

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 94/MP/2021

Coram:

Shri Jishnu Barua, Chairperson

Shri I. S. Jha, Member

Shri Arun Goyal, Member

Shri P. K. Singh, Member

Date of Order: 27.12.2023

In the matter of:

Petition under Section 79(1)(f) of the Electricity Act, 2003 read with Regulation 111 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 seeking directions for installation of optical ground wire for the 400kV Kurukshetra – Malerkotla transmission line established under the Northern Region System Strengthening Scheme XXXI(B).

And

In the matter of:

Central Transmission Utility,
(Power Grid Corporation of India Ltd).
B-9, Qutab Industrial Area,
Katwaria Sarai, New Delhi-110016

.....**Petitioner**

Versus

1. Sekura NRSS XXXI(B) Transmission Ltd.,
503, Windsor, off CST Road, Kalina, Santacruz (E), Mumbai-400098 (Maharashtra)
2. Northern Regional Power Committee
18-A, Shaheed Jeet Singh Marg, Qutab Institutional Area, New Delhi-110016
3. Central Electricity Authority,
Sewa Bhawan, Rama Krishna Puram, Sector -1, New Delhi-110066
4. National Load Despatch Centre,
B-9, First Floor, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016
5. Northern Regional Load Despatch Centre,
18-A, Shaheed JEET Singh, Sansanwal Marg, Katwaria Sarai, New Delhi-110016
6. Khargone Transmission Ltd.,
F1, The Mira Corporate Suite, Plot No.1 &2, C-Block, 2nd Floor, Ishwar Nagar,



- Mathura Road, New Delhi-110065
7. NER-II Transmission Ltd.
F1, The Mira Corporate Suite, Plot No.1 &2, C-Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 8. East North Interconnection Company Ltd.,
The Mira Corporate Suite, Plot No.1 &2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 9. Bhopal Dhule Transmission Company Ltd.,
The Mira Corporate Suite, Plot No.1 &2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 10. Jabalpur Transmission Company Ltd.,
The Mira Corporate Suite, Plot No.1 &2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 11. NRSS XXIV Transmission Ltd.,
The Mira Corporate Suite, Plot No.1 &2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 12. Purulia & Kharagpur Transmission Co. Ltd.,
The Mira Corporate Suite, Plot No.1 &2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 13. RAPP Transmission Company Ltd.,
The Mira Corporate Suite, Plot No. 1&2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 14. Maheshwaram Transmission Ltd.,
The Mira Corporate Suite, Plot No. 1&2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 15. Gurgaon Palwal Transmission Ltd.,
The Mira Corporate Suite, Plot No. 1&2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 16. Odisha Generation Phase-II Transmission Ltd.,
The Mira Corporate Suite, Plot No. 1&2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 17. Patran Transmission Company Ltd.,
The Mira Corporate Suite, Plot No. 1&2, C Block, 2nd Floor, Ishwar Nagar,
Mathura Road, New Delhi-110065
 18. Western Transco Power Ltd.(WTPL)
Achalraj, Opp.Mayor Bungalow, Law Garden, Ahmedabad-380006
 19. Western Transmission (Gujarat) Ltd., (WTGL)
Achalraj, Opp. Mayor Bungalow, Law Garden, Ahmedabad-380006
 20. Chhattisgarh WR Transmission Ltd.,
Achalraj, Opp. Mayor Bungalow, Law Garden, Ahmedabad-380006
 21. Raipur Rajnandgaon Warora Transmission Ltd.,
Achalraj, Opp. Mayor Bungalow, Law Garden, Ahmedabad-380006
 22. Sipat Transmission Limited
Achalraj, Opp. Mayor Bungalow, Law Garden, Ahmedabad-380006



23. Raichur Sholapur Transmission Co. Ltd.,
Patel Estate, S. V. Road, Jogeshwari (West), Mumbai-400102
24. POWERGRID Vizag Transmission Ltd.,
POWERGRID, SR HQ, 6th Floor, D. No. 6-6-8/32 &39/E, Kavadiguda,
Secunderabad-500080, Telangana
25. POWERGRID Unchahar Transmission Ltd.,
765/400/220 KV POWERGRID S/S, Fatehpur-Lalganj-Lucknow Road,
Village- Chauferva, Post & Distt-Fatehpur-212601(Uttar Pradesh)
26. Kudgi Transmission Ltd.,
Mount Poonamallee Road, Manapakkam, P.B. No.979, Chennai-600089
27. Darbhanga Motihari Transmission Co. Ltd.,
503, Windsor, Off CST Road, Kalina, Santacruz (E), Mumbai -40009 (Maharashtra)
28. NRSS XXXVI Transmission Ltd.,
Plot No. 19, Film City, Sec-16 A, Gautam Buddha Nagar, Noida, UP-201301
29. Warora Kurnool Transmission Ltd.,
Achalraj, Opp. Mayor Bungalow, Law Garden Ahmedabad-380006
30. POWERGRID Southern Inter Connector Transmission System Ltd (PSITSL),
POWERGRID, SR1 HQ, D.No.6-6-8/32&395/E, Kavadiguda,
Secunderabad-500080, Telangana
31. POWERGRID Parli Transmission Ltd (PPTL),
Sampriti Nagar, Nari Ring Road, Uppalwadi, Nagpur-440026
32. POWERGRID Kala Amb Transmission Ltd.
(PKATL) 400/220KV Barwala Sub-station, Vill-Naggal, NH-73,
Barwala Panchkula, Haryana-134118
33. POWERGRID Warora Transmission Ltd, (PWTL)
WR-1 RHQ, Sampriti Nagar, Nari Ring Road,
PO: Uppalwadi, Nagpur-440026(Maharashtra)
34. Powergrid NM Transmission Limited Southern
Region Transmission system –II, RHQ, Near Driving Test Track,
Singanayakanhalli, Yelahanka Hobli, Bangalore-560064
35. Powergrid Jabalpur Transmission Limited, POWERGRID,
Plot No. 54, Jay Ambe School, Sama-Savli Road, Vadodara-390018, Gujarat
36. Alipurduar Transmission Ltd.(ATL)
Achalraj, Opp. Mayor Bungalow, Law Garden Ahmedabad-380006
37. KOHIMA-MARIANI Transmission Ltd.,
B-5, Tower-3, 3rd Floor, Okaya Business Centre,
Sector-62, Noida, (Uttar Pradesh) 201306, India
38. POWERGRID Medinipur Jeerat Transmission Ltd.
POWERGRID, Eastern Region II Headquarters, CF-17,
Action Area 1C, New Town, Rajarhat, Kolkata-700156
39. POWERGRID Mithilanchal Transmission Ltd.
POWERGRID, ERTS-I Regional Haed Quarter, Near Transformer Repair Works,
Board Colony, Shastri Nagar, Patna-800023 (Bihar)
40. POWERGRID Ajmer Phagi Transmission Ltd. SCO bay 5 to 10,



SECTOR-16A, FARIDABAD, HARYANA- 121002

41. Power Grid Corporation of India Ltd.
Load Dispatch & Communication (LD&C), B-9,
Qutab Institutional Area, Katwaria Sarai, New Delhi-110016Respondents

Parties Present:

Shri Samar Chandra De, NERLDC
Shri M. G. Ramachandran, Senior Advocate, STL
Ms. Suparana Srivastava, Advocate, CTUIL
Shri Tushar Mathur, Advocate, CTUIL
Ms. Astha Jain, Advocate, CTUIL
Shri Shubham Arya, Advocate, STL
Ms. Shikha Sood Advocate, STL
Ms. Reeha Singh, Advocate, STL
Ms. Pallavi Maitra, Advocate R-7 to 12
Shri Venkatesh, Advocate, NRSS XXXVI
Shri Anand Singh Ubeja, Advocate, NRSS XXXVI
Shri Mohit Mansharamani, Advocate, NRXX XXXVI
Shri Hemant Singh, Advocate, WTPL
Shri Chetan Garg, Advocate, WTPL
Shri Swapnil Verma, CTUIL
Shri Ranjeet S. Rajput, CTUIL
Shri Priyansi Jadya, CTUIL

ORDER

Central Transmission Utility (CTU) has filed the present Petition under Section 79(1)(f) of the Electricity Act, 2003, read with Regulation 111 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, seeking directions for installation of optical ground wire for the 400kV Kurukshetra – Malerkotla transmission line established under the Northern Region System Strengthening Scheme XXXI(B).

