सत्यमेव जयते

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

संख्या: उ.क्षे.वि.स./प्रचालन/106/01/2023/5982-6023 दिनांक: 14.06.2023

विषय:उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप-समिति की 207वी बैठक का कार्यवृत |

Subject: Minutes of the 207th OCC meeting of NRPC.

उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप-समिति की 207वींबैठकदिनांक 19.05.2023 को आयोजित की गयी थी।उक्त बैठक काकार्यवृत्त उत्तर क्षेत्रीय विद्युत समिति की वेबसाइट http://164.100.60.165 पर उपलब्ध है।यदि कार्यवृत पर कोई टिप्पणी हो तो कार्यवृत जारी करने के एक सप्ताह के अन्दर इस कार्यालय को भेजें |

The 207thmeeting of the Operation Co-ordination Sub-Committee (OCC) of NRPC was held on 19.05.2023. The Minutes of this meeting has been uploaded on the NRPC website http://164.100.60.165. Any comments on the minutes may kindly be submitted within a week of issuance of the minutes.

संलग्नक:यथोपरि

Santosh
14/6/23
(संतोष कुमार)
अधीक्षण अभियंता (प्रचालन)

सेवामें,

उ.क्षे.वि.स. के प्रचालन समन्वय उप-समिति के सभी सदस्य

उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप-समिति की 207वीं बैठक का कार्यवृत्त

The 207th meeting of OCC of NRPC was held on 19.05.2023 through video conferencing.

खण्ड-क:उ.क्षे.वि.स. PART-A:NRPC

1. Confirmation of Minutes

Minutes of the 206th OCC meeting was issued on 15.05.2023.OCC confirmed the minutes.

2. Review of Grid operations of April 2023

Anticipated vis-à-vis Actual Power Supply Position (Provisional) for April 2023

Reasons submitted by States for significant deviation of actual demand from anticipated figures during the month of April 2023 are as under:

- **Delhi**

  Cloudy skies and frequent rainfalls in April 2023 caused the below normal average maximum temperature in Delhi so peak demand and energy consumption was on lower side than expected.

- **Himachal Pradesh**

  The Anticipation in Energy Requirement in respect of Himachal Pradesh for the month of April, 2023 came on the lower side due to unpredicted rains in the month of April.

- **Punjab**

  It is intimated that actual maximum demand and actual energy requirement are less as compared to anticipated maximum demand and anticipated energy requirement respectively because of decrease in demand of Agricultural as well as other categories of consumers due to rainfall in the state of Punjab during the month of April 2023.

- **Rajasthan**

  The % variation in Energy requirement and peak demand w.r.t. Anticipated Energy requirement and peak demand for April' 2023 is observed -17.7% and -6.3% due to various unexpected spell of rains during the month of April 2023 in Rajasthan state.

- **Uttar Pradesh**

  Due to unexpected rains and low atmospheric temperature in first half of April 2023 in comparison to April 2022, peak demand requirement (in MW) and Energy Consumption was less than anticipated peak demand.

- **Uttarakhand**

  The negative variation in actual Energy consumption w.r.t. anticipated Energy requirement is due to unexpected rainfall and snowfall in hilly areas in the month of April 2023, causing drop in temperature in all areas of Uttarakhand and negative variation in peak demand also.

3. Maintenance Programme of Generating units and Transmission Lines

The maintenance programme of generating units and transmission lines for the month of June 2023 was deliberated in the meeting on 18.05.2023.

4. Anticipated Power Supply Position in Northern Region for June 2023

The updated anticipated Power Supply Position for June 2023 is as below:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
CHANDIGARH	Availability	170	340	No Revision submitted
	Requirement	192	400	
	Surplus / Shortfall	-22	-60	
	% Surplus / Shortfall	-11.5%	-15.0%	
DELHI	Availability	5120	7400	18-May-23
	Requirement	3950	7400	
	Surplus / Shortfall	1170	0	
	% Surplus / Shortfall	29.6%	0.0%	
HARYANA	Availability	6030	9412	No Revision submitted
	Requirement	6030	10541	
	Surplus / Shortfall	0	-1129	
	% Surplus / Shortfall	0.0%	-10.7%	
HIMACHAL PRADESH	Availability	1083	1782	09-May-23
	Requirement	1085	1755	
	Surplus / Shortfall	-2	27	
	% Surplus / Shortfall	-0.2%	1.5%	
J&K and LADAKH	Availability	2110	3530	No Revision submitted
	Requirement	1610	2780	
	Surplus / Shortfall	500	750	
	% Surplus / Shortfall	31.1%	27.0%	
PUNJAB	Availability	6570	12330	18-May-23
	Requirement	6620	11320	
	Surplus / Shortfall	-50	1010	
	% Surplus / Shortfall	-0.8%	8.9%	
RAJASTHAN	Availability	10270	18410	18-May-23

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	Requirement	9300	14900	
	Surplus / Shortfall	970	3510	
	% Surplus / Shortfall	10.4%	23.6%	
UTTAR PRADESH	Availability	15345	23900	12-May-23
	Requirement	15190	27200	
	Surplus / Shortfall	155	-3300	
	% Surplus / Shortfall	1.0%	-12.1%	
UTTARAKHAND	Availability	1365	2370	11-May-23
	Requirement	1387	2380	
	Surplus / Shortfall	-23	-10	
	% Surplus / Shortfall	-1.6%	-0.4%	
NORTHERN REGION	Availability	48063	73400	
	Requirement	45364	72700	
	Surplus / Shortfall	2699	700	
	% Surplus / Shortfall	5.9%	1.0%	

5. Submission of breakup of Energy Consumption by the states

5.1. The updated status on the submission of energy consumption breakup is presented below:

State / UT	From	To
Delhi	Apr-2018	Feb-2023
Haryana	Apr-2018	Mar-2023
Himachal Pradesh	Apr-2018	Mar-2023
Punjab	Apr-2018	Mar-2023
Rajasthan	Apr-2018	Mar-2023
Uttar Pradesh	Apr-2018	Jan-2023
Uttarakhand	Apr-2018	Jan-2023

5.2. OCC forum again expressed concern on non-submission of energy breakup data by UTs of J&K &Ladakh, and Chandigarh despite repeated reminders.

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

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

6.2. In 207thOCC, SLDCs were requested again to coordinate with respective Transmission Utilities of states/UTs and submit details about the updated status of Down Stream network by State Utilities from ISTS Station (enclosed as ***Annexure-A-I.I***) before every OCC meeting.

7. NR Islanding scheme

7.1. In the meeting (207th OCC), EE(P) apprised forum that draft report submitted by CPRI for Agra-Lalitpur Islanding scheme was deliberated in previous OCC meeting and UPSLDC was asked to take up the issues discussed in the meeting with CPRI. In the 207th OCC meeting, UPSLDC representative intimated forum that they have communicated the matter to STU vide letter dated 21.04.2023 for taking up with CPRI and comments from CPRI are awaited. MS, NRPC asked UPSLDC to kindly follow up with CPRI and expedite the matter.

7.2. Representative from UPPTCL apprised forum that with regard to Lucknow-Unchahar islanding scheme, the tender floated for procurement of UFR's for the aforesaid islanding scheme has been cancelled due to technical reasons and retendering has been done.

7.3. Representative from Rajasthan SLDC intimated forum that they have sought status from STU with regard to preparation of DPR for PSDF funding for Jodhpur-Barmer-Rajwest and Suratgarh islanding scheme, however, the same is awaited from STU.

7.4. EE(P) apprised forum that Pathankot-RSD islanding scheme has been implemented in March end, however, testing/commissioning reports with regard to islanding scheme is awaited. Punjab SLDC representative informed forum that testing/commissioning reports are under approval and same would be shared within a week.

7.5. Further, with regard to Patiala-Nabha Power Rajpura islanding scheme representative from Punjab informed that tendering in under progress.

7.6. With regard to Kullu-Manali islanding scheme representative form HPSLDC apprised forum that discom has intimated that upon approval from their management tentative timeline for implementation is around six months. Further, he intimated that no date has been received from Malana for PFR testing.

7.7. With regard to Shimla-Solan islanding scheme representative from HPSLDC apprised forum that as per the deliberation done in separate meeting held on 11.04.2023 among NRPC, NRLDC, HPSLDC, HPSEBL, HPPTCL and various generators involved in Shimla-Solan islanding scheme, HPSLDC has explored the option of island excluding two generators namely Sumez and Suryakanta generators. The minutes for the aforesaid meeting has been received and same is being followed with generators for under frequency setting below the islanding frequency (47.9 Hz).

7.8. EE(P) apprised forum that Delhi islanding scheme is under revision and there has been one round of meeting to deliberate on steady state analysis of PSSE base case of Delhi islanding scheme and based on the discussion held in the aforesaid meeting, revised scheme submitted by Delhi has been forwarded to

NRLDC for comments. NRLDC opined that another physical meeting may be held for further deliberation on the same.

8. Coal Supply Position of Thermal Plants in Northern Region

8.1. In the meeting, NRPC representative apprised the forum about the coal stock position of generating stations in northern region during current month (till 10thMay 2023).

8.2. Average coal stock position of generating stations in northern region, having critical stock, during first ten days of May 2023 is as follows:

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd. (Days)	Actual Stock (Days)
TALWANDI SABO TPP	1980	73.43	26	2.5

8.3. In the meeting, above mentioned generating station was requested to take adequate measures.

9. SPS protection logic review at PPGCL (Agenda by UPSLDC)

9.1. The cited matter was deliberated in the 206th OCC meeting held on 18.04.2023 and special meeting held on subject issue on dated 12.05.2023.

9.2. UPSLDC representative apprised forum that based on the discussion in the aforesaid meetings the revised logic has been finalized by UPSLDC which is enclosed as **Annexure-A.II.**

9.3. Further, UPSLDC representative apprised forum that in case of tripping of 765kV Jawaharpur-Gr Noida line, there would be transmission constraint in evacuation of power from Jawaharpur TPS as there is single ICT of 1000 MVA capacity at 765kV substation Mainpuri. Therefore, SPS need to be planned at Jawaharpur TPS.

9.4. OCC forum approved the revised SPS logic at PPGCL Bara (detailed logic is attached at **Annexure-A.II).** However, forum asked UPSLDC to submit the plan for complete communication system network/infrastructure in the Bara complex with NRPC Sectt. and NRLDC before implementation of the SPS scheme.

9.5. ***Decisions of the Forum***

- *OCC forum approved the revised SPS logic at PPGCL Bara (detailed logic is attached at Annexure-A.II). However, forum asked UPSLDC to submit the plan for complete communication system network/infrastructure in the Bara complex with NRPC Sectt. and NRLDC before implementation of the SPS scheme.*

10. Replacement of existing 100 MVA, 220/132 kV ICT at Sitarganj with regional spare 160MVA, 220/132 kV ICT with provision of the LT Auxiliary Supply from the tertiary (Agenda by Powergrid/NR-3)

10.1. In regard to cited matter, NR-3 Powergrid representative apprised forum that in existing system at Sitarganj S/s, there are three ICTs of 100MVA each and all of which do not have provision for tertiary winding for taking auxiliary supply for the systems installed at Sitarganj Substation. Presently these ICTs are taking supply from 02 Nos. UPCL LT Supply Feeder Sources available at Sitarganj Substation which are not reliable in operation and both feeders frequently experience fault or interruption of supply which causes frequent switching of the auxiliary supply (especially during the summer season).

10.2. Further, he intimated that a 160MVA ICT at Sitarganj has been commissioned (DOCO 05.07.2022) as Regional Spare ICT at Sitarganj Substation of NR-3 under the project “Provision for Spare ICTs in Northern Region”.

10.3. In the meeting, Powergrid requested forum for the following:

— replacement of existing 100MVA 220/132kV ICT at Sitarganj with Regional Spare 160MVA 220/132kV ICT (having the provision of the LT Auxiliary Supply from the tertiary) and keeping the replaced 100 MVA220/132 ICT as regional spare.

— Further, Powergrid also requested for reimbursement of the cost to be incurred in the replacement of the 100MVA 220/132kV ICT at Sitarganj with Regional Spare ICT along with the cost for the provision of necessary tertiary bay equipment & protection system for using the tertiary winding for station auxiliary power supply needs.

— Required outage for the above replacement may be considered as deemed available in view to system improvement and reliable grid operation.

10.4. Uttarakhand SLDC mentioned that with regard to capitalization of cost, view of beneficiary i.e. State discom may be sought. As State discom is not present in the OCC meeting the same may be deliberated in NRPC forum.

10.5. MS, NRPC was of view that the cited agenda may be taken up in the NRPC meeting for deliberation with CTU, UPCL and other constituents.

10.6. ***Decisionof the Forum***

- *OCC forum was of view that cited agenda shall be taken up in the NRPC meeting for deliberation with CTU, UPCL and other constituents.*

11. Non Compliance of N-1 contingency in ICTs at Allahabad and Mainpuri Sub

Stations (Agenda by Powergrid/NR-3))

11.1. In regard to cited matter, NR-3 Powergrid representative apprised forum that in the existing system there are three 315 MVA, ICTs at Allahabad Sub-station and two 315 MVA ICTs and one 500 MVA ICT at Mainpuri Sub-station. Further, he highlighted that loading on these ICTs have increased substantially in past few years.

11.2. In the meeting, Powergrid requested forum that to review the need for additional transformation capacity at Allahabad and Mainpuri substations, CTU may be asked to do the system studies based on present and future forecasted load. Further, for contingency measure due to overloading of ICTs, System Protection Scheme (SPS) may also be considered and advised till implementation of capacity augmentation.

11.3. NRLDC representative intimated forum that N-1 issue at 400/220kV Allahabad(PG) Sub-station is already highlighted in the Q1, Q2 feedback of last F.Y. with CTU. Further, he highlighted that at present, there is no major N-1 issue at 400/220kV Mainpuri (PG) Substation.

11.4. CTU representative intimated forum that they have asked Powergrid to confirm whether space is available for new 4th ICT at Allahabad (PG) & Mainpuri (PG) Substation. Based on the load profile communicated by NRLDC and space availability for 4th ICT, they will further deliberate on this matter in their 'consultation meeting for evolving transmission schemes' for augmentation of 400/220kV transformation capacity at Allahabad and Mainpuri sub-station.

11.5. OCC forum asked Powergrid to propose a SPS scheme at Allahabad Substation in consultation with UP till implementation of capacity augmentation.

11.6. ***Decisions of the Forum***

- *OCC forum asked Powergrid to propose a SPS scheme at Allahabad Substation in consultation with UP till implementation of capacity augmentation.*

12. Regional Transmission Deviation Account of NR-Declaration of High inflow season (Agenda by NRPC Sectt.)

12.1. OCC forum agreed that High inflow season for the purpose of calculation of RTDA only would be deliberated and declared in OCC meeting of NRPC every year. Further, High inflow season for the hydro stations (grouped basin-wise) may comprise of consecutive/ non-consecutive months of high inflows.

12.2. It was also agreed that hydro generating companies may propose High inflow season for their stations in line with above methodology and furnish latest 5 years water inflow series to NRPC sectt. Subsequently, High inflow season for FY 2023-24 will be declared in upcoming OCC of NRPC. Whereas, High inflow

season for hydro stations (grouped basin-wise) for FY 2021-22 and 2022-23 will be finalized considering actual scheduling of the stations.

12.3. ***Decisions of the Forum***

- *OCC forum asked hydro generating companies to propose High inflow season for their stations in line with above methodology and furnish latest 5 years water inflow series to NRPC sectt.*
- *High inflow season for FY 2023-24 will be finalized in upcoming OCC of NRPC. Whereas, High inflow season for hydro stations (grouped basin-wise) for FY 2021-22 and 2022-23 will be finalized considering actual scheduling of the stations.*

13. Table Agenda No.1: Regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 from RSD following Transmission Constraint (Agenda by APCPL-IGSTPS JHAJJAR)

13.1 In the meeting, APCPL representative highlighted that presently two transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are under forced outage since 08.05.2023 due to tower bending and these lines are expected to be revived around 25th May. Currently, IGSTPS Jhajjar is evacuating power through 400kV Jhajjar-Mundka-1 & 2 with thermal limit of 852 MW each circuit.

13.2 As all India demand is on rising trend and considering dry weather spell in coming days, Grid-India has been requesting APCPL to bring Unit-1 on bar from RSD through requisition from its beneficiaries.

13.3 APCPL in its communication to GRID-India (correspondence attached as **Annexure-A.III.)** in this regard has been stating that third machine is available to be brought on the bar. However, due to transmission constraint owing to non-availability of Jhajjar-Daulatabad circuit 1 & 2 (owned by HVPNL) bringing third machine on the bar and running on full load is a safety concern.

13.4 In the meeting NRLDC informed that after analysing transmission network status around the generating plant of Jhajjar they have requested APCPL to bring the third machine on bar with load restriction of 1200 MW on two available transmission lines.

13.5 APCPL mentioned that they will not be able to back down upto safe evacuation limit of 850 MW in case (n-1) condition arises and requested for their schedule to be restricted to 1000 MW.

13.6 On this matter, NRLDC representative suggested that APCPL might explore the possibility of bus splitting at Jhajjar S/s with two machine evacuating around 800 MW on one bus with one line and third machine evacuating 500 MW on another bus with second line.

13.7 In that case if one line trips, then third machine is also tripped and two machines can evacuate around 800 MW on another line and vice-a-versa.

13.8 OCC forum asked APCPL to explore the option of bus splitting as suggested by NRLDC.

13.9 Decisions of the Forum

- *OCC forum asked APCPL to explore the option of bus splitting as suggested by NRLDC.*

14. Table Agenda No.2: Regarding SPS Scheme for 2 ICT's of Bawana Substation of DTL (Agenda by DTL)

14.1. DTL representative apprised forum that at Bawana Substation there are total six ICTs and interconnector from DTL Bawana to PPCL Bawana is open due to high fault level at Bawana sub-station. Further, he informed that there are two ICT's at 400 kV Bawana DTL and four ICT's at 400 kV Bawana CCGT.

14.2. DTL representative also mentioned thatthe 2nos. 315MVA ICTs running in parallel at 400 kV Bawana DTL are feeding 220kV Kanjhawala S/Stn and 220kV Rohini-II S/Stn. The load of 66kV is also fed from these ICTs through 1 no. 100MVA Transformer. The combined maximum load of 220kV Kanjhawala & Rohini-II S/Stn is about 390MW and that of 100MVA Transformer is about 63MW.

14.3. Further, he stated that the proposed SPS at Bawana Substation is designed to take care of N-1 contingency of 2 nos. 315MVA ICTs running in parallel. Proposed SPS scheme is implemented to prevent the cascaded tripping of the 315MVA ICTs in case of contingency by providing load relief on 220kV level. Proposed SPS scheme is implemented on 220kV side of 315 MVA transformers using numerical relays.

SPS Actions:

1. Tripping of 100MVA Transformer at 400kV S/Stn Bawana, thus providing load relief of about 63MW at peak load.
2. Tripping of 66kV RG-23 Ckts 1 & 2 at 220kV S/Stn Kanjhawala, providing total load relief of about 70MW at peak load.

   The tripping command from 400kV S/Stn Bawana to 220kV S/Stn Kanjhawala will be sent through numerical current line differential relay on fibre.

14.4. NRLDC representative mentioned that they will study the abovementioned SPS logic and thereby submit its observation.

