

NORTHERN REGIONAL POWER COMMITTEE

ADDITIONAL AGENDA

FOR

40th MEETING OF TECHNICAL COORDINATION SUB-COMMITTEE

&

43rd MEETING OF NORTHERN REGIONAL POWER COMMITTEE

B. OPERATIONAL ISSUES

B.30 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. (Agenda by PTCUL)

B.30.1 PTCUL is implementing UITP Scheme as deemed ISTS network as per CERC order dated 31.01.2013 for evacuation of Power from Generating projects namely Tapovan Vishnugad 520 MW HEP (M/s NTPC Ltd), Singoli Bhatwari 99 MW HEP (M/s L&T Uttaranchal Hydropower Ltd), Phatabyung 76MW HEP(M/s Lanco Mandakini Hydro Energies Pvt. Ltd), Pipalkoti 444MW HEP (M/s THDC India Ltd), Naitwar Mori 60 MW (M/s SJVN Ltd).

B.30.2 CTU is the nodal agency for granting Connectivity & LTA to these Generators in accordance with applicable CERC Regulations. Accordingly, Intimation for Connectivity & Intimation for LTA had been issued to following Generators by CTU as quoted below:-

1. M/s L&T Uttaranchal Hydropower Ltd. (99MW Singoli Bhatwari HEP)

Point of Connection:-

Interim Arrangement- 400/220KV Srinagar Substation(PTCUL)

Final Arrangement- 220KV Baramwari Substation (PTCUL).

Transmission System for grant of Connectivity to Singoli Bhatwari HEP

Interim Arrangement:-

- LILO of one circuit of Baramwari (initially line shall be from Phatabyung as Phatabyung is coming before Singoli Bhatwari)-Srinagar 220KV D/c at generation switchyard: LILO portion to be implemented by the applicant (including 220KV Bays at Generation end).

Common Transmission System required for Connectivity

- Proposed site of Baramwari (PTCUL) S/s-Srinagar (PTCUL) substation 220KV D/c Line- To be implemented by PTCUL as deemed ISTS.

Final Arrangement:-

- Singoli Bhatwari generation switchyard-Baramwari S/s 220KV D/c with the opening of LILO as mentioned above in interim arrangement- To be implemented by Applicant (including 220KV Bays at both ends)

- Common Transmission System required for Connectivity- Proposed site of Baramwari (PTCUL) S/s-Srinagar (PTCUL) substation 220KV D/c Line (To be implemented by PTCUL) as deemed ISTS. &
- **Transmission System for LTA-** 400KV D/c Srinagar-Kashipur line

2. M/s NTPC (520 MW Tapovan Vishnugad HEP)

As per the Intimation for Connectivity,

The point of connection is Generation Switchyard of Tapovan Vishnugad HEP.

& The Transmission System required for Connectivity is as follows:-

- a. Tapovan Vishnugad HEP-Proposed site of Pipalkoti 400KV S/s 400KV D/c (Twin Moose) Line.**
- b. Proposed site of Pipalkoti 400KV S/s -Srinagar 400KVS/s D/c (Quad Moose) line.**

Transmission System required for LTA as –

400KV D/c Srinagar-Kashipur Line

3. M/s THDC Ltd (444 MW Pipalkoti HEP)

The point of connection is Generation Switchyard of Pipalkoti HEP.

& The Transmission System required for Connectivity was as follows:-

1. Pipalkoti HEP-400KV Pipalkoti Switching Station 400KV D/c (Twin Moose) Line.
2. Establishment of 400KV Pipalkoti Switching Substation.
3. Diversion of Tapovan Vishnugad HEP-Proposed site of Pipalkoti (400KV S/s) 400KV D/c (Twin Moose) line at Pipalkoti Switching Substation.
4. Diversion of proposed site of Pipalkoti 400KV S/s -Srinagar 400KV D/c (Quad Moose) line at Pipalkoti Switching station.

4. M/s SJVN Ltd (60 MW Naitwar Mori HEP)

As per the Intimation for Connectivity, The point of connection is 400/220 Dehradun Substation & The Transmission System required for Connectivity is as follows:-

1. Naitwar Mori HEP- Location of Mori 220/132 KV PTCUL Substation 220KV D/c line(to be implemented by applicant along 220KV Bays at Generating end)
2. Location of Mori 220/132 (PTCUL)-Dehradun 220KV D/c (to be implemented by PTCUL).
 - Mori 220/132 KV S/s is not required in the time frame of connectivity of Naitwar Mori HEP.

