

Pre Bid Technical Clarification No.5 against NIB No.377 dated 26.11.2020

Sl. No.	Bid Stipulation	Bidder's Query	NEEPCO's Reply
1.	<p>Section IV, Vol - 2, Part -II-03 Generator and Aux - PTS, Page 352</p> <p>Liquidated damages for shortfall in output and efficiency of Generator</p>	<p>The rate of liquidated damages for shortfall in Output and Efficiency is defined in Clause 1.5.1.3, Section-IV, Vol - 2, Part -II-03 Generator and Aux - PTS. However, the same is not capped based on the Contract Value. Therefore, we again request you to kindly add the following in the clause to limit the liability of the bidder (on account of performance of the Generator): Maximum penalty due to shortfall in the tested values of rated output and the weighted average efficiency shall be limited to 10% of the total Contract Value.</p>	<p>Bid specification shall prevail.</p> <p>The LD rate considered in the specification is a function of tariff and has no relation to the contract price. Any shortfall in efficiency and output will be incurred by the corporation till the useful life of the unit /s. Therefore, this standard clause do not have any capping limit but has a rejection limit for the generator.</p>
2.	<p>Section-IV, Vol-2, Part-II-05 Protection System - PTS 1.5.4 Sub-station Automation System page 410 1.1 Scope of Work Page 401</p> <p>The substation automation system (SAS) proposed is BCU based distributed architecture type for 220 KV switchyard unit bays, 33 KV system, and 415V UAB &amp; SSB panels..... .....The bidder shall suggest for necessary interfaces in different panels required to be hooked up to SAS, during detailed engineering stage, with their technical specifications and at least three vendors fulfilling the</p>	<p>Substation automation system based Bay control Unit (BCU) is recommended for Switchyard Line bays for which auto reclosing/check synchronising functions are performed during on load conditions. Also complete SAS is required in the specification.</p> <p>Control, monitoring and protection shall be provided for unit bays through L/R selector switch and TNC switch with CB/Isolator open/close feedback and will be integrated with unit control board and power house scada so that control and monitoring achieved through 3 location (from SCADA, from relay panel from SCADA) through protection interlocks in relay panels.</p> <p>For control &amp; monitoring for 33 KV and 415 V UAB &amp; SSB panels shall not be recommended through BCU as these system shall be control and monitored through Local Control Unit of station and common auxiliary system.</p>	<p>Control, monitoring and protection of unit bays, 33 KV and 415V UAB &amp; SSB may be provided by the bidder through SCADA, provided all other standard capabilities like – Fault and disturbance Recording functions, Display &amp; Reporting functions, Long term storage functions, Remote communication functions etc. and expandability is achieved. Further the other requirements mentioned at the referred clause shall also be fulfilled.</p> <p>The required functionalities mentioned shall invariably be fulfilled by the bidder either through BCU based SAS or SCADA.</p>

