



सत्यमेव जयते

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/

दिनांक: 22.04.2022

**विषय:** उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप-समिति की 194<sup>वीं</sup> बैठक के खण्ड-अ में लिए गए निर्णयों का सार ।

**Subject:** Gist of decisions taken in the Part-A of 194<sup>th</sup> OCC meeting of NRPC.

उत्तर क्षेत्रीय विद्युत समिति की प्रचालन समन्वय उप- समिति की 194<sup>वीं</sup> बैठक दिनांक 20.04.2022 को आयोजित की गयी । उक्त बैठक की खण्ड-अ में लिए गए निर्णयों का सार **अनुलग्नक – अ** के रूप में संलग्न है ।

194<sup>th</sup> meeting of the Operation Co-ordination Sub-Committee of NRPC was held on 20.04.2022. The Gist of the decisions taken in Part-A of this meeting is enclosed as **Annexure-A**.

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(सौमित्र मजूमदार)

अधीक्षण अभियंता (प्रचालन)

सेवा में,

प्रचालन समन्वय उप- समिति के सभी सदस्य ।

## Gist of decisions taken in the Part-A of 194<sup>th</sup> OCC Meeting

### **Agenda No. 1: Confirmation of Minutes**

Minutes of 192<sup>nd</sup> OCC meeting was issued on 05.04.2022. OCC confirmed the minutes.

### **Agenda No. 2.1: Supply Position (Provisional) for March 2022**

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

- **Delhi**

The positive variation in demand and energy consumption is mainly due to unusual strong hot spell in March-2022.

- **Punjab**

It is intimated that actual maximum demand and actual energy requirement are more as compared to anticipated maximum demand and anticipated energy requirement respectively because of high demand of AP and all other categories due to dry season and high temperature in the state of Punjab during month of March 2022.

- **Himachal Pradesh:**

The Anticipation in Energy requirement in respect of Himachal Pradesh for the month of March 2022 came on the negative side because there was a load shedding of around 5 MUs due to the planned shutdown of the Intra - State Network of DISCOM.

- **Uttar Pradesh**

Actual Energy Requirement was higher than anticipated due to unexpected rise in temperature from 03<sup>rd</sup> week of March 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 March 2022 was enclosed in the agenda and same was discussed in the meeting.

No significant deviation in any of the states was observed.

### **Agenda No. 3: Maintenance Programme of Generating units and Transmission Lines**

- The maintenance programme of generating units and transmission lines for the month of May 2022 was deliberated in the meeting on 19.04.2022.

### **Agenda No. 4.1: Anticipated Power Supply Position in Northern Region for May 2022**

- The updated anticipated Power Supply Position for May 2022 is as below:

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
CHANDIGARH	Availability	150	410	No Revision submitted
	Requirement	120	360	
	Surplus / Shortfall	30	50	
	% Surplus / Shortfall	25.0%	13.9%	
DELHI	Availability	4549	6900	19-Apr-22
	Requirement	3550	6900	
	Surplus / Shortfall	999	0	
	% Surplus / Shortfall	28.1%	0.0%	
HARYANA	Availability	5560	11560	No Revision submitted
	Requirement	5620	9870	
	Surplus / Shortfall	-60	1690	
	% Surplus / Shortfall	-1.1%	17.1%	
HIMACHAL PRADESH	Availability	931	1580	08-Apr-22
	Requirement	923	1570	
	Surplus / Shortfall	8	10	
	% Surplus / Shortfall	0.9%	0.6%	
J&K and LADAKH	Availability	1870	3520	No Revision submitted
	Requirement	1780	2880	
	Surplus / Shortfall	90	640	
	% Surplus / Shortfall	5.1%	22.2%	
PUNJAB	Availability	5950	11970	19-Apr-22
	Requirement	5359	9424	
	Surplus / Shortfall	591	2546	
	% Surplus / Shortfall	11.0%	27.0%	
RAJASTHAN	Availability	9280	18790	19-Apr-22
	Requirement	8150	13500	
	Surplus / Shortfall	1130	5290	
	% Surplus / Shortfall	13.9%	39.2%	
UTTAR PRADESH	Availability	13330	24000	11-Apr-22
	Requirement	12989	24000	
	Surplus / Shortfall	341	0	
	% Surplus / Shortfall	2.6%	0.0%	
UTTARAKHAND	Availability	1062	2180	06-Apr-22
	Requirement	1085	2250	
	Surplus / Shortfall	-23	-70	

State / UT	Availability / Requirement	Revised Energy (MU)	Revised Peak (MW)	Date of revision
	% Surplus / Shortfall	-2.1%	-3.1%	
NORTHERN REGION	Availability	42682	74700	
	Requirement	39576	65300	
	Surplus / Shortfall	3106	9400	
	% Surplus / Shortfall	7.8%	14.4%	

#### 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	To
Delhi	Apr-2018	Sep-2021
Haryana	Apr-2018	Feb-2021
Himachal Pradesh	Apr-2018	Feb-2021
Punjab	Apr-2018	Jan-2022
Rajasthan	Apr-2018	Jan-2022
Uttar Pradesh	Apr-2018	Jan-2022
Uttarakhand	Apr-2018	Dec-2021

