

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

सं.: उ.क्षे.वि.स./प्रचालन/106/01/2022/ 7540-7581

दिनांक: 24.08.2022

विषय: उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप-समिति की 198^{वी} बैठक के खण्ड-अ मे लिए गए निर्णयों का सार।

Subject: Gist of decisions taken in the Part-A of 198th OCC meeting of NRPC.

उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप- समिति की 198^{वी} बैठक दिनांक 17.08.2022 को आयोजित की गयी। उक्त बैठक की खण्ड-अ मे लिए गए निर्णयों का सार **अनुलग्नक – अ** के रूप मे संलग्न है।

198th meeting of the Operation Co-ordination Sub-Committee of NRPC was held on 17.08.2022. The Gist of the decisions taken in Part-A of this meeting is enclosed as **Annexure-A**.

(सौर्मित्र मजूमदार) अधीक्षण अभियंता (प्रचालन)

सेवा में,

प्रचालन समन्वय उप- समिति के सभी सदस्य।

Gist of decisions taken in the Part-A of 198th OCC Meeting

Agenda No. 1: Confirmation of Minutes

Minutes of 197th OCC meeting was issued on 05.08.2022.

In regard to agenda No. 8, UPSLDC representative requested OCC forum to modify para 8.50 as mentioned below:

"8.50. In the meeting (197th OCC), NRPC representative informed that UPSLDC has submitted the updated status of Unchahar Islanding scheme as per the deliberation held in the review meeting held on 07.07.2020. Moreover, order for system study of Agra-Lalitpur IS has been placed on CPRI."

to be replaced with

"8.50. In the meeting (197th OCC), NRPC representative informed that UPSLDC has submitted the updated status of Unchahar Islanding scheme as per the deliberation held in the review meeting held on 07.07.2020 and also submitted the revised document for the scheme. Moreover, order for system study of Agra-Lalitpur IS has been placed on CPRI."

OCC confirmed the minutes with above modification.

Agenda No. 2.1: Supply Position (Provisional) for July 2022

Reasons submitted by states for significant deviation of actual demand from anticipated figures during the month of July 2022 are as under:

Delhi

The negative variation in peak demand and energy consumption was due to rain and drop in temperature in 1st fortnight of July-2022.

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 less demand of agricultural load and all other categories due to heavy rainfall in the state of Punjab during month of July 2022.

Himachal Pradesh

The actual energy requirement in respect of Himachal Pradesh came on lower side than anticipated due to heavy rains in the state and moreover, some major industries like M/s Ambuja Cements Plant Unit Suli and Rauri and M/s Ulrtratech Bagha were under planned shutdown for some days during July, 2022.

Haryana

Variation between actual and anticipated demand (in MW) is within 3% and the variation between actual and anticipated energy consumption (MUs) for July-2022 is near about 7% due to heavy rainfall which has resulted in to the less Agricultural load.

Rajasthan

The Energy consumption & Peak Demand decreased by 15.8% & 16.6% respectively w.r.t. Anticipated Energy requirement & Anticipated Peak Demand for July '2022 because of demand decreased. This recorded Energy consumption & Peak Demand is approx. 11% lower w.r.t. July' 2021 and this was due to wide spread rains in the state during the month of July' 2022.

Agenda No. 2.2: Power Supply Position of NCR

The Sub-Committee was informed that the NCR Planning Board (NCRPB) is closely monitoring the power supply position of National Capital Region. Monthly power supply position for NCR till the month of July 2022 was enclosed in the agenda and same was discussed in the meeting.

Agenda No. 4.1: Anticipated Power Supply Position in Northern Region for September 2022

• The updated anticipated Power Supply Position for September 2022 is as below:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision	
	Availability	180	420		
CHANDICADII	Requirement	150	410	No Revision	
CHANDIGARH	Surplus / Shortfall	30	10	submitted	
	% Surplus / Shortfall	20.0%	2.4%		
	Availability	3864	6900		
	Requirement	3705	6900		
DELHI	Surplus / Shortfall	159	0	16-Aug-22	
	% Surplus / Shortfall	4.3%	0.0%		
	Availability	5490	11660		
HARYANA	Requirement	6860	12160	No Revision	
HARTANA	Surplus / Shortfall	-1370	-500	submitted	
	% Surplus / Shortfall	-20.0%	-4.1%	1	
	Availability	1128	1710		
HIMACHAL	Requirement	1042	1695	06-Aug-22	
PRADESH	Surplus / Shortfall	86	15	06-Aug-22	
	% Surplus / Shortfall	8.3%	0.9%		
	Availability	1680	3490		
J&K and LADAKH	Requirement	1580	2660	No Revision	
JAK and LADAKH	Surplus / Shortfall	100	830	submitted	
	% Surplus / Shortfall	6.3%	31.2%		
	Availability	7506	14000		
PUNJAB	Requirement	7870	14000	16-Aug-22	
TONOAD	Surplus / Shortfall	-364	0	10-Aug-22	
	% Surplus / Shortfall	-4.6%	0.0%		

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	Availability	8680	18610	
RAJASTHAN	Requirement	7700	14000	16 Aug 22
RAJASTHAN	Surplus / Shortfall	980	4610	16-Aug-22
	% Surplus / Shortfall	12.7%	32.9%	
	Availability	15000	25500	
UTTAR	Requirement	14700	25500	00 Aug 22
PRADESH	Surplus / Shortfall	300	0	08-Aug-22
	% Surplus / Shortfall	2.0%	0.0%	
	Availability	1302	2110	
UTTARAKHAND	Requirement	1290	2160	06 Aug 22
UTTARAKHAND	Surplus / Shortfall	12	-50	06-Aug-22
	% Surplus / Shortfall	0.9%	-2.3%	
	Availability	44831	77500	
NORTHERN	Requirement	44897	73000	
REGION	Surplus / Shortfall	-66	4500	
	% Surplus / Shortfall	-0.1%	6.2%	

Agenda No. 5: Submission of breakup of Energy Consumption by the states

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

State / UT	From	То
Delhi	Apr-2018	Mar-2022
Haryana	Apr-2018	Jun-2022
Himachal Pradesh	Apr-2018	Jun-2022
Punjab	Apr-2018	Mar-2022
Rajasthan	Apr-2018	Jun-2022
Uttar Pradesh	Apr-2018	Apr-2022
Uttarakhand	Apr-2018	Mar-2022

Agenda No. 6: Follow-up of issues from various OCC Meetings - Status update

- Updated status is enclosed as Annexure-A.I.
- In 195th OCC, SLDCs were requested to again to coordinate with respective Transmission utilities of states/UT's and submit details about the updated status of downstream network by State utilities from ISTS Station (*Annexure-A-I.I*) before every OCC meeting.

Agenda No. 7. NR Islanding scheme

 Based on the decisions taken in the meeting taken by Hon'ble Minister of State (IC) for Power and New & Renewable Energy on 28.12.2020, Islanding Schemes for NR have been continuously reviewed/discussed in various forums.