14.5. ***Decisions of the Forum***

- *OCC forum asked NRLDC to submit its observation for the abovementioned SPS logic after examination.*

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

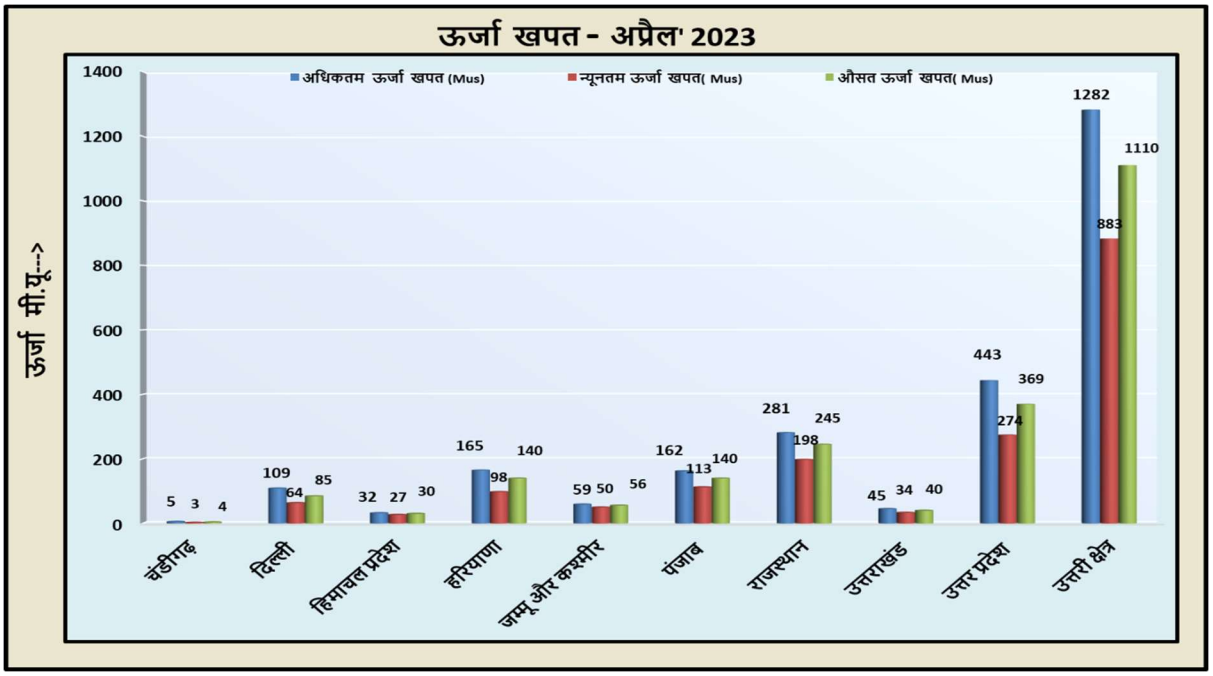
15. NR Grid Highlights for April 2023

NRLDC representative highlighted the major grid highlights of Apr 2023:

- Maximum energy consumption of Northern Region was **1282 MUs** on 18rd April'23 and it was 6.7 % lower than April' 22 (1337 MUs 30th April'22)
- Average energy consumption per day of Northern Region was **1110 MUs** and it was 9.1 % lower than April'22 (1220 Mus per day)
- Maximum Demand met of Northern Region was **60996 MW** on 18th April'23 @19:00 hours (*based on data submitted by Constituents)* as compared to 62217 MW on 30th April'22 @12:00 hours

No all-time high value recorded in April'23:

Energy Consumption:



- **Comparison of Average Energy Consumption (MUs/Day) of NR States for the April'22 vs April'23**

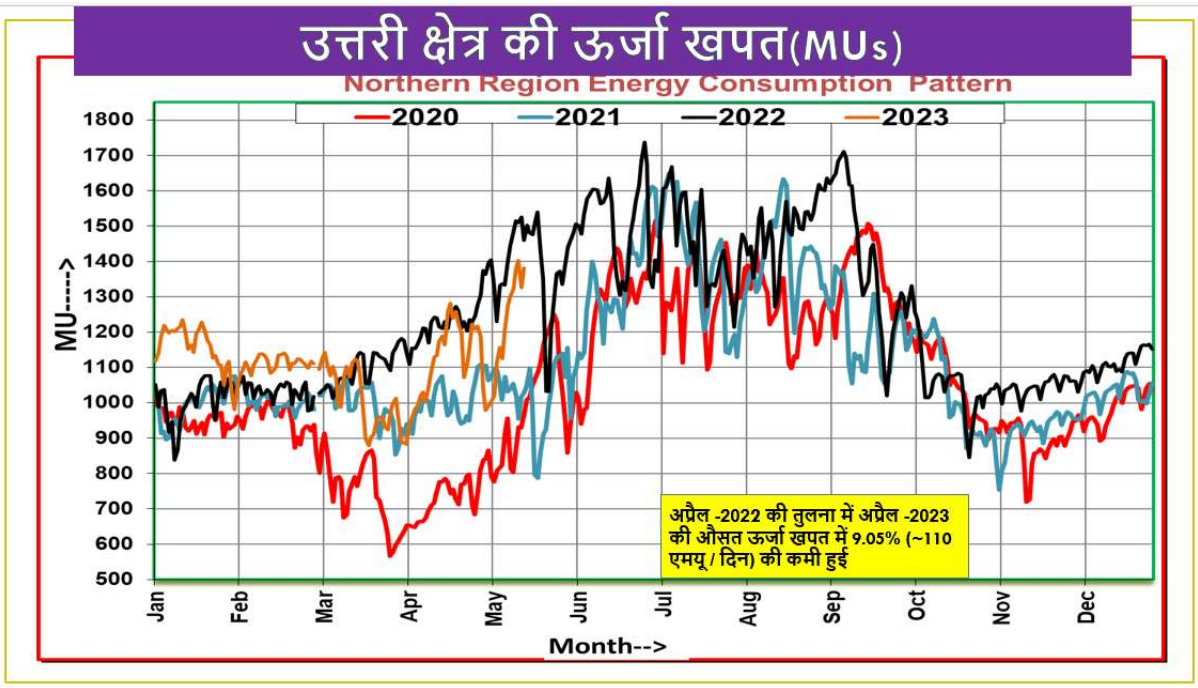
क्षेत्र/राज्य	अप्रैल - 2022	अप्रैल - 2023	%अंतर

चंडीगढ़	4.9	4.0	**-17.3%**
दिल्ली	105.7	85.1	**-19.5%**
हिमाचलप्रदेश	32.1	30.5	**-5.2%**
हरियाणा	151.3	139.8	**-7.6%**
जम्मूऔरकश्मीर	44.9	55.8	**24.4%**
पंजाब	162.4	139.8	**-13.9%**
राजस्थान	258.9	245.3	**-5.3%**
उत्तराखंड	41.2	40.2	**-2.4%**
उत्तरप्रदेश	419.0	369.4	**-11.8%**
उत्तरीक्षेत्र	**1220.5**	**1110.0**	**-9.1%**

Frequency Data

Month	**Avg. Freq. (Hz)**	**Max. Freq. (Hz)**	**Min. Freq. (Hz)**	**<49.90 (% time)**	**49.90 – 50.05 (% time)**	**>50.05 (% time)**
Apr'23	49.99	**50.33** on 23.04.23 at 08:59 hrs	**49.49** On 15.04.23 at 22:09 hrs	12.2	67.9	19.9
Apr'22	49.93	50.26 On 14.04.22 at 18:02 hrs	49.43 on 19.04.22 at 14:09 hrs	31.9	59.3	8.8

Detailed presentation on grid highlights of Apr'2023 as shared by NRLDC in OCC meeting is attached as Annexure-B.I. It was highlighted that demand of NR has been lower in 2023 compared to 2022 due to comfortable weather conditions. Comparison of demand as shown in meeting is shown below:

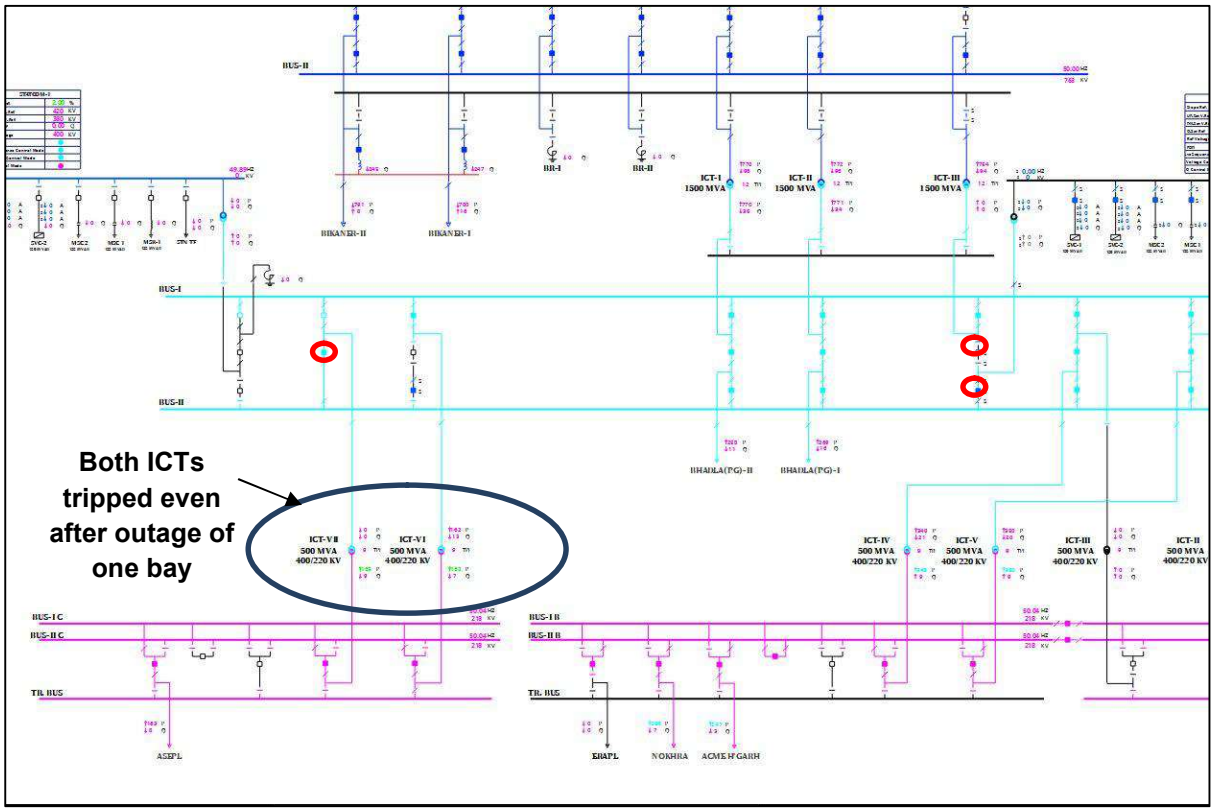


OCC forum noted the presentation and details shared by NRLDC representative.

16. Grid Operation related issues

a) Ensuring reliability at substation level

NRLDC representative described an event on 5th May 2023. It was mentioned that 400kV Bus-1 at Bhadla-II tripped on busbar protection. Before the tripping, emergency shutdown of 400/220kV ICT-VII main bay was availed to attend CT alarm, during shutdown activities 400kV bus 1 got tripped due to bus bar protection operation. Due to this the 400/220kV 500MVA ICT 7 got tripped as it was connected with only Tie CB with 400kV bus 2 (Tie CB was not supposed to trip).



400/220kV 500MVA ICT VI and 765/400kV 1500MVA ICT 3 got tripped as both were only connected to 400kV bus 1 through main CB only. 220kV Bhadla-ASEPL line got tripped due to tripping of 500MVA ICT VI and 500MVA ICT 7. ***300MW Solar generation loss occured due to tripping of 220kV Bhadla-ASEPL line(Loss of evacuation path).***

Apart from above, various tripping have also been reported in Bikaner(Raj) as the main bay of 400kV Bikaner-Deedwana line was under forced outage. 400kV Bikaner-Deedwana line was charged through TIE breaker at Bikaner(RS) end. For instance on 4th May 2023, 400kV Bikaner-Suratgarh Ckt 2 tripped @ 11:10hrs. At the same time, 400kV Bikaner-Deedwana Line also tripped, which is on the same DIA of 400kV Bikaner-SCTPS-II line.

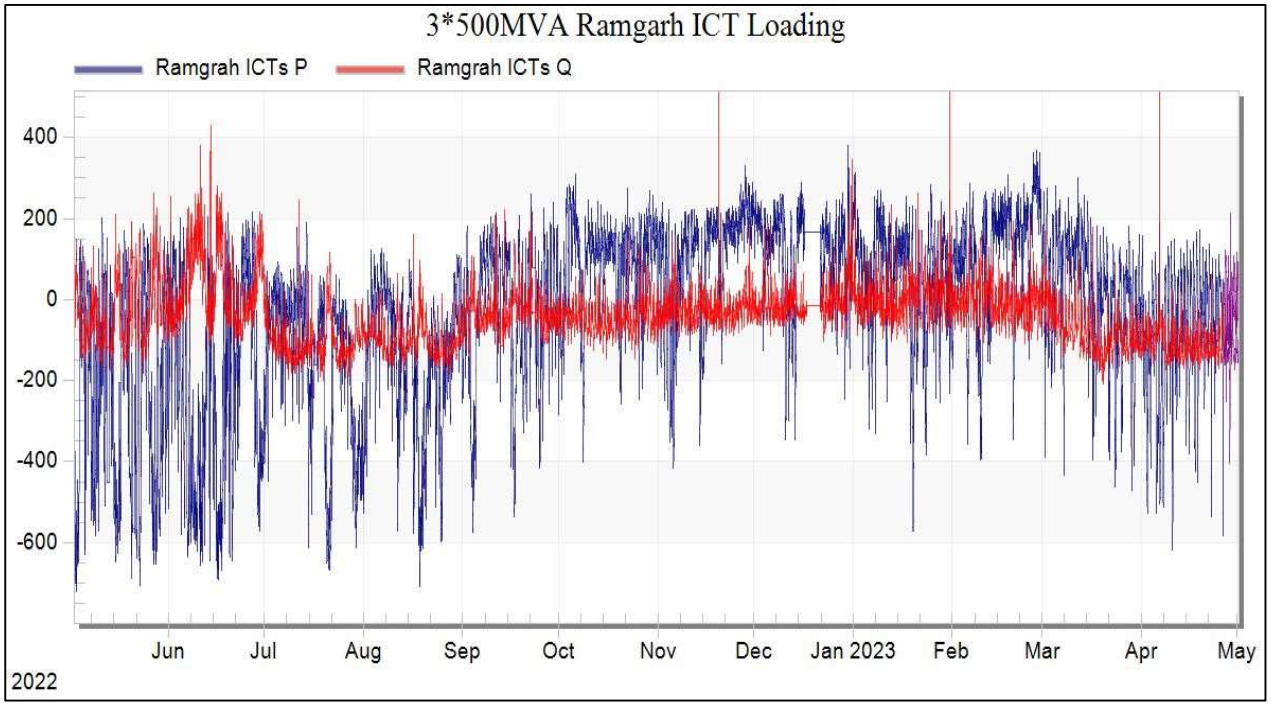
It is well known that lines in Bikaner area are heavily loaded during peak solar generation hours. Thus, this resulted in critical situation in complex as any further tripping may have lead to much larger event in the RE complex.

OCC forum agreed that utilities to make sure that reliability is ensured at substation by expediting revival of bays under forced /planned outage and closing of DIA in case of outage of transmission element so as to avoid such events in future.

b) Shifting of 400/220kV 500 MVA ICT-I from 400 kV Ramgarh to 400 kV GSS Bhadla

RVPN had communicated that 400/220 kV, 500 MVA ICT III at 400 kV GSS Bhadla tripped on 19.04.2023 and needs to be repaired at original equipment manufacturer (OEM) premises. As 400/220kV ICTs at RE pooling stations were planned without N-1 compliance, outage of one 500 MVA ICT is leading to solar generation evacuation issues at Bhadla. To overcome this, RVPN requested for shifting of 400/220 kV, 500 MVA ICT from 400 kV GSS Ramgarh to 400 kV GSS Bhadla after approval in whole-time director meeting.

In the proposal, it was mentioned by RVPN that loading of 400/220kV 3*500MVA ICTs at Ramgarh GSS is low. On observing the loading pattern of ICTs for last year as shown below, it can be clearly seen that the ICT loading is exceeding 650MW during high wind generation period (Jun-Aug months).



NRLDC representative stated that in view of above, 400/220kV 2*500 MVA ICTs at Ramgarh may become N-1 non-compliant (80-85% sensitivity) during high wind generation months. Accordingly, it was suggested that new 500MVA ICT at Ramgarh may be commissioned expeditiously after repair from OEM premises. Moreover, till the commissioning of new 500MVA ICT, SPS may be planned and implemented at 400/220kV Ramgarh GSS after discussion in OCC forum so as to avoid wind generation loss in case of N-1 contingency.

NRLDC representative also presented plots of 15th May 2023 and stated that loading of 2*500MVA ICTs was beyond 280MW each during high wind scenario and therefore ICTs were n-1 non-compliant.

Rajasthan SLDC stated that they are planning for SPS at Ramgarh GSS and ICT at Ramgarh would be available only after 12 months when it is repaired in OEM premises.

OCC asked RVPN to expedite their ICT repair work, SPS design & implementation at Ramgarh.

c) ADMS status of NR states

Delhi, Rajasthan and Haryana SLDC were asked to provide update regarding ADMS implementation.

Delhi SLDC was asked to provide update on decision held in 64thNRPC meeting regarding providing automatic action in ADMS scheme.

Delhi SLDC stated that they are discussing the matter with DISCOMs in state OCC meeting, and would share timeline after discussion in internal OCC meeting.

Haryana SLDC representative stated that matter is being taken up with DISCOMs but no response is received from DISCOM end. DISCOM were also informed about PSDF funding availability for ADMS scheme still, no action is initiated from DISCOM end.

Rajasthan SLDC representative stated that as per latest information available, scheme is likely to be completed by Jun'2023.

SE, NRPC stated that separate meeting will be called with states regarding progress and work on ADMS implementation.

OCC asked all states to expedite ADMS implementation.

d) Jawaharpur TPS dynamic data submission & synchronisation without NRLDC code

It was discussed that all checks and data formats to be provided in approved first time charging procedure need to be duly submitted by utilities. Availability of fit-for-purpose steady state and dynamics models of generating stations will enable secure operation of Indian power grid and enable identification of potential weak points in the grid so as to take appropriate remedial actions.

Dynamic data analysis of generating station is helpful to:

- Permit power system assets to be run with margins determined on the basis of security assessments
- Facilitate the tuning of control systems, such as power system stabilizers, voltage- and frequency-based special control schemes etc.

- Improve accuracy of online security tools, particularly for unusual operating conditions, which in turn is likely to result in higher reliability of supply to power system users
- Perform various studies including dynamic studies, islanding studies, black start studies etc. as per requirement.

After receiving dynamic data from generating station, testing is carried out on single machine infinite bus system. Flat run, bus fault and line fault in this subsystem is then simulated to assess the response of generating station when connected to infinite bus. The oscillatory nature of response is observed and it is checked whether machine is reaching steady state or not for all cases.

Unit 1 of 660MW at Jawaharpur TPS was to be synchronized in last week of April 2023. First Time Charging approval for said unit was not issued by NRLDC. NRLDC mail vide dated 28.04.2023, conveyed that documents along with dynamic data for synchronization of 660MW generating unit-1 Jawaharpur TPS were submitted on late night of 26.04.2023 and same is being checked by NRLDC study team. Further, NRLDC control room also conveyed that approval for charging of said unit has not been issued.

660MW Unit 1 at Jawaharpur TPS was synchronized at 04:06 hrs. Load was increased upto 46MW and hand tripped box up at 04:27hrs on 29.04.2023. This is clear violation of Indian electricity grid code.

UP SLDC representative stated that all data as per FTC procedure were submitted to NRLDC, only consent regarding dynamic data parameters was to be received from NRLDC. Further, as informed by Jawaharpur TPS, once turbine parameters are achieved and unit is rolling @ 3000rpm, synchronisation cannot be delayed as it may cause deviation in metal temperature of turbine and unnecessary loss of fuel. It was assured by UP SLDC that such instances would not be repeated in future.

NRLDC representative stated that as previously requested, utilities are well aware about the new elements to be commissioned, therefore all data required as part of first time charging procedure is submitted well in advance so that sufficient time is available with NRLDC for scrutiny of submitted data.

MS NRPC asked all states to adhere to IEGC and follow instructions of RLDC. It was also mentioned that states should not take any measure which compromises safety and security of the grid.

OCC asked all utilities to follow the NR FTC procedure before first time charging of elements and make sure that there is no violation of Indian electricity grid code.

e) Procedure for integration of power system element into the grid

As a handholding initiative an online session was taken by NRLDC on **10.05.2023** to familiarize the "**procedure for integration of power system element into the grid**" for new and modified elements. NRLDC officials from SCADA, Metering, Protection department, Studies department and FTC coordinator explained the requirement and issued faced during the process of new element charging.

More than 100 officials from UPPTCL, UP SLDC offices substations, generating stations etc. including Director Operation UPPTCL, ED NRLDC were present during the session.

It was a healthy discussion between the UP and NRLDC officials with officials from UP participating and benefitting from the discussion. It is expected that utilities will be benefited from such session as well it will ease the coordination between the two while facilitating the new element charging. Similar sessions with other states/utilities shall be organised by NR in near future.

OCC forum appreciated the efforts of NRLDC.

f) Long outage of transmission elements

Some of the key elements that need to be revived at the earliest were presented in the meeting:

- 400/220 kV 240 MVA ICT 2 at Orai(UP)
- 400/220 kV 315 MVA ICT 2 at Mundka(DV)
- 400/220 KV 240 MVA ICT 3 AT Moradabad (UP)
- 400KV Bus 1 at Vishnuprayag(JP)
- 400KV Bus 2 at Parbati_3(NH)
- 400KV Bus 2 at Noida Sec 148(UP)
- 400 KV Jodhpur-Kankani (RS) Ckt-1
- 400 KV Gr.Noida_2(UPC)-Noida Sec 148 (UP) Ckt-1
- 220 KV Gazipur(DTL)-Noida Sec62(UP) (UP) Ckt-1
- 220 KV Gazipur(DTL)-Shahibabad(UP) (UP) Ckt-2
- 220 KV Kishenpur (PG)-Mir Bazar (PDD) Ckt-1

List of generating units under long outage is attached as Annexure-B.I of agenda.

It was mentioned that number of thermal generating units are under outage in Rajasthan.

UP representative stated that 400KV Bus 2 at Noida Sec 148(UP) is expected by Jun'23 end. All other elements are not expected in next 2 months. No

major issues is expected in summer/monsoon due to forced outage of the elements listed above.

NHPC representative stated that 400KV Bus 2 at Parbati_3(NH) is expected to be revived by 15th Jun'23.

NRLDC representative asked to expedite ICT replacement at Mundka, 400kV Jodhpur-Kankani and 400kV Bus1 at Vishnuprayag.

Utilities were asked to take proactive steps to ensure that minimal transmission constraints are observed during the high demand season.

OCC asked all utilities to expedite restoration of the Grid elements under long outage at the earliest and also provide an update regarding their expected restoration date/time in the meeting/ NRLDC outage portal. It was requested to provide update regarding the likely revival date for these generating units in the meeting/ NRLDC outage portal.

g) Update of Important grid element document in line with IEGC:

In line with section 5.2. (c) of IEGC, list of important grid elements in Northern region is being compiled by NRLDC. Such elements shall be opened/closed only on instructions from NRLDC. NRLDC has requested utilities to submit the list of all elements with details charged under their jurisdiction from 1.4.2022 till date including those expected to be commissioned till May 2023 so that the same could be included in the list vide email dated 23rd March 2022.

In 206 OCC meeting, it was requested to provide details before 30th April 2023. However, response from most of the utilities is still pending.

Last updated document is available at following link https://nrldc.in/download/important-grid-element-of-northern-region-may-2022/?wpdmdl=10389. Any other feedback related to inclusion/deletion of elements may also be provided at the earliest.

Haryana SLDC representative stated they have shared the data. Other utilities were asked to provide update.

h) Update of Operating Procedure document of Northern region:

In compliance with Regulation 5.1 (f) of Indian Electricity Grid Code, Operating Procedure document would be updated by NRLDC in mid-July 2023. Latest available document is available@ *https://nrldc.in/download/final-operating-procedure-for-northern-region-2022-23/?wpdmdl=10826*

OCC asked utilities to provide their inputs/comments for any suggested changes in the document. It was requested that inputs/comments may be provided by 31st May 2023.

17. Data Preparation for Resource Adequacy Studies

In 206 OCC meeting, the agenda was discussed in detail wherein NRLDC representative presented the letter from Chairperson, CEA and excel sheet in which data was requested by CEA and explained all the data requirements as mentioned in excel file. It was also mentioned that utilities may discuss with NRLDC officers regarding any query/ issues faced while preparation of data.

