

I/11126/2020



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

विद्युत प्रणाली योजना एवं मूल्यांकन-I प्रभाग

Power System Planning & Appraisal-I Division

सेवा में/To

-As per list enclosed-

Subject: 2nd Meeting of Northern Region Power Committee (Transmission Planning) (NRPCTP) – Additional Agenda note

Sir/ Madam,

In continuation to our earlier communication dated 22.08.2020, vide which agenda notes were circulated, it is to intimated that Additional Agenda Note of 2nd meeting of Northern Region Power Committee (Transmission Planning) (NRPCTP) is now available on CEA website: www.cea.nic.in (path to access: Home Page - Wing - Power System-PSPA-I- Standing Committee on Power System Planning- Northern Region).

Kindly make it convenient to attend the meeting.

Yours faithfully,

Signature Not Verified

Digitally signed by MANJARI
CHATURVEDI
Date: 2020.08.30 13:51:58 IST



(मंजरी चतुर्वेदी/ Manjari Chaturvedi)

निदेशक/ Director

I/11126/2020

1.	Member Secretary, NRPC, 18-A Shajeed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi - 110016	2.	Director (W &P), UPPTCL, Shakti Bhawan Extn,3rd floor, 14, Ashok Marg, Lucknow - 226 001	3.	Director, (Technical), THDCIL, Pragatipuram, Bypass Road, Rishikesh-249201
4.	Director (Technical), Punjab State Transmission Corporation Ltd. (PSTCL) Head Office The Mall Patiala - 147001	5.	Member (Power), BBMB, Sector-19 B Madhya Marg, Chandigarh-1 60019	6.	CMD, NHPC, NHPC Office Complex, Sector-33, NHPC, Faridabad-121003
7.	Director (PP&D) RVPN, 3 rd Floor, Room no 330, Vidhyut Bhawan, Janpath, Jaipur-302005.	8.	Director (Technical), HVPNL, Shakti Bhawan, Sector- 6 Panchkula-134109	9.	Director (Technical), HPSEB Ltd. Vidut Bhawan, Shimla -171004
10.	Managing Director, HPPTCL, Barowalias, Khalini Shimla-171002 Fax-0177-2623415	11	Chief Engineer (Operation) Ministry of Power, UT Secretariat, Sector-9 D Chandigarh -161009	12	Development Commissioner (Power), Power Department, Grid Substation Complex, Janipur, Jammu,
13.	COO (CTU) POWERGRID, Saudamini, Plot no. 2, Sector -29, Gurgaon-122 001 (Fax-0124-2571809)	14	Director (System Operation), POSOCO B-9, Qutab Institutional Area, Katwaria Sarai New Delhi – 110010	15	MD, SECI, Prius Platinum, D-3, District Centre, Saket, New Delhi -17
16	CMD, NTPC, NTPC Bhawan, Core 7, Scope Complex-6, Lodhi Road. New Delhi	17	GM (GMR), Bajoli Holi Hydro Power Private Limited, Airport Building, 302, 1 st Floor, New Shakti Bhawan, Near Terminal 3 IGI Airport, New Delhi -37	18	SVP, M/s Greenko Budhil HEP, 113/A, Sai Square Buiding, Road No. 36, Jubilee Hills, Hyderabad- 500033
19.	General Manager (Planning), Chenab Valley Power Projects (P) Limited, Chenab Jal Shakti Bhawan, Rail Head Complex, Jammu	20	General Manager (Planning), Delhi Transco Ltd, Shakti Sadan, Kotla Marg, New Delhi-110002		

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**Additional Agenda note for 2nd Meeting of Northern Region Power Committee
(Transmission Planning) (NRPCTP):**

1.0 Creation of 400/220 kV, 2x315 MVA S/S at Akhnoor/Rajouri as ISTS

In continuation to Agenda Point no 2, the revised plots of the load flow studies without interconnection of Katra-II with Nagrota are enclosed at **Annexure-IA**.

