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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

-As per list enclosed-

विषय: उत्तरी क्षेत्र की ट्रांसमिशन पर स्थायी समिति की दूसरी बैठक - एजेंडा नोट

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

Sir/ Madam,

Agenda Note for 2nd Meeting of Northern Region Standing Committee on Transmission scheduled to be held on 13.11.2018 (Tuesday) at 11:30hrs at conference Room, NRPC Katwaria Sarai, New Delhi is 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,

रवीन्द्र गुप्ता 2/11/1

(Ravinder Gupta)

Chief Engineer

1.	Member, Secretary, NRPC, 18-A Shajeed Jeet Singh Sansanwal Marg, Katwaria Sarai, New Delhi - 110016 (Fax-011-26865206)	2.	Director (W &P) UPPTCL, Shakti Bhawan Extn,3rd floor, 14, Ashok Marg, Lucknow - 226 001 (Fax:0522-2287822)	3.	Director (Projects) PTCUL, Vidhyut Bhawan, Near ISBT -Crossing, Saharanpur Road, Majra, Dehradun-248002. Uttrakhand Fax-0135-2645744
4.	Director (Technical), Punjab State Transmission Corporation Ltd. (PSTCL) Head Office The Mall Patiala -147001 Fax-0175-2304017	5.	Member (Power) BBMB, Sectot-19 B Madhya Marg, Chandigarh-1 60019 (Fax-01 72-2549857	6.	Director (Operation) Delhi Transco Ltd. Shakti Sadan, Kotla Marg, New Delhi-110002 (Fax-01123234640)
7.	Director (PP&D) RVPN, 3rd Floor, Room no 330, Vidhyut Bhawan, Janpath, Jaipur-302005. Fax-:0141-2740794 ce.ppm@rvpn.co.in	8.	Director (Technical) HVPNL Shakti Bhawan, Sector-6 Panchkula-134109 Fax-0172-256060640	9.	Director (Technical) HPSEB Ltd. Vidut Bhawan, Shimla -171004 Fax-0177-2813554
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 Fax-0172-2637880	12.	Development Commissioner (Power), Power Department, Grid Substation Complex, Janipur, Jammu, Fax: 191-2534284
13.	Director (Projects) POWERGRID Saudamini Plot no. 2, Sector - 29. Gurgaon-122 001 (Fax-0124-2571809)	14.	CEO, POSOCO B-9, Qutab Institutional Area, Katwaria Sarai New Delhi – 110010 (Fax:2682747)	15	COO (CTU) POWERGRID, Saudamini, Plot no. 2, Sector -29, Gurgaon-122 001 (Fax-0124-2571809)

Agenda note for 2nd Meeting of Northern Region Standing Committee on Transmission

1.1 **Confirmation of the Minutes of the 1st meeting of Northern Region Standing Committee on Transmission held on 11th September 2018.**

1.2 The Minutes of 1st meeting of Northern Region Standing Committee on Transmission (NRSCT) of were issued **vide CEA letter no. CEA-PS-11-21(19)/2/2018-PSPA-I Division /I/2611/2018 (4) dated 23rd Oct., 2018**. No comments have been received from the constituents. Therefore, the minutes of the 1st meeting of NRSCT may please be confirmed.

2.0 Evolution of transmission scheme for integration of envisaged RE generation capacity in Solar & Wind Energy Zones and Transmission Schemes for Solar Energy Zones (REZs) in Rajasthan.

2.1 The transmission scheme for integration of envisaged RE generation capacity in Solar & Wind Energy Zones and Transmission Schemes for Solar Energy Zones (REZs) in Rajasthan was deliberated in 1st meeting of NRSCT held on 11.9.2018. The scheme mainly envisaged the following SEZs (10 GW) in Rajasthan based on Stage-II applications already received near Fatehgarh, Bikaner and Bhadla as well as Potential pockets in Western Rajasthan as indicated by SECI for SEZ phase-I development:

Part-A:

i) Fatehgah SEZ (4 GW) (Fathegarh-I : 2 GW, Fathegarh-II : 2.8 GW)

ii) Phalodi / Bhadla SEZ (3 GW) (Bhadla-I : 0.8 GW, Bhadla-II : 2.2 GW)

iii) Bikaner – Pugal SEZ (1.85 GW)

Part-B:

i) Ramgarh / Kuchcheri SEZ (1.15 GW)

2.2 The transmission system evolved through system studies was deliberated in 1st meeting of NRSCT held on 11.9.2018 in Delhi, wherein, it was agreed that a separate meeting of CEA, CTU, RVPNL and HVPNL would be called on 20th September, 2018 to further deliberate and study the proposed scheme. Therefore, a meeting was held on 20.9.2018 in Gurgaon, wherein, RVPN and HVPN had suggested some modifications in their intrastate network. Based on their suggestions, revised studies were carried out for various scenario like off peak, Solar minimised / maximised, peak demand for the proposed transmission scheme. It was decided that the scheme may be prioritised out of phase-I Rajasthan REZ capacity (10 GW) considering LTA / Stage-II connectivity applications and some future potential at the locations where the applications are received. Accordingly, following transmission system was evolved:

Transmission system for evacuation of power from Fatehgarh (4 GW), Phalodi/Bhadla (3 GW), Bikaner (1.85GW)

i) Establishment of 765/400/220kV, 3x1500MVA, 5x500 MVA pooling station at suitable location near Phalodi / Bhadla in Jodhpur (Bhadla-2)

ii) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri

iii) Augmentation of transformation capacity at Bhadla (PG) by 2x500MVA, 400/220kV(6th & 7th) transformers

iv) Creation of 220 kV level at Bikaner (PG) with transformation capacity of 2x500MVA, 400/220kV transformers

v) LILO of 765kV Ajmer – Bikaner D/c line (both ckts) at Bhadla-II - 135km

vi) Bhadla-II – Bhadla (PG) 400kV D/c Line (Twin HTLS) - 30 km

vii) Bikaner (PG) – Khetri S/s 765kV D/c line - 220 km

viii) LILO of both ckts of 765kV Phagi – Bhiwani D/c line at Khetri S/s - 10 km

ix) Khetri – Sikar (PG) 400 kV D/c line (twin HTLS) – 70 km

x) Augmentation of 1x1500MVA,765/400kV transformer (3rd) at Moga S/s

xi) Augmentation of 1x1000MVA,765/400kV transformer (3rd) at Bhiwani (PG)

xii) Establishment of Transformation capacity at Fatehgarh (TBCB) with 3x500MVA, 400/220kV transformers@

xiii) Establishment of 765/400/220kV, 5x1500MVA, 6x500 MVA pooling station at suitable location near Fatehgarh in Jaisalmer Distt (Fatehgarh-II)

xiv) Fatehgarh-II – Bhadla -II 765kV D/c line -130km

xv) LILO of both circuits of Fatehgarh (TBCB) – Bhadla (PG) 765 kV D/c line (op. at 400 kV) at Fatehgarh-II – 20km

xvi) Charging of Fatehgarh-II –Bhadla section of the line at 765kV level

xvii) Ajmer (PG)– Jhatikara 765kV D/c line -360 km

xviii) 1x125 MVAr (420kV), 1x240 MVAr (765 kV) Bus Reactors each at Fatehgarh-II, Bhadla-II & Khetri Substation

xix) 1x330 MVAR Switchable Line reactors for each circuit at each end of Ajmer and Jhatikara Ajmer – Jhatikara 765kV D/c line

xx) 1x240 MVAr Switchable line reactor for each circuit at each end of Bikaner – Khetri 765kV D/c line

xxi) 1x330 MVAr Switchable line reactor at for each circuit at Bhadla-II end for Ajmer-Bhadla-II 765kV D/c line (after LILO)

xxii) 220kV line bays for interconnection of solar projects at Fatehgarh-II, Fatehgarh, Bhadla, Bhadla-II and Bikaner S/s- to be discussed in view of CERC regulation

xxiii) Provision of 220kV Bus couplers etc. and common facilities at pooling/substation i.e. Fatehgarh, Fatehgarh-II, Khetri, Bhadla-II, Bikaner, Bhadla under ISTS as per regulation – under the scope of ISTS

Part B: Transmission system for evacuation of power from Ramgarh / Kuchcheri in Fatehgarh (1.15 GW*)

i) Establishment of 400/220kV 3x500 MVA pooling station at suitable location in Jaisalmer Distt (near Ramgarh/Kuchheri)

ii) Ramgarh/Kuchheri pooling station –Fatehgarh-II 400 kV 2xD/c Line (Twin HTLS on M/c tower) -150 km

iii) Ramgarh/Kuchheri pooling sttation – Jaisalmer -II (RVPN) 400 kV D/c Line (Twin HTLS)- 60 km

iv) 220kV line bays for interconnection of solar projects at Ramgarh/Kuchheri pooling station-- to be discussed in view of CERC regulation

v) Provision of 220kV Bus couplers +TBC & common facilities at Ramgarh/Kuchheri PS

*It may be mentioned that out of 2.5 GW potential in Ramgarh/Kuchcheri, about 1.5 GW potential can be evacuated through transmission corridor identified above at Part (B). Additional transmission requirement for balance 1 GW (balance Ph-1), if any, may be evolved based on the requirement subsequently.

