I/29865/2023

सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केंद्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग- II
Power System Planning & Appraisal Division-II

सेवा में /To

As per list of Addresses

विषय:ट्रांसमिशन पर राष्ट्रीय समिति (एनसीटी) की पन्द्रहवी बैठक की अतिरिक्त कार्यसूची - के सम्बन्ध में।

Subject: Additional Agenda for the 15th Meeting of National Committee on Transmission (NCT) –regarding.

महोदया (Madam) / महोदय (Sir),

The additional agenda items for the 15th meeting of NCT is enclosed herewith.

भवदीय/Yours faithfully,

24/11/2023

(राकेश गोयल / Rakesh Goyal)
मुख्य अभियन्ता एवं सदस्य सचिव,एन.सी.टी.
/Chief Engineer & Member Secretary (NCT)

प्रतिलिपि / **Copy to:**

Joint Secretary (Trans), Ministry of Power, New Delhi

List of Addresses:

1.	Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Member (Power System), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4.	Director (Trans), Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5.	Sh. Ajay Yadav, Joint Secretary Room no 403, Atal Akshay Urja Bhawan Opposite CGO Complex gate no 2, Lodhi Road, New Delhi – 110003	6.	Chief Operating Officer, CTUIL, Saudamini, Plot No. 2, Sector-29, Gurgaon – 122 001.
7.	Sh. Rajnath Ram, Adviser (Energy), NITI Aayog, Parliament Street, New Delhi – 110 001.	8.	CMD, Grid Controller of India, B-9, Qutub, Institutional Area, Katwaria Sarai, New Delhi – 110010
9.	Ms. Seema Gupta, Ex. Director (Operations), POWERGRID	10.	Sh. Ravinder Gupta, Ex. Chief Engineer, CEA

Special Invitee

Chief Engineer (PCD), CEA

Additional agenda items for 15th meeting of NCT

3.9 Addition of scope of works in OM dated 22.02.2023 to facilitate termination of Bidar – Maheshwaram 765 kV D/c line alongwith 240 MVAr switchable line reactor at Maheshwaram end under the "Transmission Scheme for Solar Energy Zone in Bidar (2500 MW), Karnataka"

3.9.1 "Transmission Scheme for evacuation of power from RE Sources in Kurnool Wind Energy Zone (3000 MW) / Solar Energy Zone (1500 MW)" Part A and Part B is under implementation by POWERGRID through RTM mode as per the scope allotted vide OM dated 22.02.2023. The above scheme also includes construction of Kurnool-III – Maheshwaram 765kV D/c line.

3.9.2 As per Office memorandum dated 22.02.2023, SLD prepared & released for construction of bays at Maheshwaram (GIS) substation, POWERGRID has considered GIS modules without Reactor GIS Bay & Auxiliary Bus.

3.9.3 One of the ckt of Bidar – Maheshwaram 765kV D/c line is being terminated to the GIS diameter at Maheswaram end, being constructed by POWERGRID, under "Transmission Scheme for evacuation of power from RE Sources in Kurnool Wind Energy Zone (3000 MW) /Solar Energy Zone (1500 MW)" Part A and Part B.

3.9.4 Subsequently, CTUIL vide email dated 18.05.2023 to CEA/BPC has informed that due to substantial change in line length of Bidar – Maheshwaram 765kV D/c line, the 240 MVAr switchable line reactor is required at both Bidar & Maheshwaram ends.

3.9.5 To incorporate 240 MVAr switchable line reactor at Maheshwaram end, GIS module for the Line GIS bay for Bidar – Maheshwaram 765kV D/c line, has to be constructed with provision of Reactor GIS Bay along with Auxiliary Bus.

3.9.6 In view of the above technical requirement for provision of GIS bay for 240 MVAr switchable line reactor at Maheshwaram end, POWERGRID have requested for change of scope / addendum (if any) to OM dated 22.02.2023, for incorporation of suitable provision in GIS bay at Maheshwaram for installation of 240 MVAr switchable line reactor by the TSP for "Transmission Scheme for Solar Energy Zone in Bidar (2500 MW), Karnataka".

3.9.7 Accordingly, it is proposed that following provision may be added in the detailed scope of works for "Transmission Scheme for evacuation of power from RE Sources in Kurnool Wind Energy Zone (3000 MW) /Solar Energy Zone (1500 MW) Part A and Part B" for GIS bay at Maheshwaram for subsequent installation of 240 MVAr switchable line reactor by the TSP.