2.0 Transmission works to be implemented in Kashmir Region under ISTS

2.1 In continuation to Agenda Point No. 5, the following work proposed by JKPDD requires interconnection with the ISTS elements:

S.No.	Transmission Line	Timeframe as per financial phasing	Substation Capacity Proposed/Anticipated Load	ISTS element involved
1	LILo of 220kV D/C Delina - Kishanganga Line (PGCIL) at Wahipora (35km)	Line: 2022-23 Wahipora S/s: 2022-23	Proposed at Wahipora: 160 MVA, 220/132kV 2x50 MVA, 132/33kV	220kV D/C Delina - Kishanganga Line (PGCIL) is ISTS line

2.2 Members may approve.

3.0 Agenda Points proposed by UPPTCL:

3.1 Downstream Network of Gorakhpur (400 kV) PG s/s with creation of 220/132/33 kV Maharajganj and Anandnagar S/s has been deliberated and concurred in the 40th meeting of SCPSNR held on 22.06.2018. However, considering final land locations of these UPPTCL s/s and associated line length of 100 km, modifications proposed in the downstream network are as follows:

S.No	Approved in 4 th NRST dated 25.07.2019	Modifications proposed
1	Gorakhpur (PG)- Maharajganj 220 kV D/C line (Twin Moose) -40 km	Gorakhpur (PG)- Maharajganj 220 kV D/C line (Zebra) -70 km
2	Maharajganj- Anandnagar 220 kV D/c line-30 km	LILo of one circuit of Gorakhpur (PG)- Maharajganj 220 kV D/C line at Anandnagar- 30 km

3.2 Further, in view of anticipated load in Unnao district and to meet n-1 criteria, UPPTCL has proposed augmentation at 400 kV Unnao S/s from 3x315 MVA to 2x315+1x500 MVA.

3.3 Members may approve.

4.0 Transmission System for upcoming hydro generators in Yamuna Basin

4.1 Power from proposed generators of Yamuna basin was earlier planned to be evacuated through 220 kV D/C Mori-Khodri line. However, as per MoM of 39th meeting of standing committee dated 29th & 30th May 2017, the evacuation system was changed to 220 kV Mori-Dehradun line.

4.2 Further, Connectivity was granted to Naitwar Mori HEP of SJVNL in October, 2017 and

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was agreed in the 2nd meeting of Northern Region Standing Committee on Transmission held on 13/11/2018 (extracts of the minutes enclosed as **Annexure-IIA**) through the following transmission system:

- Naitwar Mori HEP - # Location of Mori 220/132 kV (PTCUL) S/s 220 kV D/C line (to be implemented by applicant along with 220 kV bays at generating end).
- #Location of Mori 220/132 kV (PTCUL)-Dehradun 220 kV D/C line (to be implemented by PTCUL as ISTS Licensee).
- # Mori 220/132 kV S/s is not required in the time frame of connectivity of Naitwar Mori HEP.

- 4.3 In the same meeting of 2nd NRSCT, PTCUL was also requested to submit a report to CEA regarding the status of upcoming hydro generation projects in Yamuna basin and based on the report of PTCUL regarding Yamuna Basin hydro generation projects, decision regarding the capacity of Mori-Dehradun 220 kV D/c line would be taken. In this regard, PTCUL vide its letter dated 20/07/2020 has forwarded the status of generators in Yamuna Basin with following details:

S.No	Name of Project/Developer	Capacity	Expected Target	Construction Status
1	Naitwar Mori (SVNL)	60 MW	Dec-2021	Started
2	Hanol Tiuni (M/s Sunflag)	60 MW	March-2024	Not Started
3	Jakhol Sankari (SVNL)	51 MW	Dec-2024	Not Started
4	Arakot Tiuni (Irrigation Deptt.GOU)	81 MW	March-2026	Not Started
5	Tiuni Plasu (Irrigation Deptt.GOU)	72 MW	March-2026	Not Started
6	Mori Hanol (M/s Krishna knitwear)	63 MW	March-2026	Not Started
Total		387 MW		

