

Amendment-VII dated 21.12.2024 to the Request for Proposal Documents for selection of bidder as Transmission Service Provider to establish “Transmission scheme for evacuation of power from Ratle HEP (850 MW) & Kiru HEP (624 MW): Part-A” through tariff based competitive bidding process.

Sl. N	Clause No.	Existing Clause	New/Revised Clause
1.	<p>Clause C.1.0 of RFP & TSA</p> <p>Specific Technical Requirements for Communication</p>	<p>C.1.0 LILO of 400 kV Kishenpur- Dulhasti S/c line at Kishtwar S/s</p> <p>On LILO of 400 kV Kishenpur- Dulhasti S/c line at Kishtwar S/s, TSP shall supply, install and commission OPGW and earthwire as per Tower Configurations:</p> <p>(I) Loop-In and Loop out Ckt on Single Towers: Two (2) No. OPGW cable containing 24 Fibres (24F) to be installed and commissioned by the TSP on both the Earthwire peaks.</p> <p>(II) Loop-In and Loop out Ckt on Two separate Towers: One (1) No. OPGW cable containing 24 Fibres (24F) on one earthwire peak and conventional earthwire on other E/W peak for both Loop In and Loop Out Lines.</p> <p>The TSP shall install OPGW cables from gantry of Kishtwar S/s up to the LILO tower with all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at Kishtwar S/s. The transmission line length is 3 km (approx.). After LILO, if fiber length for links Kishtwar - Kishenpur and Kishtwar - Dulhasti is above 225 kms then repeater shall be envisaged, otherwise line can be managed as a repeater less link.</p> <p>.....</p>	<p>C.1.0 LILO of 400 kV Kishenpur- Dulhasti S/c line at Kishtwar S/s</p> <p>On LILO of 400 kV Kishenpur- Dulhasti S/c line at Kishtwar S/s, TSP shall supply, install and commission OPGW and earthwire as per Tower Configurations:</p> <p>(I) Loop-In and Loop out Ckt on Single Towers: Two (2) No. OPGW cable containing 48 Fibres (48F) to be installed and commissioned by the TSP on both the Earthwire peaks.</p> <p>(II) Loop-In and Loop out Ckt on Two separate Towers: One (1) No. OPGW cable containing 48 Fibres (48F) on one earthwire peak and conventional earthwire on other E/W peak for both Loop In and Loop Out Lines.</p> <p>The TSP shall install OPGW cables from gantry of Kishtwar S/s up to the LILO tower with all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at Kishtwar S/s. The transmission line length is 3 km (approx.). After LILO, if fiber length for links Kishtwar - Kishenpur and Kishtwar - Dulhasti is above 225 kms then repeater shall be envisaged, otherwise line can be managed as a repeater less link.</p> <p>.....</p>

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2.	<p>Clause C.2.0 of RFP & TSA</p> <p>Specific Technical Requirements for Communication</p>	<p>C.2.0 FOTE requirement at 400 kV Kishtwar S/s</p> <p>(I) TSP shall supply, install and commission 1 No. FODP (72F or higher) alongwith panel and required Approach Cable (24F) with all associated hardware fittings from gantry tower to Bay Kiosk and from the Bay Kiosk to Control room.</p> <p>(II) TSP shall supply, install and commission One STM-16 (FOTE) equipment alongwith panel/s supporting minimum Three (3) directions with MSP (Multiplex Section Protection – 1+1) with necessary interfaces to meet the voice and data communication requirement among 400 kV Dulhasti S/s, 400 kV Kishenpur S/s and local patching with Control Room FOTE. The suitable DC Power Supply and backup to be provided for communication equipment.</p> <p>(III) FOTE/FODP panel shall be installed in the new Bay Kiosk (Switchyard Panel Room (SPR)). The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of 400 kV Kishtwar S/s which shall be communicating with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing FOTE/FODP panels in control room for integration with the existing FOTE for onwards data transmission.</p> <p>In case spare optical direction is not available in the existing FOTE at the control room, the TSP shall coordinate with station owner to reconfigure the directions in existing FOTE at control room. Alternatively, The TSP may integrate the FOTE</p>	<p>C.2.0 FOTE requirement at 400 kV Kishtwar S/s</p> <p>(I) TSP shall supply, install and commission 1 No. FODP (144F or higher) alongwith panel and required Approach Cable (48F) with all associated hardware fittings from gantry tower to Bay Kiosk and from the Bay Kiosk to Control room.</p> <p>(II) TSP shall supply, install and commission One STM-16 (FOTE) equipment alongwith panel/s supporting minimum Three (3) directions with MSP (Multiplex Section Protection – 1+1) with necessary interfaces to meet the voice and data communication requirement among 400 kV Dulhasti S/s, 400 kV Kishenpur S/s and local patching with Control Room FOTE. The suitable DC Power Supply and backup to be provided for communication equipment.