सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

उत्तर क्षेत्रीय विद्युत समिति

Northern Regional Power Committee

सं. उक्षेविस/ वाणिज्यिक/ 209/ आर पी सी (50वीं)/2022/783-830 दिनाँक : 20th जनवरी, 2022

सेवा में / To,

उ.क्षे.वि.स. के सभी सदस्य (संलग्न सूचीनुसार)
Members of NRPC (As per List)

विषय: उत्तर क्षेत्रीय विद्युत समिति की 50वीं बैठक की दिनांक एवं अतिरिक्त कार्यसूची ।

Subject: 50th meeting of Northern Regional Power Committee – Meeting Date and Additional Agenda

महोदय / Sir,

उत्तर क्षेत्रीय विद्युत समिति की 50वीं बैठक दिनांक **28 जनवरी, 2022** को 1100 बजे विडियो कोंफ्रेंसिंग के माध्यम से आयोजित की जाएगी । बैठक की कार्यसूची संलग्न है। बैठक का लिंक एंव पासवर्ड नियत समय पर ईमेल द्वारा उपलब्ध करा दिया जायेगा । अतिरिक्त कार्यसूची संलग्न है ।

The 50th meeting of Northern Regional Power Committee (NRPC) will be held at **1100 Hrs** on **28th January, 2022** via video conferencing. The link and password for joining the meeting would be send in due course of time to the respective email-IDs. Additional agenda for the same is attached.

भवदीय
Yours faithfully,

न. भंडारी

(नरेश भंडारी) 20.1.22
(Naresh Bhandari)
सदस्य सचिव
Member Secretary

18-ए शहीद जीत सिंह मार्ग, कटवारिया सराय, नई दिल्ली 110016 फोन:011 26513265 ई मेल

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26. Representative of MVVNL (UP Discom)
27. Managing Director, SLDC, PTCUL , Rishikesh, (Fax-0135-2451160)
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39. CEO, Jhajjar Power Ltd., Haryana, (Fax-01251-270105)
40. Representative of Lanco Anpara Power Ltd., (Fax-124-4741024)
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43. COO, Adani Power Rajasthan Ltd., Ahmedabad-380006 (Fax No- 07925557176)
44. COO, Talwandi Sabo Power Ltd. Distt: Mansa, Punjab-151302(Fax: 01659248083)
45. MD, Lalitpur Power Generation Company Ltd., Noida-201301(Fax: 01204045100/555, 2543939/40)
46. Director (Commercial & Operations), PTC India Ltd., New Delhi (Fax- 01141659144,41659145)
47. CEO, Nabha Power Limited, (Fax: 01762277251 / 01724646802)
48. Representative of Prayagraj Power Generation Co. Ltd.
49. Representative of Greenko Budhil Hydro Power Private Limited (Member IPP<1000 MW)
50. Representative of TPDDL (Delhi Private Discom)

Special Invitee:

i. Member Secretary, WRPC, Mumbai-400 093.
ii. Member Secretary, SRPC, Bangalore-560 009
iii. Member Secretary, ERPC, Kolkata-700 033.
iv. Member Secretary, NERPC, Shillong-793 003.

Contents

उत्तरी क्षेत्रीय विद्युत समिति की 50वीं बैठक

50th MEETING OF NORTHERN REGIONAL POWER COMMITTEE

Time & Date of NRPC meeting: 11.00 Hrs. on 28.01.2022

Venue: Video Conferencing

ADDITIONAL AGENDA

AA1 Enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer (Agenda by PSTCL)

AA.1.1 An agenda regarding enhancement of ATC/TTC limit for Punjab due to unprecedented load growth during summer was discussed in 49th NRPC meeting held on dated 27-09-2021 (**Annexure-A**). However, as per the minutes of 49th NRPC meeting, it was decided that scheme may be brought up for discussion in upcoming NRPC (TP) meeting and then may be included in NRPC meeting after approval by NRPC (TP) meeting. Therefore, the agenda on the matter was put up and deliberated in 4th NRPC (TP) meeting held on dated 5.10.2021 and 12.10.2021 (**Annexure-B**). In the 4th NRPC (TP) meeting (**Annexure-C**), following was agreed after deliberations:

i. Augmentation of 1X315 MVA, 400/220 kV ICT with 1X500 MVA at 400 kV substation Ludhiana.
ii. The 315 MVA ICT spared from Ludhiana may be shifted to Bhinmal based on the residual life assessment or refurbishment (if required).
iii. Augmentation of 1x315 MVA, 400/220 kV ICT to 1x 500 MVA at Patiala. The 315 MVA spared ICT at Patiala may be used as regional spare.

AA.1.2 However, the work of installation of Addl. 1x500 MVA and LILO of 400 KV Nakodar – Kurukurshetra line at 400 KV Dhanansu were not incorporated as agreed work in the 4th NRPC (TP) Minutes.

AA.1.3 It is also apprised in above context that PGCIL have been requested to utilize 500 MVA ICT lying spare at 400 KV Malerakotla. PGCIL has also started its activities to replace 315 MVA ICT with 500 MVA ICT by May 2022 (**Annexure-D**)

AA.1.4 In context to augmentation of 315 MVA ICT with 500 MVA at 400 KV Patiala (PGCIL). CTUIL suggested (**Annexure-E**) installation of additional 500 MVA ICT instead of replacement of 315 MVA ICT. PSTCL has already provided consent in this regard (**Annexure-F**)

AA.1.5 To discuss the proposal for additional transmission elements at 400 kV Dhanansu substation, a special meeting was held on 18.11.2021 (**Annexure-G**) by CEA through video conferencing. After deliberations in the meeting, it was agreed as under: -

In view of the need of increasing the ATC/TTC limit for Punjab, proposal of PSTCL for installation of additional 500 MVA, 400/220 kV ICT at Dhanansu substation alongwith LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation was agreed. The proposal of LILO of one Ckt. of 400 kV Rajpura (Thermal) - 400 kV Nakodar D/c line at 400 kV Dhanansu substation was agreed to be dropped.

Therefore, the above said work at 400 kV Dhanansu may also be considered by NRPC for approval of the same.

Members may kindly deliberate and approve accordingly.

AA2 Requirement of 2 no. of 220 kV bays at Amritsar (Agenda by PSTCL)

AA.2.1 In 4th NRPC(TP) meeting held on dated 5/10/2021 & 12/10/2021 PSTCL put forth requirement of 2 No. of 220kV line bays at 400 KV PGCIL Amritsar to connect 220kV Patti and 220kV Rashiana substation to PGCIL Amritsar in order to reduce the loading on Amritsar –Verpal 220kV lines. After deliberations, it was agreed that PSTCL and Powergrid may discuss the matter mutually and accordingly, the requirement of 220 kV bays at 400 KV PGCIL Amritsar S/s may be put up in the next NRPC(TP) meeting (**Annexure-H**).

AA.2.2 PGCIL vide its e-mail dated 13-10-2021 has intimated that 1 No. 220 KV bay is already available at 400kV PGCIL Amritsar and space for 3 No. 220 KV new bays is also available (**Annexure-I**). Therefore, requirement of 2 No. 220 KV bays at 400 KV Amritsar (PGCIL) may be approved.

AA.2.3 One existing bay will be utilized for 220 KV Patti Sub-station (Paddy 2022) and one new bay needs to be erected by PGCIL at 400 KV Amritsar for 220 KV Rashiana before Paddy 2023.