2. The Petitioner has made the following prayers:
- i. *Issue appropriate directions to Respondent No.1 for allowing OPGW installation on the 400kV Kurukshetra-Malerkotla D/c line under the Reliable Communication Project approved for the Northern Region by Northern Region Power Committee to ensure early completion of the link.*
 - ii. *Issue further appropriate directions to Respondent No.1 for facilitating and allowing OPGW installation in the transmission elements implemented by transmission licensees in line with the mandate of Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020; any other applicable Regulations/Procedure in this regard, orders and directions of this Hon'ble Commission and*



the decision of coordinated meetings between entities such as Regional Power Committees (RPC), Central Electricity Authority (CEA), Central Transmission Utility (CTU), National/Regional Load Despatch Centres (NLDC/RLDC) and other statutory/regulatory stakeholders.

- iii. *Pass such further and other order(s) as this Hon'ble Commission may deem fit and proper in the facts and circumstances of the present case.*

Submission of Petitioner

3. Petitioner has made the following submissions:
- (a) Communication systems are essential to facilitate the secure, reliable and economic operation of the grid and are an important pre-requisite for the efficient monitoring, operation and control of the power system. The provisions relating to communication systems for the power sector have been initially spelt out in the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (hereinafter "Grid Code, 2010") and the Central Electricity Authority (Technical Standard for Connectivity to the Grid) Regulation, 2013 (hereinafter "Grid Standard for Connectivity") whereunder, all requesters, users, Central/State Transmission Utilities are obligated to provide systems to telemeter power system parameters. Thereafter, on 15.5.2016, this Commission notified the Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017 (hereinafter "Communication System Regulations, 2017"), which lay down the rules, guidelines, and standards to be followed by various persons and participants in the system for the continuous availability of data for system operation and control including market operations.
- (b) Petitioner has been entrusted with the responsibility for the development of an efficient and coordinated communication system on a regional basis, which is to be connected to provide a backbone communication system spread across India as per the Manual of Communication Planning Criteria of the Central Electricity Authority, 2019. CEA has further notified the Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, 2020 (hereinafter "Communication Standards Regulations, 2020"), laying down the requirements for planning, implementation, operation and maintenance and up-gradation of a reliable communication system for all communication requirements including exchange of data for power system at the national level, regional level,



inter-State level and intra-State level. The Regulations envisage planning of backbone regional and national communication network using ISTS transmission lines by the Petitioner as per requirement.

- (c) The Communication Standards Regulations, 2020, envisage planning of backbone regional and national communication network using ISTS transmission lines by the Petitioner as per requirement. Regulation 26 of the said Regulations necessitates the construction of wideband communications using fibre optic communication.
- (d) Optical Ground Wire (OPGW) is an optical fibre embedded in the earth wire, which is used in overhead power lines. In furtherance of the regulatory mandate, the Petitioner has established the backbone communication network in the Northern Region as part of various projects such as the Unified Load Despatch & Communication (ULDC) Project, Microwave Replacement Project and Fiber Optic Expansion Projects, apart from other transmission projects.

The Reliable Communication Scheme under the Central Sector for Northern Region was proposed by the Petitioner in the 35th Technical Coordination Committee (TCC) Meeting held on 1.5.2017, which was approved in the 39th Meeting of the Northern Regional Power Committee held on 2.5.2017.

In this manner, the scheme for the installation of OPGW based reliable communication system with a network size of 7248kms (including OPGW replacement of ULDC Phase –I) by the Petitioner in the Northern Region was approved for its implementation. In accordance with the above approval, which was reiterated in the 40th Meeting, the Petitioner proceeded with the installation of around 7248 km of OPGW along with the communication equipment under the central sector in the Northern Region.

- (e) The implementation of an additional network with the Reliable Communication Scheme under the Central Sector for the Northern Region was approved in the 47th Meeting of the Northern Regional Power Committee held on 11.12.2019 and in the 44th Meeting of the Technical Coordination Committee held on 10.12.2019. Accordingly, the revised network size of the Reliable Communication Project will become 7398 Km. As a part of the above scheme, OPGW was also agreed to be installed on the 400kV Kurukshetra-Malerkotla line (180km) by replacing the existing earth wire.



- (f) The Petitioner has taken up implementation of the project wherein OPGW is to be installed on ISTS transmission lines by replacing existing earth wire. For that purpose, the Petitioner has entered into a contract dated 31.1.2019 with M/s Apar Industries Ltd. (APAR) after the selection of the same based on an open tender.
- (g) The 400kV ISTS transmission line connecting Kurukshetra-Malerkotla had been implemented by Respondent No.1 as part of the transmission scheme in the name of “Northern Region System Strengthening Scheme XXXI (B)” through the TBCB route as follows:
- i. 400 kV Kurukshetra-Malerkotla D/c line
 - ii. 400 kV Malerkotla-Amritsar D/c line
- (h) In view of the regulatory mandate for implementing the national backbone communication system, including for the Northern Region, the Petitioner approached Respondent No.1 for the installation of OPGW on the 400kV D/c Kurukshetra- Malerkotla line built by the Respondent. Further, vide email dated 15.9.2020, the Petitioner clarified certain queries raised by Respondent No.1
- (i) Respondent No.1 vide letter dated 5.10.2020 raised issues with respect to the installation of OPGW on the 400kV Kurukshetra-Malerkotla transmission line and stated that it was unable to understand the regulatory provision which allowed that part of TBCB asset could be removed/dismantled and adjusted against the capital cost of other cost-plus assets in order to achieve tariff optimization in cost plus project. As such, Respondent No.1 declined to grant its consent “to take away NTL earth wire including hardware & fittings by M/s. APAR Industries Ltd. after dismantling for executing OPGW Work”. Respondent No.1 also sought clarifications from the Petitioner with respect to the following:
- i. The available regulatory provisions and contractual provisions under the TSA under which implementation of OPGW ULDC scheme through its asset would not entail any impact on the revenue of the asset.
 - ii. Petitioner to hand over the verified quantity of earth wire, including accessories to Respondent No.1 after proper re-rolling on drums at its Patiala store.



- iii. Whether any damage to the assets of Respondent No.1 during the installation of OPGW by the Petitioner would be rectified by the Petitioner at its own to the level of satisfaction of Respondent No.1.
- iv. Petitioner to provide schedule of work execution, planning, details of executing agency etc., to Respondent No.1 prior to mobilizing the work at the site for joint discussion purposes.
- v. Whether the Petitioner would indemnify Respondent No.1 towards:
 - a. Outage/tripping of line implemented by Respondent No.1, which might reduce transmission line service availability.
 - b. Any perspective dispute, litigation or (RoW/crop) compensation claims raised by any of the landowners.
- vi. From the lifetime operation and maintenance perspective after the completion, commissioning and capitalization of the OPGW work, clarification with respect to:
 - a. Ownership of the transmission line, particularly in view of the substitution of earth wire by the Petitioner and if the asset was to be handed over to Respondent No.1 for ease of its operation and maintenance in future.
 - b. Whether the Petitioner intended to utilize the transmission line commercially in any manner.
- (j) Petitioner vide letter dated 12.10.2020 informed Respondent No.1 that live-line installation of OPGW was field proven and more than 70,000 kms of installation had been completed by the Petitioner. As regards the return of earth-wire and other issues raised by Respondent No.1, the Petitioner stated that the same could be dealt with in line with the decision taken during the Meeting chaired by the Member Secretary, Northern Region Power Committee on 5.3.2019 on similar issues raised by M/s Parbati Koldam Transmission Company Limited (PKTCL) for OPGW installation on their lines. Petitioner's prayers are liable to be seen in the context and perspective of the obligations of Respondent No.1 in terms of the Transmission Service Agreement dated 02.01.2014.
- (k) Respondent No.1 is also obligated in terms of the provisions of the CERC (Procedure, Terms and Conditions for grant of Transmission License and other



related matters) Regulations, 2009, to maintain the project in accordance with the prudent utility practices and applicable directions passed by competent authorities.

