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Memo No.: APSCCL/MD/Project-400MW (East)/2016/2594

Date: 02 August 2016

**Project's Name: Construction of Ashuganj 400 MW Combined Cycle Power Plant (East)**

**Invitation for Bids: APSCCL/Project-400(East)/MD/2016/1437 dated: 05 May 2016**

**Amendment No. 3**

Sl. No.	Doc. No. & Clause No.	Page No.	Existing As	Amended As
1	Volume 3 of 3 Section 4 Bidding Forms	4-12	<p><b>Price Schedule</b></p> <p>Price Schedule No. 1A2: Supply of Mandatory Spares &amp; Consumable items for Defect Liability Period (warranty period) (Financed by IDB)</p> <p><b>Spares &amp; consumables for the scheduled inspections of GT</b>            In addition ----- equivalent 24000 operating hours.            Bidder shall have ----- considered for further evaluation.            These spare ----- claim for installed components.</p>	<p><b>Price Schedule</b></p> <p>Price Schedule No. 1A2: Supply of Mandatory Spares &amp; Consumable items for Defect Liability Period (warranty period) (Financed by IDB)</p> <p>Deleted</p>
2	Volume 3 of 3 Section 8 Special Conditions of Contract	8-10	<p><b>46. Environmental</b></p> <p>More particularly, the Contractor shall comply with (----- appendix [ ] and (ii) any ----- of the environmental management plan.</p>	<p><b>46. Environmental</b></p> <p>More particularly, the Contractor shall comply with (----- appendix 1 and (ii) any ----- of the environmental management plan.</p>

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3	Volume 3 of 3 Section 9 Contract Forms	9-19	<p><b>Appendix 8</b></p> <p><b>2. Preconditions</b></p> <p>The Contractor gives the functional guarantees (specified herein) for the facilities, subject to the following preconditions being fully satisfied:</p> <p>[List any conditions for the carrying out of the Guarantee Test]</p> <p><b>3. Functional Guarantees</b></p> <p>Subject to compliance with the foregoing preconditions, the Contractor guarantees as follows: As mentioned in PC, Vol. 1 of 3 and Guarantee Schedule, Vol. 3 of 3.</p> <p><b>4. Failure in Guarantees and Liquidated Damages</b> As mentioned in PC, Vol. 1 of 3</p>	<p><b>Appendix 8</b></p> <p><b>2. Preconditions</b></p> <p>The Contractor gives the functional guarantees as specified in Volume 3 of 3 for the facilities, subject to the following preconditions being fully satisfied:</p> <p>a) Ambient Dry Bulb Temperature: 35°C b) Barometric Pressure: 1,013 mbar c) Relative Humidity: 98% d) System Frequency (Hz): 50 Hz e) Power Factor: 0.80 lagging f) Range of acceptable Fuel Calorific Values: 35.2229 to 39.0641 MJ/SCM (LHV) (at standard condition) g) Cooling water temperature: 32.2°C</p> <p><b>3. Functional Guarantees</b></p> <p>Subject to compliance with the foregoing preconditions, the Contractor guarantees as follows: As mentioned in GCC &amp; SCC, Volume 1 of 3 and Guarantee Schedule, Volume 3 of 3.</p> <p><b>4. Failure in Guarantees and Liquidated Damages</b> As mentioned in GCC &amp; SCC, Volume 1 of 3</p>
4	Volume 2 of 3 (Part-A) 3. Scope of Works	9	<p><b>3. SCOPE OF WORK</b></p> <p><b>d. Others</b></p> <p>i) All underground &amp; over ground structure/foundation of the existing plant &amp; auxiliaries and all underground structure/foundation from the rest of the Project area.</p>	<p><b>3. SCOPE OF WORK</b></p> <p><b>d. Others</b></p> <p>ii) All underground &amp; over ground structure/foundation of the existing plant &amp; auxiliaries and all underground structure/foundation from the rest of the Project area as per annexure 6. Re-use or demolition of existing piles is Bidder's option. Re-use of existing piles should be acceptable in engineering point of view.</p>

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5	Volume 2 of 3 (Part-A) List of Equipments and Structure/ Foundation	19	<b>12.4 Others</b> All over ground & underground structure/foundation of the existing plant & auxiliaries and all underground structure/foundation from the rest of the Project area.	<b>12.4 Others</b> All over ground & underground structure/foundation of the existing plant & auxiliaries and all underground structure/foundation from the rest of the Project area as per annexure 6.
6	Volume 2 of 3 (Part-B) 1 Project Requirements	21	<b>1.2 Summary Scope of Work of Contractor</b> ----- a) Demolition and disposal of the existing Plants and Auxiliaries including over ground & underground structure/foundation of the plant area and all underground structure/foundation from the rest of the project site.	<b>1.2 Summary Scope of Work of Contractor</b> ----- a) Demolition and disposal of the existing Plants and Auxiliaries including over ground & underground structure/foundation of the plant area and all underground structure/foundation from the rest of the project site.
7	Volume 2 of 3 (Part-B) 1 Project Requirements	24	<b>1.2.2 Scope of Supply</b> ----- • Site access road from main highway -----	<b>1.2.2 Scope of Supply</b> ----- Deleted -----
8	Volume 2 of 3 (Part-B) 1 Project Requirements	25	<b>1.3.2 Water</b> ----- The demineralised water quality of the said plant is included for information. Conductivity : <0.1 $\mu$ s/cm at 25°C Silica as SiO <sub>2</sub> : <0.02 ppm PH : 6.5 ~ 7.4 Total Iron : <0.02 ppm as Fe -----	<b>1.3.2 Water</b> ----- The demineralised water quality of the said plant is included for information. Conductivity : <0.1 $\mu$ s/cm at 25°C Silica as SiO <sub>2</sub> : <0.02 ppm PH : 6.5 ~ 7.4 Total Iron : <0.02 ppm as Fe Total copper : 0.00 mg/litre Calcium : 0.00 mg/litre Chlorine : 0.00 mg/litre Fluorine : 0.00 mg/litre Sodium : 0.00 mg/litre Potassium : 0.00 mg/litre Copper : 0.00 mg/litre Dissolved organic carbon : 0.00 ppm Dissolved Oxygen content : 6~8 ppm -----