</p> <p>(III) FOTE/FODP panel shall be installed in the new Bay Kiosk (Switchyard Panel Room (SPR)). The FOTE under present scope shall be integrated by TSP with the existing FOTE at control room of 400 kV Kishtwar S/s which shall be communicating with respective control center. TSP to provide necessary FODP sub rack / Splice trays/ Patch cords etc. and optical interfaces/equipment in the existing FOTE/FODP panels in control room for integration with the existing FOTE for onwards data transmission.</p> <p>In case spare optical direction is not available in the existing FOTE at the control room, the TSP shall coordinate with station owner to</p>
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		<p>under the present scope with existing FOTE in the nearby Kiosk connected to the control room FOTE (if available with spare direction). For this purpose, TSP shall provide necessary FODP sub rack / Splice trays/ Patch cords etc. and suitable optical interfaces/ equipment in the existing FOTE/FODP panels in another Kiosk (SPR).</p> <p>(IV) FOTE and FODP can be accommodated in same panel to optimize space.</p> <p>(V) The maintenance of all the communication equipment and software thereof including FOTE, FODP, approach cable, PMU, DCPS alongwith Battery Bank shall be the responsibility of TSP.</p>	<p>reconfigure the directions in existing FOTE at control room. Alternatively, The TSP may integrate the FOTE under the present scope with existing FOTE in the nearby Kiosk connected to the control room FOTE (if available with spare direction). For this purpose, TSP shall provide necessary FODP sub rack / Splice trays/ Patch cords etc. and suitable optical interfaces/ equipment in the existing FOTE/FODP panels in another Kiosk (SPR).</p> <p>(IV) FOTE and FODP can be accommodated in same panel to optimize space.</p> <p>(V) The maintenance of all the communication equipment and software thereof including FOTE, FODP, approach cable, PMU, DCPS alongwith Battery Bank shall be the responsibility of TSP.</p>
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3.	<p>Clause C.3.0 of RFP & TSA</p> <p>Specific Technical Requirements for Communication</p>	<p>C.3.0 400 kV Kishenpur-Samba D/C line</p> <p>(I) On 400 kV Kishenpur - Samba D/C line (Quad), TSP shall supply, install and commission One (1) No. OPGW cable containing 24 Fibres (24F) on one E/W peak and conventional earth wire on other E/W peak.</p> <p>(II) The TSP shall install this OPGW from gantry of 400 kV Kishenpur S/s up to the gantry of 400 kV Samba S/s with all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at end Substations. The transmission line length is 36 km (approx.), where repeater may not be required to meet the link budget requirement of 400 kV Kishenpur-Samba D/C link.</p> <p>(III) Maintenance of OPGW Cable and OPGW Hardware shall be responsibility of TSP.</p>	<p>C.3.0 400 kV Kishenpur-Samba D/C line</p> <p>(I) On 400 kV Kishenpur - Samba D/C line (Quad), TSP shall supply, install and commission One (1) No. OPGW cable containing 48 Fibres (48F) on one E/W peak and conventional earth wire on other E/W peak.</p> <p>(II) The TSP shall install this OPGW from gantry of 400 kV Kishenpur S/s up to the gantry of 400 kV Samba S/s with all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at end Substations. The transmission line length is 36 km (approx.), where repeater may not be required to meet the link budget requirement of 400 kV Kishenpur-Samba D/C link.</p> <p>(III) Maintenance of OPGW Cable and OPGW Hardware shall be responsibility of TSP.</p>
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<p>4.</p>	<p>Clause C.4.0 of RFP & TSA</p> <p>Specific Technical Requirements for Communication</p>	<p>C.4.0 400 kV Samba-Jalandhar D/C line and Bypassing of Jalandhar – Nakodar line at Jalandhar and connecting it with one of the circuit of Samba-Jalandhar 400 kV D/C line thus forming 400 kV Samba –Nakodar direct line</p> <p>I. On 400 kV Samba-Jalandhar D/C line, TSP shall supply, install and commission two (2) No. OPGW cable containing 24 Fibres (24F) on both the E/W peaks of D/C Tower.</p> <p>II. One number OPGW (24F) shall terminate at Gantry of Jalandhar and another shall be bypassing Jalandhar S/s to form a link between Samba – Nakodar in similar transmission line route.</p> <p>III. The TSP shall install one No. OPGW from gantry of Sambha S/s up to the gantry of Jalandhar S/s with all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at end Substation. The transmission line length is 145 km (approx.).