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

#### Agenda No. 6: System Study for Capacitor requirement in NR for the year 2019-20

- OCC forum was intimated that NRPC in its 48<sup>th</sup> meeting decided that the study report for 2019-20 along with the guidelines for finding the capacitor requirement at 11/33 kV level in NR would be submitted by CPRI. Accordingly, CPRI have submitted the system study report on 24.02.2021 and thereafter same was shared with the constituent states. The recommended capacitor compensation, additionally required as per the report is 352MVar. The report has brought out the additional requirement of 137MVar and 215MVar compensation for Punjab and J&K respectively. Moreover, empirical relationship for capacitor requirement against voltage profile at 11 kV, based on two configurations has been worked out in the report.
- In the 45<sup>th</sup> TCC / 48<sup>th</sup> NRPC meeting, it was decided after the submission of report for 2019-20 and the guidelines, the same would be studied by the same sub-group who had earlier recommended for guidelines and foreclosure of the contract. Based on Committee's recommendations, NRPC Sectt. can process the pending bills of Rs. 14 lakhs (Rs. 2 + 12 Lakhs), excluding taxes along with foreclosure of the contract. Accordingly, submitted report needs to be examined by the Committee.
- In 181<sup>st</sup> OCC, forum decided that sub-group comprising of following officers would study the report and submit the recommendation report within two weeks:
- NRPC Sectt. asked comments/observations on the CPRI report from all the states via e-mail. Comment from Delhi was received. Rajasthan, HP, Punjab, Haryana had submitted NIL comment. Comment from rest of the members was not received.

- In the 182<sup>nd</sup> OCC meeting, forum decided that a video-conferencing meeting may be held by members of sub-group to finalize the comments latest by 30th April, 2021 and compiled comments may be sent to CPRI for necessary correction in the report.
- The meeting of sub-group was held on 03.05.21. In the meeting, sub-group members decided to get PSSE file from CPRI for better understanding, which was later shared with them.
- In 183<sup>rd</sup> OCC meeting, NRPC representative requested for any other comments on the CPRI report, if remaining, from any of the members. Sub-group committee member from Rajasthan stated that since the CPRI report is for the year 2019-20, old data needs to be collected and then values in the CPRI report would be checked. It was further intimated that around 2-3 days' time would be required for this task. Rajasthan representative was requested to send their observation/comments via e-mail to NRPC Sectt. at the earliest. Forum decided that after receiving observations/comments from Rajasthan, the compiled observations/comments may be sent to CPRI so that necessary corrections may be done in the draft report.
- In 184<sup>th</sup> OCC, forum was apprised that compiled comments were mailed to CPRI vide email dated 28<sup>th</sup> May'21 with a request to submit the corrected report within two weeks' time.
- CPRI vide email dated 31<sup>st</sup> May'21 communicated that majority of comments are on the modeling of base case PSSE file. Since the file is given by NRPC and CPRI has not modeled it so they are not in position to make any comment on the accuracy & modeling of file.
- In 185<sup>th</sup> OCC, NRPC representative stated that CPRI has submitted on 28<sup>th</sup> June 2021 its point-wise reply on the observations of sub-group along with updated report. OCC forum decided that a video-conferencing meeting may be held within sub-group members and CPRI for further discussion on reply of CPRI.
- In 186<sup>th</sup> OCC, NRPC representative apprised the forum that in line with decisions of 185<sup>th</sup> OCC, a meeting was held on 06.08.2021 under the chairmanship of MS, NRPC through Video Conferencing. It was attended by members of the sub-group, CPRI representatives, and officials from NRPC Sectt & NRLDC.
- It was also stated that in the meeting dt. 06.08.2021, comments of the sub-group on the latest version of CPRI report were deliberated in detail. After weighing the merits of the original & revisions of the report, following were decided:
  - First Report submitted by CPRI in September, 2020 shall be considered as the reference report. CPRI confirmed that the base-case of 11.07.2018 at 00:45 hrs. received from NRPC Sectt has been used for preparing September, 2020 report.
  - Comments from all utilities and NRLDC on September 2020 report must be submitted to NRPC Sectt, latest by 24.08.2021.
  - NRPC Sectt, after examination, shall share with CPRI the compiled comments of the utilities and NRLDC, latest by 31.08.2021.
  - Thereafter, CPRI shall submit its reply on the compiled comments sent by NRPC Sectt, latest by 15.09.2021.

- It was further intimated that base case file (11.07.2018 00:45 hrs) and CPRI September 2020 report has been e-mailed to all sub-group members on 10.08.2021 requesting to submit comments/observations thereon latest by 24.08.2021.
- In the meeting (187<sup>th</sup> OCC), forum was apprised that although last date for submission of comments was 24.08.2021, NRPC Sectt. received comments from Himachal Pradesh, Punjab, Rajasthan, Delhi, and NRLDC vide mails dtd. 24.08.2021, 25.08.2021, 26.08.2021, 31.08.2021, and 03.09.2021 respectively. As the received comments were also on the base-case data, a meeting was held on 06.09.2021 among officers of NRPC Sectt, NRLDC and above four states for discussing comments before sending to CPRI. After detailed discussions, following were decided:

#### **A. Himachal Pradesh:**

- a) It was apprised by NRLDC that generation data of micro IPPs has not been modelled by them in base-case due to their small quantity. Further, Capacitor at Baddi needs to be removed from base-case.
- b) HP was requested to submit within 3 days data regarding (11.07.2018 00:45 HRS):
  - i. Generation break-up along with details of micro IPPs.
  - ii. Capacitors at 132 kV level
  - iii. Nodes of major voltage profile mismatch
  - iv. Load factor of state (current scenario if data of past is not available)
- c) It was decided that after getting above data from HP, base-case will be tuned by NRLDC before sending to CPRI.