- 4.4 Considering the total capacity of potential generation of 387 MW and as per above MoM of 2nd NRSCT, PTCUL has planned a 220 kV Mori-Dehradun line as ISTS, with Twin Zebra configuration.
- 4.5 PTCUL has also informed that the LTA for construction of above line has been signed with SVNL on dated 31.01.2020 and Implementation Agreement on dated 16.03.2020.
- 4.6 For transmission system for evacuation of power from 60 MW Naitwar Mori HEP of M/s SVNL Ltd, PTCUL has also proposed construction of 220 kV Mori-Dehradun line interconnection with under construction 220 kV D/C Vyasi-Dehradun line (being constructed as Intrastate Transmission Network of PTCUL) through LILO arrangement near Vyasi as an interim arrangement (Phase-I) as per Single Line Diagram (SLD) enclosed as **Annexure-III A**. This will reduce the line length of proposed 220 kV Twin Zebra Mori-Dehradun line from 116 km to 86 km. approximately. Further, the construction of remaining portion of approximately 30 km. of 220 kV Twin Zebra Mori-Dehradun line (Phase-II) can be taken up as and when required considering the commissioning schedule of remaining 5 nos. Generators in Mori & nearby area and the capacity of under construction 220 kV D/C Vyasi-Dehradun line.
- 4.7 PTCUL has also informed that 220 kV twin Zebra D/C Lakhwar-Vyasi-Dehradun line has been designed as per the capacity of proposed UJVNL generators Lakhwar HEP (300 MW) and Vyasi HEP (120 MW) as Intra State Transmission Scheme. Out of the two proposed generators Lakhwar (300MW) and Vyasi 120(MW), only Vyasi HEP is under construction and is scheduled for commissioning in year 2021. Construction of Lakhwar HEP has not started yet. PTCUL is constructing 220kV Vyasi Dehradun line on Double

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circuit in twin Zebra scheduled for commissioning in March 2021. This scheme is already discussed in 3rd Standing Committee Meeting on Transmission Planning dated 24/05/2019 (extracts of minutes enclosed as **Annexure-IVA**). Presently 220 kV D/C Vyasi-Dehradun line is under construction. The expected CoD of Vyasi HEP is March, 2021 and of Lakhwar HEP is Dec, 2027.