Format in which data is to be submitted by respective utilities is available @ *https://docs.google.com/spreadsheets/d/1yHDNxVEUHuWdCunNLr7vg009LZX7JMkf/edit?usp=share_link&ouid=101952646418859842988&rtpof=true&sd=true.*

In the meeting, all state utilities were asked to furnish the data and nomination of officers for data preparation and to carry out RA studies to CEA with copy to NRPC/ NRLDC. ISGS generators were asked to submit the data to NRLDC in attached format for compilation and further sharing with CEA. OCC members agreed to provide the data by 30th Apr 2023*.*

In 207 OCC meeting, HP, Uttarakhand and UP representatives stated that they are preparing data and it would be shared at the earliest.

OCC asked all utilities to furnish the data to CEA/ NRPC/ NRLDC as agreed in 206 OCC meeting at the earliest.

18. TTC/ATC of state control areas for summer 2023

As discussed in previous OCC meetings, most of the NR states except J&K, Ladakh and 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.

Discussions held in 207 OCC meeting:

Haryana:

TTC: 9100MW

ATC: 8500MW

Haryana representative stated that following works are expected by Jun'23:

- New 500MVA ICT at Kurukshetra(PG)
- Connection of one circuit of 220 KV Jhajji - Rai D/C line and 220 kV Rai - RGEC D/C line on terminal towers outside 220 KV GIS S/Stn. HSIIDC, Rai (U/C) to give relief at 400 KV S/Stn Deepalpur
- 220kV Sec 32 Panchkula and 220kV lines to Panchkula (PG) (expected by Jun 2023 end)
- 220kV lines from Panchkula(PG) to Pinjore (expected by Jun 2023 end)
- Matter regarding new ICT at Deepalpur is under discussion with Indigrid.

Punjab:

TTC: 9000MW

ATC: 8500MW

Punjab representative stated that following works are expected shortly:

- One ICT replacement by 500MVA capacity at Ludhiana(PG) and Moga(PG) each (first week of Jun)
- 315MVA ICT to 500MVA ICT at Nakodar (second week of Jun)
- 400/220kV Dhanansu S/s (mid-July)

Delhi:

TTC: 7100MW

ATC: 6800MW

NRLDC representative asked Delhi SLDC to submit which feeders would be opened, Radial network details & Bus split to be implemented during high demand.

NRLDC representative stated that non-availability of ICT at Mundka would create N-1 related issues at Mundka. Last year, even with three ICTs, N-1 non-compliance was observed and presently, only two ICTs are available. It was also mentioned that given the criticality, mock testing of already implemented SPS may be carried out at 400/220kV Mundka.

Rajasthan:

TTC: 7600MW

ATC: 7000MW

RVPN representative informed the following:

- Proposal for capacitor bank installation was approved and is presently with PSDF. Few queries have been received from PSDF, reply for which would be submitted shortly.
- PMU data sharing would be completed by 15th June 2023.

UP:

TTC: 15100MW

ATC: 14500MW

UP representative stated that new ICT at 400/220kV Sohawal is expected shortly whereas at Gorakhpur (UP), ICT replacement is not expected in this summer. UP representative stated that mock testing has already been carried out at Nehtaur & Gorakhpur S/s and would also be carried out at other substations shortly.

HP:

HP SLDC & POWERGRID informed that CT ratio at Nallagarh end has been changed and line can now be loaded to higher power (more than 350MW) provided margin availability in 400/220kV ICTs at Nallagarh.

Uttarakhand:

Uttarakhand SLDC vide email dated 28.04.2023 submitted their ATC/TTC assessment for summer 2023. NRLDC vide email dated 02.05.2023 have shared their comments to the ATC/TTC assessment done by Uttarakhand.

Uttarakhand SLDC agreed to provide update and mock testing report of Kashipur SPS.

J&K

Loading of 400/220kV Amagarh ICTs was above N-1 contingency limits. 220kV Amargarh-Ziankote D/C lines are also N-1 non-compliant for most of the time during winter months.

Apart from above, there are issues related to huge MVAR drawl by J&K control area during winter season.

J&K representatives had intimated during 47th TCC and 49th NRPC meeting that they would be sharing ATC/TTC assessment with NRLDC from October 2021, however the same is still awaited.

NRLDC had taken online training sessions for J&K representative (two in Feb 2023, two in March 2023 and two in Apr 2023). J&K and Ladakh U/Ts are once again requested to advise the concerned officers to evaluate their ATC/TTC limits in coordination with NRLDC and share latest assessment with NRLDC and NRPC.

Punjab, Haryana, HP, Uttarakhand & UP are communicating with NRLDC regularly regarding ATC/TTC assessment for summer/monsoon 2023. However, other states such as Delhi, Rajasthan and J&K are yet to provide their ATC/TTC assessments for summer/monsoon 2023.

Punjab, Haryana and UP have shared their ATC/TTC assessment considering number of transmission elements that were anticipated to be commissioned. Based on actually commissioned transmission elements, these states are requested to review and submit their ATC/TTC for summer/monsoon 2023.

It was again requested that SLDCs may 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. NRLDC is continuously sending emails in real-time for ensuring N-1 compliances as well as restricting schedule till ATC limit and maximizing internal generation. SLDCs need to ensure this during real-time operation.

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**

It is seen that most of the links are old and have old ATC/TTC limits.

OCC asked all SLDCs to regularly update ATC/TTC limits as agreed between SLDC and NRLDC.

19. Frequent forced outages of transmission elements in the month of April'23:

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

S. No.	Element Name	No. of forced outages	Utility/SLDC
1	220 KV Debari(RS)-RAPS_A(NP) (RS) Ckt-1	6	NPCIL/Rajasthan
2	220 KV Dasuya(PS)-Jalandhar(BB) (BBMB) Ckt-2	4	BBMB/Punjab
3	220 KV Panipat(BB)-Narela(DV) (BBMB) Ckt-1	4	BBMB/Delhi
4	400 KV Bareilly-Unnao (UP) Ckt-1	9	UP
5	400 KV Ballabhgarh(PG)-Tughlakabad(PG) (DTL) Ckt-2	3	Delhi/POWERGRID
6	220 KV Khara(UP)-Saharanpur(PG) (UP) Ckt-1	3	UP/POWERGRID

The complete details are attached at **Annexure-B.II** of Agenda.

Discussion during the meeting:

- **220 KV Debari(RS)-RAPS_A(NP) (RS) Ckt-1:***NRLDC representative raised concern over frequent faults in line. Rajasthan representative informed that line passes through forest area so frequent faults occurred due to vegetation clearance issue. Rajasthan was requested to ensure Right of Way by tree trimming to minimise the number of trippings. Rajasthan agreed for the same.*

- **400 KV Bareilly-Unnao (UP) Ckt-1:***NRLDC representative raised concerned on frequent tripping of line, trippings were reported during previous months also. He further stated that issue in Main-2 relay at Bareilly end and some design issue in line configuration were informed by the UP in previous OCC meetings. UP representative informed that they will test the Main-2 relay & A/R relay at Bareilly end within next 15 days and take actions accordingly. It was also informed that there is no further follow-up on design related issue of line. NRLDC representative emphasized to expedite the testing work of Main-2 relay and take corrective actions on priority to minimise the frequent tripping in line. UP representative agreed for the same.*

- **220 KV Khara(UP)-Saharanpur(PG) (UP) Ckt-1:** *NRLDC representative raised concern over delayed clearance of fault. UP representative informed that relay at Khara end are of electromechanical type and faults were also not captured by the relay during the incidents. Fault then cleared with the tripping of line from remote end and thus delayed clearance of fault occurred. It was further informed that process of replacing electrochemical relay with numerical relay has been started, it will be completed within 2-3 months. NRLDC representative emphasized to expedite the corrective actions to avoid delayed clearance of fault. UP representative agreed the same.*

- **400 KV Ballabhgarh(PG)-Tughlakabad(PG) (DTL) Ckt-2: NRLDC** *representative asked the reason of occurrence of multiple faults in line. POWERGRID representative informed that patrolling of the line was done on 7th& 11th May, no fault was found in POWERGRID section of the line. However, a tree was found in DTL section, trimming of the same was done on 12th May. NRLDC represented emphasized DTL to take necessary actions to ensure the Right of Way.*

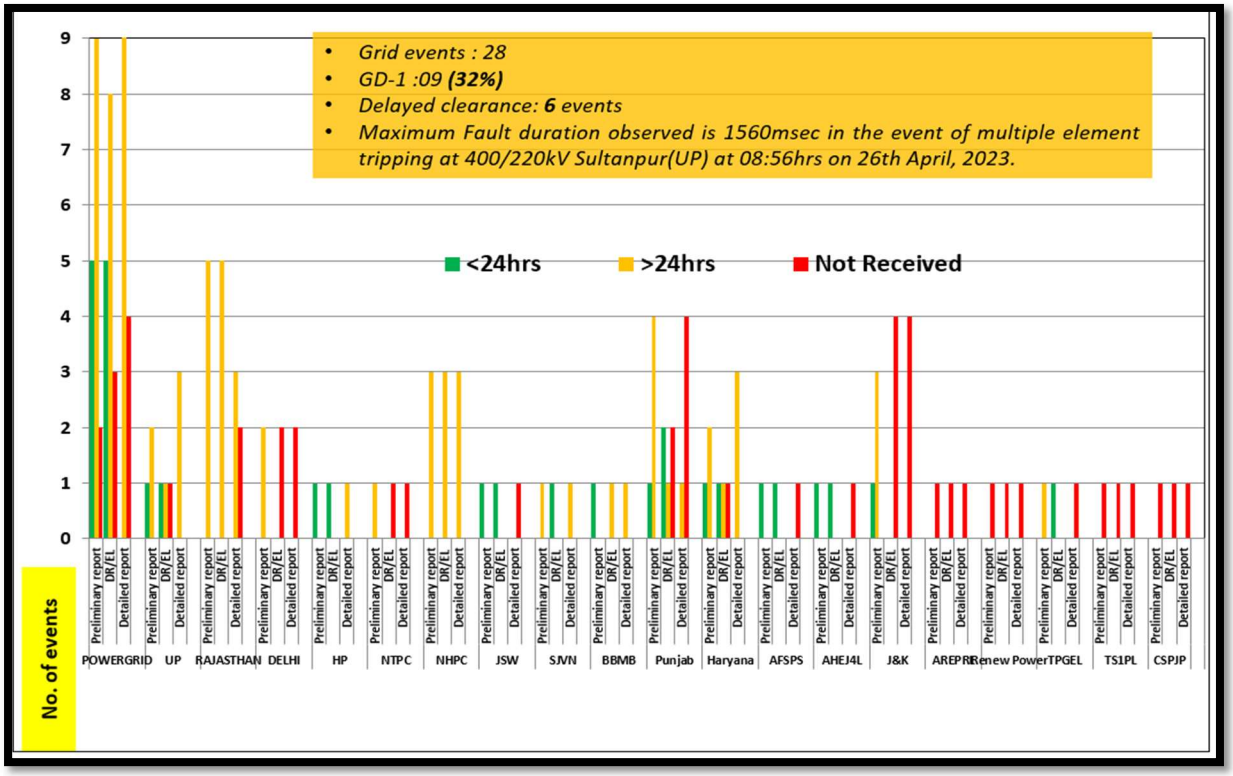
Status of remedial action as agreed in last OCC (206) meeting:

- **Issue of A/R operation in 400 KV Suratgarh(RVUN)-Bikaner(RS) (RS) Ckt-1:***Rajasthan representative informed that there is SASA SCADA issue at Suratgarh end and therefore A/R is also not operating. AMC of SAS SCADA is in process and issue w.r.t. A/R operation will be resolved. NRLDC representative asked to expedite the AMC work. Rajasthan agreed the same.*

NRLDC representative emphasized that A/R (auto re-closer) issue was found in many of these tripping. He sensitized all the utilities to ensure healthiness/ in service of A/R in 220 kV and above transmission lines in compliance to CEA Grid Standards. He further informed that most of the tripping are transient in nature but due to non-operation of A/R, it resulted into tripping of the transmission element thus reducing the reliability of the grid. All the utilities shall endeavor to keep auto re-closer in service and healthy condition of 220 kV and above voltage level transmission line. In addition, necessary actions also need to be taken to ensure the Right of Way to minimize the frequent faults in the line. All utilities agreed for the same.

OCC forum reiterate that frequent outages of such elements affect the reliability and security of the grid. Members were requested to look into such frequent outages and share the remedial measures taken/being taken in this respect.

20. Multiple element tripping events in Northern region in the month of April'23:



A total of 28 grid events occurred in the month of April'23 of which **09** are of GD-1 category, **09** are of GI-2 Category &**10** 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.III** of Agenda.

Further, despite persistent discussions/follow-up in various OCC/PCC meetings, it is observed that provisions 5.2(r) and 5.9.4(d) of the IEGC, pertaining to reporting of events / tripping to RLDC, is not being complied with by many utilities.

Maximum fault duration observed is **1560msec** in the event of multiple element tripping at 400/220kV Sultanpur(UP) at 08:56hrs on 26th April, 2023. During the event, Y-ph bus isolator of 220kV Sultanpur-Tanda New ckt damaged during switching operation and created Y-N bus fault.

Regarding multiple elements tripping at 400/220kV Sultanpur(UP), UP representative informed that relay of 400/220kV 315MVA ICT-1 at Sultanpur are of electromechanical type and it didn't trip during the event, due to which fault didn't clear and then fault cleared after tripping of 400kV lines from remote end. It was also informed that bus bar protection is also not healthy at 220kV Sultanpur and isolators are also very old. NRLDC representative asked to take necessary corrective actions, expedite the replacement work of electromechanical relays with numerical one and also take the necessary actions to ensure the healthiness of bus bar protection. UP agreed for the same.

Delayed clearance of fault (more than 100ms for 400kV and 160ms for 220kV system) observed in total **6** events out of **28** grid events occurred in the month. The other events with delayed clearance of faults are as follows:

i. Multiple elements tripping at 400/220kV Daulatabad(Har) at 17:53hrs on 01st April, 2023, fault clearance time: 360msec

ii. Multiple elements tripping at 220/132kV Safidon(Har) at 18:32hrs on 11th April, 2023, fault clearance time: 440msec

iii. Multiple elements tripping at 220/132kV Mau(Har) at 01:43hrs on 14th April, 2023, fault clearance time: 1280msec

iv. Multiple elements tripping at 220kV Dasuya(Pun) at 17:15hrs on 15th April, 2023, fault clearance time: 680msec

v. Multiple elements tripping at 220kV Salal(NHPC) at 10:33hrs on 25th April, 2023, fault clearance time: 320msec

NRLDC representative requested concerned utilities to analyse the tripping incidents at their end and taken necessary actions to avoid the similar events in future. Utilities agreed for the same.

Status of remedial action as agreed in last OCC (206) meeting:

- **Protection system review at 400/220kV Panki(UP) S/s:***UP representative informed that the issue related to bus bar protection has been taken up with the OEM and protection review at Panki S/s is being done. It was also informed that the bus coupler relay are of electromechanical type, same will be replaced with the numerical relay. NRLDC representative emphasized to expedite the remedial measure and also share the report of action taken/to be taken. UP representative agreed for the same.*

OCC forum suggested all the NR constituents to update the information on tripping portal developed by NRLDC. All the constituents agreed to take proactive remedial actions in this regard to minimize the tripping.

Members were asked to take expeditious actions to avoid such tripping in future, Moreover, utilities may impress upon all concerned for providing the Preliminary Report, DR/EL & Detailed Report of the events in line with the regulations. Members were further requested to ensure the time syncing of recording devices (DR, EL etc.) with GPS/NAVIK at substation of their respective control area. Members agreed to take action in this regard.

21. Details of tripping of Inter-Regional lines from Northern Region for April' 23:

S. No.	Name of Transmission Element Tripped	Outage		Brief Reason (As reported)	*FIR Furnished (YES/NO)	DR/EL provided in 24 hrs (YES/NO)	Suggestive Remedial Measures	Remarks
		Date	Time					
1	400 KV Balia-Bihartariff (PG) Ckt-2	15-Apr-23	11:55	Phase to earth fault R-N. Fault distance: ~80km from Balia end, fault current: ~5kA. Fault distance from Biharsarrif end was ~160km. Fault is under ER-1 jurisdiction.	yes (After 24 hrs)	yes (After 24 hrs)		As per PMU at Sohawal(PG) & DR of Balia end, line tripped after unsuccessful A/R operation on permanent R-N fault. Fault distance: ~80km, fault current: ~5kA from Balia end.
2	765 KV Orai-Gwalior (PG) Ckt-1	21-Apr-23	16:07	Phase to earth fault R-N. Fault distance: ~9km from Orai end, fault current: ~13kA. Fault distance from Gwalior end was ~123km. Fault is under WR-2 jurisdiction.	yes	yes		As per PMU at Mainpuri(PG) & DR of Orai end, line tripped after unsuccessful A/R operation on permanent R-N fault. Fault distance: ~9km, fault current: ~13kA from Orai end.
3	765 KV Fatehpur-Sasaram (PG) Ckt-1	30-Apr-23	15:39	Line tripped from Fatehpur end only on receipt of DT at Fatehpur end. Dist. 144.6km, Fault current 2.159kA from Sasaram.	yes	yes	Reason of DT received (PLCC maloperation etc.) need to be looked into	As per PMU, no fault in system is observed and as per DR of Fatehpur end, line tripped on DT received.

A total of 3 inter-regional lines tripping occurred in the month of April'23. The list is attached at **Annexure-B.IV** of Agenda**.** 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 5.2(r) 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.

Regarding tripping of 765kV Fatehpur-Sasaram ckt-1, POWERGRID(NR-3) representative informed that issue related to maloperation of PLCC was at Sasaram end and same has been resolved and system is healthy now.

NRLDC representative requested members to advise the concerned for taking corrective action to avoid such tripping as well as timely submission of the information. Members agreed for the same.

OCC forum emphasized the importance of inter- regional links and requested all the concerned utilities to take necessary corrective to minimise the such tripping in future.

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

The status of receipt of DR/EL and tripping report of utilities for the month of April'2023 is attached at **Annexure-B.V** of Agenda. It is to be noted that as per the IEGC provision under clause 5.2 (r), detailed 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.

NRLDC representative stated that reporting status has been improved from POWERGRID, UP, HP, Haryana, Rajasthan & Uttarakhand. However, reporting status from Punjab, Delhi, J&K & RE stations need improvement.

OCC forum emphasized the importance of DR/EL & tripping report data for analysis of the trippings. In addition, these data are also base for the availability verification. Unavailability of these details delays the availability verification process also. Hence, timely submission of DR/EL & tripping report is very much necessary. Members were requested to comply the IEGC 5.2(r) and submit the details in time. Members agreed to take necessary follow-up actions to improve the reporting status

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 5.2.r 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.

23. Status of PSS tuning/ re-tuning and Step Response Test of generator

Since 182nd OCC meeting, this point was discussed and Utilities were requested to submit the present status of PSS tuning/re-tuning and Step Response Test of their respective generators as per the below mentioned format.

S. No.	Name of the Generating Station	Date of last PSS tuning / re-tuning performed (in DD/MM/YYYY format)	Date of last Step Response Test performed (in DD/MM/YYYY format)	Report submitted to NRLDC (Yes/ No)	Remarks (if any)

The status of test performed till date is attached at **Annexure-B.VI** of Agenda**.**

It is to be noted that as per regulation 5.2(k) of IEGC, Power System Stabilizers (PSS) in AVRs of generating units (wherever provided), shall be got properly tuned by the respective generating unit owner as per a plan prepared for the purpose by the CTU/RPC from time to time.

Members were requested to update about their future plan for PSS tuning as there is no significant progress despite including this agenda in every OCC meeting and a separate meeting may be called for detail discussion on this matter.

NRLDC representative informed that all the units who have done Step response test before 2018 were requested to plan the exciter step-response test as soon as possible and submit the tentative schedule of step-response test on the units with NRPC/ NRLDC.

OCC forum deliberated that members may kindly accord due priority in this regard and update about their future plan for PSS tuning as there is little progress despite including this agenda in every OCC meeting. Members agreed for the same.

24. Status of Bus bar protection:

Clause - 4 in schedule - V of Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 reads as

"Bus bar protection and local breaker backup protection shall be provided in 220kV and higher voltage interconnecting sub- stations as well as in all generating station switchyards".

During analysis of many grid incidents/disturbances, it has been found that the Busbar protection at the affected substation was **not present or non-operational** which resulted in considerably increasing both the number of affected elements and fault clearance time. Accordingly, it becomes critical to monitor and keep Busbar protection at all the 220 kV and above voltage level substations healthy and operational.

Constituents were requested vide NRLDC letter dated 28th Dec 2022 to furnish status of Busbar protection in the following format in your control area**.**

Details are yet to be received from Delhi & J&K.

Constituent wise status of bus bar protection where bus bar protection is either not installed or installed but not operational is attached as **Annexure-B.VII** ofAgenda.

Constituents agreed in last OCC meeting to share the current status of the bus bar protection, however no details received as of now. Constituents are requested to share the present status w.r.t. to the same.

Uttarakhand representative informed that SE T&C have started the follow-up regarding the same, details of action plan will be shared in due time.

Punjab representative informed that bus bar status is non-operational at total nine(no.) 220kV & above stations in Punjab control area. Bus bar protection at these nine(no.) S/s will be made healthy/available within next 06 months (December 2023).

NRLDC requested all the concerned members to share the current status of bus bar protection w.r.t. their control area.

OCC forum requested all the constituents to update the status of bus bar protection at S/s of their control area and also expedite the commissioning and implementation work of bus bar protection system. Members agreed for the same.

25. Sharing of station event logger detail during First Time Charging of elements:

It is observed that many a times utility submits bay wise individual event logger details in Format –II (Protection setting/DR/Event logger) during FTC request. However, station event logger details need to be submitted. Constituents are requested to ensure the same during FTC request.

NRLDC representative emphasized on the importance of availability and healthiness of station event logger at each and every stations/sub stations. He further requested all the constituents to ensure the same at First Time Charging itself. Members were requested to advice the same to all the concerned in their control area to ensure the same and also taken necessary actions to commission or to ensure the healthiness of the station event logger wherever it is not yet commissioned or not healthy.

OCC forum agreed that all the power stations/substations should have facility of station event logger.

