## Enquiry No- 04/SLDC-D/2022 Design, Engineering, Supply, Erection, Testing, Commissioning and Integration of Remote Terminal Units (RTUs) for SCADA/ EMS system in PSTCL on Turnkey Basis

| Sr. No. | Clause Reference | Description | Bidder's Query | PSTCL Reply |
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| 1 | 5.0 Scope of Work (5.4) | Further, this office has installed sealable Energy Meters (very similar to MFMs) at many I/O locations. If these meters are found suitable at the time of survey/ detailed design & engineering then instead of Transducers/ MFTs for these I/O locations, these Energy Meters shall be interfaced at the option of Purchaser. Future addition of such Energy meters by Purchaser, if any, shall also be integrated with the RTU as per the Purchaser's requirements. | We understand existing energy meters are having Modbus communication protocol for integration with RTU, kindly confirm.<br><br>Further, please specify number of sites where existing energy meters are available. | Confirmed. |
| 2 | 5.2 Scope of Work | The scope includes supply, laying and termination of all cables, site adaptation works as required to connect/ interface the RTU and Transducer Panel with Customer's Control and relay panels. | We understand that we don't have to consider cable other than mentioned in BOQ. Same shall be utilized to interface the RTU with customer control & relay panel. | Not Confirmed.<br>This point is clearly addressed in the scope of work Clause No.5.10 of PSTCL specification. |
| 3 | 5.0 Scope of Work (5.5) | All hardware, software, accessories and services required for successful commissioning/ integration and operation of the supplied equipment in conjunction with the existing SCADA/EMS System at Master/ SLDC station but are not specifically mentioned in the specification shall be included in the scope of contract. | We understand that we need to provide data on IEC-104 protocol for communication with existing/upcoming SCADA/EMS system at Master/SLDC station, however integration of RTU with Master/SLDC shall be in the scope of PSTCL, kindly confirm. | Not Confirmed<br>It is clarified that Database creation in SCADA is not in RTU vendor's scope. |
| 4 | Specification 9.12.1.b Delivery Schedule | The delivery of whole material/ equipment at the Purchaser store/ Consignee, shall be completed within 4 (four) months from the date of issue of Work/ Purchase Order. | We understand delivery shall be completed within 4 months from the date of drawing approval, kindly confirm. | Not Confirmed.<br>The specification requirement is amply clear. |
| 5 | Specification 9.12.1.c Erection, testing commissioning/integration schedule | The erection, (Dismantlement of old RTU if applicable), testing, commissioning and integration of the RTUs i.e. SAT at the respective location shall be completed within 12 (Twelve) months from the date of issue of Work/Purchase Order. | We understand erection, testing, commissioning and integration of the RTU shall be completed within 12 months from the date of supply of material at stores, kindly confirm. | Not Confirmed.<br>The specification requirement is amply clear. |

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| 6 | 9.22 Warranty, Extended Warranty cum Maintenance Support Services & Life Span | During Warranty Period of 2 years and thereafter during Extended Warranty cum Maintenance support, Contractor shall assign a team of at least two qualified and competent persons at a suitable place as may be desired by Purchaser for time bound attendance of the faults/ other problems and to keep the online data from RTUs always available in SLDC. Extended Warranty shall be extendable further by 5 years as per mutual agreement between PSTCL and the Contractor. Under this, the Contractor shall supply all spares as required to maintain the RTUs. | We understand that spares shall be provided by PSTCL for extended warranty cum maintenance period, kindly confirm. | Not Confirmed.<br>This point is clearly addressed in Warranty, Extended Warranty cum Maintenance Support Services & Life Span clause no.9.22 |
| 7 | Technical Specifications for RTU<br>1.12 Data Concentrator Communication Protocol | RTU should have built in DCU feature may be in its CPU card itself so that RTUs can be cascaded.<br>However, RTU could also be used exclusively as a Data concentrator Unit by adding suitable Comm. Port Card and shall be provided with at least ten (10) IEC 101 input may be by adding ports/ cards and shall have capability to report to two master stations on IEC 104 interface. | As mentioned in Brief Technical Particulars of RTU under Sr. No.2-Communication Ports, there is requirement for 2 no. RS-232 ports for communication with master stations on IEC-101 however in this clause, it is mentioned that 10 no. IEC-101 ports are required. Request to confirm the no. of ports required for IEC-101. | The requirement mentioned in Clause no.1.3 Communication is amply clear regarding Communication Ports. RTU to be used exclusively as DCU features as per clause no.1.12 is optional requirement in BOQ. |
| 8 | Technical specifications for RTU<br>1.14.1 Contact Multiplying Relay | The CMRs shall be generally mounted in existing control & Relay panel but in case of non-availability of space, it shall be accommodated in the System Interface Cabinets (being supplied by the Contractor). Detailed Specifications are given in Annexure-IV. | Please specify number of locations where proper space is not applicable to install CMRs in CRPs and need to consider SIC for those sites. | SIC is not required. CMR shall be mounted in CRP. |
| 9 | Technical specifications for RTU<br>1.2 RTU Functions<br>q. Cybersecurity Requirement (xii-a) | All the above security features fulfil basic requirements of the following security standards:<br>a. Relevant parts of NERC/CIP - North American Electric Reliability Corporation - Critical Infrastructure Protection. | NERC-CIP is an American Standard, we shall provide BDEW white Paper which is the equivalent European standard for cybersecurity, kindly accept. | Bidder shall quote as per requirement of specification. Any deviation from the same is subject to approval of competent Authority |

