TPCODL

**Pre Bid Queries Response for "Rate Contract for RTU based Automation for Conventional Substations"**
**NIT No.: TPCODL/P&S/ 1000000099 /21-22**

| Sr. No. | Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No | Description as per Bid Document | Remarks - Query / Clarification | TPCODL Response Dated 06.09.2021 |
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| 1 | 2 | 3 | 4 | 5 |
| 1 | For Structuring (Configuration) System (Separate Port) | A galvanically isolated USB port for local engineering through laptop | Ethernet and Serial Port can also be used for local engineering through laptop, so we understand that USB Port not is not Mandatory. Please check and confirm. | As per Section-B 1.33.1 clause, separate communication ports for internal communication, maintenance and configuration has been asked for. USB, RS232 or Ethernet port with compatible communication cable shall be acceptable |
| 2 | 1.49.3 | Patch Panel, I/O Box,Ethernet Patch cords | Kindly allow us to use other make preston/Bestnet | Please refer Annexure – 6 for approved make list |
| 3 | 1.50.3 | Constructional Features | RTU & SIC – allow us to use other make MPP/Fabionix | Please refer Annexure – 6 for approved make list |
| 4 | J.4 | SMS Utility Software | Kindly share the details of SMS software | SMS alarm notification is a part of RTU's functionality. Bidder to consider SMS notification feature with the RTU. |
| 5 | 4.1.6 | Integration with Control Centre SCADA | We can support for RTU integration with purchaser SCADA, however modification in SCADA is respective vendor scope | Noted, modification in SCADA is in the scope of the Purchaser whereas the necessary modification at the RTU end and point testing as per RFP will be in the scope of the Bidder. |
| 6 | CMR with Mounting Base | CMR make | Kindly give us approved make if any | Please refer Annexure – 6 for approved make list |
| 7 | Services of RTU | Civil Activities for installation of RTU panel | We can make baseframe for RTUs, no other civil work is part of RTU vendor. | For the outdoor applications, the plinth should be of concrete make and the tentative height of the plinth is approximate of 1 meter. The installation of the panels on the platform should be strong enough to withstand the wind speed of around 200 KM/HR. |
| 8 | Services of RTU | Integrated FAT | RTU FAT will be done at Bangalore HITACHI-ABB PG factory. We can support for the remote integrated FAT. | Noted, Bidder has to setup arrangement at their shop floor for Integrated FAT with their simulated master SCADA. However, during detailed engineering we will plan to carry out FAT from remote. |
| 9 | Services of RTU | Unloading and Storage | RTUs unloading and storage at site wll be customer scope. | Unloading and storage of RTU will be in the Bidder scope as per RFP. |
| 10 | Services of RTU | Installation and Commissioning of Multifunction Meters in CRP Panel an it integration with RTU | Required site support during the wiring( assitance on scheme and shut down if any ) same will be in customer scope | Purchaser will support in arranging outage and necessary support on per site basis( Sample) if required. Cable laying, termination, wiring and tagging is in the scope of the Bidder. |
| 11 | Standard Warranty | Standard warranty period of 5 Years from the date of system handover after SAT | Warranty will be 60months from the date of commissioning or 66 months from the date of supply. | Please refer the RFP clause 14.0 of Section A Page 73 of 88 |
| 12 | Extended warranty | Maintenance Services for the supplied Hardware, System and Application Software up-gradation, Patch Management services including sub-vendor products | We can agree extended warranty support for the OEM items (RTU and software), However extended warranty cannot be confirmed for the sub-vendor items. | Please refer the RFP clause 14.0 of Section A Page 73 of 88. Bidder to submit back to back order placed on sub vendors to purchaser for their review and necessary action as applicable. |
| 13 | Payment terms<br>9.3 Mile Stones | Milstone for Ph 1 and Ph 2 | Drawing approval of RTUs 10%<br>FAT and panel delivery at site 70%<br>Installation of panels 10%<br>Commissioning and handing over 10% | Please refer the RFP clause 9.3 Milestone of Section A Page 40 of 88. Payment terms as per RfP. |

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| 14 | Communication with MCC/BCC | | Communication media/networking for the interface with MCC/BCC SCADA system is not our scope. | Router and PoE will be free issue item by TPCODL however engineering and mounting the same in the RTU panel and necessary networking and power supply arrangement is in the scope of the Bidder. |
| 15 | Clause no 10.0, Page 1 of 27, Information to Bidder | Bidder shall ensure that the proposed architecture at Substation are certified by Cyber Security auditor for the compliance as per Industry standards. | We request TPCODL to confirm whether system has to be certified by CERT-IN empanelled agency for cyber security at the time of system handover for Phase-1 and Phase-2 | Bidder to engage third party CERT-IN empanelled auditor to carry out the audit of the installed substation infrastructure. Bidder to ensure bridging all the identified gaps before handling over the system for operation. Bidder shall also note that the third party auditor credential and experience in OT will be approved by the purchaser |