- Suitable 765 kV GIS module at Maheshwaram end in the GIS diameter under implementation as part of "Transmission Scheme for evacuation of power from RE Sources in Kurnool Wind Energy Zone (3000 MW) / Solar Energy Zone (1500 MW) Part A and Part B", to facilitate termination of Bidar – Maheshwaram 765kV D/c line alongwith 240 MVAr switchable line reactor at Maheshwaram end by TSP for "Transmission Scheme for Solar Energy Zone in Bidar (2500 MW), Karnataka"

3.9.8 Members may deliberate.

4.6 Implementation of Unified Network Management System (UNMS) in the Western Region

4.6.1 Unified Network Management System will facilitate centralized supervision of ISTS as well as Intra state communication system at State level, Regional level and Inter-Regional Communication system at national level. Three regional UNMS systems for ER, NER, NR and SR are under implementation. Details of the proposal for Western Region is given below:

S. No.	Items	Details
1.	Name of Scheme	Establishment of State-of Art Unified Network Management System (U-NMS) for ISTS and State Utility Communication System for Western Region
2.	Scope of the scheme	• Main & Back-up UNMS software and hardware along with required Application software including Video Projection System (VPS), firewall and IDPS. • Remote Workstation for SLDCs. • Video Projection System (VPS), Printer, furniture etc. at main & back-up U-NMS location. • Integration of existing NMS/NEs of ISTS and State Utility in a region in the proposed UNMS. • Integration of upcoming U-NMS for National & other regions and upcoming NMS/NEs of ISTS and State Utility in a region during implementation and AMC period of the project. • Operational support, training & maintenance for proposed UNMS software and hardware. • Auxiliary Power System for U-NMS system. • Workstation Console along and other associated software and hardware such as firewall, router, switch, furniture at CTUIL HQ and WRLDC location • Bandwidth connectivity & Its recurring charges for CTUIL HQ Office.
3.	Objective / Justification	i. CERC Regulations 2017 for Communication System envisages that CTU shall be the Nodal Agency for supervision of communication system in respect of Inter-State communication system and will implement centralised supervision of quick fault detection and restoration. Further CERC regulation also envisages 99.9% availability of

S. No.	Items	Details
		communication channel. ii. The Interstate and Intra-state communication system in the region has evolved over time with modernisation of SLDCs/ RLDC. As part of these projects, Network Management Systems (NMS) were also commissioned to support configuration and maintenance of Network Elements (NEs) of communication system. As these projects were implemented in different time frame hence multiple NMSs came up in a region and states. As of now around 60,000 km of OPGW based communication network is under operation to cater data and voice services pertaining to RTU, PMU and ICCP data etc. in the region including state network. As such, expansion/strengthening of communication system is continuous process. iii. Further, standalone communication equipment has also come up as part of TBCB/Renewable transmission project, whose integration with existing NMS is not possible as the same are proprietary and generally support integration of same make equipment only. Thus, centralised supervision of entire state/ regional communication system is not possible as envisaged in CERC regulation for communication system. Computation of channel availably is also not possible through present communication infrastructure in view of constraints such as involvement of multiple NMSs and limitation of supplied system. iv. Accordingly, concept of Unified Network Management System in Control Center setup at National, Regional and state level has emerged to address these issues. This will facilitate centralized supervision of ISTS as well as Intra state communication system at State level, Regional level and Inter-Regional Communication system at national level. Three regional UNMS systems for ER, NER and NR are under implementation. All five (5) Regional UNMS servers shall be integrated in the next layer to the National UNMs server (in main & backup configuration) having PAN India topological view. Further, control shall be possible only for inter-regional links with National UNMS server. v. Accordingly, CTUIL had taken up the requirement

S. No.	Items	Details
		for WR in Western Regional Power Committees for their approval to facilitate implementation of the Regional UNMS. National UNMS shall be implemented subsequent to regional UNMS and Tariff for National UNMS to be shared by all regions. vi. The Main CC Server location shall have 24x7 manning whereas the Backup CC server location & state CC shall have general shift (9AM to 6PM) 365 days for UNMS systems.
4.	Estimated Cost	Rs. **82*** CRs. (approx.) and 19.07 CRs. AMC charges for 7 years. *Cost has been derived from awarded package of ER and NR UNMS Scheme.
5.	Implementation timeframe	24 Months from date of project allocation based on NCT approval.
6.	Deliberations with WRPC along with their comments	**WRPC approved** CTU's proposal of **WR-UNMS project** for establishment of State-of Art Unified Network Management System (U-NMS) for ISTS and State Utility Communication System for Western Region in the 47th WRPC meeting held on 14th & 15th June 2023. The project has been approved to be implemented by POWERGRID in RTM mode.
7.	Implementation Mode	Through RTM to POWERGRID

4.6.2 Members may deliberate.

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