- (l) The OPGW requirement on the said line under the Reliable Communication Project is vital for providing reliable and redundant communication of Malerkotla 400kV ISTS sub-station to the Northern Region Load Despatch Center and the Malerkotla 400 kV ISTS sub-station is important for evacuation of bulk power to Punjab through the downstream of 800 kV Champa-Kurukshetra HVDC line.
- (m) Respondent No.1 or any similarly placed transmission licensee may have inter alia the following concerns or issues, on which the Commission may be pleased to issue appropriate guidance and directions:
- i. Change in value (if any) of their assets upon replacement of existing earth-wire with OPGW (optical ground-wire) when such installation is being carried out at the behest of CTU/POWERGRID.
 - ii. Impact of this change in assets on the tariff (if any).
 - iii. Impact of tripping and shutdowns on their system availability (if any)
 - iv. Ownership of OPGW.
 - v. Permission for the licensee to use OPGW for any commercial purpose.
- (n) The Commission may issue directions and guidance in general governing the installation of OPGW wherever so required in accordance with the mandate of Communication Standards Regulations, 2020, Communication System Regulations, 2017 or any other applicable Regulations/Procedure in this regard; orders and directions of this Commission and the decision of coordinated meetings between entities such as Regional Power Committees (RPC), Central Electricity Authority (CEA), Central Transmission Utility (CTU), National/Regional Load Despatch Centres (NLDC/RLDC) and other statutory/regulatory stakeholders.

Hearing on 25.06.2021

4. Petition was admitted on 25.06.2021, and the Commission observed that the issues raised by CTUIL in the instant matter may arise in the case of other TBCB projects. Therefore, the Commission directed CTUIL to implead all the transmission



licensees implementing transmission projects under the TBCB route as respondents so that all of them may be heard and suitable directions could be issued in one order instead of deciding the issues in multiple petitions. The Commission further directed the Petitioner to implead PGCIL as a party to the proceedings. The Commission also directed STL to discuss with CTUIL and firm up the issues that may arise in the installation of OPGW in place of earth wire in various TBCB projects for smooth and proper adjudication of the issues involved.

Submission of Petitioner

5. Petitioner vide affidavit dated 30.11.2021 and dated 08.03.2022 has filed an “Amended Memo of parties” impleading other transmission licensees.
6. Petitioner vide affidavit dated 08.03.2022 submitted the Minutes of Meeting dated 14.07.2021 between CTU, NRSS XXXI(B) Transmission Ltd (NTL) & Powergrid and Minutes of the Meeting held on 13.08.2021 with ISTS licensees to discuss issues related to OPGW installation on Malerkotla - Kurukshetra line & LILO of Fatehgarh – Bhadla line at Fatehgarh-II. There were divergent opinions with respect to the implementation, ownership, maintenance and operation of OPGW and no consensus was arrived at in these meetings.

Hearing on 10.03.2022

7. The Commission directed CTUIL to hold a further meeting(s) with the transmission licensees and come out with a suitable proposal for smooth and proper adjudication of the issues involved.
8. The Commission directed the Petitioner to submit the list of transmission assets along with the transmission licensee’s name wherein this replacement of earth wire/ old OPGW is planned and any other issues being faced by CTUIL related to modifications required to be carried out in TBCB assets keeping in view the integrated nature of ISTS.



Submission of Petitioner

9. Petitioner vide affidavit dated 29.03.2022 has submitted as follows:

- (a) The list of the transmission assets along with the transmission licensee's name wherein the replacement of earthwire/old OPGW is planned (as on 29/03/2022) has been submitted comprising of majority assets of Powergrid and one line Western Transmission Power Ltd (Adani).
- (b) In case the replacement of earth wire/old OPGW is planned in additional transmission assets in future, the same would be informed to the Commission by the Petitioner.
- (c) The issues (including issues other than replacement of earth wire/old OPGW) being faced by the Petitioner related to modifications required to be carried out in TBCB assets is tabulated as below:

Sr. No.	Name of Owner Utility (TBCB/JV/ IPTC)	Name of lines	Issues raised by owner Utilities/likely to arise	Comments
1.	M/s. NTL (NRSS XXXI(B) Transmission Limited) M/s Sekura Ltd.	400kV Kurukshetra – Malerkotla TL (139Km)	<ul style="list-style-type: none"> a. Impact on tariff and revenue after replacement of Earthwire with OPGW (POWERGRID ownership). b. Handing over the Earthwire. c. Rectification of any damaged asset in the process of OPGW installation. d. Prior intimation of any work and responsible contractor. e. Indemnification of any outage or claimed compensation by any landowner. f. Ownership of OPGW and its O&M. g. Any commercial use of OPGW. 	POWERGRID has communicated that it has no objection if the implementation of the laying of OPGW is undertaken by M/s Sekura NRSS XXXI(B) Transmission Ltd (STL)
2.	M/s. PKTCL (M/s. IndiGrid) (JV with POWERGRID)	<ul style="list-style-type: none"> i. 400kV S/C Parbati III(HEP) – Parbati Pooling (7Km) ii. 400kV S/C Parbati II(HEP) – Parbati III (12Km) iii. 400kV Parbati Pooling – Koldam (65Km) 	<ul style="list-style-type: none"> a. Rectification of any damaged asset in the process of OPGW installation. b. Return of earthwire c. Any commercial use of OPGW. 	POWERGRID has communicated that M/s PKTCL may do the installation of OPGW on their own, as discussed during the meeting with Licensees on 13.08.21.
3.	Torrent Power Limited	(i) LILO of Pirana (PG) – Pirana (T) 400kV D/c line at Ahmedabad S/s with twin HTLS along	a. Long shutdown is required for the execution of reconductoring and bay upgradation work. This may	As such no issue has been raised by owner/implementer. However, the implementation work through TBCB for bay



	(TBCB)	with reconductoring of Pirana (PG) – Pirana(T) line with twin HTLS conductor (ii) Bay upgradation work at Pirana (PG) & Pirana (T)	affect the availability of other bays intermittently. b. Commercial issues may be raised by the owner for the modification.	upgradation works and reconductoring in the existing line of Torrent Power will require dismantling, breakage, and removal of existing infrastructure in the premises of Torrent Power by the new TSP.
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(d) The Ministry of Power vide its Order No. 15/3/2017-Trans-Pt(1) dated 09.03.2022 has issued the “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)”. The Guidelines define the categories of Communication System Schemes for ISTS as Category (A) and Category (B) and provide their corresponding approval procedure. The categories A and B have been defined under the Guidelines as follows: -

- **Category (A):** Communication system directly associated with new ISTS as well as incidental due to implementation of new ISTS elements (e.g. LILO of existing line on new/existing S/s where OPGW/terminal equipment are not available on the existing mainline/substations etc.)
- **Category (B):** Upgradation/modification of existing ISTS Communication system pertaining to the following:
 - Missing Links Redundancy/ System Strengthening
 - Capacity upgradation (Terminal equipment)
 - Completion of life of existing communication system elements
 - Other standalone project e.g. Cyber Security, Unified Network Management System (UNMS)
 - Adoption of New Communication Technologies

(e) Under the Guidelines, the requirement for a communication system linked with the new ISTS, shall be included in the new ISTS package and the combined proposal shall be approved as per the directions contained in MoP’s Office Order dated 28.10.2021 regarding the Re-constitution of the “National Committee on Transmission” (NCT). In the case of Category (B), Communication Schemes/Packages proposed by CTUIL for the upgradation/modification of the existing ISTS Communication System, standalone projects, and adoption of new technologies shall be put up to RPC for their views, and RPC has to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of



the proposal from CTUIL. The Schemes/Packages, along with the views of RPC shall be approved by NCT. Subsequent to communication received from POWERGRID that it has no objection if the implementation of laying of OPGW is undertaken by M/s Sekura NRSS XXXI(B) Transmission Ltd (STL), the installation of OPGW on 400kV Kurukshetra-Malerkotla Transmission Line in the instant petition may be undertaken as per the procedure prescribed for category (B) communication systems under the Guidelines.

- (f) The Guidelines formulated by the Ministry of Power settle the divergent opinions with respect to implementation, ownership, maintenance and operation of OPGW between the transmission licensee and CTUIL and therefore, difficulty/disputes which are under consideration in the present Petition are not likely to recur in near future.