| 16 | Clause no 31.0 , Page 2 of 27, Information to Bidder | TPCODL reserve the right to split the order quantity to any extent amongst the bidders | Request TPCODL to confirm the basis of splitting the order amongst the bidders | Splitting of order is of substation wise. |
| 17 | Project Specification , Section A, Page 16 of 88, Clause no 3 Scope of work | Phase 3 (FY'23-24): Scope of work as mentioned for 90 Nos. of Substations (Refer Annexure-3 of Section-E Phase-3 (FY'23-24) for Sub-Station details). | As per the Price Bid-RTU, only prices for Phase-1 and Phase-2 are asked whereas as per scope of work Phase-3 is also included. Request you to kindly amend the Price Bid accordingly | The current RFP is only for Phase-1 & Phase-2 , however TPCODL may decide to engage the same bidder to execute phase-3 also or may refloat the RFP for phase-3. |
| 18 | Project Specification , Section A, Page 18 of 88, Clause no 3.3.1 i | Instrumentation and control cable shall be laid through the existing cable trenches whereas the communication cable shall be laid through PVC coated steel flexible conduit. | Request TPCODL to confirm that cable trenches are available at all the S/s for laying Instrumentation and Control Cables. | For all indoor substation cable trenches are available, but in case of outdoor application minor arrangement may be required. |
| 19 | Project Specification , Section A, Page 18 of 88, Clause no 3.3.2 a RTU | Data acquisition and Control is primarily planned through BCPUs, therefore the integration of these BCPUs through ethernet switch and upto the RTU is in the scope of the bidder. | We understand that configuration of BCPUs for integration of the same with RTU is in scope of BCPU supplier. Kindly confirm | Configuration of the BCPU shall be with the Purchaser, however the necessary configuration and networking in RTU to integrate BCPU is in the scope of the Bidder. |
| 20 | Project Specification , Section A, Page 18 of 88, Clause no 3.3.2 f RTU | In some substations space for RTU and SIC shall be created by dismantling and shifting the existing unused dead panel by the bidder. | Since it is not possible to do survey for all the sub-stations at this stage, request you to kindly confirm the sub-stations in which dismantling and shifting the existing unused dead panel has to be done by the bidder | Since the bidder need to engage resources for dismantling of the DC system in all the substation, so the same resources can be used for dismantling of dead panel, if any. |
| 21 | Project Specification , Section A, Page 19 of 88, Clause no 3.3.3 e DCPS | The Bidder has to dismantle the existing DC System (Station Battery and Battery Charger, DC Wiring) by the proposed one. | We understand our scope is limited to dismantaling of the existing DC system. Its transportation from S/s and disposal is in scope of TPCODL. | Please refer clause 3.6('e) of section-A sheet no. 121/553 for shifting of dead panel . These dismantled panels and DC system are to be shifted to purchaser store. |
| 22 | Project Specification , Section A, Page 19 of 88, Clause no 3.4 e Substation Earthing | Bidder to consider proper grounding of the outdoor panels for adequate protection from heavy lightning, Gusty Wind and Cyclone | Request TPCODL to confirm the details of the grouding to be done for heavy lightning, Gusty Wind and Cyclone at the sub-stations | Bidder to design the offered system to fulfil the requirement of RFP. |
| 23 | Project Specification , Section A, Page 19 of 88, Clause no 3.5 a Control, Instrumentation and Communication Cable | For outdoor CRP, the bidder shall supply armored control cable and shall lay the cable through the cable trenches. | Request TPCODL to confirm that cable trenches are available for laying the cable for outdoor CRP | Please refer reply of TPCODL for point no. 18 |
| 24 | Project Specification , Section A, Page 20 of 88, Clause no 3.5 f Control, Instrumentation and Communication Cable | Supply, Laying and termination of control cable from Isolator Box to SIC panel. | We understand that monitoring of Isolator is not covered under the present scope of work. Request TPCODL to confirm signals which needs to be picked from the Isolator Box for which cables have to be laid | Please refer Annexure – 4: Indicative Signal List |

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| 25 | Project Specification , Section A, Page 20 of 88, Clause no 3.6 C Panel Erection | In case of outdoor application, Proper concrete based plinth with suitable height shall be built which shall be strong and specious enough to hold the RTU and SIC panel. The height shall be selected based on the record of rain water in the substation. | Request TPCODL to confirm the tentative details of the height of the plinth so that we can accordingly prepare our estimate.<br><br>Kindly you to kindly also allow MS stand for outdoor panel installation near the CRP panel/ room. | For the outdoor applications, the plinth should be of concrete make and the tentative height of the plinth is approximate of 1 meter. The installation of the panels on the platform should be strong enough to withstand the wind speed of around 200 KM/HR. |