- In 187th OCC, it was decided that states shall submit MIS report before every OCC meeting so that same may be discussed. Format was circulated vide agenda of 187th OCC.
- It was also highlighted that MoP has agreed for PSDF funding for implementation of islanding schemes and states were requested to prepare and submit DPR for the same.
 Further, a sample DPR on implementation of Islanding scheme for PSDF funding has been already circulated vide email dated 07.10.2021 and requested to expedite the preparation of DPR.
- Utilities were requested to refer and submit SOP for every Islanding scheme in their control area.
- A meeting was also held by Honorable Cabinet Minister (Power, New & Renewable Energy) on 07.10.2021 wherein emphasis was given on PSDF funding for Islanding schemes and DPR submission for the same. MoM has been issued and copy of the same is enclosed as Annexure-A.II of 189th OCC agenda.
- In the 189th OCC, MS, NRPC expressed concern regarding apathy of states in implementation of Islanding Schemes. He stated that all SLDCs shall intimate the names of Islands for which system study from CPRI is required along with justification for the same by 30th Nov, 2021. He also set timeline of 30th Nov, 2021 for Delhi to submit SOP data. He stated that communication may be sent to RAPS for submission of SOP data at the earliest.
- In the 190th OCC, NRPC Sectt representative informed that SOP data in respect of Delhi and RAPS have been received.
- UPSLDC vide letter dated 01.12.2021 has submitted the names of islands for which system study from CPRI is required. UPSLDC has highlighted, inter-alia, that involvement of long length 765kV line and high number of buses necessitates them to go for system study by CPRI. It has mentioned that SLDC/STU has no expertise in such studies and before doing any investment on the project, proper study is must for successful implementation and operation of Islands.
- HPSLDC vide letter dtd. 18.12.2021 has intimated that a meeting was held on 26.11.2021 between HPSLDC and HPSEBL wherein a team of officers from HPSLDC and HPSEBL has been formed to carry out transient study of all islands within a month.
- UPSLDC representative informed that CPRI has asked for some additional details and technical commercial offer would be provided to them by CPRI by 15th Jan 22.
- NRLDC representative informed that report received from Rajasthan regarding the Jodhpur-Barmer-Rajwest islanding scheme is in order and Rajasthan SLDC can proceed ahead. Further, NRLDC submitted that they use PSSE software for system study but Rajasthan has submitted details of Islands in MI Power Software, therefore, they are not able to access the file.
- Rajasthan SLDC representative informed that they have given the details in the hard copy
 of the load and generation to be considered for islanding scheme, and based on that have
 requested NRLDC to simulate it in PSSE software for validation. NRLDC representative
 agreed to the request of the Rajasthan SLDC.

- Uttarakhand SLDC representative informed that hydro stations near Dehradun are
 peaking stations and the proposed Dehradun islanding scheme appears to be infeasible.
 NRPC representative informed that some schemes in NR have been proposed by
 considering Hydro stations and Dehradun islanding scheme was proposed by the state
 SLDC itself in view of all factors. Thus, Uttarakhand SLDC shall immediately conduct
 study on the proposed Islanding Scheme having Khodri & Chibro units and provide status
 on the feasibility of scheme with supporting data so that same may be communicated to
 the Ministry.
- In 191st OCC, HPSLDC representative informed that they need further two weeks to submit the outcome of transient study of all islands.
- Uttarakhand representative informed that major hydro stations e.g. Chibro, Khodri etc at
 Dehradun Region in Yamuna valley are non-must run and peaking stations. Therefore, it
 is technically not feasible to implement Dehradun as an islanding scheme. However,
 nominations of nodal officers from various utilities (PTCUL, UJVN Ltd & UPCL) are being
 sought for the formation of internal committee for accessing the possibility of Dehradun
 as Islanding scheme and the report shall be submitted to NRPC Secretariat subsequently.
- NRPC Sectt representative asked Uttarakhand to expedite the submission regarding the status on feasibility of the proposed Islanding scheme.
- MS, NRPC stated that all constituents that have given their information about the planning
 of islanding scheme shall take up the work on top priority and submit the progress in time
 bound manner by submitting the updated MIS format every month.
- NRLDC representative informed that Rajasthan SLDC is modelling data on PSSE software and it is expected to be completed within one week. Thereafter, NRLDC will submit its comments on the same. Rajasthan representative consented for the same.
- UP and Punjab were asked to update the status of their study being done by CPRI. Both informed that there is no progress since last OCC and they are waiting for response from CPRI.
- In the 192nd OCC, UPSLDC informed that they have received techno-commercial offer from CPRI for both the islanding schemes of UP and accessing the inputs from CPRI they will be conveying a meeting in last week of February 2022.
- NRLDC representative informed modeling data on PSSE software received from Rajasthan has not been modeled for islanding scheme. Further, NRLDC representative asked Rajasthan SLDC to send their team next week for modeling the data on PSSE software.
- MS, NRPC asked Uttarakhand SLDC to expedite the study they are conducting to access the feasibility of Dehradun islanding scheme.
- NRPC Sectt representative informed that a meeting was convened by HPSLDC with
 officials of NRPC Sectt., NRLDC, HPSEBL, & HPPTCL on 11.02.2022. It was observed
 that system study work has been pending due to pre-occupation of the concerned
 resource. Therefore, it was decided that HPSLDC shall write letters to MDs of HPSEBL
 & HPPTCL. It was decided to review the status in another meeting in the first week of
 March 22. HPSLDC has written letter dt. 14.02.2022.

- Punjab SLDC also informed that they will be conveying a meeting with STU within a week to track the progress.
- In the 193rd OCC, NRPC representative informed forum that HPSLDC convened a
 meeting on 4th March 2022 wherein they presented the results of static and dynamic study
 conducted by them. NRLDC suggested that dynamic data used by HPSLDC is common
 data and it was decided that they will use data of particular generators and then apprise
 about the same.
- UPSLDC also convened a meeting on 7th March 2022 wherein they informed that CPRI
 has submitted the offer with a completion target of 5 months. It was also discussed that
 as there are two islanding schemes in UP control area hence it was suggested that CPRI
 may be asked to do it in 2 parts preferably 2.5 months each for both the islanding scheme.
- UPSLDC representative informed that CPRI would not be able to bifurcate the time separately for both the islanding scheme and acceptance is under consideration by the management.
- HPSLDC representative informed that they have communicated to all generators for providing dynamic data, and only reply from Karcham Wangtoo has been received from till date.
- Rajasthan representative informed that next week they will send their team to NRLDC for modelling the data on PSSE software.
- J&K representative informed that load has been identified and no further update. MS, NRPC asked J&K representative expedite the study work.
- Further, MS NRPC suggested that states shall coordinate with NRPC and NRLDC officials for carrying out the study.
- In the 194th OCC, Punjab representative informed that CPRI has asked for PSSE file for dynamic study which is being coordinated with NRLDC. STU has given timeline of 6 months for implementation after CPRI study.
- MS, NRPC along with NRLDC have desired that all states of northern region where islanding scheme is to be implemented shall convene meeting with the officials of NRPC and NRLDC wherein the study requirements can be discussed.
- OCC forum was of opinion that all generating units (especially 660MW units) shall make an effort to ensure successful household operations. UP representative was requested to expedite the implementation work of Unchahar-Lucknow Islanding scheme after analyzing load-generation balance and conducting steady state study.
- Further, OCC forum was of view that states shall go for implementation of islanding scheme after steady state study along with load generation balancing and dynamic study, if desired, may be carried out in later stage.
- In the 195th OCC, NRLDC representative intimated that steady state study for Rajasthan islanding scheme has been completed. It was decided that Rajasthan may go ahead for implementing the scheme.
- NRPC Sectt representative informed that a sub-group will be formulated shortly that would review all proposed islanding schemes of NR and assess the reason for delay.

