

**Amendment –XI dated 15.07.2022 on the Request for Proposal Document and Transmission Service Agreement issued for selection of bidder as Transmission Service Provider to establish “System Strengthening Scheme for Eastern and North Eastern Regions” through tariff based competitive bidding process**

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			220kV ICT (GIS) bays – 2 nos.		220kV ICT (GIS) bays – 2 nos.	
		4.	220kV (GIS) line bays – 2 nos. Bus Coupler bay – 1 no.#  Future provision: Space for future 220kV GIS bays: 6 nos.		220kV (GIS) line bays – 2 nos. Bus Coupler bay – 1 no.#  Future provision: Space for future 220kV GIS bays: 6 nos.	
		<b>A. North Eastern Region Strengthening Scheme-XV (NERSS-XV)</b>		<b>A. North Eastern Region Strengthening Scheme-XV (NERSS-XV)</b>		
		5.	Upgradation of existing 132kV Namsai (POWERGRID) S/S to 220kV (with 220kV side as GIS)  <b>220kV in GIS:</b> <ul style="list-style-type: none"> <li>• ICTs: 220/132kV, 2x160MVA</li> <li>• ICT bay : 2 nos.</li> <li>• Bus Reactor: 220kV, 1x50MVA</li> <li>• Bus Reactor bay: 1 no.</li> <li>• Line bays : 2 nos. [for termination of Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/C line]</li> </ul>	36	Upgradation of existing 132kV Namsai (POWERGRID) S/S to 220kV (with 220kV side as GIS)  <b>220kV in GIS:</b> <ul style="list-style-type: none"> <li>• ICTs: 220/132kV, 2x160MVA</li> <li>• ICT bay : 2 nos.</li> <li>• Bus Reactor: 220kV, 1x50MVA</li> <li>• Bus Reactor bay: 1 no.</li> <li>• Line bays : 2 nos. [for termination of Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/C line]</li> <li>• Bus coupler bay: 1 no. #</li> </ul>	36

Sl. No.	Clause No.	Existing Provisions		New / Revised Clause			
			<ul style="list-style-type: none"> <li>• Bus coupler bay: 1 no. #</li> <li>• Space for future line bays: 4 nos.</li> </ul> <p><b>132kV:</b></p> <ul style="list-style-type: none"> <li>• ICT bays: 2 nos.</li> <li>• Space for future line bays: 4 nos.</li> </ul>			<ul style="list-style-type: none"> <li>• Space for future line bays: 4 nos.</li> </ul> <p><b>132kV:</b></p> <ul style="list-style-type: none"> <li>• ICT bays: 2 nos.</li> <li>• Space for future line bays: 4 nos.</li> </ul>	
		6.	Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/C line		6.	Kathalguri (NEEPCO) – Namsai (POWERGRID) 220kV D/C line	
		7.	Extension at Kathalguri (NEEPCO) switchyard: 2 nos. of GIS line bays for termination of Kathalguri (NEEPCO) – Namsai  220kV GIS line bays: 2 nos.		7.	Extension at Kathalguri (NEEPCO) switchyard: 2 nos. of GIS line bays for termination of Kathalguri (NEEPCO) – Namsai  220kV GIS line bays: 2 nos.	
		<p># To fulfil the requirement of bus switching scheme.</p> <p><b>* In matching timeframe of Banka (POWERGRID) – Goradih (Sabour New) 220kV D/c line of BSPTCL or 24 months from the date of transfer of SPV, whichever is later.</b></p> <p>.....</p>		<p># To fulfil the requirement of bus switching scheme.</p> <p><b>* (Deleted)</b></p> <p>.....</p>			

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2.	Annexure C: SPECIFIC TECHNICAL REQUIREMENTS FOR COMMUNICATION of RFP & Schedule:1 of TSA	<p><b>1.0 2 nos. of 220kV GIS line bays at Banka (POWERGRID) for termination of Banka (POWERGRID) - Goradih (Sabour New) 220kV D/C line of BSPTCL.</b></p> <p>.....</p> <p><b><u>Note* It is assumed that OPGW has been considered by BSPTCL on Banka – Gordih (Sabour) line alongwith FOTE at Gordih (Sabour). However, confirmation not received from BSPTCL.</u></b></p>	<p><b>1.0 2 nos. of 220kV GIS line bays at Banka (POWERGRID) for termination of Banka (POWERGRID) - Goradih (Sabour New) 220kV D/C line of BSPTCL.</b></p> <p>.....</p> <p><b><u>Note* OPGW along with Joint box, FODP, SDH equipment, etc. and its accessories are considered for Goradih End.</u></b></p>								
3.	RFP & TSA SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION	<p><b>1.1 Insulation Coordination</b></p> <p>The system design parameters for substations/switchyards shall be as given below:</p> <p>.....</p> <p><b><u>B. North Eastern Region Strengthening Scheme-XV (NERSS-XV)</u></b></p> <table border="1" data-bbox="340 1278 1137 1369"> <thead> <tr> <th data-bbox="340 1278 421 1369">Sl No</th> <th data-bbox="421 1278 672 1369">Description of parameters</th> <th data-bbox="672 1278 911 1369">220kV Namsai (GIS) s/s (new)</th> <th data-bbox="911 1278 1137 1369">132kV Namsai (AIS) s/s</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sl No	Description of parameters	220kV Namsai (GIS) s/s (new)	132kV Namsai (AIS) s/s					<p><b>1.1 Insulation Coordination</b></p> <p>The system design parameters for substations/switchyards shall be as given below:</p> <p>.....</p> <p><b><u>B. North Eastern Region Strengthening Scheme-XV (NERSS-XV)</u></b></p>
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		1.	System operating voltage	220kV	132kV	SI No	Description of parameters	220kV Namsai (GIS) s/s (new)	132kV Namsai (AIS) s/s	<u>220 kV Kathalguri S/s (Extension)</u>
		2.	Maximum voltage of the system (rms)	245kV	145kV	1.	System operating voltage	220kV	132kV	<u>220 kV</u>
		3.	Rated frequency	50Hz	50Hz	2.	Maximum voltage of the system (rms)	245kV	145kV	<u>245 kV</u>
		4.	No. of phase	3	3	3.	Rated frequency	50Hz	50Hz	<u>50 Hz</u>
		5.	Rated Insulation levels			4.	No. of phase	3	3	<u>3</u>
		i)	Impulse withstand voltage for (1.2/50 micro sec.) - for Equipment other than Transformer and Reactors - for Insulator String	1050 kV <sub>p</sub> 1050 kV <sub>p</sub>	650 kV <sub>p</sub> 650 kV <sub>p</sub>	5.	Rated Insulation levels			
		ii)	One minute power frequency dry and wet withstand voltage (rms)	460kV	275kV	i)	Impulse withstand voltage for (1.2/50 micro sec.) - for Equipment other than Transformer and Reactors - for	1050 kV <sub>p</sub> 1050 kV <sub>p</sub>	650 kV <sub>p</sub> 650 kV <sub>p</sub>	<u>1050 kVp</u> <u>1050 kVp</u>
		6.	Max. radio interference voltage for	1000 microvolts at 156kV rms	500 microvolts at 92kV rms					