#### **B. Punjab:**

- a) All switched reactors/capacitors to be converted into fixed & net shunt capacitor value in the base-case to be corrected as per Punjab's comment.
- b) Punjab was requested to submit low voltage nodes (11.07.2018 00:45 HRS) within 3 days.
- c) Based on data from Punjab, initial tuning to be done by NRLDC for Q values of generators. CPRI may be required to do further tuning.

#### **C. Rajasthan:**

- a) Except low voltage points, power factor needs to be upgraded in the base-case.
- b) Rajasthan representative confirmed that most of the capacitors were off during the time for which modelling is done, so lumped capacitor at 132kV needs to be deleted.
- c) Rajasthan was requested to submit
  - i. List of bus-wise capacitors and their status (OFF/ON condition) on 11.07.2018 00:45 HRS.
  - ii. Voltage profile of generator buses.

#### **D. Delhi:**

- a) Delhi was requested to submit voltage profile of generator buses.

- It was decided that after receiving data from above four states, NRLDC will tune the base case initially and will also ensure that regional generators shall not absorb reactive power in the base-case and then base case will be sent to CPRI along with compiled comments.
- In 188<sup>th</sup> OCC, it was apprised that CPRI vide e-mail dtd. 23.09.2021, requested to send comments at the earliest.
- NRPC Sectt. vide e-mail dtd. 23.09.2021 apprised the CPRI that as per decisions of meeting dtd. 06.09.2021, tuning of base-case file is being done by NRLDC so that no new issue arises in future.
- CPRI vide e-mail dtd. 24.09.2021 has requested that any change in loading & generation profile will be a new base case and this will be a fresh study for new base case. It will require an extensive time and efforts. CPRI has requested to ensure that load/generation profile in tuned PSSE should be same as was given to CPRI for PSSE base 11.7.2018 at 00.45.
- In view of CPRI's request, NRLDC was requested vide e-mail dtd. 24.09.2021 to halt tuning of base-case till further discussion.
- A meeting was held between NRPC Sectt. and NRLDC on 04.10.2021, wherein it was decided that without incorporating corrective comments of states, the report is not acceptable w.r.t drawing any conclusion on requirement of capacitor. Later, NRLDC representative informed that tuned base-case will be submitted by 28.10.2021.
- Tuned base-case has been received from NRLDC vide mail dtd 10.11.2021.
- In 189<sup>th</sup> OCC, NRPC representative apprised that tuned base-case received from NRLDC is under examination in NRPC Sectt. After examination, the same will be sent to CPRI for correction in the report along with the comments submitted by states.
- In 190<sup>th</sup> OCC, NRPC representative informed that tuned base-case along with comments of states has been sent to CPRI vide mail dated 30.11.2021 for correction in the report.
- In 191<sup>st</sup> OCC, NRPC representative apprised the forum that a meeting was held between members of the sub-group, CPRI representatives, and officials from NRPC Sectt & NRLDC on 05.01.2022, wherein it was decided that CPRI shall tune the  $Q_{gen}$  value taking help of NRLDC. Tuning may be done for some machines of Punjab (such as Talwandi Sabo), Uttarakhand (such as Shrivanti), Himachal Pradesh, and Jammu. CPRI shall also tune  $Q_{gen}$  of Central Sector machines such as Salal, Rampur, Bhakra, Dehar etc. These  $Q_{gen}$  tunings shall be done in spirit to relieve machines from absorbing MVARs and to avoid over compensation in system due to recommended capacitors. CPRI has intimated 20<sup>th</sup> Jan'22 as target date for the activity.
- In 192<sup>nd</sup> OCC, NRPC representative apprised the forum that report has been received from CPRI vide mail dtd. 14.02.2022. However, some grammatical and typographical error were observed in the report and CPRI has been requested to resolve the same. After resolution of same, report shall be shared with sub-group members tentatively in next week. After final acceptance, payment to CPRI may be processed.
- In 193<sup>rd</sup> OCC, NRPC representative informed that final study report of CPRI has been shared with all states of NR region vide mail dated 02.03.2022. Further, matter regarding the payment will be taken as agenda in the next NRPC meeting.

- In the meeting (194<sup>th</sup> OCC), NRPC representative informed that in the 52<sup>nd</sup> NRPC meeting, NRPC Board gave approval for payment of Rs. 14 Lakh (excluding GST) to CPRI for the system study conducted by them.
- OCC forum decided that the payment process may be undertaken by NRPC Sectt as per the decision in 52<sup>nd</sup> NRPC meeting and this agenda would not be pursued further from 195<sup>th</sup> OCC onward.