- In the 196th OCC, MS NRPC desired UP representative to take up the matter with CPRI for Agra islanding scheme and ask them to complete the work in one month time from the date of acceptance of offer by CPRI.
- UP representative informed that steady state study along with load generation balancing is complete for Unchahar-Lucknow Islanding scheme and the same would be submitted to NRLDC in one week time.
- Rajasthan representative informed that for Jodhpur-Barmer-Rajwest and Suratgarh islanding scheme work of DPR preparation is under progress and same would be submitted to NLDC to avail PSDF funding before next OCC meeting.
- MS, NRPC asked Uttarakhand representative to expedite the submission regarding the status on feasibility of the proposed Islanding scheme.
- MS, NRPC asked Himachal Pradesh representative to coordinate with NRLDC officials to converge the study carried out by them.
- Further, MS NRPC also asked Punjab representative to coordinate with NRLDC officials to converge the steady state study carried out by them.
- In 197th OCC, NRPC Sectt representative informed that UPSLDC has submitted the updated status of Unchahar Islanding scheme as per the deliberation held in the review meeting held on 07.07.2020. Moreover, order for system study of Agra-Lalitpur IS has been placed on CPRI.
- In regard to Delhi Islanding scheme, NRPC Sectt representative informed that as per the
 deliberation held in the review meeting held on 13.07.2020, response from Delhi Discoms
 is awaited regarding whether trippings through ADMS system can be facilitated for Delhi
 Islanding scheme.
- MS, NRPC expressed apathy over no significant progress in implementation of Delhi Islanding Scheme since last 18 months. He suggested that in view of allocation of Dadri-II to Haryana and non-scheduling of Jhajjar and Dadri-II due to high cost, the proposed islanding may not survive. Therefore, it would be better to have two small islands one with GTs and the other with Bawana. Mostly, these plants operate and therefore survival chances for islands would be more. Moreover, these islands could be controlled through UFRs at 220kV level by STU and not at 33kV by Discoms as envisaged in proposed scheme. It was suggested that DTL may bring out proposal for further discussion at NRPC Sectt and NRLDC level.
- NRPC Sectt representative informed that HPSLDC has been requested to provide load wise details for the islanding scheme finalized by them.
- In the meeting (198th OCC), NRPC Sectt representative informed forum that Delhi SLDC has been asked to submit generation data for last 2 years (96 blocks) of power stations in Delhi control area and they need to expedite the submission of requisite data. Further, forum was of view that after submission of data, a meeting may be conducted between NRPC Sectt., NRLDC and Delhi SLDC to review the same.
- In regard to Unchahar Islanding scheme, NRPC Sectt representative informed that complete proposal has been received. On analysis of same, it is felt that logic needs to be discussed and NTPC Unchahar needs to confirm whether machines can be operated

in FGMO mode in islanding operation. Further, NRPC Sectt representative informed that they would be their sharing their observations with UPSLDC/NTPC and thereafter, comments/confirmation of NTPC on the same may kindly be communicated to NRPC Sectt.

- NRPC Sectt representative intimated that based on the discussion in the 56th NRPC meeting for Rajwest and Suratgarh islanding schemes, RVPN was asked to review the Load in Suratgarh and Rajwest islands and reduce it so that there may be some adequate gap between island load and generation.
- NRPC Sectt representative apprised that Punjab has submitted the details and same has been scrutinized. Observations of NRPC Sectt have been shared with Punjab and they may kindly submit their response on the same. Punjab representative mentioned that reply on the observations would be submitted within two-three days.
- As regards to Dehradun Islnading Scheme, NRPC Sectt representative reiterated that a
 report may kindly be submitted to OCC forum after analyzing the past generation and
 demand data pertaining to the proposed scheme. Based on the report, further decision
 would be taken.
- NRPC Sectt representative intimated that data from Himachal Pradesh has been received and same is under examination.

Agenda No. 8. Coal Supply Position of Thermal Plants in Northern Region

- In the meeting, NRPC representative apprised the forum about the coal stock position of generating stations in northern region during current month (till 09th August 2022).
- Average coal stock position of generating stations in northern region, having critical stock, during first nine days of August 2022 is as follows:

Station	Capacity (MW)	PLF % (prev. months)	Normative Stock Reqd. (Days)	Actual Stock (Days)
ANPARA C TPS	1200	76.03	13	0.6
BARKHERA TPS	90	59.60	21	1.5
GOINDWAL SAHIB TPP	540	46.84	21	3.0
KHAMBARKHERA TPS	90	60.95	21	1.2
KUNDARKI TPS	90	57.80	21	2.7
LALITPUR TPS	1980	74.07	21	2.7
MAQSOODPUR TPS	90	56.47	21	1.0
OBRA TPS	1094	55.80	21	2.1
PARICHHA TPS	1140	54.12	21	3.8
ROSA TPP Ph-I	1200	73.25	21	1.1
UTRAULA TPS	90	60.67	21	2.1

 In the meeting, above mentioned generating stations were requested to take adequate measures.

Agenda No. 9. Assessment and usability of the interstate lines i.e., 220 KV S/C MIA (Alwar) – BTPS (Badarpur) line and 132 KV S/C Hisar-Sadulpur (Rajgarh) (Agenda by RRVPNL)

- In the meeting, Rajasthan SLDC representative presented the matter to the forum.
- MS, NRPC was of view that the cited agenda may be taken up in the NRPC meeting, and CTU may be asked to deliberate on this agenda in the upcoming 'consultation meeting for evolving transmission schemes' and thereafter CTU's views may be discussed in subsequent NRPC meeting.
- Further, NRLDC representative stated that Haryana and Delhi STU views shall also be taken on the cited matter.

Agenda No. 10. Deemed Enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer/paddy season. (Agenda by PSTCL)

- NRPC representative presented the matter to the forum.
- PSTCL representative mentioned the revision in timeline for the augmentation of 2 Nos.
 315 MVA ICTs at 400kV Nakodar as follows:
 - a. Augmentation of 1st 315 MVA, 400/220 kV ICT: May, 2023
 - b. Augmentation of 2nd 315 MVA, 400/220 kV ICT: Sep, 2023
- In respect of 400kV POWERGRID Patiala (SI. No. 4 of para 10.9 of the agenda), PSTCL representative informed that timeline for installation of additional 500 MVA ICT is May, 2023 and timeline for bays utilization work is May, 2024.
- In the meeting, POWERGRID agreed to the works for SI Nos. 2, 4, 5, 6 and 7 of para 10.9 of the agenda. Further, forum was of view that works at SI. Nos. 1 and 3 of para 10.9 of the agenda may be deliberated in the upcoming NRPC meeting on 31.08.2022.
- MS NRPC opined that entire matter shall be taken up for discussion in the 57th NRPC meeting.

Agenda No.11. Adequacy augmenting of Transmission Capacity at 400/220 kV level (Agenda by JKPTCL)

- In the meeting, JKPTCL representative presented the matter to the forum.
- NRLDC representative intimated forum that augmentation of 400/220 kV GIS Amargarh (Indigrid) and augmentation of 400/220 kV New Wanpoh (PGCIL) was also discussed in 3rd NRPCTP and its extract were presented to OCC forum.
- OCC forum requested JKPTCL to share the study they have carried out for transmission capacity augmentation at 400/220kV level with NRPC Sectt. and NRLDC.
- MS, NRPC was of view that the cited agenda may be taken up in the NRPC meeting for deliberation with CTU and other constituents.

Agenda No.12. Conversion of existing conductor to its equivalent HTLS conductor (Agenda by JKPTCL)

- In the meeting, JKPTCL representative presented the matter to the forum.
- Further, MS NRPC requested JKPTCL to share the load flow study details for the three single circuit transmission lines at Glandi Grid Sub-station to NRPC Sectt and NRLDC before 57th NRPC meeting for further analysis.

Agenda No.13. Modification Issues related to Power System Operation of J&K/Ladakh (Agenda by NRLDC)

- NRLDC representative highlighted the issue related to Power System operations in J&K/Ladakh control area.
- Further, he asked JKPTCL to submit the list of 220 KV voltage level substations in their control area which are operated with only single Main and Transfer Bus scheme instead of Double Main Transfer (DMT) bus scheme as per CEA planning criteria. Bus shutdown in single Main and Transfer scheme requires shutdown of entire station which affects reliability of power supply.
- As regards to para 13.2.ii of the agenda, JKPTCL representative assured to submit the latest status of AUFR settings of J&K.
- For para 13.2.iii & iv of the agenda, JKPTCL representative mentioned that the status would be submitted by upcoming NRPC meeting.
- For para 13.2.vi of the agenda, J&K representative informed that shortly they would plan the Mock black start exercise of Uri-I, Uri-II HEP and Lower Jhelum HEP.
- For para 13.2.viii of the agenda, JKPTCL representative submitted that they will look into the requested data and would submit to NRLDC.
- For para 13.2.ix of the agenda, JKPTCL representative assured to seek the details of SLDC control room in UT of Ladakh and share it with NRPC Sectt and NRLDC.

