed presentation on grid highlights of Nov'2023 will be shared by NRLDC in OCC meeting.

14. Winter preparedness 2023-24:

14.1 Status of washing of insulators & replacement of porcelain insulators with polymer insulators

The issues related to challenge during winter months regarding tripping of EHV lines due to fog has been deliberated in last two OCC meetings. With low temperature across Northern region and sometimes with high humidity in the air, fog starts to appear across Northern region. This problem is generally most severe from 15Dec- 15Feb period. During this time additional care need to be taken by system operator as many multiple element tripping events have been reported in the past especially in Punjab and Eastern UP. Such tripping are more severe if the lines are tripping from generation complex such as the Singrauli-Anpara-Rihand complex.

For lines such as 400kV Bara-Meja 1 & 400kV Bara-Meja 2 for which pre-winter maintenance was not carried out last year, tripping on number of occasions was reported during Jan month in 2023 at the time of fog.

OCC forum asked utilities to furnish the utility-wise latest status of washing of insulators & replacement of porcelain insulators with polymer insulators in 212 & 213 OCC meeting.

NRLDC has compiled list of lines that have tripped for 5 or more times during last 4 years on fog. Data for Dec-Jan months of last 4 years from 21:00hrs to 10:00hrs was selected. List is attached as **Annexure-B.I** along with status of insulator washing/cleaning and replacement by polymer insulator for such lines.

Few of the lines that have poor record during these winter months are listed below:

S. No.	Line Name	Tripping events
1	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-2	30
2	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-1	21
3	220 KV Debari(RS)-RAPS_A(NP) (RS) Ckt-1	19
4	400 KV Aligarh-Sikandrabad (UP) Ckt-1	16
5	400 KV Anpara_B(UPUN)-Mau(UP) (UP) Ckt-1	16
6	220 KV Duni(RS)-Kota(PG) (RS) Ckt-1	16
7	220 KV Bairasiul(NH)-Jessore(HP) (PG) Ckt-1	16
8	400 KV Bareilly-Unnao (UP) Ckt-1	14
9	220 KV Agra(PG)-Shamshabad(UP) (UP) Ckt-1	12
10	400 KV Amritsar(PG)-Makhu(PS) (PSTCL) Ckt-2	12
11	400 KV Muktsar-Makhu (PS) Ckt-2	12
12	400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1	11
13	400 kv suratgarh(rvun)-bikaner(rs) (rs) ckt-1	11
14	400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-2	11

Also, the status of insulator washing & cleaning and replacement of porcelain insulators with polymer insulators for these lines have been prepared as per data available with NRLDC. The most affected utilities are RRVPNL, UPPTCL, POWERGRID and PSTCL.

It is requested to accord priority to insulator washing & cleaning of these lines at the earliest, if not already done. Moreover, for the lines in the list for which polymer replacement is pending, the replacement of the insulators may be expedited. In the lines for which insulator washing & cleaning has been done, it is also requested to mention the portion/length of line for which such exercise has been completed, including any vulnerable pockets left, if any.

14.2 Other followup actions related to Winter preparedness

- All SLDCs where high voltages are observed are requested to confirm that capacitor banks at low voltage level have been switched off
- RSD may be used as synchronous condenser by Punjab SLDC as per grid requirement
- All generators to maximize the MVAR absorption as per capability curve to avoid high voltage in grid.
- SLDCs to confirm they have carried out tap change exercise for 220/132kV and below voltage level transformers.
- Rajasthan has committed to running all the 03 units of Dhaulpur gas plant in the high-demand winter season in 70 NRPC meeting. SLDC to provide update.

All concerned utilities are requested to provide update on the follow up actions as mentioned above. Members may please discuss.

15 Signing of connectivity agreement by licensees

As per Clause 9 of IEGC 2023,

(1) In case of users seeking connectivity to the ISTS under GNA Regulations, Connectivity Agreement shall be signed between such users and CTU. In case of multiple transmission licensees connected at same station, the Site Responsibility Schedule including the responsibility for operation & protection coordination and data sharing among the licensees, shall be specified in the Connectivity Agreement.

(2) In case of an inter-State transmission licensee, Connectivity Agreement shall be signed between such licensee and CTU after the award of the project and before physical connection to ISTS.

(3) In case of intra-State transmission system getting connected to inter-State transmission system, Connectivity Agreement shall be signed between intra-State transmission licensee, CTU and the inter-State transmission licensee after the award of the project and before physical connection to ISTS.

Recently, two applications have been received at NRLDC end regarding first time charging of 220kV Chamba-Majra line and 220/33kV 31.5MVA transformer at AD Hydro HEP from HPPTCL side.

NRLDC has requested HPPTCL for connectivity agreement between, HPPTCL, CTU and NHPC/ADHydro as per clause 9(3) of IEGC 2023 before first time charging.

Other interstate as well as intrastate transmission licenses having upcoming transmission elements for FTC are requested to complete formalities related to signing of connectivity agreement timely so as to avoid any kind of issues at the time of first time charging.

Members may kindly deliberate.

16 Sharing of ATC/TTC assessment and basecase with NRLDC

All NR states Chandigarh U/Ts 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.

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	***Sl No***	***Action of Stakeholder***	***Responsibility***	***Submission to***	***Data/ Information Submission Time line***
1. Revision 0 TTC/ATC Declaration	*1(a)*	*Submission of node wise Load and generation data along with envisaged C*	*SLD*	*RLDC*	*10th Day of 'M-12' month*

for Month 'M'		*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			
	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*	*C*	*SLDC*	*RLDC*	*8th Day of 'M- 6' month*
	2(b)	*Sharing of inter-connection study results*				*21st Day of 'M-6' month*
3. Month Ahead TTC/ ATC Declaration & Base case for Operational Studies for Month 'M'	*3(a)*	*Submission of node wise Load and generation data along with envisaged scenarios for assessment of transfer capability*	*C*	*SLDC*	*RLDC*	*8th Day of '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*		*SLDC*	*RLDC*	*22nd Day of 'M-1' month*

16.1 ATC/TTC assessment sharing 11 months in advance

The procedure mentions that:

"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."

Accordingly, SLDCs were requested to send the PSSE cases for four scenarios for December'24 i.e. Morning Peak, Solar Peak, Evening Peak & Off-Peak hours as given below

S. No.	Scenario	Time of Scenario
1	Off-Peak	03:00 Hrs

2	Morning Peak	10:30 Hrs
3	Evening Peak	18:30 Hrs
4	Solar Peak	12:00 Hrs

Same was also requested vide NRLDC email dated 06.12.2023. It was requested that the basecases as well as ATC/TTC assessments may be shared with NRLDC as per CERC approved procedure. Further, above exercise needs to be carried out regularly on monthly basis.

Basecase & ATC/TTC assessment was received from Haryana whereas ATC/TTC assessment was only received from J&K for M-11 scenarios in November 2023.

16.2 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.

In line with above, utilities are requested to share the list of **elements/LGB data/interconnection study results** etc as per the approved procedure which are expected to be commissioned up to **June 2024, before 8.12.2023. Above was also requested vide mails dated 28.11.2023 by NRLDC. This needs to be practised as monthly exercise on regular basis.**

Data regarding M-6 scenarios are pending from the utilities.

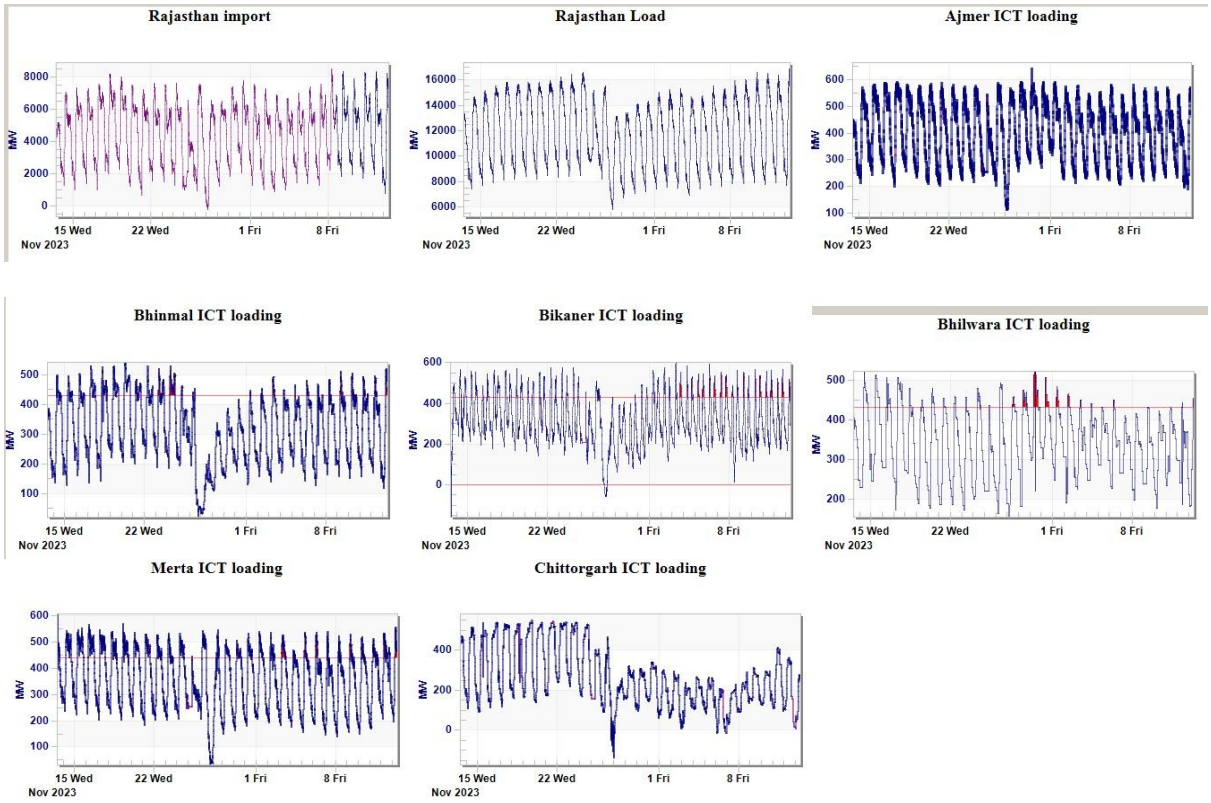
16.3 ATC/TTC of states for winter 2023-24 (M-1)

Latest ATC/TTC figures as available with NRLDC for the month of January 2024 is attached as **Annexure-B.II**. States are requested to go through these figures and provide any comments.

ATC/TTC assessment for winter 2023-24 has only been received from Rajasthan, Haryana, J&K and Uttarakhand as of now.

16.4 Constraints observed during last month

It is being observed that loading of 400/220kV ICTs at number of RVPN substations continue to be on the higher side. Some of the such stations are shown below along with loading of 400/220kV ICTs for last 30 days:



16.5 Publishing of ATC/TTC on SLDC website

As discussed in last several OCC meetings, all SLDCs need to furnish ATC/TTC details of their control area at respective SLDC websites. Now, it is being observed that most of the SLDCs except J&K are uploading ATC/TTC limits on their websites.

SLDC	Link for ATC on website
UP	https://www.upsldc.org/documents/20182/0/ttc_atc_24-11-16/4c79978e-35f2-4aef-8c0f-7f30d878dbde
Punjab	https://www.punjabsldc.org/downloads/ATC-TTC0321.pdf
Haryana	https://hvpn.org.in/#/atcttc
Delhi	https://www.delhisldc.org/resources/atcttcreport.pdf
Rajasthan	https://sldc.rajasthan.gov.in/rrvpnl/scheduling/downloads
HP	https://hpsldc.com/mrm_category/ttc-atc-report/
Uttarakhand	https://uksldc.in/ttc-atc
J&K and Ladakh U/T	NA

In last OCC meeting,

- Forum agreed that in case no assessments for eleven months in advance are shared by SLDC, the existing ATC/TTC assessment could be published on website and considered for the said month.
- It was requested that all SLDCs (especially Rajasthan, HP and Uttarakhand) assess and share ATC/TTC assessment for Winter 2023-24 at the earliest. The

forum had also asked all states to share data and base case for M-6 & M-11 timelines as discussed in the agenda.

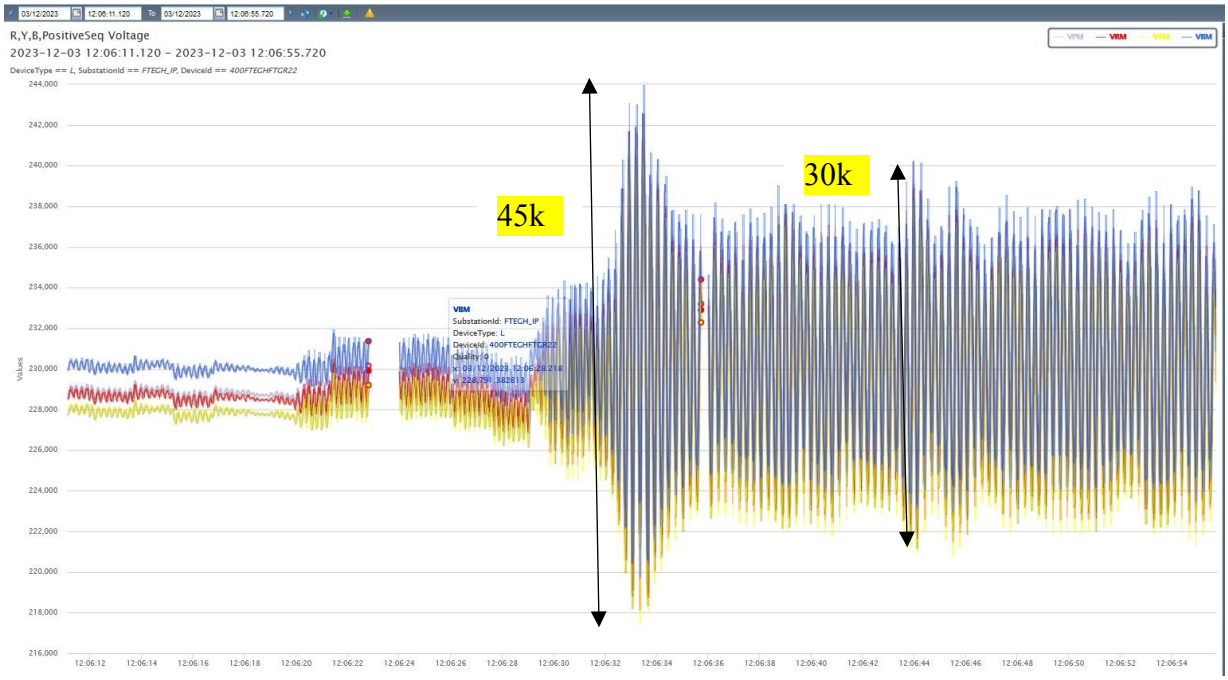
It is again requested that all SLDCs:

- Assess and share ATC/TTC assessment for Winter 2023-24 as well as share basecases as well as other data as per the approved procedure.
- Ensure that loading of ICTs and lines are below their N-1 contingency limits.
- While requisitioning power from various sources, states should take care to limit their scheduled drawl as well as actual drawl in real time within the Available Transfer Capability (ATC) limits assessed by SLDC and NRLDC.
- Maximize internal generation in case of drawl near to the transfer capability limits.

Members may please discuss.

17 Observance of oscillations in NR ISTS RE complex in Western Rajasthan

On 4th Dec 2023, around 1215 hrs, NRLDC control room reported oscillations of around 4 Hz frequency with magnitude as high as 10-15 kV. One day prior to this event, STATCOM stations in Rajasthan, particularly 765 kV Fatehgarh-2(POWERGRID) reported oscillations as high as 60-70 kV. These oscillations are similar to previously observed cases. Plot of 400kV Fatehgarh I bus voltage for 03.12.2023 @12:06 hrs is shown below:



Prior to this event, 9 out of 41 RE plants in Rajasthan ISTS system were operating in constant Q mode of voltage control. STATCOM at 765 kV Fatehgarh-2 were operating in Q-V control with 380-420 kV voltage range and 100 MVAR X 2, constant reactive injection mode. NR Solar generation reached maximum of 16050 MW against AvC of 19458 MW on the same day.

Following actions have already been taken by NRLDC in this regard:

- The mode of reactive power control for RE plants amplifying oscillations was changed from voltage control to fixed Power Factor and fixed Q
- Few plants with large fluctuations in reactive power were identified and accordingly few parameters of their PPC - Proportional gain (Kp), integral time constant (Ti) were tuned. The voltage dead band (Vdb) of most of the RE Plants connected at Fatehgarh-II (PG) and Fatehgarh I was changed from 1% to 2%.
- One of the cause for variation for active power variation in RE plants is due to plant entering the ride though mode during oscillation. Thus the ride through limit of such plants were increased.

After the actions taken by NRLDC control room operators, the phenomenon of oscillations in the RE complex have subsided as of now, however, the possible issues related to oscillations owing to the communication delays between PQ-meter sampling, PPC response time and inverter polling rate continue to observed.

Apart from this, the SCR at Fatehgarh-II continues to be on the lower side (slightly less than 4). Moreover, traditional SCR does not account sufficiently for the presence of nearby inverter-based resources or power electronic-based equipment. The SCR computation shall factor the presence of controller based fast responding elements in vicinity.

Such issues along with analysis of Events Involving Transmission Grid Connected Wind & Solar Power Plants have been carried out by Grid-India in detail and published in form of report available @ https://posoco.in/wp-content/uploads/2023/12/Report-on-Events-Involving-Transmission-Grid-Connected-Wind-Solar-Plants.pdf.

Considering the issues related to oscillations, NRLDC is generally taking measures to control the oscillations in the grid including changing modes of solar plants, STATCOM, modifying settings of droop & dead band etc.

However, in case still oscillations threatening to safety and security of the grid are observed, then for such conditions NRLDC as last resort may curtail generation of plants which are aggravating the oscillations in the grid such that the oscillations are controlled. It is expected that support from respective power plants may be extended in this regard as per requirement.

Moreover, for overcoming the issues related to weak-grid and low short circuit strength it is recommended that the associated transmission system is also commissioned on or before the commissioning of RE plants so as to avoid any case of limitation of transmission system.

Members may please discuss.

18 Registration of RE plants without final connectivity agreement

As per section 10.9 of GNA regulation 2022, “Connectivity grantee need to submit a copy of the signed Connectivity Agreement to the RLDC, in whose control area it is located”.

Before GNA regime, it used to be two (2) different agreement (i) Connectivity agreement/ LTA agreement (Mainly for commercial point of view, submission of BG etc.) (ii) Connection agreement (i.e. CON-5 & CON-6 etc.).

After GNA regulation 2022, both (i) LTA agreement & (ii) Connection agreement are merged to single agreement (i.e. Connectivity agreement for both Technical and commercial aspect).

As the connectivity agreement format is yet to be finalised, therefore to facilitate RE integration during the intervening period, based on understanding between CTUIL & RLDC, upon intimation for Con-IVA & an affidavit which is an undertaking (endorsed by CTUIL), the connectivity grantee is being facilitated for further physical connection to the grid.

Till date, based on Connectivity (CON-IVA) and Affidavit (in lieu of final connectivity agreement) endorsed by CTUIL, NRLDC has facilitated registration & commissioning processing for the following RE plants.

i. Renew Surya Vihaan Private Limited (295MW) (Registered at NRLDC)
ii. Grian Energy Pvt. Ltd. (100MW). (Registered at NRLDC)
iii. Amplus ages Pvt. Ltd. (100MW). (Registered at NRLDC)
iv. AMP Energy Green Six Pvt. Ltd. (100MW). (Registered at NRLDC)
v. Altra Xergi Pvt. Ltd. (380MW) (Registered at NRLDC).

For kind information of members.

19 Reactive power performance of generators

During winter season, demand of Northern region is low and high voltages are a common phenomenon predominantly in Punjab, Haryana and Delhi area. Even after several actions being taken by control centers, it is seen that there is persistent high voltage in Northern region. The reactive power absorption by generators becomes an important resource that helps in managing high voltages in the grid. However, even after continuous follow up in OCC meetings, it is seen that MVAR data telemetry is poor/ inaccurate from most of the generating stations. For some of the generators it is seen that there is inadequate reactive power absorption based on their capability curve especially during night hours. The performance of generators in absorption of reactive power for last 30 days (10 Nov 2023 – 10 Dec 2023) is shown below:

S.No.	Station	Unit No.	Capacity	Geographical location	MVAR capacity as per capability curve (on LV side)	MVAR performance (-) Absorption (+) Generation (HV side data)	Voltage absorption above (in KV)
1	Dadri NTPC	1	490	Delhi-NCR	-147 to 294	-150 to 100	410
		2	490		-147 to 294	-180 to 100	408
2	Singrauli NTPC	1	200	UP	-60 to 120	-20 to 10	404
		2	200		-60 to 120	-20 to 10	404
		3	200		-60 to 120	-20 to 5	402

		4	200		-60 to 120	-30 to 0	402
		5	200		-60 to 120	-30 to 10	402
		6	500		-150 to 300	-80 to 0	400
		7	500		-150 to 300	-80 to 10	402
3	Rihand NTPC	1	500	UP	-150 to 300	-110 to 0	398
		2	500		-150 to 300	-90 to 10	400
		3	500		-150 to 300	-120 to -20	400
		4	500		-150 to 300	-110 to 0	400
4	Kalisindh RS	1	600	Rajasthan	-180 to 360	-120 to 100	-
		2	600		-180 to 360	-100 to 50	-
5	Anpara C UP	1	600	UP	-180 to 360	-70 to 20	765
		2	600		-180 to 360	-90 to 40	765
6	Talwandi Saboo PB	1	660	Punjab	-198 to 396	-210 to 0	410
		2	660		-198 to 396	-200 to 0	410
		3	660		-198 to 396	-	-
7	Kawai RS	1	660	Rajasthan	-198 to 396	-100 to 50	405
		2	660		-198 to 396	-100 to 70	405
8	IGSTPP Jhajjar	1	500	Haryana	-150 to 300		
		2	500		-150 to 300	-100 to 80	415
		3	500		-150 to 300	-130 to 50	415
9	Rajpura (NPL)	1	700	Punjab	-210 to 420	-220 to 0	408
		2	700		-210 to 420	-230 to 0	405
10	MGTPS	1	660	Haryana	-198 to 396	-150 to 50	410
		2	660		-198 to 396	-150 to 80	410
11	Bawana	1	216	Delhi-NCR	-65 to 130	-60 to 40	418
		2	216		-65 to 130	-	-
		3	216		-65 to 130	-50 to 20	415
		4	216		-65 to 130	-	-
		5	253		-65 to 130	-50 to 60	415
		6	253		-65 to 130	-30 to 50	420

12	Bara PPGCL	1	660	UP	-198 to 396	-30 to 100	780
		2	660		-198 to 396	-40 to 80	775
		3	660		-198 to 396	-50 to 100	780
13	Lalitpur TPS	1	660	UP	-198 to 396	0 to 100	760
		2	660		-198 to 396	-70 to 100	765
		3	660		-198 to 396	-140 to 140	760
14	Anpara D UP	1	500	UP	-150 to 300	-110 to 0	755
		2	500		-150 to 300	-120 to 20	755, 765
15	Chhabra TPS	1	250	Rajasthan	-75 to 150	-60 to 0	400
		2	250		-75 to 150	-80 to 20	405
		3	250		-75 to 150	-40 to 20	405
		4	250		-75 to 150	-	-
		5	660		-198 to 396	-60 to 100	410
		6	660		-198 to 396	-70 to 100	410

For some of the generating stations it is seen that even after the machines are on bar, there is high voltage at these stations such as IGSTPP Jhajjar (425kV), CCGT Bawana (430kV), Bara (785kV).

All generating stations are requested to resolve any issues related to telemetry and make sure that MVAr absorption is as per grid requirement and capability curve of machine.

As per the reactive energy charges account issued by NRPC for Week 20th to 26th November, 2023 (Week No. 35) & 13th to 19th November, 2023 (WEEK No. 34), following nodes/plants were payable for reactive power injection during high voltage in both weeks:

- ADANI HYBRID FOUR
- BUDHIL HEP
- N.F.L.
- NAPP
- RIHAND STPS
- SAINJ HEP
- SALAL HEP
- SORANG HEP

Since with IEGC 2023 implementation, reactive energy performance also has financial impact, it is desirable that all generating stations continue to support grid voltages by having reactive power performance as per their capability curve and grid requirement.

Some of the generating units such IGSTPP Jhajjar, Bawana need to explore possibility of further MVAR absorption. Generators may also set their Vsch (voltage set point) such that units are absorbing MVAR as per their capability and grid requirement.

Members may like to discuss.

20 Frequent forced outages of transmission elements in the month of November'23:

The following transmission elements were frequently under forced outages during the month of **November'23**:

S. NO.	Element Name	No. of forced outages	Utility/SLDC
1	220 KV Bhiwadi(PG)-HSIIDC Bawal(HV) (HVPNL) Ckt-1	4	PG/HR
2	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-2	6	Rajasthan/ RAPS
3	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-1	3	Rajasthan/ RAPS
4	400 KV Bareilly-Unnao (UP) Ckt-1	4	UP
5	400 KV Bareilly-Unnao (UP) Ckt-2	3	UP
6	400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1	4	Rajasthan

The complete details are attached at **Annexure-B.III**.

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

Members may like to discuss.