| 26 | Project Specification , Section A, Page 20 of 88, Clause no 3.7 a Communication Infrastructure | Communication components and accessories such as Converters, Serial Server, Ethernet switches, and other accessories such as cables, connectors etc. required for the RTU based automation systems shall be in the scope of the bidder. | Request TPCODL to confirm the details of the converters, serial server which needs to be provided at the S/s. | If converters, serial server etc. are required, the model and make shall be from the reputed OEM and will be finalized during detailed engineering. |
| 27 | Project Specification , Section A, Page 44 of 88, Clause no 10.1 Mandatory Documents required along with the Bid | Technical bid shall be properly indexed and to be submitted in Soft and three nos. Hard Copy. | We understand technical bid has to be uploaded online and no hard copy needs to be submitted. Kindly confirm | Please adhere to the RFP requirement and also communicated during pre-bid meeting. |
| 28 | Project Specification , Section A, Page 47 of 88, Clause no 11.7.1 Bidder's Responsibilities | Defining the stock of spare parts needed to maintain for system availability | We understand spares as per Price Bid has to be provided to TPCODL. Kindly confirm. | Noted.<br>Bidder to submit the unit price against each and every item. |
| 29 | Project Specification , Section A, Page 52 of 88, Clause no 12.3.3 Cabling Scope (Supply, Laying, Installation and Termination) | Any civil work for housing the control cable, communication cables in the switch yard / control room. | As per Project Specification , Section A, Page 18 of 88, Clause no 3.3.1 I, existing cable trenches has to be used. Request TPCODL to confirm the details of the civil work which is in scope of bidder for laying control cable and communication cable | Please refer the TPCODL response for the similar query above. |
| 30 | Project Specification , Section A, Page 68 of 88, Clause no 13.1 System Capacity | Similarly, the RTU and SIC rack shall have provision to add additional DI (224 DI) module, DO module (80 DO) to meet the site requirement. | Request TPCODL to confirm for additional DI and DO Modules, required racks along with CPU and PSU modules needs to be provided now or later on. | The standard RTU panel is equipped with 96 DI, 48 DO & 16 AI. However, addition and deletion of I/O module shall be done as per the requirement of the site (substation) during detailed engineering. The RTU shall be designed in all respect as per the clause 13.1, sheet 169/553. The maximum capacity of signal handling of the RTU will be 5000 as per RFP. |
| 31 | Project Specification , Section A, Page 74 of 88, Clause no 14.6 a Warranty and Post Warranty support | Standard warranty period of 5 Years from the date of system handover after SAT, resolution of all punch point of SAT and trouble-free operation of the entire system for a period of one month. | We understand standard warranty for 5 years will be phase-wise kindly confirm. | Noted<br>The standard and extended warranty will be phase wise. |
| 32 | Project Specification , Section A, Page 75 of 88, Clause no 14.6 b Warranty and Post Warranty support | Bidder shall provide Maintenance Services for the supplied Hardware, Software package, Software up-gradation, Patch Management services including sub-vendor products for next 5 years over and above as mentioned in item a. | 1. As per Sr No L3 of price bid extended warranty support from 11th to 15th year is also asked. Request you to kindly confirm the scope of services for this period.<br>2. We understand only maintenance services need to be provided during 5th to 15th year. Kindly confirm. | The scope of work under standard warranty and extended warranty is clearly defined in the RFP clause no. 14.6 sheet no. 176/553 of Section A. Bidder to accordingly consider the scope and resources. |
| 33 | Project Specification , Section A, Page 79 of 88, Clause no 14.9 Database modification during Warranty and Post Warranty Period | All database modification major or minor (including new bay, new station inclusion and new equipment/device) is in the scope of the bidder, after the system handover and during the warranty and extended warranty period. | We request TPCODL to quanitfy the numbers of new bays and stations to be included in 15 years warranty and extended warranty or as it is impossible for bidders to estimate the cost involved without any estimates for 15 years period. | New bay addition of maximum 2-3 bays<br>New substation- Purchaser will plan new RTU<br>Ne equipment/device - new equipment/device will be for the existing bays<br>However, as per the RFP bidder to provide the necessary services for 5000 tags |
| 34 | Annexures , Section E, Page 4 of 114, Annexure-1 | Technical Type # 1 and Type # 2 | Request you to kindly confirm the difference between the type 1 and type 2 architecture | There is no topological difference between Type-1 & Type-2 architecture, only in case of Type-1 RTU and SIC panel will be housed in the control room and the same will be housed in the switchyard in case of Type-2. |