Agenda No.14. Extension of 220kV Switchyard – "Construction of two (2) no. 220 kV Line bays at Roorkee" (Agenda by NR-1 POWERGRID)

 PTCUL representative submitted that the abovementioned matter in sub-judice before the Hon'ble CERC and may not be discussed in the OCC forum. Thus, agenda was not discussed further in the meeting.

Agenda No.15. Approval of utilization of 2x50 MVAR Reactors and 4 nos. associated line bays at Meerut (Agenda by NR-I POWERGRID)

 MS, NRPC opined that the CTU may be asked to deliberate on this agenda in their upcoming 'consultation meeting for evolving transmission schemes' and thereafter CTU's views may be discussed in subsequent OCC meeting.

Agenda No.16. Requirement of revision of "Review of Special Protection Scheme (SPS) at POWERGRID Bhadla Pooling station" (Agenda by NR-I POWERGRID)

- NRLDC representative highlighted SPS scheme was proposed in 2020 when N-1 compliance of 400/220 kV ICTs was not being considered for planning transmission system for RE evacuation.
- Further, he mentioned that SPS scheme was agreed in 48th NRPC meeting but due to delay in quotation collection, the requirement of SPS has now changed and is further likely to change by the time of its implementation.
- CTU representative stated LTA granted at Bhadla Pooling station is 3530 MW and the eighth ICT is planned to be operational by Dec'2022.
- NRLDC representative mentioned that with the commissioning of eighth ICT, SPS requirement would not be there at 400/220 kV level at Bhadla Pooling station.
- In view of the above, the forum decided that the SPS requirement at Bhadla Pooling complex may be dropped.

Agenda No.17. Review of Setpoints for SVC Kankroli in view of non-optimal operation (Agenda by NR-I POWERGRID)

- NRLDC representative highlighted that the set-points were revised for SVC installed at Powergrid Kankroli substation to minimize oscillation in the area so as to inject full Capacitive VARs.
- Further, he mentioned that there has been minor revision in set-points which has been communicated by NRLDC control room to Powergrid sub-station; however, there seems to be some gap in the communication of same to Powergrid.
- NRLDC representative stated that they would again review the set-points and same would be communicated to Powergrid for implementation.

Agenda No.18. Requirement of SPS Schemes at RE pooling stations of POWERGRID in Northern Region (Fatehgarh-2, Bikaner, Bhadla-2) (Agenda by NR-I POWERGRID)

- CTU representative confirmed that they would keep N-1 compliance at 400/220 kV RE pooling stations of POWERGRID in Northern Region (Fatehgarh-2, Bikaner, Bhadla-2).
- NRLDC representative mentioned that as per the discussions held in 56th NRPC meeting, N-1 compliance at 400/220kV RE pooling stations with higher RE capacity on case-tocase basis needs to be ensured. As per the draft CEA Transmission Planning Criteria 2022, N-1 reliability criteria may be considered for ICTs at pooling stations handling RE based generation of more than 1000MW. Thus, there would not be requirement of SPS at the above-mentioned locations.
- NRLDC representative further mentioned that in case ICT capacity is more than 1000 MW at RE pooling station and there is N-1 non-compliant, then SPS may be planned after agreement from all stakeholders.
- In view of the above, the forum decided that there is currently no requirement of SPS at Fatehgarh-2, Bikaner and Bhadla-2 pooling stations.

Agenda No.19. Recovery of Tariff (including O&M charges) for Automatic Meter Reading system (AMR) system installed in Northern Region for collection of SEM data (Agenda by NR-I POWERGRID)

OCC forum directed POWERGRID to refer to the minutes of meeting of 15th NRPC wherein the modalities for recovery of tariff (including O&M charges) are explicitly stated.

Agenda No.20. LC-oscillations/resonance in over-compensated 765kV transmission lines in Northern Region-1 (Agenda by NR-I POWERGRID)

NRLDC representative submitted that the matter was discussed in previous OCC meeting and requested CTUIL to carry out studies for LC oscillation/resonance for the overcompensated lines.

Agenda No.21. Frequent tripping of 220KV D/C Hisar-Hisar (IA) Line (Agenda by NR-I **POWERGRID)**

HVPN representative informed OCC forum that they are planning to conduct a joint visit with POWERGRID in this regard, and thereafter would suggest a suitable solution accordingly.

Additional Agenda No.1. Unchahar#6 (St-IV U#1)-500 MW FGD Unit PG Test. (Agenda by NTPC)

 OCC forum was of view that NTPC may approach constituents for the consent of beneficiaries for full requisition.

Additional Agenda No.2. DSM charges under exceptional circumstances of increased silt, cloud burst etc. (Agenda by SJVN)

After discussing the matter, the OCC forum took cognizance of the fact that the issue of DSM charges under exceptional circumstances of increased silt, cloud burst, etc is genuine concern of Hydro Generators. However, OCC forum was of the view that as the matter is related to the regulations of the Central Commission, hence necessary petition may be filed by the Hydro generators before the Commission.

	Down Stream network by State utilities from ISTS Station	Augmentation of transformation capacity in various existing substations, addition of new substations along with line bays as well as requirement of line bays by STUs for downstream network are under implementation at various locations in Northern Region. Further, 220kV bays have already been commissioned at various substations in NR. For its utilization, downstream 220kV system needs to be commissioned.	List of downstream networks is enclosed in Annexure-A. I. I.
2	Progress of installing new capacitors and repair of defective capacitors	Information regarding installation of new capacitors and repair of defective capacitors is to be submitted to NRPC Secretariat.	Data upto following months, received from various states / UTs: © CHANDIGARH Sep-2019 © DELHI Jul-2022 © HARYANA May-2022 © HP Jan-2022 © J&K and LADAKH Not Available © PUNJAB Jul-2022 © RAJASTHAN Jul-2022 © UP Jun-2022 © UTTARAKHAND Jul-2022 All States/UTs are requested to update status on monthly basis.
3	defence mechanism: Self-certification	Report of mock exercise for healthiness of UFRs carried out by utilities themselves on quarterly basis is to be submitted to NRPC Secretariat and NRLDC. All utilities were advised to certify specifically, in the report that "All the UFRs are checked and found functional".	Data upto following months, received from various states / UTs: © CHANDIGARH Not Available © DELHI Jun-2022 © HARYANA Jun-2022 © J&K and LADAKH Not Available © PUNJAB Jun-2022 © RAJASTHAN Jun-2022 © UP Jun-2022 © UTTARAKHAND Jun-2022 © BBMB Jun-2022 All States/UTs are requested to update status for healthiness of UFRs on monthly basis for islanding schemes and on quartely basis for the rest .
		In compliance of NPC decision, NR states/constituents agreed to raise the AUFR settings by 0.2 Hz in 47th TCC/49th NRPC meetings.	Status: © CHANDIGARH Not Available © DELHI Increased © HARYANA Increased © HP Increased © J&K and LADAKH Not increased © PUNJAB Increased © RAJASTHAN Increased © UP Increased © UTTARAKHAND Increased © BBMB Increased

			self incr one upda UFRs	f certification rease of 0.2 Hz in week. J&K and LAnte status for income.	report indicating on AUFR settings, within ADAKH were requested to acreasing settings of
4	Status of FGD	List of FGDs to be installed in			nation submission (month)
	installation vis-à-	NR was finalized in the 36th TCC	from	n states / utilit	ies is as under:
	_	(special) meeting dt. 14.09.2017.			
	at identified TPS	All SLDCs were regularly			Mar-2022
		requested since 144th OCC meeting			Aug-2022
		to take up with the concerned			Aug-2022
		generators where FGD was required	O U		Jun-2022
		to be installed.	◎ N		Feb-2022
		Further, progress of FGD			re enclosed as Annexure -
		installation work on monthly	A. I.		. 1 . 1 .
		basis is monitored in OCC			are requested to update
		meetings.	1	thly basis.	lation progress on
			mont	ally basis.	
<u> </u>	T 0 1	m	411	, , /IID	. 1
5	Information about	The variable charges detail for		states/UTs are r	-
	variable charges of	different generating units are		nit daily data on	n MERIT Order
	all generating units	available on the MERIT Order	Port	tal timely.	
	in the Region	Portal.			
		mi o ADVS			
6	Status of Automatic	<u> </u>			
	Demand Management	in NR, which is mandated in			Fully implemented
	Sysytem in NR	clause 5.4.2 (d) of			Scheme not implemented
	states/UT's	IEGC by SLDC/SEB/DISCOMs is	O H	IP	Scheme not implemented
		presented in the following table:	O P	PUNJAB	Scheme not implemented
			© R	AJASTHAN	Under implementation.
					Likely completion
					schedule is 31.12.2022.
			O U	IP	Scheme implemented by
					NPCIL only