21 Multiple Element/ Cascade tripping events in Northern region in the month of November '23:

A total of 07 grid events occurred in the month of Nov'23 of which **01** are of GD-1 category, **04** are of GI-2 Category & **02** is 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.IV.**

Maximum delayed clearance of fault observed was 440msec during event of multiple elements tripping at 220kV Ropar GGSTP (Punjab) on 30th November, 2023.

Delayed clearance of fault (more than 100ms for 400kV and 160ms for 220kV system) observed in total **02** events out of **07** grid events occurred in the month.

Remedial actions taken by constituents to avoid such multiple elements tripping may be shared.

As per IEGC clause 37.2 (c), Disturbance Recorder (DR), station Event Logger (EL), Data Acquisition System (DAS) shall be submitted within 24 hrs of the event and as per IEGC clause 37.2 (e), the user shall submit a detailed report in the case of grid disturbance or grid incidence within one (1) week of the occurrence of event to RLDC and RPC.

However, DR/EL of the following grid events not received for events at Ropar GGSTPP on 30th Nov'23, Dehar(BBMB) on 10th Nov'23 and Hinduan(Raj) on 03rd Nov'23. Detailed report received only for Grid event occurred at Tehri HEP on 30th Nov'23.

Members may take necessary preventive measures to avoid such grid incidents / disturbances in future and report actions taken by respective utilities in OCC & PSC forum. Moreover, utilities may impress upon all concerned for providing the Preliminary Report, DR/EL & Detailed Report of the events to RLDC in line with the regulations.

Members may like to discuss.

22 Details of tripping of Inter-Regional lines from Northern Region for November' 23:

A total of 04 inter-regional lines tripping occurred in the month of November'23. The list is attached at **Annexure-B.V.** The status of receipt of preliminary reports, DR/EL within 24hrs of the event and fault clearing time as per PMU data has also been mentioned in the table. The non-receipt of DR/EL & preliminary report within 24hrs of the event from SLDCs / ISTS licensees / ISGSs is in violation of regulation 37.2(c) of IEGC and regulation 15(3) of CEA Grid Standards. As per regulations, all the utilities shall furnish the DR/EL, flag details & preliminary report to RLDC/RPC within 24hrs of the event. They shall also furnish the detailed investigation report within 7 days of the event if fault clearance time is higher than that mandated by CEA (Grid Standard) Regulations.

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

Members may like to discuss.

23 Status of submission of DR/EL and tripping report of utilities for the month of November'23.

The status of receipt of DR/EL and tripping report of utilities for the month of November'2023 is attached at **Annexure-B.VI**. It is to be noted that as per the IEGC provision under clause 37.2 (c), tripping report along with DR/EL has to be furnished within 24 hrs of the occurrence of the event. However, it is evident from the submitted data that reporting status is not satisfactory and needs improvement. Also, it is observed that reporting status has improved however, reporting status from Punjab, Haryana, Rajasthan, J&K & POWERGRID (NR-2) need further improvement.

Members may please note and advise the concerned for timely submission of the information. It is requested that DR/EL of all the trippings shall be **uploaded on Web Based Tripping Monitoring System "http://103.7.128.184/Account/Login.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 may please also be submitted in tripping portal / through email.

Members may like to discuss.

24 Mock black start exercises in NR:

As per Indian Electricity Grid Code (IEGC) clause 34.3

"*Detailed plans and procedures for restoration after partial/total blackout of each user's/STU/CTU system within a Region, will be finalized by the concerned user's/STU/CTU in coordination with the RLDC. The procedure will be reviewed, confirmed and/or revised once every subsequent year. Mock trial runs of the procedure for different subsystems shall be carried out by the users/CTU/STU at least once in every year under intimation to the RLDC*".

Mock Black-start exercise of power stations therefore needs to be carried out in-order to ensure healthiness of black start facility.

The summary of last conducted mock black start exercise of ISGS hydro & gas stations is tabulated below:

Hydro Power Stations:

Name of stations	**Last conducted exercise date**	**Remark**
Uri-I, II HEP, Lower Jhelum HEP, Upper Sindh and Kishenganga	20th Dec 2016	Exercise carried out successfully
Dhauliganga	28th Dec 2021	Exercise carried out successfully
Bairasiul	30th Nov 2022	
Sewa-2	29th May 2022	
N. Jhakri and Rampur	09th Dec 2022	
Karcham and Baspa	29th Dec 2021	Exercise was partially successful
Budhil	–	
Parbati-3 and Sainj	22nd Dec 2020	Black start of only Parbati-3 was carried out successfully. Sainj to explore blackstart capability.
Salal	02nd Dec 2018	Exercise carried out successfully
Chamera-3	04th Dec 2017	Exercise carried out successfully
Kishenganga	-	
Koteshwar	07th Dec 2022	Exercise carried out successfully
Chamera-1 and Chamera-2	02nd Dec 2022	
Malana-2, AD Hydro and Phozal	27th Jan 2023	

Tehri	14th Dec 2022	
Koldam	11th Nov 2022	Conducted successfully

Gas Power Stations:

Name of stations	Last conducted exercise date	Remark
Anta GPS	03rd Mar 2023	(unsuccessful, Anta Unit couldn't able to charge the dead bus)
Auraiya GPS	-	
Dadri GPS	28th Jan 2022 (without load)	Exercise carried out successfully

The winter months are off peak hydro period and therefore good time to carry out such exercises. Therefore, the schedule of mock exercise dates for different hydro & Gas power station need to be finalized. The power stations may propose the tentative date for mock black start exercise of their generating units. Power stations may confirm and inform to all the concerned persons of control centre/ substations to facilitate the exercise.

Hydro Power Stations:

Name of stations	Tentative Date for Mock Black start exercise (proposed by power plants)
Uri-I, II HEP & Lower Jhelum HEP	Jan'24
Dhauliganga	Jan'24
Bairasiul	Feb'24
Sewa-2	Feb'24
N. Jhakri and Rampur	20th Dec'23
Karcham and Baspa	
Budhil	
Parbati-3 and Sainj	Mar'24
Salal	Mar'24
Chamera-3	
Kishenganga	Jan'24
Koteshwar	
Chamera-1 and Chamera-2	Jan'24
Malana-2, AD Hydro and Phozal	29th Jan'24
Tehri	Conducted successfully on 07th Nov'23
Koldam	22nd Dec'23

Gas Power Stations:

Name of stations	Tentative Date for Mock Black start exercise (proposed by power plants)
Anta GPS	12th Feb'24
Auraiya GPS	11th Mar'24
Dadri GPS	Feb'24

SLDC's may also carryout mock black-start of station in their respective control area & inform the tentative dates to the OCC as well as outcome of these exercises. The proposed Hydro Power Stations to undergo the exercise are as follows:

S. NO.	Utility	Hydro Power Station	Installed Capacity(MW)
1	J&K	Baglihar	3x150
2		Baglihar stage-2	3x150
3		Lower Jhelum	3x35
4		Upper Sindh	2x11+3x35
5	HP	Larji	3x42
6		Bhabha	3x40
7		Malana -I	2x43
8		Baspa	3x100
9	Punjab	Ranjit Sagar	4x150
11	Rajasthan	Mahi-I&II	2x25+2x45
12		Rana Pratap Sagar	4x43
13		Jawahar Sagar	3x33
14		Gandhi Sagar	5x23
15		Dholpur GPS	3x110
16		Ramgarh GPS	1x35.5+2x37.5+1x110
17	UP	Rihand	6x50
18		Obra	3x33
19		Vishnuprayag	4x100
20		Srinagar (Alaknanda)	4x82.5
21		Gamma Infra	2x76+1x73
22		Shravanti	6x75

23		Ramganga	3x66
24		Chibro	4x60
25		Khodri	4x30
26		Chilla	4x36
27	Uttarakhand	Maneri Bhali-I&II	3x30+4x76
28		IP Extn GTs	6x30+3x30
29	Delhi	Pragati GPS	2x104.6+1x121.2
30		Rithala	3x36
31	Haryana	Faridabad GPS	2x137.75+1x156.07

Members are requested to share the tentative schedule of mock black start exercise of their respective generating stations. SLDCs shall submit the reports of black start exercise in their respective control area. SLDCs may also identify further generating stations/unit for black start exercise.
Members may like to discuss.

25 Revision of document for Reactive Power Management of Northern Region:

NRLDC has been issuing 'Reactive Power document of Northern Region' on annual basis. Reactive Power Management document for Northern region was last revised on 31st Dec 2022 & updated document link is as below:

https://nrldc.in/download/nr-reactive-power-management-2023/?wpdmdl=11903

Document is password protected and password was already informed to all the NR constituents through letter dated 30th Dec 2022.

In view of new addition/modification of transmission & generation element in NR grid since Dec'22, the document is being review for update.

Constituents were requested to provide the feedback, suggestion and updated information by 10th Dec 2023. Details have been received from HP, Uttarakhand, Punjab and Delhi. Remaining Constituents are requested to share the details by 20th Dec 2023.

26 Commissioning of station event logger at 220kV & above stations:

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. Therefore, availability of disturbance recorder with standardisation and correct nomenclature and station event logger details are verified and ensured during FTC of

generation and transmission elements. However, it is observed that, many of the old stations don't have facility of station event logger. Some of the stations have submitted the undertaking during FTC to install the station event logger in near future.

In view of above, all the constituents are requested are requested to review the availability of station event logger at their respective stations and taken necessary follow-up actions for expeditious installation of station event logger.

Members may like to discuss.

Follow up issues from previous OCC meetings

Annexure-A.I

<table>
<tr><td>1</td><td>Down Stream network by State utilities from ISTS Station</td><td>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.</td><td>List of downstream networks is enclosed in Annexure-A.I.I.</td></tr>
<tr><td>2</td><td>Progress of installing new capacitors and repair of defective capacitors</td><td>Information regarding installation of new capacitors and repair of defective capacitors is to be submitted to NRPC Secretariat.</td><td>Data upto following months, received from various states / UTs:
◎ CHANDIGARH — Sep-2019
◎ DELHI — Sep-2023
◎ HARYANA — Sep-2023
◎ HP — Oct-2023
◎ J&K and LADAKH — Not Available
◎ PUNJAB — Sep-2023
◎ RAJASTHAN — Sep-2023
◎ UP — Nov-2023
◎ UTTARAKHAND — Nov-2023
All States/UTs are requested to update status on monthly basis.</td></tr>
<tr><td>3</td><td>Healthiness of defence mechanism: Self-certification</td><td>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”.</td><td>Data upto following months, received from various states / UTs:
◎ CHANDIGARH — Not Available
◎ DELHI — Sep-2023
◎ HARYANA — Sep-2023
◎ HP — Oct-2023
◎ J&K and LADAKH — Not Available
◎ PUNJAB — Sep-2023
◎ RAJASTHAN — Sep-2023
◎ UP — Sep-2023
◎ UTTARAKHAND — Sep-2023
◎ BBMB — Sep-2023
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 .</td></tr>
<tr><td></td><td></td><td>In compliance of NPC decision, NR states/constituents agreed to raise the AUFR settings by 0.2 Hz in 47th TCC/49th NRPC meetings.</td><td>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
J&K and LADAKH were requested to update status for increasing settings of UFRs.</td></tr>
</table>

4	Status of FGD installation vis-à-vis installation plan at identified TPS	List of FGDs to be installed in NR was finalized in the 36th TCC (special) meeting dt. 14.09.2017. All SLDCs were regularly requested since 144th OCC meeting to take up with the concerned generators where FGD was required to be installed. Further, progress of FGD installation work on monthly basis is monitored in OCC meetings.	Status of the information submission (month) from states / utilities is as under: ◎ HARYANA — Sep-2023 ◎ PUNJAB — Oct-2023 ◎ RAJASTHAN — Jul-2023 ◎ UP — Oct-2023 ◎ NTPC — Feb-2023 FGD status details are enclosed as **Annexure-A.I.II.** All States/utilities are requested to update status of FGD installation progress on monthly basis.
5	Submission of breakup of Energy Consumption by the states	All states/UTs are requested to submit the requisite data as per the billed data information in the format given as under: Category→ | Consumption by Domestic Loads | Consumption by Commercial Loads | Consumption by Agricultural Loads | Consumption by Industrial Loads | Traction supply load | Miscellaneous / Others <Month>	Status of the information submission (month) from states / utilities is as under: ◎ CHANDIGARH — Not Submitted ◎ DELHI — Sep-23 ◎ HARYANA — Sep-23 ◎ HP — Sep-23 ◎ J&K and LADAKH — Not Submitted ◎ PUNJAB — Sep-23 ◎ RAJASTHAN — Oct-23 ◎ UP — Jul-23 ◎ UTTARAKHAND — Jul-23 J&K and Ladakh and Chandigarh are requested to submit the requisite data w.e.f. April 2018 as per the billed data information in the given format
6	Information about variable charges of all generating units in the Region	The variable charges detail for different generating units are available on the MERIT Order Portal.	All states/UTs are requested to submit daily data on MERIT Order Portal timely.
7	Status of Automatic Demand Management Sysytem in NR states/UT's	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:	Status: ◎ DELHI — Scheme Implemented but operated in manual mode. ◎ HARYANA — Scheme not implemented ◎ HP — Scheme not implemented ◎ PUNJAB — Scheme not implemented ◎ RAJASTHAN — Under implementation. Likely completion schedule is 31.12.2023. ◎ UP — Scheme implemented by NPCIL only ◎ UTTARAKHAND — Scheme not implemented

8	Reactive compensation at 220 kV/ 400 kV level at 15 substations			
	State / Utility	Substation	Reactor	Status
i	POWERGRID	Kurukshetra	500 MVAr TCR	Anticipated commissioning: Last week of Nov'23 (Final Testing is presently being conducted)
ii	DTL	Peeragarhi	1x50 MVAr at 220 kV	1x50 MVAr Reactor at Peeragarhi has been commissioned on dated 18.09.2023
iii	DTL	Harsh Vihar	2x50 MVAr at 220 kV	2x50 MVAR Reactor at Harsh Vihar has been commissioned on dated 31th March 2023.
iv	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.
v	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.
vi	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.
vii	DTL	Electric Lane	1x50 MVAr at 220 kV	Under Re-tendering due to Single Bid
viii	PUNJAB	Dhuri	1x125 MVAr at 400 kV & 1x25 MVAr at 220 kV	400kV Reactors - 1x125 MVAR Reactor at Dhuri has been commissioned on dated 30th March 2023. 220kV Reactors - 1x25 MVAR Reactor at Dhuri has been commissioned on dated 27th January 2023.
ix	PUNJAB	Nakodar	1x25 MVAr at 220 kV	1x25 MVAR Reactor at Nakodar has been commissioned on dated 13th February 2023.
x	PTCUL	Kashipur	1x125 MVAR at 400 kV	Price bid has been opened and is under evaluation. Retendered in Jul'23 due to [illegible]
xi	RAJASTHAN	Akal	1x25 MVAr	1x25 MVAR Reactor at Akal has been commissioned on dated 25th July' 2022.

xii	RAJASTHAN	Bikaner	1x25 MVAr	1x25 MVAR Reactor at Bikaner has been commissioned on dated 24th June 2023.
xiii	RAJASTHAN	Suratgarh	1x25 MVAr	1x25 MVAR Reactor at Suratgarh has been commissioned on dated 25th November 2022.
xiv	RAJASTHAN	Barmer & others	13x25 MVAr	Agreement signed on dt. 22.06.2020. Grant of Ist Instalment received on dt.19.02.21 & work order placed on dt. 7.04.2022 to M/s Kanohar Electricals Ltd. Schedule time is 18 months. Likely to be commissioned by 31.01.2024.
xv	RAJASTHAN	Jodhpur	1x125 MVAr	Agreement signed on dt. 22.06.2020. Grant of Ist Instalment received on dt.19.02.21 & work order placed on dt. 7.04.2022 to M/s Kanohar Electricals Ltd. Schedule time is 18 months. Likely to be commissioned by 31.01.2024.

Annexure-A-I.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 delayed due to severe ROW problem at Location No. 1 near Grid Substation Jatwal where the Land owner is not allowing erection of Tower. The Deputy Commissioner Samba has been approached for intervention and facilitating the erection of Tower. He is persuading the Land owner to get the work completed. Updated in 210th 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	End of 2023	02 No. of bays are to be utilized for connecting 220kV New Wanpoh-Alusteng D/c Line. The work is in progress and expected to be commission by the end of 2023. Updated in 204th 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	Jul'24	Updated in 205th OCC by HVPNL
5	400/220 kV, 2x315 MVA Dehradun	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• Network to be planned for 4 bays	-	PTCUL to update the status.
6	Shahjahanpur, 2x315 MVA 400/220 kV	Commissioned: 6 Approved/Under Implementation:1 Total: 7	Utilized: 5 Unutilized: 1 (1 bays to be utilized shortly) Approved/Under Implementation:1	• 220 kV D/C Shahajahanpur (PG) - Gola line	31.10.2023	Updated in 212th OCC by UPPTCL. Work completed but pending for first time charging to be expected in the month October.
				• 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 (2 bays to be utilized shortly)	• 220 kV Hamirpur-Dehan D/c line	Commissioned	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.	Dec'23	Issue related to ROW as intimated in 208th OCC by HVPNL.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	Apr'24	Issue related to ROW as intimated in 192nd 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	May'24	Tender is under process Updated in 205th OCC by HVPNL.
11	400/220kV Tughlakabad GIS	Commissioned: 6 Under Implementation: 4 Total: 10	Utilized: 6 Unutilized: 0 Under Implementation:4	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line – March 2023.	-	DTL to update the status.
				• Masjid Mor – Tughlakabad 220kV D/c line.	-	DTL to update the status.
12	400/220kV Kala Amb GIS (TBCB)	Commissioned: 6 Total: 6	Utilized: 0 Unutilized: 6	• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Kala Amb S/s	Dec'23	Updated in 211th OCC by HPPTCL
				• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Giri S/s	-	HPPTCL to update the status.
				• 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	• LILO of both circuits of 220 KV Pali - Sector 56 D/C line at Kadarpur along with augmentation of existing conductor from 220 KV Sector-56 to LILO point with 0.4 sq inch AL-59 conductor.	Dec'23	Forest approval is pending for 220 KV Pali - Sector 56 D/C line. Updated in 205th OCC by HVPNL
				• LILO of both circuits of 220KV Sector 65 - Pali D/C line at Kadarpur along with augmentation of balance 0.4 sq. inch ACSR conductor of 220 kV Kadarpur - Sector 65 D/C line with 0.4sq inch AL-59 conductor	Dec'23	Updated in 205th OCC by HVPNL
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	Jan'24	Updated in 208th 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 205th 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	31.03.2024	Updated in 205th OCC by HVPNL
				• LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line	Commissioned	Commisioned date: 31.12.2021. Updated in 198th OCC by HVPNL
				• 220kV D/C for Sector78, Faridabad	31.03.2024	Issue related to ROW and Pending crossing approval from Northern Railways and DFCCIL. as intimated in 205th OCC by HVPNL.
				• Prithla - Sector 89 Faridabad 220kV D/c line	31.03.2024	Updated in 205th OCC by HVPNL

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
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	31.12.2023	Updated in 205th OCC by HVPNL. **Status:** Work was held up due to ROW at T.L. No. 7,8,11,12 & 13 by the farmers of Jajji villagers during July'23 and now the matter has been resolve and work under progress from 01.08.2023. The erection work of T.no. 1 is pending due to non availability of shut down at 220KV Mohana-Smk line and 220KV Jajji-Mohana line. • PLCC protection coupler and Forest approval is also pending.
				• Sonepat - HSIISC Rai 220kV D/c line	Mar'24	Updated in 212th OCC by HVPNL. **Status:** Due to non-performance of work of 220KV GIS Rai S/Stn, the Contract has been terminated & blacklisted by O/o XEN/WB O/o CE/PD&C, HVPNL, Panchkula vide Ch-100/HDP-2418/REC-254/Xen(WB) Dated 24.02.2023. Now pending work will be caried out by HVPNL/ Departmentely. Now, the matter is under approval from competent authority of Nigam.,
				• Sonepat - Kharkhoda Pocket A 220kV D/c line	31.07.2024	Updated in 212th OCC by HVPNL. **Status:** Work order has been issued to M/s R.S Infra on dated 09.08.2023 by O/o CE/PD&C, Panchkula for construction of line. The Survey work has been completed.
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 order is finalized as updated in 201st OCC by RVPNL. 5 months from layout finalization.
18	400/220kV Kotputli Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Kotputli - Pathreda 220kV D/c line	-	Bid documents under approval as updated in 195th OCC by RVPNL.
19	400/220kV Jallandhar Sub-station	Commissioned: 10 Total: 10	Utilized: 8 Unutilized: 2	• Network to be planned for 2 bays	May'24	LILO of 220 kV BBMB Jalandhar - Butari line at 400 kV PGCIL Jalandhar being planned. Work expected to be completed by May 2024. Updated in 198th OCC by PSTCL.
20	400/220kV Roorkee Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Roorkee (PG)-Pirankaliyar 220kV D/c line	Commissioned	Roorkee (PG)-Pirankaliyar 220kV D/c line commissioned in 2020 as intimated by PTCUL in 197th OCC
21	400/220kV Lucknow Sub-station	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• Network to be planned for 2 bays	Commissioned	• Lucknow -Kanduni, 220 kV D/C line work energized on 05.10.2023. Updated in 212th OCC by UPPTCL. _____ • No planning for 2 no. of bays upated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.
22	400/220kV Gorakhpur Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Network to be planned for 2 bays	Commissioned	• Gorakhpur(PG)- Maharajganj, 220 kV D/C line energized on 27.09.2023 updated by UPPTCL in 212th OCC
23	400/220kV Fatehpur Sub-station	Commissioned: 8 Under Implementation:2 Total: 10	Utilized: 6 Unutilized: 2 Under Implementation:2	• Network to be planned for 2 bays	-	• UPPTCL intimated that 02 no. of bays under finalization stage. In 201st OCC, UPPTCL intimated that it is finalized that Khaga s/s will be connected (tentative time 1.5 years). _____ • No planning for 2 no. of bays updated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
24	400/220kV Abdullapur Sub-station	Commissioned: 10 Under Implementation:2 Total: 12	Utilized: 10 Unutilized: 0 Under Implementation:2	• Abdullapur – Rajokheri 220kV D/c line	Dec'23	SCDA System & PLCC work pending at 220 KV S/stn. Rajokheri Updated in 209th OCC by HVPNL
25	400/220kV Pachkula Sub-station	Commissioned: 8 Under tender:2 Total: 10 Out of these 10 nos. 220kV Line Bays, 2 bays would be used by the lines being constructed by POWERGRID (Chandigarh-2) and balance 8 nos. bays would be used by HVPNL	Utilized: 2 Unutilized: 4 Under Implementation:2	• Panchkula – Pinjore 220kV D/c line	Dec'23	Updated in 211th OCC by HVPNL
				• Panchkula – Sector-32 220kV D/c line	Feb'24	Updated in 211th OCC by HVPNL
				• Panchkula – Raiwali 220kV D/c line	Commissioned	Updated in 194th OCC by HVPNL
				• Panchkula – Sadhaura 220kV D/c line: Sep'23	Jul'24	Updated in 205th OCC by HVPNL
26	400/220kV Amritsar S/s	Commissioned:7 Approved in 50th NRPC- 1 no. Total: 8	Utilized: 6 Unutilized: 1 Approved in 50th NRPC- 1 no.	• Amritsar – Patti 220kV S/c line	Nov'23	Route survey/tender under process. Updated in 211th 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)	Nov'23	Route survey/tender under process.. Updated in 211th 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	31.03.2024	Updated in 205th OCC by HVPNL. **Status:** Tentative route stands submitted by TS wing and accordingly BOQ has been submitted by design wing to contracts wing for award of work.
				• Bahadurgarh - METL 220kV D/c line (Deposit work of M/s METL)	31.03.2024	Updated in 205th OCC by HVPNL. **Status:** Tentative route stands submitted by TS wing and accordingly BOQ has been submitted by design wing to contracts wing for award of work.
				• Bahadurgarh - Kharkhoda Pocket B 220kV D/c line	31.07.2024	Updated in 212th OCC by HVPNL. **Status:** Work order has been issued to M/s R.S Infra on dated 09.08.2023 by O/o CE/PD&C, Panchkula for construction of line. The Survey work has been completed.
29	400/220kV Jaipur (South) S/s	Commissioned: 4 Total: 4	Utilized:2 Unutilized: 2	• Network to be planned for 2 bays.	-	LILO case of 220 kV Dausa – Sawai Madhopur line at 400 kV GSS Jaipur South (PG) is under WTD approval as updated by RVPNL in 195th 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

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
31	400/220kV, Kankroli	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	• Network to be planned for 2 bays	-	RVPNL to update the status
32	400/220kV, Manesar	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	• Network to be planned for 2 bays	-	Status:- 2nos bays are being utilised for 220 kV D/C Panchgaon (PGCIL)-Panchgaon Ckt-I & 220 kV D/C Panchagon (PGCIL)-Panchgaon Ckt-II, charged on dated 05.09.2022 & 20.10.2022 respectively. The 2nos bays may be utilised by HVPNL in future.
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	Oct'23	Direct circuit from 220 kV Lalton Kalan to Dhandari Kalan to be diverted to 400 kV PGCIL Ludhiana. Work completed but DR/EL not submitted by PSTCL.Updated in 212th 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	-	Stringing of 2nd Circuit of Chamera Pool-Karian Tansmission line has been completed & terminal bay at 400/220 kV chamera pooling substation (PGCIL) is not ready.Updated in 198th 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	• Network to be planned for 2 bays	May'24	2 Nos. bays for 400 kV PGCIL Patiala - 220 kV Bhadson (D/C) line being planned. Work expected to be completed by May 2024. Updated in 198th OCC by PSTCL.