Members may kindly deliberate and approve accordingly.

AA3 NR Transmission Schemes agreed in various consultative meetings for NRPC information (agenda by CTUIL)

1) 400kV Khandukhal (Srinagar) - Rampura (Kashipur) D/c line

In the 3rd NRPC(TP) meeting held on 19.02.21, implementation of 400 kV D/c Khandukhal(Srinagar) - Rampura (Kashipur) line was agreed to be taken up under central sector as an ISTS scheme with the matching time frame of commissioning of Vishnugad Pipalkoti HEP of THDC or Tapovan Vishnugad HEP of NTPC, whichever is earlier. The proposal was also approved in the 49th NRPC meeting held on 27.09.21. Subsequently, the scheme was deliberated in the 6th NCT meeting held on 29.10.21. In view of NCT recommendation, a joint visit was carried out for confirmation of space availability for switchable line reactor at Kashipur end. Based on the joint visit, the scheme was discussed and agreed in the 7th meeting of NCT held on 03.12.21. Scheme details is as under:

S. No	Scope of the Transmission Scheme	Capacity /km
1	400 kV D/c Khandukhal(Srinagar) - Rampura (Kashipur) line (Twin HTLS)	Length – 195 km
2	1x80MVAr switchable line reactor at Rampura (Kashipur) end on each circuit of Khandukhal(Srinagar) - Rampura (Kashipur) line	Switching equipment for 420 kV 80 MVAR switchable line reactor –2 420 kV, 80 MVAr Switchable line reactor- 2
3	1 no. of 400 kV line bay at Rampura (Kashipur) S/s	400 kV line bay -1
4	Upgradation of existing 400kV bays at Khandukhal (Srinagar)	Upgradation works for 400 kV line bays -2
5	Upgradation of existing 1 no. of 400 kV diameter comprising line bay (Srinagar) and ICT bay alongwith associated Tie bay at Rampura (Kashipur)	Upgradation works for 400 kV line bay – 1 Upgradation works for 400 kV ICT bay – 1 Upgradation of Tie bay -1

Estimated Cost – Rs 800 Cr

Note

(i) ***Implementation Timeframe****: The timeline to be considered as matching timeframe of commissioning of Vishnugad Pipalkoti HEP of THDC or Tapovan Vishnugad HEP of NTPC, whichever is earlier.*

(ii) *The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey*

(iii) *PTCUL to provide space for 1 no. of 400kV bay at Rampura (Kashipur) along with the space for switchable line reactors.*

Members may kindly note.

2) Transmission system for evacuation of RE power from renewable energy parks in Leh (5 GW Leh - Kaithal transmission corridor)

Transmission system for evacuation of RE power from renewable energy parks in Leh (5 GW) was discussed in 4th NRPC-TP meeting held on 05.10.21 and 12.10.21. In the above meeting, HVDC system comprises Pang- Kaithal VSC based HVDC system was agreed. In the meeting, it was also deliberated that MNRE in its letter dated 24.03.21 informed about DOE grant for in-principle approval for providing central grant of 40% of the project cost for ISTS component for this project. Composite Transmission system including EHVAC system beyond Kaithal for evacuation of power (5GW) from RE generation parks in Leh was agreed in the stakeholder consultative meeting held on 29.11.21 as well as 7th meeting of NCT held on 03.12.21. Scheme details is as under:

S.No.	***Scope of the Transmission Scheme***	***Capacity /km***
1.	ISTS system for RE nterconnection at Pang:	(i) 400kV PS-1 - Pang D/C (quad moose) line - 7 km (ii) 400kV PS-2 - Pang D/C (quad moose) line - 27 km (iii) 400kV PS-3 - Pang D/C (quad moose) line - 41 km *Note: 400kV GIS line bays (2 nos) each at PS-1, PS-2 & PS-3 is under RE developer scope*
2.	Battery Energy Storage System (1 GWh: 250MW x 4 hr) at Pang	(i) BESS of suitable size (1 GWh: 250MW x 4 hr) (ii) 220kV line bay (1 no.) for BESS (ISTS) interconnection at Pang
3.	HVDC System:	(i) Pooling point in Pang (Leh) : ±350 kV, 2 nos. of 2500 MW HVDC terminal *Future provision: space for* • *400 kV line bays : 6 nos.* • *400/220 kV ICTs along with bays : 2 nos.* • *220 kV line bays : 4 nos* (ii) Pooling point in Kaithal (Haryana): ±350 kV, 2 nos. of 2500 MW HVDC terminal

S.No.	***Scope of the Transmission Scheme***	***Capacity /km***
		Future provision: space for • *765/400kV ICTs along with bays : 1 no.* • *765kV line bays along with switchable line reactor: 2 nos.* • *400kV line bays along with switchable line reactor: 4 nos.* • *400/220 kV ICTs along with bays: 2 nos.* • *220 kV line bay : 4 nos* (iii) 4 Nos. of 400 kV converter (VSC) bays at Pang (iv) 4 Nos. of 400 kV converter (VSC) bays at Kaithal (v) 2 Nos. of 400/220/33 kV, 315 MVA Transformers along with associated Bays at Pang (vi) 3 Nos. of 765/400/33 kV, 1500 MVA Transformers along with associated bays at Kaithal (vii) 2 nos. of 400 kV line bays at Kaithal (viii) 2 nos. of 765 kV line bays at Kaithal (ix) 6 nos. of 400 kV line bays at Pang for termination of lines from RE parks **DC GIS/ AIS** (i) DC GIS / AIS at Pang and DC AIS at Kaithal (ii) 4 nos. of transition stations with DC GIS/ AIS **HVDC Line (OHL and UG Cable)** (i) HVDC Line (OHL and UG Cable): 480 kms of ±350kV HVDC line between Pang & Kaithal PS (combination of 465 km overhead line (Quad) and 15 km underground cable)
4.	EHVAC System beyond Kaithal:	(i) Kaithal - Bahadurgarh (PG) 400 kV D/C Line (Twin HTLS*) - 170 km (ii) Kaithal - Modipuram (Meerut) (UPPTCL) 765 kV D/C Line along with 1x240MVAr switchable line reactor on each ckt at Kaithal end (along with 2 nos. switching equipment for 765kV, 240 MVAR Switchable line reactor)- 210 km (iii) Augmentation of 765/400 kV, 1500 MVA transformer of Bhiwani S/s (one section

S.No.	***Scope of the Transmission Scheme***	***Capacity /km***
		has 2x1000 MVA ICT wherein 1500 MVA augmentation will take place, whereas other has 1x1000 MVA ICT through series reactor) along with associated bays incl. 500 MVA spare transformer unit (1-Phase) (iv) 2 nos. of 400 kV line bays at Bahadurgarh (PG) (v) 2 nos. of 765 kV line bays at Modipuram (Merrut) (UPPTCL)
5.	ISTS system to provide reliable power supply to Ladakh:	(i) 220kV Pang – Leh (Phyang) (PG) S/c line (Deer conductor) (S/c line on D/c tower) along with 220kV line bay each at Pang & Leh (Phyang) for line termination- 151 km + 7 km underground cable

**with minimum capacity of 2100 MVA on each circuit at nominal voltage*

Estimated Cost – Rs 26967 Cr

i. UPPTCL to provide space for 2nos. of 765kV bays at Modipuram (Merrut) S/s
ii. POWERGRID to provide space for 2nos. of 400V bays at Bahadurgarh S/s
iii. The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey
iv. Implementation Time-frame: 5 years from approval

Members may kindly note.