4.8 Considering the above, following system for evacuation in Yamuna basin(Including SJVN HEP) may be considered-

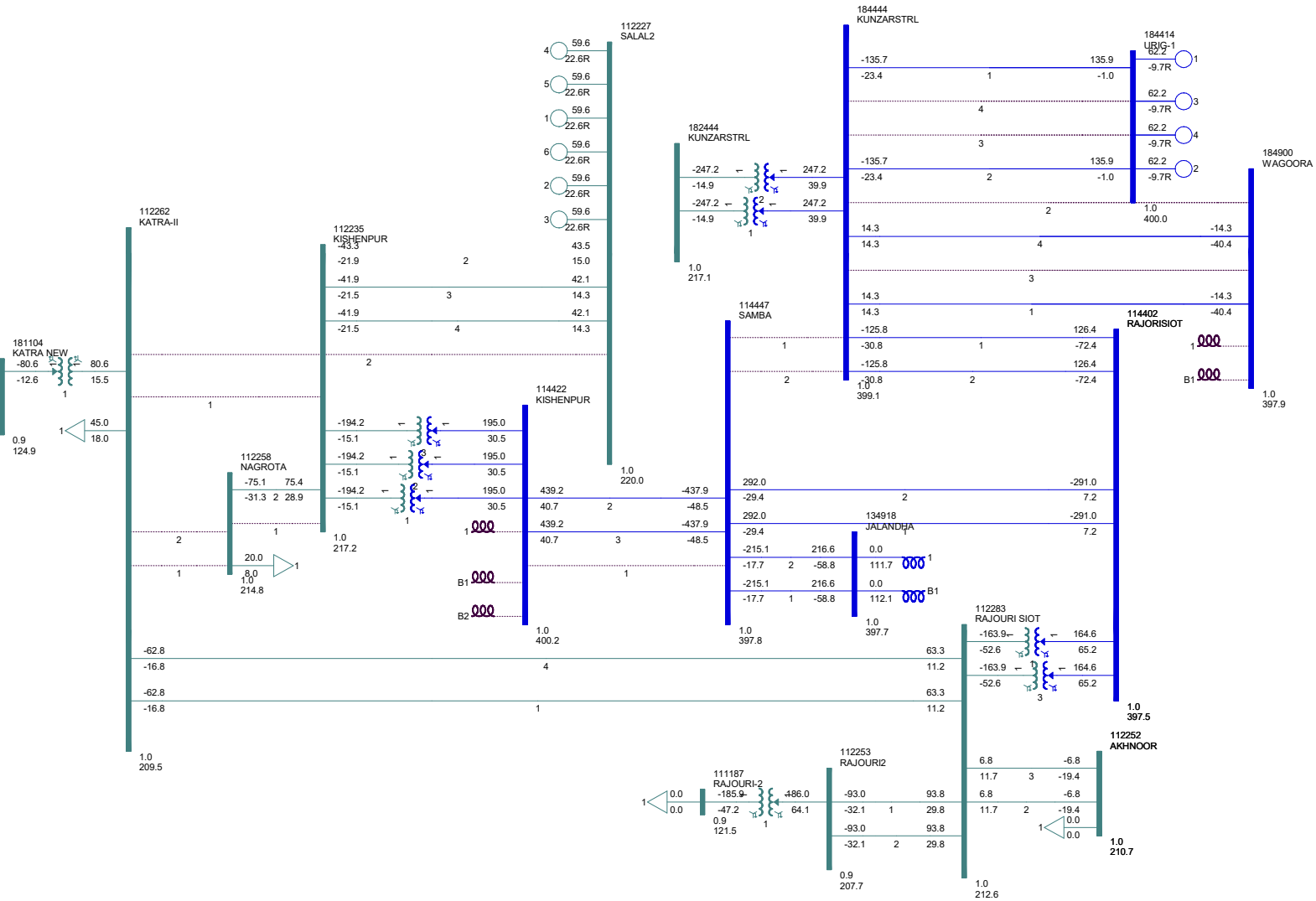
- i. Capacity of Proposed 220 kV Mori-Dehradun line on double circuit in Twin Zebra Conductor configuration considering the approx. 387 MW power from Proposed/Under Construction Hydro Generators of Yamuna basin as mentioned above.
- ii. In first phase, Construction of proposed 220 kV D/C twin zebra line from Mori upto the interconnection point (near Vyasi) of 220 kV D/C Vyasi-Dehradun line (being constructed as Intrastate Transmission Network of PTCUL) as an interim arrangement (Phase-I, approx. line length 86 km.).This will expedite the evacuation of Power from SJVN HEP.

In Phase-II construction of 220 kV D/C twin zebra line from interconnection point near Vyasi to Dehradun (approx. line length in Phase-II 30 km) shall be taken up later on as per system requirement.

- iii. Accordingly, Tripartite LTA Agreement signed between PTCUL, CTU & SJVNL and Implementation Agreement signed between PTCUL & M/s SJVNL will be amended for incorporating the above arrangement of implementation of 220 kV Mori-Dehradun line in phases(Phase-I&II) for evacuation of power from 60MW Naitwar Mori HEP and operationalisation of LTA through the interim arrangement for recovery of tariff.

4.9 Members may like to deliberate.

Rajouri Studies- without LILO of Salal -Kishenpur at Katra-II



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ANNEXURE-IIA



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Ministry of Power
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Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन-I प्रभाग
Power System Planning & Appraisal-I Division

-As per list enclosed-

विषय: उत्तरी क्षेत्र की ट्रांसमिशन पर स्थायी समिति की दूसरी बैठक के विषय में

Sub: 2nd Meeting of Northern Region Standing Committee on Transmission- Minutes of Meeting

Sir/ Madam,

2nd Meeting of Northern Region Standing Committee on Transmission was held on 13.11.2018 (Tuesday) at 11:30hrs at NRPC, New Delhi. Minutes of meeting are available on CEA website: www.cea.nic.in (path to access – Home Page –Wing- Power System-PSPA-I- Standing Committee on Power System Planning- Northern Region).