FGD Status

Updated status of FGD related data submission

NTPC (27.02.2023)
MEJA Stage-I
RIHAND STPS
SINGRAULI STPS
TANDA Stage-I
TANDA Stage-II
UNCHAHAR TPS
UPRVUNL (18.07.2023)
ANPARA TPS
HARDUAGANJ TPS
OBRA TPS
PARICHHA TPS

PSPCL (18.07.2023)
GGSSTP, Ropar
GH TPS (LEH.MOH.)
RRVUNL (09.07.2023)
CHHABRA SCPP
CHHABRA TPP
KALISINDH TPS
KOTA TPS
SURATGARH SCTPS
SURATGARH TPS

Updated status of FGD related data submission

Lalitpur Power Gen. Co. Ltd. (17.10.2022)
Lalitpur TPS
Lanco Anpara Power Ltd. (18.06.2022)
ANPARA-C TPS

HGPCL (14.09.2022)
PANIPAT TPS
RAJIV GANDHI TPS
YAMUNA NAGAR TPS

Adani Power Ltd. (18.02.2022)
KAWAI TPS

Rosa Power Supply Company (18.06.2022)
Rosa TPP Phase-I
Prayagraj Power Generation Company Ltd. (17.10.2022)
Prayagraj TPP
APCPL (25.02.2022)
INDIRA GANDHI STPP

Pending submissions

GVK Power Ltd.
GOINDWAL SAHIB

NTPC
DADRI (NCTPP)
Talwandi Sabo Power Ltd.
TALWANDI SABO TPP
L&T Power Development Ltd.
Nabha TPP (Rajpura TPP)

Target Dates for FGD Commissioning (Utility-wise)

Adani Power Ltd.	KAWAI TPS U#1 (Target: 31-12-2024), KAWAI TPS U#2 (Target: 31-12-2024)
APCPL	INDIRA GANDHI STPP U#1 (Target: 31-01-2022), INDIRA GANDHI STPP U#2 (Target: 30-09-2023), INDIRA GANDHI STPP U#3 (Target: 30-06-2023)
GVK Power Ltd.	GOINDWAL SAHIB U#1 (Target: 30-04-2020), GOINDWAL SAHIB U#2 (Target: 29-02-2020)
HGPCL	PANIPAT TPS U#6 (Target: 31-12-2022), PANIPAT TPS U#7 (Target: 31-12-2022), PANIPAT TPS U#8 (Target: 31-12-2022), RAJIV GANDHI TPS U#1 (Target: 31-12-2024), RAJIV GANDHI TPS U#2 (Target: 31-12-2024), YAMUNA NAGAR TPS U#1 (Target: 31-12-2024), YAMUNA NAGAR TPS U#2 (Target: 31-12-2024)

NTPC	DADRI (NCTPP) U#1 (Target: 31-12-2020), DADRI (NCTPP) U#2 (Target: 31-10-2020), DADRI (NCTPP) U#3 (Target: 31-08-2020), DADRI (NCTPP) U#4 (Target: 30-06-2020), DADRI (NCTPP) U#5 (Target: 30-06-2022), DADRI (NCTPP) U#6 (Target: 31-03-2023), RIHAND STPS U#1 (Target: 31-10-2025), RIHAND STPS U#2 (Target: 30-06-2026), RIHAND STPS U#3 (Target: 31-12-2024), RIHAND STPS U#4 (Target: 31-03-2025), RIHAND STPS U#5 (Target: 30-06-2025), RIHAND STPS U#6 (Target: 31-10-2025), SINGRAULI STPS U#1 (Target: 31-12-2024), SINGRAULI STPS U#2 (Target: 31-12-2024), SINGRAULI STPS U#3 (Target: 31-12-2024), SINGRAULI STPS U#4 (Target: 31-12-2024), SINGRAULI STPS U#5 (Target: 31-03-2025), SINGRAULI STPS U#6 (Target: 31-06-2024), SINGRAULI STPS U#7 (Target: 31-03-2024), UNCHAHAR TPS U#1 (Target: 31-12-2023), UNCHAHAR TPS U#2 (Target: 31-12-2023), UNCHAHAR TPS U#3 (Target: 30-09-2023), UNCHAHAR TPS U#4 (Target: 30-09-2023), UNCHAHAR TPS U#5 (Target: 30-09-2023), UNCHAHAR TPS U#6 (Target: 31-08-2022), MEJA Stage-I U#1 (Target: 31-10-2023), MEJA Stage-I U#2 (Target: 30-06-2023), TANDA Stage-I U#3 (Target:), TANDA Stage-I U#4 (Target:), TANDA Stage-II U#3 (Target: 31-03-2023), TANDA Stage-II U#4 (Target: 30-09-2023)

L&T Power Development Ltd (Nabha)	Nabha TPP (Rajpura TPP) U#1 (Target: 30-04-2021), Nabha TPP (Rajpura TPP) U#2 (Target: 28-02-2021)
Lalitpur Power Gen. Company Ltd.	LALITPUR TPS U#1 (Target: 31-12-2026), LALITPUR TPS U#2 (Target: 30-09-2026), LALITPUR TPS U#3 (Target: 30-06-2026)
Lanco Anpara Power Ltd.	ANPARA C TPS U#1 (Target: 31-12-2023), ANPARA C TPS U#2 (Target: 31-12-2023)
Prayagraj Power Generation Company Ltd.	PRAYAGRAJ TPP U#1 (Target: 31-12-2024), PRAYAGRAJ TPP U#2 (Target: 31-12-2024), PRAYAGRAJ TPP U#3 (Target: 31-12-2024)
PSPCL	GH TPS (LEH.MOH.) U#1 (Target: 31-12-2026), GH TPS (LEH.MOH.) U#2 (Target: 31-12-2026), GH TPS (LEH.MOH.) U#3 (Target: 31-12-2026), GH TPS (LEH.MOH.) U#4 (Target: 31-12-2026), GGSSTP, Ropar U#3 (Target: 31-12-2026), GGSSTP, Ropar U#4 (Target: 31-12-2026), GGSSTP, Ropar U#5 (Target: 31-12-2026), GGSSTP, Ropar U#6 (Target: 30-12-2026)

Rosa Power Supply Company	ROSA TPP Ph-I U#1 (Target: 31-12-2026), ROSA TPP Ph-I U#2 (Target: 31-12-2026), ROSA TPP Ph-I U#3 (Target: 31-12-2026), ROSA TPP Ph-I U#4 (Target: 31-12-2026)
RRVUNL	KOTA TPS U#5 (Target: 31-08-2024), KOTA TPS U#6 (Target: 31-08-2024), KOTA TPS U#7 (Target: 31-08-2024), SURATGARH TPS U#1 (Target: 31-12-2026), SURATGARH TPS U#2 (Target: 31-12-2026), SURATGARH TPS U#3 (Target: 31-12-2026), SURATGARH TPS U#4 (Target: 31-12-2026), SURATGARH TPS U#5 (Target: 31-12-2026), SURATGARH TPS U#6 (Target: 31-12-2026), SURATGARH SCTPS U#7 (Target: 28-02-2025), SURATGARH SCTPS U#8 (Target: 28-02-2025), CHHABRA TPP U#1 (Target: 31-12-2026), CHHABRA TPP U#2 (Target: 31-12-2026), CHHABRA TPP U#3 (Target: 31-12-2026), CHHABRA TPP U#4 (Target: 31-12-2026), CHHABRA SCPP U#5 (Target: 28-02-2025), CHHABRA SCPP U#6 (Target: 28-02-2025), KALISINDH TPS U#1 (Target: 28-02-2025), KALISINDH TPS U#2 (Target: 28-02-2025)
Talwandi Sabo Power Ltd.	TALWANDI SABO TPP U#1 (Target: 28-02-2021), TALWANDI SABO TPP U#2 (Target: 31-12-2020), TALWANDI SABO TPP U#3 (Target: 31-10-2020)
UPRVUNL	ANPARA TPS U#1 (Target: 31-12-2023), ANPARA TPS U#2 (Target: 31-12-2023), ANPARA TPS U#3 (Target: 31-12-2023), ANPARA TPS U#4 (Target: 31-12-2023), ANPARA TPS U#5 (Target: 31-12-2023), ANPARA TPS U#6 (Target: 31-12-2023), ANPARA TPS U#7 (Target: 31-12-2023), HARDUAGANJ TPS U#8 (Target: 31-12-2024), HARDUAGANJ TPS U#9 (Target: 31-12-2024), OBRA TPS U#9 (Target: 31-12-2024), OBRA TPS U#10 (Target: 31-12-2024), OBRA TPS U#11 (Target: 31-12-2024), OBRA TPS U#12 (Target: 31-12-2024), OBRA TPS U#13 (Target: 31-12-2024), PARICHHA TPS U#3 (Target: 30-04-2022), PARICHHA TPS U#4 (Target: 31-12-2024), PARICHHA TPS U#5 (Target: 31-12-2024), PARICHHA TPS U#6 (Target: 31-12-2024)

MIS Report for Status of Islanding Schemes

Implemented Schemes

Sl. No.	Islanding Scheme	SLDC	Status	Submission of Self Certification of Healitheness	SOP	SCADA Display Page	Remarks
1	NAPS IS	UP	Implemented	Yes (08-10-2021)	Yes	Yes	-
2	RAPS IS	Rajasthan	Implemented	16-Aug-21	Yes	Yes	List of officials in-charge, format for generation, islanding scheme sld and relays in RAPP IS submitted by RVPN on 04.12.2021.

Under Implementation/ Newly Proposed/Under Discussion

Sl. No.	Islanding Scheme	SLDC	Status	Details of progress	DPR for PSDF funding (Require	Timelines Status - Proposed/Actual									
						Study		Design		Approval		Procurement		Commissioning	
						Proposed	Actual	Proposed	Actual	Proposed	Actual	Proposed	Actual	Proposed	Actual
1	Lucknow-Unchahar IS	UP	Under Implementation	Scheme has been approved in 59th NRPC meeting held on 31.10.2022. Installation of Ufrs is complete expect at NTPC Unchahar end .		-		-	-	-	-	-	-	-	-
2	Agra IS	UP	Under Study	Lalitpur TPS has has some observations on CPRI report and same is under examination.		-		-	-	-	-	-	-	-	-
3	Jodhpur-Barmer-Rajwest IS	Rajasthan	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022.Preparation of DPR is under finalization. Timeline to be intimated by RVPN	-	-		-	-	-	-	-	-	-	-
4	Suratgarh IS	Rajasthan	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. Preparation of DPR is under finalization. Timeline to be intimated by RVPN	-	-		-	-	-	-	-	-	-	-
5	Patiala-Nabha Power Rajpura IS	Punjab	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. Punjab SLDC informed that their management has decided to go for PSDF funding for its implementation Implementation timeline: March,2025		-		-	-	-	-	-	-	-	-
6	Pathankot-RSD IS	Punjab	Implemented	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. Scheme has been implemented in April 2023 as informed by Punjab in 206th OCC. Testing Reports submitted by Punjab.		-		-	-	-	-	-	-	-	-
7	Kullu-Manali-Mandi IS	HP	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. Timeline to be intimated by HPSLDC		-		-	-	-	-	-	-	-	-
8	Shimla-Solan IS	HP	Under Implementation	Scheme has been approved in 60th NRPC meeting held on 30.11.2022. Timeline to be intimated by HPSLDC											
9	Delhi IS	Delhi	Implemented	Revised Delhi islanding scheme has been implemented as informed by DTL in 48th TCC and 70th NRPC meeting.											

Status of availability of ERS towers in NR

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

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
15	HVPN						HVPN does not have ERS Set. Technical Specifications are being finalized
16	PSTCL						
17	UPPTPCL						
18	POWERLINK						
19	POWERGRID HIMACHAL TRANSMISSION LTD						
20	Powergrid Ajmer Phagi Transmission Limited						
21	Powergrid Fatehgarh Transmission Limited						
22	POWERGRID KALA AMB TRANSMISSION LTD						
23	Powergrid Unchahar Transmission Ltd						
24	Powergrid Khetri Transmission Limited						
25	POWERGRID VARANASI TRANSMISSION SYSTEM LTD						
26	ADANI TRANSMISSION INDIA LIMITED						
27	BIKANER KHETRI TRANSMISSION LIMITED						
28	FATEHGARH BHADLA TRANSMISSION LIMITED						
29	NRSS-XXXI(B) TRANSMISSION LTD						
30	ARAVALI POWER COMPANY PVT LTD						

*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)

Planned Annual Maintenance Programme of Tramsmission Elements for the year 2024-25

Annexure-A.IV

Note: Category A: AC Transmission elements at 400 kV & above and HVDC elements (excluding lines emanating ISGS)
Category B: Transmission elements at 132 kV & above and below 400kV level emanating from ISGS
Category C: Transmission elements at 132 kV & above and below 400kV which are inter-regional in nature
Category D: Transmission elements at 220 kV level with one end in a state while other end is in another state

Sl. No.	Name of Element (line/ Transformer/ Reactor/ Bay/ Bus)	Type of Element (line/ Transformer/ Reactor/ Bay/ Bus)	Owner (RVPN/ Adani/ PGCIL)	Category (A/ B/ C/D) as mentioned below	Daily / Continuous basis	Corridor (Inter/Intra)	Outage From (mm/dd/yy)	Outage To (mm/dd/yy)	Reason	Remarks, if any
1										
2										
3										
4										
5										
6										
7										
8										

सं. 22-30/2023-ओ एम [268857]
भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, the 29th November, 2023

OFFICE MEMORANDUM.

Subject: Minutes of the meeting held under the Chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3:00 P.M to review the preparedness to meet the Power Demand in the Country.

Please find enclosed herewith a copy of the Minutes of the meeting held under the Chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3:00 P.M to review the preparedness to meet the Power Demand in the Country for information and necessary action.

2. It is also requested that an Action Taken Report(ATR) on the decisions taken in the meeting may be provided to OM Division within a week.

Encl:- As above.

(Hausuanthang Guite)
Under Secretary (OM)
Tel:23062492
opmonitor-power@nic.in

To,

1. **The Chairperson, CEA. Sewa Bhavan, R.K.Puram, New Delhi**
2. **The CMD, Grid India, New Delhi**
3. **The CMD, NTPC**
4. **The ED(Project), PFC**

Copy to :-

PS to Hon'ble Minister for Power & NRE/Sr.PPS to Secretary(Power)/PPS to JS(OM/Thermal))/PPS to CE(R&R)/PS to Director(OM)/PS to DS(Thermal).

Minutes of the meeting held under the chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3.00 PM to review the preparedness to meet the Power Demand in the country

A meeting was held under the chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023 at 3:00 PM to review the preparedness to meet the power demand in country. The meeting was attended by Secretary (Power) and Senior Officials of CEA, NTPC, PFC and Grid India. The List of Participants is **Annexed.**

2. **Grid-India** made a detailed presentation on the power supply position in the country. Following points, were, inter-alia, highlighted in the presentation :

i. Peak demand, both in Solar and Non-Solar Hours, is showing a rising trend and has touched 241 GW (Solar hours) on September 01, 2023. Hence, advance planning for meeting the peak demand in Solar and Non-Solar Hours of H2 of FY 2023-24 and Q1 of FY 2024-25 needs to be done on priority.

ii. Growth in the maximum demand met, as compared to the corresponding period last year, varied between 21.36% to 18.57% during August 2023- October 2023 period. The growth was 17.66% for November, 2023 (till 5th).

iii. 20.99% and 16.14% growth was recorded in energy consumed in Oct,2023 and Nov, 2023 (till 5th Nov 2023) respectively, compared to the corresponding period last year.

iv. Short fall in capacity (with 3% reserve) in non-solar hour is expected to be 17.6 GW in December 2023, 14.2 GW in January, 2024 and 12 GW in March, 2024, 17.8 GW in April, 2024 and 19.6 GW in June, 2024.

v. Planning is required for 243 GW (Solar hours) and 237 GW (Non-solar hours) demand scenarios for the months of June, 2024 in order to avoid any load shedding.

3. Chairperson, CEA stated that capacity shortfall can be met by reducing forced and partial outage of thermal units, preponing of planned maintenance and ensuring the availability of 10 GW of gas based capacity.

4. Hon'ble Minister enquired about the status of thermal and renewable capacity addition during 2023-24. CEA informed that around 9000 MW thermal capacity is likely to get commissioned by March, 2024. It was further informed that there are certain stressed thermal assets in NCLT which, if resolved early, can also help in addition of the thermal capacities.

5. CEA informed that SJVNL-Buxar Thermal Power Project Unit-1 (1x660 MW) coal based thermal power plants unit is likely to be commissioned in 2023-24, however, due to present law and order situation, construction work had been slow and Unit 1 is likely to be delayed. Hon'ble Minister directed to write a DO letter to the State for support for timely completion of the Buxar unit.

6. CMD, NTPC stated that in order to ensure the timely completion of under construction projects, progress of under construction project may be comprehensively reviewed with M/s BHEL.

7. Hon'ble Minister stated that in order to meet the growing demand, it is imperative that all power plants should run at full capacity. Power from central unallocated quote should not be allocated to those States which do not run their power plants at peak capacity and instead seek power from the Centre's pool.

8. Hon'ble Minister enquired about the possible option for shifting the agriculture demand from non-solar hours to solar hours and issuing an advisory to the States in this regard. Grid India stated that estimated solar and wind capacity addition may be taken into consideration before issuing advisory as there was not much surplus power available even during solar hours. Hon'ble Minister directed Grid India to carry out the analysis for any shortages that occurred and generation backing down during solar hours on September 01, 2023 - the day of all time high demand met.

9. After detailed deliberations, **Hon'ble Minister directed to take action on the following points :**

A. All the maintenance work in Thermal plants must be completed by February, 2024. No planned maintenance work should be undertaken during the period from March, 2024 to June, 2024.

(Action : CEA)

B. Forced outage and partial outage should be brought down from around 25 GW to 15 GW. Monitoring of forced outage for early restoration needs to be done periodically.

(Action : CEA)

C. All Gencos, including IPPs and Central Generating Stations, must be advised to generate at least 85% PLF and maintain full availability on a daily basis. Any surplus power i.e the difference between declared capacity and the scheduled capacity, must be sold in day-ahead market and any remaining quantity not cleared in day-ahead market, must be sold in RTM.

(Action : CEA)

D. The new units which are getting commissioned in any State or the firm share that the State will be getting from any Central Generating Stations needs to be counted in the availability. If State is found to be having surplus power, the power from unallocated quantity of Central Generating Stations may be reduced and allocated to other needy State, which is falling short of capacity.

(Action : CEA/OM Division)

E. Progress of under construction thermal plants should be monitored periodically in order to ensure their timely completion and a monthly report be given to MoP. Similarly, progress of upcoming RE projects should be monitored (a list of such

projects be obtained from MNRE). A list of such capacities be given to Hon'ble Minister and Secretary (Power).

(Action : CEA/Thermal Division)

F. A meeting should be held with BHEL on expeditious completion of balance works of thermal plants so that their commissioning could be done without any delay.

(Action : CEA/Thermal Division)

G. Availability of 10 GW of gas based capacity (include NTPC's 4.2 GW gas based capacity) must be ensured by June, 2024.

(Action : Grid India/CEA)

H. Grid India must monitor all the power plants i.e Inter-State generating stations as well as Intra-State generating stations with respect to declared capacity, scheduled capacity and power sold in the exchanges. In this regard, system should be put in place by linking SLDCs with RLDCs. This should be done in next 15 days time i.e by 22nd November, 2023.

(Action : Grid India)

I. Implementation of time-of-the-day (ToD) tariff needs to be monitored which will help in demand shifting. There cannot be a situation wherein there is a load shedding and also some plants are backing down. Such situation needs to be monitored closely by Grid India.

(Action : Grid India)

J. After assessing the capacity addition in solar and wind, if required, an advisory may be issued to States/UTs for shifting of agriculture load from non-solar to solar hours.

(Action : CEA/OM Division

K. A DO letter be sent to the Bihar State for timely completion of the Buxar unit.

(Action : Thermal Division)

10. JS (Thermal) presented the revised coal requirement at domestic coal-based power plants in H2 of 2023-24 and Q1 of FY 2024-25 in details. It was informed that overall 424 MT domestic coal is required for generation in H2 of 2023-24 and additional 18 MT coal is required to build-up overall coal stock upto 40 MT by end of March-24. The projected average blending rate for imported coal in the H2 of the 2024-25 is 4%, which is lower than the advisory issued on 25.10.2023 for 6% blending. 17MT (24 MT equivalent domestic coal) of imported coal will be available when 4% blending is considered. With this scenario, Coal requirement in H2 of 2023-24 from Domestic source will be 418 MT (424+18-24). To fulfill this coal requirement, 463 rake/day (444 rakes/day for Domestic coal and 20 rakes/day for imported coal) is required in H2 of 2023-24, which has been agreed by MoR and MoC. Average Rake per day in Nov'23 (till 06.11.2023) is 437 (including imported coal rake).

11. In the first quarter of the fiscal year 2024-25, it is projected that there will be a 10% increase in electricity generation from domestic coal-based plants, totalling 328 billion units (BU) compared to Q1 of 2023-24. This surge in power generation is estimated to demand around 229 million metric tons (MT) of coal which is 11% higher of the corresponding period last year. With 4% import coal (9.2 MT, Eqv. domestic: 13 MT) blending, there will be requirement of 216 MT (229 MT-13MT) domestic coal. To fulfill this coal demand, it's anticipated that 488 rakes per day will be necessary (Domestic: 468 Rakes/day + Imported: 20 rakes/day).

12. It was informed that States of Tamil Nadu, Maharashtra, Andhra Pradesh, Rajasthan, Gujarat and Karnataka are either doing blending or have issued tender for procurement of imported coal.

13. Hon'ble Minister enquired about the methodology for distribution of domestic coal rakes among GENCOs. JS (thermal) and CEA submitted that shortfall in domestic coal supplies is uniformly distributed among all the GENCOs & IPPs.

14. On the basis of above discussions, Hon'ble Minister directed the following:

A. CEA was asked to devise a methodology of fair distribution of railway rakes among Gencos. While devising the methodology, the directions given in the OM dated 01.09.2023, regarding advisory to Sub-group on rake allocation, should be adhered too (as attached). The methodology once approved should be shared with MoC with the instruction that Sub-group be directed to follow these fair distribution principles for allocation of rakes among GENCOs. States must comply with the blending guidelines issued by the Ministry of Power (MoP) based on their coal requirements. If States fail to adhere to these blending guidelines, they will not receive domestic coal beyond their allocated fair share.

B. Further, above policy should also be shared with States/ Gencos..

The Meeting ended with Vote of Thanks to the Chair.

.....

Annexure

List of participants who attended the Meeting held under the Chairmanship of Hon'ble Minister of Power & NRE at 03:00 PM on 07th November, 2023 to 'Review of preparation

Ministry of Power

1. Shri R.K Singh Hon'ble Minister of Power and NRE -----In the Chair
2. Shri Pankaj Agarwal, Secretary (Power)
3. Shri Piyush Singh, Joint Secretary (Thermal)
4. Shri. Hemant Kumar Pandey, CE (R&R)
5. Shri Parveen Dudeja, Director (OM)
6. Shri Anoop Singh Bisht, Deputy Secretary (Thermal)
7. Shri Hausuanthang Guite, Under Secretary (OM)

CEA

8. Shri. Ghanshyam Prasad, Chairperson
9. Shri Praveen Gupta, Member (Thermal)
10. Shri. Ajay Talegaonkar, Member (E & C)
11. Shri B.Lyngkhoi, CE (OPM)
12. Shri Chandra Prakash, CE (GM)
13 . Shri Rajeev Kumar, CE (FM)

Grid-India

14. Shri S. R. Narasimhan, CMD
15. Shri S.C Saxena , ED NLDC
16. Shri Rajiv Porwal, Dir (SO)
17. Shri Ashok Kumar, GM

NTPC

18. Shri. Gurdeep Singh, CMD
19. Shri. Ramesh Babu, Director (Operation)
20. Shri Shivam Srivastava, Dir.(Fuel)
21. Shri SPS VIRK , GM
22. Shri G.S. Rao, GM (OS-SIIS)
23. Shri G.S. Gawara, AGM, Fuel

PFC

24. Shri. P.K.Sinha, ED (Project)
25. Shri. B. Praveen, GM

सत्यमेव जयते

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

No. उ.क्षे.वि.स./प्रचालन/106/02/2023/6860-6865 दिनांक:06.12.2023

विषय: Zero Planned outages of Thermal (Coal) based units from March 2024 to June 2024 -reg.

Reference is invited to point no. 9(a) of the Minutes of meeting held under the Chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023, No planned maintenance should be undertaken during the period of March 2024 to June 2024(MoM attached).