Submission of Respondent Western Transco Power Limited (WTPL)

10. Respondent No.18 **Western Transco Power Limited (WTPL)** vide affidavit dated 29.04.2022 has mainly submitted as under:
- (a) Respondent No. 18, Western Transco Power Limited, is a Transmission Licensee and the 765/400kV Pune (PG) (GIS) – 400kV Parli (PG) was constructed by Respondent No. 18, which was commissioned on 01.12.2013.
- (b) If the Commission allows some other party to lay OPGW on the transmission asset owned and operated by another licensee, the same would necessarily entail the following issues, which need to be considered by this Commission:
- i. The ownership of the OPGW shall remain uncertain as the transmission asset will belong to one entity, and the OPGW shall be owned by another entity.
 - ii. The OPGW which shall be installed may be utilized for commercial purposes such as communication etc., which cannot be allowed to an entity which is not the owner of the transmission asset, and the said entity cannot be permitted to make undue monetary gains by using the said asset.
 - iii. During installation of the OPGW, there may be damage to the existing asset of the Applicant.



- iv. The suitability of OPGW to the existing transmission asset is an important factor, which also requires consideration by this Commission.
 - v. Issues as regards the Right of Way (“RoW”) during the extraction of the existing wire.
 - vi. The Applicant will be liable to be compensated in case of any damage caused by the licensee during the installation of OPGW.
 - vii. Deemed availability/ compensation of financial loss in case of tripping, breakdown, maintenance etc., due to the reason not attributable to the transmission licensee which owns the transmission line in question.
 - viii. Whether O&M will be carried out by the transmission licensee which owns the transmission line in question.
11. The Commission is precluded from granting a license or permission to any other party qua a transmission asset which is owned by Respondent No. 18.

Submission of other Respondents

12. The other Respondents NER-II Transmission LTD. (NERII), Parbati Koldam Transmission Co. LTD. (PKTCL), Gurgaon Palwal Transmission Co. LTD. (GPTL), Jabalpur Transmission Co. LTD. (JTCL), Maheshwar Transmission Co. LTD. (MTL), RAPP Transmission Co. LTD. (RTCL), Bhopal Dhule Transmission Co. LTD. (BDTCL), Odisha Generator Phase-II Transmission Co. LTD. (OGPTL), East North Interconnection Transmission Co. LTD. (ENICL), Patran Transmission Co. LTD (PTCL) and Purulia & Kharagpur Transmission Co. LTD (PKTCL), vide their individual affidavit dated 29.05.2022 have submitted the similar submission, which are as under:
- (a) The present Petitioner is obligated to comply with the provisions of Communication System Regulations, 2017, which requires the Petitioner to undertake only the planning of the communication system and not undertake installation of OPGW and communication system on the assets of the other transmission licensees.
 - (b) Section 17 of the 2003 Act has a bar on the Petitioner to acquire the transmission assets of any other licensee by any arrangement. The prayers made by the Petitioner are tantamount to the Petitioner acquiring the transmission assets of the



Respondent Licensee for installing OPGW. This is clearly stated in negative language in clause 1(a) of section 17 of the 2003 Act.

(c) The “Guidelines on Planning and Communication System for Inter State Transmission System” do not mandate the CTUIL or PGCIL to install OPGW on the transmission lines/transmission projects owned by other transmission licensees. The said Guidelines state that the proposal made by the Petitioner for the upgradation/modification of the existing ISTS communication system, etc., shall be put up to RPCs for their views.

(d) The following substantial issues arise in the present matter:

(A) Proposal may entail modification of license conditions:

- i. In the event that the Petitioner is to replace the earth wires of other transmission licensees, there may be an issue attracting license amendment, which *inter alia* requires prior permission of the Lenders. Moreover, if the ownership of OPGW is to remain with the Petitioner, then two different transmission licensees will have ownership over one TBCB asset, which will lead to complexities in terms of operation and maintenance of the asset, leveraging of the assets for another business, RoW/crop compensation, outage and availability related claims, etc.

(B) The issue of Deemed Availability.

(C) The issue of CTUIL engaging in “Other Business” under section 41 of the 2003 Act:

- i. The proposal of the Petitioner to install OPGW on the transmission assets of another Transmission Licensee entails the Petitioner to recover capital expenditure and other expenditure on installing the OPGW from the point of connection, transmission charges from the base of customers of the Petitioner.
- ii. Section 41 only allows the transmission licensee to engage in any business for “Optimum Utilization of its assets.” Therefore, under section 41 of the 2003 Act, one transmission licensee cannot engage in another business for utilization of another transmission licensee’s assets.
- iii. There is no basis in fact or in law based on which the Respondent No.1 transmission licensee or any other transmission licensee would permit the



- Petitioner or PGCIL to utilize their own transmission assets for CTUIL/PGCIL to derive revenue from installing the OPGW.
- iv. Under section 41, the Second Proviso thereto prohibits the Respondent No.1 licensee or other transmission licensees from providing their own transmission assets to CTUIL/PGCIL because that would be tantamount to encumbering its transmission assets for the loans/financial assistance that CTUIL/PGCIL would incur for the expenditure on OPGW installation.
 - v. Respondent No.1 licensee/other transmission licensees cannot be deprived of return on investment on their own transmission assets by depriving them of installing the OPGW on their own assets.

(D) The issue of Indemnification: The transmission licensees will be exposed to disputes on account of right-of-way issues with locals, outages, decrease in availability of transmission system, loss of revenue, etc., if the OPGW is installed by CTUIL/PGCIL and hence transmission licensees should be indemnified by CTUIL and/or PGCIL, as the case may be.

- (e) The dismantled earth wires will have to earn scrap value which will be amenable to treatment under the sharing of non-tariff income between the beneficiaries and LTTCs and transmission licensees. Can CTUIL nor PGCIL be permitted to replace the existing earth wires of the transmission assets of the Answering Respondent/other transmission licensees?

Submission of Petitioner

- 13. Petitioner vide affidavit dated 12.05.2023 has submitted that in compliance with the directions of the Commission, a meeting was held between CTUIL & ISTS Transmission Licensees on 08.05.2023, and the minutes of the same have been submitted.

Hearing on 15.05.2023

- 14. During the hearing on 15.05.2023, following has been recorded:

"3. Learned counsel for CTUIL informed that pursuant to the direction of the Commission given in the instant petition vide Record of Proceedings dated 10.3.2022, a meeting was held between CTUIL and ISTS transmission licensees on 8.5.2023, wherein it was recorded that in the earlier meeting held on 13.8.2021, between CTUIL and the transmission licensees, it was agreed by general consensus that unless otherwise requested, the work



regarding installation of OPGW shall be awarded to the asset owner. She further informed that a meeting was also held on 13.3.2023, amongst CTUIL, Powergrid and Sekura pursuant to the directions of the Commission vide RoP dated 10.3.2022 to discuss OPGW installation on 400 kV D/C Malerkotla- Kurukshetra line owned and operated by Sekura wherein Sekura suggested that OPGW work should be awarded to them as additional work being change in the original transmission line scope and cost of the same shall be recovered by revision in their existing TBCB tariff. Learned counsel for the CTUIL submitted that the work shall be awarded in RTM mode and tariff of the same shall be determined by the Commission as per the applicable regulations.

4. Learned counsel for Respondent No.18/WTPL submitted that while passing order in present petition, the Commission may bear in mind that the matter in issue is of Communication System and to what extent the powers under the Electricity Act, 2003 can be used in allowing revenue or in approving or determining tariff of Communication System which is not part of the transmission. In response, learned counsel for the CTUIL submitted that the Communication System is part of the transmission system CTUIL submitted that the work should be awarded in RTM mode and tariff of the same shall be determined by the Commission as per the applicable regulations.”

15. After hearing the Petitioner and Respondents, the Commission reserved the order in the matter on 15.05.2023.

Written Submission of Respondent No. 1, SEKURA NRSS XXXI(B) Transmission Ltd

16. Respondent No.1, **SEKURA NRSS XXXI(B) Transmission Ltd** has made written submissions dated 05.06.2023 as under:
- (a) CTUIL has proposed the following in view of MoP “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)” dated 09.03.2022 and recent approvals of OPGW on existing lines:
- (i) OPGW installation work under ISTS Communication requirement shall be awarded to the transmission line asset owner.
 - (ii) Terminal equipment associated with OPGW cable shall be awarded to bay owner/s of the transmission line on which OPGW is proposed for installation.
- (b) A consensus has emerged that Respondent No. 1 can undertake the implementation of OPGW in the transmission assets owned by it and further that such OPGW cables will form part of its transmission assets, which ownership would also lie with Respondent No 1.
- (c) The NRSS project has been developed and operated by Respondent No. 1 as a Tariff based Competitive Bidding licensee. All transmission assets forming part of the NRSS XXXI B Project are subject to the tariff that has been arrived at pursuant to competitive bidding in accordance with the guidelines issued by the Ministry of



Power (“MOP”). Accordingly, the regime that governs the tariff of the NRSS XXXI B project falls under Section 63 of the EA 2003.