Yours faithfully,

रवीन्द्र गुप्ता

(Ravinder Gupta)

Chief Engineer (PSPA-I)

30/11/2018

I/3021/2018

<p>at Pipalkoti switching station</p> <p>iv. Diversion of Proposed site of Pipalkoti (400 kV S/s)– Srinagar 400kV D/c (Quad) line at Pipalkoti switching station</p> <p>Note: The bays at Generation end are to be implemented by THDC</p>	<p>Srinagar-Kashipur 400kV D/C line, Srinagar-Srinagar (HEP) 400 kV line alongwith 400 kV Srinagar substation may be included which have already been suitably replied by CTU.</p>
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LTA application in conformity with CERC regulation is not yet received from THDC Ltd for Vishnugarh Pipalkoti HEP (444 MW).

Members may discuss.

E. Connectivity and LTA to Naitwar Mori HEP (2X30MW) of SJVN Ltd.

Connectivity was granted to Naitwar Mori HEP of SJVNL in October, 2017 through following transmission system:

- Naitwar Mori HEP - # Location of Mori 220/132kV (PTCUL) Substation 220kV D/c line (to be implemented by applicant alongwith 220kV bays at generating end)
- # Location of Mori 220/132kV (PTCUL) – Dehradun 220kV D/c line (to be implemented by PTCUL)
- # Mori 220/132 kV substation is not required in the time frame of connectivity of Naitwar Mori HEP.

Meanwhile, PTCUL desired to change the location of their proposed Mori substation. In the meeting held on 04/04/2018 at CEA to discuss the status and issues related to transmission elements of UITP scheme under implementation by PTCUL, the following was agreed:

- PTCUL to finalize the location of Mori substation jointly with M/s SJVNL within 15-20 days
- PTCUL to review the status of hydro generation projects in Yamuna basin and submit a report to CEA in 15 days time.
- Based on the report of PTCUL regarding Yamuna Basin hydro generation projects, decision regarding the capacity of Mori-Dehradun 220 kV D/c line would be taken

PTCUL may update the status.