In this regard, all thermal Generating Stations of NR whose planned maintenance was scheduled in the month of March 2024 are requested to kindly review their maintenance program such that in compliance of direction of Ministry No planned maintenance should be undertaken during the period of March 2024 to June 2024. The list of outages proposed by utilities in the month of March is as below:

Station	Unit	Station Type	Region	State	Utility	Capacity (MW)	Original Outage from	Original Outage To	Duration (days)	Remarks
MAHATMA GANDHI TPS (JPL)	2	THERMAL	NR	HARYANA	JHAJJAR POWER LIMITED	660	1-Feb-24	31-Mar-24	60	Boiler overhauling and chimney repair
DADRI-I (NCTPP)	1	THERMAL	NR	UTTAR PRADESH	NTPC	210	14-Feb-24	9-Mar-24	25	Boiler OH
RIHAND-III STPS	1	THERMAL	NR	UTTAR PRADESH	NTPC	500	10-Feb-24	25-Mar-24	45	Annual OH
SINGRAULI STPS	1	THERMAL	NR	UTTAR PRADESH	NTPC	500	15-Feb-24	15-Mar-24	30	Annual OH
TANDA TPS	2	THERMAL	NR	UTTAR PRADESH	NTPC	110	1-Feb-24	11-Mar-24	40	O/H
UNCHAHAR-II TPS	2	THERMAL	NR	UTTAR PRADESH	NTPC	210	5-Mar-24	10-Mar-24	6	Boiler Licence Renewal
DCR TPS YAMUNA NAGAR	1	THERMAL	NR	HARYANA	HPGCL	300	1-Feb-24	31-Mar-24	60	CAPITAL OH
DCR TPS YAMUNA NAGAR	2	THERMAL	NR	HARYANA	HPGCL	300	26-Feb-24	31-Mar-24	35	Annual OH
GGSSTP ROPAR	2	THERMAL	NR	PUNJAB	PSPCL	270	16-Feb-24	16-Mar-24	30	Capital OH
TALWANDI SABO TPP	1	THERMAL	NR	PUNJAB	Vedanta Limited	660	26-Feb-24	22-Mar-24	26	Annual Overhaul/ Boiler overhaul
KOTA TPS (KSTPS)	4	THERMAL	NR	RAJASTHAN	RVUNL	210	16-Feb-24	7-Mar-24	21	Annual Boiler Overhauling

06/12/23

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

सेवा में,

1. Rajneesh Kumar Setia, DGM, Apraave Energy Ltd
2. Hitesh Rastogi, DGM, NTPC HQ-NR
3. Raman Sobti, SE, HPGCL
4. Paramjit Singh, CE, PSPCL
5. Vinay Baj, Deputy Chief Engineer, RRVUN
6. Ravinder Thakur, Dy. Head O&M, Talwandi Sabo Power Ltd.

सत्यमेव जयते

विजय कुमार सिंह
सदस्य सचिव

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

अर्ध शासकीय पत्र सं.
D.O. No. NRPC/OPR/102/02/2023/6866-6872

दिनांक :
Date : 11th December, 2023

Dear Shri Rajesh Ji,

As you are aware that the RRVUNL submitted the Annual Maintenance Program of its generating units planned to be carried out in FY 2024-25, wherein 1850 MW thermal units are scheduled for planned maintenance during April 2024 to June 2024 (copy attached as **Annexure-I**). The proposed annual maintenance program of RRVUNL was discussed and agreed in the 29th LGBR Sub-Committee meeting of NRPC held on 29.08.2023.

In this regard, it is informed that a meeting was held under the chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023 to review the preparedness to meet the power demand in country (copy of MoM is attached as **Annexure-II**). In the said meeting, Hon'ble Minister of Power and NRE directed that all the maintenance work in Thermal plants must be completed by February, 2024 and no planned maintenance work should be undertaken during the period from March, 2024 to June, 2024.

In view of the above, it is requested that please look into the issue personally and give directions to concerned officials to review the planned maintenance program of generating stations of RRVUNL for FY 2024-25 to ensure zero planned maintenance for the period March to June 2024.

Encl: as above.

Yours sincerely,

11/12/2023

(V.K. Singh)

Shri Rajesh Kumar Sharma
Chairman & Managing Director,
Rajasthan Rajya Vidyut Utpadan Nigam Limited
Vidyut Bhawan, Jyoti Nagar, Janpath
Jaipur Rajasthan-302005

Copy to:

1. Chairperson, CEA
2. Member (GO&D), CEA
3. CMD, Grid India
4. Executive Director, NRLDC
5. Chief Engineer (OPM), CEA

Annexue-I

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LIMITED
(A Government of Rajasthan undertaking)
Corporate Identity Number (CIN)-U40102RJ2000SGC016484
Regd. Office & H.O.: Vidyut Bhawan, Janpath, Jyoti Nagar, Jaipur-302005
Office of the Chief Engineer (PPC_PTD)

No. RRVUNL/Addl. CE(PPC_PTD)/SE(Tech.-Cell)/AEN(Tech.-Cell)/ F.-06/ D.- 1013 Date- 29.08.23

The Chief Engineer (OPM Division),
Central Electricity Authority,
Government of India,
Sewa Bhawan, R.K.Puram,
New Delhi –110066.

Sub.:- Regarding Electricity Generation Program for the year 2024-25.
Ref.:- No.-CEA-GO-11-24/1//2023-OPM Division/Dtd.-11.07.2023 received through Email on Dtd.-11.07.2023.

With references to above cited subject please find enclosed herewith the Electricity Generation Program for the FY_2024-25 as per **Annexure-I (Point No.-1 to 8), II, III, IV** for further needful.

29/08/23
(Sanjay Jain)
Superintending Engineer (PP/Tech.-Cell)

Encl.:- As above.

Copy submitted / forwarded to the following for kind information and n/a please:-

1. The Managing Director, RUVNL, Jaipur.
2. The Director (Project/Technical/Operations), RRVUNL/RRVPNL, Jaipur.
3. The Chief Engineer (O&M – SSTPS/ KSTPS/ KaSTPP/ CTPP/ DCCPP/ RGTPP)/ (Super Critical-Suratgarh/Chhabra), RRVUNL, Suratgarh/ Kota/ Kalisindh/ Chhabra/ Dholpur/ Ramgarh.
4. The Chief Engineer, RUVNL, Jaipur.
5. The Chief Engineer (LD), RRVPNL, Heerapura, Jaipur
6. The TA to Hon'ble CMD, RRVUNL, Jaipur.
7. MF/OC.
8. The Superintending Engineer (Opn.), NRPC, GOI, New Delhi.

29/08/23
Superintending Engineer (PP/Tech.-Cell)

Room No.301, 3rd Floor, Rajasthali Mall, MI Road, Ajmeri Gate, Jaipur-302001.
Phone No. : 0141-4018794
Email : ce.ppmcit@rrvun.com, montg.rvun@gmail.com, website : www.energy.rajasthan.gov.in/rvunl

Annexure - I

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Unit wise yearly Generation Program for the FY-2024-25

1. Contact Details :-

S. No.	Name of Officer & Designation	Mobile No./Phone No.	Fax No.	Email ID
1	Sh. Vinay Baj, Dy. CE(PPC_PTD)	9413349667	0141-2744521	montg.rvun@gmail.com
2	Sh. Sanjay Jain, SE(PP/Tech.-Cell)	9413349936		

2. Units existing on 31.03.2023:-

Name of Power Stations	Unit No.	Capacity (MW)	Date of COD	Generation (MU) (2023-24)					Generation (MU) (2024-25)			
				Program (2023-24)	Actual (up to July-23)	Anticipated (Aug.-23 to March-24)	Total (Actual & Anticipated)	Major Reason for Low Generation (up to July-23)	Anticipated Max. Generation Capability	Anticipated Generation	Reason for variation from Max. Generation Capability	Remarks
SSTPS, Suratgarh	U#1	250	01.02.1999	1976.40	490.48	1171.20	1661.68	1066.81 MU/ 24.29% Generation Lost due to Backing-Down & Boxedup by SLDC and Grid Constraints	2190.00	1651.20	Proposed Annual Shut-Down & Forced-Outage/Partial Loading	Considering Anticipated Availability 80%
	U#2	250	01.10.2000	1976.40	448.74	1171.20	1619.94		2190.00	1651.20		
	U#3	250	15.01.2002	1733.40	409.49	1171.20	1580.69		2190.00	1651.20		
	U#4	250	31.07.2002	1976.40	356.56	1171.20	1527.76		2190.00	1651.20		
	U#5	250	19.08.2003	1976.40	390.64	1024.50	1415.14		2190.00	1752.00		
	U#6	250	30.12.2009	1863.00	334.28	1017.60	1351.88		2190.00	1752.00		
	Total	1500	-	11502.00	2430.18	6726.90	9157.08		13140.00	10108.80		
SSCTPP, Suratgarh	U#7	660	01.12.2020	4790.02	1162.92	2318.98	3481.89	165.18 MU/ 4.27% Generation Lost due to Backing-Down & Boxedup by SLDC	5781.60	4308.48	Proposed Annual Shut-Down & Forced-Outage/Partial Loading	Considering Anticipated Availability 80%
	U#8	660	07.10.2021	4918.32	1137.92	2318.98	3456.90		5781.60	4308.48		
	Total	1320	-	9708.34	2300.84	4637.95	6938.79		11563.20	8616.96		
KSTPS, Kota	U#1	110	01.04.1983	819.72	154.32	515.33	669.65	260.94 MU/ 7.19% Generation Lost due to Backing-Down by SLDC & Grid Constraints	963.60	726.53	Proposed Annual Shut-Down & Forced-Outage/Partial Loading	Considering Anticipated Availability 80%
	U#2	110	01.04.1984	819.72	177.99	515.33	693.32		963.60	726.53		
	U#3	210	11.03.1989	1564.92	512.54	842.69	1355.23		1839.60	1471.68		
	U#4	210	16.01.1990	1456.06	532.15	848.99	1381.13		1839.60	1290.24		
	U#5	210	18.07.1995	1564.92	365.32	983.81	1349.13		1839.60	1387.01		
	U#6	195	01.08.2004	1453.14	563.13	856.44	1419.57		1708.20	1287.94		
	U#7	195	31.12.2009	1453.14	542.72	856.44	1399.16		1708.20	1287.94		
	Total	1240	-	9131.62	2848.17	5419.02	8267.19		10862.40	8177.86		
KaSTPP, Kalisindh	U#1	600	07.05.2014	4160.16	942.99	2776.32	3719.31	171.98 MU/ 4.89% Generation Lost due to Backing-Down by SLDC	5256.00	3962.88	Proposed Annual Shut-Down & Forced-Outage/Partial Loading	Considering Anticipated Availability 80%
	U#2	600	25.07.2015	4471.20	1387.69	2635.20	4022.89		5256.00	3962.88		
	Total	1200	-	8631.36	2330.68	5411.52	7742.20		10512.00	7925.76		
CTPP, Chhabra	U#1	250	11.06.2010	1868.40	551.35	1171.20	1722.55	100.36 MU/ 3.43% Generation Lost due to Backing-Down by SLDC & Grid Constraints	2190.00	1656.00	Proposed Annual Shut-Down & Forced-Outage/Partial Loading	Considering Anticipated Availability 80%
	U#2	250	15.10.2011	1868.40	590.42	1171.20	1761.62		2190.00	1656.00		
	U#3	250	19.12.2013	1868.40	215.82	950.40	1166.22		2190.00	1656.00		
	U#4	250	30.12.2014	1760.40	423.51	1098.00	1521.51		2190.00	1560.00		
	Total	1000	-	7365.60	1781.09	4390.80	6171.89		8760.00	6528.00		
CSCTPP, Chhabra	U#5	660	09.08.2018	4591.22	850.35	3053.95	3904.30	51.81 MU/ 1.34% Generation Lost due to Backing-Down by SLDC	5781.60	4097.81	Proposed Annual Shut-Down & Forced-Outage/Partial Loading	Considering Anticipated Availability 75% up to proposed Annual Maintenance Schedule & thereafter 80%
	U#6	660	02.04.2019	4591.22	1172.18	2800.51	3972.69		5781.60	4078.01		
	Total	1320	-	9182.45	2022.52	5854.46	7876.99		11563.20	8175.82		

Annexure - I

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Unit wise yearly Generation Program for the FY-2024-25

Name of Power Stations	Unit No.	Capacity (MW)	Date of COD	Generation (MU) (2023-24)					Generation (MU) (2024-25)			
				Program (2023-24)	Actual (up to July-23)	Anticipated (Aug.-23 to March-24)	Total (Actual & Anticipated)	Major Reason for Low Generation (up to July-23)	Anticipated Max. Generation Capability	Anticipated Generation	Reason for variation from Max. Generation Capability	Remarks
DCCPP, Dholpur	GT-1	110	01.03.2008	772.99	0.00	515.33	515.33	925.74 MU/ 95.81% Generation Lost due to Boxed-Up by SLDC	963.60	770.88	Forced-Outage/Partial Loading	Considering Anticipated Availability 80% (on Spot Gas)
	GT-2	110	01.03.2008	772.99	0.00	515.33	515.33		963.60	770.88		
	STG	110	01.03.2008	772.99	0.00	515.33	515.33		963.60	770.88		
	Total	330	-	2318.98	0.00	1545.98	1545.98		2890.80	2312.64		
RGTPP, Ramgarh	GT-1	35.5	12.01.1996	218.28	80.51	542.22	916.00	154.61 MU/ 19.52% Generation Lost due to Non-Availability/Shortage of Gas (ONGC/Focus) 109.8 MU/ 13.86% Generation Lost due to under Forced-Outage of GT-2 54.90 MU/ 6.93% Generation Lost due to STG-I run on Partial Loading due to non availability of GT-2 1.63 MU/ 0.21% Generation Lost due to frequent Grid Constraints (Voltage Flactuations) in Summer causes Deteriorate Performance & additional Trippings of Units (Total - 320.94 MU/ 40.52% Generation Lost)	310.98	811.11	Shortage of Gas (As per Annexure-A-I-7 (a&b))	Considering Anticipated Availability 34.23%
	GT-2	37.5	07.08.2002	230.58	0.00				328.50			
	STG-I	37.5	25.04.2003	230.58	30.66				328.50			
	GT-3	110	06.12.2013	593.21	172.76				963.60			
	STG-II	50	07.06.2014	269.64	89.85				438.00			
	Total	273.5	-	1542.29	373.78				2369.58			

3. Units Commissioned during 2023-24:-

Name of Power Stations	Unit No.	Capacity (MW)	Date of COD	Generation (MU) (2023-24)					Generation (MU) (2024-25)			
				Program (2023-24)	Actual (up to July-23)	Anticipated (Aug.-23 to March-24)	Total (Actual & Anticipated)	Major Reason for Low Generation (up to July-23)	Anticipated Max. Generation Capability	Anticipated Generation	Reason for variation from Max. Generation Capability	Remarks
Nil												

4. Units likely to be Commisioned during 2024-25:-

Name of Power Stations	Unit No.	Capacity (MW)	Expected Date of COD	Generation (MU) (2024-25)	Remarks
Nil					

Annexure-I

Rajasthan Rajya Vidyut Utpadan Nigam Limited

5. Loss of Generation due to Grid Constraints/Low Schedules/High Fuel Cost issues during 2023-24:-

Name of Power Stations	Details of the Constraint	Actual Loss (April-23 to July-23) (MU)	Anticipated Loss (August-23 to March-24) (MU)	Total Loss (2023-24) (MU)
SSTPS, Suratgarh	Low Schedules	1066.81	0.00	**1066.81**
SSCTPP, Suratgarh	Low Schedules	165.18	0.00	**165.18**
KSTPS, Kota	Low Schedules & Grid Constraints	260.94	0.00	**260.94**
KaSTPP, Kalisindh	Low Schedules	171.98	0.00	**171.98**
CTPP, Chhabra	Low Schedules & Grid Constraints	100.36	0.00	**100.36**
CSCTPP, Chhabra	Low Schedules	51.81	0.00	**51.81**
DCCPP, Dholpur	Low Schedules (due to High Fuel Cost)	925.74	1851.51	**2777.25**
RGTPP, Ramgarh	Grid Constraints	1.63	0.00	**1.63**

6. PPA Details:-

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Name of Power Stations	Capacity (MW)	With DISCOM					With State Trading Company						With PTC/ Other Trading Company						Untied (MW)
		State of Discom	Type of PPA (Base or Peak Load)	Quantum (MW)	Duration		Quantum (MW)	Type of PPA (Base or Peak Load)	b/b PPA with Discom (Name of Discom)	Quantum of b/b PPA (MW)	Duration of b/b PPA		Quantum (MW)	Type of PPA (Base or Peak Load)	b/b PPA with Discom (Name of Discom)	Quantum of b/b PPA (MW)	Duration of b/b PPA		
					From	To					From	To					From	To	
SSTPS, Suratgarh	1500	Jaipur VVNL, Ajmer VVNL, Jodhpur VVNL.	Base	40.27% 27.14% 32.59%	01.04.2004	31.03.2029	NA						NA						NA
SSCTPP, Suratgarh	1320																		
KSTPS, Kota	1240																		
KaTPP, Kalisindh	1200																		
CTPP, Chhabra	1000																		
CSCTPP, Chhabra	1320																		
DCCPP, Dholpur	330		Peak																
RGTPP, Ramgarh	273.5																		

Annexure-I

Rajasthan Rajya Vidyut Utpadan Nigam Limited

7(a). Coal Linkage for Coal based Plants during 2024-25:-

Name of Power Stations	Source M/s	Domestic Linkage (MT)	Trigger Value Linkage (MT)	Remarks
SSTPS, Suratgarh	SECL & NCL	SECL-6304000 (Raw+Wash) NCL-1367000 (Raw) Total=7671000	SECL-5547520 NCL-1230300 Total=6777820	Under Flexi Utilization, Coal Quantity Distribution is made as per requirement to achieve Normative PLF
KSTPS, Kota	SECL & NCL	SECL-3196000 (Raw+Wash) NCL-3390000 (Raw) Total=6586000	SECL-2780520 NCL-2949300 Total=5729820	
CTPP, Chhabra (U#1&2)	SECL	SECL-2312000 (Raw+Wash)	1849600	
CTPP, Chhabra (U#3&4)	PKCL	11625000	1205000	-
KaSTPP, Kalisindh			3620000	
SSCTPP, Suratgarh			2660000	Part requirement to be met from Parsa Block
CSCTPP, Chhabra			4140000	
CTPP (U#3)	MCL	38000	-	***Part requirement through Bridge Linkage up to 27.04.2024***
SSCTPP (U#7)		94000		
KaSTPP (U#1)		91000		
CTPP (U#3)	BCCL	26000		***Part requirement through Bridge Linkage up to 27.04.2024***
SSCTPP (U#7)		64000		
KaSTPP (U#1)		61000		

7(b). Gas Availability during Gas based Stations 2024-25:-

Name of Stations	Source M/s	Allocated Qty. MMSCMD/Day	Present available Qty. MMSCMD/Day
DCCPP, Dholpur	Gail	1.5 (Spot on Daily Basis)	1.5 (Spot)
RGTPP, Ramgarh	Oil India Ltd./ ONGC/ Focus Energy	0.7 (by M/s Oil for Stage-I&II)/ 0.05 (by M/s ONGC for Stage-I&II)/ 0.95 (by M/s Focus i.e. 0.75 for Stage-III & 0.2 for Stage-I&II) (Total-1.7)	Presently Gas supplied by M/s ONGC stopped since 03.10.2018 & Gas supplied by M/s Focus is in the range of 0.40 to 0.45 (Contract of Gas Supply form M/s Focus is up to September-24)

Annexure-I

Rajasthan Rajya Vidyut Utpadan Nigam Limited

8. Cost of Generation during 2022-23:-

Name of Power Stations	Cost of Generation (Rs./kwh)	Rate of Sale of Power (Rs./kwh)
SSTPS, Suratgarh	5.52	5.05
SSCTPP, Suratgarh	8.41	12.01
KSTPS, Kota	4.27	4.00
KaSTPP, Kalisindh	6.01	5.04
CTPP, Chhabra	4.86	4.65
CSCTPP, Chhabra	5.89	4.81
DCCPP, Dholpur	-	-
RGTPP, Ramgarh	7.40	6.75

Annexure-II

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Planned Maintenance Schedules

A) Planned Maintenance Schedules of Units likely to be completed during *2023-24* :-

Name of Power Stations	Unit No.	Capacity (MW)	Planned Maintenance Schedules			
			From	To	Days	Reason
SSTPS, Suratgarh	5	250	01.01.24	21.01.24	21	Annual Boiler Overhauling
	6	250	24.01.24	13.02.24	21	Annual Boiler Overhauling
SSCTPP, Suratgarh	7	660	The Shut-Down of both Units are critical & must required to avoid any mishappening. M/s BHEL has demanded Shut-Down for U#7 & U#8 w.e.f. 01.11.23 to 15.12.23 and 18.12.23 to 31.01.24 respectively. However if it is required to run these Machines to meet the Power requirement the Shut-Down can be deferred up to 15.12.23 in consultation with M/s BHEL. Therefore for safety reasons these Machines runs on 60% of its Installed Capacity.			
	8	660				
KSTPS, Kota	4	210	16.02.24	07.03.24	21	Annual Boiler Overhauling
	6	195	Deferred to meet out the Power Demand & if whenever allowed than Unit will be taken under Annual Maintenance			
	7	195				
KaSTPP, Kalisindh	2	600	The last Shut-Down was done w.e.f. 08.04.22 to 13.06.22 in FY_2022-23 and after that the Unit has been run more than 9000 Hrs. and against recommended the Annual Maintenance should be done after 8000 running Hrs. Annual Maintenance of this Unit is also deferring to meet the Power demand of the State even though recurring the losses in Availability, SHR & APC			
CTPP, Chhabra	3	250	24.05.23	15.09.23	115	*Under Capital Overhauling*

B) Annual Overhaul / Boiler Overhaul during *2024-25* :-

Name of Power Stations	Unit No.	Capacity (MW)	ABOH Schedule			
			From	To	Days	Reason
SSTPS, Suratgarh	4	250	15.04.24	05.05.24	21	Annual Boiler Overhauling
	1	250	11.05.24	31.05.24	21	Annual Boiler Overhauling
	3	250	05.06.24	25.06.24	21	Annual Boiler Overhauling
	2	250	01.07.24	21.07.24	21	Annual Boiler Overhauling
SSCTPP, Suratgarh	7	660	01.01.25	25.01.25	25	Annual Boiler Overhauling
	8	660	01.02.25	25.02.25	25	Annual Boiler Overhauling
KSTPS, Kota	3	210	NR			
	7	195	01.04.24	21.04.24	21	Annual Boiler Overhauling
	6	195	01.05.24	21.05.24	21	Annual Boiler Overhauling
	5	210	01.06.24	21.06.24	21	Annual Boiler Overhauling
	1	110	01.07.24	21.07.24	21	Annual Boiler Overhauling
	2	110	23.07.24	12.08.24	21	Annual Boiler Overhauling
KaSTPP, Kalisindh	1	600	01.08.24	21.08.24	21	Annual Boiler Overhauling
	2	600	01.03.25	21.03.25	21	Annual Boiler Overhauling
CTPP, Chhabra	2	250	01.04.24	20.04.24	20	Annual Boiler Overhauling
	1	250	22.04.24	11.05.24	20	Annual Boiler Overhauling
	3	250	01.10.24	20.10.24	20	Annual Boiler Overhauling
CSCTPP, Chhabra	5	660	16.07.24	19.08.24	35	Annual Boiler Overhauling & to attend HP Extraction problem
	6	660	26.08.24	28.09.24	35	Annual Boiler Overhauling & to attend HP Extraction problem.

