

Amendment-1 (dated:19.11.2024) to RFP Documents for “North Eastern Region Expansion Scheme-XXV (NERES-XXV) Part-A” through tariff based competitive bidding process.

Sl. No.	Clause No.	Existing Clause	New/Revised Clause
1.	A.6.0	<p>(A) For power line crossing of 400 kV or above voltage level large angle and dead end towers (i.e. D/DD/QD) shall be used on either side of power line crossing.</p> <p>(B)For power line crossing of 132 kV and 220 kV (or 230 kV) voltage level, angle towers (B/C/D/DB/DC/DD/QB/QC/QD) shall be used on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.</p> <p>(C)For power line crossing of 66 kV and below voltage level, suspension/tension towers shall be provided on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.</p> <p>(D)For crossing of railways, national highways and state highways, the rules/ regulations of appropriate authorities shall be followed.</p>	<p>(A) Under crossing of the existing transmission line of same Voltage shall not be allowed. In the case where it is inevitable to under-cross the existing transmission line then TSP shall seek prior approval from Chief Electrical Inspector, CEA with detailed study ensuring that all statutory electrical clearances and Electric Field limit of 10 kV/m at 1 m and 1.8 m from ground level is not violated.</p> <p>(B) For power line crossing of 400 kV or above voltage level large angle and dead end towers (i.e. D/DD/QD) shall be used on either side of power line crossing.</p> <p>(C) For power line crossing of 132 kV and 220 kV (or 230 kV) voltage level, angle towers (B/C/D/DB/DC/DD/QB/QC/QD) shall be used on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.</p>

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			<p>(D)For power line crossing of 66 kV and below voltage level, suspension/tension towers shall be provided on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.</p> <p>(E)For crossing of railways, national highways and state highways, the rules/ regulations of appropriate authorities shall be followed.</p>
2.	A.22.0	New Clause	The stringing of the transmission line in forest area shall be carried out through drone.
3.	A.23.0	New Clause	The tower shall be designed considering the porcelain Insulators with creepage factor of 31 mm/ kV irrespective of type of insulator used.
4.	All the relevant clauses of RFP, TSA and SPA “SPV [which is under incorporation]”		All the relevant clauses of RFP, TSA and SPA “SPV [which is under incorporation]” in the subject RFP, TSA and SPA may be read as “NER EXPANSION TRANSMISSION LIMITED”
5	Schedule 1 of	<u>Annexure – A</u> A. North- Eastern Region Expansion Scheme-XXV (NERES-XXV) Part-A	