3) Transmission System requirement for additional 20GW REZ in Northern Region (Phase-III) - Provision of spare ICT/Reactors and future space

In the 3rd meeting of NRPC(TP) held on 19.02.21, Transmission System requirement for additional 20GW REZ in Northern Region was discussed and agreed. The scheme also approved in 49th NRPC meeting held on 27.09.21 with the provision of future space provisions as well as spare single phase 765/400kV, 500 MVA transformers and spare 765 kV single phase 80 MVAR/110 MVAR reactor at Bhadla-3, Ramgarh, Dausa, Fatehgarh-3 (new section), Fatehpur and Beawar substation. Transmission system for additional 20GW REZ in NR (Phase-III) along with detailed scope of provision of spares and future space was agreed during 5th NCT meeting held on 25.08.21 and 02.09.2021. Same was also noted in the 4th NRPC-TP meeting held on

05.10.21 and 12.10.21.

The details of spares & future space under aforesaid scheme is given below:

S.No	**Approved in 3rd NRPC-TP Meeting held on 19.02.21**	**Corresponding Future Space and Spare ICTs/Reactors Unit (5th NCT)**
1	Establishment of 5x500 MVA, 400/220 kV pooling station at Fatehgarh-4 along with 2x125 MVAr Bus Reactor	Future provisions: Space for • 400/220 kV ICTs along with bays: 2 nos. • 400 kV line bays along with switchable line reactor: 6 nos. • 400 kV Bus Reactor along with bays: 2 nos. • 400 kV Sectionalization bay: 1 no. • 220 kV line bays: 10 nos. • 220 kV sectionalization bay: 2 nos. 220kV bays for RE connectivity-4 nos.
2	Establishment of 2x1500 MVA 765/400kV & 10x500 MVA 400/220 kV pooling station at Bhadla-3 along with 2x330 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus Reactor	Future provisions: Space for • 765/400kV ICTs along with bays: 2nos. • 765kV line bay along with switchable line reactor: 4nos. • 765kV line bay: 4nos. • 765kV Bus Reactor along with bays: 2 nos. • 400/220 kV ICTs along with bays: 3 nos. • 400 kV line bays: 8 nos. • 400 kV line bays along with switchable line reactor: 4 nos. • 400kV Bus Reactor along with bays: 2 nos. • 400kV Sectionalization bay: 2 nos. • 220 kV line bays: 12 nos. • 220kV sectionalization bay: 2nos. 220kV bays for RE connectivity-5 nos. Spare ICTs/Reactors: • 500MVA, 765/400kV single phase ICT: 1 no (spare unit) • 110 MVAR, 765kV, 1-ph Reactor: 1 no. (spare unit)

S.No	Approved in 3rd NRPC-TP Meeting held on 19.02.21	Corresponding Future Space and Spare ICTs/Reactors Unit (5th NCT)
3	Establishment of 3x1500 MVA 765/400kV & 2x500 MVA 400/220 kV pooling station at Ramgarh along with 2x240 MVAr (765kV) Bus Reactor & 2x125 MVAr (420kV) Bus reactor	Future provisions: Space for • 765/400kV ICTs along with bays: 2nos. • 765kV line bay along with switchable line reactor: 2nos. • 765kV Bus Reactor along with bays: 2 nos. • 400/220 kV ICTs along with bays: 6 nos. • 400 kV line bays along with switchable line reactor: 4nos. • 400 kV line bays: 4 nos. • 400kV Bus Reactor along with bays: 2 nos. • 400kV Sectionalization bay: 3 nos. • 220 kV line bays: 8 nos. • 220kV sectionalisation bay: 2 nos. 400kV bays for RE connectivity-2 nos. 220kV bays for RE connectivity-4 nos. Spare ICTs/Reactors: • 500MVA, 765/400kVsingle phase ICT :1 no (spare unit) • 80MVAR, 765kV, 1-ph Reactor: 1(spare unit)
4	Establishment of 6x1500 MVA 765/400kV & 5x500 MVA 400/220 kV pooling station at Fatehgarh-3 (new section) (In addition to 4x500 MVA ICT proposed under Rajasthan SEZ Ph-II-of Section-1) along with 2x330 MVAr,765kV & 2x125 MVAr, 420kV Bus Reactors	Spare ICTs/Reactors • 500MVA, 765/400kV single phase ICT :1 no (spare unit) • 110MVAR, 765kV, 1-ph Reactor: 1 no. (spare unit) Future scope for Fatehgarh-3 (new section) is already agreed in 2nd NRPC-TP and 48th NRPC meeting as Part of Rajasthan SEZ Phase-II.
5	Establishment of 2x1500MVA 765/400kV Substation at suitable	Future provisions: Space for

S.No	Approved in 3rd NRPC-TP Meeting held on 19.02.21	Corresponding Future Space and Spare ICTs/Reactors Unit (5th NCT)
	location near Beawar along with 2x330 MVAr 765kV Bus Reactor & 2x125 MVAr 420kV Bus Reactor	• 765/400kV ICTs along with bays: 2 nos. • 765kV line bay along with switchable line reactor: 6nos. • 765kV Bus Reactor along with bays: 2 nos. • 400/220 kV ICTs along with bays: 2 nos. • 400 kV line bays along with switchable line reactor: 4 nos. • 400kV Bus Reactor along with bays: 1no. • 220 kV line bays: 4nos. Spare ICTs/Reactors: • 500MVA, 765/400kV single phase ICT :1 no (spare unit) • 110 MVAR, 765kV, 1-ph Reactor: 1 no. (spare unit)
6	Establishment of 2x1500 MVA 765/400kV substation at suitable location near Dausa along with 2x330 MVAr, 765 kV Bus Reactor & 2x125 MVAr, 420 kV bus Reactor	Future provisions: Space for • 765/400kV ICTs along with bays: 2 nos. • 765kV line bay along with switchable line reactor: 4nos. • 765kV Bus Reactor along with bays: 2 nos. • 400/220 kV ICTs along with bays: 2 nos. • 400 kV line bays along with switchable line reactor: 4 nos. • 400kV Bus Reactor along with bays: 1 no. • 220 kV line bays: 4nos. Spare ICTs/Reactors: • 500MVA, 765/400kV single phase ICT :1 no. (spare unit) • 110 MVAR, 765kV, 1-ph Reactor: 1no. (spare unit)

S.No	Approved in 3rd NRPC-TP Meeting held on 19.02.21	Corresponding Future Space and Spare ICTs/Reactors Unit (5th NCT)
7	LILO of both circuits of Jaipur(Phagi)- Gwalior 765 kV D/c at Dausa along with 240 MVAr Switchable line reactor for each circuit at Dausa end of Dausa – Gwalior 765kV D/c line	• 80MVAR, 765kV, 1-ph Spare Reactor unit at Dausa end (shall also be used as spare reactor at Dausa end for 765kV Beawar – Dausa D/c line)
8	Establishment of 5x1500MVA, 765/400KV ICTs at Fatehpur (HVDC) along with 2x330MVAr (765kV) bus reactor	Future provisions: Space for • 765/400kV ICTs along with bays: 1 no. • 765kV line bay along with switchable line reactor: 4 nos. • 765kV Bus Reactor along with bays: 2 nos. • 400/220 kV ICTs along with bays: 4 nos. • 400 kV line bays along with switchable line reactor: 4 nos. • 400kV Bus Reactor along with bays: 1 no. • 220 kV line bays: 6 nos. Spare ICTs/Reactors: • 500MVA, 765/400kV single phase ICT :1 no. (spare unit) • 110 MVAR, 765kV, 1-ph Reactor: 1no. (spare unit)

Members may kindly note.