@ Based on the requirement of stage-II connectivity at 220 kV level. May be reviewed

2.3 Subsequently, as requested by RVPNL, a meeting was held on 9.10.2018 (copy of the minutes enclosed as Annexure–I) under the Chairmanship of Director (Op) & Director (Tech), RVPN in RVPN office Jaipur, wherein, following transmission system was technically agreed for evacuation of power from the projects for which applications for Stage-II/LTA in Phalodi/Bhadla, Fatehgarh & Bikaner complex has been received as well as some part of future potential in above locations:

i) Establishment of 765/400/220kV, 3x1500MVA (765/400kV), 5x500 MVA (400/220kV) pooling station at suitable location near Phalodi/ Bhadla in Jodhpur (Bhadla-II)

ii) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri

iii) Augmentation of transformation capacity at Bhadla (PG) by 400/220kV, 2x500MVA (6^{th} & 7^{th}) transformers

iv) Creation of 220 kV level at Bikaner (PG) with transformation capacity of 2x500MVA, 400/220kV transformers

v) LILO of both circuits of Ajmer – Bikaner 765kV D/c line at Bhadla-II

vi) Bhadla-II – Bhadla (PG) 400kV D/c Line (Twin HTLS)

vii) Bikaner(PG) – Khetri S/s 765kV D/c line

viii) LILO of both circuits of Phagi – Bhiwani 765kV D/c line at Khetri S/s

ix) Khetri – Sikar (PG) 400kV D/c line (Twin HTLS)

x) Augmentation with 765/400kV, 1x1500MVA transformer (3^{rd}) at Moga S/s

xi) Augmentation with 765/400kV, 1x1000MVA, transformer (3^{rd}) at Bhiwani (PG) S/s

xii) Establishment of Transformation capacity at Fatehgarh (TBCB) with 3x500MVA, 400/220kV transformers

xiii) Establishment of 400/220kV, 4x1500MVA (765/400kV), 5x500 MVA (400/220kV) pooling station at suitable location near Fatehgarh in Jaisalmer Distt (Fatehgarh-II)

xiv) Fatehgarh-II – Bhadla -II 765kV D/c line

xv) LILO of both circuits of Fatehgarh (TBCB) – Bhadla (PG) 765 kV D/c line (op. at 400kV) at Fatehgarh-II so as to establish Fatehgarh (TBCB) – Fatehgarh -II 765 kV D/c line (to be op. at 400kV) and Fatehgarh-II-Bhadla (PG) 765kV D/c line

xvi) Charging of Fatehgarh-II –Bhadla section at 765kV level

xvii) Ajmer (PG)– Jhatikara 765kV D/c line

xviii) 1x125 MVAr (420kV), 2x240 MVAr (765kV) Bus Reactor each at Fatehgarh-II, Bhadla-II & Khetri Substation

xix) 1x330 MVAR Switchable Line reactors for each circuit at each end of Ajmer – Jhatikara 765kV D/c line

xx) 1x240 MVAr Switchable line reactor for each circuit at each end of Bikaner – Khetri 765kV D/c line

xxi) 1x330 MVAr Switchable line reactor for each circuit at Bhadla-II end for Ajmer-Bhadla-II 765kV line (after LILO)

xxii) 1x240 MVAr Switchable line reactor for each circuit at Bhadla-II end for Bikaner-Bhadla-II 765kV line (after LILO)

xxiii) 220kV line bays for interconnection of solar projects at Fatehgarh-II (9 nos), Bhadla-II (9 nos) and Bikaner (4 nos) S/s

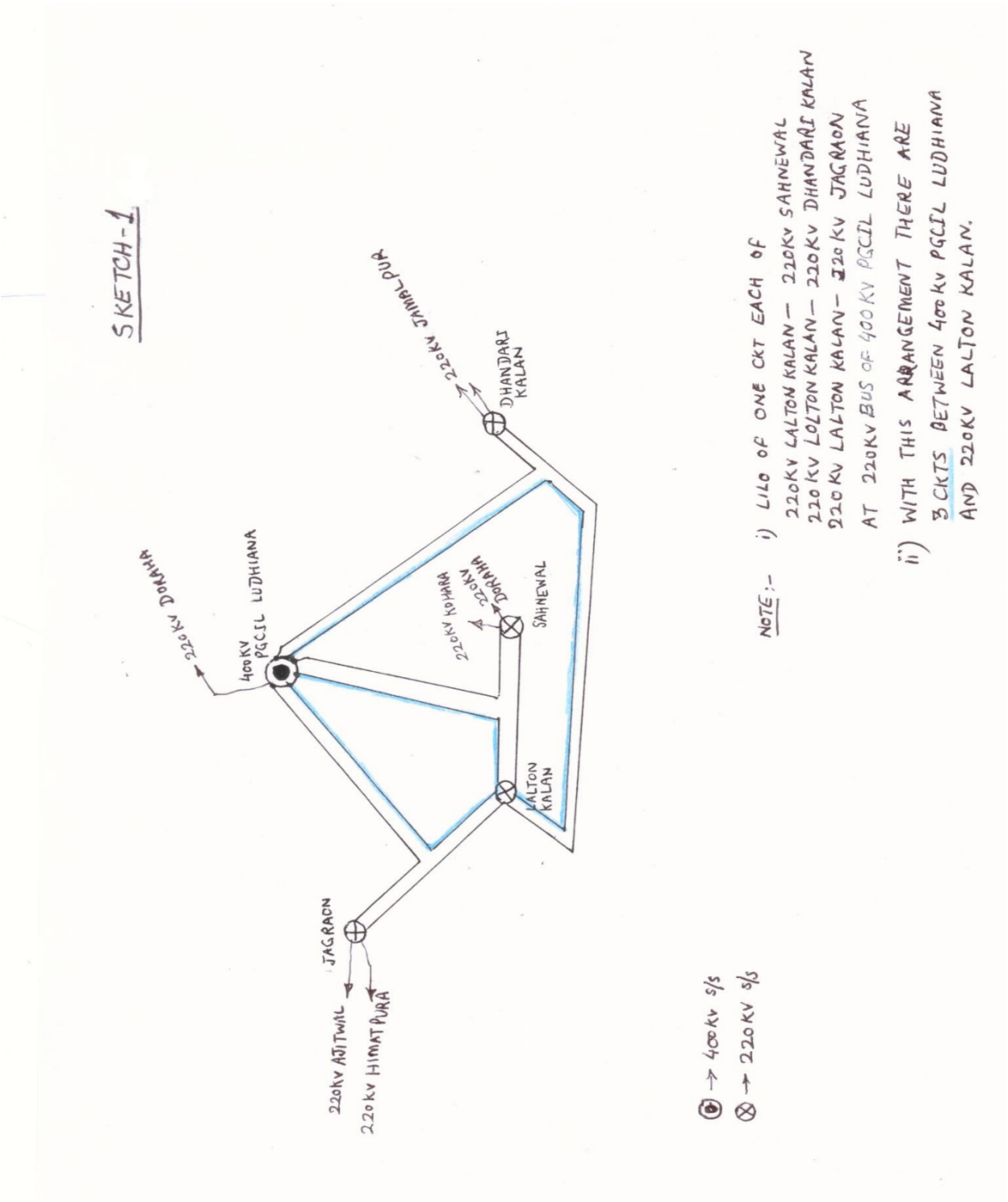
2.4 It was also decided that scheme for evacuation of power from Ramgarh/Kuchcheri in Jaisalmer & additional potential of Rajasthan SEZ may be taken up subsequently based on stage-II connectivity/LTA application. The study results are given as Annexure-II.