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9	Volume 2 of 3 (Part-B) 1 Project Requirements	27	<p><b>1.3.5 Interface Summary Table</b></p> <table border="1"> <thead> <tr> <th>Item</th> <th>Terminal Point</th> <th>Interfacing Body</th> <th>Detail</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Underground 230 KV cable</td> <td>APSCL/PGCB</td> <td>230 KV existing outdoor GIS Sub-Station</td> </tr> <tr> <td>20</td> <td>Gas (town supply)</td> <td>Employer</td> <td>Nearest point</td> </tr> </tbody> </table>	Item	Terminal Point	Interfacing Body	Detail	9	Underground 230 KV cable	APSCL/PGCB	230 KV existing outdoor GIS Sub-Station	20	Gas (town supply)	Employer	Nearest point	<p><b>1.3.5 Interface Summary Table</b></p> <table border="1"> <thead> <tr> <th>Item</th> <th>Terminal Point</th> <th>Interfacing Body</th> <th>Detail</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Underground 6.6 KV</td> <td>APSCL/PGCB</td> <td>230 KV existing outdoor GIS Sub-Station (Annexure 5 &amp; 7)</td> </tr> <tr> <td>20</td> <td></td> <td></td> <td>Delete</td> </tr> </tbody> </table>	Item	Terminal Point	Interfacing Body	Detail	9	Underground 6.6 KV	APSCL/PGCB	230 KV existing outdoor GIS Sub-Station (Annexure 5 & 7)	20			Delete
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10	Volume 2 of 3 (Part-B) 1 Project Requirements	31	<p><b>1.4.3 Existing Power Plants at the station</b></p> <p>The 132 KV Sub-station built with the 2x64MW power -..... 2 x 500 mm2 copper conductors having estimated capacity of 2000A.</p>	<p><b>1.4.3 Existing Power Plants at the station</b></p> <p>The 132 KV Sub-station built with the 2x64MW power ..... 2 x 500 mm2 copper conductors having estimated capacity of 2000A. Existing 230 KV GIS Sub-station also double bus system having capacity of 3150A.</p>																								
11	Volume 2 of 3 (Part-B) 2 Performance, Operating and Maintenance Requirements	32	<p><b>2.2 Fuel Gas Specification</b></p> <p>The fuel gas composition -----production facilities. The calorific values of the gas (LHV) have been ranging between 35,222.9 kJ/Scm. and 39,064.1 kJ/Scm. Table 2 shows a "typical" gas composition provided by Bakhrabad Gas. This composition shall be used for performance guarantee purposes.</p> <p>The Contractor shall include the appropriate margin in their design. The margin shall be no less than 10% of the design gas flow.</p>	<p><b>2.2 Fuel Gas Specification</b></p> <p>The fuel gas composition -----production facilities. The lower and higher calorific value of the gas (LHV) is 35,222.9 kJ/Scm. and 39,064.1 kJ/Scm respectively. Table 2 shows a "typical" gas composition provided by Bakhrabad Gas. This composition shall be used for bidding purpose only.</p> <p>The Contractor shall include the appropriate margin in their design. The margin shall be no less than 20% of the design gas flow.</p>																								
12	Volume 2 of 3 (Part-B) 2 Performance, Operating and Maintenance Requirements	38	<p><b>2.7 General Redundancy Requirements</b></p> <p>If there are N pieces of equipment in use at full load, then there should be N + 1 pieces of that equipment installed, excluding the GTG, its starting equipment and generator step-up transformer, HSRG, ST.</p> <p>Specific equipment redundancies for the CCGT Power Plant shall be per the requirements below which provides a greater level of redundancy.</p>	<p><b>2.7 General Redundancy Requirements</b></p> <p>If there are N pieces of equipment in use at full load, then there should be N + 1 pieces of that equipment installed, excluding the GTG, its starting equipment and generator step-up transformer, HSRG, ST.</p> <p>All Electrical changeover should be automatically without interrupting the system if the running equipment got tripped. Mechanical changeover also should be designed that its changeover can't interrupt the running system.</p> <p>Specific equipment redundancies for the CCGT Power Plant shall be per the requirements below which provides a greater level of redundancy.</p>																								