7	Reactive compensation at 220 kV/ 400 kV level at 15 substations						
	State / Substation Utility		Reactor	Status			
i	POWERGRID	Kurukshetra	500 MVAr TCR	Anticipated commissioning: Nov'22 2022			
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.			
ix	PUNJAB	Nakodar	1x25 MVAr at 220 kV	220kV Reactors - LOA issued on dated 19.07.2021 and date of completion of project is 18 months from the date of LOA.			
X	PTCUL	Kashipur	1x125 MVAR at 400 kV	Price bid has been opened and is under evaluation			
хi	RAJASTHAN	Akal	1x25 MVAr	1x25 MVAR Reactor at Akal has been commissioned on dated 25th July' 2022.			

xii	RAJASTHAN	Bikaner	1x25 MVAr	Erection work of 1x25 MVAR Reactors at Bikaner and Suratgarh completed and testing work is pending. The same are likely to be commissioned in Aug / Sept 2022.
xiii	RAJASTHAN	Suratgarh	1x25 MVAr	Erection work of 1x25 MVAR Reactors at Bikaner and Suratgarh completed and testing work is pending. The same are likely to be commissioned in Aug / Sept 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.
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.

	21	State State State IOTO				Annexure-A-I.I
1. D	own Stream networк I	by State utilities from ISTS	Station:			
SI. 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.	-	PDD, J&K to update the status.
	400/220kV, 2x315	Commissioned: 6	Utilized: 2	• 220 kV New Wanpoh - Alusteng D/c Line	-	PDD, J&K to update the status.
2	MVA New Wannoh	Total: 6	Unutilized: 4	• 220 kV New Wanpoh - Mattan D/c Line	-	PDD, J&K to update the status.
3	400/220kV, 2x315 MVA Amargarh	Commissioned: 6 Total: 6	Utilized: 6 Unutilized: 2	• 220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri	-	PDD, J&K to update the status.
4	400/220kV, 2x500 MVA Kurukshetra (GIS)	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	220kV Bhadson (Kurukshetra) Ramana Ramani D/c line	-	HVPNL to update the status.
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.
	Chabiahannan 20245	Commissioned: 6	Utilized: 5 Unutilized: 1	• 220 kV D/C Shahajahanpur (PG) - Gola line	Oct'22	Updated in 196th OCC by UPPTCL
6	Shahjahanpur, 2x315 MVA 400/220 kV	Approved/Under Implementation:1 Total: 7	(1 bays to be utilized shortly) Approved/Under Implementation:1	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	Utilized: 4 Unutilized: 4	• 220 kV Hamirpur-Dehan D/c line	Commissioned	Commisioned date: 09.06.2022. Updated in 198th OCC by HPPTCL
	Sub Station	Total: 8	(2 bays to be utilized shortly)	Network to be planned for 4 bays	-	HPPTCL to update the status.
				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
8	Sikar 400/220kV, 1x 315 MVA S/s	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	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
				• 220 kV D/C line Bhiwani (PG) – Bhiwani (HVPNL) line	Dec'22	Updated in 197th OCC by HVPNL
9	Bhiwani 400/220kV S/s	Commissioned: 6 Total: 6	Utilized: 0 Unutilized: 6	• 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line.	Dec'22	Issue related to ROW as intimated in 192nd OCC.HVPNL to update the status.
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	Apr'24	Issue related to ROW as intimated in 192nd OCC.HVPNL to update the status.
10	Jind 400/220kV S/s	Commissioned: 4 Approved:4 Total: 8	Utilized: 4 Unutilized: 0 Approved:4	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	Updated in 197th 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.
	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	Mar'23	Updated in 198th OCC by HPPTCL
	/		34. 0	Network to be planned for 4 bays	-	HPPTCL to update the status.
	400/220kV Kadarpur	Commissioned: 8	Utilized: 0	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.	Mar'23	Updated in 197th OCC by HVPNL
12	THOUZZOKY NAUAIPUL					

SI. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
13	Sub-station	Total: 8	Unutilized: 8	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	May'23	Updated in 197th OCC by HVPNL
14	400/220kV Sohna	Commissioned: 8	Utilized: 2	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
14	Road Sub-station	Total: 8	Unutilized: 4	LILO of both circuits of 220kV D/c Badshahpur-Sec77 line at 400kV Sohna Road	Jun'23	Updated in 197th OCC by HVPNL
			Utilized: 2	Prithla - Harfali 220kV D/c line with LILO of one ckt at Meerpur Kurali	Commissioned	Commisioned date: 31.12.2021. Updated in 198th OCC by HVPNL
15	400/220kV Prithla Sub-station	Commissioned: 8	Unutilized: 4	LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line	-	HVPNL to update the status
	Sup-station	Total: 8	Under Implementation:2	• 220kV D/C for Sector78, Faridabad	02.03.2023	Updated in 198th OCC by HVPNL
				Prithla - Sector 89 Faridabad 220kV D/c line	31.03.2024	Under Implementation (Mar'24). Updated in 198th OCC by HVPNL
16	400/220kV Sonepat	Commissioned: 6 Under Implementation:2	Utilized: 2 Unutilized: 2	LILO of both circuits of 220kV Samalkha - Mohana line at Sonepat	-	HVPNL to update the status.
10	Sub-station	Total: 8	Under Implementation:2	Sonepat - HSIISC Rai 220kV D/c line	Nov'22	Updated in 196th OCC by HVPNL
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)	Oct'22	In Tendering stage as updated in 192nd OCC by RVPNL.
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 4 bays	Oct'22	Lucknow -Kaurasa (Sitapur), 220 kV D/C line expected energization date Oct'22 updated by UPPTCL in 196th OCC No planning for 2 no. of bays
						upated by UPPTCL in 196th OCC
22	400/220kV Gorakhpur Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	Network to be planned for 2 bays	Dec'22	Gorakhpur(PG)- Maharajganj, 220 kV D/C line expected energization date Dec'22 updated by UPPCL in 196th 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 4 bays	-	UPPTCL intimated that 02 no. of bays under finalization stage No planning for 2 no. of bays updated by UPPTCL in 196th OCC
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	Oct'22	Updated in 198th OCC by HVPNL
				Panchkula – Pinjore 220kV D/c line	31.12.2022	Updated in 194th OCC by HVPNL
		Commissioned: 8		Panchkula – Sector-32 220kV D/c line	31.12.2022	Updated in 194th OCC by HVPNL
		Under tender:2	Utilized: 2	• Panchkula – Raiwali 220kV D/c line	Commissioned	Updated in 194th OCC by HVPNL

SI.		Downstream network		Planned 220 kV system and	Revised	
No.	Substation	bays	Status of bays	Implementation status	Target	Remarks
25		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	Unutilized: 4 Under Implementation:2	• Panchkula – Sadhaura 220kV D/c line: Sep'23	Sept'23	Updated in 194th 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.
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	Aug'22	Updated in 196th OCC by UPPTCL, within 10 day tentative charging updated in 198th OCC by UPPTCL.
28	400/220kV Bahardurgarh S/s	Commissioned: 4 Total: 4	Utilized:2 Unutilized: 2	Network to be planned for 2 bays.	Mar'24 and July'24	Updated in 198th OCC by HVPNL
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
				• Sohawal - Barabanki 220kV D/c line	Commissioned	Energization date: 14.04.2018 updated by UPPTCL in 196th OCC
		Commission of 0	Utilized: 8	Sohawal - New Tanda 220kV D/c line	Commissioned	Energization date: 28.05.2019 updated by UPPTCL in 196th OCC
30	400/220kV Sohawal	Commissioned: 8 Total: 8	Officed. 8	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
		Commissioned: 6	Utilized: 4			in 196th OCC
31	400/220kV, Kankroli	Total: 6	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	-	HVPNL to update the status
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	Sept'22	Saharanpur(PG)-Devband D/c line expected energization date Sept'22 updated by UPPTCL in 196th 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	Mar'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 March 2023.Updated in 198th OCC by PSTCL.