26. Replacement of electromagnetic relays with numerical relays:

Clause-5.2(r) of IEGC, clause-15(4) of CEA Grid standards and clause-48(4) of CEA Construction Standards 2022 mandates that *''each line or transformer or reactor or any other bay shall be provided with facility for disturbance recording, event logging and time synchronizing equipment''.*

During analysis of grid incidents/disturbances, it has been found that there are few stations where electromechanical relays are still in use and thus disturbance recorder are not available there which accounts for violation of Clause-5.2(r) of

IEGC, clause-15(4) of CEA Grid Standards and clause 48(4) CEA Construction Standards 2022.

In addition, clause-3 in part III (Grid Connectivity Standards applicable to Transmission Line and Sub-Station) of Standards for Connectivity to the Grid, 2007 reads as

‘’*Two main numerical Distance Protection Schemes shall be provided on all the transmission lines of 220 kV and above for all new sub-stations. For existing sub-stations, this shall be implemented in a reasonable time frame’’*

NRLDC representative stated that Disturbance recorder (DR) is essential for analysis of grid incidents/disturbances. Its non-availability eventually affects the proper analysis of grid incidents/disturbances and monitoring of protection system.

OCC forum emphasized the importance and necessity of numerical relays, compliance of aforementioned regulations also very much necessary to ensure the healthiness of protection system. Members were requested to expedite the necessary actions to ensure that all the relays in their control are of numerical type. Members agreed the same.

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:
<table><tr><td>◎</td><td>CHANDIGARH</td><td>Sep-2019</td></tr><tr><td>◎</td><td>DELHI</td><td>Mar-2023</td></tr><tr><td>◎</td><td>HARYANA</td><td>Dec-2022</td></tr><tr><td>◎</td><td>HP</td><td>Jan-2023</td></tr><tr><td>◎</td><td>J&K and LADAKH</td><td>Not Available</td></tr><tr><td>◎</td><td>PUNJAB</td><td>Jan-2023</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Mar-2023</td></tr><tr><td>◎</td><td>UP</td><td>Apr-2023</td></tr><tr><td>◎</td><td>UTTARAKHAND</td><td>Apr-2023</td></tr></table>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:
<table><tr><td>◎</td><td>CHANDIGARH</td><td>Not Available</td></tr><tr><td>◎</td><td>DELHI</td><td>Dec-2022</td></tr><tr><td>◎</td><td>HARYANA</td><td>Mar-2023</td></tr><tr><td>◎</td><td>HP</td><td>Apr-2023</td></tr><tr><td>◎</td><td>J&K and LADAKH</td><td>Not Available</td></tr><tr><td>◎</td><td>PUNJAB</td><td>Mar-2023</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Dec-2022</td></tr><tr><td>◎</td><td>UP</td><td>Mar-2023</td></tr><tr><td>◎</td><td>UTTARAKHAND</td><td>Mar-2023</td></tr><tr><td>◎</td><td>BBMB</td><td>Mar-2023</td></tr></table>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:
<table><tr><td>◎</td><td>CHANDIGARH</td><td>Not Available</td></tr><tr><td>◎</td><td>DELHI</td><td>Increased</td></tr><tr><td>◎</td><td>HARYANA</td><td>Increased</td></tr><tr><td>◎</td><td>HP</td><td>Increased</td></tr><tr><td>◎</td><td>J&K and LADAKH</td><td>Not increased</td></tr><tr><td>◎</td><td>PUNJAB</td><td>Increased</td></tr><tr><td>◎</td><td>RAJASTHAN</td><td>Increased</td></tr><tr><td>◎</td><td>UP</td><td>Increased</td></tr><tr><td>◎</td><td>UTTARAKHAND</td><td>Increased</td></tr></table></td></tr>
</table>

			◎	BBMB	Increased
			J&K and LADAKH were requested to update status for increasing settings of UFRs.		
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-2022
			◎	PUNJAB	May-2023
			◎	RAJASTHAN	May-2023
			◎	UP	May-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	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.		
6	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	Fully implemented
			◎	HARYANA	Scheme not implemented
			◎	HP	Scheme not implemented
			◎	PUNJAB	Scheme not implemented
			◎	RAJASTHAN	Under implementation. Likely completion schedule is 30.06.2023.
			◎	UP	Scheme implemented by NPCIL only

7	Reactive compensation at 220 kV/ 400 kV level at 15 substations			
	State / Utility	Substation	Reactor	Status
i	POWERGRID	Kurukshetra	500 MVAr TCR	Anticipated commissioning: May'23
ii	DTL	Peeragarhi	1x50 MVAr at 220 kV	PO awarded to M/s Kanohar Electricals Ltd. Drawings approved and under final stage inspection. GIS Bay is already available.
iii	DTL	Harsh Vihar	2x50 MVAr at 220 kV	PO awarded to M/s Kanohar Electricals Ltd. Drawings approved and under final stage inspection. GIS Bay is already available.
iv	DTL	Mundka	1x125 MVAr at 400 kV & 1x25 MVAr at 220 kV	Bay work awarded to M/s. Ethos. Bay work is expected to be completed by Dec.21. Reactor part tender is dropped and at present same is under revision.
v	DTL	Bamnauli	2x25 MVAr at 220 kV	Bay work awarded to M/s. Ethos. Bay work is expected to be completed by Dec.21. Reactor part tender is dropped and at present same is under revision.
vi	DTL	Indraprastha	2x25 MVAr at 220 kV	Bay work awarded to M/s. Ethos. Bay work is expected to be completed by Dec.21. 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 - LOA issued on dated. 17.08.2021 and date of completion of project is 18 months from the date of LOA. 220kV Reactors - LOA issued on dated 19.07.2021 and date of completion of project is 18 months from the date of LOA. Commsioned 27th Jan'23
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 Jan'23
xi	RAJASTHAN	Akal	1x25 MVAr	1x25 MVAR Reactor at Akal has been commissioned on dated 25th July' 2022.

xii	RAJASTHAN	Bikaner	1x25 MVAr	Main bus shutdown is required for commissioning of 1x25 MVAR reactor at Bikaner, same is expected upto March’ 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.
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.

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.	Jun'23	02 No. of bays shall be utilized for LILO-II of 220kV Hiranagar Bishnah Transmission Line, the work of which is under progress and shall be completed by end of Jun'2023. Updated in 207th 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	31.05.2023	Due to ROW issue work was delayd.Updated in 207th OCC by UPPTCL
				• 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.	Jun'23	Issue related to ROW as intimated in 202nd OCC by HVPNL.
				• 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	Commissioned: 6 Under Implementation: 4	Utilized: 6 Unutilized: 0	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line – March 2023.	-	DTL to update the status.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
	GIS	Total: 10	Under Implementation:4	• 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	Jun'23	Updated in 205th OCC by HPPTCL
				• Network to be planned for 4 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: 2 Unutilized: 4	• LILO of both circuits of 220kV D/c Sector-69 - Roj Ka Meo line at 400kV Sohna Road	Jun'23	Updated in 197th 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 Total: 8	Utilized: 4 Unutilized: 4 Under Implementation:2	• Prithla - Harfali 220kV D/c line with LILO of one ckt at 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
16	400/220kV Sonepat Sub-station	Commissioned: 6 Under Implementation:2 Total: 8	Utilized: 2 Unutilized: 4 Under	• LILO of both circuits of 220kV Samalkha - Mohana line at Sonepat	05.10.2023	Updated in 205th OCC by HVPNL
				• Sonepat - HSIISC Rai 220kV D/c line	-	Updated in 205th 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

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
		Total: 8	Implementation:2	• Sonepat - Kharkhoda Pocket A 220kV D/c line	31.07.2024	Updated in 205th OCC by HVPNL. **Status:** The Possession of land for construction of 220KV S/Stn. Pocket-A i.e 6.33 Acres and for Pocket-B is 5.55 Acres has been taken over by HVPNL. Work order yet to be issued by O/o CE/PD&C, Panchkula for construction of 2 no. 220KV GIS S/Stn Pocket-A & Pocket-B.
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 comiisioned 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	Jun'23	• Lucknow -Kanduni, 220 kV D/C line expected energization date Jun'23 updated by UPPTCL in 205th OCC due to sub-station commissioning delay _____ • 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	31.05.2023	• Gorakhpur(PG)- Maharajganj, 220 kV D/C line expected energization date is 15.04.2023 updated by UPPTCL in 205th OCC
23	400/220kV Fatehpur Sub-station	Commissioned: 8 Under Implementation:2 Total: 10	Utilized: 6 Unutilized: 2 Under Implementation:2	• Network to be planned for 2 bays	-	• UPPTCL intimated that 02 no. of bays under finalization stage. In 201st OCC, UPPTCL intimated that it is finalized that Khaga s/s will be connected (tentative time 1.5 years). _____ • No planning for 2 no. of bays updated by UPPTCL in 196th OCC. The same has been communicated to Powergrid.
24	400/220kV Abdullapur Sub-station	Commissioned: 10 Under Implementation:2 Total: 12	Utilized: 10 Unutilized: 0 Under Implementation:2	• Abdullapur – Rajokheri 220kV D/c line	Jul'23	SCDA System work pending at 220 KV S/stn. Rajokheri Updated in 205th 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	Sep'23	Updated in 205th OCC by HVPNL
				• Panchkula – Sector-32 220kV D/c line	Sep'23	Updated in 205th 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
		Commissioned:7	Utilized: 6	• Amritsar – Patti 220kV S/c line	May'23	Route survey/tender under process. Work expected to be completed by May 2023. Updated in 198th OCC by PSTCL.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
26	400/220kV Amritsar S/s	Approved in 50th NRPC- 1 no. Total: 8	Unutilized: 1 Approved in 50th NRPC- 1 no.	• 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)	May'23	Route survey/tender under process. Work expected to be completed by May 2023. Updated in 198th 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 Total: 4	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	
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
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 4 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	May'23	Direct circuit from 220 kV Lalton Kalan to Dhandari Kalan to be diverted to 400 kV PGCIL Ludhiana. Work expected to be completed by May 2023.Updated in 205th OCC by PSTCL.

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

2. Establishment of new 400/220kV substations in Northern Region:

Sl. No.	Name of Substation	MVA Capacity	Expected Schedule		Downstream connectivity by States
1	400/220kV Dwarka-I GIS (8 nos. of 220kV bays)	4x 500	Mar'22		DTL to update the status
2	220/66kV Chandigarh GIS (8 nos. of 66kV bays)	2x 160	Apr'22		Chandigarh to update the status.
3	400/220kV Jauljivi GIS Out of these 8 nos. 220kV Line Bays, 4 nos. (Pithoragath-2, & Dhauliganga-2) would be used by the lines being constructed by POWERGRID and balance 4 nos. bays would be used by the lines being constructed by PTCUL.	2x315	Feb'22		• 220kV Almora-Jauljibi line • 220kV Brammah-Jauljibi line PTCUL to update the status of lines.

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 (17.05.2023)
ANPARA TPS
HARDUAGANJ TPS
OBRA TPS
PARICHHA TPS

PSPCL (16.02.2023)
GGSSTP, Ropar
GH TPS (LEH.MOH.)
RRVUNL (16.05.2023)
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)

Annexure-A.II

उत्तर प्रदेश राज्य भार प्रेषण केन्द्र
उ0प्र0पॉवर ट्रांसमिशन कारपोरेशन लि0
(उत्तर प्रदेश सरकार का उपक्रम)
यू0पी0एस0एल0डी0सी0 परिसर, विभूति खण्ड–II
गोमती नगर, लखनऊ–226010
ई–मेल : cepso@upsldc.org
sera@upsldc.org

U.P. State Load Despatch Centre
U.P. Power Transmission Corporation Ltd.
(A U.P. Govt. Undertaking)
UPSLDC Complex, Vibhuti Khand – II
Gomti Nagar, Lucknow- 226010
E-mail: cepso@upsldc.org
sera@upsldc.org

No: - 2063 /SE(R&A)/EE-II/SPS

Dated: - 16/05/ 2023

Member Secretary, NRPC,

18 – A, SJSS Marg, Katwaria Sarai,

New Delhi, 110016.

Subject - Regarding revision of System Protection Scheme (SPS) at Bara TPS.

It is to inform you that 1500MVA, 765/400kV ICT-II has been commissioned on 31.03.2023 at Bara TPS. Following the commissioning of aforementioned ICT, SPS installed at Bara TPS needs to be revised. Discussion on revised SPS scheme at Bara TPS was held in 206th OCC meeting of NRPC and the special meeting held on subject issue on dated 12.05.2023. Based on discussion in the aforesaid meetings the revised logic has been finialized by UPSLDC which is enclosed herewith.

It is requested to kindly include this proposal as agenda in 207th OCC meeting of NRPC so that the same may be discussed and approved.

Encl: - As above

16/5

Arshad Jamal Siddiqui)
Superintending Engineer (R&A)

No: - 2063 /SE(R&A)/EE-II/SPS

Dated: - 16/05/ 2023

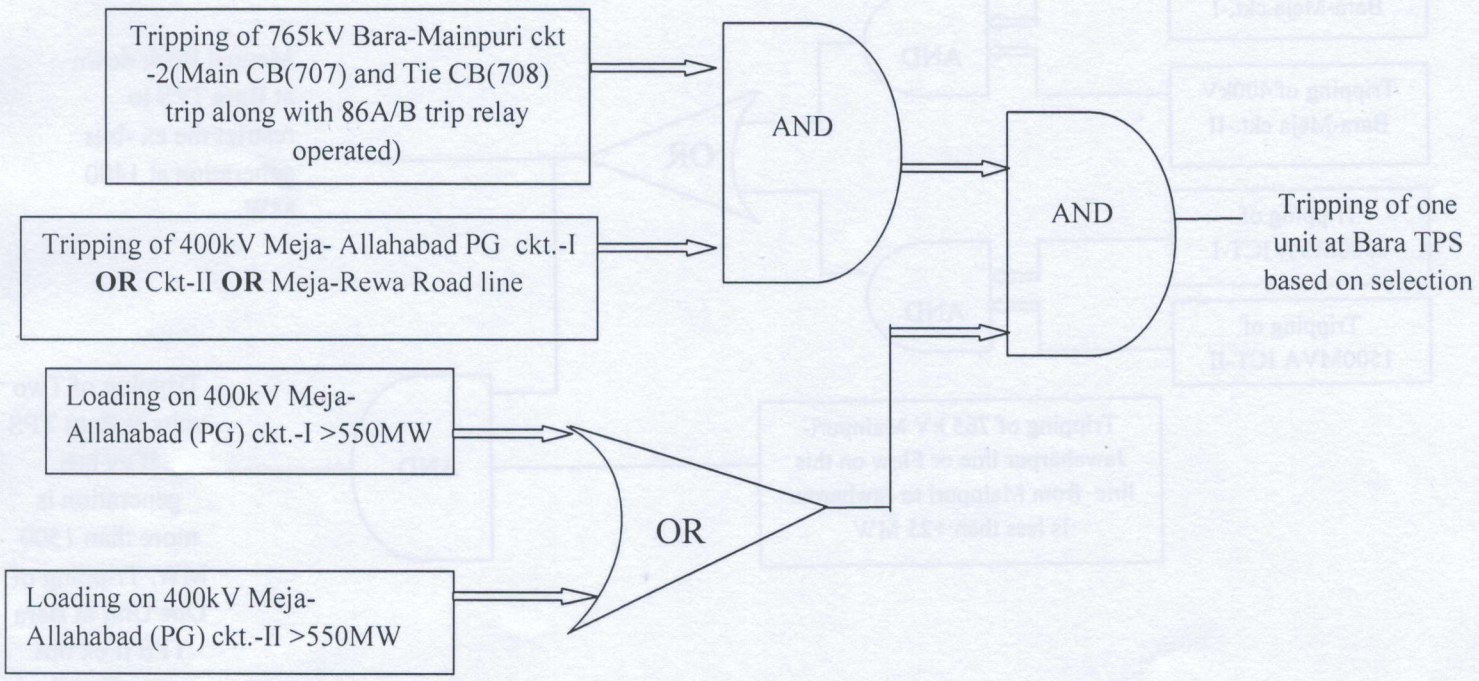
Copy forwarded to following for kind information and necessary action:-

1. Director, UPSLDC, Vibhuti Khand – II, Gomti Nagar, Lucknow.
2. Director (Operation), UPPTCL, 11th Floor, Shakti Bhawan Extn., Lucknow.
3. Chief Engineer (PSO), UPSLDC Vibhuti Khand – II, Gomti Nagar, Lucknow.
4. General Manager, NRLDC18-A, SJSS Marg, Katwaria Sarai, New Delhi – 110016.
5. President, M/s Prayag Raj Thermal Power Plant, Village-Khansemra, PO-Lohgara, Tehsil-Bara, Distt-Allahabad 212107.

(Arshad Jamal Siddiqui)
Superintending Engineer (R&A)

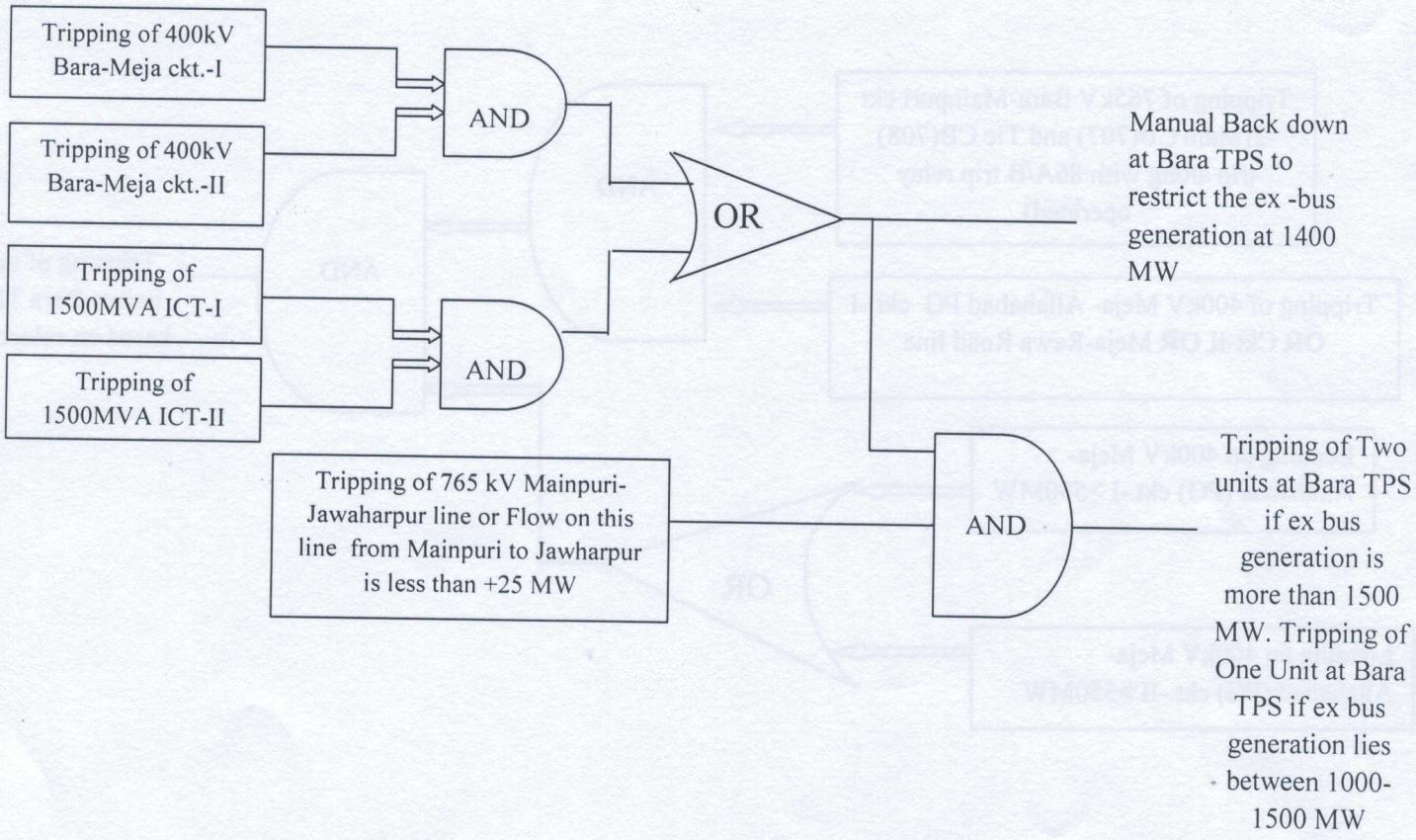
Revised logic for SPS at Bara TPS

Logic-1



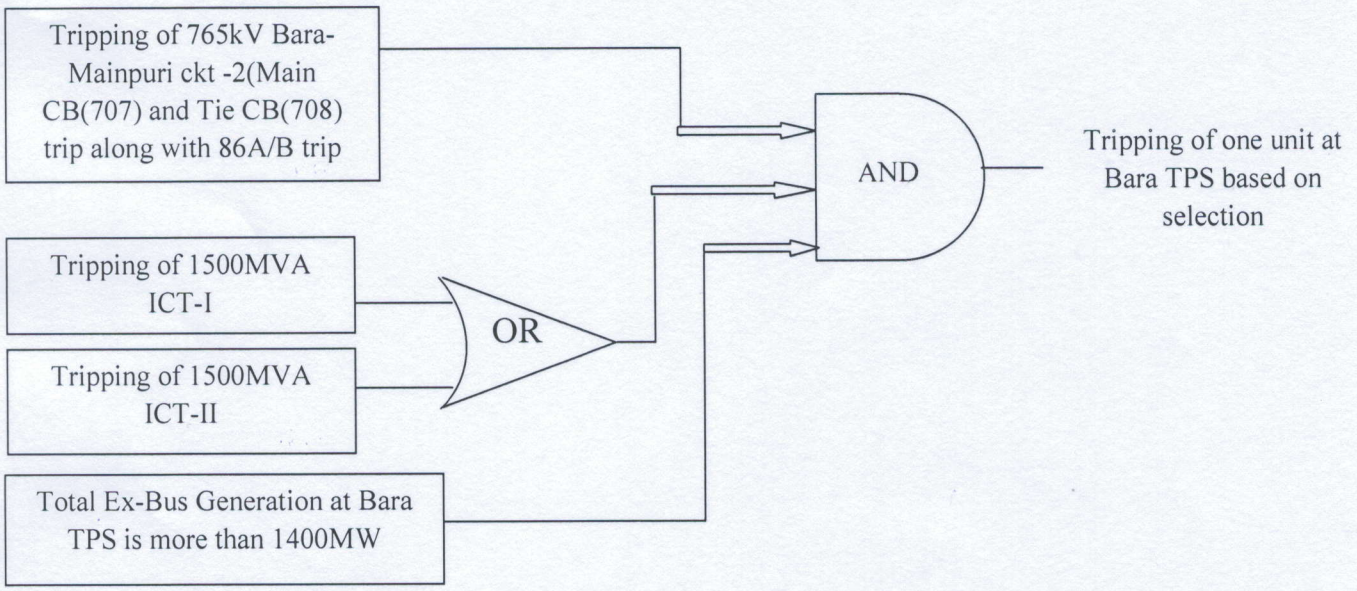
Note- To avoid the loading on 400kV Meja- Allahabad PG ckt.-I &II to go beyond 650 MW following the tripping of 765 kV Bara-Mainpuri Ckt –II ,as a Standard Operating Procedure, control room operator shall take action to bring down generation at Bara TPS to restrict the loading on 400kV Meja- Allahabad PG ckt.-I &II below 550 MW

Logic-2



Note- As a SOP, Bara TPS shall ensure that selection of Unit for tripping is done in such a way that Unit with highest generation gets tripped.