### **Agenda No. 7: Automatic Demand Management System**

- Forum was informed that as decided in the 175<sup>th</sup> OCC meeting, to conduct separate meeting with states, nominations are pending from PuVVNL, PVVNL, MVVNL, DVVNL, UPPTCL, UPCL, PTCUL, SLDC Uttarakhand, and J&K. They were requested on 01.03.2021 to submit nominations for the meeting.
- Meetings on ADMS implementation road map have been held with the officers of Haryana, Himachal Pradesh, Punjab and UP on 05.02.2021, 19.02.2021, 05.03.2021, and 14.07.2021 respectively. In these meetings, issues and apprehensions on ADMS were discussed along with vital aspects like addressing the commercial issues, basic architecture for scheme and funding possibilities for the scheme.
- As per the request of states for DPR of any state that has got PSDF support for ADMS, website link of PSDF Sectt. has been shared with Haryana, Himachal Pradesh, Punjab and Uttar Pradesh for accessing DPR. SLDCs were also requested to expedite the submission of pending nominations.
- In 186<sup>th</sup> OCC, In-charge, NRLDC stated that as per IEGC, implementation of ADMS is mandatory. It helps in reducing DSM charges also. States must take it seriously.
- MS, NRPC stated that non-implementation of ADMS by states is indistinguishably non-adherence to directions of CERC. He enquired from NRLDC whether POSOCO has made any communication with CERC regarding non-adherence of its deadline i.e. 31.06.2016. NRLDC representative stated that he would look into and inform in next meeting.
- NRPC representative added that initial deadline for ADMS implementation was 1<sup>st</sup> January 2011 as per para 5.4.2 (d) of IEGC. Later, CERC has taken suo-motu cognizance of non-implementation of ADMS by states and given 31.06.2016 as deadline vide its order dtd. 31.12.2015 in petition no. 5/SM/2014. Implementation deadline given by the statutory and regulatory body need to be complied by concerned SLDC / SEB / distribution licensee as per regulation no. 5.4.2 (a) & (b) of IEGC. Moreover, hand holding process for project proposal preparation in respect of four NR states has already been done by NRPC.
- Forum decided that NRLDC may file a report to CERC based on compiled status of ADMS implementation in states of Northern Region.
- In the 187<sup>th</sup> OCC, NRLDC representative quoted the texts of CERC order dtd. 31.12.2015 in petition no. 5/SM/2014. He apprised the status of ADMS implementation till 2015. Further, he requested the states to update the status so that NRLDC may file petition in CERC on the basis of compiled status.



- In the 188<sup>th</sup> OCC, NRLDC informed that it has not received comments from states in this matter. Accordingly, all SLDC/DISCOMs are requested to furnish the latest status of ADMS implementation in their respective control areas latest by 31<sup>st</sup> October 2021 to NRLDC. Status as received till 31.10.2021 would be reported to CERC by NRLDC.
- In the 189<sup>th</sup> OCC, NRLDC informed that status of ADMS has been sent to CERC twice in the past (same is recorded in MoM of 127<sup>th</sup> OCC).
- NRLDC representative also informed that CERC will be apprised about the latest status of ADMS as per the updated information available with them.
- In the 190<sup>th</sup> OCC, NRLDC representative informed that vide letter dated 09.12.2021 (enclosed as Annexure-A.0 of minutes of 190<sup>th</sup> OCC), CERC has been apprised about the latest status of ADMS as per the updated information available with them.
- In the 192<sup>nd</sup> OCC, forum was intimated that no further update has been received on this matter. Rajasthan representative intimated that ADMS implementation schedule in their state has been extended till Dec'22 and this agenda may be continued in OCC meetings for monitoring the ADMS implementation schedule.
- In the 193<sup>rd</sup> OCC, Rajasthan representative informed that first trial is tentatively scheduled in May 2022.
- In the 194<sup>th</sup> OCC, Rajasthan representative reiterated its commitment for the 1<sup>st</sup> trials in May 2022. MS, NRPC asked representatives of other states to regularly update the status on ADMS implementation.

#### **Agenda No. 8: Follow-up of issues from various OCC Meetings - Status update**

- Updated status is enclosed as ***Annexure-A.I***.
- In 193<sup>rd</sup> OCC, SLDCs were requested to coordinate with respective Transmission utilities of states/UT's 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.
- In 194<sup>th</sup> OCC, SLDCs were requested to again to coordinate with respective Transmission utilities of states/UT's 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.

#### **Agenda No. 9. 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 187<sup>th</sup> 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 187<sup>th</sup> 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 189<sup>th</sup> OCC agenda.
- In the 189<sup>th</sup> 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 30<sup>th</sup> Nov, 2021. He also set timeline of 30<sup>th</sup> 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 190<sup>th</sup> OCC, NRPC 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 15<sup>th</sup> 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 191<sup>st</sup> 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 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 192<sup>nd</sup> 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 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 193<sup>rd</sup> OCC, NRPC representative informed forum that HPSLDC convened a meeting on 4<sup>th</sup> 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 7<sup>th</sup> 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 meeting (194<sup>th</sup> 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.