</p> <p>IV. The TSP shall install one No. OPGW from gantry of Sambha S/s up to the bypassing tower of Samba-Jalandhar D/C line of second circuit and forming a link between Samba- Nakodar. TSP shall install all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at bypass tower. The transmission line length is 145 kms (approx.).</p>	<p>C.4.0 400 kV Samba-Jalandhar D/C line and Bypassing of Jalandhar – Nakodar line at Jalandhar and connecting it with one of the circuit of Samba-Jalandhar 400 kV D/C line thus forming 400 kV Samba –Nakodar direct line</p> <p>I. On 400 kV Samba-Jalandhar D/C line, TSP shall supply, install and commission two (2) No. OPGW cable containing 48 Fibres (48F) on both the E/W peaks of D/C Tower.</p> <p>II. One number OPGW (48F) shall terminate at Gantry of Jalandhar and another shall be bypassing Jalandhar S/s to form a link between Samba – Nakodar in similar transmission line route.</p> <p>III. The TSP shall install one No. OPGW from gantry of Sambha S/s up to the gantry of Jalandhar S/s with all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at end Substation. The transmission line length is 145 km (approx.).</p> <p>IV. The TSP shall install one No. OPGW from gantry of Sambha S/s up to the bypassing tower of Samba-Jalandhar D/C line of second circuit and forming a link between Samba- Nakodar. TSP shall install all associated hardware including Vibration Dampers, mid-way and gantry Joint Boxes (called OPGW Hardware hereafter) and finally terminate in Joint Boxes at bypass tower.</p>
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		<p>After forming complete link between Samba-Nakodar if repeater is required to meet the link budget requirement of Samba-Nakodar link, the same shall be provided by TSP.</p> <p>TSP shall also provide necessary optical interfaces in the FOTE of Nakodar as per revised link budget of link after making a link between Samba- Nakodar.</p> <p>.....</p>	<p>The transmission line length is 145 kms (approx.). After forming complete link between Samba- Nakodar if repeater is required to meet the link budget requirement of Samba-Nakodar link, the same shall be provided by TSP.</p> <p>TSP shall also provide necessary optical interfaces in the FOTE of Nakodar as per revised link budget of link after making a link between Samba- Nakodar.</p> <p>.....</p>
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5.	Appendix F.1: SPECIFIC TECHNICAL REQUIREMENTS FOR COMMUNICATION	<p>Repeater Requirements</p> <ul style="list-style-type: none"> If the repeater location is finalized in the Control Room of a nearby substation, TSP shall provide <u>1 no. OPGW (48F)</u> on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and <u>1 no. Approach Cable (48F)</u> with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the repeater equipment in substation control room. <p>TSP shall co-ordinate for Space & DC power supply sharing for repeater equipment.</p> <p>TSP shall provide FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link.</p> <p>OR</p> <ul style="list-style-type: none"> If the repeater location is finalized in the nearby substation premises, the TSP shall identify the Space for repeater shelter in consultation with station owner. Further TSP shall provide <u>1 no. OPGW (48F)</u> on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and <u>1 no. Approach Cable (48F) / UGFO (48F)</u> with all associated hardware fittings, to establish connectivity between 	<p>Repeater Requirements</p> <ul style="list-style-type: none"> If the repeater location is finalized in the Control Room of a nearby substation, TSP shall provide <u>OPGW to accommodate all the fibers in main transmission line</u> on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line <u>and required approach Cable to accommodate all the OPGW fibers</u> with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the repeater equipment in substation control room. <p>TSP shall co-ordinate for Space & DC power supply sharing for repeater equipment.</p> <p>TSP shall provide FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link.</p> <p>OR</p> <ul style="list-style-type: none"> If the repeater location is finalized in the nearby substation premises, the TSP shall identify the Space for repeater shelter in consultation with station owner. Further TSP shall provide <u>OPGW to accommodate all the fibers in main transmission line</u> on a single Earthwire peak with OPGW Hardware & mid-way Joint Boxes etc. of the line crossing the main line and <u>required approach Cable/UGFO to accommodate all the</u>