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	<p>same. 1.1 SCOPE OF WORK- Integration and interface with SAS &amp; Protection to be made by the contractor for the scheme to be implemented by PGCIL for 220 KV Feeders (3 Nos.), ICT (2 Nos.) &amp; Bus coupler bays, BB protection of all 220 KV bays including generator bays, PLCC, RTU &amp; PMU.</p>	<p>Also Interfacing of Power House SCADA with switchyard SAS installed by PGCIL shall be done through Switchyard Lcoal control unit with IEC communication.</p> <p>Necessary protocol/gateway shall be decided during detail engg.</p> <p>Therefore Substation automation sytem based Bay control Unit (BCU) requirement is not foreseen as explained above and same shall excluded from scope.</p>	
<p>3.</p>	<p>Section-IV, Vol-2, Part-II-05 Protection System - PTS 1.1.1.7 Standalone Disturbance Recorder (1Set) page 404</p> <p>Separate DR shall be provided having at least 8 Analog and 16 Digital channels with a scan rate of minimum 1000 Hz, for data extraction from all numerical relays of the plant, including 220 KV switchyard.</p> <p>There shall be a central storage/ evaluation unit cum PC located in the Central Control Room, with auto extraction facility, for the analysis of disturbances/events recorded in each relay</p>	<p>Standalone disturbance recorder (1Set) envisaged for 4 Nos Unit bays, 2 nos SAT bays and 220kV Switchyard Protection as listed in clause 1.1.1.3 with storage capacity as per supplier standard. We want to mention that outgoing Line bays, Bus bar and Bus coupler of 220kV Switchyard are under PGCIL control and relay panels are installed in Switchyard control room. Therefore all relays in 220kV switchyard (including lines, bus bar, ICT, Bus-coupler) shall not be part of standalone disturbance recorder (1Set). Kindly confirm</p>	<p>Standalone DR must be capable of capturing disturbances recorded and to access all events from all the Numerical Protection relays including those of the 220 KV switchyard and store them for a long duration of at least 30 days for retrieval. It may be noted that although numerical relays have DR capability, owing to limited storage in them, event data overflows and critical data for fault analysis is not available at times.</p> <p>The standalone DR shall capture all events in the numerical relays, and therefore shall communicate with them. It shall record GPS synchronized time stamped event data from the relays</p>

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4.	<p>Section-IV, Vol-2, Part-II-05 Protection System - PTS 1. Protection systems, 1.1 scope of work AND 1.1.1.6 Station Auxiliary Transformer Protection (2 Sets) page 404 Control &amp; Protection for one incomer and two outgoing 33 KV breakers feeding two nos. of 33/0.415 KV SAT of 33 KV system</p>	<p>Two nos. of 33/0.415 KV SAT of 33 KV system only considered as per clause 1.1.1.6. Please confirm</p>	<p>The 33 KV outdoor system shall have one incomer breaker from the 132/33 KV SST and two outgoing breakers to the 33/0.415 KV SATs. The control, protection &amp; monitoring of these three 33 KV breakers is in bidders scope.</p>
5.	<p>Section-IV, Vol-2, Part-II-05 Protection System - PTS 1.1.1.4 Unit Auxiliary Transformer Protection (4 Sets) page 403 Following minimum protection for UAT shall be provided: i) 50UAT Instantaneous over-current protection. ii) 51UAT Over-current protection (IDMT). iii) 64 Restricted earth fault protection. Electro-Mechanical iv) 51NGT Neutral Grounding back-up E/F protection. v) 49T Winding temperature protection</p>	<p>iv) 51NGT Neutral Grounding back-up E/F protection shall be part of Unit Auxiliary Transformer Protection Numerical relay and separate relay requirement is not envisaged.  Please review and confirm</p>	<p>Specification asks for the required protection function and not separate relay.</p>

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<p>6.</p>	<p>Section-IV, Vol-2, Part-II-00 General Technical Requirement-PTS page 259 E) Cable Schedule Preparation of cable schedule for interconnection of their respective equipment to Local control cubicle etc., or any other panel / equipment / supplied under this package is deemed to be included in the scope of this contract. Preparation of cable schedule (power, control and instrumentation) of entire E&amp;M works for successful commissioning of the plant as a whole with proper co-ordination and inputs / data / details / drawings etc., from Contractor of other packages is included in the scope of this Contract.</p>	<p>As the scope of supply of this tender is limited to Generator, Control, Protection, Excitation, Governor and some components of Turbine. Therefore we can provide cable schedule of the supplied equipments under the scope of this tender only. Further, kindly note that preparation of Cable schedule of entire plant is a process of about-5-6 months and required accurate inputs to avoid mismatch at later stage. Since majority of the EM equipments are to be supplied by third party (other contractors not part of this tender) and placed at different location in the plant, So the co-ordination with so many third party suppliers for drgs/docs./inputs/clarification may not be possible in a proper manner which leads to incorrect/delay in cable schedule. Due to delay because of third party supplier unforseen causes/ incomplete inputs, finally we will be responsible for complete delay. Since we have to acheive project milestone/ deliverables on time which are neither in our control nor we have information to work up on, it would not be justified to prepare the cable schedule of the complete plant under this tender. Thererore it is requested that entire power plant cable schedule to be exculded from scope. Please review and confirm</p>	<p>Bid specification shall prevail.  Preparation of cable schedule of entire E&amp;M works for successful commissioning of the plant shall be in the scope. Necessary inputs required from other package contracts shall be intimated and shall be made available for the purpose.</p>
<p>7.</p>	<p>Section-IV, Vol-2, Part-II-00 General Technical Requirement-PTS page 260  D) Cables &amp; Cabling Works All cables and cabling works including covered perforated cable trays from individual equipment supplied under</p>	<p>We have to consider cable scope as per this clause only and as specified in technical specifications in particular clauses. Please review and confirm</p>	<p>Agreed. The same is as per bid specification.</p>