#### **Agenda No. 10. 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 10<sup>th</sup> April 2022).

#### **Agenda No. 11. Appraisal report of NRPC regarding Installation/ Re-shuffling Programme of 33kV Shunt Capacitor Banks at various GSS of RVPN (Agenda by RRVPNL)**

- NRPC representative apprised forum that RVPN has planned reshuffling of existing capacitors and installation of new capacitors for improving voltage profile and power factor. In this regard, they have submitted proposal to NLDC for PSDF funding. In turn,

NPC Division, CEA has sought appraisal report of NRPC for further processing of RVPN's case.

- NRPC representative informed that final capacitor study report has recently been submitted by CPRI and same has been circulated among all NR states, including Rajasthan. The CPRI report provides insight of state-wise MVAr requirement for the year 2019-20 and empirical formula for assessing the capacitor requirement at Distribution level.
- MS, NRPC asked RVPN to conduct an initial study at their side for the year 2021-22 and thereafter results of their study can be discussed with the officials of NRPC and NRLDC. Further, he opined that a sub-group comprising of officers of NRPC Sectt, NRLDC and RVPN may go through the proposal of RVPN and submit its recommendation on the subject matter. Representative of RVPN was requested to depute their concerned officer(s) in NRLDC/NRPC in the first week of May, so that sub-group can jointly go through the proposal.

#### **Agenda No. 12. Calibration and testing of Interface Energy Meters installed at Generating stations. (Agenda by NHPC)**

- NHPC requested CTU and POWERGRID to carry out the calibration and testing of Interface Energy Meters installed at their Generating stations.
- CTU representatives informed the forum that as per the regulation they have no mandate to carry out the Calibration and testing of Interface Energy Meters; moreover, currently they do not have any regional set up for facilitating the same. However, considering the criticality of the issue of Calibration and testing of Interface Energy Meters for all the generating stations and economy of these calibration and testing, MS, NRPC opined that a separate meeting may be conveyed with the CTU, POWERGRID, NRPC, NRLDC and generators wherein the matter may be discussed and subsequently a decision can be taken on this issue.

#### **Agenda No.13. Review of Special Protection Scheme at POWERGRID Bhadla Pooling station (Agenda by POWERGRID)**

- NRPC representative presented the matter to the forum and communicated that POWERGRID has requested that requirement of SPS schemes may be reviewed
- NRLDC representative mentioned that during the time of design of conditions and formulation of load group it was envisaged that at the time of n-1 non-compliance of ICT's at Fatehgarh-II, Bhadla-II and Bikaner substations, load groups may be rearranged. On the request of POWERGRID, NRLDC has accepted the request for the study of load groups and to review the requirement of the SPS scheme.
- Further, NRLDC representative suggested POWERGRID to review the sectionalization of ICT's at Bhadla Pooling station.

#### **Addl. Agenda No.14. Load Flow Study of Bhakra Power House Complex. (Agenda by BBMB)**

- BBMB representative presented the matter to the forum and highlighted the need for requirement of comprehensive study for adequacy of transmission lines from Bhakra

Power House Complex. BBMB requested that load flow study may please be carried out by NRLDC to identify possible constraints for evacuation of power of Bhakra Left Bank and Bhakra Right Bank Power House.

- NRLDC representative requested BBMB to share the results of study they have got conducted from Himachal Pradesh for further examination.

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## Follow up issues from previous OCC meetings