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<p>TSA</p> <p>.....</p> <p>.....</p>	<p>i) Description of the Transmission Scheme:</p> <p>Bongaigaon substation is gateway to North Eastern Region (NER) grid as all synchronous interconnections to NER originate from this substation. Bongaigaon substation is a flood affected area and any mishap at the substation could jeopardise power supply situation in NER as all existing ER-NER AC interconnections are only through Bongaigaon substation. Thus, in order to improve reliability and security of power supply to NER, establishment of a 2nd 400 kV AC node for interconnection with National Grid has been planned at Bornagar in Assam. This substation is essential to create an alternative path for ER-NER interconnection.</p> <p>The Bornagar substation is being initially planned as 400 kV switching station with provision to establish 765 kV and 220 kV levels in future as per system requirements. The substation is planned to be set up through LILO of both circuits of Bongaigaon – Balipara 400 kV D/C (Quad) line and extension of the existing Alipurduar – Bongaigaon 400 kV D/C (Quad) line from Bongaigoan S/s to Bornagar S/s so as to form Alipurduar – Bornagar 400 kV D/C (Quad) line. This would help in enhancing the stability and reliability of the NER grid and creating an alternate ER-NER path.</p> <p>The subject scheme was agreed in the 32nd Consultation Meeting for Evolving Transmission Schemes in North Eastern Region (CMETS-NER) held on 26-06-2024. The scheme was further deliberated and approved for implementation through TBCB route in the 21st meeting of National Committee on Transmission (NCT) held on 06-08-2024.</p> <p>NERES-XXV Part-B comprising of “<i>Conversion of existing 420 kV, 1x63 MVA fixed line reactor at Bongaigaon (POWERGRID) end in each circuit of Bongaigaon (POWERGRID) – Bornagar (ISTS) 400 kV D/C line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400 kV D/C (Quad) line at Bornagar (ISTS) to Switchable Line Reactor along with implementation of NGR bypass arrangement.</i>” is being taken up by POWERGRID</p>
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	in matching timeframe of NERES-XXV Part-A.						
	ii) Detailed Scope of Work: North- Eastern Region Expansion Scheme-XXV (NERES-XXV) Part-A						
	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Scope of the Transmission Scheme</th> <th>Capacity (MVA) / Line length (km) / Nos.</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td> <p>Establishment of new 400 kV Bornagar (ISTS) switching station in Assam (765 kV and 220 kV levels to be established in future)</p> <p>Additional space for future expansion:</p> <ul style="list-style-type: none"> • 6x1500 MVA, 765/400 kV ICTs (19x500 MVA single phase including one spare unit) along with associated ICT bays at both voltage levels • 5x500 MVA, 400/220 kV ICTs along with associated ICT bays at both voltage levels • 765 kV line bays (along with space for switchable line reactor) for future lines: 8 </td> <td> <ul style="list-style-type: none"> • 420 kV, 1x125 MVAr Bus Reactor: 2 Nos. • 400 kV bus reactor bays: 2 Nos. • 400 kV line bays: <ol style="list-style-type: none"> 2 Nos. each with provision for installation of 1x80 MVAr switchable line reactor [for termination of Alipurduar (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line formed after shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line from Bongaigaon (POWERGRID) end to Bornagar (ISTS) S/s] 2 Nos. [for termination of Bongaigaon (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – </td> </tr> </tbody> </table>	Sl. No.	Scope of the Transmission Scheme	Capacity (MVA) / Line length (km) / Nos.	(a)	<p>Establishment of new 400 kV Bornagar (ISTS) switching station in Assam (765 kV and 220 kV levels to be established in future)</p> <p>Additional space for future expansion:</p> <ul style="list-style-type: none"> • 6x1500 MVA, 765/400 kV ICTs (19x500 MVA single phase including one spare unit) along with associated ICT bays at both voltage levels • 5x500 MVA, 400/220 kV ICTs along with associated ICT bays at both voltage levels • 765 kV line bays (along with space for switchable line reactor) for future lines: 8 	<ul style="list-style-type: none"> • 420 kV, 1x125 MVAr Bus Reactor: 2 Nos. • 400 kV bus reactor bays: 2 Nos. • 400 kV line bays: <ol style="list-style-type: none"> 2 Nos. each with provision for installation of 1x80 MVAr switchable line reactor [for termination of Alipurduar (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line formed after shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line from Bongaigaon (POWERGRID) end to Bornagar (ISTS) S/s] 2 Nos. [for termination of Bongaigaon (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) –
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(a)	<p>Establishment of new 400 kV Bornagar (ISTS) switching station in Assam (765 kV and 220 kV levels to be established in future)</p> <p>Additional space for future expansion:</p> <ul style="list-style-type: none"> • 6x1500 MVA, 765/400 kV ICTs (19x500 MVA single phase including one spare unit) along with associated ICT bays at both voltage levels • 5x500 MVA, 400/220 kV ICTs along with associated ICT bays at both voltage levels • 765 kV line bays (along with space for switchable line reactor) for future lines: 8 	<ul style="list-style-type: none"> • 420 kV, 1x125 MVAr Bus Reactor: 2 Nos. • 400 kV bus reactor bays: 2 Nos. • 400 kV line bays: <ol style="list-style-type: none"> 2 Nos. each with provision for installation of 1x80 MVAr switchable line reactor [for termination of Alipurduar (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line formed after shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line from Bongaigaon (POWERGRID) end to Bornagar (ISTS) S/s] 2 Nos. [for termination of Bongaigaon (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – 					