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| 10 | 1.2 RTU Functions<br>q. Cyber Security Requirements (vi) | RTU shall comply to IEC62351-3 and IEC62351-5 requirement as per MoP order 12/34/2020-T7R dt. June 8, 2021. The same shall be certified at CPRI as mentioned in the referred notification and certificate issued by CPRI shall be attached with the bid. | As per MoP order it is applicable for Imported products and not for "Made In India" products. The offered Make RTU is manufactured in India, hence the MoP Order is not applicable, kindly accept. | Confirmed. |
| 11 | Technical Specifications for RTU<br>1.23 RTU Size & Expandability | The RTUs delivered shall have the capability to accommodate additional I/O modules to expand the overall point count of the RTU by a minimum of fifty percent (50%) i.e. 80% more than the actual RTU count defined in the BOQ. The I/O modules here means Status Input module, Analog input module and the Control output module. Other modules, such as processor module, racks etc. as required to meet the overall expandability requirement defined above shall also be supplied by the contractor. These I/O Modules should be wired upto the TBs. | We understand that I/O count mentioned in the BOM is inclusive of additional I/O modules to expand the overall point count of the RTU by 50%, we have to consider TB only for this purpose, kindly confirm. | Not Confirmed<br>It is clarified that additional wired available reserve capacity for 2 additional feeders and one additional transformer, has already been considered in spec. BOQ. This reserve capacity shall be used without any additional hardware such as I/O Cards and Terminal Blocks. However, RTUs shall have the space / TB to accommodate additional I/O modules to expand the overall point count of the RTU by a minimum of fifty percent. |
| 12 | Technical Specifications for RTU<br>1.25 Interconnections | All cabling between component units of the RTU, RTU to interface cabinet, RTU to MFTs and to the Employer control and relay panels (located in the substation control room) shall be supplied and installed by the Contractor and shall be shown on Contractor supplied drawings. Plug-type connectors with captive fasteners or compression type connectors shall be used for all internal interconnections. The connectors shall be polarized to prevent improper assembly. Each end of connection cables shall be identified by a marker which includes the cable number and the identifying number and location of each of the cable's terminations. This information shall match with the Contractor's drawings. | We understand we have to use cable as mentioned in the BOQ, supply of additional cable is not required, kindly confirm. | Not confirmed<br>For cables mentioned in BOQ, any extra quantity required after finalization of BOQ after survey shall be payable. However, any other type of cable/item required for completion of the project but not specifically mentioned shall be in the scope of vendor as per various provisions of scope of work. |

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| 13 | Technical Specifications for RTU<br>1.25 Interconnections | All internal interconnection wiring and cables shall be routed separately from field wiring to the RTU terminals & power wiring. All wiring shall use copper conductors and have flame retardant insulation. Conductors in multi-conductor cables shall be individually colour coded. | We understand all internal interconnection wiring and cables from field wiring to the RTU terminals shall be in the scope of PSTCL, kindly confirm. | Not comfirmed<br>This point is clearly addressed in Vendor Responsibilities and Obligations Clause No. 6.4 of PSTCL specification. |
| 14 | Annexure-XIX(A)<br>Consolidated BOQ | Analog Input/Digital Input/Digital Output | Please specify number of Analog Input, Digital Input and Digital Output required in each card of RTU. | Analog Input Card, Digital Input Card and Digital Output Card have been asked in Lot in the spec. BOQ. However, the actual count in each card of RTU shall be as per individual design (i.e.number of channels per card) of each OEM. The actual BOQ count of IO cards in nos. shall be submitted in Part-II of the bid. The bidder shall quote accordingly. |
| 15 | Annexure-V<br>Specification for Power & Control Cable | Power & Control Cable | Please confirm if cables shall be armoured or non-armoured. | Non armoured cables are mentioned in Spec. |
| 16 | General | Ethernet Switch | We understand Ethernet switches are available at sites to connect IEC-61850 compliant relays with RTU, kindly confirm. Further, Icd files shall be provided by PSTCL for integration of relays with RTU. | Confirmed. |

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