Annexure-A. I

1	Down Stream network by State utilities from ISTS Station	Augmentation of transformation capacity in various existing substations, addition of new substations along with line bays as well as requirement of line bays by STUs for downstream network are under implementation at various locations in Northern Region. Further, 220kV bays have already been commissioned at various substations in NR. For its utilization, downstream 220kV system needs to be commissioned.	List of downstream networks is enclosed in <b>Annexure-A. I. I.</b>																				
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.	<p>Data upto following months, received from various states / UTs:</p> <table border="1" data-bbox="965 869 1549 1189"> <tr><td>⊙ CHANDIGARH</td><td>Sep-2019</td></tr> <tr><td>⊙ DELHI</td><td>Dec-2021</td></tr> <tr><td>⊙ HARYANA</td><td>Aug-2021</td></tr> <tr><td>⊙ HP</td><td>Jan-2022</td></tr> <tr><td>⊙ J&amp;K and LADAKH</td><td>Not Available</td></tr> <tr><td>⊙ PUNJAB</td><td>Aug-2021</td></tr> <tr><td>⊙ RAJASTHAN</td><td>Feb-2022</td></tr> <tr><td>⊙ UP</td><td>Nov-2021</td></tr> <tr><td>⊙ UTTARAKHAND</td><td>Mar-2022</td></tr> </table> <p>All States/UTs are requested to update status on monthly basis.</p>	⊙ CHANDIGARH	Sep-2019	⊙ DELHI	Dec-2021	⊙ HARYANA	Aug-2021	⊙ HP	Jan-2022	⊙ J&K and LADAKH	Not Available	⊙ PUNJAB	Aug-2021	⊙ RAJASTHAN	Feb-2022	⊙ UP	Nov-2021	⊙ UTTARAKHAND	Mar-2022		
⊙ CHANDIGARH	Sep-2019																						
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⊙ RAJASTHAN	Feb-2022																						
⊙ UP	Nov-2021																						
⊙ UTTARAKHAND	Mar-2022																						
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".	<p>Data upto following months, received from various states / UTs:</p> <table border="1" data-bbox="965 1391 1549 1742"> <tr><td>⊙ CHANDIGARH</td><td>Not Available</td></tr> <tr><td>⊙ DELHI</td><td>Dec-2021</td></tr> <tr><td>⊙ HARYANA</td><td>Dec-2021</td></tr> <tr><td>⊙ HP</td><td>Jan-2022</td></tr> <tr><td>⊙ J&amp;K and LADAKH</td><td>Not Available</td></tr> <tr><td>⊙ PUNJAB</td><td>Mar-2021</td></tr> <tr><td>⊙ RAJASTHAN</td><td>Dec-2021</td></tr> <tr><td>⊙ UP</td><td>Dec-2021</td></tr> <tr><td>⊙ UTTARAKHAND</td><td>Mar-2022</td></tr> <tr><td>⊙ BBMB</td><td>Dec-2021</td></tr> </table> <p>All States/UTs are requested to update status on monthly basis.</p>	⊙ CHANDIGARH	Not Available	⊙ DELHI	Dec-2021	⊙ HARYANA	Dec-2021	⊙ HP	Jan-2022	⊙ J&K and LADAKH	Not Available	⊙ PUNJAB	Mar-2021	⊙ RAJASTHAN	Dec-2021	⊙ UP	Dec-2021	⊙ UTTARAKHAND	Mar-2022	⊙ BBMB	Dec-2021
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⊙ BBMB	Dec-2021																						
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	<p>Status of the information submission (month) from states / utilities is as under:</p> <table border="1" data-bbox="965 1966 1549 2145"> <tr><td>⊙ HARYANA</td><td>Mar-2022</td></tr> <tr><td>⊙ PUNJAB</td><td>Apr-2022</td></tr> <tr><td>⊙ RAJASTHAN</td><td>Apr-2022</td></tr> <tr><td>⊙ UP</td><td>Mar-2022</td></tr> <tr><td>⊙ NTPC</td><td>Feb-2022</td></tr> </table> <p>FGD status details are enclosed as <b>Annexure-A. I. II.</b></p>	⊙ HARYANA	Mar-2022	⊙ PUNJAB	Apr-2022	⊙ RAJASTHAN	Apr-2022	⊙ UP	Mar-2022	⊙ NTPC	Feb-2022										
⊙ HARYANA	Mar-2022																						
⊙ PUNJAB	Apr-2022																						
⊙ RAJASTHAN	Apr-2022																						
⊙ UP	Mar-2022																						
⊙ NTPC	Feb-2022																						

		<p>INSTALLATION WORK ON MONTHLY basis is monitored in OCC meetings.</p>	<p>All States/utilities are requested to update status of FGD installation progress on monthly basis.</p>
5	<p>Information about variable charges of all generating units in the Region</p>	<p>The variable charges detail for different generating units are available on the MERIT Order Portal.</p>	<p>All states/UTs are requested to submit daily data on MERIT Order Portal timely.</p>



6	Reactive compensation at 220 kV/ 400 kV level at 15 substations			
	State / Utility	Substation	Reactor	Status
i	POWERGRID	Kurukshetra	500 MVAR TCR	Anticipated commissioning: July 2022 (90% supplies received from GE and rest is expected by Feb'22)
ii	DTL	Peeragarhi	1x50 MVAR at 220 kV	PO awarded to M/s Kanohar Electricals Ltd. Drawings approved and under stage inspection (delay due to pending supply of reactor bushings). 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 stage inspection (delay due to pending supply of reactor bushings). 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	Tender has been invited in first week of Jan'22.

xi	RAJASTHAN	Akal	1x25 MVar	LOA placed on dt. 4.1.2021. Agreement signed on dt. 8.02.2021. 2nd instalment has been received on dt. 30.07.2021. The erection work of 3 Reactors is under progress and shall be commissioned by 30.06.2022.
xii	RAJASTHAN	Bikaner	1x25 MVar	LOA placed on dt. 4.1.2021. Agreement signed on dt. 8.02.2021. 2nd instalment has been received on dt. 30.07.2021. The erection work of 3 Reactors is under progress and shall be commissioned by 30.06.2022.
xiii	RAJASTHAN	Suratgarh	1x25 MVar	LOA placed on dt. 4.1.2021. Agreement signed on dt. 8.02.2021. 2nd instalment has been received on dt. 30.07.2021. The erection work of 3 Reactors is under progress and shall be commissioned by 30.06.2022.
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.