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	<p>this contract to their respective individual marshalling kiosks as well as any other panel / equipment supplied under this package is deemed to be included in the scope of this Contract. Further cabling from Local control cubicle /marshalling kiosk of other equipment supplied by other contractor (not of this package) to various LCBs / UCBs / Plant SCADA / power supply boards shall not be within the scope of contract under this package</p>		
8.	<p>Section-IV, Vol-2, Part-II-05 Protection System - PTS page 414</p> <p>(5) The unit protection cubicles shall be installed in the CCR, or arranged in a common assembly with the UCB on the generator floor;</p>	<p>We have to consider the unit protection cubicles and UCB's location in the old control room arranged together on the generator floor. Please review and confirm</p>	<p>Agreed. The same is as per bid specification.</p>
9.	<p>Section-IV, Vol-2, Part-I, General Technical Specification 6.4.9 Test Page 223 A) Routine Tests at factory: (i)-(Viii)</p>	<p>Please note that routine test on motors shall be performed at factory in accordance with IS: 325 and review of equivalent Type test report of motors against type test defined in the contract. Kindly accept</p>	<p>Agreed. The same is as per bid specification.</p>

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10.	<p>Section-IV, Vol-2,Part-II-04, Excitation System - PTS 1.9.3 Type test at works Page 395</p> <ul style="list-style-type: none"> <li>• Heat run test on Thyristor bridge on one set of static equipment</li> <li>• Heat run test one excitation transformer</li> </ul>	<p>We will propose to accept equivalent type of Type test report instead of conducting the test. Kindly accept. This will reduce unnecessary delay or cost in testing for NEEPCO</p>	<p>Bid specification shall prevail.</p>
11.	<p>Section-IV, Vol-2, Part-II-01 Turbine Component-PTS 1.13.3 Hydraulic Pressure Tests page 307</p> <p>All components and devices subject to lubricating oil pressure, compressed air pressure and cooling water pressure shall be shop tested at a pressure of 150% design maximum operating pressure for a period of 120 min</p>	<p>Please note that as per national/international standards, holding pressure during pressure testing is generally 30 Minutes. The same may please be accepted</p>	<p>Bid specification shall prevail.</p>
12.	<p>Section-IV, Vol-2 Part-II-03 Generator and Aux - PTS, 1.12.4. Hydraulic Pressure Tests (Page 378)</p> <p>All components and devices subject to lubricating oil pressure, compressed air pressure and cooling water pressure shall be shop tested at a pressure of 150% design maximum operating pressure for a period of 120 min.</p>	<p>Please note that as per national / international standards, holding pressure during pressure testing is generally 30 Minutes. The same may please be accepted</p>	<p>Bid specification shall prevail.</p>

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13.	Section-IV, Vol-2 Part-II-03 Generator and Aux - PTS, 1.12.5. Electrical Tests (Page 379) 3. Accelerated life test at increased voltage and temperatures for two randomly selected coils/bars	We propose to accept the type test report conducted in previous project for similar rating considering similar insulation system. This will reduce unnecessary delay or cost in testing for NEEPCO	Bid specification shall prevail.
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