5. M/s Lanco Mandakini Hydro Energies Pvt Ltd (76MW Phatabyung HEP)

Point at which Connectivity is granted-

Interim Arrangement- 400/220KV Srinagar S/s (PTCUL) (Till the commissioning of Baramwari 220KV Switching Substation of PTCUL).

Final Arrangement- 220KV Switching Station Baramwari of PTCUL.

Transmission System required for Connectivity-

1. Interim Arrangement:

- Phata Byung generation switchyard-Proposed site of Baramwari (PTCUL) 220KV D/c (to be implemented by the applicant including 220KV bays at generation switchyard)
- Common Transmission System required for Connectivity (Deemed ISTS):-
Proposed site of Baramwari (PTCUL)- Srinagar (PTCUL) 220KV D/c Line (to be implemented by PTCUL)

2. Final Arrangement-

Phata Byung generation switchyard-Baramwari 220KV D/c (to be implemented by the applicant including 220KV bays at both ends)

&

Transmission System required for LTA as –

400KV D/c Srinagar-Kashipur Line

Note- As per Minutes of meeting held at CEA on dated 25.09.2017 between CTU,CEA,PTCUL& Generators, Phatabyung HEP has become uncertain and the 220KV D/c Baramwari-Srinagar line is to be implemented in two phases. However, in the Meeting held on 12.09.2018 at CEA between PTCUL,CTU & the Generators, it was informed by representative of M/s Lanco that their Project is expected to be commissioned by December,2020.

PTCUL's view of the Connectivity/LTA Intimations-

- ❖ On the above Intimations of Connectivity/LTA, PTCUL has raised its objection at various platforms/meetings and with CTU on the alleged treatment of Transmission System being implemented by PTCUL as connectivity lines & Transmission system required for LTA. It is understood that Connectivity & LTA are two different provisions and are to be dealt accordingly as per CERC (Grant of Connectivity, Long term Access and Medium term Open Access in inter-State Transmission and related matters) Regulations, 2009. But at the same time it is implicit that the whole Transmission System is being developed and implemented by PTCUL under coordinated system planning of CEA/CTU and accordingly all the elements of Associated Transmission System being implemented by PTCUL is to be made part of LTA intimations/LTA Agreements so as to ensure its recovery through beneficiaries rather than executing a separate Transmission Agreement for Connectivity lines as per CTU. As per CERC Regulations, a Transmission Agreement is signed for dedicated lines only.

Further, CTU is not including 400KV S/s Srinagar & 400KV D/c Srinagar-SrinagarPH Line, already implemented by PTCUL as ISTS Network, in LTA intimations.

- ❖ As per intimations of Connectivity issued by CTU, 400KV S/s pipalkoti is not required in time frame of Tapovan Vishnugad HEP, 220/132 KV S/s Mori is not required in time frame of Naitwar Mori HEP and 220KV S/s Baramwari is not required in time frame of Singoli Bhatwari HEP. With this approach, the Transmission System required for Connectivity for these Generators up to the point of Connectivity becomes a single link/line i.e the Transmission lines to be constructed by the Generator i.e by M/s L&T & M/s SJVN and afterwards those to be constructed by PTCUL are basically a single link up to the point of Connectivity. Similarly, The Transmission lines to be constructed by PTCUL for Tapovan Vishnugad HEP i.e 400KV D/C Tapovan Vishnugad –Pipalkoti S/s line & 400KV D/c Pipalkoti –Srinagar S/s is a single link. Thus, the Transmission System seems to be treated as dedicated lines by CTU for which CTU is insisting for signing a Transmission Agreement for recovery of Transmission Charges against these lines between PTCUL & Generators. Only 400KV (Quad Bersimis) D/c Srinagar- Kashipur Line is included in LTA intimations issued by CTU to M/s NTPC, M/s L&T & M/s Lanco.

In view of the above, Committee may deliberate on the following issues:-

1. To include 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. Otherwise, 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.
2. As Transmission Agreement is to be signed for dedicated lines (if implemented by the ISTS licensee). So, is there any need for signing the Transmission Agreement for connectivity lines with Generators and What would be the sanctity of these Transmission Agreements after implementation of above mentioned substations i.e 400KV S/s Pipalkoti, 220KV S/s Baramwari & 220 KV S/s Mori at later stage when these connectivity lines/ Transmission system including these substations will be shared by upcoming Generators?
3. To include 400KV S/s Srinagar & 400KV D/c Srinagar –Srinagar PH Line in the LTA intimations/Agreements (which are also agreed between PTCUL & Generators in the Implementation Agreements).