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		<p>Nos.</p> <ul style="list-style-type: none"> • 400 kV line bays (along with space for switchable line reactor) for future lines: 8 Nos. • 220 kV line bays: 10 Nos. • 4x330 MVA_r, 765kV Bus Reactors (13x110 MVA_r single phase including one spare unit) along with associated bays • 3x125 MVA_r, 420 kV Bus Reactors along with associated bays • 765 kV Bus Sectionalizer: 1 set • 400 kV Bus Sectionalizer: 1 set • 220 kV Bus Sectionalizer: 1 set • 220 kV Bus Coupler bays: 2 No. • 220 kV Transfer Bus Coupler bays: 2 No. 	<p>Balipara (POWERGRID) 400 kV D/C (Quad) line at Bornagar (ISTS)]</p> <p>iii) 2 Nos. each with provision for installation of 1x63 MVA_r switchable line reactor [for termination of Bornagar (ISTS) – Balipara (POWERGRID) 400 kV D/C (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400 kV D/C (Quad) line at Bornagar (ISTS)]</p>
	(b)	LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID)	About 8 km (4 km Loop-in + 4 km Loop-out)

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		400 kV D/C (Quad) line at Bornagar (ISTS)	
	(c)	#Disconnection of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line from Bongaigaon (POWERGRID) end and extension of the line for termination at Bornagar (ISTS) S/s so as to form Alipurduar (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line	About 110 km additional line section
	(d)	Installation of 420 kV, 1x80 MVA _r switchable line reactor (along with 500 ohm NGR and NGR bypass arrangement) at Bornagar (ISTS) end in each circuit of Alipurduar (POWERGRID) – Bornagar 400 kV D/C (Quad) line formed after shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line from Bongaigaon (POWERGRID) end to Bornagar (ISTS) S/s	<ul style="list-style-type: none"> • 420 kV, 1x80 MVA_r switchable line reactor (along with 500 ohm NGR and NGR bypass arrangement) - 2 Nos. • Switching equipment for switchable line reactor of 420 kV, 1x80 MVA_r - 2 Nos.

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		<p>(e) Installation of 420 kV, 1x63 MVA_r switchable line reactor (along with 400 ohm NGR and NGR bypass arrangement) at Bornagar (ISTS) end in each circuit of Bornagar (ISTS) – Balipara (POWERGRID) 400 kV D/C (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400 kV D/C (Quad) line</p>	<ul style="list-style-type: none"> • 420 kV, 1x63 MVA_r switchable line reactor (along with 400 ohm NGR and NGR bypass arrangement) - 2 Nos. • Switching equipment for switchable line reactor of 420 kV, 1x63 MVA_r - 2 Nos.
<p><i>Note:</i></p> <p>(i) <i>*Siliguri (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line was implemented by M/s East North Interconnection Company Limited (M/s ENICL, SPV of M/s Sterlite). Line bays at both ends were implemented by POWERGRID. Further, this line was LILOed at Alipurduar (POWERGRID) S/s by POWERGRID along with implementation of line bays for termination of line, resulting in formation of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line. The Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400 kV D/C (Quad) line (partly owned by M/s ENICL and partly by POWERGRID) is to be disconnected from Bongaigaon (POWERGRID) end and extended for termination at Bornagar (ISTS) S/s so as to form Alipurduar (POWERGRID) – Bornagar (ISTS) 400 kV D/C (Quad) line. Upon shifting of line, the line section left unutilised at Bongaigaon (POWERGRID) end needs to be kept anti-theft charged so that the same can be used in future for termination of new line. Further, upon shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) line from Bongaigaon (POWERGRID) S/s to Bornagar (ISTS) S/s, connectivity of all operational communication links through Bongaigaon</i></p>			

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		<p><i>has to be ensured. For the same additional OPGW and FOTE needs to be planned as per requirement. ISTS licensee implementing the NERES-XXV Part-A scheme needs to coordinate with M/s ENICL for line shifting and keeping the unutilised line section at Bongaigaon (POWERGRID) end anti-theft charged.</i></p> <p><i>(ii) The line lengths mentioned above are approximate as the exact line length shall be obtained after the detailed survey.</i></p>
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