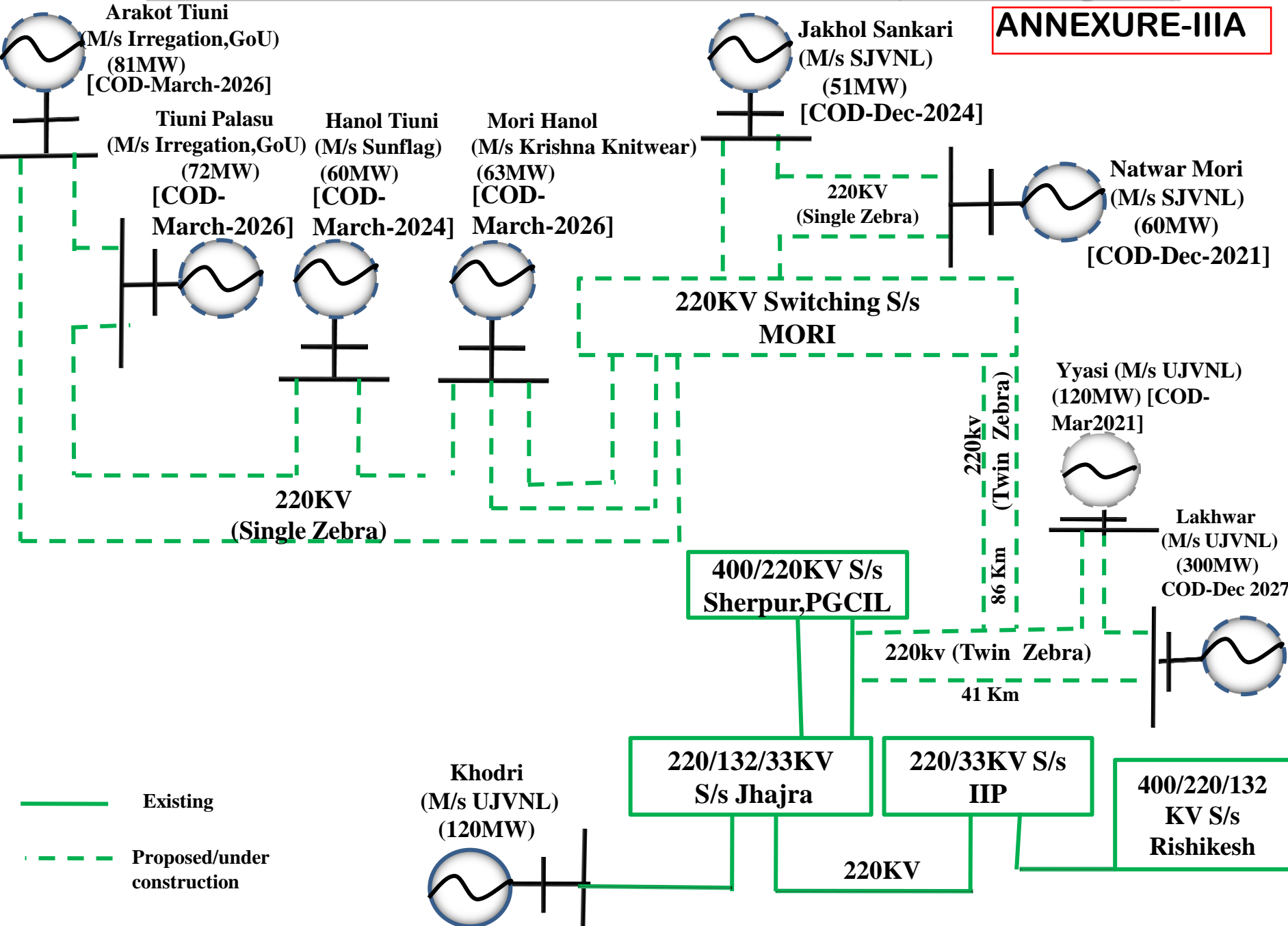
Proposal for LTA:

Grant of LTA to SJVN Limited for Naitwar Mori Hydro Electric Power Project has been agreed during 12th Connectivity/LTA meeting of Northern Region system held on 22/06/2018 with existing transmission. Details of which are mentioned below:

<p>Name of the Applicant</p> <p>Application no:</p> <p>Name of Power Plant</p> <p>Applied for</p> <p>Quantum (MW)</p> <p>Time Frame</p> <p>Connectivity Point</p>	<p>M/s SJVN Limited.</p> <p>1200000925</p> <p>Naitwar Mori Hydro Electric Power Project</p> <p>LTA</p> <p>60 (Target – NR)</p> <p>30th Nov'2021</p> <p>Location of Mori 220/132kV (PTCUL)</p>
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SLD OF PROPOSED NETWORK OF YAMUNA VALLEY (Interim Arrangement)

ANNEXURE-IIIA



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Power System Planning & Appraisal-I Division

To

-As per list enclosed-


विषय: उत्तरी क्षेत्र की ट्रांसमिशन पर स्थायी समिति की तृतीय बैठक के विषय में

Subject: 3rd meeting of Northern Region Standing Committee on Transmission (NRSCT) – Minutes of Meeting

Sir/ Madam,

3rd meeting of Northern Region Standing Committee on Transmission was held on 24.05.2019 at 10:30 Hrs at NRPC, New Delhi. Minutes of meeting are available on CEA website: www.cea.nic.in (path to access – Home Page –Wing-Power System-PSPA-I- Standing Committee on Power System Planning- Northern region).

Yours faithfully,


(Goutam Roy) 17/7/2019
Chief Engineer

I/6067/2019

1	Additional (3 rd) 765/400kV transformer at Bhadla-II	1x1500MVA, 765/400kV 5x500 MVA, 400/220 kV 765 kV ICT bay-1 400 kV ICT bay-6
2	Creation of 220kV level at Bhadla-II 9 nos. of 220 kV line bays	220 kV ICT bay-5 220kV line bays- 9

23.0 Construction of 132/33 kV s/s Padartha(Patanjali), Haridwar and LILO of 132kV Chilla – Nazibabad line at proposed 132/33 kV S/s Padartha(Patanjali), Haridwar.

