

Amendment – V dated 08.12.2023 on the Request for Proposal Document and Transmission Service Agreement issued for selection of bidder as Transmission Service Provider to establish “Transmission System for Evacuation of Power from REZ in Rajasthan (20 GW) under Phase-III Part I” through tariff based competitive bidding process

Sl. No.	Clause No.	Existing Clause	New/Revised Clause																								
1.	Clause 4 of specific technical specification of RfP	<p>4. Design Consideration</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item Description</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td>--</td> <td>--</td> <td>--</td> </tr> <tr> <td>8</td> <td>Minimum Short circuit level (MVA) at 400 kV Bhadla (both rectifier and inverter operation)</td> <td><u>21700 (with IBR) 13300 (without IBR)-runback allowed upto 5300 MW</u></td> </tr> <tr> <td>9</td> <td>Minimum Short circuit level (MVA) at 400 kV Fatehpur (both rectifier and inverter operation)</td> <td>16600</td> </tr> </tbody> </table>	S. No.	Item Description	Parameters	--	--	--	8	Minimum Short circuit level (MVA) at 400 kV Bhadla (both rectifier and inverter operation)	<u>21700 (with IBR) 13300 (without IBR)-runback allowed upto 5300 MW</u>	9	Minimum Short circuit level (MVA) at 400 kV Fatehpur (both rectifier and inverter operation)	16600	<p>4. Design Consideration</p> <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item Description</th> <th>Parameters</th> </tr> </thead> <tbody> <tr> <td>--</td> <td>--</td> <td>--</td> </tr> <tr> <td>8</td> <td>Minimum Short circuit level (MVA) at 400 kV Bhadla (both rectifier and inverter operation)</td> <td><u>24600 (with IBR) 17200 (without IBR)</u></td> </tr> <tr> <td>9</td> <td>Minimum Short circuit level (MVA) at 400 kV Fatehpur (both rectifier and inverter operation)</td> <td>16600</td> </tr> </tbody> </table>	S. No.	Item Description	Parameters	--	--	--	8	Minimum Short circuit level (MVA) at 400 kV Bhadla (both rectifier and inverter operation)	<u>24600 (with IBR) 17200 (without IBR)</u>	9	Minimum Short circuit level (MVA) at 400 kV Fatehpur (both rectifier and inverter operation)	16600
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2.	Clause 10 of specific technical specification of RfP (page 133 of RfP)	<p>10. Converters Operating modes</p> <p>(a) Balanced/ unbalanced bipolar operation</p> <p>(b) Monopolar operation with Pole Metallic Return (PMR):</p> <p><u>(c) Monopolar operation with Dedicated Metallic Return (DMR) mode or DMR in parallel with PMR;</u></p> <p>(d) Three converter operation at each HVDC terminal end: These 3 converters could be any 3 out of 4 converters at terminal station.</p>	<p>10. Converters Operating modes</p> <p>(a) Balanced/ unbalanced bipolar operation</p> <p>(b) Monopolar operation with Pole Metallic Return (PMR):</p> <p><u>(c) Monopolar operation with Dedicated Metallic Return (DMR) [DMR1 or DMR2 or DMR1+DMR 2] mode or DMR [DMR1 or DMR2 or DMR1+DMR 2] in parallel with PMR.</u></p> <p>(d) Three converter operation at each HVDC terminal end: These 3 converters could be any 3 out of 4 converters at terminal station.</p>																								
3.	Annexure – D Page(203 of RfP)	<p>LOCATION DETAILS OF EXISTING SUBSTATIONS</p> <p>a) <u>Bikaner-III s/s:</u> Location details is to be finalized by the developer of the substation</p>	<p>LOCATION DETAILS OF EXISTING SUBSTATIONS</p> <p>a) <u>Bhadla-III s/s:</u> Location details is to be finalized by the developer of the substation</p>																								