## 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.	-	PDD, J&K to update the status.
2	400/220kV, 2x315 MVA New Wanpoh	Commissioned: 6 Total: 6	Utilized: 2 Unutilized: 4	• 220 kV New Wanpoh - Alusteng D/c Line	-	PDD, J&K to update the status.
				• 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.
6	Shahjahanpur, 2x315 MVA 400/220 kV	Commissioned: 6 Approved/Under Implementation:1 Total: 7	Utilized: 3 Unutilized: 3 (2 bays to be utilized shortly) Approved/Under Implementation:1	• 220 kV D/C Shahjahanpur (PG) - Gola line	-	UPPTCL to update the status.
				• LILO of Sitapur – Shahjahanpur 220 kV SC line at Shahjahanpur (PG) – under commissioning	21.02.2022	Updated in 192nd OCC by UPPTCL.
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	Mar'22	Updated in 192nd 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: 4 Unutilized: 4	• 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.	-	RRVPNL to update the status.
9	Bhiwani 400/220kV S/s	Commissioned: 6 Total: 6	Utilized: 0 Unutilized: 6	• 220 kV D/C line Bhiwani (PG) – Bhiwani (HVPNL) line	-	Issue related to ROW as intimated in 192nd OCC.HVPNL to update the status.
				• 220 kV Bhiwani (PG) - Isherwal (HVPNL) D/c line.	-	Issue related to ROW as intimated in 192nd OCC.HVPNL to update the status.
				• 220 kV Bhiwani (PG) - Dadhibana (HVPNL) D/c line.	-	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	-	HVPNL to update the status.
11	400/220kV Tughlakabad GIS	Commissioned: 6 Under Implementation: 4 Total: 10	Utilized: 6 Unutilized: 0 Under Implementation:4	• RK Puram – Tughlakabad (UG Cable) 220kV D/c line – March 2023.	-	DTL to update the status.
				• Masjid Mor – Tughlakabad 220kV D/c line.	-	DTL to update the status.
12	400/220kV Kala Amb GIS (TBCB)	Commissioned: 6 Total: 6	Utilized: 0 Unutilized: 6	• HPPTCL has planned one no. of 220kV D/c line from Kala Amb 400/220kV S/s to 220/132kV Kala Amb S/s	Jan'23	Updated in 192nd 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.	-	HVPNL to update the status.
				• 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	-	HVPNL to update the status.

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
14	400/220kV Sohna Road Sub-station	Commissioned: 8	Utilized: 0	• LILO of both circuits of 220kV D/c Sector-69 - Roj Ka Meo line at 400kV Sohna Road	-	HVPNL to update the status.
		Total: 8	Unutilized: 8	• LILO of both circuits of 220kV D/c Badshahpur-Sec77 line at 400kV Sohna Road	-	HVPNL to update the status.
15	400/220kV Prithla Sub-station	Commissioned: 8	Utilized: 0	• LILO of both ckt of 220kV D/c Ranga Rajpur – Palwal line	-	HVPNL to update the status.
		Total: 8	Unutilized: 8	• 220kV D/C for Sector78, Faridabad	-	HVPNL to update the status.
16	400/220kV Sonepat Sub-station	Commissioned: 6	Utilized: 2	• LILO of both circuits of 220kV Samalkha - Mohana line at Sonepat		HVPNL to update the status.
		Under Implementation:2	Unutilized: 2	• Sonepat - HSIISC Rai 220kV D/c line	Jul'22	Updated in 192nd OCC
17	400/220kV Neemrana Sub-station	Commissioned: 6	Utilized: 4	• LILO of Bhiwadi - Neemrana 220kV S/c line at Neemrana (PG)	Oct'22	In Tendering stage as updated in 192nd OCC by RVPNL.
		Total: 6	Unutilized: 2			
18	400/220kV Kotputli Sub-station	Commissioned: 6	Utilized: 4	• Kotputli - Pathreda 220kV D/c line	-	RVPNL to update the status.
		Total: 6	Unutilized: 2			
19	400/220kV Jalandhar Sub-station	Commissioned: 10	Utilized: 8	• Network to be planned for 2 bays	-	PSTCL to update the status.
		Total: 10	Unutilized: 2			
20	400/220kV Roorkee Sub-station	Commissioned: 6	Utilized: 4	• Roorkee (PG)-Pirankaliyar 220kV D/c line	-	PTCUL to update the status.
		Total: 6	Unutilized: 2			
21	400/220kV Lucknow Sub-station	Commissioned: 8	Utilized: 4	• Network to be planned for 4 bays	-	UPPTCL to update the status.
		Total: 8	Unutilized: 4			
22	400/220kV Gorakhpur Sub-station	Commissioned: 6	Utilized: 4	• Network to be planned for 2 bays	-	UPPTCL to update the status.
		Total: 6	Unutilized: 2			
23	400/220kV Fatehpur Sub-station	Commissioned: 8	Utilized: 6	• Network to be planned for 4 bays	-	UPPTCL to update the status.
		Under Implementation:2	Unutilized: 2			
		Total: 10	Under Implementation:2			
24	400/220kV Abdullapur Sub-station	Commissioned: 10	Utilized: 10	• Abdullapur – Rajokheri 220kV D/c line	May'22	Updated in 194th OCC by HVPNL
		Under Implementation:2	Unutilized: 0			
		Total: 12	Under Implementation:2			
25	400/220kV Pachkula Sub-station	Commissioned: 8	Utilized: 2	• Panchkula – Pinjore 220kV D/c line	31.12.2022	Updated in 194th OCC by HVPNL
		Under tender:2	Unutilized: 4	• Panchkula – Sector-32 220kV D/c line	31.12.2022	Updated in 194th OCC by HVPNL
		Total: 10	Under Implementation:2	• Panchkula – Raiwali 220kV D/c line	Commissioned	Updated in 194th OCC by HVPNL
		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: 2	• Panchkula – Sadhaura 220kV D/c line: Sep'23	Sept'23	Updated in 194th OCC by HVPNL
26	400/220kV Amritsar S/s	Commissioned:7	Utilized: 6	• Amritsar – Patti 220kV S/c line	-	PSTCL to update the status.
		Approved in 50th NRPC- 1 no.	Unutilized: 1	• 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)	-	PSTCL to update the status.
		Total: 8	Approved in 50th NRPC- 1 no.			
27	400/220kV Bagpat S/s	Commissioned: 8	Utilized:6	• Bagpat - Modipuram 220kV D/c line	-	UPPTCL to update the status.
		Total: 8	Unutilized: 2			
28	400/220kV Bahardurgarh S/s	Commissioned: 4	Utilized:2	• Network to be planned for 2 bays.		HVPNL to update the status.
		Total: 4	Unutilized: 2			