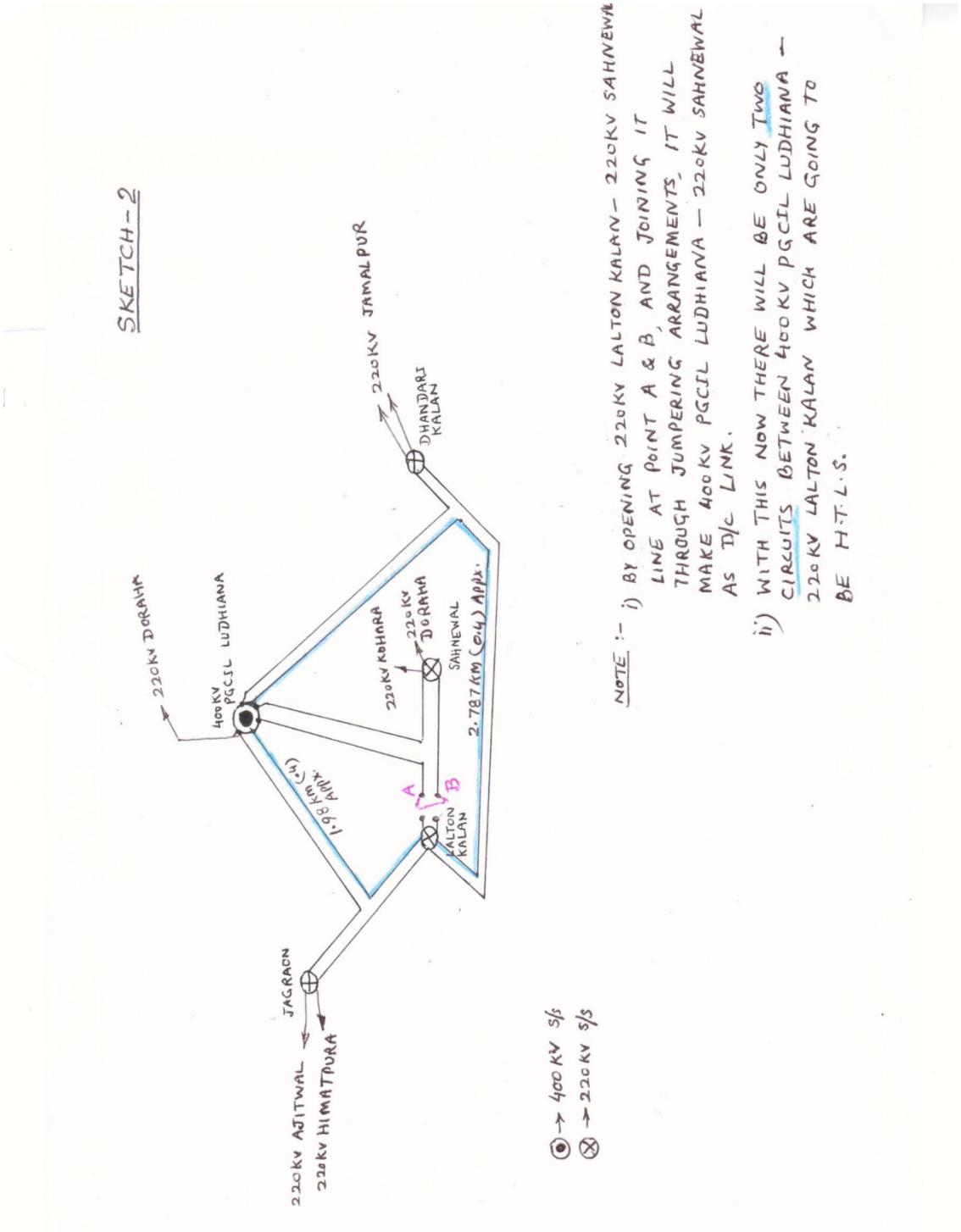
2.5 Members may concur the above proposed system.

3.0 Replacement of conductors of one circuit of 220kV Ludhiana –Lalton Kalan line (3 circuits) and Verpal -Mall Mandi 132kV line with HTLS conductor: PSTCL proposal regarding

3.1 National Power Committee (NPC), CEA vide their letter dated 24-10-2018 has sent record note of discussions of a meeting with PSTCL representatives regarding PSTCL's proposal for replacement of conductors of one circuit of 220kV Ludhiana –Lalton Kalan 220kV line (2-3 km) and Verpal -Mall Mandi 132kV line (12km) with HTLS conductor for PSDF funding. The Techno Economic Subgroup (TESG), who had examined the proposal, in its meeting held on 22.10.2018 has, interalia, sought recommendation of NRSCT on the above proposal.

3.2 PSTCL vide their e-mail dated 30-10-2018 has provided sketches (shown below) of existing 220 kV network inter-connection between Ludhiana (PG) and Laltonkalan (PSTCL) and proposed rearrangement at Laltonkalan (PSTCL) after which, there would be 2 no. 220 kV circuits between Ludhiana (PG) and Laltonkalan (PSTCL). PSTCL has indicated loading on these line during paddy season for past three years i.e. from 2016 to 2018, which is of the order of 640A touching 695A this year. PSTCL has also provided load flow studies (enclosed at Annexure-III) with rearrangement at Laltonkalan (PSTCL) and power flow on remaining two circuits is 175 MW and 252 MW.


SKETCH-1
220 KV JAMALPUR
DHANDARI KALAN
220 KV DOMOHA
400 KV PGCIL LUDHIANA
220 KV KOHARA
220 KV DOMOHA
SAHNEWAL
LALTON KALAN
JAGRAON
220 KV AJITWAL
220 KV HIMATPURA
NOTE :-
i) LILO OF ONE CKT EACH OF
220 KV LALTON KALAN – 220 KV SAHNEWAL
220 KV LALTON KALAN – 220 KV DHANDARI KALAN
220 KV LALTON KALAN – 220 KV JAGRAON
AT 220 KV BUS OF 400 KV PGCIL LUDHIANA
ii) WITH THIS ARRANGEMENT THERE ARE
3 CKTS BETWEEN 400 KV PGCIL LUDHIANA
AND 220 KV LALTON KALAN.
→ 400 KV S/S
→ 220 KV S/S



3.3 PSTCL also informed that the present peak load on Verpal -Mall Mandi 132kV line (panther conductor) is of the order of 80 MW. Therefore, PSTCL has proposed for replacement of one circuit of Ludhiana (PG) and Laltonkalan (PSTCL (Zebra conductor) and Verpal -Mall Mandi 132kV line (Panther conductor) with HTLS conductors to provide relief to these overloaded lines.

3.4 PSTCL may present. Members may deliberate.

4.0 Issue related to signing of Transmission Agreement/LTA Agreements for implementation of UITP Scheme (deemed ISTS) by PTCUL for evacuation of power from various Generators:

4.1 To deliberate on the issue related to signing of Transmission Agreement/LTA Agreements for implementation of UITP Scheme (deemed ISTS) by PTCUL for evacuation of power from various Generators, a meeting was held on 12.9.2018 in CEA involving NTPC, THDC, L&T, Lanco, SJVNL, PTCUL, CTU and POSOCO. Minutes of the meeting are enclosed as Annexure-IV.

4.2 Subsequently, PTCUL vide their letter dated 20.10.2018 has forwarded following observations on the minutes of the meeting:

1. **Point no. 2 read with (v) - Baramwari – Srinagar D/c Line.**

"….CEA stated that for implementation of above proposal PTCUL may apply for connectivity/LTA for the quantum of power to be exchanged through ISTS at Baramwari Switching Station. CEA also pointed out that Baramwari Switching Station would be required in matching time frame of Phatabyoung. Therefore, PTCUL needs to start the implementation process for the same."

PTCUL's observation –

During meeting it was informed to PTCUL that if power from SHP's of UJVNL is to be evacuated through 220 kV S/s Baramwari (ISTS network) then UJVNL will have to bear applicable PoC (ISTS) Charges. It was not discussed that PTCUL will have to apply for connectivity/LTA to CTU for the quantum of power to be exchanged through ISTS at Baramwari Switching Station.

Accordingly, this point needs to be modified.

2. **Point no. 6 –**

"….Regarding query raised by PTCUL for signing of transmission agreements with generators, CTU stated that the matter has already been discussed with PTCUL number of times and as per para no. 7.3 of Detailed Procedure of CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009:

"*In all the cases where dedicated transmission system up to point of connection is to be undertaken by CTU / Inter-State Transmission licensee, the applicant after grant of connectivity shall sign transmission agreement as per the format given at FORMATCON-8 within one month of the grant of connectivity*"

Therefore, a tripartite agreement needs to be signed between CTU, PTCUL and generation developers. In addition, it was also informed that Implementation Agreement is signed between generator and POWERGRID wherever implementation of the transmission system is taken up by POWERGRID"

PTCUL'S observation – The above para needs to be started/modified in line with the actual submission made by PTCUL as follows: -

"PTCUL stated that as per CERC Connectivity Regulations, Transmission Agreement is signed for dedicated lines only. Here, all the transmission elements to be implemented by PTCUL are part of ISTS network and there is no need of signing of a separated Transmission Agreement for the same. CTU, vide its letter dated 23.06.2016 to M/s L&T (copy enclosed as Annexure – I) has also clarified that Transmission Agreement as per FORMAT-CON-8 is not needed as the transmission line is built by the deemed ISTS licensee under coordinated transmission system planning."