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| 35 | Annexures , Section E, Page 12 of 114, Phase # 3 (FY'23-24) | Phase # 3 (FY'23-24)<br>This Phase will be taken up after completion of Phase # 1 & Phase # 2 | As per the Price Bid-RTU, only prices for Phase-1 and Phase-2 are asked whereas as per scope of work Phase-3 is also included. Request you to kindly amend the Price Bid accordingly | Bidder to refer the TPCODL response for the similar query above |
| 36 | Annexures , Section E, Page 29 of 114, Information to bidder Sr No 18 | Necessary Communication equipment (Industrial grade) such as Layer2 switches, Router, Networking cables, patch cords etc. for integrating the Substation Automation System with Purchaser's SCADA System through NBSP Communication network shall be in the scope of the Bidder. | We understand the routers withr networking cables etc will be provided by NBSP communication network provider. Request you to kindly amend the clause accordingly. | Router and PoE will be free issue item by TPCODL however engineering and mounting the same in the RTU panel and necessary networking and power supply arrangement is in the scope of the Bidder. |
| 37 | Project Specification , Section B, Page 25 of 100, Clause no 1.45 Engineering Station (Laptop) | Also, shall be loaded with configuration and management software of RTUs, BCUs on IEC 61850 LAN. | We understand BCUs configuration and management software along with laptop along will be provided by BCU supplier under different contract as BCUs are not part of this package. Kindly confirm. | BCU procurement is not under this current RFP. |
| 38 | Clause No. 1.33 Communication - 1.33.1 Ports<br>Document No.:<br>A&T/CS-RTU-SPEC/01/2021 Rev: R0<br>Page No. 9 | 6 nos. RS 485 electrical ports for communication with serial devices over IEC60870-5-103, Modbus and IEC 60870-5-101 protocol | Please ammend the RTU with minimum no. of 4 serial port which can be selectable during ordering for RS-485 or RS-422 or RS-232 Port. | Please adhere to the RFP requirement |
| 39 | Clause: DATA SHEET FOR SUBSTATION RTU<br>Page No. 90 | Ports Requirement and Type 4 Nos. Ethernet Ports | Please consider as Minimum 2 No. ethernet ports.<br>It should be possible to connect multiple SCADA master & IEC 61850 devices using the ports. | Please adhere to the RFP requirement |
| 40 | Clause No. 1.21<br>Document No.:<br>A&T/CS-RTU-SPEC/01/2021 Rev: R0<br>Page No. 7 | The Master Station user shall be able to perform a virtual connection through RTU with any RTU/BCPU/IED, provided by the communication protocol functionality, to support the information transfer to/from RTU/BCPU/IEDs. e.g., the Master Station shall gather on-demand IED data; visualize IED configuration parameters. On the other hand, the Master Station shall be able to download to the BCPU/IEDs configuration parameters, code changes, etc. | The Master Station user shall be able to perform a virtual connection through RTU with any RTU/BCPU/IED, provided by the communication protocol functionality, to support the information transfer to/from RTU/BCPU/IEDs. Please consider the Master Station shall gather on-demand IED Disturbance Record in IEEE Comtrade format through RTU. | Bidder to refer and consider the requirement specified (Clause No. 1.21 )for RTU, BCPU, IED configuration and management as per the RFP. However, as proposed IEEE contrade format file will be acquired on demand is acceptable. |
| 41 | Clause No. Consolidated Price Schedule for Conventional Substations<br>(Phase # 1, Phase # 2)<br>Page No. 64 | Consolidated Price Schedule for Conventional Substations (Phase # 1, Phase # 2) | Clarrification required for Tender Enquiry No-TPCODL/P&S/1000000099 /20-21<br>whether the price schedule is consider for Supply of RTU for Phase 3 Substation. | Bidder to refer TPCODL response for the similar query above. |
| 42 | Clause No. 3.7 Communication Infrastructure<br>Document No.:<br>A&T/2021/SPEC-02/CS-SAS-RTU<br>Page No. 122 | Communication equipment's like Router cum Firewall, POE and its associated power supply and any other accessories required to make through the communication between RTU and MPLS cloud shall be installed in the RTU panel. Bidder to take care during detailed engineering. However, supply of these equipment's except the communication cable shall not be in the scope of the bidder. | Detail technical specification of Router cum Firewall is required for communication between RTU and MPLS cloud. | Router and PoE will be free issue item by TPCODL however engineering and mounting the same in the RTU panel and necessary networking and power supply arrangement is in the scope of the Bidder. |

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| 43 | General | Total number of Location | We understand there are thee phase.<br>Phase-1 is having 22no's of location.<br>Phase-2 is having 67no's of location.<br>Phase-3 is having 90no's of location.<br>Total-179no's of location | The bidder understanding is right. However, under this RFP only Phase-1 & 2 are considered. |