4.	<p>Appendix- C.1 of specific technical specification of RfP (page 182 & 183 of RfP)</p>	<p>Appendix- C.1 Direct Current Measuring Equipment</p> <p>It shall be ensured that all DC current measurement outputs are accurately calibrated with all the respective loads connected. <u>Sufficient buffered outputs shall be provided at the time of the initial installation for all future output signal requirements.</u> If required, on-site adjustments to output calibration shall be possible. The sensitivity of the devices supplied for such calibration shall be appropriate for setting the required accuracy.</p>	<p>Appendix- C.1 Direct Current Measuring Equipment</p> <p>It shall be ensured that all DC current measurement outputs are accurately calibrated with all the respective loads connected. If required, on-site adjustments to output calibration shall be possible. The sensitivity of the devices supplied for such calibration shall be appropriate for setting the required accuracy.</p>																								
5.	<p>Clause 38 of specific technical specification of RfP (page 171 & 172 of RfP)</p>	<p>.....</p> <p>(A) Reactive power exchange limits Table 9</p> <table border="1" data-bbox="488 687 1267 1114"> <tr> <td>Minimum DC Power 150 MW</td> <td>Maximum DC Power 3000 MW per bipole</td> </tr> <tr> <td colspan="2"><u>In the entire range of HVDC power (minimum 1 pu)</u></td> </tr> <tr> <td colspan="2"><u>400 kV AC SYSTEM Bhadla (Bus Sectionalizer open)</u></td> </tr> <tr> <td>Maximum Export at 420 kV 50 MVAR</td> <td>Import NIL at 380 kV</td> </tr> <tr> <td colspan="2">400 kV AC SYSTEM Fatehpur</td> </tr> <tr> <td>Maximum Export at 420 kV 100 MVAR</td> <td>Import NIL at 380 kV</td> </tr> </table> <p>.....</p>	Minimum DC Power 150 MW	Maximum DC Power 3000 MW per bipole	<u>In the entire range of HVDC power (minimum 1 pu)</u>		<u>400 kV AC SYSTEM Bhadla (Bus Sectionalizer open)</u>		Maximum Export at 420 kV 50 MVAR	Import NIL at 380 kV	400 kV AC SYSTEM Fatehpur		Maximum Export at 420 kV 100 MVAR	Import NIL at 380 kV	<p>.....</p> <p>(A) Reactive power exchange limits Table 9</p> <table border="1" data-bbox="1402 687 2181 1153"> <tr> <td>Minimum DC Power 150 MW</td> <td>Maximum DC Power 6000MW (3000 MW per bipole)</td> </tr> <tr> <td colspan="2"><u>In the entire range of HVDC power</u></td> </tr> <tr> <td colspan="2"><u>400 kV AC SYSTEM Bhadla</u></td> </tr> <tr> <td>Maximum Export at 420 kV 50 MVAR</td> <td>Import NIL at 380 kV</td> </tr> <tr> <td colspan="2"><u>400 kV AC SYSTEM Fatehpur</u></td> </tr> <tr> <td>Maximum Export at 420 kV 100 MVAR</td> <td>Import NIL at 380 kV</td> </tr> </table> <p>Sectionalizer breaker at 400kV Bhadla & 400kV Fatehpur is to be considered normally closed. However, bidder shall design both stations such that power transmission is also possible with sectionaliser open.</p> <p>.....</p>	Minimum DC Power 150 MW	Maximum DC Power 6000MW (3000 MW per bipole)	<u>In the entire range of HVDC power</u>		<u>400 kV AC SYSTEM Bhadla</u>		Maximum Export at 420 kV 50 MVAR	Import NIL at 380 kV	<u>400 kV AC SYSTEM Fatehpur</u>		Maximum Export at 420 kV 100 MVAR	Import NIL at 380 kV
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6.	Clause B2.5 of specific technical specification of RfP (page 220 of RfP)	<p>B.2.5 Protection Relaying & Control System</p> <p>.....</p> <p>b) <u>Auto Transformer Protection (Fire protection?)</u></p> <p>.....</p>	<p>B.2.5 Protection Relaying & Control System</p> <p>.....</p> <p>b) <u>Auto Transformer Protection</u></p> <p>.....</p>
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