Logic-3


Tripping of 765kV Bara-Mainpuri ckt -2(Main CB(707) and Tie CB(708) trip along with 86A/B trip
Tripping of 1500MVA ICT-I
Tripping of 1500MVA ICT-II
OR
Total Ex-Bus Generation at Bara TPS is more than 1400MW
AND
Tripping of one unit at Bara TPS based on selection

Agenda by APCPL-IGSTPS JHAJJAR for 207th OCC meeting

Regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 from RSD following Transmission Constraint

- APCPL IGSTPS-Jhajjar is having 3 units of 500 MW and 4 transmission lines of 400 KV, namely Jhajjar-Mundka circuit 1& 2 & Jhajjar Daulatabad Circuit 1& 2 for evacuation of power.

- 400 KV Jhajjar-Mundka are ISTS lines owned and maintained by APCPL, IGSTPS-Jhajjar

- 400 KV Jhajjar-Daulatabad Circuits are owned & maintained by HVNL and are dedicated Transmission Lines for evacuation of Haryana's Share from the station.

- Jhajjar-Daulatabad Circuit 1 & 2 are not available since 08-05-2023.

- Currently, two machines are on bar as per request of beneficiaries, Unit-1 is under RDS since 01-05-2023.

- On 10-05-20233, Haryana requested NRLDC for full schedule from APCPL Jhajjar vide email dated 10-05-2023, NLRDC vide email dated 10-05-2023 replied

  "*kindly revive the Jhajjar-Daulatabad Circuit 1 & 2 as early as possible for running of all 03units at NTPC, Jhajjar. Without revival of Jhajjar-Daulatabad lines only 02 Units can be run at NTPC, Jhajjar. Kindly expedite the restoration of lines as early as possible*"

- NRLDC vide email dated 10-05-2023 has asked APCPL Jhajjar

  "to back down the generation suitably for safe evacuation of power form Jhajjar stating that 400kV Jhajjar-Daulatabad-1 & 2 are under forced outage due to tower bend which is expected to be revived around 25th May. Currently, Jhajjar is evacuating power through 400kV Jhajjar – Mundka-1 & 2 with thermal limit of 852MW each circuit."

- NLDC vide email dated 17-05-2023 has asked NRLDC to bring Jhajjar third unit (which is under RSD) on bar stating dry weather and increasing demand in days to come.

- NRLDC vide email dated 17-05-2023 has asked APCPL-Jhajjar beneficiaries to review their power portfolio and arrange to bring on-bar units closed under RSD (Jhajjar Unit-1 500 MW).

- APCPL vide email dated 17-05-2023 has requested its beneficiaries not to schedule power from third machine owing to Transmission constraint and raising safety concern.

  "*we would like to submit that out of 4 Transmission Lines, 2 Transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are not available since 08-05-2023.*

  At present, even with two units running at full load, there is already a risk of station failure if any of the transmission line trips. Bringing 3rd unit on the bar and evacuating

1500 MW from the available 2 transmission lines further increases the risk of the station outage as the probability of transmission lines failure with increased loading will be much more. This is a major safety concern for our station.
In addition to this, running three units with 2 transmission lines is not in line with (n-1) criteria.
Similar incident happened on 20-12-2022, wherein all three units were on bar and 3 transmission lines were in service. Subsequent to tripping of Jhajjar-Daulatabad Line-1 & 2 resulted in shifting of the entire station load of 1400 MW on single line, which led to failure of transmission element due to thermal overloading and caused Station Blackout.

Instant tripping of all three machines at full load is a matter of concern as it may pose a serious threat to the safety of the machines. In addition to this, any damage in the machine may lead to prolonged outage.

Therefore, considering the above circumstances, we request your good office not to schedule power from our third machine till Jhajjar-Daulatabad Lines are made available by HVPNL"

- APCPL vide email dated 17-05-2023 has requested NLDC not to bring third machine on bar on account of RRAS stating the transmission constraint.

- NLDC vide email dated 17-05-2023 replied that

"*Thank you very much for flagging your concerned. But as it is already mentioned in the trailing e-mail that All India demand will further increase keeping in view the dry spell in coming days. It is important to maximise generation where ever possible. So keeping in view all these aspect and after analysing all the network status around the generating plant of Jhajjar, NRLDC & NLDC had requested to bring the unit-1 at Jhajjar.*

Hence it is kindly requested to bring the unit-1, as per the trailing email. If plant fails to bring the unit, then accordingly plant has to revise the DC.

NRLDC requested to monitor the same i.e. to bringing of unit-1 at Jhajjar and revision of DC if plant fail to bring the unit.

Matter is to be taken on priority basis, as it is very critical and important."

- Following the email from NLDC, NRLDC asked APCPL to bring the unit on bar as Haryana and Delhi has consented for the same.

- Thereafter, APCPL submitted the following

"With reference to your email, we would like to reiterate that our third machine is available to be brought on the bar. However, due to transmission constraint owing to non-availability of Jhajjar-Daulatabad circuit 1 & 2 (owned by HVPNL) bringing third machine on the bar and running on full load is a safety concern.

Non availability of dedicated transmission line for evacuation of Haryana' share from our station may not be the reason for reduction of our DC.

It is our humble request to kindly reconsider your decision and take necessary action as deemed fit."

- *NLDC vide email dated 18-05-2023 has again asked APCPL to bring the machine stating the following:*

  "It is to bring to your kind notice that after analysing transmission network status around the generating plant of Jhajjar, NLDC and NRLDC has requested to bring the unit-1 at Jhajjar.

  The same has been reiterated in our trailing communications.

  NRLDC requested to monitor the same i.e. to bringing of unit-1 at Jhajjar and revision of DC if plant fail to bring the unit.

  In case of deficit in technical minimum schedule, RRAS support will be provided by NLDC.

  Matter is to be taken on priority basis, as it is very critical and important."

- APCPL again requested NRLDC vide email dated 18-05-2023 stating the following:

  "With reference to your advisory dated 10-05-2023 which is as follows:

  Quote
  400kV Jhajjar-Daulatabad-1 & 2 are under forced outage due to tower bend which is expected to be revived around 25thMay. Currently, Jhajjar is evacuating power through 400kV Jhajjar-Mundka-1 & 2 with thermal limit of 852 MW each circuit. In case of tripping of any of the circuit, you are requested to back down the generation suitably for safe evacuation of power from Jhajjar.
  Unquote

  Further, reference is requested to your email dated 10-05-2023 wherein you asked Haryana to revive the Jhajjar-Daulatabad Circuit 1 & 2 as early as possible for running of all 03 units at NTPC, Jhajjar. Without revival of Jhajjar-Daulatabad lines only 02 Units can be run at NTPC, Jhajjar. Kindly expedite the restoration of lines as early as possible.

  Now, without revival of Jhajjar-Daulatabad Transmission circuits, we are being insisted to run the third machine which is not desirable and safe considering (n-1) compliance.

  Running three machines in this condition may lead to station blackout and may endanger our machines and the transmission element. This may result in prolonged outage of units and Thermal runaway of the Transmission line. In case of any mishap with both available Jhajjar-Mundka lines, station won't be able to get backup power for a considerable period of time for restoration.

  Bringing third unit with load restriction of 1200 MW on two available transmission lines is not safe as we won't be able to back down upto safe evacuation limit of 850 MW in case (n-1) condition arises, which may pose a serious safety concern for non-stakeholder entities along the span of Jhajjar-Mundka Transmission lines.

  In case of any untoward incident arising thereof APCPL-IGSTPS Jhajjar will not be held responsible.

  In view of the above, it is once again requested to kindly review your decision and intimate whether to bring the machine or not."

Despite several request and stating safety concern, we are being urged to bring the third machine on bar (correspondence attached as Annexure-I).

In view of the above, we hereby request the OCC forum to deliberate on the issue.

Annexure-I

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: Regarding safe evacuation of power generation at Jhajjar s/s

Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com> Mon, May 15, 2023 at 5:14 PM
To: amit hooda <amit.hooda01@gmail.com>

---------- Forwarded message ---------
From: **NRLDC SO** <nrldcso@grid-india.in>
Date: Wed, May 10, 2023 at 11:40 PM
Subject: Regarding safe evacuation of power generation at Jhajjar s/s
To: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>
Cc: nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, Haryana <sldcharyanacr@gmail.com>, DTL WEB (dtlscheduling@gmail.com) <dtlscheduling@gmail.com>, dtldata@gmail.com <dtldata@gmail.com>

Sir,

400kV Jhajjar-Daulatabad-1 & 2 are under forced outage due to tower bend which is expected to be revived around 25th May. Currently, Jhajjar is evacuating power through 400kV Jhajjar – Mundka-1 & 2 with thermal limit of 852MW each circuit. In case of tripping of any of the circuit, you are requested to back down the generation suitably for safe evacuation of power form Jhajjar.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

Follow Grid-India on:

--
SCE,
IGSTPP Jhajjar.

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Regarding full Haryana share from NTPC,Jhajjar.

Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com> Wed, May 10, 2023 at 2:10 PM
To: amit hooda <amit.hooda01@gmail.com>, Prashant Jain <prashantjain@ntpc.co.in>
Cc: Sanjay Asati <sanjayasati@ntpc.co.in>, GM L D Sahoo Sir <ldsahoo01@ntpc.co.in>, Abhishek Jain अभिषेक जैन <abhishekjain@ntpc.co.in>

---------- Forwarded message ---------
From: **NRLDC SO** <nrldcso@grid-india.in>
Date: Wed, May 10, 2023 at 2:06 PM
Subject: RE: FW: Regarding full Haryana share from NTPC,Jhajjar.
To: XEN/ PC <sldcharyanacr@gmail.com>
Cc: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, NRLDC Outage <nrldcoutage@grid-india.in>

Sir,

With ref. to trailing mail, kindly revive the Jhajjar-Daulatabad Circuit 1 & 2 as early as possible for running of all 03 units at NTPC, Jhajjar.

Without revival of Jhajjar-Daulatabad lines only 02 Units can be run at NTPC, Jhajjar.

Kindly expedite the restoration of lines as early as possible.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

From: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>
Sent: 10 May 2023 09:00
To: NRLDC SO <nrldcso@grid-india.in>
Cc: XEN LD&PC Panipat <sldcharyanacr@gmail.com>; ucrpanchkula <ucrpanchkula@uhbvn.org.in>; Sanjay Asati <sanjayasati@ntpc.co.in>; GM L D Sahoo Sir <ldsahoo01@ntpc.co.in>; Abhishek Jain अभिषेक जैन <abhishekjain@ntpc.co.in>
Subject: Re: FW: Regarding full Haryana share from NTPC,Jhajjar.

****Warning****

[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

--
SCE,
IGSTPP Jhajjar.

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Regarding full Haryana share from NTPC,Jhajjar.

Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com> Wed, May 10, 2023 at 7:22 AM
To: Prashant Jain <prashantjain@ntpc.co.in>, amit hooda <amit.hooda01@gmail.com>
Cc: Sanjay Asati <sanjayasati@ntpc.co.in>, GM L D Sahoo Sir <ldsahoo01@ntpc.co.in>, Eemg Apcpl <eemg.apcpl@gmail.com>

---------- Forwarded message ---------
From: **NRLDC SO** <nrldcso@grid-india.in>
Date: Wed, May 10, 2023 at 7:14 AM
Subject: FW: Regarding full Haryana share from NTPC,Jhajjar.
To: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>

Sir,

For your consent & also provide the expected time of revival in reply

Thanks & Regards,

Grid Controller of India Ltd.

(Grid-India)

Northern Regional Load Despatch Center
18-A, Saheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line: 20112151/52, M. - 08448167373

From: XEN/ PC <sldcharyanacr@gmail.com>
Sent: 10 May 2023 06:39
To: NRLDC SO <nrldcso@grid-india.in>; NRLDC Power Grid <nrldcso@gmail.com>; NRLDC Scheduling <nrldcscheduling@grid-india.in>; Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>; igtpp.jhajjar.sce@gmail.com
Subject: Fwd: Regarding full Haryana share from NTPC,Jhajjar.

Sir,

Please see the trailing mail and submit the reply please.

---------- Forwarded message ---------
From: **ucrpanchkula** <ucrpanchkula@uhbvn.org.in>

Date: Wed, 10 May 2023 at 06:37
Subject: Regarding full Haryana share from NTPC,Jhajjar.
To: XEN/LD&PC <sldcharyanacr@gmail.com>
Cc: Ce Hppc <Cehppc@uhbvn.org.in>

Sir

In view new MOD Haryana want to schedule its full share i.e. 660 MW from NTPC Jhajjar from 18:00 Hrs. but 400 KV JHAJJAR(APCL)-DAULATABAD(HV) CKT-1 & 2 was out, **if we give full schedule of 660 MW please confirm that full schedule to Haryana is possible or not.**

Regards

SE/ SO,UHBVN

Panchkula

--

Regards,

SCE (पाली प्रभारी अभियंता)

SLDC Control room

HVPNL Panipat

Contact No- 9053090722/9053090721

Every 8333.3 sheets of paper costs us a tree.

Please don't print this e-mail unless you really need to.

Save Paper Save Trees
Follow Grid-India on:

--
SCE,
IGSTPP Jhajjar.

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com> Wed, May 17, 2023 at 5:34 PM
To: Prashant Jain <prashantjain@ntpc.co.in>, amit hooda <amit.hooda01@gmail.com>

---------- Forwarded message ---------
From: **NRLDC SO** <nrldcso@grid-india.in>
Date: Wed, May 17, 2023 at 5:16 PM
Subject: FW: Bringing units out on RSD on bar_ Important
To: Haryana <sldcharyanacr@gmail.com>, dtldata@gmail.com <dtldata@gmail.com>, DTL WEB (dtlscheduling@gmail.com) <dtlscheduling@gmail.com>, system.uppcl@gmail.com <system.uppcl@gmail.com>, JK SLDC <jksldc1@gmail.com>, apc_chandigarh@hotmail.com <apc_chandigarh@hotmail.com>, Sr.Xen P.C., Patiala SLDC Operations <pc-sldcop@pstcl.org>, Uttarakhand <sldc1@rediffmail.com>, cecnsjmu@gmail.com <cecnsjmu@gmail.com>, dtldata@yahoo.co.in <dtldata@yahoo.co.in>, ldrvpnl@gmail.com <ldrvpnl@gmail.com>, ldshutdown@gmail.com <ldshutdown@gmail.com>, pcpseb@gmail.com <pcpseb@gmail.com>, pcshimla2003@gmail.com <pcshimla2003@gmail.com>
Cc: R K Porwal (आर के पोरवाल) <rk.porwal@grid-india.in>, Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, WRLDC Control Room <wrldccr@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>

Sir/Ma’am,

Please refer the trailing e-mail.

You are requested to review your power portfolio and arrange to bring on-bar units closed under RSD {Jhajjar(U#1,500 MW)}.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

From: NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>
Sent: 17 May 2023 15:35
To: NRLDC SO <nrldcso@grid-india.in>; WRLDC Control Room <wrldccr@grid-india.in>
Cc: Surajit Banerjee (सुरजीत बनर्जी) <surajit.banerjee@grid-india.in>; Ashok Kumar (अशोक कुमार) <ashokkr@grid-india.in>; Vivek Pandey (विवेक पांडे) <vivek.pandey@grid-india.in>; Alok Kumar (आलोक कुमार) <alok.kumar@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Pushpa S (पुष्पा एस) <pushpa@grid-india.in>
Subject: Bringing units out on RSD on bar_ Important

Sir,

All India demand is in rising trend and today all India maximum demand touched 220 GW. Considering the coming dry weather, which may further increase the demand in coming days; you are requested to kindly bring Jhajjar(U#1,500 MW), Gadarwara(U#1,800 MW) on bar from RSD through requisition of their beneficiaries.

Regards,

Shift Incharge

National Load Dispatch Center

Grid Controller of India Limited

(Formerly Power System Operation Corporation)

Government of India Enterprise

B-9 Qutub Institutional Area

Katwaria Sarai , New Delhi -110016

Follow Grid-India on:

Follow Grid-India on:

--
SCE,
IGSTPP Jhajjar.

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in> Wed, May 17, 2023 at 10:56 PM
To: amit hooda <amit.hooda01@gmail.com>
Cc: "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, NRLDC SO <nrldcso@grid-india.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "Alok Kumar (आलोक कुमार)" <alok.kumar@grid-india.in>

Sir,

Thank you very much for flagging your concerned. But as it is already mentioned in the trailing e-mail that All India demand will further increase keeping in view the dry spell in coming days. It is important to maximise generation where ever possible. So keeping in view all these aspect and after analysing all the network status around the generating plant of Jhajjar, NRLDC & NLDC had requested to bring the unit-1 at Jhajjar.

Hence it is kindly requested to bring the unit-1, as per the trailing email. If plant fails to bring the unit, then accordingly plant has to revise the DC.

NRLDC requested to monitor the same i.e. to bringing of unit-1 at Jhajjar and revision of DC if plant fail to bring the unit.

Matter is to be taken on priority basis, as it is very critical and important.

Thanks and regards,

SCE, NLDC

From: amit hooda <amit.hooda01@gmail.com>
Sent: 17 May 2023 21:42
To: NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>
Cc: Ashok Kumar (अशोक कुमार) <ashokkr@grid-india.in>; Vivek Pandey (विवेक पांडे) <vivek.pandey@grid-india.in>; Phanisankar Chilukuri (फणिशंकर चिलुकूरि) <pchilukuri@grid-india.in>; Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>; Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>; Sanjay Asati <sanjayasati@ntpc.co.in>; Prashant Jain <prashantjain@ntpc.co.in>; Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>; B S RAO <SRBODANKI@ntpc.co.in>
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important

[Quoted text hidden]
[Quoted text hidden]
[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

Follow Grid-India on:

Follow Grid-India on:

--

SCE,

IGSTPP Jhajjar.

[Quoted text hidden]

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

amit hooda <amit.hooda01@gmail.com> Wed, May 17, 2023 at 7:32 PM
To: "Power Manager (PSC)" <Power.Manager@tatapower-ddl.com>, XEN LD&PC Panipat <sldcharyanacr@gmail.com>, ucrpanchkula <ucrpanchkula@uhbvn.org.in>, dtldata@gmail.com
Cc: Ce Hppc <Cehppc@uhbvn.org.in>, Sandeep Kumar <sandeep.k@tatapower-ddl.com>, mehra.deepak@tatapower-ddl.com, Lalit Wasan <lalit.wasan@tatapower-ddl.com>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, nrldcso@grid-india.in, Prashant Jain <prashantjain@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, "Somara Lakra (सोमारा लाकरा)" <somara.lakra@posoco.in>

Dear Sir,

This has reference to the trailing mail from NRLDC regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 on bar.

In this regard, we would like to submit that out of 4 Transmission Lines, 2 Transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are not available since 08-05-2023.

At present, even with two units running at full load, there is already a risk of station failure if any of the transmission line trips. Bringing 3rd unit on the bar and evacuating 1500 MW from the available 2 transmission lines further increases the risk of the station outage as the probability of transmission lines failure with increased loading will be much more. This is a major safety concern for our station.

In addition to this, running three units with 2 transmission lines is not in line with (n-1) criteria.

Similar incident happened on 20-12-2022, wherein all three units were on bar and 3 transmission lines were in service. Subsequent to tripping of Jhajjar-Daulatabad Line-1 & 2 resulted in shifting of the entire station load of 1400 MW on single line, which led to failure of transmission element due to thermal overloading and caused **Station Blackout**.

Instant tripping of all three machines at full load is a matter of concern as it may pose a serious threat to the safety of the machines. In addition to this, any damage in the machine may lead to prolonged outage.

Therefore, considering the above circumstances, we request your good office not to schedule power from our third machine till Jhajjar-Daulatabad Lines are made available by HVPNL.

With Regards
AMIT HOODA
Senior Manager (EEMG-Commercial)
APCPL-IGSTPS Jhajjar
Ph. +91-9416212595
01251-266567

---------- Forwarded message ---------
From: **Igstpp Jhajjar** <igstpp.jhajjar.sce@gmail.com>
Date: Wed, May 17, 2023 at 5:33 PM
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important
To: Prashant Jain <prashantjain@ntpc.co.in>, amit hooda <amit.hooda01@gmail.com>

[Quoted text hidden]

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

amit hooda <amit.hooda01@gmail.com> Wed, May 17, 2023 at 9:41 PM
To: nldccr@grid-india.in
Cc: ashokkr@grid-india.in, vivek.pandey@grid-india.in, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@posoco.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>

Dear Sir,

This has reference to the trailing mail from NRLDC regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 on bar.

In this regard, we would like to submit that out of 4 Transmission Lines, 2 Transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are not available since 08-05-2023.

At present, even with two units running at full load, there is already a risk of station failure if any of the transmission line trips. Bringing 3rd unit on the bar and evacuating 1500 MW from the available 2 transmission lines further increases the risk of the station outage as the probability of transmission lines failure with increased loading will be much more. This is a major safety concern for our station.