| 44 | Pdf Page 70<br>BOM for RTU<br>Point No-1 | Protocols : IEC104, IEC103, IEC61850 (ED1, ED2), MODBUS (Serial), MODBUS (TCP/IP) with Server and Client license, SNTP, SNMP, MQTT<br>Software Licenses: Application Software, Configuration tools, Diagnostic tools. Logic building Application-Interlock logic, Calculation Package, SMS Utility Software. | Protocols-We understand RTU should support only SNMP client.<br>Also provide for which device MQTT protocol is supported.<br>If MQTT protocol is not available in RTU, is it possible to use external converter to integrate the devices on MQTT protocol.<br>Software license - Kindly provide details for calculation package and SMS utility software | SNMP Manager and agent both are required.<br>MQTT is required for integrating IOTs<br>MQTT shall be native protocol of the RTU<br>SMS notification and calculation packages are the standard software of the RTU's functionality. |
| 45 | Pdf Page 70<br>Networking Accessories for Integration of IEDs, Ethernet Switches | Networking Accessories for Integration of IEDs, Ethernet Switches & RTU<br>All required networking accessories like patch panel (for each ethernet switch), LIU, patch cords (Fibre Optic, UTP as per the Ethernet Switch Configuration) of suitable length, Conduits for all non-armored cables, RJ45 connectors, I/O boxes with Quad face plate and connectors etc. | Kindly provide Fibre optic patch cord details with respect to connector type and MM or single mode. | FO patch cord type and connector type shall be finalized during detailed engineering. |
| 46 | Pdf Page 71<br>Pre-Wired SIC Panel (Indoor Application) | RTU Panel & SIC Panel | Kindly confirm the I/O Modules can be mount in RTU panel itself and SIC panel is not required. | The suggestion of the bidder is acceptable, however bidder to ensure the general arrangement of panel is as per the best practice with respect to maintenance and heat dissipation and other environmental condition. During detailed engineering, if the proposed solution does not meet all the above mentioned requirement bidder to provide additional panel with no cost implication. |
| 47 | Pdf Page 71<br>RTU Panel(Outdoorapplication) & Pre-Wired SIC Panel (Outdoor Application) | Outdoor application panel | Kindly confirm if canopy required for outdoor panels | Yes, bidder to also refer TPCODL response against point no. 25 above. |
| 48 | General-BOM | Qunatity mentioned in BOM | We understand the quantity mentioned in BOM against each item is final and the supply will be done against the quantity mentioned in BOM | Bidder to note that this RFP calls for rate contract. The unit prices are also requested . Any addition/deletion will be based on as per the site requirement.<br>The quantity mentioned in the indicative bill of material are maximum requirement at each substations. |
| 49 | General-BOM | T&H Sensor | Kindly confirm is T&H sensor quantity correct as per BOM as in BOM it is 22no's substation but T&H sensor quantity is 15no's | Bidder to consider T&H requirement as per indicative BOM. |
| 50 | General-BOM | Services of RTU based System for Indoor & Outdoor Application<br>d) Civil Activities for installation of RTU panel | Kindly confirm the work details for civil activities for RTU Base system | Bidder to refer TPCODL response for the similar query above. |
| 51 | PDF Page 119<br>Clause No - 3.3.2<br>Point No-e | Analog output of WTI, OTI & TPI shall be connected with Analog input card of the RTU. Required instrumentation cable supplying, laying and termination is in the scope of the bidder. | Kindly confirm the scope matrix for supply for transducer. | Supply of Transducer is not in the scope of the Bidder. |
| 52 | General | DCDB Panel | Kindly confirm the scope matrix for supply,installation,comissioning for DCDB Panels | Bidder to refer RFP all the required functionality, scope , responsibility clearly defined. |

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| 53 | PDF Page 120<br>Clause No - 3.3.3<br>Point No-d | DC System (Station Battery and Battery Charger) shall be equipped with a controller which can communicate over Modbus RTU protocol. The Bidder must do necessary arrangement to communicate the same with the proposed RTU system. | Kindly confirm the scope matrix for supply of DC system | Bidder to refer RFP all the required functionality, scope , responsibility clearly defined. |
| 54 | PDF Page 121<br>Clause No - 3.7, Communication Interface<br>Point No-d | Communication equipment's like Router cum Firewall, POE and its associated power supply and any other accessories required to make through the communication between RTU and MPLS cloud shall be installed in the RTU panel. Bidder to take care during detailed engineering. However, supply of these equipment's except the communication cable shall not be in the scope of the bidder. | Kindly confirm the scope matrix for supply of Router or firewall or POE | Router and PoE will be free issue item by TPCODL however engineering and mounting the same in the RTU panel and necessary networking and power supply arrangement is in the scope of the Bidder. |