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Annexure-A

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

सं उक्षेविस/वाणिज्यिक/209/ आरपीसी (49वीं)/2021/ 10980 - 10974
No. NRPC/Comml/209/ RPC (49th)/2021/

दिनाँक 25 नवंबर, 2021
Dated 25 November, 2021

सेवा में / To,

उ.क्षे.वि.स. के सभी सदस्य
Members of NRPC/TCC

विषय: उत्तर क्षेत्रीय विद्युत समिति की 49वीं तथा तकनीकी समंवय उप-समिति की 47वीं बैठक-कार्यवृत।
Sub: 49th meeting of NRPC and 47th meeting of TCC – Minutes.

महोदय / महोदया,

उत्तरी क्षेत्रीय विद्युत समिति की 49वीं बैठक दिनांक 27 सितम्बर, 2021 को तथा तकनीकी समंवय उप-समिति की 47वीं बैठक दिनांक 23 व 24 सितम्बर, 2021 को विडियो कॉन्फ्रेंसिंग के द्वारा आयोजित की गयी थी। इन बैठकों के कार्यवृत की प्रति आपकी सूचना व आवश्यक कार्यवाही हेतु इस पत्र के साथ संलग्न है।

The 49th meeting of NRPC was held on 27th September, 2021 and 47th meeting of TCC was held on 23rd and 24th September, 2021 via video-conferencing. A copy of the minutes of the meetings is enclosed herewith for your information and necessary action.

भवदीय/Yours faithfully

(नरेश भण्डारी) 25.11.21
(Naresh Bhandari)
सदस्य सचिव
Member Secretary

B.7.11 NRPC approved above schemes which were deliberated in 3rd Northern Regional Power Committee (Transmission Planning) meeting held on 19.02.2021.

B.8 Proposed Evacuation Plan (Transmission System) for Shahpur Kandi Power Project (SKPP). (*agenda by PSTCL)*

TCC Deliberations

B.8.1 Punjab informed that scheme is yet to be discussed in NRPC (TP) meeting and agenda regarding the same has been submitted for discussion in next NRPC (TP) meeting scheduled to be held on 5th October, 2021.

B.8.2 TCC recommended scheme (subject to the decision of minutes of upcoming NRPCTP meeting) for approval of NRPC.

NRPC Deliberations

B.8.3 NRPC approved the scheme (subject to the decision in upcoming NRPC-TP meeting).

B.9 Emergent enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer (*agenda by PSTCL)*

TCC Deliberations

B.9.1 PSTCL informed that load flow studies have been carried out and it is proposed to plan Transmission Works for enhancing ATC/TTC limits to 10,000/10,600MW (considering 1000 MW annual load growth for FY 2022-23). It was also highlighted that general consumption in the state of Punjab has increased unprecedentedly so the works listed above need to be approved to meet the power supply demand of the state in the coming season.

B.9.2 It was again highlighted that scheme may be brought up for discussion in upcoming NRPC (TP) meeting and then may be included in NRPC meeting after approval by NRPC (TP) meeting.

B.9.3 POWERGRID highlighted that timeline for May, 2022 is very ambitious and unlikely to be achieved.

B.9.4 Punjab highlighted that SPS scheme can be implemented as an alternative; however, requested for expeditious augmentation at Ludhiana.

NRPC Deliberations

B.9.5 NRPC concurred with the decisions of TCC that scheme may be brought up for discussion in upcoming NRPC (TP) meeting and then may be included in NRPC meeting after approval by NRPC (TP) meeting.

B.10 Laying of 400 KV OPGW links on Transmission lines (*agenda by PSTCL*)

TCC Deliberations

B.10.1 PSTCL informed that they have requirement for erection of OPGW on 2 no. 400 kV Transmission lines totaling 149 Kms. approx. and proposed for execution of this requirement by PGCIL through inclusion of these links in Package-I(a) or any other suitable project of PGCIL. The concerned 400 kV

I/17372/2021

ANNEXURE-B

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 मे / To,

संलग्न सूची के अनुसार
As per enclosed list

विषय : उत्तर क्षेत्रीय विद्युत समिति (परेक्षण योजना) की 4th बैठक की कार्यसूची।

Subject: Agenda for 4th meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)].

महोदय(Sir)/महोदया(Madam),

The 4th meeting of Northern Regional Power Committee (Transmission Planning) [NRPC (TP)] is scheduled to be held on **05.10.2021 at 10:30 AM through VC**. Agenda of the meeting is enclosed. Link for joining the meeting would be sent in due course.

You are requested to participate in the meeting.

भवदीय/Yours faithfully,

Signature Not Verified
Digitally signed by ISHAN SHARAN
Date: 2021.09.20 18:24:26 IST

(ईशान शरण / Ishan Sharan)
मुख्य अभियंता / Chief Engineer

Copy for kind information to:
1) PPS to Member (Power System), CEA

(ii) In case of LILO of the subject line, Sahupuri will be connected to Karamanasa GSS of BSPTCL & drawl of ISTS power may be affected in certain loading conditions.

(iii) Further, 220 kV Sarnath — Sahupuri line is proposed to be LILOed at (under construction) 220 kV Bhadaura (Ghazipur) S/s and after construction of this LILO, 220 kV Sahupuri will be disconnected from 400 kV Sarnath and the connectivity will be from 220 kV Bhadaura.

(iv) Up-gradation of 220 kV Sahupuri to 400 kV level is planned and tentatively expected by February, 2022.

8.4 In view of above observations, UPPTCL has suggested that LILO of 220 kV Sasaram(PG)-Sahupuri(UPPTCL) line at 220 kV New Karamanasa GSS(BSPTCL) may be permitted after up-gradation of 220 kV Sahupuri to 400 kV level, so that power supply to Varanasi District can be maintained in reliable & uninterrupted manner.

Members may deliberate.

9.0 Enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer

9.1 PSTCL vide letter dated 05.08.2021 (attached as **Annexure D**) has submitted that unrestricted demand of the state during the current paddy season has been intimated as 15500 MW by the distribution licensee i.e. PSPCL. However, Punjab has ability to meet about 13500 MW of load in solar hours with existing ATC limit of 6800 MW with full IPPs generation at 400/220/132 kV generating nodes. Therefore, in order to meet the state's demand, ATC limit is required to be increased to at least 9000 MW (for paddy season 2022). PSPCL has informed that no significant addition of generation within the State is likely in coming year. State of Punjab has to deal with peculiar load profile wherein demand is nearly two times during Paddy season of June-September than that in the rest of the year. Therefore, it would not be a viable option to enter into long/Medium term arrangements at the cost of surrendering power and paying fixed charges in the lean season apart from applicable transmission charges. Hence, to meet the increasing power demand, enhanced ATC/TTC is the only solution.