In addition to this, running three units with 2 transmission lines is not in line with (n-1) criteria.

Similar incident happened on 20-12-2022, wherein all three units were on bar and 3 transmission lines were in service. Subsequent to tripping of Jhajjar-Daulatabad Line-1 & 2 resulted in shifting of the entire station load of 1400 MW on single line, which led to failure of transmission element due to thermal overloading and caused **Station Blackout**.

Instant tripping of all three machines at full load is a matter of concern as it may pose a serious threat to the safety of the machines. In addition to this, any damage in the machine may lead to prolonged outage.

Therefore, considering the above circumstances, we request your good office not to bring our third machine on bar on account of RRAS till Jhajjar-Daulatabad Lines are made available by HVPNL.

With Regards
AMIT HOODA
Senior Manager (EEMG-Commercial)
APCPL-IGSTPS Jhajjar
Ph. +91-9416212595
01251-266567

---------- Forwarded message ---------
From: **amit hooda** <amit.hooda01@gmail.com>
Date: Wed, May 17, 2023 at 8:05 PM
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important
To: <nldccr@grid-india.in>
Cc: <ashokkr@grid-india.in>, <vivek.pandey@grid-india.in>, Phanisankar Chilukuri (फणिशंकर चिलुकूरि) <pchilukuri@posoco.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>

Dear Sir,

This has reference to the trailing mail from NRLDC regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 on bar.

In this regard, we would like to submit that out of 4 Transmission Lines, 2 Transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are not available since 08-05-2023.

At present, even with two units running at full load, there is already a risk of station failure if any of the transmission line trips. Bringing 3rd unit on the bar and evacuating 1500 MW from the available 2 transmission lines further increases the risk of the station outage as the probability of transmission lines failure with increased loading will be much more. This is a major safety concern for our station.

In addition to this, running three units with 2 transmission lines is not in line with (n-1) criteria.

Similar incident happened on 20-12-2022, wherein all three units were on bar and 3 transmission lines were in service. Subsequent to tripping of Jhajjar-Daulatabad Line-1 & 2 resulted in shifting of the entire station load of 1400 MW on single line, which led to failure of transmission element due to thermal overloading and caused **Station Blackout**.

Instant tripping of all three machines at full load is a matter of concern as it may pose a serious threat to the safety of the machines. In addition to this, any damage in the machine may lead to prolonged outage.

Therefore, considering the above circumstances, we request your good office not to bring our third machine on bar on account of RRAS till Jhajjar-Daulatabad Lines are made available by HVPNL.

With Regards
AMIT HOODA
Senior Manager (EEMG-Commercial)
APCPL-IGSTPS Jhajjar
Ph. +91-9416212595
01251-266567

---------- Forwarded message ---------
From: **Igstpp Jhajjar** <igstpp.jhajjar.sce@gmail.com>
Date: Wed, May 17, 2023 at 5:33 PM
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important
To: Prashant Jain <prashantjain@ntpc.co.in>, amit hooda <amit.hooda01@gmail.com>

---------- Forwarded message ---------
From: **NRLDC SO** <nrldcso@grid-india.in>
Date: Wed, May 17, 2023 at 5:16 PM
Subject: FW: Bringing units out on RSD on bar_ Important
To: Haryana <sldcharyanacr@gmail.com>, dtldata@gmail.com <dtldata@gmail.com>, DTL WEB (dtlscheduling@gmail.com) <dtlscheduling@gmail.com>, system.uppcl@gmail.com <system.uppcl@gmail.com>, JK SLDC <jksldc1@gmail.com>, apc_chandigarh@hotmail.com <apc_chandigarh@hotmail.com>, Sr.Xen P.C., Patiala SLDC Operations <pc-sldcop@pstcl.org>, Uttarakhand <sldc1@rediffmail.com>, cecnsjmu@gmail.com <cecnsjmu@gmail.com>, dtldata@yahoo.co.in <dtldata@yahoo.co.in>, ldrvpnl@gmail.com <ldrvpnl@gmail.com>, ldshutdown@gmail.com <ldshutdown@gmail.com>, pcpseb@gmail.com <pcpseb@gmail.com>, pcshimla2003@gmail.com <pcshimla2003@gmail.com>
Cc: R K Porwal (आर के पोरवाल) <rk.porwal@grid-india.in>, Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, WRLDC Control Room <wrldccr@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>

Sir/Ma’am,

Please refer the trailing e-mail.

You are requested to review your power portfolio and arrange to bring on-bar units closed under RSD {Jhajjar(U#1,500 MW)}.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

From: NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>
Sent: 17 May 2023 15:35
To: NRLDC SO <nrldcso@grid-india.in>; WRLDC Control Room <wrldccr@grid-india.in>
Cc: Surajit Banerjee (सुरजीत बनर्जी) <surajit.banerjee@grid-india.in>; Ashok Kumar (अशोक कुमार) <ashokkr@grid-india.in>; Vivek Pandey (विवेक पांडे) <vivek.pandey@grid-india.in>; Alok Kumar (आलोक कुमार) <alok.kumar@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Pushpa S (पुष्पा एस) <pushpa@grid-india.in>
Subject: Bringing units out on RSD on bar_ Important

Sir,

All India demand is in rising trend and today all India maximum demand touched 220 GW. Considering the coming dry weather, which may further increase the demand in coming days; you are requested to kindly bring Jhajjar(U#1,500 MW), Gadarwara(U#1,800 MW) on bar from RSD through requisition of their beneficiaries.

Regards,

Shift Incharge

National Load Dispatch Center

Grid Controller of India Limited

(Formerly Power System Operation Corporation)

Government of India Enterprise

B-9 Qutub Institutional Area

Katwaria Sarai , New Delhi -110016

Follow Grid-India on:

Follow Grid-India on:

--
SCE,

IGSTPP Jhajjar.

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

NRLDC SO <nrldcso@grid-india.in> Thu, May 18, 2023 at 12:39 AM
To: amit hooda <amit.hooda01@gmail.com>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>
Cc: "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "Alok Kumar (आलोक कुमार)" <alok.kumar@grid-india.in>, "NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम)" <nldccr@grid-india.in>

Sir,

Please refer trailing mail and take necessary action to bring Unit 1 on bar.(Delhi and Haryana has provided consent to take their share as per entitlement)

From: NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>
Sent: 17 May 2023 22:56
To: amit hooda <amit.hooda01@gmail.com>
Cc: Surajit Banerjee (सुरजीत बनर्जी) <surajit.banerjee@grid-india.in>; Ashok Kumar (अशोक कुमार) <ashokkr@grid-india.in>; Vivek Pandey (विवेक पांडे) <vivek.pandey@grid-india.in>; Phanisankar Chilukuri (फणिशंकर चिलुकूरि) <pchilukuri@grid-india.in>; Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>; Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>; Sanjay Asati <sanjayasati@ntpc.co.in>; Prashant Jain <prashantjain@ntpc.co.in>; Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>; B S RAO <SRBODANKI@ntpc.co.in>; NRLDC SO <nrldcso@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Alok Kumar (आलोक कुमार) <alok.kumar@grid-india.in>
Subject: RE: FW: Bringing units out on RSD on bar_ Important

Sir,

Thank you very much for flagging your concerned. But as it is already mentioned in the trailing e-mail that All India demand will further increase keeping in view the dry spell in coming days. It is important to maximise generation where ever possible. So keeping in view all these aspect and after analysing all the network status around the generating plant of Jhajjar, NRLDC & NLDC had requested to bring the unit-1 at Jhajjar.

Hence it is kindly requested to bring the unit-1, as per the trailing email. If plant fails to bring the unit, then accordingly plant has to revise the DC.

NRLDC requested to monitor the same i.e. to bringing of unit-1 at Jhajjar and revision of DC if plant fail to bring the unit.

Matter is to be taken on priority basis, as it is very critical and important.

Thanks and regards,

SCE, NLDC

From: amit hooda <amit.hooda01@gmail.com>
Sent: 17 May 2023 21:42
To: NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>
Cc: Ashok Kumar (अशोक कुमार) <ashokkr@grid-india.in>; Vivek Pandey (विवेक पांडे) <vivek.pandey@grid-india.in>; Phanisankar Chilukuri (फणिशंकर चिलुकूरि) <pchilukuri@grid-india.in>; Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>; Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>; Sanjay Asati <sanjayasati@ntpc.co.in>; Prashant Jain <prashantjain@ntpc.co.in>; Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>; B S RAO <SRBODANKI@ntpc.co.in>
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important

Dear Sir,

This has reference to the trailing mail from NRLDC regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 on bar.

In this regard, we would like to submit that out of 4 Transmission Lines, 2 Transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are not available since 08-05-2023.

At present, even with two units running at full load, there is already a risk of station failure if any of the transmission line trips. Bringing 3rd unit on the bar and evacuating 1500 MW from the available 2 transmission lines further increases the risk of the station outage as the probability of transmission lines failure with increased loading will be much more. This is a major safety concern for our station.

In addition to this, running three units with 2 transmission lines is not in line with (n-1) criteria.

Similar incident happened on 20-12-2022, wherein all three units were on bar and 3 transmission lines were in service. Subsequent to tripping of Jhajjar-Daulatabad Line-1 & 2 resulted in shifting of the entire station load of 1400 MW on single line, which led to failure of transmission element due to thermal overloading and caused **Station Blackout**.

Instant tripping of all three machines at full load is a matter of concern as it may pose a serious threat to the safety of the machines. In addition to this, any damage in the machine may lead to prolonged outage.

Therefore, considering the above circumstances, we request your good office not to bring our third machine on bar on account of RRAS till Jhajjar-Daulatabad Lines are made available by HVPNL.

With Regards
AMIT HOODA
Senior Manager (EEMG-Commercial)
APCPL-IGSTPS Jhajjar
Ph. +91-9416212595
01251-266567

---------- Forwarded message ---------
From: **amit hooda** <amit.hooda01@gmail.com>
Date: Wed, May 17, 2023 at 8:05 PM
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important
To: <nldccr@grid-india.in>
Cc: <ashokkr@grid-india.in>, <vivek.pandey@grid-india.in>, Phanisankar Chilukuri (फणिशंकर चिलुकूरि)

<pchilukuri@posoco.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>

Dear Sir,

This has reference to the trailing mail from NRLDC regarding bringing of APCPL-IGSTPS Jhajjar Unit-1 on bar.

In this regard, we would like to submit that out of 4 Transmission Lines, 2 Transmission lines namely Jhajjar-Daulatabad Circuit 1 & 2 (both owned by HVPNL) are not available since 08-05-2023.

At present, even with two units running at full load, there is already a risk of station failure if any of the transmission line trips. Bringing 3rd unit on the bar and evacuating 1500 MW from the available 2 transmission lines further increases the risk of the station outage as the probability of transmission lines failure with increased loading will be much more. This is a major safety concern for our station.

In addition to this, running three units with 2 transmission lines is not in line with (n-1) criteria.

Similar incident happened on 20-12-2022, wherein all three units were on bar and 3 transmission lines were in service. Subsequent to tripping of Jhajjar-Daulatabad Line-1 & 2 resulted in shifting of the entire station load of 1400 MW on single line, which led to failure of transmission element due to thermal overloading and caused **Station Blackout**.

Instant tripping of all three machines at full load is a matter of concern as it may pose a serious threat to the safety of the machines. In addition to this, any damage in the machine may lead to prolonged outage.

Therefore, considering the above circumstances, we request your good office not to bring our third machine on bar on account of RRAS till Jhajjar-Daulatabad Lines are made available by HVPNL.

With Regards
AMIT HOODA
Senior Manager (EEMG-Commercial)
APCPL-IGSTPS Jhajjar
Ph. +91-9416212595
01251-266567

---------- Forwarded message ---------
From: **Igstpp Jhajjar** <igstpp.jhajjar.sce@gmail.com>
Date: Wed, May 17, 2023 at 5:33 PM
Subject: Fwd: FW: Bringing units out on RSD on bar_ Important
To: Prashant Jain <prashantjain@ntpc.co.in>, amit hooda <amit.hooda01@gmail.com>

---------- Forwarded message ---------
From: **NRLDC SO** <nrldcso@grid-india.in>
Date: Wed, May 17, 2023 at 5:16 PM
Subject: FW: Bringing units out on RSD on bar_ Important
To: Haryana <sldcharyanacr@gmail.com>, dtldata@gmail.com <dtldata@gmail.com>, DTL WEB (dtlscheduling@gmail.com) <dtlscheduling@gmail.com>, system.uppcl@gmail.com <system.uppcl@gmail.com>, JK SLDC <jksldc1@gmail.com>, apc_chandigarh@hotmail.com <apc_chandigarh@hotmail.com>, Sr.Xen P.C., Patiala SLDC Operations <pc-sldcop@pstcl.org>, Uttarakhand <sldc1@rediffmail.com>, cecnsjmu@gmail.com <cecnsjmu@gmail.com>, dtldata@yahoo.co.in <dtldata@yahoo.co.in>, ldrvpnl@gmail.com <ldrvpnl@gmail.com>, ldshutdown@gmail.com <ldshutdown@gmail.com>, pcpseb@gmail.com <pcpseb@gmail.com>,

pcshimla2003@gmail.com <pcshimla2003@gmail.com>
Cc: R K Porwal (आर के पोरवाल) <rk.porwal@grid-india.in>, Somara Lakra (सोमारा लाकरा) <somara.lakra@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, WRLDC Control Room <wrldccr@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>

Sir/Ma'am,

Please refer the trailing e-mail.

You are requested to review your power portfolio and arrange to bring on-bar units closed under RSD {Jhajjar(U#1,500 MW)}.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

From: NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम) <nldccr@grid-india.in>
Sent: 17 May 2023 15:35
To: NRLDC SO <nrldcso@grid-india.in>; WRLDC Control Room <wrldccr@grid-india.in>
Cc: Surajit Banerjee (सुरजीत बनर्जी) <surajit.banerjee@grid-india.in>; Ashok Kumar (अशोक कुमार) <ashokkr@grid-india.in>; Vivek Pandey (विवेक पांडे) <vivek.pandey@grid-india.in>; Alok Kumar (आलोक कुमार) <alok.kumar@grid-india.in>; Mahavir Prasad Singh (महावीर प्रसाद सिंह) <mahavir@grid-india.in>; Pushpa S (पुष्पा एस) <pushpa@grid-india.in>
Subject: Bringing units out on RSD on bar_ Important

Sir,

All India demand is in rising trend and today all India maximum demand touched 220 GW. Considering the coming dry weather, which may further increase the demand in coming days; you are requested to kindly bring Jhajjar(U#1,500 MW), Gadarwara(U#1,800 MW) on bar from RSD through requisition of their beneficiaries.

Regards,

Shift Incharge

National Load Dispatch Center

Grid Controller of India Limited

(Formerly Power System Operation Corporation)

Government of India Enterprise

B-9 Qutub Institutional Area

Katwaria Sarai , New Delhi -110016

Follow Grid-India on:

Follow Grid-India on:

--

SCE,

IGSTPP Jhajjar.

Follow Grid-India on:

Follow Grid-India on:

* This e-mail is an official email of Grid Controller of India Limited (Grid-India), is confidential and intended to use by the addressee only. If the message is received by anyone other than the addressee, please return the message to the sender by replying to it and then delete the message from your computer. Internet e-mails are not necessarily secure. The Grid Controller of India Limited (Grid-India) does not accept responsibility for changes made to this message after it was sent. Whilst all reasonable care has been taken to avoid the transmission of viruses, it is the responsibility of the recipient to ensure that the onward transmission, opening or use of this message and any attachments will not adversely affect its systems or data. No responsibility is accepted by the Grid-India in this regard and the recipient should carry out such virus and other checks as it considers appropriate. Visit our website at www.posoco.in *

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com> Thu, May 18, 2023 at 1:08 AM
To: NRLDC SO <nrldcso@grid-india.in>
Cc: amit hooda <amit.hooda01@gmail.com>, "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "Alok Kumar (आलोक कुमार)" <alok.kumar@grid-india.in>, "NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम)" <nldccr@grid-india.in>, cksamta@ntpc.co.in

Dear Sir,
With reference to your email, we would like to reiterate that our third machine is available to be brought on the bar. However, due to transmission constraint owing to non-availability of Jhajjar-Daulatabad circuit 1 & 2 (owned by HVPNL) bringing third machine on the bar and running on full load is a safety concern.

Non availability of dedicated transmission line for evacuation of Haryana' share from our station may not be the reason for reduction of our DC.

It is our humble request to kindly reconsider your decision and take necessary action as deemed fit.

Thanks & Regards
SCE- Jhajjar
[Quoted text hidden]
--
SCE,
IGSTPP Jhajjar.

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

NRLDC SO <nrldcso@grid-india.in> Thu, May 18, 2023 at 12:06 PM
To: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>
Cc: "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "cksamta@ntpc.co.in" <cksamta@ntpc.co.in>, "Somara Lakra (सोमारा लाकरा)" <somara.lakra@grid-india.in>, amit hooda <amit.hooda01@gmail.com>, "S. C. Saxena (एस. सी. सक्सेना)" <scsaxena@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, "NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम)" <nldccr@grid-india.in>, "R K Porwal (आर के पोरवाल)" <rk.porwal@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>

Sir,

With reference to trailing mail, Kindly bring the unit 1 500MW of Jhajjar ON BAR on immediate basis. In case of deficit in technical minimum schedule, RRAS support will be provided by NLDC.

Thanks & Regards,

Grid Controller of India Ltd.

(Grid-India)

Northern Regional Load Despatch Center
18-A, Saheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line: 20112151/52, M. - 08448167373

[Quoted text hidden]
[Quoted text hidden]

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

NRLDC SO <nrldcso@grid-india.in> Thu, May 18, 2023 at 12:18 PM
To: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>
Cc: "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "cksamta@ntpc.co.in" <cksamta@ntpc.co.in>, "Somara Lakra (सोमारा लाकरा)" <somara.lakra@grid-india.in>, amit hooda <amit.hooda01@gmail.com>, "S. C. Saxena (एस. सी. सक्सेना)" <scsaxena@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, "NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम)" <nldccr@grid-india.in>, "R K Porwal (आर के पोरवाल)" <rk.porwal@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, "Alok Kumar (आलोक कुमार)" <alok.kumar@grid-india.in>

Sir,

In continuation of trailing mail, after syn. of U#1, kindly restrict the total generation of Jhajjar at 1200MW. In case of tripping of any one ckt of 400kV Jhajjar- Mundka, please bring down the generation to technical minimum.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

[Quoted text hidden]
[Quoted text hidden]

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

amit hooda <amit.hooda01@gmail.com> Thu, May 18, 2023 at 1:33 PM
To: NRLDC SO <nrldcso@grid-india.in>
Cc: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "cksamta@ntpc.co.in" <cksamta@ntpc.co.in>, "Somara Lakra (सोमारा लाकरा)" <somara.lakra@grid-india.in>, "S. C. Saxena (एस. सी. सक्सेना)" <scsaxena@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, "NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम)" <nldccr@grid-india.in>, "R K Porwal (आर के पोरवाल)" <rk.porwal@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, "Alok Kumar (आलोक कुमार)" <alok.kumar@grid-india.in>, Sanjeev Kumar Singh <SKSINGH15@ntpc.co.in>, "R.P Pradhan" <sec-nrpc@nic.in>, SE Operation <seo-nrpc@nic.in>

Dear Sir,

With reference to your advisory dated 10-05-2023 which is as follows:

Quote
400kV Jhajjar-Daulatabad-1 & 2 are under forced outage due to tower bend which is expected to be revived around 25thMay. Currently, Jhajjar is evacuating power through 400kV Jhajjar-Mundka-1 & 2 with thermal limit of 852 MW each circuit. In case of tripping of any of the circuit, you are requested to back down the generation suitably for safe evacuation of power from Jhajjar.
Unquote

Further, reference is requested to your email dated 10-05-2023 wherein you asked Haryana to revive the Jhajjar-Daulatabad Circuit 1 & 2 as early as possible for running of all 03 units at NTPC, Jhajjar. Without revival of Jhajjar-Daulatabad lines only 02 Units can be run at NTPC, Jhajjar. Kindly expedite the restoration of lines as early as possible.

Now, without revival of Jhajjar-Daulatabad Transmission circuits, we are being insisted to run the third machine which is not desirable and safe considering (n-1) compliance.

Running three machines in this condition may lead to station blackout and may endanger our machines and the transmission element. This may result in prolonged outage of units and Thermal runaway of the Transmission line. In case of any mishap with both available Jhajjar-Mundka lines, station won't be able to get backup power for a considerable period of time for restoration.

Bringing third unit with load restriction of 1200 MW on two available transmission lines is not safe as we won't be able to back down upto safe evacuation limit of 850 MW in case (n-1) condition arises, which may pose a serious safety concern for non-stakeholder entities along the span of Jhajjar-Mundka Transmission lines.

In case of any untoward incident arising thereof APCPL-IGSTPS Jhajjar will not be held responsible.

In view of the above, it is once again requested to kindly review your decision and intimate whether to bring the machine or not.

With Regards
AMIT HOODA
Senior Manager (EEMG-Commercial)
APCPL-IGSTPS Jhajjar
Ph. +91-9416212595
01251-266567

[Quoted text hidden]

Gmail **amit hooda <amit.hooda01@gmail.com>**

Fwd: FW: Bringing units out on RSD on bar_ Important

NRLDC SO <nrldcso@grid-india.in> Thu, May 18, 2023 at 2:42 PM
To: amit hooda <amit.hooda01@gmail.com>
Cc: Igstpp Jhajjar <igstpp.jhajjar.sce@gmail.com>, "Surajit Banerjee (सुरजीत बनर्जी)" <surajit.banerjee@grid-india.in>, "Ashok Kumar (अशोक कुमार)" <ashokkr@grid-india.in>, "Vivek Pandey (विवेक पांडे)" <vivek.pandey@grid-india.in>, "Phanisankar Chilukuri (फणिशंकर चिलुकूरि)" <pchilukuri@grid-india.in>, Laxmidhar Sahoo <ldsahoo01@ntpc.co.in>, Sanjay Asati <sanjayasati@ntpc.co.in>, Prashant Jain <prashantjain@ntpc.co.in>, Lalit Neeraj ललित नीरज <lalitneeraj@ntpc.co.in>, B S RAO <SRBODANKI@ntpc.co.in>, "Mahavir Prasad Singh (महावीर प्रसाद सिंह)" <mahavir@grid-india.in>, "cksamta@ntpc.co.in" <cksamta@ntpc.co.in>, "Somara Lakra (सोमारा लाकरा)" <somara.lakra@grid-india.in>, "S. C. Saxena (एस. सी. सक्सेना)" <scsaxena@grid-india.in>, nrldc_hods_tech <nrldc_hods_tech@grid-india.in>, "NLDC Control Room (एन.एल.डी.सी. कंट्रोल रूम)" <nldccr@grid-india.in>, "R K Porwal (आर के पोरवाल)" <rk.porwal@grid-india.in>, NRLDC Scheduling <nrldcscheduling@grid-india.in>, "Alok Kumar (आलोक कुमार)" <alok.kumar@grid-india.in>, Sanjeev Kumar Singh <SKSINGH15@ntpc.co.in>, "R.P Pradhan" <sec-nrpc@nic.in>, SE Operation <seo-nrpc@nic.in>

Sir,

With ref. to our earlier communication kindly bring the unit 1 500MW of Jhajjar ON BAR immediately.