Members may like to deliberate.

5.0 Any other agenda item –with the permission of chair.

Minutes of meeting held on 09.10.18 in chairmanship of Director (Op) & Director (Tech), RVPN regarding joint study for transmission system of western Rajasthan (Rajasthan Solar energy zones-Bhadla/Fatehgarh/Bikaner)

A meeting was held in chairmanship of Director (Op) & Director (Tech), RVPN regarding joint study for transmission system of western Rajasthan (Rajasthan Solar energy zones-Bhadla/Fatehgarh/Bikaner) on 09/10/18 in RVPN office Jaipur. List of participants is enclosed at Annex-I

1) In line with the discussion held in 1st SCT of NR held on 11.09.18 regarding transmission system for Rajasthan Solar energy zones in Western Rajasthan (scheme details enclosed at Annex-II), a meeting was held on 20.09.18 in Gurgaon with HVPNL,NRPC, RVPN, CEA & CTU. In the meeting RVPN & HVPN suggested network modifications. Incorporating these suggestions, revised studies were carried out for various scenarios like off peak, Solar maximized/minimised, peak demand for the proposed transmission scheme. It was also decided that scheme may be prioritised out of Phase -1 Rajasthan SEZ capacity (10 GW) in accordance to the Stage-II/LTA applications as well as some part of future potential.

   The above studies were presented and discussed in the meeting held on 09.10.18 in RVPN office.

2) RRVPN stated that interconnection of the proposed RE corridor with RVPN Intra state system and incidental power flow due to these interconnections may also be studied.

   Further, RVPN suggested that reactive power management requirement may also be studied for Low RE & Low demand scenario where high voltage is being experienced in RVPN Intra state transmission.

3) CEA/CTU stated that RE ISTS has been proposed considering 80-90% line reactive compensation as well as additional Bus reactive compensation. Accordingly, a low demand/Low RE scenario was also studied taking additional Bus reactors/line reactors (Bhadla-2, fathegarh-2 &Khetri SS) wherein it was observed that the voltage profile of ISTS proposed is within permissible limits and it was even supporting voltage profile to Intra state system in western rajasthan.

   It was also seen that in such scenario the high voltage was observed in the intra-state transmission system of RVPN. It is requested by RVPN that CEA should study the reactive compensation requirement in incidental RVPN system to maintain the voltage profile. It is also intimated that RVPN has already submitted the reactive compensation requirements under various renewable energy injection scenarios to CEA for taking up in NR standing committee in June,2018 for funding of PSDF. CEA agreed to look in to this aspect.

4) After deliberation, with above, proposed system (scheme details enclosed at Annex-III) was technicallyagreed for evacuation of power from applications for Stage-II/LTA in Phalodi/Bhadla, Fatehgarh& Bikaner complex as well as some part of future potential in above complexes of western Rajasthan.

9/10/18
Dir(Op), RVPN

9/10/18

9/10/18
Dir(Tech) RVPN

It was also decided that scheme for Ramgarh/Kuchcheri in Jaisalmer & additional potential of Rajasthan SEZ may be taken up subsequently based on stage-II connectivity/LTA application.

Annex-I

RVPN

1. Sh. V K Mishra Director (OP)
2. Sh. Kamal Jain Director (Tech)
3. Sh. R KJain CE (PPD)
4. Sh. S C Sharma SE (P&P)
5. Smt Anjana Agwarwal, XEN (PSS)
6. Sh V A Kale , XEN (Automation
7.

CEA

1. Sh. Ravinder Gupta , CE (SP&PA-1)
2. Sh. Awadhesh Kr. Yadav, Director

POWERGRID

1. Sh. KashishBhambhani, Chief Manager
2. Sh. Sandeep Kumawat

09/2/21

Annex-II

Part A: Transmission system for evacuation of power from Fatehgarh (4 GW), Phalodi/Bhadla (3 GW), Bikaner (1.85GW)

i) Establishment of 765/400/220kV, 3x1500MVA, 5x500 MVA pooling station at suitable location near Phalodi/ Bhadla in Jodhpur (Bhadla-2)
ii) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri
iii) Augmentation of transformation capacity at Bhadla (PG) by 2x500MVA (6th/7th), 400/220kV transformers
iv) Transformation capacity at Bikaner (PG) with 2x500MVA, 400/220kV transformers
v) LILO of 765kV Ajmer – Bikaner D/c line (both ckts) at suitable point with interconnection of suitable point to Bhadla-2-135km
vi) Bhadla-2 –Bhadla (PG) 400kV D/c Line (Twin HTLS) -30 km
vii) Bikaner(PG) – Khetri S/s 765kV D/c line -220 km
viii) LILO of both ckts of 765kV Phagi – Bhiwani D/c line at Khetri S/s- 10 km
ix) Khetri – Sikar (PG) D/c line (twin HTLS) – 70 km
x) Augmentation of 1x1500MVA,765/400kV transformer (3rd) at Moga S/s
xi) Augmentation of 1x1000MVA,765/400kV transformer (3rd) at Bhiwani (PG)
xii) Establishment of Transformation capacity at Fatehgarh (TBCB) with 3x500MVA, 400/220kV transformers
xiii) Establishment of 765/400/220kV, 5X1500MVA, 6x500 MVA pooling station at suitable location near Fatehgarh in Jaisalmer Distt (Fatehgarh-2)
xiv) Fatehgarh-2 – Bhadla -2 765kV D/c line -130km
xv) LILO of 400kV Fatehgarh (TBCB) – Bhadla (PG) D/c line at Fatehgarh-2 – 20km
xvi) Charging of 400kV Fatehgarh-2 –Bhadla section at 765kV level
xvii) Ajmer (PG)– Jhatikara 765kV D/c line -360 km
xviii) 1x125 MVAr (420kV), 1x240 MVar Bus Reactor each at Fatehgarh-2, Bhadla-2 &Khetri Substation
xix) 1x330 MVAR Switchable Line reactors each at Ajmer &Jhatikara end for Ajmer – Jhatikara 765kV D/c line
xx) 1x240 MVAr Switchable line reactor at each end of Bikaner – Khetri 765kV D/c line
xxi) 1x330 MVAr Switchable line reactor at Bhadla-2 end for Ajmer-Bhadla-2 765kV line (after LILO)
xxii) 220kV line bays for interconnection of solar projects at Fatehgarh-2, Fatehgarh, Bhadla, Bhadla-2 and Bikaner S/s- to be discussed in view of CERC regulation
xxiii) Provision of 220kV Bus couplers +TBC & common facilities at pooling/substation i.e. Fatehgarh, Fatehgarh-2, Khetri, Bhadla-2, Bikaner, Bhadla under ISTS as per regulation – under the scope of ISTS

Part B: Transmission system for evacuation of power from Ramgarh/Kuchcheri in Fatehgarh (1.15 GW*)

i) Establishment of 400/220kV 3x500 MVA pooling station at suitable location in Jaisalmer Distt (near Ramgarh/Kuchheri)

ii) Ramgarh/Kuchheri pooling station –Fatehgarh-2 400 kV 2xD/c Line (Twin HTLS on M/c tower) -150 km

iii) Ramgarh/Kuchheri pooling sttation – Jaisalmer -2 (RVPN) 400 kV D/c Line (Twin HTLS)- 60 km

iv) 220kV line bays for interconnection of solar projects at Ramgarh/Kuchheri pooling station-- to be discussed in view of CERC regulation

v) Provision of 220kV Bus couplers +TBC & common facilities at Ramgarh/Kuchheri PS