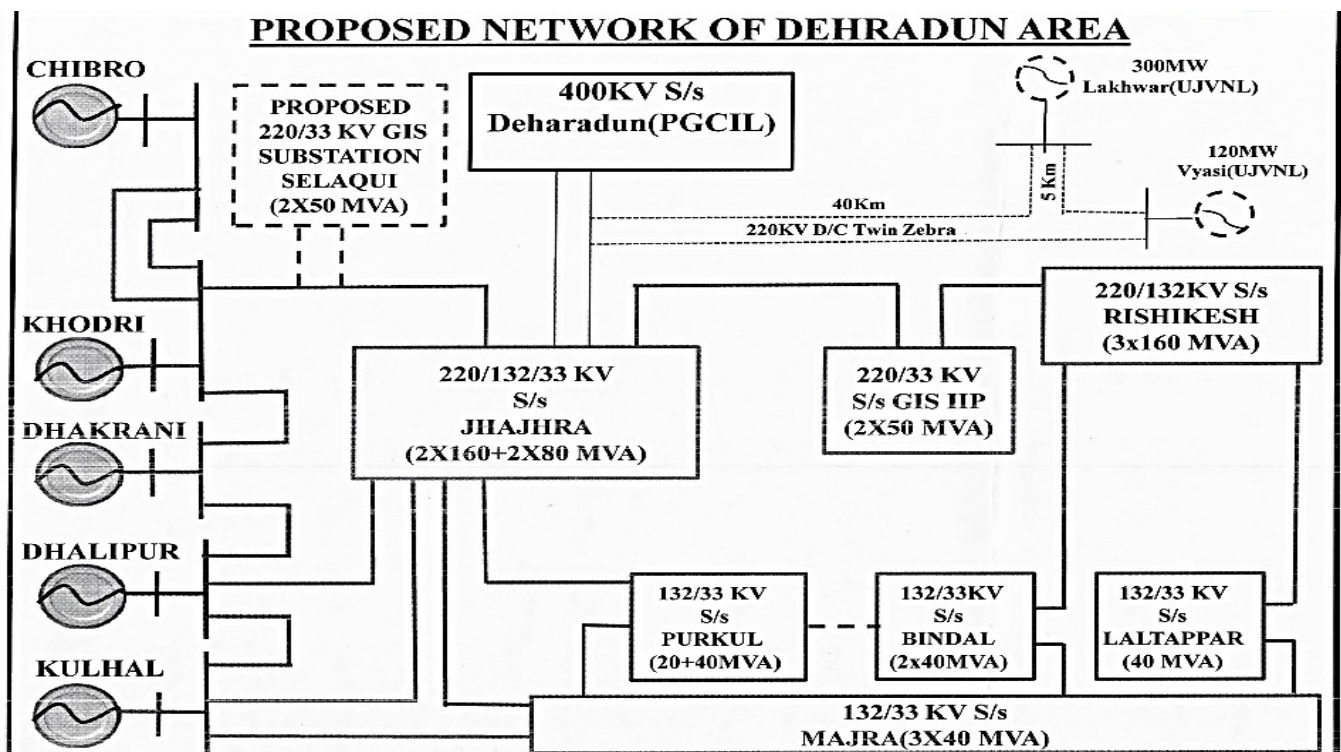
23.1 CEA stated that PTCUL has planned to construct 132/33kV S/s Padartha for providing the load to Patanjali and its nearby area of Padartha in district Haridwar. This proposed S/s will be energized through LILO of 132 kV Chilla – Nazibabad line.

23.2 UPPTCL stated that they have no objection to the proposal submitted by PTCUL.

23.3 Members agreed with the proposal submitted by PTCUL. CEA advised UPPTCL and PTCUL to take care of metering provisions.

24.0 Construction of LILO of 1stckt. of 220 kV D/c Jhajhra(PTCUL) – Sherpur(PGCIL) line at under construction Vyasi HEPP, 120 MW UJVNL.