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		<p>crossing point of main transmission line up to the substation where the repeater shelter is to be housed.</p> <p>TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems.</p> <p>OR</p> <ul style="list-style-type: none"> If the repeater location is finalized on land near the transmission tower. TSP shall make the provisions for Land at nearby tower for repeater shelter. Further TSP shall provide <u>1 no. Approach Cable (48F) / UGFO (48F)</u> with all associated hardware fittings to establish connectivity up to the location of repeater shelter. <p>TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems</p>	<p><u>OPGW fibers</u> with all associated hardware fittings, to establish connectivity between crossing point of main transmission line up to the substation where the repeater shelter is to be housed.</p> <p>TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems.</p> <p>OR</p> <ul style="list-style-type: none"> If the repeater location is finalized on land near the transmission tower. TSP shall make the provisions for Land at nearby tower for repeater shelter. Further TSP shall provide <u>required approach Cable to accommodate all the OPGW fibers</u> with all associated hardware fittings to establish connectivity up to the location of repeater shelter. <p>TSP shall provide repeater shelter along with FODP, FOTE (with STM-16 capacity) with suitable interfaces require for link budget of respective link, reliable power supply provisioning for AC and DC supply, battery bank, Air Conditioner and other associated systems</p> <p>Maintenance of OPGW Cable and OPGW Hardware, repeater equipment & items associated with repeater shelter shall be responsibility of TSP.</p>
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<p>6.</p>	<p>Frequently Asked Queries:</p> <p>3.3 Communication</p>	<p>3.3 How is the OPGW laying done in case of LILO lines?</p> <p>Reply: In case LILO lines are on same towers (e.g. both Line in and Line Out portion are on same towers, generally done LILO of S/C lines). Then 2x24F OPGW shall be required to install by TSP on both earthwire peak on 400 kV & 765 kV lines where two E/W peaks are available. On 220 & 132 kV lines where only one E/W peak is available TSP to install one no. 48F OPGW.</p> <p>Incase LILO lines are on different towers (e.g. both Line In and Line Out portion are on different towers, generally done LILO of D/C lines). Then 1x24F OPGW shall be required to install by TSP on one earthwire peak and conventional earthwire on second earthwire peak, on both Line In and Line Out portion towers of 400 kV & 765 kV lines. On 220 & 132 kV lines where only one E/W peak is available TSP to install one no. 24F OPGW in place of conventional earthwire.</p> <p>3.4 How is the OPGW laying done in case Multi circuit Towers?</p> <p>Reply: In case two different lines are using common multi circuit portion for some distance (originating from different stations, may be terminating on same or on different stations). Two</p>	<p>3.3 How is the OPGW laying done in case of LILO lines?</p> <p>Reply: In case LILO lines are on same towers (e.g. both Line in and Line Out portion are on same towers, generally done LILO of S/C lines). Then 2x48F OPGW shall be required to install by TSP on both earthwire peak on 400 kV & 765 kV lines where two E/W peaks are available. On 220 & 132 kV lines where only one E/W peak is available TSP to install one no. 96F OPGW.</p> <p>Incase LILO lines are on different towers (e.g. both Line In and Line Out portion are on different towers, generally done LILO of D/C lines). Then 1x48F OPGW shall be required to install by TSP on one earthwire peak and conventional earthwire on second earthwire peak, on both Line In and Line Out portion towers of 400 kV & 765 kV lines. On 220 & 132 kV lines where only one E/W peak is available TSP to install one no. 48F OPGW in place of conventional earthwire.</p> <p>3.4 How is the OPGW laying done in case Multi circuit Towers?</p> <p>Reply: In case two different lines are using common multi circuit portion for some distance (originating from different stations, may be terminating on same or on different stations). Two</p>
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		<p>no. <u>24F</u> OPGW to be installed on both E/W peaks for common M/C portion of 765 kV & 400 kV lines.</p> <p>Incase 220/132 kV lines using multi circuit portion where single E/W peak is available one no <u>48F</u> may be installed for common multi circuit portion.</p>	<p>no. <u>48F</u> OPGW to be installed on both E/W peaks for common M/C portion of 765 kV & 400 kV lines.</p> <p>Incase 220/132 kV lines using multi circuit portion where single E/W peak is available one no <u>96F</u> may be installed for common multi circuit portion.</p>
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