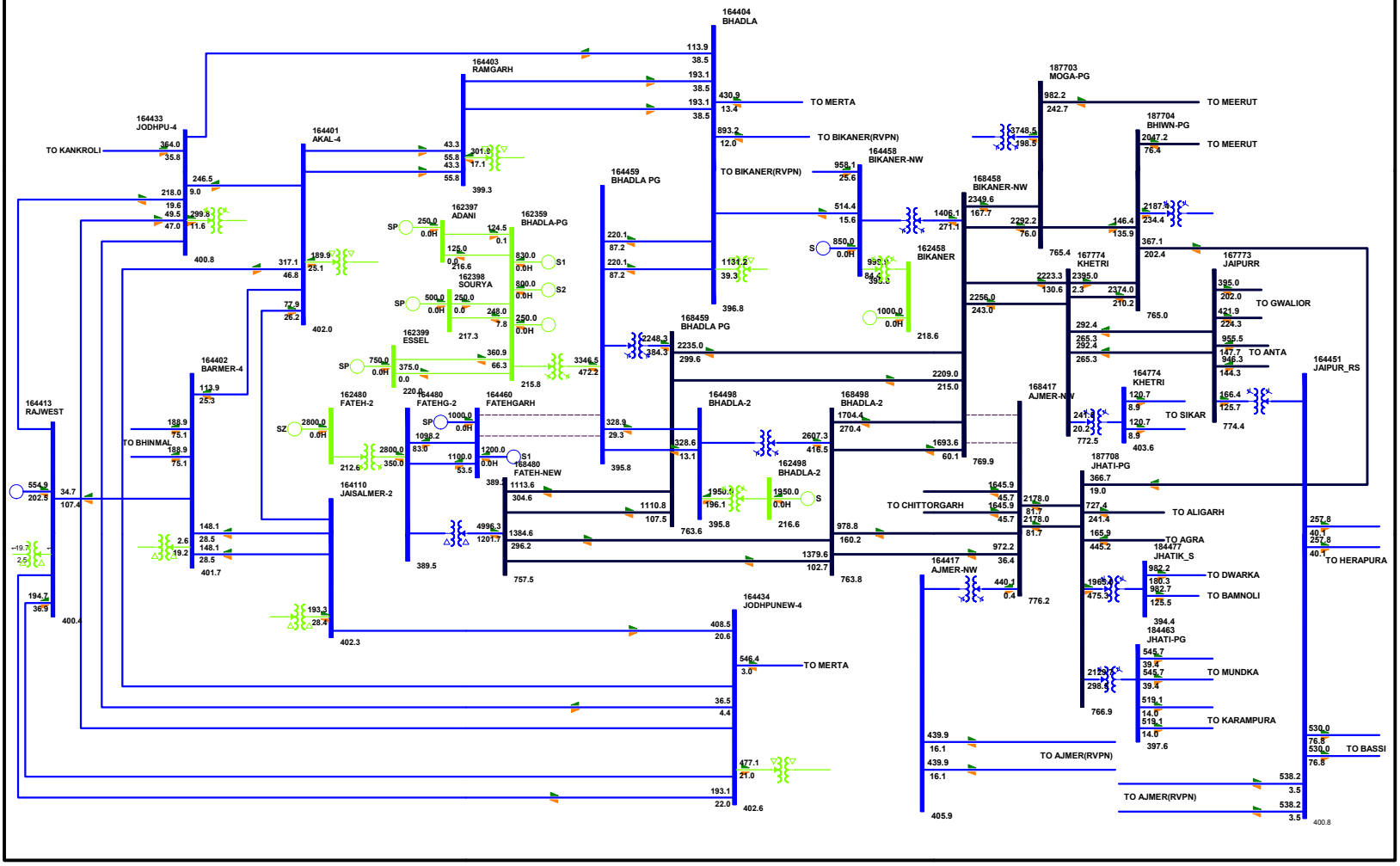
Annex-III

1) Establishment of 765/400/220kV, 3x1500MVA (765/400kV), 5x500 MVA (400/220kV) pooling station at suitable location near Phalodi/ Bhadla in Jodhpur (Bhadla-2)
2) Establishment of 765/400kV, 2x1500 MVA S/s at suitable location near Khetri
3) Augmentation of transformation capacity at Bhadla (PG) by 400/220kV, 2x500MVA (6^{th}&7^{th}) transformers
4) Installation of 400/220kV, 2x500MVA transformers at Bikaner (PG)
5) LILO of 765kV Ajmer – Bikaner D/c line at Bhadla-2
6) Bhadla-2 –Bhadla (PG) 400kV D/c Line (Twin HTLS)
7) Bikaner(PG) – Khetri S/s 765kV D/c line
8) LILO of 765kV Phagi – Bhiwani D/c line at Khetri S/s
9) Khetri – Sikar (PG) 400kV D/c line (Twin HTLS)
10) Augmentation with 765/400kV, 1x1500MVA transformer (3^{rd}) at Moga S/s
11) Augmentation with 765/400kV ,1x1000MVA, transformer (3^{rd}) at Bhiwani (PG) S/s
12) Establishment of Transformation capacity at Fatehgarh (TBCB) with 3x500MVA, 400/220kV transformers
13) Establishment of 400/220kV, 4X1500MVA (765/400kV), 5x500 MVA(400/220kV) pooling station at suitable location near Fatehgarh in Jaisalmer Distt (Fatehgarh-2)
14) Fatehgarh-2 – Bhadla -2 765kV D/c line
15) LILO of Fatehgarh (TBCB) – Bhadla (PG) D/c (765kV line op. at 400kV) line at Fatehgarh-2 so as to establish Fatehgarh (TBCB) – Fatehgarh -2 400kV D/c line (765kV line op. at 400kV) and Fatehgarh -2- Bhadla 400kV D/c line (765kV line op. at 400kV)
16) Charging of Fatehgarh-2 –Bhadla section at 765kV level
17) Ajmer (PG)– Jhatikara 765kV D/c line
18) 1x125 MVAr (420kV), 2x240 MVar(765kV) Bus Reactor each at Fatehgarh-2, Bhadla-2 &Khetri Substation
19) 1x330 MVAR Switchable Line reactors each at Ajmer &Jhatikara end for Ajmer – Jhatikara 765kV D/c line
20) 1x240 MVAr Switchable line reactor at each end of Bikaner – Khetri 765kV D/c line
21) 1x330 MVAr Switchable line reactor at Bhadla-2 end for Ajmer-Bhadla-2 765kV line (after LILO)
22) 1x240MVAr Switchable line reactor at Bhadla-2 end for Bikaner-Bhadla-2 765kV line (after LILO)
23) 220kV line bays for interconnection of solar projects at Fatehgarh-2 (9nos), Bhadla-2 (9 nos) and Bikaner (4 nos) S/s