Thanks & Regards,

Shift-in-Charge

Grid Controller of India Ltd.(Grid-India)

Northern Regional Load Despatch Centre
18-A, Shaheed Jeet Singh Marg, Katwaria Sarai, New Delhi-110016
Ph. : 011-26519406, Hot Line :20112151/52, M.: 08448167373

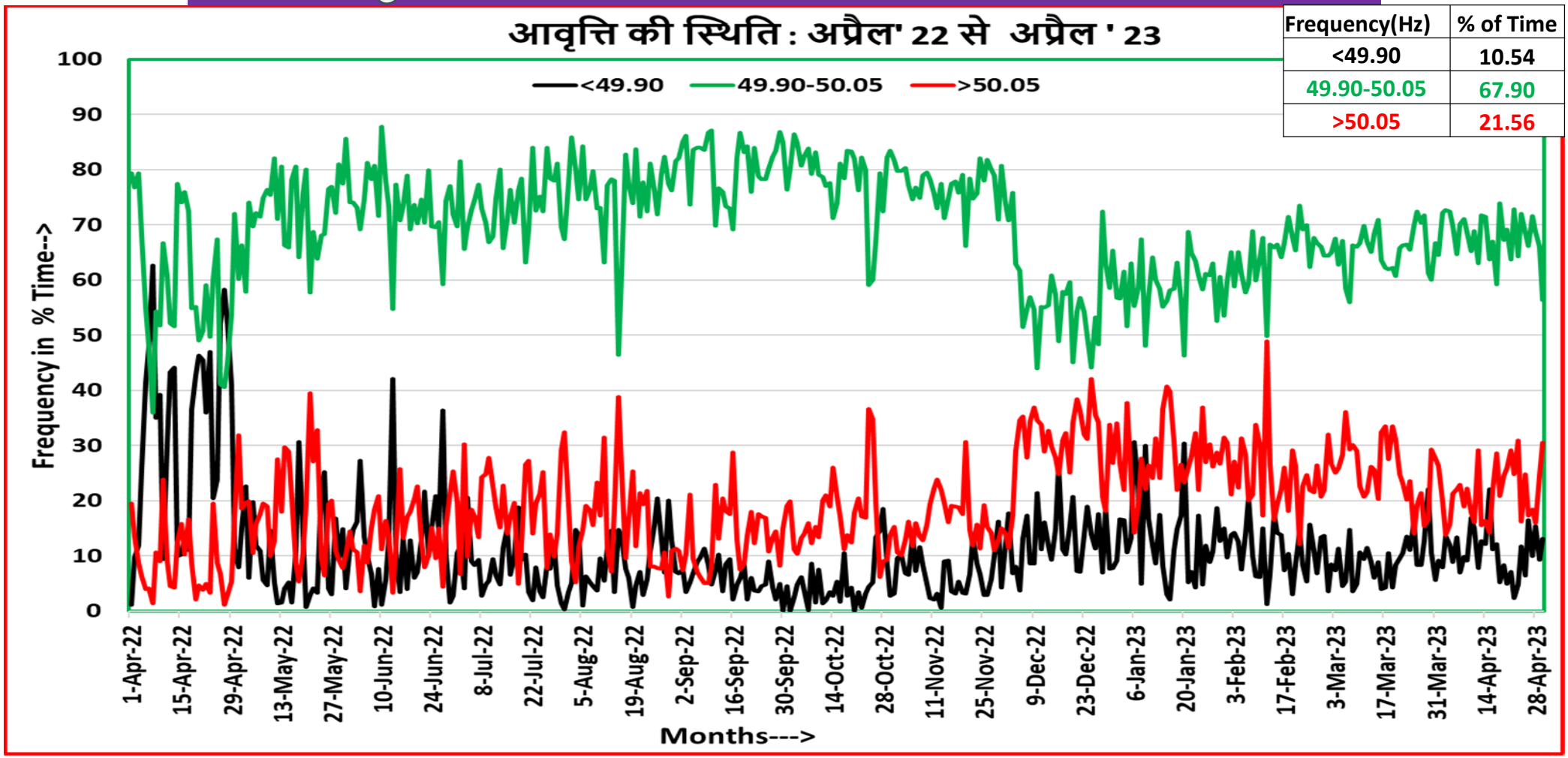
[Quoted text hidden]
[Quoted text hidden]

प्रचालन समन्वय उपसमिति की बैठक
अप्रैल - 2023

पिछले एक साल मे आवृत्ति की स्थिति

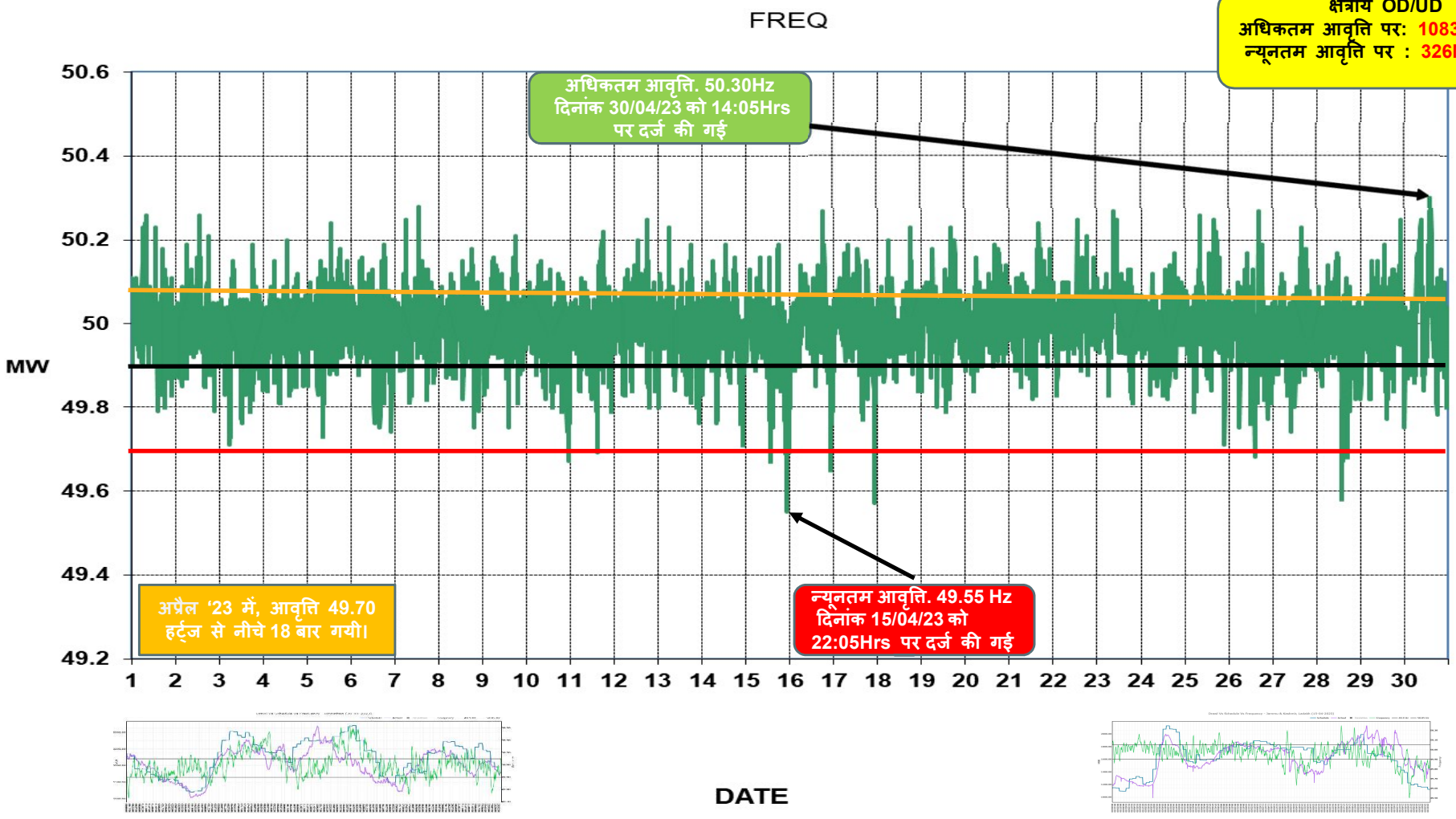
आवृत्ति बैंड	अप्रैल 2022	मई 2022	जून 2022	जुलाई 2022	अगस्त 2022	सितम्बर 2022	अक्टूबर 2022	नवम्बर 2022	दिसंबर 2022	जनवरी 2023	फ़रवरी2023	मार्च 2023	अप्रैल 2023
< 49.7 Hz(%)	4.94	0.27	0.42	0.42	0.49	0.17	0.04	0.13	1.11	1.25	0.32	0.16	0.24
<49.8 Hz(%)	13.60	1.94	2.41	1.78	2.02	0.91	0.46	0.76	3.96	3.60	1.95	1.26	1.68
<49.9 Hz(%)	31.98	9.83	12.45	7.82	8.77	5.94	4.88	6.70	12.78	13.30	10.75	9.03	10.54
49.90-50.05 Hz(%)	**59.30**	**72.23**	**73.38**	**73.45**	**75.77**	**80.77**	**78.27**	**77.00**	**57.39**	**58.70**	**64.68**	**63.84**	**67.90**
50.05-50.10 Hz(%)	7.35	12.95	11.46	14.84	11.99	11.55	14.04	13.88	11.99	15.26	14.59	17.86	12.54
>50.10 Hz(%)	1.35	4.11	2.43	3.58	3.00	1.65	2.63	2.30	17.84	12.34	8.49	7.99	6.46
>50.20 Hz(%)	0.08	0.88	0.28	0.31	0.47	0.08	0.18	0.12	4.07	1.83	1.49	1.28	0.88
औसत आवृत्ति	49.93	50.00	49.99	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	49.99

आवृत्ति की स्थिति: अप्रैल -2022 से 2023



Frequency(Hz)	% of Time
<49.90	10.54
49.90-50.05	67.90
>50.05	21.56

अप्रैल -2023 के दौरान आवृत्ति की स्थिति
(As per 5 Minute SCADA data)



क्षेत्रीय OD/UD
अधिकतम आवृत्ति पर: 1083MW(UD)
न्यूनतम आवृत्ति पर : 326MW(OD)

OD(+)/UD(-) at Min Freq

UP	-125
Del	-21
Har	-106
Utt	-36
JK	+355
Pun	+156
Chd	+6
Raj	+2
HP	+79

OD(+)/UD(-) at Max Freq

Del	-71
Har	-165
Utt	-2
Chd	-23
JK	-87
Pun	-30
Raj	-821
UP	+51
HP	+64

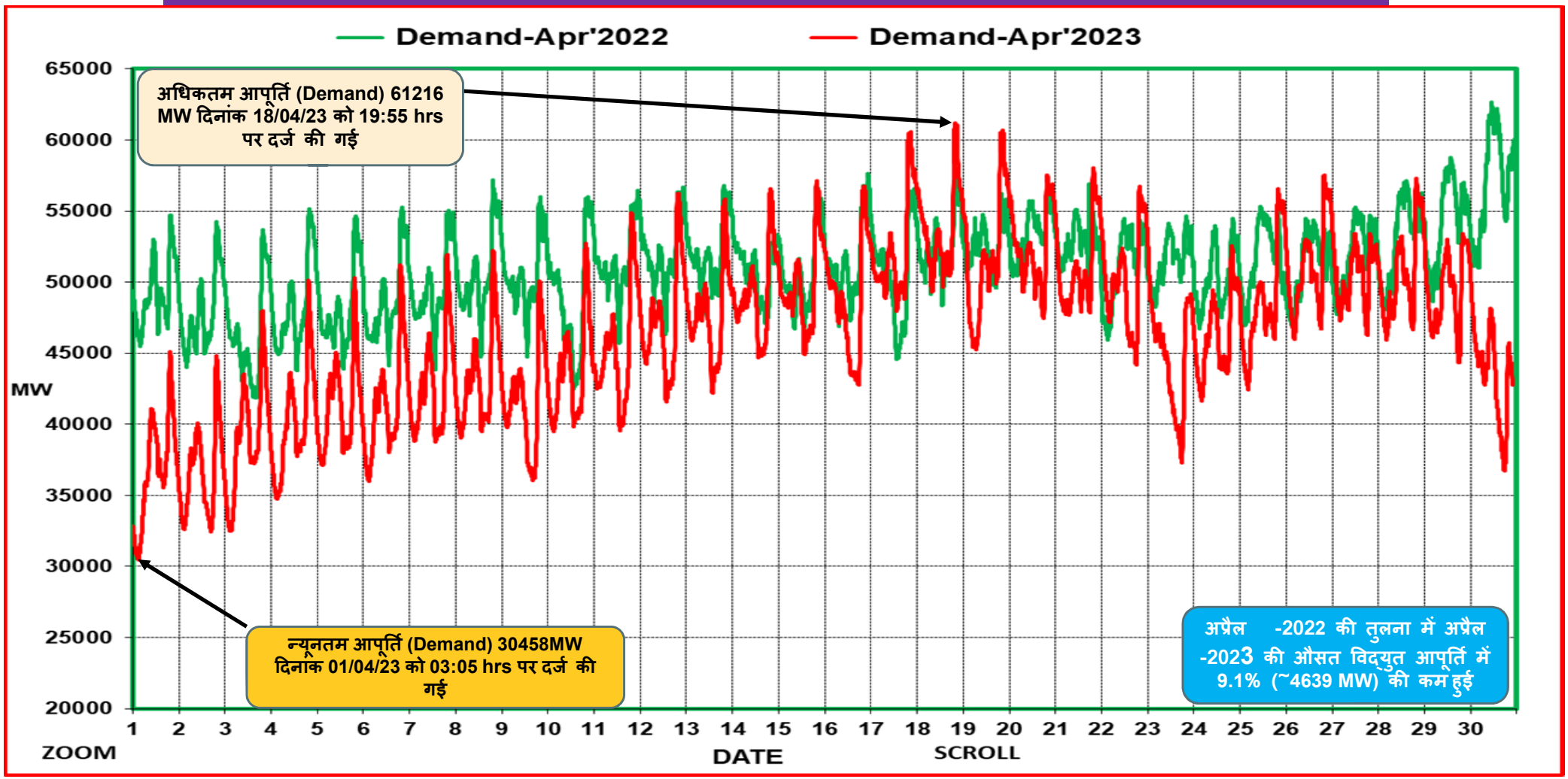
अप्रैल -2023 के दौरान अधिकतम मांग (Demand Met), अधिकतम ऊर्जा खपत (Energy consumption) और अब तक का कीर्तिमान (राज्यों द्वारा जमा आंकड़ों के अनुसार)

ग्रिड-इंडिया GRID-INDIA

राज्य	अधिकतम मांग (MW) (in Apr'23)	दिनांक / समय	रिकॉर्ड अधिकतम मांग (in MW) (upto Mar'23)	दिनांक / समय	अधिकतम ऊर्जा खपत (MU) (in Apr'23)	दिनांक	रिकॉर्ड अधिकतम ऊर्जा खपत (MU) (Upto Mar'23)	दिनांक
पंजाब	8143	18.04.23 at 21:15	14295	22.08.22 को 14:45 बजे	162.5	26.04.23	334.45	29.06.22
हरियाणा	8345	26.04.23 at 22:45	12768	28.06.22 को 11:56 बजे	164.8	18.04.23	266.15	07.07.21
राजस्थान	13766	18.04.23 at 11:30	17206	18.01.23 को 14:30 बजे	281.3	17.04.23	328.86	09.09.22
दिल्ली	5422	18.04.23 at 15:19	7695	29.06.22 को 15:10 बजे	109.1	18.04.23	153.52	28.06.22
उत्तर प्रदेश	23473	19.04.23 at 20:29	26589	09.09.22 को 21:39 बजे	443.2	20.04.23	547.360	19.08.22
उत्तराखंड	2228	17.04.23 at 19:00	2594	14.06.22 को 21:00 बजे	45.1	29.04.23	54.27	15.06.22
हिमाचल प्रदेश	1809	05.04.23 at 07:45	2071	06.01.23 को 09:45 बजे	32.3	07.04.23	37.0	06.01.23
जम्मू और कश्मीर (UT) तथा लद्दाख़ (UT)	2890	16.04.23 at 20:00	3044	02.02.23 को 20:00 बजे	59.3	21.04.23	64.6	20.01.23
चंडीगढ़	252	18.04.23 at 15:30	426	08.07.21 को 15:00 बजे	5.2	18.04.23	8.41	08.07.21
उत्तरी क्षेत्र #	61216	18.04.23 at 19:55	77006	28.06.22 को 11:50 बजे	1282.3	18.04.23	1737.09	28.06.22

उत्तरी क्षेत्र अधिकतम मांग (Demand Met) as per SCADA Data

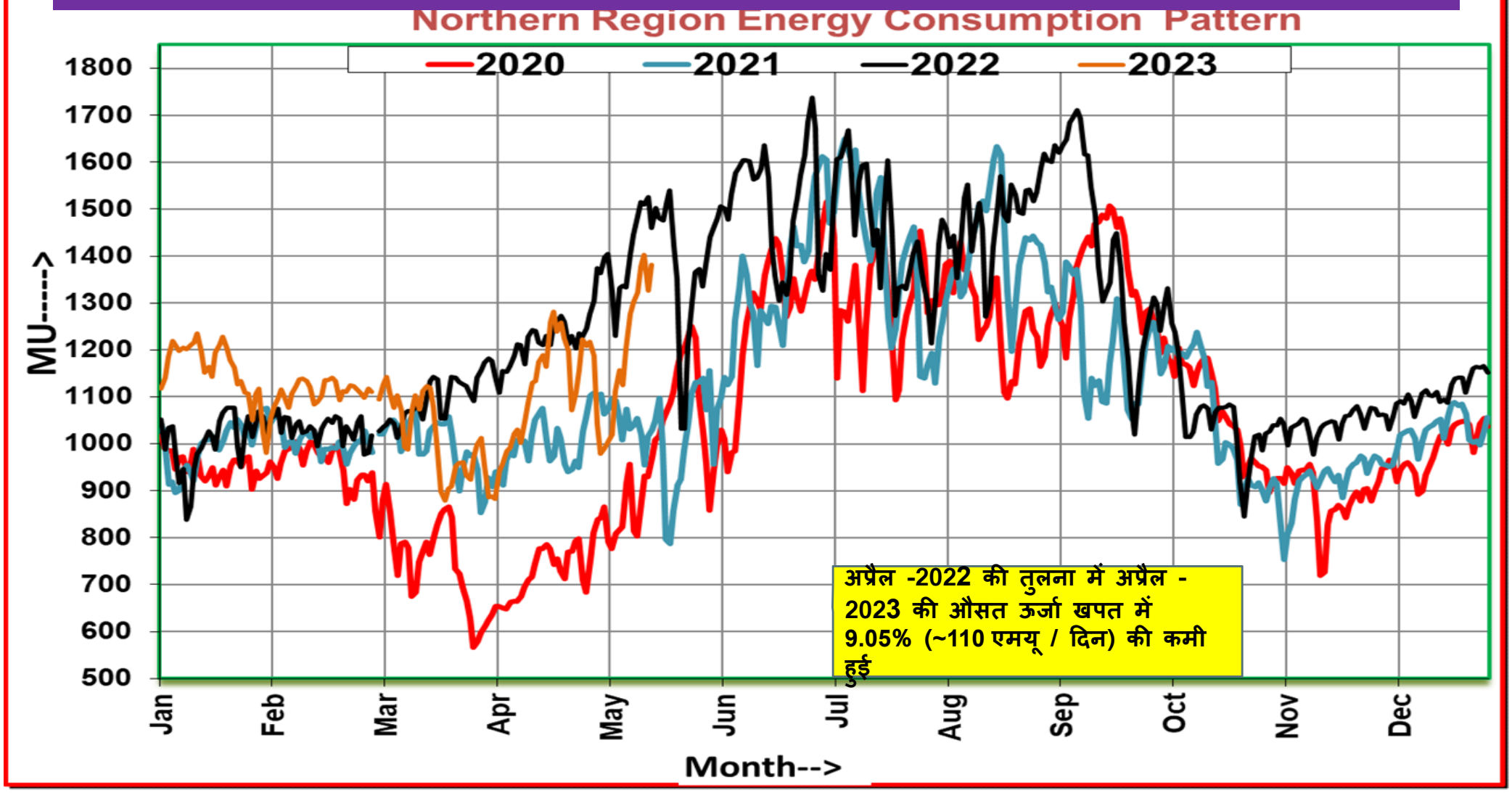
क्षेत्रीय विद्युत आपूर्ति (Demand) अप्रैल 2022 बनाम अप्रैल 2023 (As per 5 Minute SCADA data)