- (d) OPGW cables do not constitute a standalone asset. It is only a part of the transmission assets of a transmission licensee. The NRSS XXXI B Project is regulated under Section 63 of the EA 2003, it may not be appropriate to apply a separate regulated tariff mechanism for the upcoming OPGW cables of the NRSS XXXI B Project.
- (e) In view of the above, the OPGW cables forming part of the communication system would form an integral part of the transmission lines owned and operated by Respondent No. 1.
- (f) In the context of factoring in the implementation of the Reliable Communications Scheme in the tariff of the TBCB licensee, implementation of the Communication System as part of the NRSS XXXI B project by replacing the earth-wire with OPGW cables is an additional requirement under the mandate of law. Considering that the said requirement has cropped up after the bid deadline, the implications of the above should be considered under the Change in Law provision of the Transmission Service Agreement (TSA).
- (g) The consequences of the Change in Law and, in particular, the computation of the impact thereof upon the tariff have been set out in detail under the TSA. Considering that the TSA governs the tariff for the entire transmission assets in the NRSS project, any change in such tariff would fall within the purview of the TSA.
- (h) There is precedent for allowing additional expenditure incurred on account of a Change in Law to be passed through in the tariff. Reliance is placed on *Talwandi Sabo Power Limited vs Punjab State Electricity Regulatory Commission* [MANU/ET/0054/2020], wherein the Tribunal held that the MoEF and CC Notification constituted a Change in Law event and any additional expenditure incurred on account of the installation of flue-gas desulphurisation system was to be included as Additional Capital Cost. Reliance is also placed on the judgment of the Tribunal in *NRSS XXXI (B) Transmission Limited vs Central Electricity Regulatory Commission* [MANU/ET/0071/2021]. In this case, the Appellant has claimed compensation on account of the increase in the length of the transmission lines due to a change in the Gantry Coordinates from the one indicated in the Survey Report.



- (i) Further, vide its Final Order dated 13.05.2022 in remand proceedings in Petition no. 195MP2017, it was decided as follows:

“16. Accordingly, NTL shall recover from LTTCs the IDC and IEDC incurred for the extended period of SCOD and compensation for the actual change in the length of the Transmission lines as against the length of the Transmission lines in case the Gantry Coordinates would have been same as indicated in the Survey Report in accordance with Article 12.2.1 of the TSA i.e. increase in non-escalable transmission charges at the rate of 0.313% for a cumulative increase of capital cost of Rs. 1.158 crore incurred up to the extended SCOD of the project.”

- (j) Procedurally and administratively, it would be quite difficult and challenging for the TSP, CTUIL & other stakeholders involved actively in the ISTS transmission charges billing, collection & disbursement (BCD) process from a viewpoint that parts of the same transmission asset owned & operated by same Transmission Licensee would be treated under two different tariff regimes i.e. part asset under TBCB Tariff and part asset under RTM mode. The commission may please consider the single tariff regime under the available provision of the TSA for all such similar cases of OPGW laying in the existing transmission TBCB assets.

Analysis and Decision

17. We have considered the submissions of the Petitioner, and Respondents and perused all relevant documents on record. The following issues arise for our consideration:

Issue No. 1: Who shall be responsible for implementing the installation of optical ground wire (OPGW) to strengthen the communication network by replacing the earth wire on the existing transmission line owned by a transmission licensee?

Issue No. 2: What other factors need to be considered while such replacement is carried out, such as the impact on discovered tariff, availability, loss due to damage, etc. for the transmission licensee?

The above issues have been dealt with in succeeding paragraphs.



Issue No. 1: Who shall be responsible for implementing the installation of optical ground wire (OPGW), to strengthen the communication network by replacing the earth wire on the existing Transmission Line owned by a transmission licensee?

18. Petitioner has submitted that the Reliable Communication Scheme under Central Sector for Northern Region for installation of OPGW based reliable communication system with a network size of 7248 kms (including OPGW replacement of ULDC Phase-I), by the Petitioner, was approved in the 39th Meeting of the Northern Regional Power Committee held on 2.5.2017, which was revised to 7398 Km in the 47th Meeting of the Northern Regional Power Committee held on 11.12.2019.
19. Petitioner has taken up the implementation of the project wherein OPGW is to be installed on ISTS transmission lines by replacing existing earth wire for which it has entered into a contract dated 31.1.2019 with M/s Apar Industries Ltd. (APAR) as per which dismantled earth wire shall be taken away by the contractor.
20. Petitioner has approached Respondent No.1 for installation of OPGW on the 400kV D/c Kurukshetra-Malerkotla line, which was opposed by Respondent No. 1 seeking clarifications on the regulations under which Petitioner has proposed to take away part of its asset and the ownership of new OPGW among other queries.
21. Respondent Western Transco Power Limited (WTPL) has submitted that the OPGW which shall be installed may be utilized for commercial purposes such as communication etc., which cannot be allowed to an entity which is not the owner of the transmission asset, and that the said entity cannot be permitted to make undue monetary gains by using the said asset. Further, during the installation of the OPGW, there may be damage to the existing assets of the Applicant. WTPL. Further, the concerns on Deemed availability/ compensation of financial loss in case of tripping, breakdown, maintenance, etc., due to the reason not attributable to the transmission licensee which owns the transmission line in question need to be handled besides who will carry out O&M of such OPGW.
22. The Respondents NER-II Transmission LTD. (NERII), Parbati Koldam Transmission Co. LTD. (PKTCL), Gurgaon Palwal Transmission Co. LTD. (GPTL), Jabalpur Transmission Co. LTD. (JTCL), Maheshwar Transmission Co. LTD. (MTL), RAPP Transmission Co. LTD. (RTCL), Bhopal Dhule Transmission Co. LTD. (BDTCL), Odisha Generator Phase-II Transmission Co. LTD. (OGPTL), East North



Interconnection Transmission Co. LTD. (ENICL), Patran Transmission Co. LTD (PTCL) and Purulia & Kharagpur Transmission Co. LTD (PKTCL) have opposed the replacement of earth wire by any other licensee such as Petitioner.

23. Subsequent to the filing of the instant Petition, several rounds of meetings were undertaken by CTUIL with transmission licensees wherein consensus emerged during the meetings held on 13.3.2023 and 8.5.2023 regarding modalities for implementation of OPGW raised in the instant Petition.
24. We have considered the submissions of the Petitioner and Respondents and have also perused the facts on record.
25. The relevant extracts of the 39th Meeting of the NRPC held on 2.5.2017, and 47th Meeting of the NRPC held on 11.12.2019 are as under:

39th Meeting of the NRPC held on 2.5.2017

"NRPC Deliberations

B.6 Reliable Communication Scheme under Central Sector for Northern Region

B.6.7 NRPC approved the proposal by POWERGRID for installation of 5474 kms. of OPGW based communication scheme, at an estimated cost of Rs.137 Crs."

"B.17 Replacement of OPGW installed under ULDC Phase-I

B.17.6 POWERGRID informed that 24-F OPGW would be considered as per the existing philosophy and along with communication equipment for which the estimated cost would be Rs.59 Crs. The scheme would become part of existing Commercial Agreement signed for ULDC Project and would be implemented as part of Reliable Communication Scheme under Central Sector for Northern Region.

B.17.7 After detailed deliberations NRPC approved the proposal of replacement of old OPGW installed under ULDC phase-I..."