9/10/18

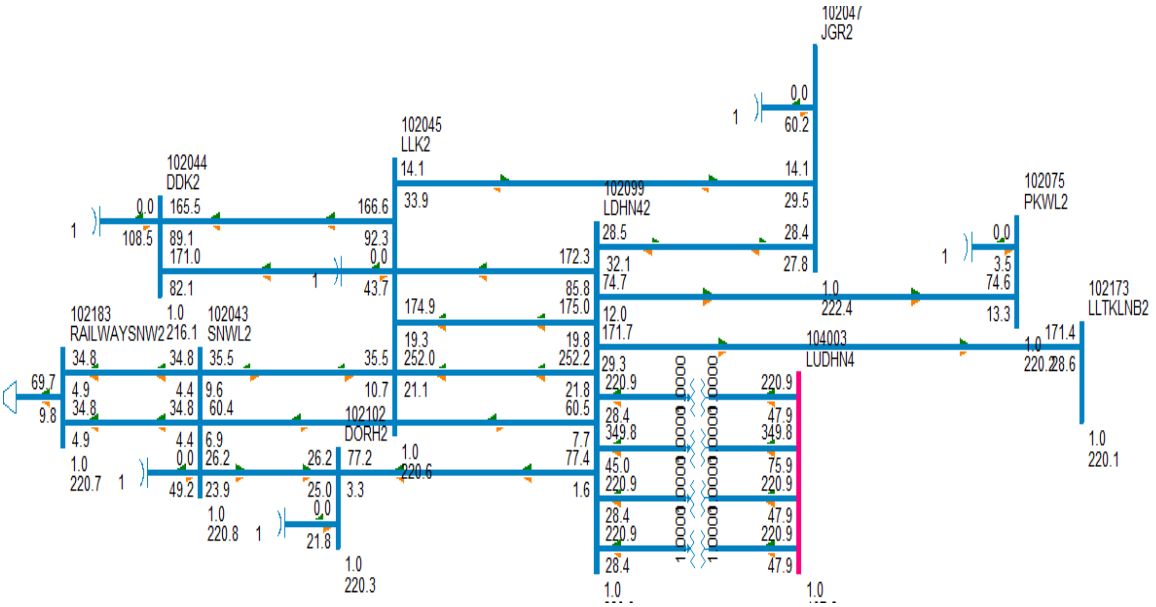
Annexure II

Transmission Scheme for Rajasthan SEZ

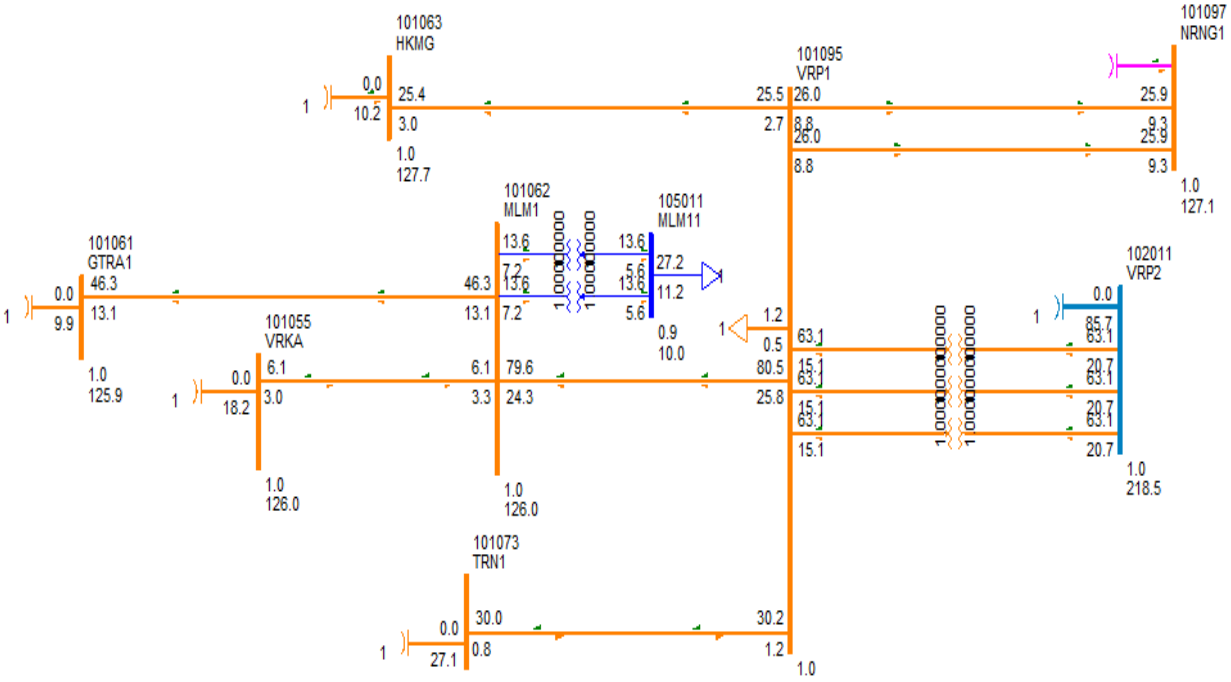


Annexure-III

220kV Ludhiana –Lalton Kalan 220kV line (2-3 km)



Verpal -Mall Mandi 132kV line



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,

1. COO(CTU), PGCIL Saudamini, Plot No. 2, Sector 29, Gurgaon-122001
2. CEO, POSOCO, B-9, Qutub Institutional Area, Katwaria Sarai, New Delhi – 110010
3. Director (Projects) PTCUL, Urja Bhawan Campus, Kanawali Road Dehradun-248001 (Fax-0135-276431)
4. Director (Projects), NTPC, NTPC Bhawan, Core 7, Scope Complex-6, Institutional Area Lodhi Road. New Delhi
5. Head-Technical, M/s L&T Uttaranchal Hydropower Ltd., L&T-PDL-Hydel, 5th Floor, 12/4, Delhi Mathura Road, Near Sarai Khwaja Chowk, Faridabad, Haryana-121003.
6. General Manager(CSO), SJVNL Corporate Office Complex, Shanan, Shimla-171006
7. Director(Technical), THDC Ltd. Pragatipuram, ByPass Road, Rishikesh – 249201
8. Director, Lanco Mandakini Hydro Energy Pvt. Ltd., 14-H, Pushpanjali Enclave, General Mahadev Singh (GMS Road), Dehradun – 248001, Uttarakhand.

Subject: Minutes of Meeting held on 12.09.2018 to discuss the issue related to signing of Transmission Agreement/LTA Agreements for implementation of UITP Scheme (deemed ISTS) by PTCUL for evacuation of power from various Generators

Sir/ Madam,

Please find enclosed minutes of the meeting held on 12.09.2018 in CEA under the chairmanship of Chief Engineer (PSPA – I), CEA to discuss the issue related to signing of Transmission Agreement/LTA Agreements for implementation of UITP Scheme (deemed ISTS) by PTCUL for evacuation of power from various Generators

Yours faithfully,

11/10/2018

(अवधेश कुमार यादव /Awdhesh Kumar Yadav)
निदेशक/Director
Tele No.26732343

Minutes of Meeting held on 12.09.2018 to discuss the issue related to signing of Transmission Agreement/LTA Agreements for implementation of UITP Scheme (deemed ISTS) by PTCUL for evacuation of power from various Generators

The list of participants is enclosed at Annexure-1.

1. Chief Engineer (PSPA-I), CEA welcomed the participants to the meeting and requested generation developers to update the status of their generation projects. The status provided by generators is enclosed as Annexure-II.

2. **Review of Status of various transmission elements being implemented by PTCUL:**

Chief Engineer CEA requested PTCUL to furnish Status of various transmission elements being implemented by PTCUL.

The status as furnished by PTCUL is as follows: -

i. Srinagar – Kashipur 400kV D/C line (Khandukhal – Rampura 400kV D/C line)

PTCUL stated that they have submitted Preliminary Proposal Report (PPR) to Department of Economic Affairs (DEA), Govt. of India for grant of ADB loan for Uttarakhand Transmission Strengthening and Distribution Improvement Program. DEA has given recommendations to ADB on the PPR in May 2018. Vetting of tender documents is going on with ADB. The DPR of 400kV D/C Khandukhal – Rampura line is divided into two packages i.e. Package-1 (400kV D/C Khandukhal – Kodwar line (85 km) in hilly terrain & Package-2 (400kV D/C Kodwar – Rampura line (105 km) in plain terrain. The route survey is also included in the scope of contractor. NIT for the project is expected in October 2018 and award by December 2018 with implementation time of 21 months. Therefore, the line is likely to be commissioned by Sept 2020.

CEA stated that early implementation of 400kV D/C Khandukhal – Rampura transmission line (Srinagar – Kashipur 400kV D/C line) is very much required for evacuation of power from Singoli Bhatwari HEP, which is scheduled for commissioning by March, 2019 and other HEPs in Alaknanda Basin. CEA requested PTCUL to expedite submission of forest clearance cases and award of the project.

ii. Tapovan Vishnugarh-Pipalkoti 400 kV D/C line:

PTCUL stated that Tapovan Vishnugarh-Pipalkoti 400 kV D/C line had been awarded on 26.09.2016 to M/s Tata, with implementation schedule of two years. The line is about 20 km in length and would be commissioned in matching time frame of commissioning schedule of Tapovan Vishnugarh HEP. Forest case had been uploaded on which some queries were raised by forest department and the reply to the queries had also been submitted. PTCUL stated that the line would be commissioned with the matching time frame of the generation i.e. September 2020.

iii. Pipalkoti-Srinagar 400kV D/C line:

PTCUL informed that Pipalkoti-Srinagar 400kV D/C line (86 km) had been awarded in three packages in September 2017, two packages were awarded to M/s Tata and one package to M/s Ranjit Singh. The commissioning scheduled as per award document is of two years from the date of LOA i.e. September 2019. However,

PTCUL stated that the line would be commissioned in the matching timeframe of Tapovan Vishnugarh HEP i.e. September 2020.

iv. Pipalkoti switching station and Pipalkoti HEP-Pipalkoti switching station 400kV D/C line

PTCUL stated that Pipalkoti Switching Station is adjacent to Pipakoti HEP Switchyard therefore, Pipalkoti HEP - Pipalkoti switching station 400 kV D/c (Twin Moose) line may not be required.

PTCUL stated that implementation of Pipalkoti HEP-Pipalkoti switching station 400kV D/C line and the Pipalkoti switching station would be taken up in the matching time frame of Pipalkoti HEP. On enquiry about any dispute related to identified land for Pipalkoti switching station, PTCUL appraised that some forest land is there in the center of the already identified land.

CEA stated that the timelines of Pipalkoti HEP is December 2021, therefore Pipalkoti Switching Station would be required in matching time frame.

v. Baramwari-Srinagar 220KV D/C line

PTCUL stated that the LoA has been issued to the successful bidder i.e. L&T on 28.03.2018 with commissioning schedule of March 2019. The works of Baramwari-Srinagar 220kV D/C line (93 km) has been divided in 2 packages. At present they are taking up the construction of Phase I (77 km) i.e. Point of interconnection of Singoli Batwari HEP with proposed Baramwari-Srinagar 220kV D/c line to Srinagar substation (matching with the commissioning of Singoli Bhatwari HEP) and the same would be implemented in matching time frame of Singoli Bhatwari S/s.

PTCUL further stated that Phase II (16 km) i.e. Part of Baramwari-Srinagar 220 kV D/C line from Point of Interconnection (i.e. Interconnection of connectivity line from Singoli Batwari HEP with proposed Baramwari-Srinagar 220KV line) to Baramwari Switching Station would be implemented in matching time frame of Phatabyoung HEP.