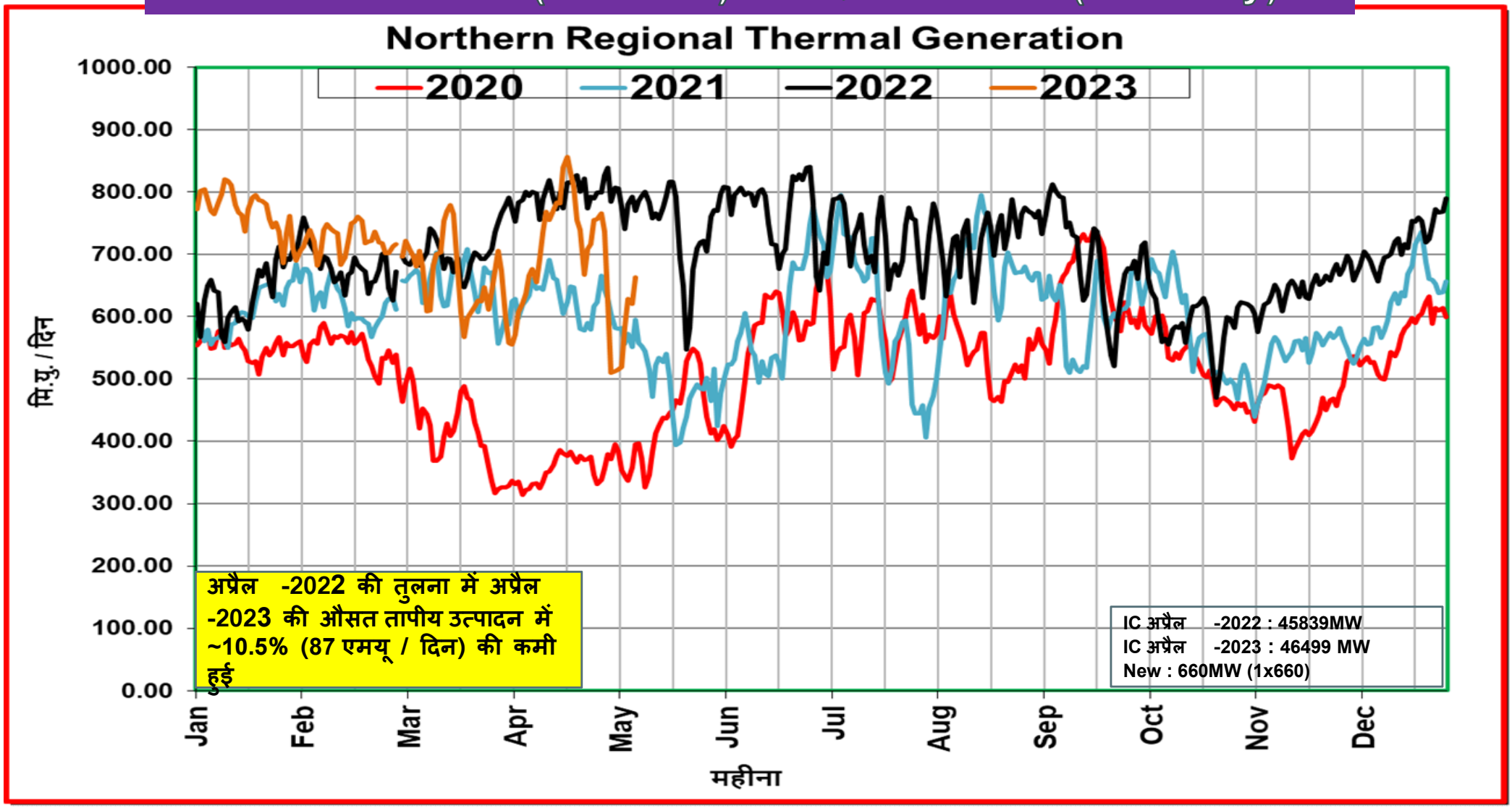
उत्तरी क्षेत्र की औसत ऊर्जा खपत में वृद्धि(% में) अप्रैल -2023/ अप्रैल -2022 / अप्रैल -2021

राज्य	अप्रैल -2021	अप्रैल -2022	अप्रैल -2023	% वृद्धि (अप्रैल -2022 vs अप्रैल -2021)	% वृद्धि (अप्रैल -2023 vs अप्रैल -2022)
पंजाब	123.35	162.42	139.81	31.68%	-13.93%
हरियाणा	128.74	151.30	139.83	17.52%	-7.58%
राजस्थान	213.73	258.94	245.30	21.16%	-5.27%
दिल्ली	74.33	105.70	85.10	42.21%	-19.49%
उत्तर प्रदेश	337.41	419.04	369.43	24.20%	-11.84%
उत्तराखंड	36.93	41.20	40.22	11.59%	-2.38%
चंडीगढ़	3.51	4.89	4.04	39.13%	-17.33%
हिमाचल प्रदेश	28.13	32.15	30.47	14.30%	-5.22%
जम्मू और कश्मीर (UT) तथा लद्दाख़ (UT)	52.41	44.88	55.83	-14.37%	24.41%
उत्तरी क्षेत्र	998.52	1220.52	1110.03	22.23%	-9.05%

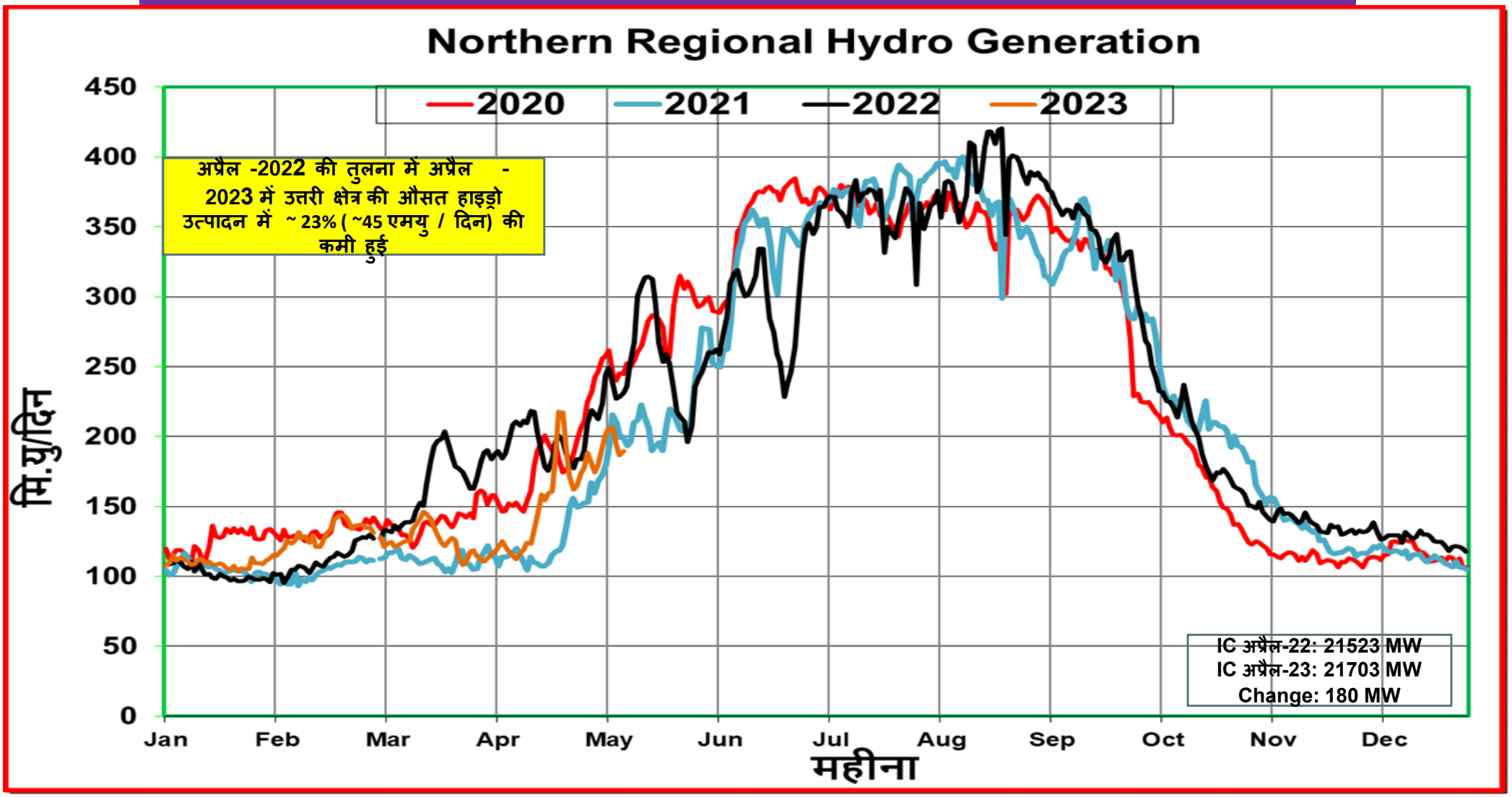
उत्तरी क्षेत्र की ऊर्जा खपत(MUs)



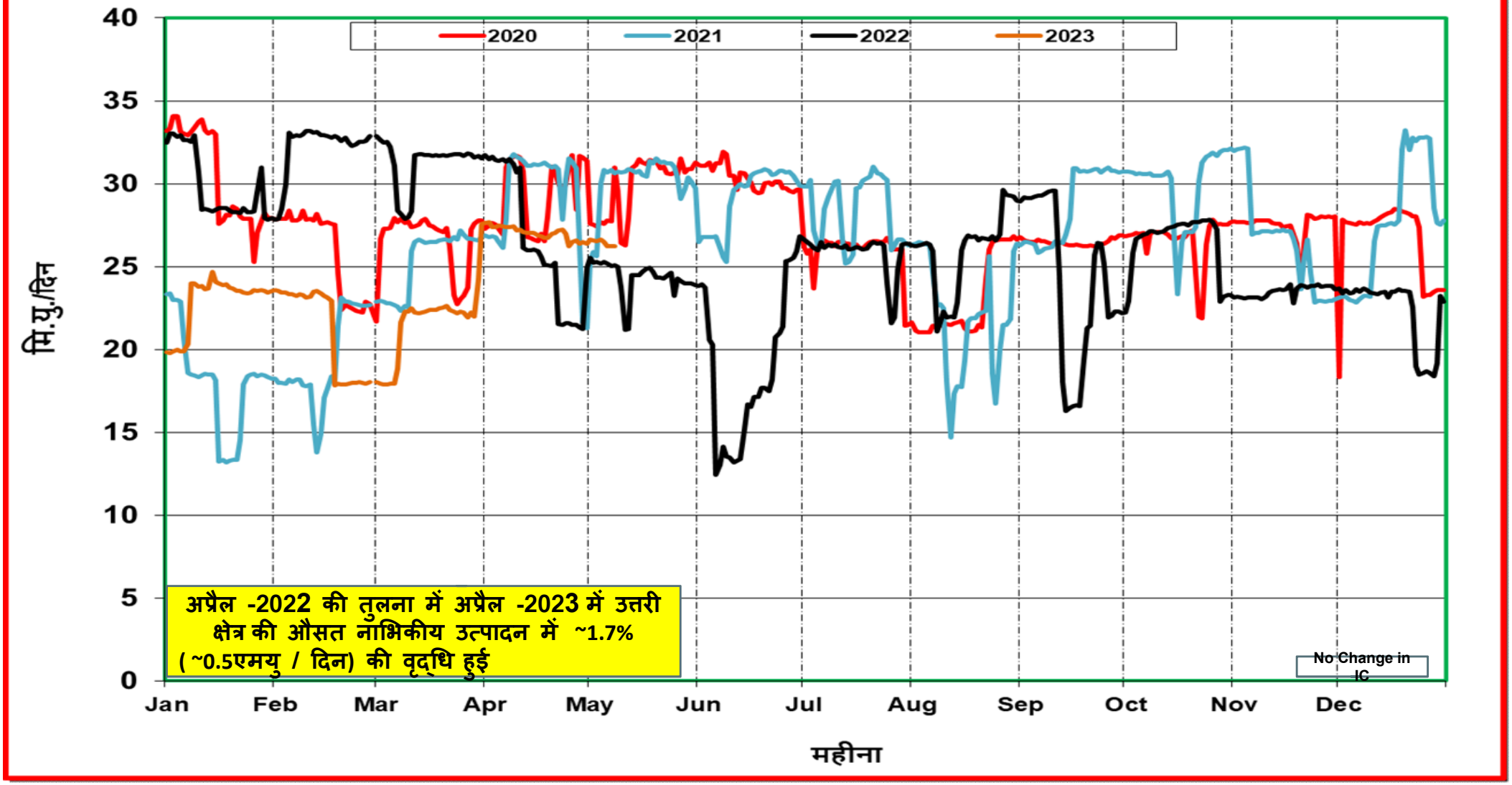
उत्तरी क्षेत्र की तापीय (Thermal) उत्पादन की स्थिति(Mus/Day)



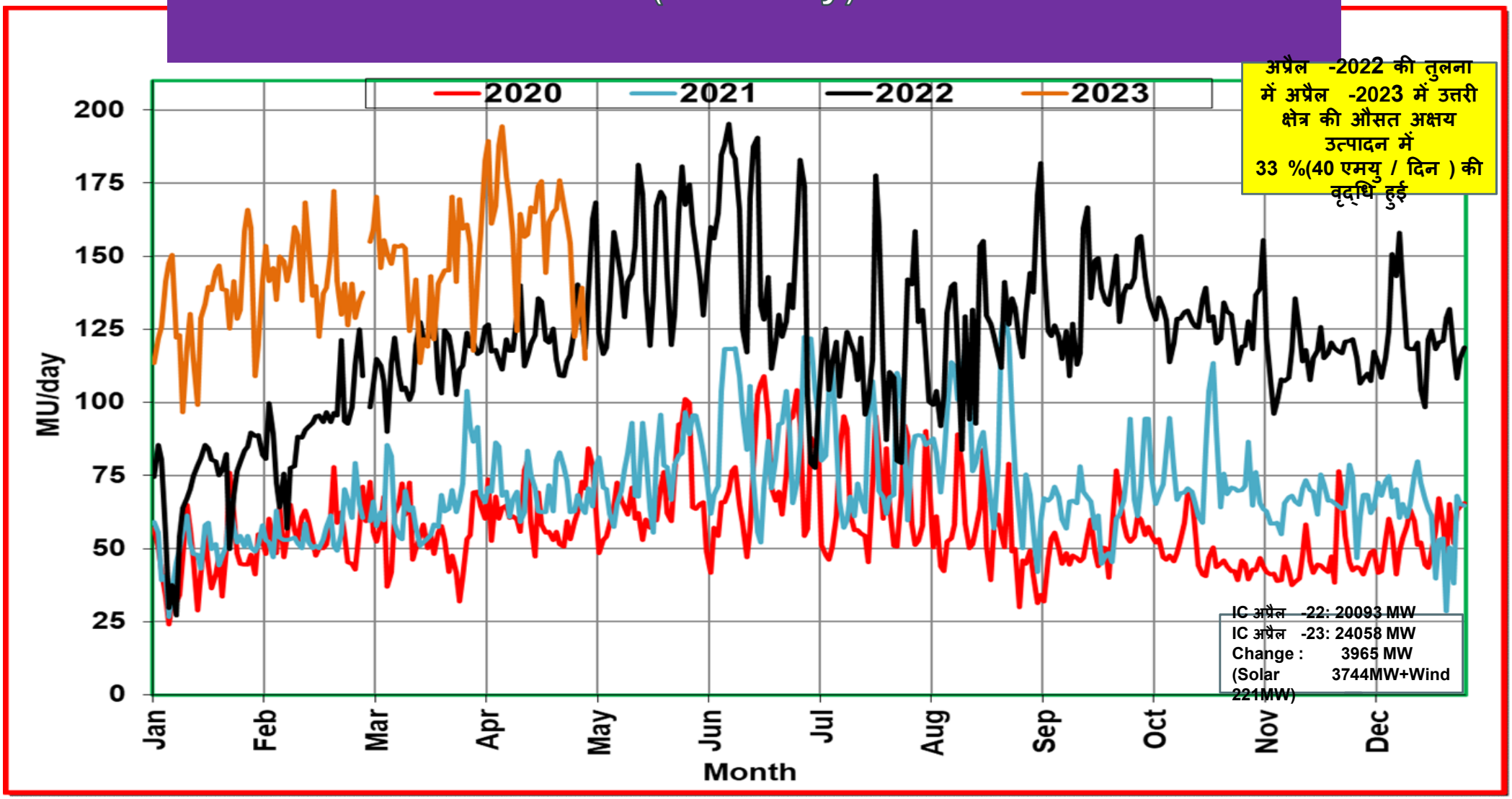
उत्तरी क्षेत्र की जलीय (हाइड्रो) उत्पादन की स्थिति(Mus/Day)



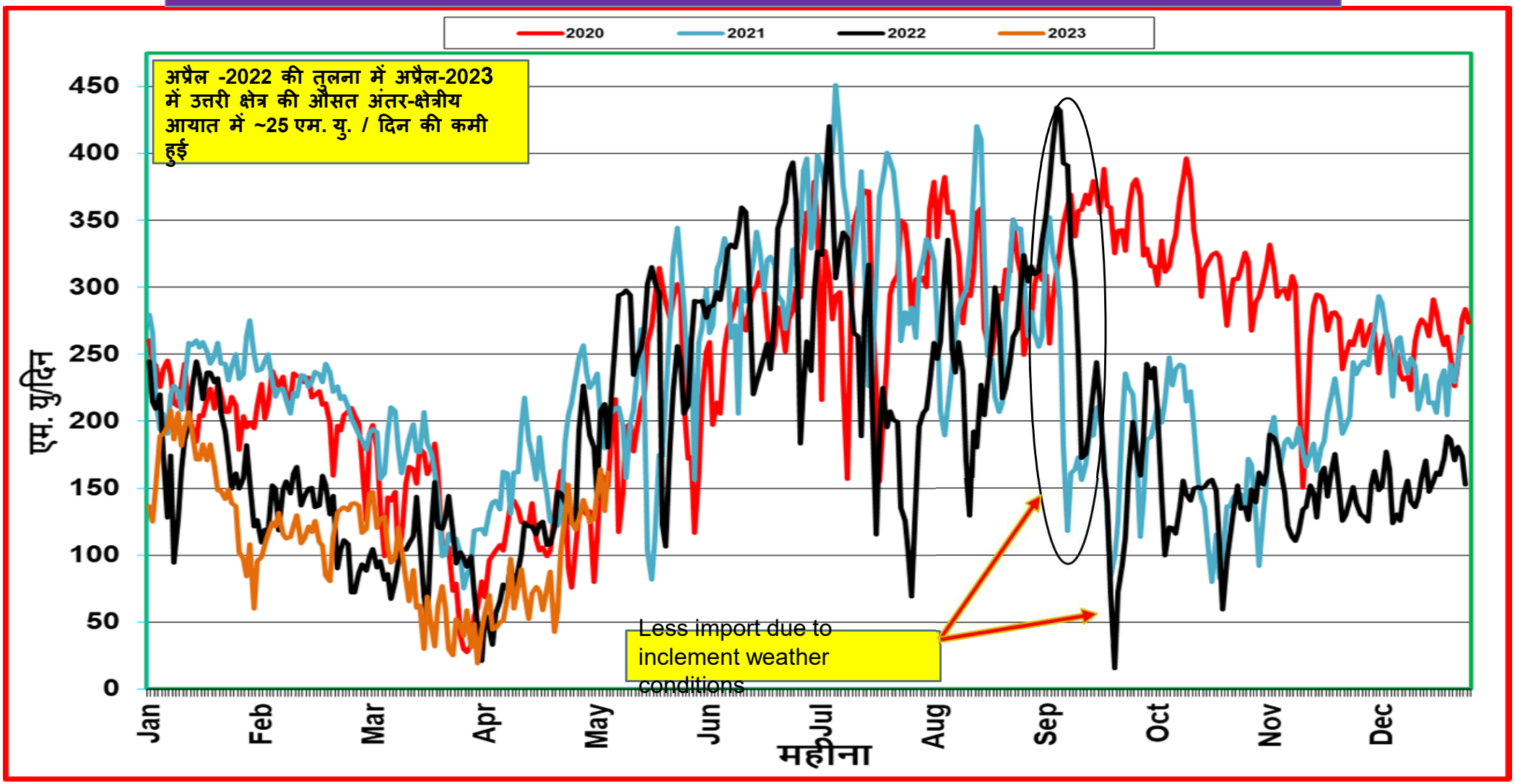
उत्तरी क्षेत्र की नाभिकीय उत्पादन की स्थिति (Mus/Day)



(Mus/Day)


2020
2021
2022
2023
200
175
150
125
100
75
50
25
0
MU/day
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month
अप्रैल -2022 की तुलना में अप्रैल -2023 में उत्तरी क्षेत्र की औसत अक्षय उत्पादन में 33 %(40 एमयु / दिन) की वृद्धि हुई
IC अप्रैल -22: 20093 MW
IC अप्रैल -23: 24058 MW
Change : 3965 MW
(Solar 3744MW+Wind 221MW)

अंतर-क्षेत्रीय आयात(Mus/Day) की स्थिति



वास्तविक सारांश -
अप्रैल -2021 बनाम अप्रैल -2022

	अप्रैल -2022 (मि.यु. /दिन)	**अप्रैल -2023 (मि.यु. /दिन)**	**अप्रैल माह में वृद्धि (मि.यु./दिन)**
तापीय (Thermal) उत्पादन	796.70	713.04	-83.65
जलीय (Hydro) उत्पादन	196.16	151.47	-44.69
नाभिकीय (Nuclear) उत्पादन	26.58	27.03	0.45
अंतर-क्षेत्रीय (Inter-Regional) कुल आयात	99.58	74.99	-24.60
अक्षय (Renewable) उत्पादन	121.37	161.07	39.70
कुल	**1240.39**	**1127.6**	**-112.79**

RE Penetration

	Maximum Daily MU Penetration			
	April '2023		Record upto March '2023	
	Max % Penetration	Date	Max % Penetration	Date
Punjab	6.05	02-04-2023	12.28	01-04-2020
Rajasthan	28.53	03-04-2023	36.47	22-10-2021
UP	4.46	02-04-2023	4.72	22-03-2023
NR	20.69	02-04-2023	18.36	26-03-2023

	Maximum Instantaneous Penetration in MW			
	April '2023		Record upto March '2023	
	Max % Penetration	Date	Max % Penetration	Date
Punjab	11.37	09-04-2023	26.87	22-04-2020
Rajasthan	51.83	02-04-2023	68.38	31-03-2020
UP	17.02	02-04-2023	17.78	13-02-2023
NR	53.72	02-04-2023	42.96	25-10-2022


धन्यवाद