Sl. No.	Substation	Downstream network bays	Status of bays	Planned 220 kV system and Implementation status	Revised Target	Remarks
29	400/220kV Jaipur (South) S/s	Commissioned: 4 Total: 4	Utilized:6 Unutilized: 2	• Network to be planned for 2 bays.	-	RVPNL to update the status.
30	400/220kV Sohawal S/s	Commissioned: 8 Total: 8	Utilized: 2 Unutilized: 6	• Sohawal - Barabanki 220kV D/c line	-	UPPTCL to update the status.
				• Sohawal - New Tanda 220kV D/c line	-	UPPTCL to update the status.
				• Network to be planned for 2 bays	-	UPPTCL to update the status.
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	-	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	-	UPPTCL to update the status
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	-	PSTCL to update the status
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	-	HPPTCL to update the status
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	-	UPPTCL to update the status
38	400/220kV, Patiala	Commissioned: 8 Total: 8	Utilized: 6 Unutilized: 2	• Network to be planned for 2 bays	-	PSTCL to update the status

## 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	<ul style="list-style-type: none"> <li>• 220kV Almora-Jauljibi line</li> <li>• 220kV Brammah-Jauljibi line</li> </ul> PTCUL to update the status of lines.

# FGD Status

# Updated status of FGD related data submission

## **NTPC (25.02.2022)**

MEJA Stage-I

RIHAND STPS

SINGRAULI STPS

TANDA Stage-I

TANDA Stage-II

UNCHA HAR TPS

## **UPRVUNL (21.03.2022)**

ANPARA TPS

HARDUAGANJ TPS

OBRA TPS

PARICHHA TPS

## **PSPCL (12.04.2022)**

GGSSSTP, Ropar

GH TPS (LEH.MOH.)

## **RRVUNL (07.04.2022)**

CHHABRA SCPP

CHHABRA TPP

KALISINDH TPS

KOTA TPS

SURATGARH SCTPS

SURATGARH TPS

# Updated status of FGD related data submission

**Lalitpur Power Gen. Co. Ltd.  
(15.02.2022)**

Lalitpur TPS

**Lanco Anpara Power Ltd.  
(15.02.2022)**

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  
(15.02.2022)**

Rosa TPP Phase-I

**Prayagraj Power Generation  
Company Ltd. (15.02.2022)**

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)

<b>Adani Power Ltd.</b>	KAWAI TPS U#1 (Target: 31-12-2024), KAWAI TPS U#2 (Target: 31-12-2024)
<b>APCPL</b>	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)
<b>GVK Power Ltd.</b>	GOINDWAL SAHIB U#1 (Target: 30-04-2020), GOINDWAL SAHIB U#2 (Target: 29-02-2020)
<b>HGPCL</b>	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: 31-12-2022), 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)

<b>L&amp;T Power Development Ltd (Nabha)</b>	Nabha TPP (Rajpura TPP) U#1 (Target: 30-04-2021), Nabha TPP (Rajpura TPP) U#2 (Target: 28-02-2021)
<b>Lalitpur Power Gen. Company Ltd.</b>	LALITPUR TPS U#1 (Target: 31-12-2024), LALITPUR TPS U#2 (Target: 30-09-2024), LALITPUR TPS U#3 (Target: 30-06-2024)
<b>Lanco Anpara Power Ltd.</b>	ANPARA C TPS U#1 (Target: 31-12-2023), ANPARA C TPS U#2 (Target: 31-12-2023)
<b>Prayagraj Power Generation Company Ltd.</b>	PRAYAGRAJ TPP U#1 (Target: 31-10-2024), PRAYAGRAJ TPP U#2 (Target: 31-10-2024), PRAYAGRAJ TPP U#3 (Target: 31-12-2024)
<b>PSPCL</b>	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)

<b>Rosa Power Supply Company</b>	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)
<b>RRVUNL</b>	KOTA TPS U#5 (Target: 31-12-2022), KOTA TPS U#6 (Target: 31-12-2022), KOTA TPS U#7 (Target: 31-12-2022), 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), CHHABRA SCPP U#6 (Target: 31-12-2024), KALISINDH TPS U#1 (Target: 31-12-2024), KALISINDH TPS U#2 (Target: 31-12-2024)
<b>Talwandi Sabo Power Ltd.</b>	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)
<b>UPRVUNL</b>	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)