PTCUL also proposed to implement 220/33 kV 10x6MVA transformers at Baramwari (Rudrapur) substation. This would be helpful in catering local demand in Baramwari (Rudrapur) area and also for injection of power from SHPs of UJVN Ltd. (Kaliganga-I - 4 MW, Kaliganga-II - 4.5MW & Madhyamaheshwar - 15 MW). The necessary approval from the State Electricity Regulatory Commission will be sought by PTCUL. The proposed 220/33 kV substation will be connected to 400kV Srinagar S/s i.e. ISTS network through Baramwari-Srinagar 220kV D/c line (Phase -I & II), which is also part of ISTS Network.

CEA stated that for implementation of above proposal PTCUL may apply for connectivity/LTA for the quantum of power to be exchanged through ISTS at Baramwari Switching Station. CEA also pointed out that Baramwari Switching Station would be required in matching time frame of Phatabyoung. Therefore, PTCUL needs to start the implementation process for the same.

vi. Mori Switching Station (PTCUL) - Dehradun 220kV D/C

SJVNL stated that dedicated 220 kV D/c line from NMHEP to site of Mori Switching Station (PTCUL) S/s is to be implemented by M/s SJVNL. However, location of Mori Substation is yet to be finalized by PTCUL. The location of the substation needs to be finalized as soon as possible, so as to enable them to start the works related to construction of dedicated line.

No update was given by PTCUL regarding Mori Switching Station (PTCUL) - Dehradun 220 kV D/C line. However, CEA stated that PTCUL needs to start the implementation process for 220 kV D/C line from site of Mori Switching Station to Dehradun as the same is required for evacuation of power from NMHEP.

Detailed status of the transmission elements under implementation by PTCUL under UITP is summarized as **Annexure III.**

3. PTCUL stated that above transmission elements are under implementation by PTCUL as per prior contractual obligations and as per the Implementation Agreements signed with Generators like M/s NTPC, M/s Lanco & M/s L&T. The implementation Agreements were signed with these Generators as per the directions of Standing Committee and also for timely implementation of ATS so that power from these Generating projects do not bottled up.

PTCUL further stated that as per the intimation for Grant of Connectivity issued by CTU to M/s L&T (Singoli Bhatwari HEP), M/s Lanco (Phatabyung HEP) & M/s SJVN (Naitwar Mori HEP), these Generators are required to submit BG at the rate of Rs. 5 lakhs/MW to PTCUL against the Transmission system being implemented by PTCUL for these generators. However, M/s Lanco and M/s SJVNL had not submitted the requisite BG to PTCUL and M/s L&T had submitted BG to PTCUL on 24.10.2017(which is not accepted by PTCUL due to delayed submission).

In the absence or delayed submission of BG by the generators and appropriate agreements, as required in terms of applicable CERC Regulations, PTCUL is unable to give a firm schedule of completion of Transmission lines (specifically 400 kV D/C Srinagar – Kashipur Line) and will face difficulty in Implementation of the transmission system matching with the generators.

4. PTCUL insisted on inclusion of complete Associated Transmission System to be implemented by PTCUL, as agreed between Generators & PTCUL in the implementation Agreements, in the LTA intimations/LTA Agreements so as to ensure its recovery through beneficiaries. PTCUL stated that in the absence of any security against the investment made by PTCUL, PTCUL will be unable to fulfill the commitments of timelines for completion of Associated Transmission System of various Generators in the absence of LTA Agreements.

It was explained to PTCUL that Connectivity and LTA are two separate products under the existing CERC Connectivity Regulations, 2009. Under connectivity system, the transmission system from the generation project to the nearest ISTS sub-station is covered whereas under LTA, the transmission system which is required for transfer of power to the identified beneficiaries is covered. Considering this, Connectivity and LTA system have been mentioned in the respective intimations. Further, tripartite LTA Agreements needs to signed immediately by the applicants/beneficiaries and PTCUL.

After insistence of PTCUL, CTU/CEA stated that revised LTA intimations may be issued indicating connectivity system also, which would be required in addition to LTA system for effecting the LTA.

5. Regarding PTCUL proposal for inclusion of Srinagar 400kV S/s & Srinagar-Srinagar 400kV D/c line in the LTA intimations / Agreements, CTU stated that these two transmission elements had already been commissioned and LTA

intimations/agreements do not include the existing elements. However, in the 39th SCM of NR it has already been agreed that: *400/220kV substation at Srinagar would be required for effecting the connectivity to the first generation project out of 5 generation projects of Alaknanda Basin i.e. with the commissioning of first generation project, it would be considered under ISTS, although Srinagar substation is required for all five generation projects in Alaknanda Basin.*

Regarding the commercial aspects PTCUL stated that for the transmission system developer it is necessary that all the agreements should be intact before taking up the transmission system for implementation.

6. Regarding query raised by PTCUL for signing of transmission agreements with generators, CTU stated that the matter has already been discussed with PTCUL number of times and as per para no. 7.3 of Detailed Procedure of CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009:

"In all the cases where dedicated transmission system up to point of connection is to be undertaken by CTU / Inter-State Transmission licensee, the applicant after grant of connectivity shall sign transmission agreement as per the format given at FORMATCON-8 within one month of the grant of connectivity"

Therefore, a tripartite agreement needs to be signed between CTU, PTCUL and generation developers. In addition, it was also informed that Implementation Agreement is signed between generator and POWERGRID wherever implementation of the transmission system is taken up by POWERGRID.

7. It was informed that based on the application of LTA for Singoli Bhatwari HEP, the agenda for grant was circulated to the constituents, however, PTCUL did not give its consent to the proposal of LTA.

In view of the above deliberations, it was decided that 99MW LTA intimation to Singoli Bhatwari HEP may be issued by CTU.

8. CEA/CTU further suggested that for any further clarification PTCUL may approach CERC.

Meeting ended with thanks to chair.

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Annexure I

List of participants of meeting held on 12.09.2018 to discuss the issue related to signing of Transmission Agreement/LTA Agreements for implementation of UITP Scheme (deemed ISTS) by PTCUL for evacuation of power from various Generators.

Sl.	Name (Mr./M/s)	Designation
1.	Ravinder.Gupta	C.E.(PSPA-I)
2.	Awdhesh Kumar Yadav	Director
3.	Manjari Chaturvedi	Deputy Director
4.	Priyam Srivastava	Assistant Director
5.	Jitesh Shrivas	Assistant Director
CTU		
6.	Rajesh Verma	Chief Manager (CTU-Plg.)
POSOCO		
7.	H K Chawla	DGM
SJVNL		
8.	Rajeev Agarwal	DGM (C&SO)
9.	Dhananjay Jha	DGM
PTCUL		
10.	Sanjaya Mittal	Director (Projects)
11.	Deep Sah	CE
12.	Kamal Kant	CE
13.	Vikas Sharma	S.E
14.	Ashok Kumar Arya	EE
15.	Himanshu Baliyan	E.E.
L&T		
16.	A.K. Kirtamia	Joint GM
17.	G.P. Singh	Sr. DGM
18.	S.C. Kaushal	Prd- H
19.	Rishkar Praveen	Consultant
20.	Vivek Shahi	Manager
THDC		
21.	L.P. Joshi	GM
NTPC		
22.	P.K. Yadav	GM(PP&M)
23.	M. K. Malviya	DGM(Comm.)
24.	Subhash Thakur	AGM(PE)
25.	J. C. Kakoti	AGM(Engg.)
LANCO		
26.	Ankur Vashishtha	V.P. (Proj. Head)
27.	Gyanesh Shukla	D.M.(PMG)