| 55 | PDF Page 195<br>Chapter-1 RTU<br>Clause No - 1.10 | Disturbance and fault record collection over IEC 60870-5-104 protocol. | Kindly provide the details is separate system is required to send the DR files over IEC 60870-5-104. | IEC 60870-5-104 protocol profile of the RTU should support fault data( IEEE contrade format) transmission from slave to master. |
| 56 | PDF Page 196<br>Chapter-1 RTU<br>Clause No - 1.15 | RTU shall support SNMP protocol for device monitoring and management from Purchaser's Network Management System. | We understand the use of RTU for device monitoring is only for SNMP manager (v2 client) and not for SNMP Server. | SNMP Manager for device monitoring and SNMP agent for monitoring of RTU from Purchaser asset management system. |
| 57 | PDF Page 197<br>Chapter-1 RTU<br>Clause No - 1.28 | Separate set of communication modules shall be used for communicating to slave IEDs and to Purchaser's FEP/Master Systems. | We understand it means hot and standby RTU should have capable for communicating to slave IED and customer FEP/Master system.<br>The proposed RTU support hot and standby which has the capability for communication to slave IED and Customer FEP/Master system, and no separate set of modules is required. | Please adhere to the RFP requirement |
| 58 | PDF Page 197<br>Chapter-1 RTU<br>Clause No - 1.32 | The RTU shall be redundant with all functionalities, so that the RTU can communicate with the Remote Control Centre, even when one of the units fails. | We understand only CPU module and powersupply module to be redundant in RTU and not I/O Modules and serial communication card.<br>Kindly confirm. | No redundancy of IO modules are envisaged . However, all other functionalities should be as per the RFP. |
| 59 | PDF Page 198<br>Chapter-1 RTU<br>Clause No - 1.32,Potocols | IEC 61850 Ed.1 & 2, IEC 60870-5-104, IEC60870-5-101, IEC 60870-5-103, MODBUS (Serial and TCP/IP), MQTT shall be supported. The RTU shall meet the IEC 61850 standard in every respect and interoperability with other manufactures IEDs and tools shall be verified. | We request you to remove MQTT Protocol from RTU if MQTT protocol is not required.<br>If MQTT protocol is required and need to be integrated with RTU we request you to consider to use external protocol converter also for integration of MQTT protocol with RTU | MQTT is required for integrating IOTs<br>MQTT shall be native protocol of the RTU |
| 60 | PDF Page 198<br>Chapter-1 RTU<br>Clause No - 1.32,Potocols | SNMP (v1, v2c and v3) for Health monitoring of the Hardware. | We understand SNMP is required to use the RTU for device monitoring for which SNMP client is required. Hence request you to consider SNMP client only either with v1 or v2 or v3 avaibility instead of supporting all v1,v2 &v3.<br>Also we understand SNTP server is not required. | SNMP Manager and agent both are required. The existing devices are installed in different time schedule supporting different versions. The solution proposed shall take care the existing infrastructure for remote monitoring and management. |

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| 61 | PDF Page 198<br>Cyber security<br>Clause No - 1.42<br>Point No - f | RTU shall be NERC-CIP/NIST 7628, IEC62351, IEC 62443 and IEEE 1686 compliant. | We request to have IEC62351, IEC 62443 standard as mandatory for cybersecurity compliant in RTU and remaining NERC-CIP/NIIST 7628,IEC 1686 as applicable. | Please adhere to the RFP requirement |
| 62 | PDF Page 234<br>Chapter - 2<br>DC System:24 V VRLA Type Storage Battery | DC System:24 V VRLA Type Storage Battery | Kindly confirm the scope matrix for supply for battey along with batter charger along with quantity. | Bidder to refer the TPCODL response for the similar query above |
| 63 | Pdf Page 234<br>Chapter-3<br>70A Battery Charger for 24 V-150 AH (Type-1) & 24 V-200 AH (Type-2) VRLA Type Battery with Microprocessor based Communicable Controller | 70A Battery Charger for 24 V-150 AH (Type-1) & 24 V-200 AH (Type-2) VRLA Type Battery with<br>Microprocessor based Communicable Controller | Kindly confirm the scope matrix for supply for battey along with batter charger along with quantity. | Bidder to refer the TPCODL response for the similar query above |
| 64 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 6 | LIU (Fiber Optic) | We request you to include preston also in approved make for LIU,Patch cord | Please refer Annexure – 6: Approved Make of Equipment/System |
| 65 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 8 & 10 | Armored UTP CAT6 Cable & Unarmored UTP CAT6 Cable & CAT6 UTP Patch Chords | We request you to include D-Link also in approved make for Armored UTP CAT6 Cable & Unarmored UTP CAT6 Cable & CAT6 UTP Patch Chords | Please refer Annexure – 6: Approved Make of Equipment/System |
| 66 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 9 | Armored Fiber Optic Cable | We request you to include preston also in approved make for Armored Fiber Optic Cable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 67 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- | Temperature & Humidity Sensor | We request you to include Schneider also in approved make for Temperature & Humidity Sensor | Please refer Annexure – 6: Approved Make of Equipment/System |