SI. 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
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.
2.5	stablishmant of nov.	 00/220kV substations in No	uthama Daniam			
2. E	stablishment of new 4	UU/220KV SUDSTATIONS III NO	rthern Region:			
SI. No.	Name o	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 (25.02.2022)

MEJA Stage-I (Updated by UP on 18.06.2022)

RIHAND STPS

SINGRAULI STPS

TANDA Stage-I

TANDA Stage-II

UNCHAHAR TPS

UPRVUNL (18.06.2022)

ANPARA TPS

HARDUAGANJ TPS

OBRA TPS

PARICHHA TPS

PSPCL (21.07.2022)

GGSSTP, Ropar

GH TPS (LEH.MOH.)

RRVUNL (08.08.2022)

CHHABRA SCPP

CHHABRA TPP

KALISINDH TPS

KOTA TPS

SURATGARH SCTPS

SURATGARH TPS

Updated status of FGD related data submission

Lalitpur Power Gen. Co. Ltd. (18.06.2022)

Lalitpur TPS

Lanco Anpara Power Ltd.

(18.06.2022)

ANPARA-C TPS

HGPCL (21.03.2022)

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. (18.06.2022)

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: 30-09-2022), INDIRA GANDHI STPP U#2 (Target: 30-09-2022), INDIRA GANDHI STPP U#3 (Target: 30-09-2022)
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: 30-04-2021), PANIPAT TPS U#7 (Target: 28-02-2021), PANIPAT TPS U#8 (Target: 31-12-2020), RAJIV GANDHI TPS U#1 (Target: 30-04-2022), RAJIV GANDHI TPS U#2 (Target: 28-02-2022), YAMUNA NAGAR TPS U#1 (Target: 31-12-2021), YAMUNA NAGAR TPS U#2 (Target: 31-10-2021)

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: 30-06-2022), RIHAND STPS U#1 (Target: 30-06-2024), RIHAND STPS U#2 (Target: 30-06-2024), RIHAND STPS U#3 (Target: 31-12-2023), RIHAND STPS U#4 (Target: 31-12-2023), RIHAND STPS U#5 (Target: 30-06-2023), RIHAND STPS U#6 (Target: 30-06-2023), SINGRAULI STPS U#1 (Target: 30-06-2024), SINGRAULI STPS U#2 (Target: 30-06-2024), SINGRAULI STPS U#3 (Target: 30-06-2024), SINGRAULI STPS U#4 (Target: 30-06-2024), SINGRAULI STPS U#5 (Target: 30-06-2024), SINGRAULI STPS U#6 (Target: 31-03-2023), SINGRAULI STPS U#7 (Target: 31-03-2023), UNCHAHAR TPS U#1 (Target: 31-12-2023), UNCHAHAR TPS U#2 (Target: 31-12-2023), UNCHAHAR TPS U#3 (Target: 30-06-2024), UNCHAHAR TPS U#4 (Target: 30-06-2024), UNCHAHAR TPS U#5 (Target: 30-06-2024), UNCHAHAR TPS U#6 (Target: 30-06-2022), MEJA Stage-I U#1 (Target: 31-12-2022), MEJA Stage-I U#2 (Target: 31-03-2023), TANDA Stage-I U#3 (Target:), TANDA Stage-I U#4 (Target:), TANDA Stage-II U#3 (Target: 31-12-2022), TANDA Stage-II U#4 (Target: 31-12-2022)

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: 31-12-2024), LALITPUR TPS U#2 (Target: 30-09-2024), LALITPUR TPS U#3 (Target: 30-06-2024)
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: 31-12-2024), GH TPS (LEH.MOH.) U#2 (Target: 31-12-2024), GH TPS (LEH.MOH.) U#3 (Target: 31-12-2024), GH TPS (LEH.MOH.) U#4 (Target: 31-12-2024), GGSSTP, Ropar U#3 (Target: 31-03-2022), GGSSTP, Ropar U#4 (Target: 31-05-2022), GGSSTP, Ropar U#5 (Target: 31-07-2022), GGSSTP, Ropar U#6 (Target: 30-09-2022)

ROSA TPP Ph-I U#1 (Target: 31-12-2024), ROSA TPP Ph-I U#2 (Target: 31-12-2024), ROSA TPP Ph-I
U#3 (Target: 31-12-2024), ROSA TPP Ph-I U#4 (Target: 31-12-2024)
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: 31-12-2024), SURATGARH TPS U#2 (Target: 31-12-2024), SURATGARH TPS U#3 (Target: 31-12-2024), SURATGARH TPS U#4 (Target: 31-12-2024), SURATGARH TPS U#5 (Target: 31-12-2024), SURATGARH TPS U#6 (Target: 31-12-2024), SURATGARH SCTPS U#7 (Target: 31-12-2024), SURATGARH SCTPS U#8 (Target: 31-12-2024), CHHABRA TPP U#1 (Target: 31-12-2024), CHHABRA TPP U#2 (Target: 31-12-2024), CHHABRA TPP U#3 (Target: 31-12-2024), CHHABRA TPP U#4 (Target: 31-12-2024), CHHABRA SCPP U#5 (Target: 31-12-2024), KALISINDH TPS U#1 (Target: 31-12-2024), KALISINDH TPS U#2 (Target: 31-12-2024), KALISINDH TPS U#2 (Target: 31-12-2024)
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)
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#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)

1	Down Stream network by State utilities from ISTS Station	Augmentation of transformation capacity in various existing substations, addition of new substations along with line bays as well as requirement of line bays by STUs for downstream network are under implementation at various locations in Northern Region. Further, 220kV bays have already been commissioned at	List of downstream networks is enclosed in Annexure-A. I. I.	n
2	Progress of	various substations in NR. For its utilization, downstream 220kV system needs to be commissioned. Information regarding	Data upto following months, received from	
	installing new	installation of new capacitors and repair of defective capacitors is to be submitted to NRPC Secretariat.	various states / UTs: © CHANDIGARH Sep-2019 © DELHI Ju1-2022 © HARYANA May-2022 © HP Jan-2022 © J&K and LADAKH Not Available © PUNJAB Ju1-2022 © RAJASTHAN Ju1-2022 © UP Jun-2022 © UTTARAKHAND Ju1-2022 All States/UTs are requested to update status on monthly basis.	
3	Healthiness of defence mechanism: Self-certification	Report of mock exercise for healthiness of UFRs carried out by utilities themselves on quarterly basis is to be submitted to NRPC Secretariat and NRLDC. All utilities were advised to certify specifically, in the report that "All the UFRs are checked and found functional".	Data upto following months, received from various states / UTs: © CHANDIGARH Not Available © DELHI Jun-2022 © HARYANA Jun-2022 © HP Jun-2022 © J&K and LADAKH Not Available © PUNJAB Jun-2022 © RAJASTHAN Jun-2022 © UP Jun-2022 © UTTARAKHAND Jun-2022 © UTTARAKHAND Jun-2022 © BBMB Jun-2022 All States/UTs are requested to update status for healthiness of UFRs on monthly basis for islanding schemes and or quartely basis for the rest .	
		In compliance of NPC decision, NR states/constituents agreed to raise the AUFR settings by 0.2 Hz in 47th TCC/49th NRPC meetings.	Status: © CHANDIGARH Not Available © DELHI Increased © HARYANA Increased © HP Increased © J&K and LADAKH Not increased © PUNJAB Increased © RAJASTHAN Increased © UP Increased © UTTARAKHAND Increased © BBMB Increased	