Sl. No	Clause No.	Existing Provisions				New / Revised Clause				
			frequency between 0.5 MHz and 2 MHz				Insulator String			
		7.	Minimum creepage distance for insulator string/ longrod insulators/ outdoor bushings	7595 mm (31mm/kV)	4495 mm (31mm/kV)	ii)	One minute power frequency dry and wet withstand voltage (rms)	460kV	275kV	<b><u>460 kV</u></b>
		8.	Minimum creepage distance for switchyard equipment	6125 mm (25mm/kV)	3625 mm (25mm/kV)	6.	Max. radio interference voltage for frequency between 0.5 MHz and 2 MHz	1000 microvolts at 156kV rms	500 microvolts at 92kV rms	<b><u>1000 microvolts at 156kV rms</u></b>
		9.	Max. fault current	50 kA	31.5 kA	7.	Minimum creepage distance for insulator string/ longrod insulators/ outdoor bushings	7595 mm (31mm/kV)	4495 mm (31mm/kV)	<b><u>7595 mm (31mm/kV)</u></b>
		10.	Duration of fault	1 Sec	1 Sec	8.	Minimum creepage distance for switchyard equipment	6125 mm (25mm/kV)	3625 mm (25mm/kV)	<b><u>6125 mm (25mm/kV)</u></b>
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4.	RFP & TSA  SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION	<p><b>2.0 Substation Equipment and facilities (Voltage level as applicable):</b></p> <p>The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All equipment shall be designed considering the following capacity.</p> <p>.....</p> <p><b>B. North Eastern Region Strengthening Scheme-XV (NERSS-XV)</b></p> <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Description of bay</th> <th>220kV Namsai (GIS) S/S (new)</th> <th>132kV Namsai (AIS) S/S</th> </tr> <tr> <td></td> <td></td> <th>220kV</th> <th>132kV</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Bus Bar</td> <td>3000A</td> <td>Twin Zebra existing*</td> </tr> <tr> <td>2.</td> <td>Line bay</td> <td>1600A</td> <td>-</td> </tr> <tr> <td>3.</td> <td>ICT bay</td> <td>1600A</td> <td>800A</td> </tr> <tr> <td>4.</td> <td>Bus Reactor</td> <td>1600A</td> <td>-</td> </tr> </tbody> </table>	Sl. No	Description of bay	220kV Namsai (GIS) S/S (new)	132kV Namsai (AIS) S/S			220kV	132kV	1.	Bus Bar	3000A	Twin Zebra existing*	2.	Line bay	1600A	-	3.	ICT bay	1600A	800A	4.	Bus Reactor	1600A	-	<p><b>2.0 Substation Equipment and facilities (Voltage level as applicable):</b></p> <p>The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All equipment shall be designed considering the following capacity.</p> <p>.....</p> <p><b>B. North Eastern Region Strengthening Scheme-XV (NERSS-XV)</b></p> <table border="1"> <thead> <tr> <th>Sl. No</th> <th>Description of bay</th> <th>220kV Namsai (GIS) S/S (new)</th> <th>132kV Namsai (AIS) S/S</th> <th><u>220kV Kathalguri (GIS) S/S extension</u></th> </tr> <tr> <td></td> <td></td> <th>220kV</th> <th>132kV</th> <th><u>220 kV</u></th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Bus Bar</td> <td>3000A</td> <td>Twin Zebra existing*</td> <td><u>3000A</u></td> </tr> <tr> <td>2.</td> <td>Line bay</td> <td>1600A</td> <td>-</td> <td><u>1600A</u></td> </tr> </tbody> </table>	Sl. No	Description of bay	220kV Namsai (GIS) S/S (new)	132kV Namsai (AIS) S/S	<u>220kV Kathalguri (GIS) S/S extension</u>			220kV	132kV	<u>220 kV</u>	1.	Bus Bar	3000A	Twin Zebra existing*	<u>3000A</u>	2.	Line bay	1600A	-	<u>1600A</u>
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