B.31 Regarding committee for Cyber Security (Agenda by PTCUL)

- B.31.1 Cyber security in power sector being an important and sensitive subject, the power utilities may benefit from discussion under the guidance and facilitation of the NRPC. Focused interaction on the subject of cyber-security may result in better capacity building and preparedness, and may also serve to ensure better and closer coordination..
- B.31.2 To ensure better coordinated action on matters related to cyber-security It is proposed that a Cyber Security Committee may be constituted comprised of the designated CISOs from the utilities of the Northern Region.
- B.31.3 Being a platform focused specifically on cyber-security, this may facilitate a deeper interaction on the topic than is possible in OCC meetings. It is hoped that closer and regular interaction of the CISOs of power utilities may result in the following benefits:
- Better coordination / uniformity in cyber security policies, designation of critical information infrastructure, crises management procedures etc.
 - Better capacity development, knowledge sharing etc.
 - Better and more detailed monitoring of cyber-security preparedness.

Members may kindly deliberate.

C. COMMERCIAL and TeST ISSUES

C.32 Scheduling of RRAS during high grid frequency (Agenda by UP SLDC)

- C.32.1 As per the regulatory provisions, RRAS is to be scheduled only when frequency remains continuously below 49.9 Hz or in case of congestion in the grid in real time. On scrutiny of RRAS data for 15th, 16th and 17th October 2018, it was found that frequency remained below 49.9 Hz in 13 time blocks (Annexure C.32.1). It appears that RRAS was not scheduled as per the real time grid requirement.
- C.32.2 It is requested that nodal agency for RRAS may kindly explain under what circumstances RRAS was triggered in different time blocks on the above mentioned dates and why RRAS was not withdrawn when frequency was above 50.05 Hz continuously for more than 5 minutes.
- C.32.3 It is also requested that PSDF should be utilized judiciously and grid is to be operated in economic order.

C.33 Replacement of S900 RTUs for POWERGRID Station (Agenda by POWERGRID)

- C.33.1 Alstom make S-900 RTUs were installed under ULDC Phase-I at various location in Northern Region. These RTUs are under commercial operation since July 2002, useful life of these RTUs is over, repairing of RTU cards were a concern as these RTUs were declared obsolete by the manufacturer. Considering above, NRPC

approved replacement of these RTUs at all locations of Northern Region Constituents & Central Sector locations including POWERGRID sites in 34th TCC and 38th NRPC and modalities of procurement for NR Constituents was subsequently discussed in 35th TCC and 39th NRPC.

C.33.2 RTUs of NR constituents are being replaced as deposit work. For RTUs of POWERGRID it is for information to NRPC that RTUs shall be part of Reliable Communication system which was approved in 35th TCC & 39th NRPC meeting on cost plus basis. Tariff for the investment made was to be shared by all constituents as per CERC notification.

Members may kindly deliberate.

C.34 Challenges in Demand Forecasting (Agenda by TPDDL)

C.34.1 Accurate demand forecast on day ahead basis is a big challenge for optimum power scheduling and dispatching. During the workshop held at Tata Power-DDL, it was shared that demand forecast generated by Gujarat DISCOMs is fairly accurate. We request NRPC to arrange a meeting of Delhi SLDC and DISCOMs with Gujarat DISCOM representatives for better understanding of their practices being used in demand forecasting.

C.34.2 For generating accurate forecast, the ingredients used for forecasting should also be equally accurate. Weather is a critical parameter in this & Indian Meteorological department is the best source for weather data in India. Tata Power-DDL, BYPL and POSOCO have already approached IMD separately to get location specific and more granular data. Though IMD has developed a web-portal for POSOCO, further drill down requirement of weather parameters for power sector is needed to be communicated to IMD. A Core team having members from SLDC, RLDC, State DISCOMs & NRPC needs to be formed. The core team will share power sector specific weather requirements with IMD in a holistic manner who, in turn, may hire a consultant to address power sector specific requirements in a time bound manner.

Members may kindly deliberate.