			self certiincrease cone week. update sta	ification in of 0.2 Hz in J&K and LA	to submit the updated report indicating in AUFR settings, within ADAKH were requested to acreasing settings of
4	Status of FGD	List of FGDs to be installed in	1		mation submission (month)
	installation vis-à-	NR was finalized in the 36th TCC	from state	es / utilit	ties is as under:
	_	(special) meeting dt. 14.09.2017.			
	at identified TPS	All SLDCs were regularly	MARYANA	l	Mar-2022
		requested since 144th OCC meeting	© PUNJAB		Aug-2022
		to take up with the concerned	© RAJASTE	<u>HAN</u>	Aug-2022
		generators where FGD was required	© UP		Jun-2022
		to be installed.	◎ NTPC		Feb-2022
		Further, progress of FGD	A. I. II.	s details a	are enclosed as Annexure -
		installation work on monthly		- /:1:4:-	
		basis is monitored in OCC	1		s are requested to update
		meetings.	monthly ba		riation progress on
				1818.	
5	Information about	The variable charges detail for	A11 a4a4a	~ /IIT ~ ~ ~ ~ ~	requested to
) o		<u> </u>	1		-
	variable charges of	different generating units are available on the MERIT Order	1	•	n MERIT Order
	all generating units in the Region	Portal.	Portal tin	пету.	
	In the Region	rortal.			
6	Status of Automatic	The status of ADMS implementation	Status:		
	Demand Management	in NR, which is mandated in	© DELHI		Fully implemented
	Sysytem in NR	clause 5.4.2 (d) of	O HARYANA		Scheme not implemented
	states/UT's	IEGC by SLDC/SEB/DISCOMs is	© HP	1	Scheme not implemented
		presented in the following table:			
			© PUNJAB	****	Scheme not implemented
			© RAJASTE	IAN	Under implementation.
					Likely completion
					schedule is 31.12.2022.
			© UP		Scheme implemented by
					NPCIL only

	State /	Substation	Reactor	Status
	Utility			
i	POWERGRID	Kurukshetra	500 MVAr TCR	Anticipated commissioning: Nov'22 2022
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.
ii	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.
ii	DTL	Electric Lane	1x50 MVAr at 220 kV	Under Re-tendering due to Single Bid
iii	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 projectis 18 months from the date of LOA. 220kV Reactors - LOA issued on dated 19.07.2021 and date of completion of projectis 18 months from the date of LOA.
ix	PUNJAB	Nakodar	1x25 MVAr at 220 kV	220kV Reactors - LOA issued on dated 19.07.2021 and date of completion of projectis 18 months from the date of LOA.
X	PTCUL	Kashipur	1x125 MVAR at 400 kV	Price bid has been opened and is under evaluation
хi	RAJASTHAN	Aka1	1x25 MVAr	1x25 MVAR Reactor at Akal has been commissioned on dated 25th July' 2022.

xii	RAJASTHAN	Bikaner	1x25 MVAr	Erection work of 1x25 MVAR Reactors at Bikaner and Suratgarh completed and testing work is pending. The same are likely to be commissioned in Aug / Sept 2022.
xiii	RAJASTHAN	Suratgarh	1x25 MVAr	Erection work of 1x25 MVAR Reactors at Bikaner and Suratgarh completed and testing work is pending. The same are likely to be commissioned in Aug / Sept 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.
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.

	21	20 1 STEP STATE INTO				Annexure-A-I.I
1. D	own Stream networк I	by State utilities from ISTS	Station:			
SI. 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.	-	PDD, J&K to update the status.
	400/220kV, 2x315	Commissioned: 6	Utilized: 2	• 220 kV New Wanpoh - Alusteng D/c Line	-	PDD, J&K to update the status.
2	MVA New Wanneh	Total: 6	Unutilized: 4	• 220 kV New Wanpoh - Mattan D/c Line	-	PDD, J&K to update the status.
3	400/220kV, 2x315 MVA Amargarh	Commissioned: 6 Total: 6	Utilized: 6 Unutilized: 2	• 220kV D/C line from 400/220kV Kunzar - 220/33kV Sheeri	-	PDD, J&K to update the status.
4	400/220kV, 2x500 MVA Kurukshetra (GIS)	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• 220kV Bhadson (Kurukshetra) – Ramana Ramani D/c line	-	HVPNL to update the status.
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.
		Commissioned: 6	Utilized: 5 Unutilized: 1	• 220 kV D/C Shahajahanpur (PG) - Gola line	Oct'22	Updated in 196th OCC by UPPTCL
6	Shahjahanpur, 2x315 MVA 400/220 kV	Approved/Under Implementation:1 Total: 7	(1 bays to be utilized shortly) Approved/Under Implementation:1	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	Utilized: 4 Unutilized: 4	• 220 kV Hamirpur-Dehan D/c line	Commissioned	Commisioned date: 09.06.2022. Updated in 198th OCC by HPPTCL
	Sub Station	Total: 8	(2 bays to be utilized shortly)	Network to be planned for 4 bays	-	HPPTCL to update the status.
				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
8	Sikar 400/220kV, 1x 315 MVA S/s	Commissioned: 8 Total: 8	Utilized: 4 Unutilized: 4	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
				• 220 kV D/C line Bhiwani (PG) – Bhiwani (HVPNL) line	Dec'22	Updated in 197th OCC by HVPNL
9	Bhiwani 400/220kV S/s	Commissioned: 6 Total: 6	Utilized: 0 Unutilized: 6	• 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line.	Dec'22	Issue related to ROW as intimated in 192nd OCC.HVPNL to update the status.
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	Apr'24	Issue related to ROW as intimated in 192nd OCC.HVPNL to update the status.
10	Jind 400/220kV S/s	Commissioned: 4 Approved:4 Total: 8	Utilized: 4 Unutilized: 0 Approved:4	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	Updated in 197th 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.
	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	Mar'23	Updated in 198th OCC by HPPTCL
	/		34. 0	Network to be planned for 4 bays	-	HPPTCL to update the status.
	400/220kV Kadarpur	Commissioned: 8	Utilized: 0	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.	Mar'23	Updated in 197th OCC by HVPNL
12	TOUIZZON V Naudipul					

SI. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
13	Sub-station	Total: 8	Unutilized: 8	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	May'23	Updated in 197th OCC by HVPNL
14	400/220kV Sohna	Commissioned: 8	Utilized: 2	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
14	Road Sub-station	Total: 8	Unutilized: 4	LILO of both circuits of 220kV D/c Badshahpur-Sec77 line at 400kV Sohna Road	Jun'23	Updated in 197th OCC by HVPNL
			1107-110	Prithla - Harfali 220kV D/c line with LILO of one ckt at Meerpur Kurali	Commissioned	Commisioned date: 31.12.2021. Updated in 198th OCC by HVPNL
15	400/220kV Prithla Sub-station	Commissioned: 8	Utilized: 2 Unutilized: 4	LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line	-	HVPNL to update the status
	Sub-station	Total: 8	Under Implementation:2	220kV D/C for Sector78, Faridabad	02.03.2023	Updated in 198th OCC by HVPNL
				Prithla - Sector 89 Faridabad 220kV D/c line	31.03.2024	Under Implementation (Mar'24). Updated in 198th OCC by HVPNL
16	400/220kV Sonepat	Commissioned: 6 Under Implementation:2	Utilized: 2 Unutilized: 2	LILO of both circuits of 220kV Samalkha - Mohana line at Sonepat	-	HVPNL to update the status.
10	Sub-station	Total: 8	Under Implementation:2	Sonepat - HSIISC Rai 220kV D/c line	Nov'22	Updated in 196th OCC by HVPNL
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)	Oct'22	In Tendering stage as updated in 192nd OCC by RVPNL.
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	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 4 bays	Oct'22	Lucknow -Kaurasa (Sitapur), 220 kV D/C line expected energization date Oct'22 updated by UPPTCL in 196th OCC No planning for 2 no. of bays upated by UPPTCL in 196th OCC
22	400/220kV Gorakhpur Sub-station	Commissioned: 6 Total: 6	Utilized: 4 Unutilized: 2	Network to be planned for 2 bays	Dec'22	Gorakhpur(PG)- Maharajganj, 220 kV D/C line expected energization date Dec'22 updated by UPPCL in 196th 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 4 bays	-	UPPTCL intimated that 02 no. of bays under finalization stage No planning for 2 no. of bays updated by UPPTCL in 196th OCC
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	Oct'22	Updated in 198th OCC by HVPNL
				Panchkula – Pinjore 220kV D/c line	31.12.2022	Updated in 194th OCC by HVPNL
		Commissioned: 8		Panchkula – Sector-32 220kV D/c line Panchkula – Painceli 220kV	31.12.2022	Updated in 194th OCC by HVPNL
		Under tender:2	Utilized: 2	• Panchkula – Raiwali 220kV D/c line	Commissioned	Updated in 194th OCC by HVPNL