47th Meeting of the NRPC held on 11.12.2019

"B.6.4 After detailed deliberations, the following links were agreed upon:

<i>Sl. No.</i>	<i>Name of Link</i>	<i>Route Length (km)</i>	<i>Purpose</i>
<i>1</i>	<i>400kV Panchkula-Patiala</i>	<i>65.494</i>	<i>Physical Path Redundancy & route diversity for Panchkula S/s</i>
<i>2</i>	<i>400kV Jalandhar Moga</i>	<i>85.15</i>	<i>Physical Path Redundancy & route diversity for Jalandhar (PG) through Central Sector links.</i>
<i>3</i>	<i>400kV Parbati PS - Amritsar</i>	<i>250.53</i>	<i>Path Redundancy & route diversity of Parbati PS (Banala) & Hamirpur 4 through Central sector network.</i>
<i>4</i>	<i>LILO of Parbati - Amritsar at Hamirpur</i>	<i>6.7</i>	



5	400kV Kurukshetra-Malerkotla PG	180	Path Redundancy of Malerkotla (PG) through central sector network.
6	765kV Meerut - Moga	337.15	Route diversity of Moga S/S & creation of reliable ICCP link between Punjab, Rajasthan (through upcoming 765kV Bikaner Moga under GEC Part D & NRLDC).
7	400kV Dehradun-Bagpat	165	Physical path Redundancy & for route diversity of Bagpat S/S
8	400kV RAPP B -Jaipur South with LILO at Kota	226	Redundancy of Kota & RAPP through Central Sector network
9	400kV Allahabad-Singrauli	200	Redundancy of Singrauli
10	400kV Allahabad-Fatehpur 765	130	Strengthening of Inter Regional Connectivity (WR-NR). (400kV Fatehpur – Mainpuri is under implementation under Reliable Communication scheme)
11	400kV Kanpur - Ballabgarh	370	Redundancy of old Agra-Kanpur link which has reached the end of its useful life of 15 years.
12	Chittorgarh 400kV RVPN to Chittorgarh 220kV RVPN	07	Redundancy of Chittorgarh 220/132 through Central Sector network
13	400kV Lucknow – Kanpur	156	Redundancy of Network and avoiding multiple sub-stations
	TOTAL	2179.024	

B.6.5 POWERGRID further informed that in accordance with 39th & 40th NRPC meeting, implementation of 7248 Km OPGW is under execution. POWERGRID also informed that around 2031 km OPGW network is not coming up in the original reliable scheme (as approved in 39th NRPC) as some of the IPPs are not coming up and also connectivity for some were covered in different schemes. Considering the same and additional requirement of 2180 km as proposed for taking care of contingencies as per Communication Planning Criteria, the overall network size approved in 39th & 40th NRPC will increase by only 150 km considering new requirement of 2180 km in lieu of 2031km network not coming up as brought out above.

B.6.6 Accordingly, TeST sub-committee members have agreed for the implementation of 2180 Km of OPGW network under on-going Reliable Communication Project (7248 km) so that the same can be implemented within the same time period. The revised network size of Reliable Communication Project will become 7398 Km.

B.6.7 TCC recommended for the approval of the modified scheme as agreed by TeST subcommittee.

NRPC Deliberations

B.6.8 NRPC concurred with TCC deliberations.”

As per the above, the proposal of the petitioner for the installation of OPGW based communication network for Reliable Communication Scheme under the Central Sector for Northern Region was approved in 39th Meeting of NRPC held on 02.05.2017 and 47th Meeting of NRPC held on 11.12.2019, wherein the installation of OPGW on 400kV Kurukshetra - Malerkotla line (180km) by replacing the earth wire was agreed in 47th meeting of the NRPC.



26. Clauses 7.1.1 and 7.1.2 of the Transmission Service Agreement dated 02.01.2014 of Respondent No.1, as submitted by the Petitioner, provide as under:

“7. OPERATION AND MAINTENANCE OF THE PROJECT

7.1.1 The TSP shall be responsible for ensuring that the Project is operated and maintained in accordance with the Indian Electricity Grid Code (IEGC)/State Grid Code (as applicable), Transmission License, directions of National Load Despatch Centre/RLDC/SLDC (as applicable), Prudent Utility Practices, other legal requirements including the terms of Consents, Clearances and Permits and is made available for use by the Transmission Customers as per the provisions of applicable regulations including but not limited to the Central Electricity Regulatory Commission (Open Access in Inter-state Transmission) Regulations, 2004, Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, and the Central Electricity Authority Grid Standards of Operation and Maintenance of Transmission Lines (as and when it comes into force) as amended from time to time and provisions of this Agreement.

7.1.2 The TSP shall operate and maintain the Project in an efficient, coordinated and economical manner and comply with the directions issued by the National Load Despatch Centre, RLDC or the SLDC, as the case may be, in line with the provisions of the Electricity Act 2003 and Rule 5 of the Electricity Rules, 2005, and as amended from time to time.”

As per the above, the TSP (i.e. Transmission licensee) is responsible for ensuring the operation and maintenance of the project in an efficient, coordinated and economical manner and in compliance with the Indian Electricity Grid Code (IEGC)/State Grid Code (as applicable), Transmission License, directions of National Load Despatch Centre/RLDC/SLDC (as applicable), Prudent Utility Practices, other legal requirements.

Further, the “Prudent Utility Practices” defined in the TSA are as under:

“Prudent Utility Practices” shall mean the *practices, methods and standards that are generally accepted internationally from time to time by electric transmission utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation, repair and maintenance of the Project and which practices, methods and standards shall be adjusted as necessary, to take account of:*

- (i) operation, repair and maintenance guidelines given by the manufacturers to be incorporated in the Project,*
 - (ii) the requirements of Law, and*
 - (iii) the physical conditions at the Site*
-”*

As per the above, the TSP (i.e. Transmission licensee) is obligated to adopt the practices, methods and standards that are generally accepted internationally from time to time by electric transmission utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation, repair and maintenance of the Project and to take into account the guidelines given by the manufacturers, requirements of law and physical conditions at the site.



27. Regulation 7.2 of the Communication System Regulations, 2017, provides as under:

“7.2 Role of CTU (i) The CTU shall in due consideration of the planning criteria and guidelines formulated by CEA, be responsible for planning and coordination for development of reliable National communication backbone Communication System among National Load despatch Centre, Regional Load Despatch Centre(s) and State Load Despatch Centre(s) and REMCs along with Central Generating Stations, ISTS Sub - Stations, UMPPs, inter-State generating stations, IPPs, renewable energy sources connected to the ISTS, Intra-State entities, STU, State distribution companies, Centralised Coordination or Control Centres for generation and transmission. While carrying out planning process from time to time, CTU shall in addition to the data collected from and in consultation with the users consider operational feedback from NLDC, RLDCs and SLDCs.

(ii) The CTU shall plan the communication system comprehensively and prospectively for users considering the requirement of the expected nodes in consultation with Standing Committee to be constituted by CEA.”

As per the above, CTUIL shall be responsible for planning and coordination for the development of a reliable National communication backbone Communication System among the National Load despatch Centre, Regional Load Despatch Centre(s) and State Load Despatch Centre(s) and REMCs along with Central Generating Stations, ISTS Sub -Stations, UMPPs, inter-State generating stations, IPPs, renewable energy sources connected to the ISTS, Intra-State entities, STU, State distribution companies, Centralized Coordination or Control Centres for generation and transmission.

28. Clause (aa) of Regulation 2(i) and Regulation 7.8 of the Communication System Regulations, 2017, provide as under:

“2(i) aa) “User” means a person such as a Generating Company including Captive Generating Plant, RE Generator, Transmission Licensee [other than the Central Transmission Utility (CTU) and State Transmission Utility (STU)], Distribution Licensee, a Bulk Consumer, whose electrical system is connected to the ISTS or the intra-State transmission system.

.....

7.8 Role of Users:

(i) The Users including renewable energy generators shall be responsible for provision of compatible equipment along with appropriate interface for uninterrupted communication with the concerned control centres and shall be responsible for successful integration with the communication system provided by CTU or STU for data communication as per guidelines issued by NLDC.

(ii) Users may utilize the available transmission infrastructure for establishing communication up to nearest wideband node for meeting communication requirements from their stations to concerned control centres.

(iii) The Users shall also be responsible for expansion /up-gradation as well as operation and maintenance of communication equipment owned by them.”



As per the above, Users, inter-alia including transmission licensee, may utilize the available transmission infrastructure for establishing communication up to the nearest wideband node for meeting communication requirements and shall also be responsible for expansion /up-gradation as well as operation and maintenance of communication equipment owned by them.

29. Regulation 26(1) of the Communication Standards Regulations, 2020 provides as under:

“26. Requirements of fibre optic communication. (1) All wideband communications shall be established using fibre optic communication consisting of underground fibre optic cable, optical ground wire (OPGW) or underground fiber optic cable (UGFO) and all dielectric self supporting (ADSS).”