| 68 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 23 | Multifunction Meter | We request you to include Schneider also in approved make for Multifunction Meter | Please refer Annexure – 6: Approved Make of Equipment/System |
| 69 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 27 | Auxillary Relays - CMR & HDR | Kindly confim the make and request you to include schneider also in approved make. | Please refer Annexure – 6: Approved Make of Equipment/System |
| 70 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 14 | 4P X 0.36 Sq.mm. Armored Communication Cable (Multistrand, individual pair and overall shielded) | We request you to include Delton also in approved make for 4P X 0.36 Sq.mm. Armored Communication Cable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 71 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 15 | 4P X 0.36 Sq.mm. Unarmored Communication Cable (Multistrand, individual pair & overall shielded) | We request you to include Delton also in approved make for 4P X 0.36 Sq.mm. Unarmored Communication Cable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 72 | Pdf Page 316<br>Annexure-6<br>Approved make for Equipped system.<br>Point No- 30 | Instrumentation Cable (Status, Indications, Control and Analog Measurement | We request you to include Cord also in approved make for Instrumentation Cable (Status, Indications, Control and Analog Measurement | Please refer Annexure – 6: Approved Make of Equipment/System |

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| 73 | Pdf Page 62<br>Point No 16 | All cabling (Communication, Power Supply, Field, Interfaces) is in Bidder's scope. This includes supply, laying, termination and connection to equipment. | Kindly confirm the cable details along with distance from RTU Panel to feeders. | Bidder to note that this RFP calls for rate contract. The unit prices are also requested . Any addition/deletion will be based on as per the site requirement.<br>The quantity mentioned in the indicative bill of material are maximum requirement at each substations. |
| 74 | Pdf Page 62<br>Point No 18 | Necessary Communication equipment(Industrialgrade) such as Layer2 switches,Router,Networkingcables,patchcordsetc.for integrating the Substation Automation System with Purchaser'sSCADA System through NBSP Communication network shall be in the scope of the Bidder.All structure cabling at Sub-Stations(ifany)is in Bidderscope.AlltheCommunication equipment shall be DC Powered. | Kindly confirm layig and splicing of communication cable from RTU to master scada is in bidder scope. | Communication network from substation to control centre is in the scope of the Purchaser. |
| 75 | General<br>Standard warranty | Standard Warranty - Maintenance Services for the supplied Hardware, System and Application Software up-gradation,Patch Management services including sub-vendor products during the Standard warranty period of 5Years from the date of system handover after SAT,resolution of all punch point of SAT and trouble-free operation of the entire system for a period of one month. | We request you to consider the standard warranty terms from date of supply and not from date of system handover after SAT. | Please adhere to the RFP requirement |
| 76 | General<br>Extended warranty | Extended Warranty Support - Hardware & Software warranty support for next 5 years over and above as mentioned in clauseO.1 and O.2 for the supplied Hardware,Softwarepackage,Softwareup-gradation,Patch Management services including sub-vendor products. | Kindly confirm extended warranty for supply of items will be quoted as optional price or will be included in scope. | The entire scope will be technically evaluated. However, the placement of order will be TPCODL's discretion. |
| 77 | General<br>Extended Warranty support | Extended Warranty Support - Hardware & Software warranty support for next 5 years over and above as mentioned in clauseO.1 and O.2 for the supplied Hardware,Softwarepackage,Softwareup-gradation,Patch Management services including sub-vendor products. | Kindly confirm extended warranty support will be quoted as optional price or will be included in scope. | The entire scope will be technically evaluated. However, the placement of order will be TPCODL's discretion. |
| 78 | 1.7 Qualification<br>Requirement /<br>Eligibility Criteria | The Bidder shall be the<br>Original Equipment<br>Manufacturer for Hardware<br>and Software of the<br>proposed Sub-Station<br>Automation System. | The Bidder shall be the Original<br>Equipment Manufacturer or<br>authorized dealer of OEM for<br>Hardware and Software of the<br>proposed Sub-Station Automation<br>System | No changes in QR. Please adhere to the RFP requirement. |

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| 79 | 1.7 Qualification Requirement / Eligibility Criteria | Bidder must have executed at least 100 Nos. of RTUs at 33/22/11 kV Substations commissioned and Integrated with SCADA & ADMS system at Metro / District / Regional level for Power Utility during the last five (5) years. In addition, the Bidder must have executed at least 50 Nos. of RTU in one project. | Bidder or it's OEM must have executed at least 100 Nos. of RTUs at 33/22/11 kV Substations commissioned and Integrated with SCADA & ADMS system at Metro / District / Regional level for Power Utility during the last five (5) years. In addition, the Bidder or it's OEM must have executed at least 50 Nos. of RTU in one project. | No changes in QR. Please adhere to the RFP requirement |