SI.		Downstream network		Planned 220 kV system and	Revised	
No.	Substation	bays	Status of bays	Implementation status	Target	Remarks
25		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	Unutilized: 4 Under Implementation:2	• Panchkula – Sadhaura 220kV D/c line: Sep'23	Sept'23	Updated in 194th 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.
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	Aug'22	Updated in 196th OCC by UPPTCL, within 10 day tentative charging updated in 198th OCC by UPPTCL.
28	400/220kV Bahardurgarh S/s	Commissioned: 4 Total: 4	Utilized:2 Unutilized: 2	Network to be planned for 2 bays.	Mar'24 and July'24	Updated in 198th OCC by HVPNL
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
				• Sohawal - Barabanki 220kV D/c line	Commissioned	Energization date: 14.04.2018 updated by UPPTCL in 196th OCC
			Utilized: 8	Sohawal - New Tanda 220kV D/c line	Commissioned	Energization date: 28.05.2019 updated by UPPTCL in 196th OCC
30	400/220kV Sohawal	Commissioned: 8 Total: 8	Officed. 8	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
		Commissioned: 6	Utilized: 4			in 196th OCC
31	400/220kV, Kankroli	Total: 6	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	-	HVPNL to update the status
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	Sept'22	Saharanpur(PG)-Devband D/c line expected energization date Sept'22 updated by UPPTCL in 196th 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	Mar'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 March 2023.Updated in 198th OCC by PSTCL.

SI. 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
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.
2.5	stablishmant of nov.	 00/220kV substations in No	uthama Daniam			
2. E	stablishment of new 4	SUU/22UKV SUDSTATIONS III NO	rthern Region:			
SI. No.	Name o	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 (25.02.2022)

MEJA Stage-I (Updated by UP on 18.06.2022)

RIHAND STPS

SINGRAULI STPS

TANDA Stage-I

TANDA Stage-II

UNCHAHAR TPS

UPRVUNL (18.06.2022)

ANPARA TPS

HARDUAGANJ TPS

OBRA TPS

PARICHHA TPS

PSPCL (21.07.2022)

GGSSTP, Ropar

GH TPS (LEH.MOH.)

RRVUNL (08.08.2022)

CHHABRA SCPP

CHHABRA TPP

KALISINDH TPS

KOTA TPS

SURATGARH SCTPS

SURATGARH TPS

Updated status of FGD related data submission

Lalitpur Power Gen. Co. Ltd. (18.06.2022)

Lalitpur TPS

Lanco Anpara Power Ltd.

(18.06.2022)

ANPARA-C TPS

HGPCL (21.03.2022)

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. (18.06.2022)

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: 30-09-2022), INDIRA GANDHI STPP U#2 (Target: 30-09-2022), INDIRA GANDHI STPP U#3 (Target: 30-09-2022)
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: 30-04-2021), PANIPAT TPS U#7 (Target: 28-02-2021), PANIPAT TPS U#8 (Target: 31-12-2020), RAJIV GANDHI TPS U#1 (Target: 30-04-2022), RAJIV GANDHI TPS U#2 (Target: 28-02-2022), YAMUNA NAGAR TPS U#1 (Target: 31-12-2021), YAMUNA NAGAR TPS U#2 (Target: 31-10-2021)

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: 30-06-2022), RIHAND STPS U#1 (Target: 30-06-2024), RIHAND STPS U#2 (Target: 30-06-2024), RIHAND STPS U#3 (Target: 31-12-2023), RIHAND STPS U#4 (Target: 31-12-2023), RIHAND STPS U#5 (Target: 30-06-2023), RIHAND STPS U#6 (Target: 30-06-2023), SINGRAULI STPS U#1 (Target: 30-06-2024), SINGRAULI STPS U#2 (Target: 30-06-2024), SINGRAULI STPS U#3 (Target: 30-06-2024), SINGRAULI STPS U#4 (Target: 30-06-2024), SINGRAULI STPS U#5 (Target: 30-06-2024), SINGRAULI STPS U#6 (Target: 31-03-2023), SINGRAULI STPS U#7 (Target: 31-03-2023), UNCHAHAR TPS U#1 (Target: 31-12-2023), UNCHAHAR TPS U#2 (Target: 31-12-2023), UNCHAHAR TPS U#3 (Target: 30-06-2024), UNCHAHAR TPS U#4 (Target: 30-06-2024), UNCHAHAR TPS U#5 (Target: 30-06-2024), UNCHAHAR TPS U#6 (Target: 30-06-2022), MEJA Stage-I U#1 (Target: 31-12-2022), MEJA Stage-I U#2 (Target: 31-03-2023), TANDA Stage-I U#3 (Target:), TANDA Stage-I U#4 (Target:), TANDA Stage-II U#3 (Target: 31-12-2022), TANDA Stage-II U#4 (Target: 31-12-2022)

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: 31-12-2024), LALITPUR TPS U#2 (Target: 30-09-2024), LALITPUR TPS U#3 (Target: 30-06-2024)
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: 31-12-2024), GH TPS (LEH.MOH.) U#2 (Target: 31-12-2024), GH TPS (LEH.MOH.) U#3 (Target: 31-12-2024), GH TPS (LEH.MOH.) U#4 (Target: 31-12-2024), GGSSTP, Ropar U#3 (Target: 31-03-2022), GGSSTP, Ropar U#4 (Target: 31-05-2022), GGSSTP, Ropar U#5 (Target: 31-07-2022), GGSSTP, Ropar U#6 (Target: 30-09-2022)

ROSA TPP Ph-I U#1 (Target: 31-12-2024), ROSA TPP Ph-I U#2 (Target: 31-12-2024), ROSA TPP Ph-I
U#3 (Target: 31-12-2024), ROSA TPP Ph-I U#4 (Target: 31-12-2024)
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: 31-12-2024), SURATGARH TPS U#2 (Target: 31-12-2024), SURATGARH TPS U#3 (Target: 31-12-2024), SURATGARH TPS U#4 (Target: 31-12-2024), SURATGARH TPS U#5 (Target: 31-12-2024), SURATGARH TPS U#6 (Target: 31-12-2024), SURATGARH SCTPS U#7 (Target: 31-12-2024), SURATGARH SCTPS U#8 (Target: 31-12-2024), CHHABRA TPP U#1 (Target: 31-12-2024), CHHABRA TPP U#2 (Target: 31-12-2024), CHHABRA TPP U#3 (Target: 31-12-2024), CHHABRA TPP U#4 (Target: 31-12-2024), CHHABRA SCPP U#5 (Target: 31-12-2024), KALISINDH TPS U#1 (Target: 31-12-2024), KALISINDH TPS U#2 (Target: 31-12-2024), KALISINDH TPS U#2 (Target: 31-12-2024)
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)
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#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)