As per the above, all wideband communications shall be established using fibre optic communication.

30. The Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS) issued by MoP on 09.03.2022 provides as under:

“Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)

1. Introduction

In order to achieve safe, secure, stable and reliable operation of the grid as well as its economical and integrated operation, communication system plays a critical role. The communication system may be treated as an integral part of the transmission system. Therefore, it is imperative to carry out the planning for Communication System in Power Sector.

For planning, and coordination for development of communication system for inter-State transmission system, Central Transmission Utility is designated as the nodal agency.

Ministry of Power has formulated this guidelines named as “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)”. This guidelines defines the categories of Communication System Schemes for ISTS and their corresponding approval procedure.

2. Objective

Considering the critical role of Communication System in ISTS, a separate guidelines for its planning is essential. This guideline on Planning of Communication System for Inter-State Transmission System (ISTS) is being formulated with the objective to help in efficient, coordinated, smooth, economical and uniform planning of Communication System for ISTS.

3. Applicability

i. This guideline shall come into force from the date of its issuance by the Ministry of Power.

ii. The guidelines shall be applicable for communication system for ISTS only.

4. Categorization of Communication Schemes/Packages



Communication Schemes/Packages under this policy are categorized as Category (A) and Category (B). The description of categories is as under:-

Category (A): Communication system directly associated with new ISTS as well as incidental due to implementation of new ISTS elements (e.g. LILO of existing line on new/existing S/s where OPGW/terminal equipment are not available on the existing main line/substations etc.)

Category (B): Upgradation/modification of existing ISTS Communication system pertaining to following:

- Missing Links
- Redundancy/ System Strengthening
- Capacity upgradation (Terminal equipment)
- Completion of life of existing communication system elements
- Other standalone project e.g. Cyber Security, Unified Network Management System (UNMS)
- Adoption of New Communication Technologies

5. Procedure for approval of Communication Schemes/Packages

Category (A): As planning of ISTS Communication System is an integral part of planning of new Inter-State Transmission System, the requirement for communication system linked with new ISTS shall be included in new ISTS package and combined proposal shall be approved as per the directions contained in MoP office order dated 28.10.2021 regarding Re-constitution of the "National Committee on Transmission" (NCT).

Further, Communication requirements which are incidental due to implementation of new ISTS elements (e.g. LILO of existing line on new/existing S/s where OPGW/Terminal Equipment are not available on the existing main line/substations etc.) are also to be approved alongwith that of respective transmission system package.

Category (B):

Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System, standalone projects, adoption of new technologies shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL.

The Schemes/Packages alongwith the views of RPC shall be approved by NCT.

6. Communication system shall be planned in accordance with Central Electricity Authority (Technical Standards for Communication System in Power System Operations) Regulations, Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, Manual of Communication System Planning in Power System Operation published by Central Electricity Authority and other relevant regulations/guidelines/orders/policies issued by Government of India for development of reliable communication system for the power system."

As per the above, Communication Schemes shall be proposed by CTUIL for the upgradation/modification of the existing ISTS Communication System, standalone projects, and adoption of new technologies, respectively.

31. We observe that the modalities of implementation of the said OPGW by the existing transmission licensee or POWERGRID are not covered specifically in the MOP



Communication Guidelines. However, on the direction of the Commission, Petitioner has convened meetings on 14.07.2021,13.08.2021,13.03.2023 and 8.05.2023 with the ISTS licensees to come out with a suitable proposal for smooth and proper adjudication of the issues involved. Consensus for the installation of OPGW by replacing the existing earth wire has been reached in the meetings held on 13.03.2023 and 08.05.2023. The relevant extracts of the same are as follows :

Minutes of the Meeting held on 13.03.2023 between CTU, POWERGRID &NRSS XXXI (B) Transmission Ltd./ Sekura

“

3. CTU added that a compliance affidavit was submitted before CERC after receiving communication from POWERGRID that it has no objection if the implementation of laying of OPGW is undertaken by M/s NRSS XXXI (B) Transmission Ltd. / Sekura on its 400kV D/C Malerkotla - Kurukshetra line. Subsequently M/s NRSS XXXI (B) Transmission Ltd. / Sekura submitted a proposal to CTU via letter dtd. 23.01.2023 for OPGW installation on its 400kV Malerkotla - Kurukshetra line as well as on 400kV Malerkotla – Amritsar line of 48F OPGW on both the lines.
4. CTU further informed that after reviewing the proposal of M/s NRSS XXXI (B) Transmission Ltd. / Sekura, the 400kV D/C Malerkotla – Amritsar line was not found to be required at present for OPGW installation. Moreover, the OPGW fibre capacity of 24F is sufficient at present. In view of this CTU has put up an agenda in 63rd NRPC for OPGW installation on the 400kV D/C Malerkotla - Kurukshetra line with 24F OPGW. NRPC after deliberations, was of the view that Hon'ble CERC should be apprised about the proposal before reviewing in RPC and getting approved in NCT. If M/s NRSS XXXI (B) Transmission Ltd. / Sekura wants to install OPGW on its 400kV D/C Malerkotla – Amritsar line and 48F in place of 24F in both 400kV D/C Malerkotla - Kurukshetra line & 400kV D/C Malerkotla – Amritsar line, the cost of the OPGW with 48F on 400kV Malerkotla – Amritsar line and additional fibers of 400kV D/C Malerkotla - Kurukshetra line shall be borne by the M/s NRSS XXXI (B) Transmission Ltd. / Sekura.
5. CTU further stated that the various issues raised earlier by M/s NRSS XXXI (B) Transmission Ltd. / Sekura viz., impact on tariff and revenue after replacement of earthwire with OPGW (POWERGRID Ownership), handing over the earth wire to POWERGRID, rectification of any damaged asset in the process of OPGW installation, prior intimation & work planning of OPGW laying work and; details of responsible contractor, indemnification on of any outage or claimed compensation by any landowner, issue related to the ownership of the OPGW and its O&M, and issue related to any commercial use of OPGW etc. shall get resolved as the OPGW laying work shall be awarded to NRSS XXXI (B) Transmission Ltd. / M/s Sekura after NCT approval under RTM mode, and M/s Sekura being the Owner of this ISTS transmission line the ownership of this OPGW would also remain with them.
6. NRSS XXXI (B) Transmission Ltd. / M/s Sekura suggested that this OPGW work shall be awarded to them as additional work by change in the original transmission line scope and cost of the same shall be recovered by revision in their existing TBCB tariff. However, CTU stated that as the TBCB asset has already lived its prominent life so this work shall be awarded in RTM mode and tariff of the same shall be determined by the applicable RTM regulations of CERC.
7. CTU stated that deliberations of this meeting shall be communicated to CERC as part of Petition no. 94/MP/2021.



.....”

As per the above, NRSS XXXI(B) Transmission Ltd / M/s Sekura suggested installing 48 F OPGW in place of 24 Fibre suggested by CTUIL. Further, Sekura suggested that OPGW work may be awarded to them as additional work by a change in the original transmission line scope, and the cost of the same may be recovered by a revision in their existing TBCB tariff. However, CTU stated that this work shall be awarded in RTM mode, and the tariff of the same may be determined as per RTM regulations of CERC. Further, CTU also stated that various issues raised earlier by M/s NRSS XXXI (B) Transmission Ltd. / M/s Sekura shall also be resolved by awarding the OPGW work to them.

Minutes of the Meeting held between CTU & ISTS Transmission Licensees on 08.05.2023

“7. With reference to above ROP and MOP guidelines, CTU proposed below mentioned methodology for deliberation during the meeting:

Sr. No.	CTUIL proposal for deliberations
(i)	<p><i>In view of MoP “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)” dtd. 09.03.2022 and recent approvals of OPGW on existing lines, following is proposed:</i></p> <p><i>(i) OPGW installation work under ISTS Communication requirement shall be awarded to the transmission line asset owner.</i></p> <p><i>(ii) Terminal equipment associated with OPGW cable shall be awarded to bay owner/s of the transmission line on which OPGW is proposed for installation.</i></p> <p><i>If the Asset owners refuses the work same shall be deliberated in the NCT and awarded to other party with consent of existing asset owner/s.</i></p>
(ii)	<p><i>Other views of Transmission licensees on the above</i></p>

8. Sekura agreed for the methodology put up by CTU, however they raised the concern of provision of Fibre Optic Terminal equipment (FOTE) at bays level for their line, 400kV Kurukshetra- Malerkotla. POWERGRID confirmed they shall provide FOTE as the bays are owned by them as suggested by CTU.