9.2 PSTCL has further mentioned that they have carried out load flow studies (attached as **Annexure D)** and has proposed following transmission works for enhancing ATC/TTC limits to 10,000/10,600 MW (considering 1000 MW annual load growth for FY 2022-23):-

(a) Transmission elements required at ISTS Sub-Stations.

Sl. No.	Sub-Station	Description of Works	Timeline for completion
1	400 kV PGCIL Ludhiana	Augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.	May,2022
2	400 kV PGCIL Patiala	Augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.	May,2023

(b) Transmission elements required in Intra State Sub-Stations of PSTCL:

Sl. No.	Sub-Station	Description of Works	Timeline for Completion
1	400 kV Dhanansu	Installation of addl.1x500MVA, 400/220 kV ICT	May, 2023
2	400 kV Dhanansu	LILO of 400 kV Nakodar-Kurukshetra line at 400 kV Dhanansu S/s.	May, 2023

In view of above, PSTCL has proposed augmentation of 1x315 MVA, 400/220 kV ICT to 1x 500 MVA.at Ludihana and Patiala.

9.3 POWERGRID vide email dated 06.09.2021 has informed that the space availability at 400/220kV Ludhiana S/S has been reviewed and it is observed that all the 400 kV & 220 kV bays have been utilized. Further, enough space is not available in the substation to carry out extension for accommodating the proposed 500MVA Transformer as well as its 400 kV & 220 kV Bays.

9.4 POWERGRID may inform about the possibility of augmentation at Patiala 400/220kV S/s. PSTCL may furnish the status of implementation of the intrastate works as mentioned above in point no. 9.2(b).

Members may deliberate.

10.0 Issue of requirement of reactors and FSCs installed at various locations in Northern Region:

CTUIL had forwarded letters from POWERGRID intimating that they have been directed by CERC for the following:

(i) To check the further requirement of 80 MVAR line reactor installed at Kanpur end of 400 kV Kanpur- Fatehpur line (earlier Kanpur- Singrauli line)

(ii) To check the utilization of FSC installed at Muradnagar substation of UPPTCL in 400 kV Panki- Muradnagar line of UPPTCL or feasibility of shifting at any other location.

(iii) FSC Refurbishment at Kanpur Ballabgarh 400 kV Line-1

10.1 Requirement of 80 MVAR line reactor installed at Kanpur end of 400 kV Kanpur-Fatehpur line (earlier Kanpur- Singrauli line):

(i) 80 MVAr line reactor at Kanpur end of 400 kV Singrauli - Kanpur S/c line (447 km) was commissioned in 1998. Subsequently, the line has been LILOed at Fatehpur substation in 2012 making Singrauli- Fatehpur S/c line (331 km) &.Fatehpur - Kanpur S/c line (107 km) and 80 MVAR line reactor remained at Kanpur end of Fatehpur - Kanpur S/c line (107 km) created after LILO.

(ii) Powergrid vide letter dated 5th July,2021 informed that CPRI carried out residual life assessment of 80 MVAr line reactor at Kanpur end of Fatehpur - Kanpur line and as per the recommendation of CPRI, the reactor need to be replaced. Accordingly, Powergrid approached CERC vide petition no- 209/TT/2020 under ADDCAP in Singrauli TS project for which CERC directed Powergrid to check whether the 80 MVAR reactor is required and to do the prudence check in coordination with concerned departments.

ANNEXURE-C

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 मे / To,

संलग्न सूची के अनुसार

As per enclosed list

विषय : उत्तर क्षेत्रीय विद्युत समिति (परेक्षण योजना) की 4th बैठक के कार्यवृत्त।

Subject: Minutes of 4th meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)].

महोदय(Sir)/महोदया(Madam),

Please find enclosed the Minutes of 4th meeting of Northern Regional Power Committee (Transmission Planning) [NRPC (TP)] held on 5.10.2021 and 12.10.2021 through VC. The same are also available on CEA's website: www.cea.nic.in (path to access: Home Page - Wing - Power System - PSPA-I - Standing Committee on Power System Planning - Northern Region).

भवदीय/Yours faithfully,

Signature Not Verified
Digitally signed by ISHAN SHARAN
Date: 2021.10.28 17:59:16 IST

(ईशान शरण / Ishan Sharan)
मुख्य अभियंता / Chief Engineer

Copy for kind information to:

1) PPS to Member (Power System), CEA

8.1 Director (PSPA-I), CEA, stated that the proposal of LILO of 220 kV Sasaram(PG)-Sahupuri(UPPTCL) line at 220/132/33kV New Karamanasa GSS(BSPTCL) was discussed in 18th Meeting of Standing Committee on Power System Planning of Eastern Region held at Kolkata on 13th June 2016, wherein, New Karamanasa 220/132/33kV GSS (BSPTCL) along with the above LILO was approved. However, the proposal was to be ratified in the SCPSPNR/ NRPC (TP) meeting.

8.2 BSPTCL vide letter dated 18th March, 2021, informed that they are not getting shutdown approval from NLDC for carrying construction/commissioning activities of the above LILO.

8.3 UPPTCL vide letter dated 12.04.2021 has submitted following on the above LILO proposal at 220kV New Karamanasa GSS(BSPTCL)

(i) 220 kV Sasaram line is one of the primary source, feeding the 220 kV S/s Sahupuri, which in turn is suppling power to 220 kV Bhelupur (2x60 MVA), 220 kV Raja ka Talab (1x60+1x40 MVA) and a number of 132 kV S/s, as shown in SLD below. (Normally power drawl from this line is of the order of 100 to 150 MW).

(ii) In case of LILO of the subject line, Sahupuri will be connected to Karamanasa GSS of BSPTCL & drawl of ISTS power may be affected in certain loading conditions.

(iii) Further, 220 kV Sarnath — Sahupuri line is proposed to be LILOed at (under construction) 220 kV Bhadaura (Ghazipur) S/s and after construction of this LILO, 220 kV Sahupuri will be disconnected from 400 kV Sarnath and the connectivity will be from 220 kV Bhadaura.

(iv) Up-gradation of 220 kV Sahupuri to 400 kV level is planned and tentatively expected by February/March, 2022.

In view of above observations, UPPTCL has suggested that LILO of 220 kV Sasaram(PG)-Sahupuri(UPPTCL) line at 220 kV New Karamanasa GSS(BSPTCL) may be permitted after up-gradation of 220 kV Sahupuri to 400 kV level, so that power supply to Varanasi District can be maintained in reliable & uninterrupted manner.

8.4 UPPTCL further informed that UPPTCL has given consent to above proposal of BSPTCL subject to power drawl by BSPTCL to be restricted to 30 MW, till the time Sahupuri S/s is upgraded at 400 kV level.

8.5 Members noted the same.

9.0 Enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer

9.1 Director (PSPA-I), CEA, stated that PSTCL vide letter dated 05.08.2021 has submitted that unrestricted demand of the state during the current paddy season has been intimated as 15500 MW by the distribution licensee i.e. PSPCL. However, Punjab has ability to meet about 13500 MW of load in solar hours with existing ATC limit of 6800 MW with full IPPs generation at 400/220/132 kV generating nodes. Therefore, in order to meet the state's demand, ATC limit is required to be increased to at least 9000 MW (for paddy season 2022). PSPCL has informed that no significant addition of generation within the State is likely in coming year. State of Punjab has to deal with peculiar load profile wherein demand is nearly two times during Paddy season of June-September than that in the rest of the year. Therefore, it would not be a viable option to enter into long/Medium term arrangements at the cost of surrendering power and paying fixed charges in the lean season apart from applicable transmission charges. Hence, to meet the increasing power demand, enhanced ATC/TTC is the only solution.