Annexure-II

Sr. No.	Generator	Implementing Agency	Connectivity	Status
1.	Naitwar Mori HEP (60 MW) in Himachal Pradesh	SJVNL	Connectivity granted from 30-Nov-2021 or availability of ISTS for Connectivity, whichever is later. i. Naitwar Mori HEP - # Location of Mori 220/132kV PTCUL substation 220kV D/C (*to be implemented by applicant along 220kV bays at generating end*). ii. Location of Mori 220/132kV (PTCUL) - Dehradun 220kV D/C (*to be implemented by PTCUL*)	SJVNL stated that the civil works and E&M works had already been awarded. The commissioning schedule is Sept-2021 and for pre-commissioning activities the connectivity lines would be required from August – 2021.
2.	Phata Byung H.E.P. (76 MW) in Uttarakhand	Lanco Mandakini Hydro Energy Pvt. Ltd.	Phata Byung generation switchyard – Baramwari Switching Station (*To be implemented by the applicant)*	Representative of Lanco Mandkini stated Phata Byung HEP will be commissioned on or before December 2020 as more that INR Rs 1200 crore already been invested into the project which has achieved 74% physical progress in terms of overall project completion. Presently work has stopped due to main contractor being referred to NCLT. The lenders of LMHEPL (Phata HE Project) are keen to support the project for its successful completion and are evaluating various options to safeguard the investment made on the project with substantial amount of debt already disbursed by the consortium of lenders. 75% work for the Phata Byung HEP has already been

				completed. The balance works can be completed in 18-24 months. EOI had been issued in August 2018. Route survey of 220 kV D/C line (3.7 km) from Phata Byung H.E.P. to Baramwari S/s is completed and line will be completed on or before October 2020 for commissioning of Phata Byung HEP by Dec 2020.
3.	Tapovan Vishnugad H.E.P. (520 MW) in Uttarakhand	NTPC	Transmission System identified for Connectivity i) Tapovan Vishnugad HEP - Pipalkoti 400kV S/s 400kV D/c (Twin Moose) line, ii) Pipalkoti 400kV S/s - Srinagar 400kV	COD of the project I Unit – Sept 2020, II Unit – October 2020, III unit – November – 2020, IV Unit – December 2020.
4.	Vishnugad Pipalkoti H.E.P. (444 MW) in Uttarakhand.	THDC	Transmission System identified for Connectivity i) Pipalkoti HEP - Pipalkoti switching station 400kV D/C (Twin Moose) line ii) Establishment of 400kV Pipalkoti switching station	THDC informed that the E&M equipment's are under manufacturing and TBM assembly is under progress. COD of the project is December 2021. Regarding Pipalkoti HEP - Pipalkoti switching station 400kV D/c (Twin Moose) line, THDC informed that the Pipalkoti Switching Station is adjacent to Pipakoti HEP Switchyard and for providing connectivity Pipalkoti Switching Station (to be implemented by PTCUL) would be required in matching timeframe.
5.	Singoli Bhatwari (99 MW) in Uttarakhand	L&T Uttaranchal Hydropower Limited	i. 220 kV D/C line from generation switchyard to point of interconnection of Baramwari Srinagar 220 kV D/C line (to be implemented by generation developer) ii. 220 kV D/C line from point of interconnection of Baramwari-Srinagar 220 kV D/C line to Srinagar S/s (to be	L&T informed that the tunnel excavation has been completed and the switchyard is 90% complete. The commissioning schedule of the project is March 2019. 220 kV D/C line from generation switchyard to point of interconnection of Baramwari - Srinagar 220 kV D/C line will be completed in the matching time frame.

			implemented by PTCUL)	

Annexure III

The status of the above transmission elements is summarized as follows:

S. No.	Name of Transmission Element	Status	Commissioning Schedule				Remarks
			As per the meeting held on 29.09.2017	As per the meeting held on 04.01.2018	As per the meeting held on 04.04.2018	As per the meeting held on 12.09.2018	
1	Srinagar-Kashipur 400kV D/C line	This line will be taken up in two packages for its early completion. A). Construction of 400 kV D/C Khadukhal-Rampura Transmission line on Quad Bersimis conductor in Hilly Terrain Khadukhal to Kotdwar (Package I) (85 Km. approx) B). Construction of 400 kV D/C Khadukhal-Rampura Transmission line on Quad Bersimis conductor in Plain Terrain Kotdwar to 400 kV S/s Rampura (Package II) (105 Km	Uncertain	September 2020	September 2020	NIT for the project expected by 15 October 2018 and award by December 2018 with implementation time of 21 months. September 2020	Critical Line, delayed by 18 months w.r.t. commissioning schedule of March 2019 of Singoli Bhatwari HEP

		approx).					
2	Pipalkoti -Srinagar 400 kV D/C line	Awarded in three packages in September 2017. **400 kV Pipalkoti-Srinagar line Package-I.** **Line Length:-** 28 Km. **Target:** -. Sept-2020 **Present Status:-** i. Detail survey completed. ii. Route approved in Feb 2018. iii. Forest case has been prepared and joint signing from competent authority is under progress. iv. Forest case submission expected in Sept. 2018. v. Identification of Land for CA (approx-190 Hect.) is under progress in different Range offices of Badrinath & Kedarnath Division. vi. NOC under FRA from 26 no. villages has been obtained against 28 no. villages. vii. NOC under FRA from two no. villages are pending 1. Hatt 2. Guniyala. **400 kV Pipalkoti-Srinagar line Package-II.** **Line Length:-** 29 Km. **Target:** -. Sept. 2020	October 2019	September 2019	Septembe r 2019	Sept. 2020.	PTCUL stated that the line would be commissioned in the matching timeframe of Tapovan Vishnugarh HEP i.e. September 2020.

		Present Status:- i. Detail survey completed. ii. Forest case has been prepared and joint signing from competent authority is under progress. iii. Forest case submission expected in Oct. 2018. iv. Identification of Land for CA (approx-180 Hect.) is completed. v. NOC under FRA has been obtained for all 29 no. villages. **400 kV Pipalkoti-Srinagar line Package-III.** **Line Length:-** 29 Km. **Target:** -. Sept. 2020 **Present Status:-** i. Detail survey completed. ii. Route approved in Feb 2018. iii. Forest case has been prepared and joint signing from competent authority is under progress. iv. Forest case submission expected in Sept. 2018. v. Identification of Land for CA (approx-180 Hect.) is completed. vi. NOC under FRA has been obtained for all 18 no. villages.					
3	Tapovan Vishnugarh-Pipalkoti 400	Already awarded on 26.09.2016 with implementation schedule of two years.	September 2018	December 2019	December 2019	September 2020	PTCUL stated that the line would be commissioned with

	kV D/C line	Status as given by PTCUL i. Survey work completed. ii. NOC as per Forest Right Act, obtained for 12 nos. villages and pending for 1 Nos. village (Hatt Gaon). iii. Forest Proposal submitted on 10.06.2018 pending with FRA certificate from competent authority. iv. Some clarification was sought by Nodal office Dehradun which was clarified on 03.08.2018. v. Presently Forest case has been forwarded to DFO level by Nodal office with the remark that NOC for village Hattgaon is required. Efforts are being made with the help of district administration to get the NOC. vi. Total land required for CA-apprx. 123 Hec. vii. 125 Hec land has been identified for CA with Digital Map & co-ordinates.					the matching time frame of the generation i.e. September 2020.
4	Pipalkoti switching station and Pipalkoti HEP-	The tendering activities would be taken up after signing of IA with THDC	In matching time frame of Pipalkoti HEP (June 2020)	In matching time frame of Pipalkoti	In matching time frame of Pipalkoti	In matching time frame of Pipalkoti December 2021.	CEA requested PTCUL to start the implementation process for the Pipalkoti Switching

<table>
<tr><td></td><td>Pipalkoti 400kV D/C line</td><td></td><td></td><td></td><td></td><td></td><td>Station.</td></tr>
<tr><td>5</td><td>Baramwari-Srinagar 220 kV D/C line (93km)</td><td>LoA has been issued to the successful bidder i.e. L&T on 28.03.2018.
<table><tr><th>Details</th><th>Srinagar to LILO point (Singoli-Bhatwari HEP)</th><th>LILO point (Singoli-Bhatwari HEP) to Rudrapur (Brahmwari) S/s</th><th>Total</th></tr><tr><td>Length (km)</td><td>77 Km</td><td>16 km</td><td>93 km</td></tr><tr><td>Tower (No's)</td><td>216</td><td>44</td><td>260</td></tr><tr><td>Completed (No's)</td><td>90</td><td>14</td><td>104</td></tr><tr><td>Balance</td><td>126</td><td>30</td><td>156</td></tr></table></td><td>Phase II: in matching time frame of Singoli Bhatwari HEP(October 2018)

Phase I : in matching time frame of Phatabyoung HEP(uncertain)</td><td>Baramwari-Srinagar 220kV D/C line by June 2019 (if awarded in March 2018) Interconnection point of Singoli Bhatwari– Srinagar section of Baramwari-Srinagar 220kV D/c line -March 2019 on best effort basis</td><td>March 19</td><td>Phase II: in matching time frame of Singoli Bhatwari HEP (March 2019)

Phase I : in matching time frame of Phatabyoung HEP</td><td>March 2019 as per status given by PTCUL for Phase II.</td></tr>
<tr><td>6</td><td>Baramwari 220 kV switching station</td><td>Tendering activities yet to be taken up</td><td>-</td><td>-</td><td>-</td><td>-</td><td>CEA pointed out that Baramwari Switching Station would be required in matching time frame of Phata Byoung HEP. Therefore, PTCUL should start the implementation process for the same.</td></tr>
</table>

7.	Mori Switching Station (PTCUL) - Dehradun 220kV D/C	-	-	-	-	-	CEA requested PTCUL to start the implementation process for 220 kV D/C line from site of Mori Switching Station to Dehradun as the same is required for evacuation of power from NMHEP.