C) Capital Overhaul during *2024-25*:-

Name of Power Stations	Unit No.	Capacity (MW)	COH Schedule			
			From	To	Days	Reason
KSTPS, Kota	4	210	02.01.25	15.02.25	45	Capital Overhauling
CTPP, Chhabra	4	250	12.08.24	20.09.24	40	Capital Overhauling
RGTPP, Ramgarh	GT-1	35.5	01.07.24	31.07.24	31	Replacement of Diffuser & Exhaust Plenum
	GT-3	110	01.08.24	15.09.24	46	Major Inspection

D) Other maintenance if not included above such as PG tests (new units) and Boiler inspection during *2023-24 & 2024-25*:-

Name of Power Stations	Unit No.	Capacity (MW)	Schedule			
			From	To	Days	Reason
Nil						

Annexure-III

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Actual/Anticipated Monthwise-Unitwise Generation & Annual Maintenance Schedule for FY 2023-24

Unit No.	Capacity (MW)	Annual Shut Down			Gross Generation (MU)												Total
					Actual				Anticipated								
		From	To	Duration	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
SSTPS, Suratgarh																	
1	250	NR			124.41	101.91	125.39	138.77	148.80	144.00	148.80	144.00	148.80	148.80	139.20	148.80	1661.68
2	250	NR			107.88	98.02	115.57	127.27	148.80	144.00	148.80	144.00	148.80	148.80	139.20	148.80	1619.94
3	250	NR			102.12	88.96	85.41	133.01	148.80	144.00	148.80	144.00	148.80	148.80	139.20	148.80	1580.69
4	250	NR			78.21	74.08	74.70	129.57	148.80	144.00	148.80	144.00	148.80	148.80	139.20	148.80	1527.76
5	250	01.01.24	21.01.24	21	76.90	87.66	95.06	131.02	139.50	135.00	139.50	135.00	139.50	48.00	139.20	148.80	1415.14
6	250	24.01.24	13.02.24	21	29.01	75.05	91.34	138.89	139.50	135.00	139.50	135.00	139.50	103.50	76.80	148.80	1351.88
TOTAL (MU)					518.51	525.67	587.46	798.53	874.20	846.00	874.20	846.00	874.20	746.70	772.80	892.80	9157.08
SSCTPP, Suratgarh																	
7	660	As per Annexure-II(A to D)			277.12	306.36	297.12	282.31	294.62	285.12	294.62	285.12	294.62	294.62	275.62	294.62	3481.89
8	660				279.71	273.78	276.69	307.74	294.62	285.12	294.62	285.12	294.62	294.62	275.62	294.62	3456.90
TOTAL (MU)					556.84	580.14	573.81	590.05	589.25	570.24	589.25	570.24	589.25	589.25	551.23	589.25	6938.79
KSTPS, Kota																	
1	110	05.06.23	02.07.23	28	61.47	50.51	7.62	34.72	65.47	63.36	65.47	63.36	65.47	65.47	61.25	65.47	669.65
2	110	27.06.23	22.07.23	26	66.71	48.46	43.33	19.48	65.47	63.36	65.47	63.36	65.47	65.47	61.25	65.47	693.32
3	210	NR			127.10	137.81	122.35	125.29	64.51	40.32	124.99	120.96	124.99	124.99	116.93	124.99	1355.23
4	210	16.02.24	07.03.24	21	136.86	137.72	128.35	129.22	117.18	113.40	117.18	113.40	117.18	117.18	56.70	96.77	1381.13
5	210	NR			0.00	104.24	133.02	128.07	124.99	120.96	124.99	120.96	124.99	124.99	116.93	124.99	1349.13
6	195	As per Annexure-II(A to D)			141.16	145.83	134.08	142.06	108.81	105.30	108.81	105.30	108.81	108.81	101.79	108.81	1419.57
7	195				141.47	124.88	134.41	141.96	108.81	105.30	108.81	105.30	108.81	108.81	101.79	108.81	1399.16
TOTAL (MU)					674.75	749.46	703.16	720.80	655.25	612.00	715.73	692.64	715.73	715.73	616.63	695.32	8267.19

For KSTPS-U#3, The Anticipated Energy Availability is considered zero from 17.08.2023 to 20.09.2023 due to High Seal Oil Flow problem in Generator w.e.f 00:31 Hrs. of Dtd.-17.08.2023.

KaSTPP, Kalisindh																	
1	600	08.07.23	03.08.23	27	257.59	281.49	324.61	79.30	322.56	345.60	357.12	345.60	357.12	357.12	334.08	357.12	3719.31
2	600	As per Annexure-II(A to D)			357.37	309.97	372.89	347.46	334.80	324.00	334.80	324.00	334.80	334.80	313.20	334.80	4022.89
TOTAL (MU)					614.96	591.46	697.50	426.76	657.36	669.60	691.92	669.60	691.92	691.92	647.28	691.92	7742.20

Annexure-III

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Actual/Anticipated Monthwise-Unitwise Generation & Annual Maintenance Schedule for FY 2023-24

Unit No.	Capacity (MW)	Annual Shut Down			Gross Generation (MU)												Total
					Actual				Anticipated								
		From	To	Duration	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	
CTPP, Chhabra																	
1	250	NR			83.61	156.66	149.48	161.60	148.80	144.00	148.80	144.00	148.80	148.80	139.20	148.80	1722.55
2	250	NR			148.75	135.86	150.23	155.58	148.80	144.00	148.80	144.00	148.80	148.80	139.20	148.80	1761.62
3	250	24.05.23	15.09.23	115	98.27	117.54	0.00	0.00	0.00	72.00	148.80	144.00	148.80	148.80	139.20	148.80	1166.22
4	250	NR			105.13	95.81	110.49	112.08	139.50	135.00	139.50	135.00	139.50	139.50	130.50	139.50	1521.51
TOTAL (MU)					435.76	505.87	410.20	429.26	437.10	495.00	585.90	567.00	585.90	585.90	548.10	585.90	6171.89
CSCTPP, Chhabra																	
5	660	26.06.23	03.08.23	39	283.34	318.16	248.85	0.00	354.82	380.16	392.83	380.16	392.83	392.83	367.49	392.83	3904.30
6	660	26.07.23	23.08.23	29	326.76	322.98	291.46	230.97	101.38	380.16	392.83	380.16	392.83	392.83	367.49	392.83	3972.69
TOTAL (MU)					610.11	641.14	540.31	230.97	456.19	760.32	785.66	760.32	785.66	785.66	734.98	785.66	7876.99
DCCPP, Dholpur																	
GT-1	110	NR			0.00	0.00	0.00	0.00	65.47	63.36	65.47	63.36	65.47	65.47	61.25	65.47	515.33
GT-2	110	NR			0.00	0.00	0.00	0.00	65.47	63.36	65.47	63.36	65.47	65.47	61.25	65.47	515.33
STG	110	NR			0.00	0.00	0.00	0.00	65.47	63.36	65.47	63.36	65.47	65.47	61.25	65.47	515.33
TOTAL (MU)					0.00	0.00	0.00	0.00	196.42	190.08	196.42	190.08	196.42	196.42	183.74	196.42	1545.98
RGTPP, Ramgarh																	
GT-1	35.5	NR			19.74	20.28	20.20	20.29	68.89	66.67	68.89	66.67	68.89	68.89	64.44	68.89	916.00
GT-2	37.5	NR			0.00	0.00	0.00	0.00									
STG-I	37.5	NR			8.37	8.39	8.52	5.37									
GT-3	110	NR			43.89	47.95	42.36	38.56									
STG-II	50	NR			23.40	25.92	23.02	17.51									
TOTAL (MU)					95.40	102.54	94.11	81.73									

For RGTPP-GT-2, The Anticipated Gross Generation is considered zero from 01.08.2023 to 31.10.2023 due to Fire incidence occured at 08:25 Hrs. of Dtd.-10.12.2021.

Annexure-IV

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Anticipated Monthwise-Unitwise Generation & Annual Maintenance Schedule for FY 2024-25

Unit No.	Capacity (MW)	Annual Shut Down			Gross Generation (MU)												Total
		From	To	Duration	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	
SSTPS, Suratgarh																	
1	250	11.05.24	31.05.24	21	144.00	48.00	144.00	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1651.20
2	250	01.07.24	21.07.24	21	144.00	148.80	144.00	48.00	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1651.20
3	250	05.06.24	25.06.24	21	144.00	148.80	43.20	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1651.20
4	250	15.04.24	05.05.24	21	67.20	124.80	144.00	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1651.20
5	250	NR			144.00	148.80	144.00	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1752.00
6	250	NR			144.00	148.80	144.00	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1752.00
TOTAL (MU)					787.20	768.00	763.20	792.00	892.80	864.00	892.80	864.00	892.80	892.80	806.40	892.80	10108.80
SSCTPP, Suratgarh																	
7	660	01.01.25	25.01.25	25	380.16	392.83	380.16	392.83	392.83	380.16	392.83	380.16	392.83	76.03	354.82	392.83	4308.48
8	660	01.02.25	25.02.25	25	380.16	392.83	380.16	392.83	392.83	380.16	392.83	380.16	392.83	392.83	38.02	392.83	4308.48
TOTAL (MU)					760.32	785.66	760.32	785.66	785.66	760.32	785.66	760.32	785.66	468.86	392.83	785.66	8616.96
KSTPS, Kota																	
1	110	01.07.24	21.07.24	21	63.36	65.47	63.36	21.12	65.47	63.36	65.47	63.36	65.47	65.47	59.14	65.47	726.53
2	110	23.07.24	12.08.24	21	63.36	65.47	63.36	46.46	40.13	63.36	65.47	63.36	65.47	65.47	59.14	65.47	726.53
3	210	NR			120.96	124.99	120.96	124.99	124.99	120.96	124.99	120.96	124.99	124.99	112.90	124.99	1471.68
4	210	02.01.25	15.02.25	45	120.96	124.99	120.96	124.99	124.99	120.96	124.99	120.96	124.99	4.03	52.42	124.99	1290.24
5	210	01.06.24	21.06.24	21	120.96	124.99	36.29	124.99	124.99	120.96	124.99	120.96	124.99	124.99	112.90	124.99	1387.01
6	195	01.05.24	21.05.24	21	112.32	37.44	112.32	116.06	116.06	112.32	116.06	112.32	116.06	116.06	104.83	116.06	1287.94
7	195	01.04.24	21.04.24	21	33.70	116.06	112.32	116.06	116.06	112.32	116.06	112.32	116.06	116.06	104.83	116.06	1287.94
TOTAL (MU)					635.62	659.42	629.57	674.69	712.70	714.24	738.05	714.24	738.05	617.09	606.14	738.05	8177.86
KaSTPP, Kalisindh																	
1	600	01.08.24	21.08.24	21	345.60	357.12	345.60	357.12	115.20	345.60	357.12	345.60	357.12	357.12	322.56	357.12	3962.88
2	600	01.03.25	21.03.25	21	345.60	357.12	345.60	357.12	357.12	345.60	357.12	345.60	357.12	357.12	322.56	115.20	3962.88
TOTAL (MU)					691.20	714.24	691.20	714.24	472.32	691.20	714.24	691.20	714.24	714.24	645.12	472.32	7925.76

Annexure-IV

Rajasthan Rajya Vidyut Utpadan Nigam Limited

Anticipated Monthwise-Unitwise Generation & Annual Maintenance Schedule for FY 2024-25

Unit No.	Capacity (MW)	Annual Shut Down			Gross Generation (MU)												Total
		From	To	Duration	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	
CTPP, Chhabra																	
1	250	22.04.24	11.05.24	20	100.80	96.00	144.00	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1656.00
2	250	01.04.24	20.04.24	20	48.00	148.80	144.00	148.80	148.80	144.00	148.80	144.00	148.80	148.80	134.40	148.80	1656.00
3	250	01.10.24	20.10.24	20	144.00	148.80	144.00	148.80	148.80	144.00	52.80	144.00	148.80	148.80	134.40	148.80	1656.00
4	250	12.08.24	20.09.24	40	144.00	148.80	144.00	148.80	52.80	48.00	148.80	144.00	148.80	148.80	134.40	148.80	1560.00
TOTAL (MU)					436.80	542.40	576.00	595.20	499.20	480.00	499.20	576.00	595.20	595.20	537.60	595.20	6528.00
CSCTPP, Chhabra																	
5	660	16.07.24	19.08.24	35	356.40	368.28	356.40	178.20	152.06	380.16	392.83	380.16	392.83	392.83	354.82	392.83	4097.81
6	660	26.08.24	28.09.24	35	356.40	368.28	356.40	368.28	297.00	25.34	392.83	380.16	392.83	392.83	354.82	392.83	4078.01
TOTAL (MU)					712.80	736.56	712.80	546.48	449.06	405.50	785.66	760.32	785.66	785.66	709.63	785.66	8175.82
DCCPP, Dholpur																	
GT-1	110	NR			63.36	65.47	63.36	65.47	65.47	63.36	65.47	63.36	65.47	65.47	59.14	65.47	770.88
GT-2	110	NR			63.36	65.47	63.36	65.47	65.47	63.36	65.47	63.36	65.47	65.47	59.14	65.47	770.88
STG	110	NR			63.36	65.47	63.36	65.47	65.47	63.36	65.47	63.36	65.47	65.47	59.14	65.47	770.88
TOTAL (MU)					190.08	196.42	190.08	196.42	196.42	190.08	196.42	190.08	196.42	196.42	177.41	196.42	2312.64
RGTPP, Ramgarh																	
GT-1	35.5	01.07.24	31.07.24	31	66.67	68.89	66.67	68.89	68.89	66.67	68.89	66.67	68.89	68.89	62.22	68.89	811.11
GT-2	37.5	NR															
STG-I	37.5	NR															
GT-3	110	01.08.24	15.09.24	46													
STG-II	50	NR															
TOTAL (MU)																	

Annexure-II

सं. 22-30/2023-ओ एम [268857]
भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, the 29th November, 2023

OFFICE MEMORANDUM.

Subject: Minutes of the meeting held under the Chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3:00 P.M to review the preparedness to meet the Power Demand in the Country.

Please find enclosed herewith a copy of the Minutes of the meeting held under the Chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3:00 P.M to review the preparedness to meet the Power Demand in the Country for information and necessary action.

2. It is also requested that an Action Taken Report(ATR) on the decisions taken in the meeting may be provided to OM Division within a week.

Encl:- As above.

(Hausuanthang Guite)
Under Secretary (OM)
Tel:23062492
opmonitor-power@nic.in

To,

1. **The Chairperson, CEA. Sewa Bhavan, R.K.Puram, New Delhi**
2. **The CMD, Grid India, New Delhi**
3. **The CMD, NTPC**
4. **The ED(Project), PFC**

Copy to :-

PS to Hon'ble Minister for Power & NRE/Sr.PPS to Secretary(Power)/PPS to JS(OM/Thermal))/PPS to CE(R&R)/PS to Director(OM)/PS to DS(Thermal).

Minutes of the meeting held under the chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3.00 PM to review the preparedness to meet the Power Demand in the country

A meeting was held under the chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023 at 3:00 PM to review the preparedness to meet the power demand in country. The meeting was attended by Secretary (Power) and Senior Officials of CEA, NTPC, PFC and Grid India. The List of Participants is **Annexed.**

2. **Grid-India** made a detailed presentation on the power supply position in the country. Following points, were, inter-alia, highlighted in the presentation :

i. Peak demand, both in Solar and Non-Solar Hours, is showing a rising trend and has touched 241 GW (Solar hours) on September 01, 2023. Hence, advance planning for meeting the peak demand in Solar and Non-Solar Hours of H2 of FY 2023-24 and Q1 of FY 2024-25 needs to be done on priority.

ii. Growth in the maximum demand met, as compared to the corresponding period last year, varied between 21.36% to 18.57% during August 2023- October 2023 period. The growth was 17.66% for November, 2023 (till 5th).

iii. 20.99% and 16.14% growth was recorded in energy consumed in Oct,2023 and Nov, 2023 (till 5th Nov 2023) respectively, compared to the corresponding period last year.

iv. Short fall in capacity (with 3% reserve) in non-solar hour is expected to be 17.6 GW in December 2023, 14.2 GW in January, 2024 and 12 GW in March, 2024, 17.8 GW in April, 2024 and 19.6 GW in June, 2024.

v. Planning is required for 243 GW (Solar hours) and 237 GW (Non-solar hours) demand scenarios for the months of June, 2024 in order to avoid any load shedding.

3. Chairperson, CEA stated that capacity shortfall can be met by reducing forced and partial outage of thermal units, preponing of planned maintenance and ensuring the availability of 10 GW of gas based capacity.

4. Hon'ble Minister enquired about the status of thermal and renewable capacity addition during 2023-24. CEA informed that around 9000 MW thermal capacity is likely to get commissioned by March, 2024. It was further informed that there are certain stressed thermal assets in NCLT which, if resolved early, can also help in addition of the thermal capacities.

5. CEA informed that SJVNL-Buxar Thermal Power Project Unit-1 (1x660 MW) coal based thermal power plants unit is likely to be commissioned in 2023-24, however, due to present law and order situation, construction work had been slow and Unit 1 is likely to be delayed. Hon'ble Minister directed to write a DO letter to the State for support for timely completion of the Buxar unit.

6. CMD, NTPC stated that in order to ensure the timely completion of under construction projects, progress of under construction project may be comprehensively reviewed with M/s BHEL.

7. Hon'ble Minister stated that in order to meet the growing demand, it is imperative that all power plants should run at full capacity. Power from central unallocated quote should not be allocated to those States which do not run their power plants at peak capacity and instead seek power from the Centre's pool.

8. Hon'ble Minister enquired about the possible option for shifting the agriculture demand from non-solar hours to solar hours and issuing an advisory to the States in this regard. Grid India stated that estimated solar and wind capacity addition may be taken into consideration before issuing advisory as there was not much surplus power available even during solar hours. Hon'ble Minister directed Grid India to carry out the analysis for any shortages that occurred and generation backing down during solar hours on September 01, 2023 - the day of all time high demand met.

9. After detailed deliberations, **Hon'ble Minister directed to take action on the following points :**

A. All the maintenance work in Thermal plants must be completed by February, 2024. No planned maintenance work should be undertaken during the period from March, 2024 to June, 2024.

(Action : CEA)

B. Forced outage and partial outage should be brought down from around 25 GW to 15 GW. Monitoring of forced outage for early restoration needs to be done periodically.

(Action : CEA)

C. All Gencos, including IPPs and Central Generating Stations, must be advised to generate at least 85% PLF and maintain full availability on a daily basis. Any surplus power i.e the difference between declared capacity and the scheduled capacity, must be sold in day-ahead market and any remaining quantity not cleared in day-ahead market, must be sold in RTM.

(Action : CEA)

D. The new units which are getting commissioned in any State or the firm share that the State will be getting from any Central Generating Stations needs to be counted in the availability. If State is found to be having surplus power, the power from unallocated quantity of Central Generating Stations may be reduced and allocated to other needy State, which is falling short of capacity.

(Action : CEA/OM Division)

E. Progress of under construction thermal plants should be monitored periodically in order to ensure their timely completion and a monthly report be given to MoP. Similarly, progress of upcoming RE projects should be monitored (a list of such

projects be obtained from MNRE). A list of such capacities be given to Hon'ble Minister and Secretary (Power).

(Action : CEA/Thermal Division)

F. A meeting should be held with BHEL on expeditious completion of balance works of thermal plants so that their commissioning could be done without any delay.

(Action : CEA/Thermal Division)

G. Availability of 10 GW of gas based capacity (include NTPC's 4.2 GW gas based capacity) must be ensured by June, 2024.

(Action : Grid India/CEA)

H. Grid India must monitor all the power plants i.e Inter-State generating stations as well as Intra-State generating stations with respect to declared capacity, scheduled capacity and power sold in the exchanges. In this regard, system should be put in place by linking SLDCs with RLDCs. This should be done in next 15 days time i.e by 22nd November, 2023.

(Action : Grid India)

I. Implementation of time-of-the-day (ToD) tariff needs to be monitored which will help in demand shifting. There cannot be a situation wherein there is a load shedding and also some plants are backing down. Such situation needs to be monitored closely by Grid India.

(Action : Grid India)

J. After assessing the capacity addition in solar and wind, if required, an advisory may be issued to States/UTs for shifting of agriculture load from non-solar to solar hours.

(Action : CEA/OM Division

K. A DO letter be sent to the Bihar State for timely completion of the Buxar unit.

(Action : Thermal Division)

10. JS (Thermal) presented the revised coal requirement at domestic coal-based power plants in H2 of 2023-24 and Q1 of FY 2024-25 in details. It was informed that overall 424 MT domestic coal is required for generation in H2 of 2023-24 and additional 18 MT coal is required to build-up overall coal stock upto 40 MT by end of March-24. The projected average blending rate for imported coal in the H2 of the 2024-25 is 4%, which is lower than the advisory issued on 25.10.2023 for 6% blending. 17MT (24 MT equivalent domestic coal) of imported coal will be available when 4% blending is considered. With this scenario, Coal requirement in H2 of 2023-24 from Domestic source will be 418 MT (424+18-24). To fulfill this coal requirement, 463 rake/day (444 rakes/day for Domestic coal and 20 rakes/day for imported coal) is required in H2 of 2023-24, which has been agreed by MoR and MoC. Average Rake per day in Nov'23 (till 06.11.2023) is 437 (including imported coal rake).

11. In the first quarter of the fiscal year 2024-25, it is projected that there will be a 10% increase in electricity generation from domestic coal-based plants, totalling 328 billion units (BU) compared to Q1 of 2023-24. This surge in power generation is estimated to demand around 229 million metric tons (MT) of coal which is 11% higher of the corresponding period last year. With 4% import coal (9.2 MT, Eqv. domestic: 13 MT) blending, there will be requirement of 216 MT (229 MT-13MT) domestic coal. To fulfill this coal demand, it's anticipated that 488 rakes per day will be necessary (Domestic: 468 Rakes/day + Imported: 20 rakes/day).

12. It was informed that States of Tamil Nadu, Maharashtra, Andhra Pradesh, Rajasthan, Gujarat and Karnataka are either doing blending or have issued tender for procurement of imported coal.

13. Hon'ble Minister enquired about the methodology for distribution of domestic coal rakes among GENCOs. JS (thermal) and CEA submitted that shortfall in domestic coal supplies is uniformly distributed among all the GENCOs & IPPs.

14. On the basis of above discussions, Hon'ble Minister directed the following:

A. CEA was asked to devise a methodology of fair distribution of railway rakes among Gencos. While devising the methodology, the directions given in the OM dated 01.09.2023, regarding advisory to Sub-group on rake allocation, should be adhered too (as attached). The methodology once approved should be shared with MoC with the instruction that Sub-group be directed to follow these fair distribution principles for allocation of rakes among GENCOs. States must comply with the blending guidelines issued by the Ministry of Power (MoP) based on their coal requirements. If States fail to adhere to these blending guidelines, they will not receive domestic coal beyond their allocated fair share.

B. Further, above policy should also be shared with States/ Gencos..

The Meeting ended with Vote of Thanks to the Chair.

.....

Annexure

List of participants who attended the Meeting held under the Chairmanship of Hon'ble Minister of Power & NRE at 03:00 PM on 07th November, 2023 to 'Review of preparation

Ministry of Power

1. Shri R.K Singh Hon'ble Minister of Power and NRE -----In the Chair
2. Shri Pankaj Agarwal, Secretary (Power)
3. Shri Piyush Singh, Joint Secretary (Thermal)
4. Shri. Hemant Kumar Pandey, CE (R&R)
5. Shri Parveen Dudeja, Director (OM)
6. Shri Anoop Singh Bisht, Deputy Secretary (Thermal)
7. Shri Hausuanthang Guite, Under Secretary (OM)

CEA

8. Shri. Ghanshyam Prasad, Chairperson
9. Shri Praveen Gupta, Member (Thermal)
10. Shri. Ajay Talegaonkar, Member (E & C)
11. Shri B.Lyngkhoi, CE (OPM)
12. Shri Chandra Prakash, CE (GM)
13 . Shri Rajeev Kumar, CE (FM)

Grid-India

14. Shri S. R. Narasimhan, CMD
15. Shri S.C Saxena , ED NLDC
16. Shri Rajiv Porwal, Dir (SO)
17. Shri Ashok Kumar, GM

NTPC

18. Shri. Gurdeep Singh, CMD
19. Shri. Ramesh Babu, Director (Operation)
20. Shri Shivam Srivastava, Dir.(Fuel)
21. Shri SPS VIRK , GM
22. Shri G.S. Rao, GM (OS-SIIS)
23. Shri G.S. Gawara, AGM, Fuel

PFC

24. Shri. P.K.Sinha, ED (Project)
25. Shri. B. Praveen, GM

सत्यमेव जयते

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

No. उ.क्षे.वि.स./प्रचालन/102/02/2023/ 6873-6878 दिनांक:12.12.2023

To,
Vijay kumar Chintala
Head of Plant
JSW Energy (Barmer) Ltd.
Barmer, Rajasthan - 344001

विषय: Zero planned maintenance of thermal units for the period of March to June 2024-reg.

This has reference to JSW Energy (Barmer) letter dated 28.08.2023 (copy attached as Annexure-I) vide which annual maintenance program of its generating units planned to be carried out in FY 2024-25 was submitted. The proposed annual maintenance program of JSW Energy (Barmer) was discussed and agreed in the 29th LGBR Sub-Committee meeting of NRPC held on 29.08.2023.

Subsequently, a meeting was held under the chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023 to review the preparedness to meet the power demand in country (copy of MoM is attached as Annexure-II). In the said meeting, Hon'ble Minister of Power and NRE directed that all the maintenance work in Thermal plants must be completed by February, 2024 and no planned maintenance work should be undertaken during the period from March, 2024 to June, 2024.

In view of the above, JSW Energy (Barmer) is requested to review the planned maintenance program of its generating stations for FY 2024-25 to ensure zero planned maintenance for the period March-Jun 2024.

12/12/2023
(वी. के. सिंह)
सदस्य सचिव

Copy to:

1. Chairperson, CEA
2. Member (GO&D), CEA
3. CMD, Grid India
4. Executive Director, NRLDC
5. Chief Engineer (GM), CEA
6. Chief Engineer (OPM), CEA

18-ए, शहीद जीत सिंह मार्ग, कटवारिया सराय, नई दिल्ली- 110016 फोन:011-26513265 ई-मेल: seo-nrpc@nic.in वेबसाईट: www.nrpc.gov.in
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016 Phone: 011-26513265 e- mail: seo-nrpc@nic.in Website: www.nrpc.gov.in

Annexure-I

Energy (Barmer) Limited
(Formerly : Raj WestPower Limited)
Village & Post : Bhadresh, Post Box No. 30,
Distt : Barmer – 344001 (Rajasthan)
CIN : U31102MH1996PLC185098
Phone : +91 2982 229100
Fax : +91 2982 229222
Website : www.jsw.in

▶ Courier ☑ Fax ☒ Hand ☒ Scanned Email ☑

Ref.: JSWBL / O&M / 22-23 / 84
Date: 28th Aug 2023

To,

Director (OPM Division)
Central Electricity Authority
Sewa Bhawan, Ramakrishna Puram,
New Delhi-110066

Sub: Electricity Generation targets for the year 2024-25.