9.2 PSTCL has further mentioned that they have carried out load flow studies and has proposed following transmission works for enhancing ATC/TTC limits to 10,000/10,600 MW (considering 1000 MW annual load growth for FY 2022-23):-

(a) Transmission elements required at ISTS Sub-Stations.

Sl. No.	Sub-Station	Description of Works	Timeline for completion
1	400 kV PGCIL Ludhiana	Augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.	May, 2022
2	400 kV PGCIL Patiala	Augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.	May, 2023

(b) Transmission elements required in Intra State Sub-Stations of PSTCL:

Sl. No.	Sub-Station	Description of Works	Timeline for Completion
1	400 kV Dhanansu	Installation of addl. 1x500 MVA,	May, 2023
2	400 kV Dhanansu	LILO of 400 kV Nakodar-Kurukshetra line at 400 kV Dhanansu S/s.	May, 2023

In view of above, PSTCL has proposed augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.at Ludhiana and Patiala.

9.3 PSTCL stated that as the demand in Ludhiana is expected to increase, therefore augmentation is much needed in Ludhiana S/s. Further, as there is a strict timeframe for this augmentation by May, 2022, therefore PSTCL requested POWERGRID to check if there is a possibility to divert any 500 MVA ICT to Ludhiana S/s.

9.4 POWERGRID stated that the 315 MVA ICTs at Ludhiana and Patiala S/s which are to be replaced by 500 MVA ICTS, can be kept as regional spare. In this regard, CTU suggested that there is requirement of 315 MVA ICT at Bhinmal, therefore ICT can be shifted to Bhinmal or kept as regional spare.

9.5 After deliberations, following was agreed:

(i) Augmentation of 1x315 MVA, 400/220 kV ICT to 1x 500 MVA at Ludhiana

(ii) The 315 MVA ICT spared from Ludhiana may be shifted to Bhinmal based on the residual life assessment or refurbishment (if required)

(iii) Augmentation of 1x315 MVA, 400/220 kV ICT to 1x 500 MVA at Patiala. The 315 MVA spared ICT at Patiala may be used as Regional spare.

10.0 Issue of requirement of reactors and FSCs installed at various locations in Northern Region:

Director (PSPA-I), CEA, stated that CTUIL had forwarded letters from POWERGRID intimating that they have been directed by CERC for the following:

(i) To check the further requirement of 80 MVAR line reactor installed at Kanpur end of 400 kV Kanpur- Fatehpur line (earlier Kanpur- Singrauli line)

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

ANNEXURE-D

Ref: CC/Dir(Pro)/NR2/Ludhiana ICT **Dated: January 10, 2022**

To

CMD,
Punjab State Transmission Corp. Ltd
PSEB Head Office
The Mall, Patiala – 147001
Punjab

References:

1. PSTCL letter No 64015PS / D(T) dated 29.12.2021 (CMD, PSTCL)

Subject: Augmentation of Transformation capacity at 400/220kV Ludhiana Substation: Replacement of 400/220kV, 315MVA ICT with 400/220kV, 500 MVA ICT.

Dear Sir,

POWERGRID has reviewed the requests of the PSTCL raised by above referred letter and following is being appraised for kind reference:

1. For immediate augmentation of transformation capacity at Ludhiana by replacing existing 315 MVA. 400/220kV ICT with 500 MVA, 400/220kV ICT; POWERGRID has taken approval from CTU for installation of spare 500 MVA, 400/220kV ICT (without OLTC) available at POWERGRID, Malerkotla substation. Now, the activities for replacement of ICT shall commence shortly and all efforts shall be made to replace the ICT at Ludhiana by May'2022.

2. Further, in 4th NRPC (TP) held on 05.10.2021 & 12.10.2021, it was agreed that the 315 MVA ICT replaced with 500 MVA ICT at Ludhiana shall be shifted to Bhinmal. Accordingly, it may not be possible to spare this 315MVA ICT of Ludhiana for Dhanansu as desired by PSTCL.

Thanking You

Yours Faithfully,

Encl: 4th NRPC (TP) Minutes

(Abhay Choudhary)
Director (Projects)

Copy to:

1. CMD, POWERGRID: For kind information please

Fw: Regarding Enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer

From: SE Planning (se-planning@pstcl.org)

To: srxen-plann1@pstcl.org

Date: Monday, November 8, 2021, 03:21 PM GMT+5:30

For necessary action please.

Regards

SE/Planning,
PSTCL, Patiala.

----- Forwarded Message -----
From: Director Technical <dir-tech@pstcl.org>
To: ce-tl@pstcl.org <ce-tl@pstcl.org>; CE SLDC <ce-sldc@pstcl.org>
Cc: SE Planning <se-planning@pstcl.org>
Sent: Monday, November 8, 2021, 03:09:08 PM GMT+5:30
Subject: Fw: Regarding Enhancement of ATC/TTC for Punjab due to unprecedented load growth of summer

For necessary action please

Thanks and regards
Yogesh Tandon
Director Technical
PSTCL Patiala

Begin forwarded message:

On Monday, November 8, 2021, 2:46 PM, PSPA-1, CEA <cea-pspa1@gov.in> wrote:

Sir,

PSTCL vide its letter dated 05.08.2021 had proposed transformer augmentation at following ISTS Sub-Stations:

Sl. No.	Sub-Station	Description of Works	Timeline for completion
1	400 kV PGCIL Ludhiana	Augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.	May, 2022
2	400 kV PGCIL Patiala	Augmentation of 1x315 MVA, 400/220 kV ICT to 1x500 MVA.	May, 2023

The above proposal of PSTCL was deliberated in 4th NRPC(TP)meeting and following was agreed:

- (i) Augmentation of 1x315 MVA, 400/220 kV ICT to 1x 500 MVA at Ludhiana

- (ii) The 315 MVA ICT spared from Ludhiana may be shifted to Bhinmal based on the residual life assessment or refurbishment (if required)
- (iii) Augmentation of 1x315 MVA, 400/220 kV ICT to 1x 500 MVA at Patiala. The 315 MVA spared ICT at Patiala may be used as Regional spare.

Subsequently, Powergrid informed that space is available at Patiala for additional transformer. Therefore, CTUIL vide its email dated 8.11.2021 has suggested that instead of replacement of ICT at Patiala, an additional ICT of 500 MVA, 400/220kV may be considered.
PSTCL is requested to furnish their comments on the above proposal before 11.11.2021 so that required necessary action may be taken.

Regards,

O/o Chief Engineer,
Power System Planning & Appraisal - I (PSPA-I) Division,
Central Electricity Authority
Ministry of Power
Govt. of India

ANNEXURE-F

PUNJAB STATE TRANSMISSION CORPORATION LIMITED

Regd. Office: - PSEB Head Office, The Mall, Patiala – 147001, Punjab, India

CIN - U40109PB2010SGCO33814

To

Chief Engineer/PSP&A-I,
Sewa Bhawan, RK Puram,
New Delhi.