24.1 PTCUL stated that at present, Vyasi HEP (120 MW) of M/s UJVNL in Yamuna basin is under construction and for evacuation of its power, PTCUL has proposed to LILO 1st ckt. of 220 kV D/C Jhajhra (PTCUL) – Sherpur(PGCIL) line at Vyasi HEP. Lakhwar HEP (300 MW) is also proposed in Yamuna basin. For evacuation of its power, PTCUL has proposed to LILO one ckt. of 220 kV D/c Vyasi – Dehradun line at proposed Lakhwar HEP.



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24.2 CEA stated that as per the master plan of the Hydro projects in Yamuna basin, the transmission system for evacuation of power from Lakhwar HEP and Vyasi HEP are as follows:

- i. Lakhwar HEP(300 MW):
 - a) Lakhwar – Dehradun 220 kV D/c line
 - b) Mori - Nagaon- Lakhwar - Khodri 220 kV D/c Line
- ii. Vyasi HEP(120 MW):

LILO of 220 KV Lakhwar - Khodri Line at Vyasi

24.3 PTCUL stated that there is no certainty about the implementation of the projects at the upstream of Lakhwar HEP (UJVNL) except Natwar Mori HEP. Vyasi HEP(UJVNL) is likely to be commissioned by March 2020 and the time frame of implementation of Lakhwar HEP is June 2024. PTCUL is constructing Jhajhra (PTCUL) – Sherpur, Dehradun(PG) 220 kV D/C (twin zebra) line under intra-state, therefore, for evacuation of power from Vyasi HEP, PTCUL has proposed LILO of one ckt. of 220 kV D/c Jhajhra (PTCUL) – Sherpur(PGCIL) line at Vyasi HEP.

PTCUL further stated that for evacuation of power from Lakhwar HEP, PTCUL has planned to LILO Vyasi-Sherpur (Dehradun) 220kV S/c line (formed after LILO of 1st ckt. of 220 kV D/C Jhajhra (PTCUL) – Sherpur(PGCIL) line at Vyasi) at Lakhwar HEP.

CEA stated that in view of the above injections the adequacy of transformation capacity at 2x315 MVA, 400/220kV Dehradun (PG) S/s needs to be studied.

After deliberations, Members agreed with the proposal of LILO of one ckt. of Jhajhra (PTCUL) – Sherpur (PGCIL) 220 kV D/c line at Vyasi HEP under intra-state works (under the scope of PTCUL).

25.0 Creation of new 400 kV S/s, 2 x 500 MVA ICTs at Ropar in the premises of existing 220 kV Guru Gobind Singh Super Thermal Plant (GGSSTP) Ropar

25.1 CEA stated that PSTCL vide their letter dated 26.12.2018 has proposed 2 x 500 MVA, 400/220 kV S/s at Ropar with the following connectivity: -

- a. Creation of 400 kV S/s Ropar with installed capacity of 2 x 500 MVA, 400/220 kV ICT's.
- b. LILO of both ckts of 400 kV Ludhina PGCIL – Koldam at proposed 400 kV S/s Ropar, LILO Length = 15 km (approx.).

25.2 PSTCL stated that maximum demand of Punjab was 12542 MW during paddy season 2018. The average load growth of Punjab is 6.5% as per data for the last ten years. Its anticipated load as projected by 19thEPS report is 14800 MW in the year 2022. Punjab has an installed generation capacity of 6672 MW (thermal + IPP = 1760 + 3920 MW and hydro = 993 MW). As the hydel generation is water dependent and thermal plants i.e. GNDTP Bathinda and GGSSTP Ropar have completed its life span, therefore, net generation of Punjab would be approx. 6000 MW. For catering the load during 2022, approx. 9050 MW Power (including Central Sector Share, BBMB share, Power Purchase etc.) shall be required from outside Punjab through ISTS system. At present, installed capacity of ISTS connected with Punjab is 8530 MVA. Therefore, some additional 400 kV grid with its connectivity with Northern Grid network shall be required in PSTCL.