Ref: CEA-GO-11-24/1/2023-OPM Division, Dt. 11.07.2023

Dear Sir,

With reference to the subject and referred letter, please find enclosed herewith the Electricity Generation targets for the year 2024-25.

Thanking you,

Yours truly,
for JSW Energy (Barmer) Limited

Gopesh Vijay
AGM (OS&TS)

Encl: As above

Station name (As per Monthly Generation Report of CEA): JSW Energy (Barmer) Limited

Organisation: JSW Energy (Barmer) Limited

Annex-I

Unit wise Monthly generation Program for the year 2024-25

1. Contact Details

Sr. no	Name	Designation	email	Phone no.	Fax. no.
1	**Mr. Vijay kumar Chintala**	HOP	vijay.chintala@jsw.in	02982229100	02982229222
2					

2. **Units existing on 31.03.2023**

Month	Unit No.	Capacity (MW)	Date of commissioning	2023-24 generation details (MU)				2024-25 generation details (MU)			Remarks
				Program for 2023-24	Total Anticipated Gen for Aug 23 to March 24 (MU)	Total Anticipated Gen for 2023-24 (MU)	Reason for low generation (if any)	Anticipated maximum Generation capability (MU)	Anticipated Generation (MU)	Reason for variation from Maximum Capability	
	1	135	26-11-2009	948.67	632.45	948.67	-	1185.84	948.67	Maintenance Purpose.	
	2	135	04-10-2010	948.67	632.45	948.67	-	1185.84	948.67		
	3	135	07-11-2011	948.67	632.45	948.67	-	1185.84	948.67		
	4	135	04-12-2011	948.67	632.45	948.67	-	1185.84	948.67		
	5	135	05-02-2013	948.67	632.45	948.67	-	1185.84	948.67		
	6	135	03-03-2013	948.67	632.45	948.67	-	1185.84	948.67		
	7	135	16-03-2013	948.67	632.45	948.67	-	1185.84	948.67		
	8	135	28-02-2013	948.67	632.45	948.67	-	1185.84	948.67		

3. Units Commissioned during 2023-24

Month	Unit No.	Capacity (MW)	Date of commissioning	2023-24 generation details (MU)				2024-25 generation details (MU)			Remarks
				Program for 2023-24	Total Anticipated Gen for Aug 23 to March 24 (MU)	Total Anticipated Gen for 2023-24 (MU)	Reason for low generation (if any)	Anticipated maximum Generation capability (MU)	Anticipated Generation (MU)	Reason for variation from Maximum Capability	
	NIL	-	-	-	-	-	-	-	-	-	

4. Units likely to be commisioned during 2024-25

Month	Unit No.	Capacity (MW)	Expected date of commissioning	Expected Generation 2024-25 (MU)	Remarks
	NIL	-	-	-	-

5. Loss of Generation due to Grid Constraints/ Low schedules /fuel related issues during 2023-24

Transmission Constraints/ power evacuation problems/ low schedule/high fuel cost

S No.	Details of the Constraint	Loss so far (Apr'23-Jul'23)	during 2023-24	
			Anticipated Period of constraint	Anticipated loss of generation (MU)
1	Loss of Generation due to Grid Constraints, Low schedules	92.60	Apr-23 to Mar-24	277.79

6. Unitwise PPA details

Unit No.	Capacity (MW)	With DISCOM					With State Trading Cos.						With PTC / other trading cos.						Untied (MW)
		State of Discom	Type of PPA(Base laod or Peak Load)	Quantum (MW)	Duration of PPA		Quantum (MW)	Type of PPA(Base laod or Peak Load)	b/b PPA with Discom (name of Discom)	quantum of b/b PPA in MW	Duration of PPA		Quantum (MW)	Type of PPA(	b/b PPA with	quantum of	Duration of PPA		
					From	To					From	To					From	To	
	1080	Rajasthan	Base load	1080	Oct-06	Mar, 2043	-	-	-	-	-	-	-	-	-	-	-	-	-

7(a)Coal Linkage for coal based plants

Month	Unit No	Domestic linkage (MT)	Source	PLF from this coal linkage during the year (%)
	Unit-1 to Unit-8		Lignite Mines	80

7(b)Gas availibility for gas based stations

Unit No.	Varoius sources	Figures in MMSCMD	PLF from this gas availibility during the year (%)
NA	NA	NA	NA

8. Cost of Generation:

Unit No	Cost of Gen. (Paise/kwh)		Rate of Sale of Power (Paise/kwh)
	Fixed Charge	Variable charge	
Unit-1 to Unit-8	-	-	470.28

Annex-IIA

Planned maintenance Schedules including R&M activities

A) R&M of Units likely to be completed during 2023-24 & 2024-25

Station name	Unit No.	Capacity (MW)	R&M Schedule	
			From date	To date
8 x 135 MW Lignite Based Thermal Power Plant; Bhadresh	-	-	-	-

B) Annual Overhaul/ Boiler overhaul

Station name	Unit No.	Capacity (MW)	AOH Schedule	
			From date	To date
JSW Energy (Barmer) Ltd.	1	135	07-02-2025	14-02-2025
	3	135	09-06-2024	16-06-2024
	4	135	14-09-2024	21-09-2024
	5	135	15-10-2024	22-10-2024
	6	135	05-10-2024	12-10-2024
	7	135	23-06-2024	30-06-2024

C) Capital Overhaul

Station name	Unit No.	Capacity (MW)	COH Schedule	
			From date	To date
JSW Energy (Barmer) Ltd.	2	135	28-07-2024	21-08-2024
	8	135	13-01-2025	06-02-2025

D) Other maintenance if not included above such as PG tests (new units) and Boiler inspection

Station name	Unit No.	Capacity (MW)	Schedule		Reason
			From date	To date	
JSW Energy (Barmer) Ltd.	1	135	07-05-2024	14-05-2024	Boiler License renewal
	1	135	01-11-2024	12-11-2024	Refractory maintenance & Boiler Inspection
	2	135	29-04-2024	06-05-2024	Boiler License renewal
	3	135	06-12-2024	13-12-2024	Boiler License renewal
	3	135	01-09-2024	12-09-2024	Refractory maintenance & Boiler Inspection
	4	135	23-11-2024	30-11-2024	Boiler License renewal
	4	135	26-05-2024	06-06-2024	Refractory maintenance & Boiler Inspection
	5	135	15-07-2024	22-07-2024	Boiler License renewal
	5	135	15-04-2024	26-04-2024	Refractory maintenance & Boiler Inspection
	6	135	04-07-2024	11-07-2024	Boiler License renewal
	6	135	15-03-2025	26-03-2025	Refractory maintenance & Boiler Inspection
	7	135	16-12-2024	27-12-2024	Refractory maintenance & Boiler Inspection
	7	135	25-02-2025	04-03-2025	Boiler License renewal
	8	135	07-04-2024	14-04-2024	Boiler License renewal

Annex-IIB

Actual and Planned maintenance Schedules including R&M activities

A) Actual Maintenance Schedule during 2023-24

Station name	Unit No.	Capacity (MW)	From date	To date	No. of Days	Outage reason
JSW Energy (Barmer) Ltd.	**1**	**135**	08-05-2023	11-05-2023	3.07	Plan Maintenance
	2	**135**	01-04-2023	08-06-2023	68.70	Plan Maintenance
	3	**135**	12-06-2023	15-06-2023	2.98	Plan Maintenance
	4	**135**	12-06-2023	15-06-2023	3.74	Plan Maintenance
	5	**135**	15-07-2023	18-07-2023	2.63	Plan Maintenance
	6	**135**	04-06-2023	11-06-2023	7.09	Plan Maintenance
	8	**135**	14-06-2023	19-06-2023	4.48	Plan Maintenance

B) Planned Maintenance Schedule during remaining months of 2023-24

Station name	Unit No.	Capacity (MW)	From date	To date	No. of Days	Outage reason
JSW Energy (Barmer) Ltd.	1	135	18-01-2024	25-01-2024	8.00	AOH
	1	135	12-10-2023	23-10-2023	12.00	Refractory maintenance & Boiler Inspection
	3	135	02-09-2023	13-09-2023	12.00	Refractory maintenance & Boiler Inspection
	3	135	03-12-2023	10-12-2023	8.00	Boiler Licence Renewal
	4	135	11-12-2023	18-12-2023	8.00	Boiler Licence Renewal
	4	135	07-03-2024	18-03-2024	12.00	Refractory maintenance & Boiler Inspection
	5	135	04-01-2024	11-01-2024	8.00	AOH
	6	135	04-10-2023	11-10-2023	8.00	AOH
	6	135	10-02-2024	21-02-2024	12.00	Refractory maintenance & Boiler Inspection
	7	135	08-11-2023	02-12-2023	25.00	COH
	7	135	28-02-2024	06-03-2024	8.00	Boiler Licence Renewal
	8	135	20-09-2023	27-09-2023	8.00	AOH
	8	135	28-01-2024	08-02-2024	12.00	Refractory maintenance & Boiler Inspection

सं. 22-30/2023-ओ एम [268857]
भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power

Shram Shakti Bhawan, Rafi Marg,
New Delhi, the 29th November, 2023

OFFICE MEMORANDUM.

Subject: Minutes of the meeting held under the Chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3:00 P.M to review the preparedness to meet the Power Demand in the Country.

Please find enclosed herewith a copy of the Minutes of the meeting held under the Chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3:00 P.M to review the preparedness to meet the Power Demand in the Country for information and necessary action.

2. It is also requested that an Action Taken Report(ATR) on the decisions taken in the meeting may be provided to OM Division within a week.

Encl:- As above.

(Hausuanthang Guite)
Under Secretary (OM)
Tel:23062492
opmonitor-power@nic.in

To,

1. **The Chairperson, CEA. Sewa Bhavan, R.K.Puram, New Delhi**
2. **The CMD, Grid India, New Delhi**
3. **The CMD, NTPC**
4. **The ED(Project), PFC**

Copy to :-

PS to Hon'ble Minister for Power & NRE/Sr.PPS to Secretary(Power)/PPS to JS(OM/Thermal))/PPS to CE(R&R)/PS to Director(OM)/PS to DS(Thermal).

Minutes of the meeting held under the chairmanship of Hon'ble Minister for Power and NRE on 07.11.2023 at 3.00 PM to review the preparedness to meet the Power Demand in the country

A meeting was held under the chairmanship of Hon'ble Minister of Power and NRE on 07.11.2023 at 3:00 PM to review the preparedness to meet the power demand in country. The meeting was attended by Secretary (Power) and Senior Officials of CEA, NTPC, PFC and Grid India. The List of Participants is **Annexed.**

2. **Grid-India** made a detailed presentation on the power supply position in the country. Following points, were, inter-alia, highlighted in the presentation :

i. Peak demand, both in Solar and Non-Solar Hours, is showing a rising trend and has touched 241 GW (Solar hours) on September 01, 2023. Hence, advance planning for meeting the peak demand in Solar and Non-Solar Hours of H2 of FY 2023-24 and Q1 of FY 2024-25 needs to be done on priority.

ii. Growth in the maximum demand met, as compared to the corresponding period last year, varied between 21.36% to 18.57% during August 2023- October 2023 period. The growth was 17.66% for November, 2023 (till 5th).

iii. 20.99% and 16.14% growth was recorded in energy consumed in Oct,2023 and Nov, 2023 (till 5th Nov 2023) respectively, compared to the corresponding period last year.

iv. Short fall in capacity (with 3% reserve) in non-solar hour is expected to be 17.6 GW in December 2023, 14.2 GW in January, 2024 and 12 GW in March, 2024, 17.8 GW in April, 2024 and 19.6 GW in June, 2024.

v. Planning is required for 243 GW (Solar hours) and 237 GW (Non-solar hours) demand scenarios for the months of June, 2024 in order to avoid any load shedding.

3. Chairperson, CEA stated that capacity shortfall can be met by reducing forced and partial outage of thermal units, preponing of planned maintenance and ensuring the availability of 10 GW of gas based capacity.

4. Hon'ble Minister enquired about the status of thermal and renewable capacity addition during 2023-24. CEA informed that around 9000 MW thermal capacity is likely to get commissioned by March, 2024. It was further informed that there are certain stressed thermal assets in NCLT which, if resolved early, can also help in addition of the thermal capacities.

5. CEA informed that SJVNL-Buxar Thermal Power Project Unit-1 (1x660 MW) coal based thermal power plants unit is likely to be commissioned in 2023-24, however, due to present law and order situation, construction work had been slow and Unit 1 is likely to be delayed. Hon'ble Minister directed to write a DO letter to the State for support for timely completion of the Buxar unit.

6. CMD, NTPC stated that in order to ensure the timely completion of under construction projects, progress of under construction project may be comprehensively reviewed with M/s BHEL.

7. Hon'ble Minister stated that in order to meet the growing demand, it is imperative that all power plants should run at full capacity. Power from central unallocated quote should not be allocated to those States which do not run their power plants at peak capacity and instead seek power from the Centre's pool.

8. Hon'ble Minister enquired about the possible option for shifting the agriculture demand from non-solar hours to solar hours and issuing an advisory to the States in this regard. Grid India stated that estimated solar and wind capacity addition may be taken into consideration before issuing advisory as there was not much surplus power available even during solar hours. Hon'ble Minister directed Grid India to carry out the analysis for any shortages that occurred and generation backing down during solar hours on September 01, 2023 - the day of all time high demand met.

9. After detailed deliberations, **Hon'ble Minister directed to take action on the following points :**

A. All the maintenance work in Thermal plants must be completed by February, 2024. No planned maintenance work should be undertaken during the period from March, 2024 to June, 2024.

(Action : CEA)

B. Forced outage and partial outage should be brought down from around 25 GW to 15 GW. Monitoring of forced outage for early restoration needs to be done periodically.

(Action : CEA)

C. All Gencos, including IPPs and Central Generating Stations, must be advised to generate at least 85% PLF and maintain full availability on a daily basis. Any surplus power i.e the difference between declared capacity and the scheduled capacity, must be sold in day-ahead market and any remaining quantity not cleared in day-ahead market, must be sold in RTM.

(Action : CEA)

D. The new units which are getting commissioned in any State or the firm share that the State will be getting from any Central Generating Stations needs to be counted in the availability. If State is found to be having surplus power, the power from unallocated quantity of Central Generating Stations may be reduced and allocated to other needy State, which is falling short of capacity.

(Action : CEA/OM Division)

E. Progress of under construction thermal plants should be monitored periodically in order to ensure their timely completion and a monthly report be given to MoP. Similarly, progress of upcoming RE projects should be monitored (a list of such

projects be obtained from MNRE). A list of such capacities be given to Hon'ble Minister and Secretary (Power).

(Action : CEA/Thermal Division)

F. A meeting should be held with BHEL on expeditious completion of balance works of thermal plants so that their commissioning could be done without any delay.

(Action : CEA/Thermal Division)

G. Availability of 10 GW of gas based capacity (include NTPC's 4.2 GW gas based capacity) must be ensured by June, 2024.

(Action : Grid India/CEA)

H. Grid India must monitor all the power plants i.e Inter-State generating stations as well as Intra-State generating stations with respect to declared capacity, scheduled capacity and power sold in the exchanges. In this regard, system should be put in place by linking SLDCs with RLDCs. This should be done in next 15 days time i.e by 22nd November, 2023.

(Action : Grid India)

I. Implementation of time-of-the-day (ToD) tariff needs to be monitored which will help in demand shifting. There cannot be a situation wherein there is a load shedding and also some plants are backing down. Such situation needs to be monitored closely by Grid India.

(Action : Grid India)

J. After assessing the capacity addition in solar and wind, if required, an advisory may be issued to States/UTs for shifting of agriculture load from non-solar to solar hours.

(Action : CEA/OM Division

K. A DO letter be sent to the Bihar State for timely completion of the Buxar unit.

(Action : Thermal Division)

10. JS (Thermal) presented the revised coal requirement at domestic coal-based power plants in H2 of 2023-24 and Q1 of FY 2024-25 in details. It was informed that overall 424 MT domestic coal is required for generation in H2 of 2023-24 and additional 18 MT coal is required to build-up overall coal stock upto 40 MT by end of March-24. The projected average blending rate for imported coal in the H2 of the 2024-25 is 4%, which is lower than the advisory issued on 25.10.2023 for 6% blending. 17MT (24 MT equivalent domestic coal) of imported coal will be available when 4% blending is considered. With this scenario, Coal requirement in H2 of 2023-24 from Domestic source will be 418 MT (424+18-24). To fulfill this coal requirement, 463 rake/day (444 rakes/day for Domestic coal and 20 rakes/day for imported coal) is required in H2 of 2023-24, which has been agreed by MoR and MoC. Average Rake per day in Nov'23 (till 06.11.2023) is 437 (including imported coal rake).

11. In the first quarter of the fiscal year 2024-25, it is projected that there will be a 10% increase in electricity generation from domestic coal-based plants, totalling 328 billion units (BU) compared to Q1 of 2023-24. This surge in power generation is estimated to demand around 229 million metric tons (MT) of coal which is 11% higher of the corresponding period last year. With 4% import coal (9.2 MT, Eqv. domestic: 13 MT) blending, there will be requirement of 216 MT (229 MT-13MT) domestic coal. To fulfill this coal demand, it's anticipated that 488 rakes per day will be necessary (Domestic: 468 Rakes/day + Imported: 20 rakes/day).

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13. Hon'ble Minister enquired about the methodology for distribution of domestic coal rakes among GENCOs. JS (thermal) and CEA submitted that shortfall in domestic coal supplies is uniformly distributed among all the GENCOs & IPPs.

14. On the basis of above discussions, Hon'ble Minister directed the following:

A. CEA was asked to devise a methodology of fair distribution of railway rakes among Gencos. While devising the methodology, the directions given in the OM dated 01.09.2023, regarding advisory to Sub-group on rake allocation, should be adhered too (as attached). The methodology once approved should be shared with MoC with the instruction that Sub-group be directed to follow these fair distribution principles for allocation of rakes among GENCOs. States must comply with the blending guidelines issued by the Ministry of Power (MoP) based on their coal requirements. If States fail to adhere to these blending guidelines, they will not receive domestic coal beyond their allocated fair share.

B. Further, above policy should also be shared with States/ Gencos..

The Meeting ended with Vote of Thanks to the Chair.

.....

Annexure

List of participants who attended the Meeting held under the Chairmanship of Hon'ble Minister of Power & NRE at 03:00 PM on 07th November, 2023 to 'Review of preparation

Ministry of Power

1. Shri R.K Singh Hon'ble Minister of Power and NRE -----In the Chair
2. Shri Pankaj Agarwal, Secretary (Power)
3. Shri Piyush Singh, Joint Secretary (Thermal)
4. Shri. Hemant Kumar Pandey, CE (R&R)
5. Shri Parveen Dudeja, Director (OM)
6. Shri Anoop Singh Bisht, Deputy Secretary (Thermal)
7. Shri Hausuanthang Guite, Under Secretary (OM)

CEA

8. Shri. Ghanshyam Prasad, Chairperson
9. Shri Praveen Gupta, Member (Thermal)
10. Shri. Ajay Talegaonkar, Member (E & C)
11. Shri B.Lyngkhoi, CE (OPM)
12. Shri Chandra Prakash, CE (GM)
13 . Shri Rajeev Kumar, CE (FM)

Grid-India

14. Shri S. R. Narasimhan, CMD
15. Shri S.C Saxena , ED NLDC
16. Shri Rajiv Porwal, Dir (SO)
17. Shri Ashok Kumar, GM

NTPC

18. Shri. Gurdeep Singh, CMD
19. Shri. Ramesh Babu, Director (Operation)
20. Shri Shivam Srivastava, Dir.(Fuel)
21. Shri SPS VIRK , GM
22. Shri G.S. Rao, GM (OS-SIIS)
23. Shri G.S. Gawara, AGM, Fuel

PFC

24. Shri. P.K.Sinha, ED (Project)
25. Shri. B. Praveen, GM

RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LIMITED.
[Corporate Identity Number (CIN):U40109RJ2000SGC016485]
(Regd. Office: Vidyut Bhawan, Jan Path, Jyoti Nagar, Jaipur - 302 005)
OFFICE OF THE SUPERINTENDING ENGINEER (PROJECT & PLANNING)
✆ +91-141-2740623,Fax:+91-141-2740794;
e-mail: se.pp@rvpn.co.in; website:www.rvpn.co.in

An ISO 9001:2015 Certified Company

150 YEARS OF CELEBRATING THE MAHATMA

Member Secretary (NRPC),
18A, Shaheed Jeet Singh Marg,
Katwaria Sarai, New Delhi-110016

Sub: Agenda for the upcoming 214th OCC-"Proposed SPS at 400 kV GSS Hindaun of RVPN"-Regd.

Ref: Meeting Notice of the 214th OCC meeting circulated by NRPC.

In reference to the meeting notice for upcoming 214th OCC meeting & on the subject mentioned above it is submitted that Agenda– "Proposed SPS at 400 kV GSS Hindaun" of RVPN" has been deliberated as per the requirements of NRLDC.

In this regard you are requested to include the SPS case of 400 kV GSS Hindaun in the agenda for upcoming 214th OCC meeting of NRPC to be held on 19.12.2023.

Encl:-SPS Case of 400 kV GSS Hindaun

(S.C. Meena)
Chief Engineer (PP&D),
RVPN, Jaipur

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

1. The Chief Engineer (LD), RVPN, Jaipur
2. The Superintending Engineer (Operation), NRPC, New Delhi

Chief Engineer (PP&D),
RVPN, Jaipur

Proposed SPS for 2x315 MVA, 400/220 KV ICTs at 400 KV GSS Hindaun

1. Details of Installed ICTs at 400kV Hindaun and Transmission Lines

- Percentage impedance of 315 MVA, 400/220/33 KV (Telk –Make) ICT-Ist is 11.86%.
- Percentage impedance of 315 MVA, 400/220/33 KV, (CGL –Make) ICT-IInd is 13.04%.
- Load sharing of ICT-I is more in respect of ICT-II about 20-30MVA due to different percentage impedance.
- During Overloading condition, 315 MVA, 400/220/33 KV (Telk –Make) ICT-Istwill trip first. Auxiliary supply of 400 KV GSS Hindaun is fed from 400/220/33 KV ICT-Ist. Hence,when ICT-Ist trips then auxiliary supply of GSSs also fail which is restored using DG set.
- Power map of transmission system associated with 400 kV GSS Hindaun is shown in Fig. 1

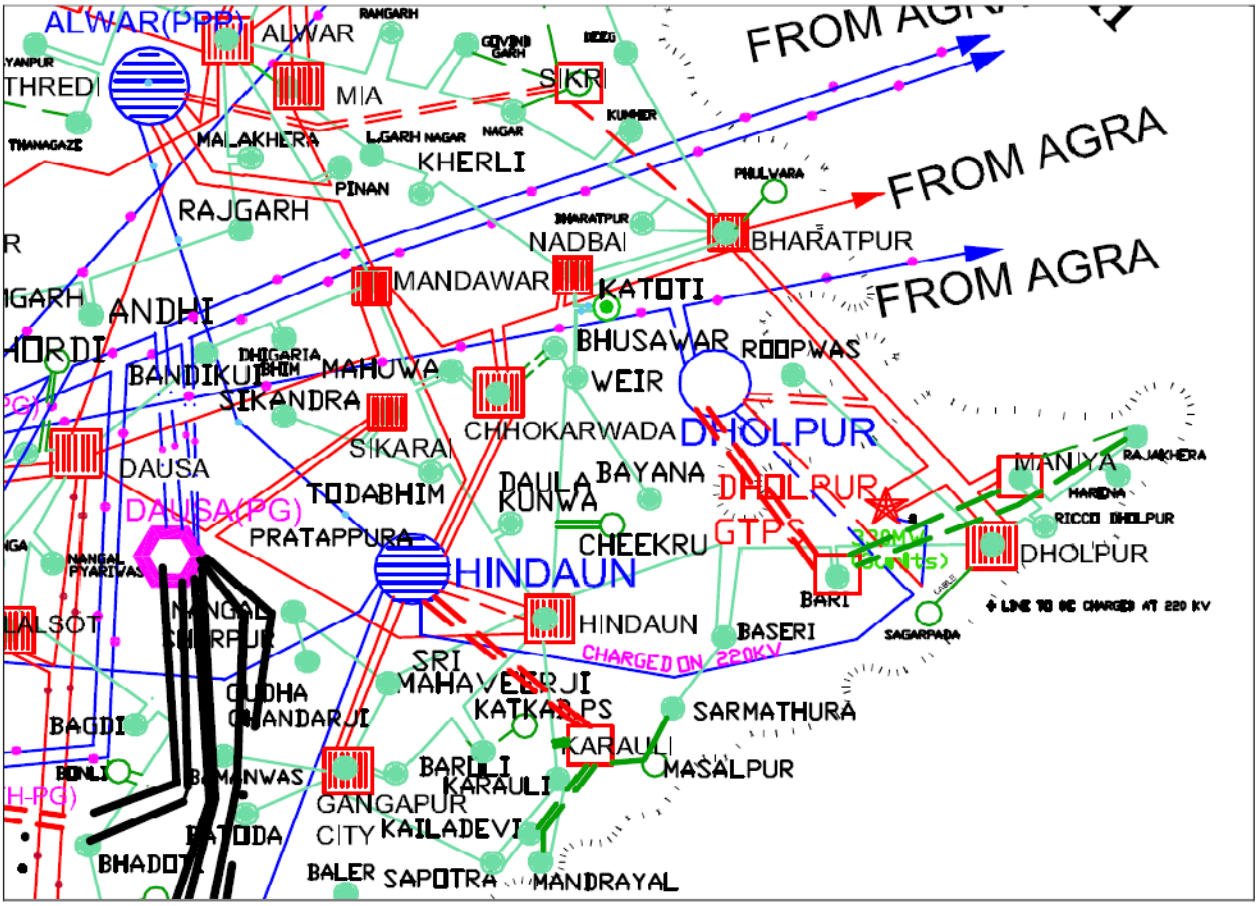


Figure 1: Power map of transmission system associated with 400 kV GSS Hindaun

2. Load Details of Installed ICTs and Transmission lines Associated with 400kV GSS Hindaun and Transmission Lines

- Peak loads recorded on 400/220 kV ICTs and 400kV and220 kV lines associated with 400 KV GSS, RVPNL, Hindaun are detailed below in Table 1.
- Proposed groups of 220 kV lines to be tripped for SPS are also shown in Table 1.