Memo No. 494 / Dated: 11/11/2021

Subject: **Regarding PGCIL proposal of installation of additional ICT of 500 MVA, 400/220kV instead of augmentation of 1X315 MVA to 1X500 MVA ICT at 400 kV Patiala.**

Ref.: **Your email dated 08.11.2021.**

In the context of the subject cited and vide the above referred email to PSTCL, it had been intimated that PGCIL has suggested to install 1 No. additional 500 MVA 400/220kV ICT instead of augmentation of 1X315 MVA to 1X500 MVA ICT at 400 kV Patiala (which was originally agreed in the 4th meeting of NRPC (TP) held on 05.10.2021 and 12.10.2021). Comments of PSTCL on the said proposal were sought in the email.

In this regard, it is intimated that upon deliberation it has been decided that the PGCIL's proposal of installing additional 500 MVA ICT instead of augmentation of 1X315 MVA to 1X500 MVA ICT be accepted.

This is for your kind information and further necessary action please.

Dy. Chief Engineer/Planning,
PSTCL, Patiala.

CC: Chief Engineer/TS, PSTCL, Patiala.

495
11/11/2021

ANNEXURE-G

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 (CTUIL), Saudamini, Plot no. 2, Sector -29, Gurgaon-122 001
2. Director (Technical), PTSCL, Head Office, The Mall, Patiala-147001

विषय /Subject: Minutes of the meeting held on 18.11.2021 through video conferencing to discuss PSTCL proposal for additional transmission elements at 400 kV Dhanansu substation.

महोदय/ Sir,

Please find enclosed the minutes of the meeting held on 18.11.2021 through video conferencing to discuss PSTCL proposal for additional transmission elements at 400 kV Dhanansu substation.

भवदीय / Yours faithfully,

Kushwaha
23.11.2021

(KANHAIYA SINGH KUSHWAHA
ASSISTANT DIRECTOR)

for– (मंजरी चतुर्वेदी/Manjari Chaturvedi)

निदेशक/Director

Minutes of the meeting held on 18.11.2021 through video conferencing to discuss PSTCL proposal for additional transmission elements at 400 kV Dhanansu substation.

List of participants is enclosed as Annexure-I.

Chief Engineer (PSPA-I), CEA, welcomed the participants and requested Director (PSPA-I), CEA, to take up the agenda of the meeting.

1. Background:

Giving the background of the agenda, Director (PSPA-I), CEA, briefed the following:

(i) To cater to the load requirements of cycle valley in Ludhiana, establishment of 2x315 MVA, 400 kV Dhanansu substation was agreed as an Intra State Transmission Scheme of PSTCL in the 3rd and 4th meeting of NRSCT held on 24.5.2019 and 25.7.2019 respectively with following transmission elements:

- LILO of one ckt of 400 kV Jallandhar – Kurukshetra D/c line at 400 kV Dhanansu substation.
- LILO of one Ckt. of 400 kV Rajpura (Thermal) - 400 kV Nakoder D/c line at 400 kV Dhanansu substation.

(ii) Subsequently, in the 4th meeting of NRPC(TP) held on 05.10.2021, PSTCL proposed following transmission elements at Dhanansu substation in addition to above mentioned elements:

- Installation of additional 500 MVA, 400/220 kV ICT at Dhanansu substation.
- LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation.

In the meeting, the above elements were discussed, however, conclusion was not recorded as it was opined that the proposal of LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation needed further deliberation.

(iii) PSTCL vide letter dated 09.11.2021 has requested to include the above transmission elements in the minutes of the 4th meeting of NRPC(TP). Over a telephonic discussion, PSTCL has also intimated that LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation would be carried out in place of LILO of one Ckt. of 400 kV Rajpura (Thermal) - 400 kV Nakodar D/c line at 400 kV Dhanansu substation which was agreed in the 3rd meeting of NRSCT held on 24.5.2019.

2. Deliberations in the meeting:

(i) Director (PSPA-I), CEA, stated that load flow studies have been carried out for LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation and power flows have been found to be generally in order.

(ii) CTUIL suggested that as considerable load growth is expected in the region near Dhanansu substation, LILO of one Ckt. of 400 kV Rajpura (Thermal) - 400 kV Nakodar D/c line at 400 kV Dhanansu substation would help in evacuation of power from Rajpura Thermal Power Station.

(iii) PSTCL clarified that sufficient evacuation paths are available from Rajpura Thermal Power Station, therefore, they have decided to drop the proposal of LILO of one Ckt. of 400 kV Rajpura (Thermal) - 400 kV Nakodar D/c line at 400 kV Dhanansu substation.

PSTCL further stated that current ATC/TTC limit for Punjab is 7,400 MW and intra state generation is around 6500 MW, whereas, peak demand of Punjab has already reached around 15,550 MW. To meet this load, ATC/TTC limit of around 9000 MW is required. Therefore, PSTCL has proposed LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation which would help in increasing the ATC/TTC limit for Punjab, instead of LILO of one Circuit of 400 kV Rajpura (Thermal) - 400 kV Nakodar D/c line at Dhanansu substation.

(iv) After deliberation, in view of the need of increasing the ATC/TTC limit for Punjab, proposal of PSTCL for installation of additional 500 MVA, 400/220 kV ICT at Dhanansu substation alongwith LILO of 400 kV Nakodar-Kurukshetra S/c line at 400 kV Dhanansu substation was agreed. The proposal of LILO of one Ckt. of 400 kV Rajpura (Thermal) - 400 kV Nakodar D/c line at 400 kV Dhanansu substation was agreed to be dropped.

Meeting ended with thanks to the chair.

Annexure I

List of participants:

S.No.	Name (Smt/Shri/Ms)	Designation
CEA		
1	Ishan Sharan	Chief Engineer
2	Manjari Chaturvedi	Director
3	Nitin Deswal	Asst. Director
4	Kanhaiya Singh Kushwaha	Asst. Director
5	Komal Dupare	Asst. Director
CTUIL		
6	Kashish Bhambhani	Sr. DGM
7	Sandeep Kumawat	Chief Manager
PSTCL		
8	Yogesh Tandon	Director (Technical)

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 मे / To,

संलग्न सूची के अनुसार

As per enclosed list

विषय : उत्तर क्षेत्रीय विद्युत समिति (परेक्षण योजना) की 4th बैठक के कार्यवृत्त।

Subject: Minutes of 4th meeting of Northern Regional Power Committee (Transmission Planning) [NRPC(TP)].

महोदय(Sir)/महोदया(Madam),

Please find enclosed the Minutes of 4th meeting of Northern Regional Power Committee (Transmission Planning) [NRPC (TP)] held on 5.10.2021 and 12.10.2021 through VC. The same are also available on CEA's website: www.cea.nic.in (path to access: Home Page - Wing - Power System - PSPA-I - Standing Committee on Power System Planning - Northern Region).

भवदीय/Yours faithfully,

Signature Not Verified
Digitally signed by ISHAN SHARAN
Date: 2021.10.28 17:59:16 IST

(ईशान शरण / Ishan Sharan)

मुख्य अभियंता / Chief Engineer

Copy for kind information to:

1) PPS to Member (Power System), CEA

36.4 After deliberations, it was decided that a separate meeting would be conducted between CEA, CTUIL, POPSOCO and UPPTCL to discuss the above proposal and accordingly would be deliberated in the next NRPC(TP) meeting.