9. Indigrd enquired about the modalities of using OPGW for ISTS communication which is provided by the TSP which was not originally in the scope of RFP of a transmission line. CTU informed that such issues shall be dealt on case-to-case basis in the RPC forum, in view of ISTS system requirement.

10. Other licenses also agreed to the CTU proposal.

.....”

As per the above, it was agreed that OPGW installation work under ISTS Communication requirement might be awarded to the transmission line asset



owner, and if the asset owners refuse the work, same may be deliberated in the NCT and awarded to another party with the consent of existing asset owner(s).

32. We observe that Communication systems are essential to facilitate secure, reliable and economic operation of the grid and are an important pre-requisite for the efficient monitoring, operation and control of the power system CTU, has been entrusted with the responsibility of planning and coordination for the development of an efficient and coordinated communication system on a regional basis to provide a backbone communication system for the ISTS under various Regulations of CEA and CERC and Guidelines of MOP.
33. We observe that during the meetings held on 13.03.2023 and 8.5.2023, Petitioner CTUIL and Respondent No.1Sekura have agreed on the modalities of implementation of OPGW on instant transmission asset of Malerkotla-Kurukshetra line. Further, during the hearing on 15.05.2023, CTUIL based on the meeting held on 08.05.2023 between CTU and various transmission licensees, submitted that the OPGW work may be awarded to the transmission line asset owner. Accordingly, the work of replacement of earth wire under instant case may be allowed to be executed by the transmission licensee owning such earth wire following the required procedure with the approval of the competent authority.

Issue No. 2: What other factors need to be considered while such replacement is carried out, such as impact on discovered tariff, availability, loss due to damage etc, for the Transmission licensee?

34. During the Meeting held on 13.03.2023 and during a hearing on 15.05.2023, CTU has submitted that the work may be awarded in RTM mode and the tariff of the same may be determined by the Commission as per the applicable regulations.
35. Respondent No.1 has submitted that the implementation of the Communication System by replacing the earth-wire with OPGW cables is an additional requirement under the mandate of law, and the same may be considered under the Change in Law provision of the Transmission Service Agreement (TSA). Further, the consequences of Change in Law and, in particular, the computation of the impact thereof upon the tariff have been set out in detail under the TSA, and any change in tariff would fall within the purview of the TSA.



36. We observe that installation of OPGW is a requirement which has emerged at a stage after the TBCB project has been declared commercial. Further, we observe that the tariff of the TBCB Project is governed in terms of TSA and are of the view that appropriate compensation needs to be provided for recovery of additional expenditure towards OPGW installation and its maintenance by the licensee.
37. We have perused the TSA signed on 02.01.2014 between NRSS XXXI (B) Transmission Limited and LTTCs, submitted in another Petition No. 89/TT/2014, which provides the treatment of Change in Law as under:

“12 CHANGE IN LAW

12.1 Change in law

12.1.1 *Change in law means the occurrence of any of the following after the date, which is seven (7) days prior to the Bid Deadline resulting into any additional recurring/ non – recurring expenditure by the TSP or any income to the TSP:*

- *The enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law;*
- *a change in the interpretation or application of any Law by any Indian Governmental Instrumentality having the legal power to interpret or apply such Law, or any Competent Court of Law;*
- *the imposition of a requirement for obtaining any Consents, Clearances and Permits which was not required earlier;*
- *a change in the terms and conditions prescribed for obtaining any Consents, Clearances and Permits or the inclusion of any new terms or conditions for obtaining such Consents, Clearances and Permits;*
- *any change in the licensing regulations of the Appropriate Commission, under which the Transmission License for the Project was granted if made applicable by such Appropriate Commission to the TSP;*
- *any change in the Acquisition Price; or*
- *any change in tax or introduction of any tax made applicable for providing Transmission Service by the TSP as per the terms of this Agreement*

.....
12.2 Relief for Change in Law

12.2.1 During Construction Period

During the Constriction Period, the impact of increase/decrease in the cost of the Project in the Transmission Charges shall be governed by the formula given below:

- *For every cumulative increase/decrease of each Rupees One Crore Fifteen Lakhs Eighty Thousand Only (Rs. 1.158 Cr) in the cost of the Project up to the Scheduled COD of the Project, the increase/decrease in Non-Escalable Transmission Charges shall be an amount equal to Zero Point Three One Three percent (0.313%) of the Non-Escalable Transmission Charges.*

12.2.2 During the Operation Period:

During the Operation Period, the compensation for any increase/decrease in revenues shall be determined and effective from such date, as decided by the Appropriate Commission whose decision shall be final and binding on both the Parties, subject to rights of appeal provided under applicable Law.

Provided that the above mentioned compensation shall be payable only if the increase/decrease in revenues or cost to the TSP is in excess of an amount equivalent to one percent (1%) of Transmission Charges in aggregate for a Contract Year.



12.2.3 For any claims made under Articles 12.2.1 and 12.2.2 above, the TSP shall provide to the Long Term Transmission Customers and the Appropriate Commission documentary proof of such increase/decrease in cost of the Project/ revenue for establishing the impact of such Change in Law.

12.2.4 The decision of the Appropriate Commission, with regards to the determination of the compensation mentioned above in Articles 12.2.1 and 12.2.2, and the date from which such compensation shall become effective, shall be final and binding on both the Parties subject to rights of appeal provided under applicable Law.”

We observe that the instant case of replacement of earth wire with OPGW is a work which was not part of the original scope of TSA. Since the OPGW has not been provided with a separate transmission licence, we are not inclined to consider the suggestion of CTU to consider the instant work of replacement under RTM. We observe that TSA provides for treatment of additional expenditure under “Change in Law”. We are of the considered view that additional expenditure on account of the replacement of earth wire after adjusting the buy-back or the scrap value of that earth-wire shall be treated in the manner as expenditure under Change in Law so that its recovery is simplified. The transmission licensee is directed to follow a transparent process of competitive bidding while implementing such work. After implementation of the work, the transmission licensee is required to approach the Commission for approval of such expenditure along with audited data of the expenditure and details of competitive bidding carried out by it. The transmission licence shall not be required to be amended to include OPGW since the transmission licence issued to Respondent No.1 does not specifically provide the specification of earth wire, and OPGW shall be considered within the same transmission licence.

38. Further regarding the treatment of deemed availability for the period when such replacement is carried out, we have perused the TSA signed on 02.01.2014 between NRSS XXXI (B) Transmission Limited and LTTCs, submitted in another Petition No. 89/TT/2014, which provides the provision for availability of the project as under:

“8 AVAILABILITY OF THE PROJECT

8.1 Calculation of Availability of the Project:

Calculation of Availability for the Elements and for the Project, as the case may be, shall be as per Appendix IV of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, as applicable seven (7) days prior to the Bid Deadline and as appended in Schedule 9.

.....



Schedule 9

Appendix IV of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009

Procedure for Calculation of Transmission System Availability Factor for a Month

”

.....

5. The transmission elements under outage due to following reasons shall be deemed to be available:

i. Shut down availed for maintenance or construction of elements of another transmission scheme. If the other transmission scheme belongs to the transmission licensee, the Member-Secretary, RPC may restrict the deemed availability period to that considered reasonable by him for the work involved.

ii. Switching off of a transmission line to restrict over voltage and manual tripping of switched reactors as per the directions of RLDC.

.....”

As per the above, the transmission elements under outage due to shutdown availed for maintenance or construction of elements of another transmission scheme, which may be of the same transmission licensee also, shall be deemed to be available. Hence the issue of deemed availability shall be handled accordingly.

39. Considering the above we are of view that the treatment of deemed availability during the period of OPGW installation work by replacing the exiting earth wire, shall be treated in terms of the provisions under TSA.
40. CTUIL is directed to follow similar principles for facilitating and allowing OPGW installation by other transmission licensees.
41. The Petition No. 94/MP/2021 is disposed of in terms of the above.

Sd/
(P. K. Singh)
Member

Sd/
(Arun Goyal)
Member

Sd/
(I. S. Jha)
Member

Sd/
(Jishnu Barua)
Chairperson