C.35 Centralized software for SLDC, RLDC and DISCOMs (Agenda by TPDDL)

C.35.1 Without intervention of technology, adherence to the newly proposed regulation is a very challenging task. NRPC and RLDC has also suggested in the past to have a common IT platform for scheduling and dispatching. NRPC is already in discussion for creation of such platform. **SLDC, RLDC, State Discoms along with NRPC can submit the proposal to CERC/SERC for centralized software for power scheduling and dispatching. It may be deliberated.**

Members may kindly deliberate.

C.36 Ancillary Services (Agenda by TPDDL)

C.36.1 GAS and HYDRO stations are not used for base load. **Specifically for Delhi, GAS and HYDRO generation can be utilised as ancillary services. The generator can be given regulation up or down instruction from concerned SLDC. Financial settlement for ancillary services can be done through pool balance. SOP of intra-state ancillary services can be submitted to SERC jointly by SLDC and DISCOMs.**

Members may kindly deliberate.

D. ITEMS FOR NRPC

D.8 Verification of NRPC Fund Account

D.8.1 As per the Bye-laws for NRPC Fund the “NRPC Fund” account was required to be audited annually for each financial year. Accordingly, the NRPC fund account for financial year 2017-18 was audited by the officers nominated by Chairperson, NRPC.

D.8.2 Audit of NRPC Fund account was also carried out through the Chartered Accountant appointed with the approval of Chairperson, NRPC. The statement of audited accounts of NRPC Fund for the Financial Year 2017-18 duly audited by the Chartered Accountant is enclosed in the agenda at Annexure-D.8.1.

Members may approve the statement of audited accounts of “NRPC – Fund” for the Financial Year 2017-18.

D.9 Verification of Regional Board Fund

D.9.1 As per Bye-laws for Regional Board Fund (RBF), the account for each financial year was required to be audited annually by the officers nominated by Chairperson, NRPC. The auditing of expenditure of RBF account for the year 2016-17 was carried out by the officers nominated by Chairperson, NRPC and statement is placed in the agenda at Annexure-D.9.1.

Members may approve the statement of audited accounts of RBF for the Financial Year 2017-18.

CONSOLIDATED RECEIPT AND PAYMENTS STATEMENT OF N.R.P.C. FUND FOR THE YEAR 2017-18					
SI No.	Payment received during the year 2017-18	Amount (in Rs.)	SI No.	Expenditure during the year 2017-18	Amount (in Rs.)
1	Opening Balance	26784737.76	1	Refund to Govt. against the Expenditure incurred by NRPC (DDO,NRPC)	30907649.00
2	Contribution for the year 2015-16	1100000.00			
3	Contribution for the year 2016-17	11200000.00	2	Transfer to R.B.Fund	1000000.00
4	Contribution for the year 2017-18	20875388.64			
			3	Outsourcing Staff	772812.00
5	Interest	1012212.00			
			4	Leaseing of Vehicles	197970.00
			5	Petrol for Vehicles	89443.00
			6	AMC of software	272610.00
			7	Auditor/Lawyer Fees	25960.00
			8	Bank Charges	188.35
				Closing Balance	27705706.05
	Total	60972338.40		Total	60972338.40

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 Nodal Officer

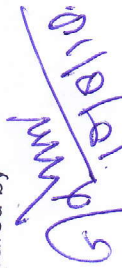
Mahesh Kumar
Mahesh Kumar
 Chief Manager, PGCIL

Er. Sonia
Er. Sonia
 ASE/PSPCL

Audited Statement of "Regional Board Fund" account for F.Y. 2017-18 (01.04.2017 to 31.03.2018)

Sl. No.	Receipts	Amount (Rs.)	Sl. No.	Payments	Amount (Rs.)
1	Opening balance as on 01.04.2017:- (a) Bank (b) Cash	208070.11 354.89	1 2	Meeting expenses Bank charges	841954.00 120.00
2	Amount received from NRPC Fund	1000000.00	3	Closing balance as on 31.03.2018:- (a) Bank (b) Cash	375047.11 1035.89
3	Bank Interest	9732.00			
	TOTAL	1218157.00		TOTAL	1218157.00

Prepared by



(G. K. Gaig)

Designated Officer "RBF"

Audited and verified as per records.



(Sonia Chauhan)

Addl. SE, PSPCL



(Mahesh Kumar)

Chief Manager, PGCIL