37.0 Additional Agenda from PGCIL- 25 MVAR, 220 kV reactor at Jauljibi

Background:

37.1 In the 36th meeting of Standing committee on Power System Planning of Northern Region held on 30.10.2015, establishment of 400/220 kV, 7x105 MVA GIS S/S in Jauljibi under ISTS was approved with the following scope:

(i) LILO of both circuits of 400 kV Dhauliganga – Bareilly (presently charged at 220 kV) at 400/220 kV, Jauljibi (incoming line from Dhauliganga shall be charged at 220 kV and outgoing to Bareilly shall be charged at 400 kV).

(ii) 2x63 MVAR switchable line reactors in Bareilly – Jauljibi 400 kV D/C at Jauljibi end

(iii) 8 no. of 220 kV bays (Pithoragarh-2, Dhauliganga-2, Almora-2, Jauljivi-2)

37.2 The existing 400 kV Dhauliganga – Bareilly (charged at 220 kV) is approx. 240 kms with 25 MVAr line reactor at Dhauliganga end. After LILO at Jauljibi, length of Dhauliganga-Jauljibi section becomes approx. 40 kms. Therefore, the 25 MVAR line reactor was to be shifted to 400/220 kV, Jauljibi and to be used as a Bus reactor at 220 kV after LILO of Dhauliganga – Bareilly at Jauljibi.

37.3 PGCIL vide its letter dated 17.09.2021 informed that the 400/220 kV Jauljibi S/s was scheduled to be charged by March 2021. Therefore, PGCIL approached BRO in the month of Feb'21 to shift 25 MVAR line reactor from Dhauliganga as per approved scheme. However, BRO informed that the road got washed away due to cloud burst, therefore the reactor could not be shifted. Hence, the reactor shall be shifted and commissioned after construction of the bridge by BRO.

Deliberations in the 4th meeting of NRPC(TP):

37.4 PGCIL informed that Jauljivi S/s is about to be charged in the month the December, 2021. Hence, POWERGRID requested the Members to grant permission to charge the 400/220 kV Jauljibi S/s without 220 kV bus reactor to avoid any further delay.

37.5 Member (Power System), CEA, requested Member Secretary (NRPC) to look into the issue.

Additional Agenda by PSTCL

PSTCL vide its letter dated 8.10.2021 requested to include following agenda items in the 2nd sitting of the meeting. A copy of PSTCL letter is enclosed as Annexure 38.

38.0 Requirement of 2 no. of 220 kV bays at Amritsar

38.1 PSTCL stated that the 3rd ICT at Amritsar has been commissioned. However, there is a requirement of 2 no. of 220kV line bays at Amritsar S/s to connect 220kV Patti and 220kV Rashiana substation to Amritsar in order to reduce the loading on Amritsar –Varpal 220kV

lines. PSTCL mentioned that one no. of spare bay is already available, therefore, PSTCL requested PGCIL to implement another bay under ISTS for their utilization.

38.2 Powergrid stated that the availability of space at Amritsar S/s is required to be checked.

38.3 After deliberations, it was agreed that PSTCL and Powergrid may discuss the matter mutually and accordingly, the requirement of 220 kV bays at Amritsar S/s may be put up in the next NRPC(TP) meeting.

39.0 Requirement of transformers at Behman Jassa Singh Switching station of PSTCL:

39.1 PSTCL informed that in the 40th meeting of SCPSPNR held on 22.06.2018, the following 400 kV switching station of PSTCL was agreed:

i. Establishment of 400 kV AIS switching station at the premises of M/s HMEL through LILO of 400kV Talwandi Sabo–Moga section of Talwandi Sabo – Nakodar 400 kV D/C line along with auxiliary required for Ph-1 (along with 2 nos. of 400 kV line bays for power supply to M/s HMEL) like control room, extension provisions etc.

ii. Provision of land (to be provided by M/s HMEL) considering the space required for the following future augmentation

- LILO of 2nd ckt of 400kV Talwandi Sabo–Nakodar 400 kV D/C line (Talwandi Sabo–Nakodar is a 400 kV D/C line with LILO of one ckt at Moga (PG) 400kV S/s)
- 3 nos. of 400/220kV ICTs for PSTCL (future)
- 10 nos. of 220kV transmission lines for PSTCL (future)

PSTCL further informed that the land for the above mentioned switching station was to be provided by HMEL and they have provided the land at Behman Jassa Singh village. Therefore, the above switching station is named as Behman Jassa Singh switching station.

Members noted the same.

39.2 Further, PSTCL vide their letter dated 8.10.2021 has mentioned that though LILO of 2nd ckt of 400kV Talwandi Sabo–Nakodar 400 kV D/C line at Behman Jassa Singh switching station alongwith 3 nos. of 400/220kV ICTs were kept in the future scope of the switching station, however, due to unprecedented load growth of Punjab, PSTCL propose to take up these works to meet their load growth.

39.3 Members agreed for the same and requested PSTCL to provide the details of the 220kV feeders planned to be connected to 400/220kV Behman Jassa Singh substation.

Meeting ended with thanks to the chair.

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Fw: Availability of 220 kV Bays at PGCIL Amritsar

From: SE Planning (se-planning@pstcl.org)

To: srxen-plann1@pstcl.org

Date: Wednesday, October 13, 2021, 04:40 PM GMT+5:30

For necessary action please.

Regards

SE/Planning,
PSTCL, Patiala.

----- Forwarded Message -----
From: Sr.Xen Protection Division, Ldh <srxen-prot2-ldh@pstcl.org>
To: SE Planning <se-planning@pstcl.org>; Director / Technical <dir-tech@pstcl.org>
Sent: Wednesday, October 13, 2021, 04:37:12 PM GMT+5:30
Subject: Fw: Availability of 220 kV Bays at PGCIL Amritsar

For information and necessary action please

Sent from Smallbiz Yahoo Mail for iPhone

Begin forwarded message:

On Wednesday, October 13, 2021, 1:26 PM, Manish Kumar Verma {मनीष कुमार वर्मा} <manishkverma@powergrid.in> wrote:

Dear Sir

One no.220kV bay is already available and space for 3nos. 220kV new bays is available at 400/220kV Amritsar S/s.

With regards,

(M K VERMA)
Dy General Manager
AMRITSAR SUB STATION
MOB NO. 9501102307

From: Sr.Xen Protection Division, Ldh <srxen-prot2-ldh@pstcl.org>
Sent: Tuesday, October 12, 2021 4:24 PM
To: Manish Kumar Verma {मनीष कुमार वर्मा}
Subject: Availability of 220 kV Bays at PGCIL Amritsar

Dear sir

PSTCL requires 2 nos. 220 kV Bays at PGCIL Amritsar for 220 kV Patti circuit and 220 kV Rashiana circuit. The issue has already been taken up in NRPC-TP meeting held on 12/10/2021. As per telephonic talk with your good self it has come to the notice that one bay is already available at PGCIL Amritsar and space for 3 new bays is also available.
So kindly confirm the same so that PSTCL can plan for future accordingly.

Addl S.E
Protection & Operation Services Division
Punjab State Transmission Corporation Ltd.
Ludhiana- 141001
Contact - 9646118223
email: srxen-prot2-ldh@pstcl.org