Table 1: Load Details of ICTs and Transmission Lines Associated with 400 kV GSS Hindaun

S. No.	Name of Lines/ICTs	Peak Load (MVA)	Average Load (MVA)	Remark
1	315 MVA, 400/220/33 kV ICT-I	308	269	Load sharing of ICT-I is more in respect of ICT-II about 20-30MVA due to different percentage impedance.
2	315 MVA, 400/220/33 kV ICT-II	276	243	
3	400 kV S/C Hindaun-DCCP line charged on 220 kV voltage	208	188	Proposed for SPS
4	220 kV Hindaun-Gangapur Line CKT-I	93	69	Proposed for SPS
5	220 kV Hindaun-Gangapur Line CKT-II	79	68	Proposed for SPS
6	220 kV Hindaun-Mandawar Line	82	55	Not included in SPS
7	220 kV Hindaun-Chhonkarwada Line CKT-I	49	32	Not included in SPS
8	220 kV Hindaun-Chhonkarwada Line CKT-II	51	30	Not included in SPS
9	220 kV S/C Hindaun (400 kV GSS)-Hindaun (220 kV GSS) line (Interconnector-I)	252	205	Tripping of this line will result in overloading of 220 kV D/C Bassi-Dausa line. Hence, this line is not considered for SPS.Not included in SPS

3. Proposed SPS for ICTs at 400 kV GSS Hindaun

- After detailed analysis of above loading conditions and grid power flow pattern, following lines are considered for tripping for SPS of ICTs:-
  - 400 kV S/C Hindaun-DCCP line charged on 220 kV voltage
  - 220 kV Hindaun-Gangapur Line CKT-I
  - 220 kV Hindaun-Gangapur Line CKT-II
- Tripping command for 220 kV lines are to be taken from overload relay/over current back up relay on 400 kV and/or 220 kV side of ICTs considering 100% loading of 315 MVA, 400/220/33 KV (Telk –Make) ICT-I and 90% loading of 315 MVA, 400/220/33 KV (CGL –Make) ICT-II with appropriate time delay (3 to 5 second) to avoid tripping

during the through faults. Further, time grading of the back-up elements may also be correlated for time delay of overloading.

- Schematic diagram for tripping of 220 kV lines included in SPS for 2x315 MVA, 400/220kV ICTs at 400 kV GSS Hindaun is shown below:-

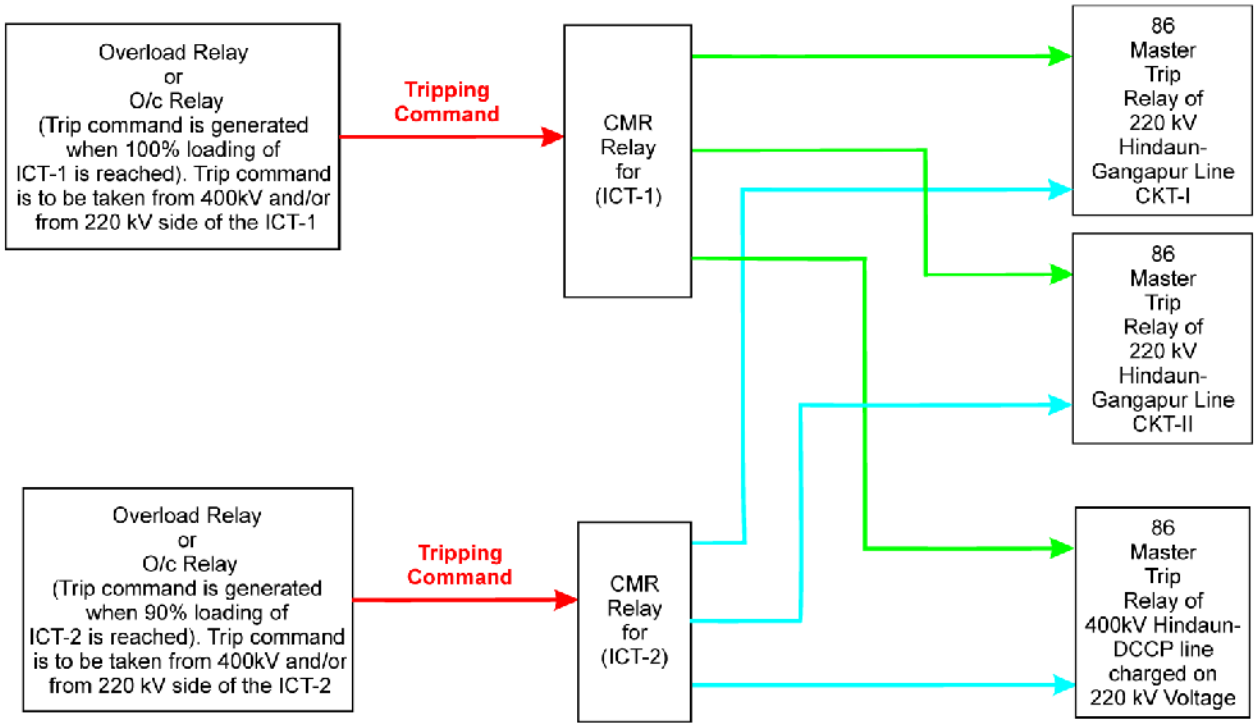


Figure 2: Schematic diagram of proposed logics for SPS of 2x315MVA, 400/220 kV ICTs at 400 kV GSS Hindaun

HIMACHAL PRADESH STATE LOAD DESPATCH CENTRE
(AN APEX BODY)
GOVERNMENT OF HIMACHAL PRADESH

No. HPSLDC/SLDC-21B/VOL-XI/2023-24- 8267 Dated: 13-12-2023

To

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

Subject: **Non-fully utilization of Baddi Pinjore D/C Line due to internal transmission issues in Haryana System.**

Sir,

On the subject cited matter, it is intimated that Baddi Pinjore D/C transmission line is connecting from 220 kV Baddi Station, Himachal Pradesh to 220 kV Pinjore Substation, Haryana. The Single Line Diagrams (SLDs) of the Baddi Substation and Pinjore Substation are attached as per Annexure – A & B. The details of the line are as under: -

Name of the line	Configuration	Line Length	Conductor type	Remarks
220 kV Baddi Pinjore Tx. Line	D/C	1.665 Kms.	Zebra	Only 1.665 Kms line with HP and remaining line is owned by Haryana

In this regard, it is further intimated that even an asset of 220 kV which has capability to carry out more than 300 MW load on both the circuit, Haryana SLDC only allows to draw the power range between 100 MW to 150 MW on these circuits due to the internal transmission issues in the Haryana System, which has resulted into non-fully utilization of the transmission Baddi Pinjore D/C Line. The said issue has persisted for more than 3 years, however, no necessary action as of now is taken by Haryana.

In view of above, it is requested to impart necessary directions to Haryana STU to take necessary actions in their transmission system, so that the fully utilization of the said system may be carried out and the said matter may also be taken in 214th OCC meeting of NRPC for further deliberation.

Your cooperation in this regard is highly solicited please.

Yours sincerely,

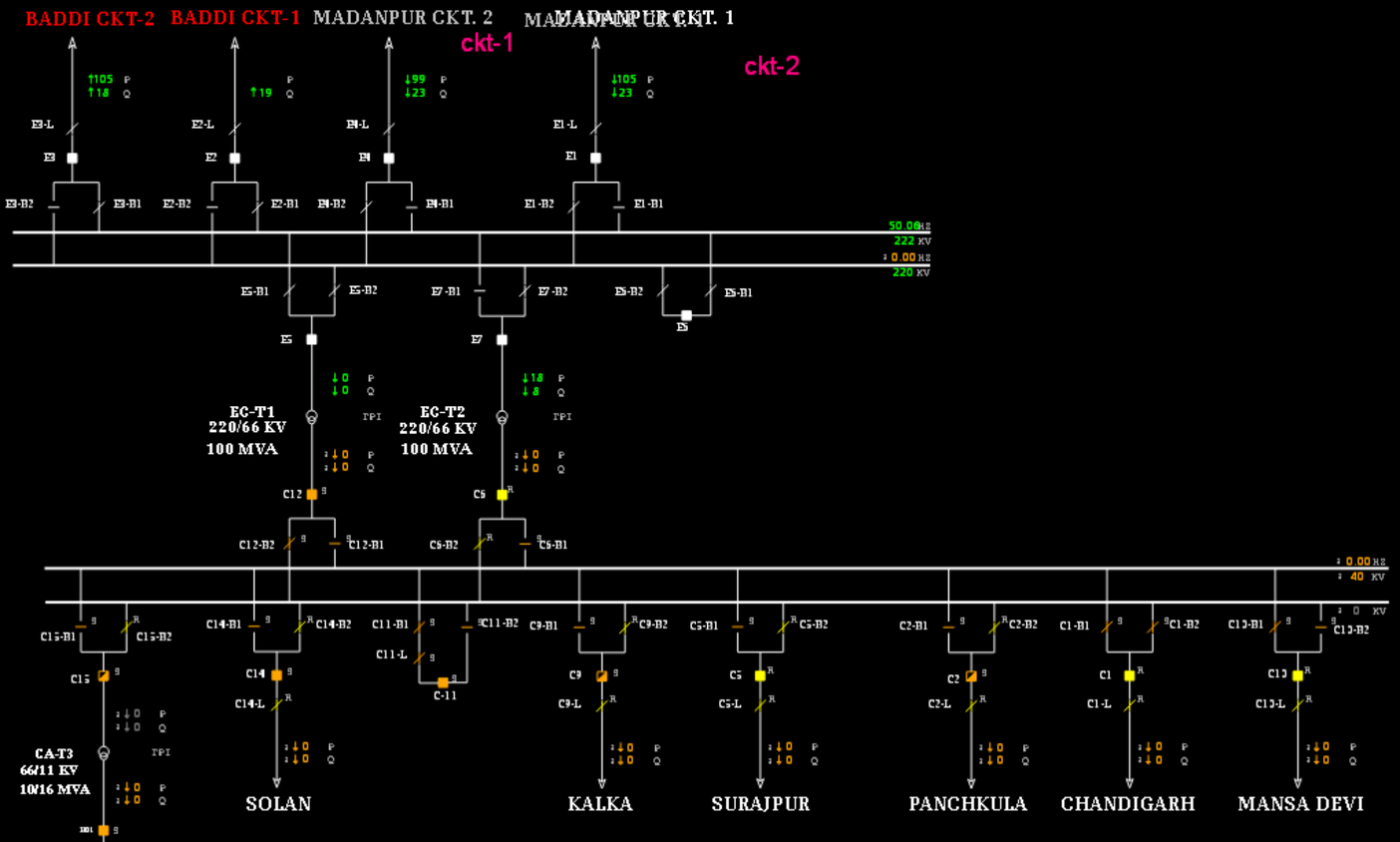
DA: As above

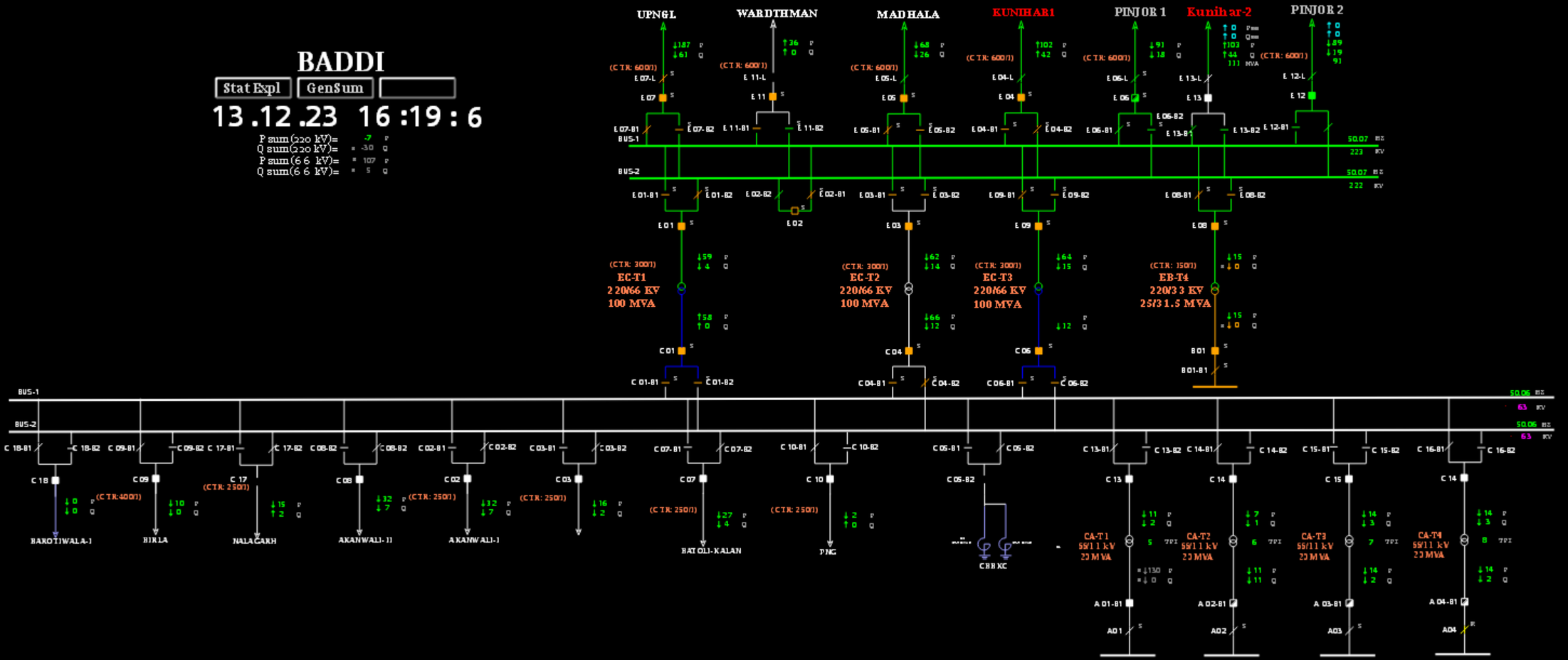
Dy. Chief Engineer,
HP State Load Despatch Centre,
Govt. of HP, Totu, Shimla-11(H.P.).

SLDC Complex, Totu, Shimla-171011
Phone: 0177-2838666, Telefax: 0177-2837649 GST No. 02AAAAH7757E1ZX
Email: sehpsldc@gmail.com, cehpsldc@gmail.com, mdhpsldc@gmail.com, Web: www.hpsldc.com

PINJORE(220kV)

CONTACT DETAILS	
SSE	Er. Ankush Gupta
MOBILE	9316369278
EMAIL	sse132kv@gmail.com




BADDI
Stat Expl
Gen Sum
13 .12 .23 16 :19 : 6
P sum (220 kV)= -7 P
Q sum (220 kV)= -30 Q
P sum (66 kV)= 107 P
Q sum (66 kV)= 5 Q
UPNGL
WARDTHMAN
MADHALA
KUNIHAR1
PINJOR 1
Kunihar-2
PINJOR 2
BUS-1
BUS-2
50.07 Hz
222 KV
50.06 Hz
63 KV
EC-T1
220/66 KV
100 MVA
EC-T2
220/66 KV
100 MVA
EC-T3
220/66 KV
100 MVA
EB-T4
220/33 KV
25/31.5 MVA
CA-T1
55/11 kV
20 MVA
CA-T2
55/11 kV
20 MVA
CA-T3
55/11 kV
20 MVA
CA-T4
55/11 kV
20 MVA
BAROTIWALA-1
BIRLA
NALAGARH
AKANWALI-II
AKANWALI-I
BATOLI-KALAN
PNG
CBBKC

Lines tripping 5 or more times during last 4 winter seasons (Dec-Jan months from 21:00hrs to 10:00hrs)

S. No.	Line Name	Tripping events	Owner	Washing/ Cleaning status (2023-24)#	Insulator replacment status	
1	765 KV Bara-Mainpuri (UP) Ckt-2	6	UPPTCL	02.12.2023, 03.12.2023	Conventional	
2	400 KV Aligarh-Sikandrabad (UP) Ckt-1	16		06.10.2023, 07.10.2023	NA	
3	400 KV Anpara_B(UPUN)-Mau(UP) (UP) Ckt-1	16		NA	Partial (96.18%)	
4	400 KV Bareilly-Unnao (UP) Ckt-1	14		18.10.2023	Partial (75%)	
5	220 KV Agra(PG)-Shamshabad(UP) (UP) Ckt-1	12		NA	NA	
6	400 KV Muradnagar_2-Mathura (UP) Ckt-1	10		01.11.2023, 02.11.2023	NA	
7	400 KV Orai-Mainpuri (UP) Ckt-2	10		NA	Partial (10%)	
8	400 KV Anpara_B(UPUN)-Sarnath(UP) (UP) Ckt-2	8		04.11.2023-16.11.2023	Partial (91.24%)	
9	400 KV Aligarh-Muradnagar_1 (UP) Ckt-1	7		NA	NA	
10	400 KV Orai-Mainpuri (UP) Ckt-1	7		NA	Partial (10%)	
11	400 KV Gr.Noida_2(UPC)-Gr.Noida(UPC) (UP) Ckt-1	6		25.11.2023-27.11.2023	Conventional	
12	765 KV Anpara_C(LAN)-Unnao(UP) (UP) Ckt-1	6		23.11.2023-	Conventional	
13	220 KV Baghpat(PG)-Baghpat(UP) (UP) Ckt-2	5		NA	NA	
14	220 KV Gazipur(DTL)-Noida Sec20(UP) (UP) Ckt-1	5		NA	NA	
15	400 KV Banda-Orai (UP) Ckt-2	5		20.11.2023	Partial (2%)	
16	400 KV Obra_B-Rewa Road (UP) Ckt-1	5		NA	Conventional	
17	400 KV Orai-Paricha (UP) Ckt-1	5		NA	Partial (8%)	
18	400 KV Panki-Aligarh (UP) Ckt-1	5		NA	Partial (24%)	
19	400 KV Rewa Road-Panki (UP) Ckt-1	5		09.10.2023-11.10.2023	NA	
20	400 KV Unnao-Lucknow (UP) Ckt-1	5		31.10.2023	Partial (72%)	
21	400 KV Unnao-Panki (UP) Ckt-1	5		NA	Partial (41%)	
22	765 KV Anpara_D-Unnao (UP) Ckt-1	9	UPPCL	NA	Conventional	
23	220 KV Duni(RS)-Jaipur South(PG) (RS) Ckt-1	9	RRVUNL	24.11.2023	NA	
24	400 KV Rajwest(RW)-Jodhpur (RS) Ckt-1	5	RRVPNL	13.10.2023, 09.11.2023	Conventional	
25	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-2	30		NA	NA	11 tripping so far in Q3 23-24
26	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-1	21		03.11.2023	NA	
27	220 KV Debari(RS)-RAPS_A(NP) (RS) Ckt-1	19		NA	NA	5 tripping so far in Q3 23-24
28	220 KV Duni(RS)-Kota(PG) (RS) Ckt-1	16		23.11.2023	NA	
29	400 KV Hindaun(RS)-Chhabra(RVUN) (RS) Ckt-1	11		NA	Conventional	
30	400 kv suratgarh(rvun)-bikaner(rs) (rs) ckt-1	11		NA	Polymer	
31	400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-2	11		25.9.2023-21.10.2023	Conventional	
32	400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1	10		NA	Conventional	
33	220 KV Badarpur(NT)-Alwar MIA(RS) (RS) Ckt-1	9		27.09.2023-	NA	
34	400 KV Akal-Jodhpur (RS) Ckt-1	8		29.11.2023	Conventional	
35	132 KV Rajgarh (RS)-Hisar(BB) (RS) Ckt-1	6		NA	NA	
36	400 KV Barmer(RS)-Rajwest(RW) (RS) Ckt-1	6		NA	Conventional	
37	400 KV Bhadla-Ramgarh (RS) Ckt-2	6		NA	Conventional	
38	400 KV Kankani-Jaisalmer (RS) Ckt-2	6		NA	Conventional	
39	400 KV Merta-Ratangarh (RS) Ckt-1	6		10.10.2023	Conventional	
40	400 KV Rajwest(RW)-Kankani (RS) Ckt-1	6		10.11.2023	Conventional	
41	220 KV RAPS_B(NP)-Sakatpura(RS) (RS) Ckt-1	5		NA	NA	6 tripping so far in Q3 23-24
42	400 KV Bhadla-Ramgarh (RS) Ckt-1	5		NA	Conventional	
43	400 KV Bikaner-Merta (RS) Ckt-1	5		05.10.2023	Polymer	
44	400 KV Amritsar(PG)-Makhu(PS) (PSTCL) Ckt-2	12	PSTCL	08.11.2023	Partial*	
45	400 KV Muktsar-Makhu (PS) Ckt-2	12		06.11.2023, 20.11.2023	Partial*	
46	132 KV Hamirpur(HP)-Chohal (PS) (PSTCL) Ckt-1	8		03.10.2023, 15.11.2023, 29.11.2023	NA	
47	400 KV Talwandi Saboo(PSG)-Muktsar(PS) (PS) Ckt-1	8		22.11.2023-25.11.2023, 04.12.2023	Conventional	
48	400 KV Muktsar-Makhu (PS) Ckt-1	6		26.11.2023-29.11.2023	Conventional	

49	400 KV Gorakhpur(PG)-Muzaffarpur(PG) (POWERLINK) Ckt-1	5	POWERLINK	NA	Conventional
50	220 KV Bairasiul(NH)-Jessore(HP) (PG) Ckt-1	16	POWERGRID	NA	NA
51	220 KV Bairasiul(NH)-Pong(BB) (PG) Ckt-1	10		NA	NA
52	400 KV Kishenpur-NewWanpoh (PG) Ckt-1	10		NA	Conventional
53	220 KV Dhauliganga(NH)-Pithoragarh(PG) (PG) Ckt-1	8		NA	NA
54	400 KV Roorkee(PG)-Kashipur(UK) (PG) Ckt-1	6		05-11.2023-11.11.2023	Partial (72%)
55	220 KV Kanpur(PG)-KanpurNaubasta(UP) (PG) Ckt-1	5		NA	NA
56	220 KV Ratangarh(RS)-Sikar(PG) (RS) Ckt-1	5		NA	NA
57	400 KV Varanasi-Biharshariff (PG) Ckt-1	5		NA	NA
58	400 KV Varanasi-Biharshariff (PG) Ckt-2	5		NA	NA
59	220 KV Amargarh(NRSS XXIX)-Ziankote(JK) (PDD JK) Ckt-2	5	PDD JK	09.11.2023	NA
60	400 KV Baspa(JP)-Karcham Wangtoo(JSW) (HBPCL) Ckt-2	5	JPL,HBPCL	23.11.2023-29.11.2023	Conventional
61	400 KV Bawana-Mundka (DV) Ckt-1	10	DTL	NA	Polymer
62	220 KV Mandola(PG)-Gopalpur(DTL) (DTL) Ckt-1	8	DTL	03.1.2023	NA
63	220 KV Hissar(BB)-Chirawa(RS) (BB) Ckt-1	8	BBMB	19.10.2023	NA

Portion of line cleaned may be intimated separately by utilities including any vulnerable zone remaining

* - planned

National Load Despatch Centre
Import Capability of Punjab for January 2024

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
1st January 2024 to 31st January 2024	00-24	9500	500	9000	5497	3503		https://www.punjabsldc.org/ATC_TTC.aspx
Limiting Constraints	N-1 contigency of 400/220KV ICTs at Rajpura, Ludhiana, Jalandhar Loading close to N-1 contingency limits of 400/220kV Patran, Malerkotla, Moga and Patiala ICTs 220 kV underlying network at Jalandhar, Ludhiana and Amritsar							

National Load Despatch Centre
Import Capability of Uttar Pradesh for January 2024

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
1st January 2024 to 31st January 2024	00-24	16100	600	15500	9779	5721		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 Azamgarh, Allahabad(PG), Gorakhpur (UP), Sarnath, Lucknow (PG) ICTs						

National Load Despatch Centre
Import Capability of Haryana for January 2024

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
1st January 2024 to 31st January 2024	00-24	9100	250	8850	5143	3707		https://hvpn.org.in/#/atcttc
Limiting Constraints	N-1 contingency of 400/220kV ICTs at Deepalpur and Panipat(BBMB)							

National Load Despatch Centre
Import Capability of Rajasthan for January 2024

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
1st January 2024 to 31st January 2024	00-24	7600	600	7000	5689	1311		https://sldc.rajasthan.gov.in/rrvpnl/scheduling/downloads
Limiting Constraints		N-1 contingency of 400/220kV Chittorgarh, Jodhpur, Bikaner, Ajmer, Merta, Hindaun and Bhinmal ICTs						

National Load Despatch Centre
Import Capability of Delhi for January 2024

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
1st January 2024 to 31st January 2024	00-24	7300	300	7000	4810	2190		https://www.delhisldc.org/resources/atcttcreport.pdf
Limiting Constraints	N-1 contingency of 400/220kV Mundka, HarshVihar and Bawana (bus-split) ICTs.							

National Load Despatch Centre
Import Capability of HP for January 2024

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
1st January 2024 to 31st January 2024	00-24	1400	100	1300	1130	170		https://hpsldc.com/mrm_category/ttc-atc-report/
Limiting Constraints		N-1 contingency of 220kV Nallagarh-Upernangal D/C. High loading of 220kV Hamirpur-Hamirpur D/C.						

National Load Despatch Centre
Import Capability of Uttarakhand for January 2024

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
1st January 2024 to 31st January 2024	00-24	1700	100	1600	1402	198		https://uksldc.in/ttc-atc
Limiting Constraints		N-1 contingency of 400/220kV Kashipur ICTs. High loading of 220kV Roorkee-Roorkee and 220kV CBGanj-Pantnagar lines						

National Load Despatch Centre
Import Capability of J&K for January 2024

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
1st January 2024 to 31st January 2024	00-24	2900	100	2800	1977	823		
Limiting Constraints		N-1 contigency of 400/220KV ICTs at Amargarh 220 kV underlying network at Amargarh, Wagoora						

National Load Despatch Centre
Import Capability of Chandigarh for January 2024

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
1st January 2024 to 31st January 2024	00-24	400	20	380	342	38		
Limiting Constraints		N-1 contigency of 220kV Nallagarh-Kishengarh						

Sr No	Element Name	Outage Date	Outage Time	Reason
1	220 KV Bhiwadi(PG)-HSIIDC Bawal(HV) (HVPNL) Ckt-1	04-Nov-23	17:52	Phase to earth fault Y-N. As per PMU, Y-N fault occured, no auto-reclosing is observed. As per DR of Bhiwadi(PG) end, instantaneous 3-ph tripping is observed. DR of Bawal(HV) not received.
		13-Nov-23	17:32	Phase to earth fault Y-N. As per PMU, Y-N fault occured, no auto-reclosing is observed. As per DR of Bhiwadi(PG) end, instantaneous 3-ph tripping is observed. DR of Bawal(HV) not received.
		23-Nov-23	02:15	Phase to earth fault R-N. As per PMU, R-N fault occured, no auto-reclosing is observed. As per DR of Bhiwadi(PG) end, instantaneous 3-ph tripping is observed. DR of Bawal(HV) not received.
		25-Nov-23	17:38	Phase to earth fault Y-N. As per PMU, Y-N fault occured, no auto-reclosing is observed. As per DR of Bhiwadi(PG) end, instantaneous 3-ph tripping is observed. DR of Bawal(HV) not received.
2	220 KV RAPS_A(NP)-Sakatpura(RS) (RS) Ckt-2	08-Nov-23	23:45	Phase to earth fault R-N. As per PMU, R-N fault occured, no auto-reclosing is observed.
		13-Nov-23	05:09	Phase to earth fault R-N. As per DR, R-N fault occured, no auto-reclosing is observed.
		21-Nov-23	20:14	Phase to earth fault R-N. As per DR, R-N fault occured, no auto-reclosing is observed.
		26-Nov-23	00:45	Phase to earth fault R-N. DR of the event not submitted.
		26-Nov-23	02:36	Phase to earth fault R-N. DR of the event not submitted.
		28-Nov-23	06:16	Phase to earth fault Y-N. DR of the event not submitted.
3	220 KV RAPS_B(NP)-Sakatpura(RS) (RS) Ckt-1	12-Nov-23	03:24	Phase to earth fault R-N. As per DR, R-N fault occured, no auto-reclosing is observed.
		21-Nov-23	03:16	Phase to earth fault R-N. As per DR, R-N fault occured, no auto-reclosing is observed.
		30-Nov-23	21:20	Phase to earth fault R-N. DR of the event not submitted.
4	400 KV Bareilly-Unnao (UP) Ckt-1	03-Nov-23	19:16	Phase to earth fault Y-N. As per DR, successful A/R at Unnao end and no A/R with 3-ph tripping observed at Bareilly end.
		09-Nov-23	13:07	Phase to earth fault Y-N. As per DR, successful A/R at Unnao end and no A/R with 3-ph tripping observed at Bareilly end.
		10-Nov-23	00:00	Phase to earth fault Y-N. As per DR, successful A/R at Unnao end and no A/R with 3-ph tripping observed at Bareilly end.
		16-Nov-23	04:04	Phase to earth fault Y-N. As per DR, successful A/R at Unnao end and no A/R with 3-ph tripping observed at Bareilly end.
5	400 KV Bareilly-Unnao (UP) Ckt-2	16-Nov-23	22:26	Phase to earth fault B-N. As per DR, successful A/R at Unnao end and improper A/R followed by 3-ph tripping observed at Bareilly end.
		29-Nov-23	00:58	Phase to earth fault Y-N. As per DR, successful A/R at Unnao end and improper A/R followed by 3-ph tripping observed at Bareilly end.
		29-Nov-23	19:35	Phase to earth fault B-N. As per DR, successful A/R at Unnao end and improper A/R followed by 3-ph tripping observed at Bareilly end.
6	400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1	17-Nov-23	20:36	Over Voltage. As per DR, significant mismatch in phase voltages during antecedent condition. Possibility of CVT error.
		18-Nov-23	00:39	Over Voltage. Incorrect DR submitted.
		27-Nov-23	03:59	Over Voltage. DR not received from Suratgarh end.
		28-Nov-23	04:02	Over Voltage. DR not received from Suratgarh end.

Grid Event summary for November 2023

S.No.	Category of Grid Disturbance (GD-I to GD-V)	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)
					Date	Time	Date	Time					Generation Loss(MW)	Load Loss (MW)	% Generation Loss(MW)	% Load Loss (MW)	Antecedent Generation (MW)	Antecedent Load (MW)	
1	GI-2	1) 400/220 kV 315 MVA ICT -1 at Hindaun(Raj) 2) 400/220 kV 315 MVA ICT -2 at Hindaun(Raj)	Rajasthan	RVVPNL	3-Nov-23	09:16	3-Nov-23	09:59	00:43	i) During antecedent condition, 220kV Hindaun220-Sikrai(Dausa)(Raj) ckt was not in service and MVA loading of 400/220 kV 315 MVA ICT-1 & 2 at Hindaun(Raj) was 269 and 259 MVA respectively. ii) As reported, at 09:16 hrs, 400/220kV 315MVA ICT-1 & 2 both tripped due to overloading. iii) As per DR, current in three phases in LV side of 400/220 kV 315 MVA ICT -1 at Hindaun(Raj) are I_R=~936A, I_Y=~966A and I_B=~938A. iv) As per PMU at Bassi(PG), no fault is observed in the system. v) As per SCADA, load loss of approx. 335MW is observed in Rajasthan control area.	0	0.24	0	335	0.000	0.623	46716	53744	NA
2	GI-2	1) 400 KV Dadri(NT)-Mandola(PG) (PG) Ckt-1 2) 400 KV Dadri(NT)-Mandola(PG) (PG) Ckt-2 3) 400 KV Dadri(NT)-Loni Harsh Vihar(DV) (NT) Ckt-2 4) 490 MW Dadri-II TPS - UNIT 2 5) 500 kV HVDC Rihand-Dadri (PG) Ckt-1 6) 500 kV HVDC Rihand-Dadri (PG) Ckt-2	Uttar Pradesh	PGCIL, NTPC, DTL	4-Nov-23	04:03	4-Nov-23	05:48	01:45	i) 400kV Dadri TPS(NTPC) has one and half breaker bus scheme. There are 04 buses at 400kV side. Bus-I, II and Bus III, IV are separated via interconnector. 490MW Unit-5&6 are connected at Bus-III, IV side. ii) During antecedent condition, interconnectors were in opened condition. 490MW Unit-5 was not running and 490MW Unit-6 was generating approx. 455MW. HVDC Rihand-Dadri Bipole was carrying total ~600MW. iii) As reported, at 04:03:05:240 hrs, B-N phase to earth fault occurred on 400kV Dadri-Mandola ckt-1. Fault distance was approx. 100meter from Dadri TPS end. This fault was sensed by both the ends in Z-1. After ~160msec (08 cycles) of fault, B-ph pole of CB at both then ends opened and A/R started. Further after ~1sec (dead time), line successfully autoreclosed due to transient nature of fault. Delayed tripping initiation in Z-1 was due to Z-1 time delay setting which was kept as 100msec instead of instantaneous. As informed by NTPC Dadri, Z-1 time delay has been set as 0 sec (instantaneous). iv) As per PMU & DR of 400kV Dadri-Mandola ckt-1, B-N phase to earth fault with successful A/R operation is observed. Steady state fault current was approx. 35kA, during transient fault current magnitude was ~52kA. v) On this fault, commutation failure at HVDC Rihand-Dadri occurred and power order dropped to zero (0). vi) Distance protection relay at Harshvihar end of 400kV Dadri-Harshvihar ckt-2 sensed the fault on 400KV Dadri-Mandola ckt in Z-1 and successful autoreclosed from Harshvihar end. Dadri end relay sensed fault in Z-4 as fault was in reverse direction however as informed by Dadri, instant three phase tripping occurred on DT received from Harshvihar end. Reason of DT received at Dadri end is yet to be identified. vii) During fault time, over voltage of the magnitude of approx. 723kV in 400kV Dadri-Mandola ckt-2 and Dadri end and approx. 560kV in 400kV Bus-2 at Dadri TPS is observed (as per PMU at Dadri TPS). Over voltage sustained for approx. 100msec viii) On this over voltage, 400kV Dadri-Mandola ckt-2 tripped on over voltage stage-2 protection operation at Dadri end. ix) At the same time, all three filter banks connected at Dadri HVDC tripped on over voltage protection operation. As reported by POWERGRID, over voltage protection of filter banks is 489.89kV with 20msec pickup time delay. x) Due to tripping of filter banks, HVDC Rihand-Dadri Bipole got blocked. xi) From DR & PMU voltage plots, over voltage didn't occur in other 400kV elements at Dadri TPS. xii) On overvoltage in Mandola ckt-2, Dadri TPS informed that neutral of CVT at Main 1 relay found opened at Dadri end which led to rise in voltage at secondary side. Reason of over voltage in 400kV Bus and Dadri HVDC bus is yet to be identified.	0	0	455	0	1.492	0.000	30487	39273	160
3	GI-1	1) 220 KV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt 2) 132 KV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt	Himachal Pradesh	BBMB, HPPTCL	10-Nov-23	13:54	10-Nov-23	14:30	00:36	i) During antecedent condition, 400/220kV 315MVA ICT at Dehar(BB) was carrying 90MW among which 220kV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt was carrying 48MW and 220/132kV 40MVA ICT-1 & 2 were carrying 22MW and 20MW respectively and the total of 42MW was evacuating through 132 KV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt. ii) As reported, at 13:54 hrs, 220kV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt tripped on R-N phase to earth fault (Exact reason and location of fault yet to be shared). iii) During the same time, 132 KV Dehar(BB)-Kangoo(HP) (HPPTCL) Ckt also tripped due to over-current (as reported by SLDC-HP). iv) As per PMU at Panchkula(PG), R-N phase to earth fault is observed with fault clearing time of 80ms. v) As per SCADA, change in demand of approx. 100MW is observed in HP control area. vi) As reported by SLDC-HP, load loss of approx. 90MW is observed in HP control area.	0	0.054	0	90	0.000	0.181	45307	49690	80
4	GI-2	1) 400 KV Gumma (HP) - Bus 1 2) 400 KV Gumma (HP) - Bus 2 3) 400/220 kV 315 MVA ICT 1 at Gumma (HP) 4) 400/220 kV 315 MVA ICT 2 at Gumma (HP)	Himachal Pradesh	HPPTCL	16-Nov-23	02:01	16-Nov-23	08:14	06:13	i) 400/220kV Gumma(HP) has one and half breaker scheme at 400kV level. ii) As reported, at 02:01hrs, bus bar protection operated at both 400kV Bus 1 & 2 at Gumma(HP) due to malfunction of relay P746 (Y-phase relay of Bus-1). Due to this, both the 400kV buses at Gumma(HP) became dead and 400/220 kV 315 MVA ICT 1 & 2 at Gumma (HP) also tripped. iii) Though the main CBs at Gumma(HP) of 400kV Gumma(HP)-Nathpa Jhakri Ckt- 1& 2 and 400kV Gumma(HP)-Panchkula(PG) Ckt-1 & 2 tripped due to bus bar protection operation, but tie CBs of the said four circuits remained closed. iv) As per PMU at Panchkula(PG), no fault is observed in the system. v) As per SCADA, no change in demand in observed in HP control area.	0	0	0	0	0.000	0.000	27333	33193	NA
5	GI-2	1) 400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1 2) 400 KV Suratgarh SCTPS(RVUN)-Suratgarh(RS) (RS) Ckt-1 3) 400 KV Suratgarh SCTPS(RVUN)-Suratgarh(RS) (RS) Ckt-2 4) 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt	Rajasthan	RVUNL	17-Nov-23	20:36	17-Nov-23	23:11	02:35	i) 400kV Suratgarh(RS) has one and half breaker bus scheme. 400kV Suratgarh SCTPS-Suratgarh ckt-1&2 acts as interconnector between Suratgarh SCTPS and Suratgarh S/s, having line CBs only. Unit-3, 4, 5 & 6 are connected at 400kV Suratgarh(RS) and Unit-7 & 8 of SCTPS are further connected via two interconnectors. ii) During antecedent condition, Unit-3, 4, 5 & 6 were already boxed up and Unit- 7 & 8 of SCTPS were running at 488MW and 247MW load respectively. Power imported by SCTPS to Suratgarh(RS) via interconnectors were 245MW and 241MW respectively. 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt and 400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1 were carrying approx. 113MW and 144MW respectively. 400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-2 was already tripped manually at 19:42 hrs. iii) As reported, at 20:36hrs, 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt tripped on B-N phase to earth fault with fault distance of 28km from Suratgarh(RS) end. As per DR at Suratgarh(RS) end, B-N phase to earth fault occurred and zone-1 distance protection operated with fault current of ~9.05kA from Suratgarh(RS) end and fault clearing time of ~68ms (DR time sync issue observed at Suratgarh(RS) end). As per DR at Bikaner(RS) end, R-N phase to earth fault occurred and zone-1 distance protection operated with fault current of ~3.69kA from Bikaner(RS) end and fault clearing time of ~48ms (Phase sequence issue observed at Suratgarh(RS) and Bikaner(RS) end). iv) During the same time, over-current protection of B-phase operated at 400kV Suratgarh SCTPS-Suratgarh ckt-1&2 (as reported). v) 400 KV Suratgarh(RVUN)-Ratangarh(RS) (RS) Ckt-1 tripped at the same time due to over-voltage stage-1 protection operation. As per DR at Suratgarh(RS) end, phase voltages of R, Y and B phase were respectively 236.44kV, 244.81kV and 254.83kV depicting B-phase voltage= ~110.34% (DR time sync issue observed at Suratgarh(RS) end). vi) As per PMU at Bikaner765(PG), Y-N phase to earth fault with fault clearing time of 80ms is observed. vii) As per SCADA, change in demand of approx. 80MW is observed Rajasthan control area. No change in generation is observed at Suratgarh(RS).	0	0.207	0	80	0.000	0.179	34411	44672	80
6	GI-1	1) 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 4 2) 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 5 3) 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 6 4) 220kV GGSTP-Kharar Ckt 5) 220kV GGSTP-Mohali Ckt 6) 220kV GGSTP-Bassi Pathana Ckt 7) 220kV GGSTP-Gobindgarh Ckt-1 8) 220kV GGSTP-Gobindgarh Ckt-2	Punjab	PSTCL	30-Nov-23	06:51	30-Nov-23	08:14	01:23	i) 220/132kV Ropar GGSTP(PS) has main and transfer bus scheme at 220kV level. ii) During antecedent condition, 210 MW Guru Gobind Singh TPS (Ropar) - UNIT 4 (carrying ~164MW), UNIT 5 (carrying ~148MW) & UNIT 6 (carrying ~151MW) and 220kV feeders to Kharar, Mohali & Gobindgarh-2 were connected to 220kV main Bus section-III. Rest of the elements were connected to main Bus section-I & II. iii) As reported, at 06:51 hrs, 220kV GGSTP-Kharar Ckt tripped on R-N phase to earth fault (zone-1 distance protection operated) with fault current of 4.071kA and fault distance of 33.91km from GGSTP end. Fault occurred due to heavy lightening. iv) On this fault, all other elements connected to 220kV main Bus section-III tripped. (Exact reason yet to be shared) v) As reported by GGSTP Ropar, 220kV GGSTP-Bassi Pathana Ckt (connected to 220kV main Bus section-I) and 220kV GGSTP-Gobindgarh Ckt-1 (connected to 220kV main Bus section –II) also tripped during the same time. (Exact reason yet to be shared) vi) As per SCADA SOE, 66kV Morinda-Kharar(PS) ckt also tripped at the same time. (Exact reason yet to be shared) vii) As per PMU at Jalandhar(PG), R-N phase to earth fault is observed with delayed fault clearance time of 440ms. viii) As per SCADA, generation loss of approx. 463MW occurred at Ropar GGSTP. ix) As per SCADA load loss of approx. 60MW is observed in Punjab control area.	0	0.083	463	60	1.331	0.140	34790	43000	440
7	GD-1	1) 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-1 2) 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-2 3) 250 MW TEHRI HPS - UNIT 1 4) 250 MW TEHRI HPS - UNIT 2 5) 250 MW TEHRI HPS - UNIT 3	Uttarakhand	Tehri HEP	30-Nov-23	17:31	30-Nov-23	19:17	01:46	i) 400kV Tehri(THDC) has double main bus scheme. ii) During antecedent condition, 250 MW TEHRI HPS - UNIT 2 was running at approx. 250MW and 250 MW TEHRI HPS - UNIT 3 was synchronized to grid at 17:24 hrs and was increasing the total generation upto approx. 500MW. iii) As reported, at 17:31 hrs, 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-1 tripped from both the ends and 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-2 tripped from Tehri end only on line bus duct differential protection operation. iv) On tripping of both 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-1 & 2, 250 MW TEHRI HPS - UNIT 1, 2 & 3 also tripped due to loss of evacuation path. v) 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-2, was synchronized at 18:01hrs. Subsequently, 250 MW TEHRI HPS - UNIT 1, 2 & 3 were also synchronized to the grid and load was gradually increased. vi) At 18:15 hrs, 400 KV Tehri(THDC)-Koteshwar(PG) (PG) Ckt-2 tripped again from Tehri end on line bus duct differential protection operation. On this, 250 MW TEHRI HPS - UNIT 1, 2 & 3 also again tripped due to loss of evacuation path. vii) As reported by Tehri-HEP, on analysis it was found that the differential current is being measured as CT of line bus duct differential relay was erroneously shorted instead of CT of bus bar protection relay due to mismatch of drawing and actual field connections during Main-II Bus bar protection related works at Tehri HEP. However, the issue is addressed and resolved. viii) As per PMU at Koteshwar(PG), Y-B phase to phase fault is observed with fault clearance time of 80ms at 17:31 hrs and no fault is observed in the system at 18:15 hrs. ix) As per SCADA, generation loss at Tehri HEP of approx. 500MW and 205MW are observed at 17:31hrs and 18:15hrs respectively.	0	0	500	0	1.371	0.000	36478	47744	80

S. No.	Name of Transmission Element Tripped	Owner/ Utility	Outage		Load Loss/ Gen. Loss	Brief Reason (As reported)	Category as per CEA Grid standards	# Fault Clearance Time (>100 ms for 400 kV and 160 ms for 220 kV)	*FIR Furnished (YES/NO)	DR/EL provided in 24 hrs (YES/NO)	Other Protection Issues and Non Compliance (inference from PMU, utility details)	Suggestive Remedial Measures	Remarks
			Date	Time									
1	765 KV Varanasi-Gaya (PG) Ckt-1	POWERGRID	19-Nov-23	08:49		Phase to earth fault R-N	NA	NA	YES	YES (After 24 hrs)			Permanent R-N fault. Unsuccessful A/R operation is observed.
2	800 KV HVDC Kurukshetra(PG) Pole-4	POWERGRID	23-Nov-23	06:39		Earth fault	NA	NA	NO	NO			
3	400 KV Bhinmal-Zerda (PG) Ckt-1	POWERGRID	26-Nov-23	18:30		Over Voltage	NA	NA	YES (After 24 hrs)	YES			Over voltage stage-1 protection operated at Zerda end, DT received at Bhinmal end.
4	400 KV Bhinmal-Zerda (PG) Ckt-1	POWERGRID	27-Nov-23	19:53		Over Voltage	NA	NA	YES (After 24 hrs)	YES			Over voltage stage-1 protection operated at Zerda end, DT received at Bhinmal end.

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

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

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

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

Reporting of Violation of Regulation for various issues for above tripping

1	Fault Clearance time(>100ms for 400kV and >160ms for 220kV)	1. CEA Grid Standard-3.e 2. CEA Transmission Planning Criteria
2	DR/EL Not provided in 24hrs	1. IEGC 5.2(r) 2. CEA Grid Standard 15.3
3	FIR Not Furnished	1. IEGC 5.9.6.a 2. CEA Grid Standard 12.2 (Applicable for SLDC, ALDC only)
4	Protection System Mal/Non Operation	1. CEA Technical Standard of Electrical Plants and Electric Lines: 43.4.A 2. CEA (Technical Standards for connectivity to the Grid) Regulation, 2007: Schedule Part 1. (6.1, 6.2, 6.3)
5	A/R non operation	1. CEA Technical Standard of Electrical Plants and Electric Lines: 43.4.C 2. CEA Technical Planning Criteria

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

Time Period: 1st November 2023 - 30th November 2023

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	AD HYDRO	3	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	Details received
2	AHEJ3L	2	2	**100**	2	0	**100**	2	0	**100**	2	0	**100**	DR, EL & Tripping report need to be submitted
3	APL	4	2	**50**	0	4	**0**	2	0	**50**	2	1	**67**	
4	BAIRASUIL-NH	1	1	**100**	1	0	**100**	1	0	**100**	1	0	**100**	
5	BBMB	19	9	**47**	11	3	**69**	11	3	**69**	11	0	**58**	
6	CPCC1	33	0	**0**	0	1	**0**	0	0	**0**	0	0	**0**	Details received
7	CPCC2	12	7	**58**	7	1	**64**	7	1	**64**	7	0	**58**	DR, EL & Tripping report need to be submitted
8	CPCC3	18	1	**6**	3	0	**17**	3	0	**17**	1	0	**6**	
9	DADRIGAS-NT	1	1	**100**	1	0	**100**	1	0	**100**	1	0	**100**	
10	DADRI-NT	3	3	**100**	3	0	**100**	3	0	**100**	3	0	**100**	
11	JHAJJAR	2	0	**0**	0	0	**0**	0	0	**0**	1	0	**50**	
12	KISHENGANGA-NH	2	1	**50**	1	0	**50**	1	1	**100**	1	0	**50**	
13	NAPP	2	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	Details received
14	RAPPA	9	4	**44**	9	0	**100**	9	0	**100**	9	0	**100**	DR, EL & Tripping report need to be submitted
15	RAPPB	3	3	**100**	3	0	**100**	3	0	**100**	3	0	**100**	
16	RIHAND-NT	2	2	**100**	2	0	**100**	2	0	**100**	2	0	**100**	
17	SALAL-NH	1	1	**100**	1	0	**100**	1	0	**100**	1	0	**100**	
18	SLDC-DV	12	3	**25**	3	2	**30**	3	2	**30**	5	0	**42**	
19	SLDC-HP	11	0	**0**	0	4	**0**	0	4	**0**	0	0	**0**	Details received
20	SLDC-HR	7	3	**43**	3	3	**75**	3	3	**75**	6	1	**100**	DR, EL & Tripping report need to be submitted
21	SLDC-JK	7	0	**0**	7	0	**100**	7	0	**100**	7	0	**100**	
22	SLDC-PS	16	0	**0**	9	0	**56**	10	0	**63**	9	0	**56**	
23	SLDC-RS	49	37	**76**	19	4	**42**	19	4	**42**	29	0	**59**	
24	SLDC-UK	8	0	**0**	0	6	**0**	0	7	**0**	2	1	**29**	
25	SLDC-UP	61	7	**11**	12	9	**23**	11	9	**21**	10	4	**18**	
26	TEHRI	10	1	**10**	1	1	**11**	1	1	**11**	1	1	**11**	
27	UNCHAHAR-NT	1	0	**0**	0	0	**0**	0	1	**0**	0	0	**0**	Details received
28	URI-II-NH	1	1	**100**	1	0	**100**	1	0	**100**	1	0	**100**	DR, EL & Tripping report need to be submitted
Total in NR Region		**300**	**89**	**30**	**99**	**38**	**38**	**101**	**36**	**38**	**115**	**8**	**39**	

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