| 80 | 1.7 Qualification Requirement / Eligibility Criteria | Bidder to submit performance certificate of Two projects (one with 50 Nos. of RTUs and other with minimum 25 Nos. of RTUs which is running in satisfactory condition for last two (2) years. In case the bidder has a previous association with TPCODL for similar products and services, the performance feedback for that bidder byTPCODL's User Group shall only be considered irrespective of performance certificates issued by any third organization. Copy of performance certificates to be submitted in this regard. | Bidder or it's OEM to submit performance certificate of Two projects (one with 50 Nos. of RTUs and other with minimum 25 Nos. of RTUs which is running in satisfactory condition for last two (2) years. In case the bidder has a previous association with TPCODL for similar products and services, the performance feedback for that bidder by TPCODL's User Group shall only be considered irrespective of performancecertificates issued by any third organization. Copy of performance certificates to be submitted in this regard. | No changes in QR. Please adhere to the RFP requirement. |
| 81 | BOM for RTU Based Automation System for 22 Nos. of Conventional Substations (Phase # 1) | Services of RTU based System for Indoor & outdoor Application | Kindly confirm the excavation of cable trenches for it's laying and major civil works are not part of this project. | Bidder to refer TPCODL response for the similar query above. |
| 82 | Annexure – 6: Approved Make of Equipment/System | Approved make of Managed L2 Ethernet Switch for IED Communication & for SCADA Integration : Ruggedcom/Hirschman/MOXA | Approved make of Managed L2 Ethernet Switch for IED Communication & for SCADA Integration : Ruggedcom/Hirschman/MOXA/Phoenix Contac | Please refer Annexure – 6: Approved Make of Equipment/System |

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| 83 | Annexure – 6:<br>Approved Make<br>of<br>Equipment/Syste<br>m | Approved make of RTU :<br>ABB / SIEMENS / SCHNEIDER<br>/ GE/Phoenix Contact | Approved make of RTU :<br>ABB / SIEMENS / SCHNEIDER / GE/<br>Phoenix Contact | Please refer Annexure – 6: Approved Make of Equipment/System |
| 84 | General | | Pls share the Feeder type,Quantity details of the sub-station where the RTUs are to be installed | The required information is already part of the RFP. |
| 85 | General | | Pls share the IEDs details and its communication interface for each station | IEDs communication details shall be shared with the successful Bidder. |
| 86 | General | | Any type of transducer if required shall be in TPCODL scope of supply | Please adhere to the RFP requirement |
| 87 | 3.3.1.e/MFM/pdf sheet no.118 | Supply, Installation and Commissioning of the MFM in the CRP shall be in the scope of the Bidder.<br>Bidder shall make appropriate cutout in the CRP panel for installation of MFM. | We understannd that the MFM shall be placed in the existing feeder Panels.The existing panel should have sufficient space for the mounting of MFM | Noted |
| 88 | 1.47/MFM/pdf sheet no220 | | Kindly share any preferred make & model.Further,we understand that any multi-function transducer(MFT) shall not be in bidder scope. | Bidder to refer the indicative BOM and Annexure – 6: for Approved Make of Equipment/System |
| 89 | 1.50.3 Constructional Features /pdf sheet no. 226 | Preferred make of panel shall be<br>o RTU & SIC – Rittal make | We understand that other make are also acceptable for RTU & SIC Panel | Please refer Annexure – 6: Approved Make of Equipment/System |
| 90 | General | RTU & SIC Panel IP Class | We understand that IP54 for indoor and IP65 for outdoor application of RTU Panel is acceptable.SIC Panel shall always be placed in indoor only | SIC shall be placed adjacent to RTU panel irrespective of indoor or outdoor application. |
| 91 | 1.49.1 Fiber Patch Cords /pdf sheet 224 | Preferred make: Systemax / Tyco / 3M | We understand that Siemens standard makes are also acceptable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 92 | 1.49.2 LIUs/pdf sheet 224 | Preferred make for LIUs: Raychem / 3M / Tyco | We understand that Siemens standard makes are also acceptable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 93 | 1.49.3 Patch Panel /pdf sheet 224 | Preferred make: Systemax | We understand that Siemens standard makes are also acceptable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 94 | 1.49.4 I/O Box /pdf sheet 224 | Preferred make: Systemax | We understand that Siemens standard makes are also acceptable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 95 | 1.49.5 Ethernet Patch cords /pdf sheet 224 | Preferred make: Systemax | We understand that Siemens standard makes are also acceptable | Please refer Annexure – 6: Approved Make of Equipment/System |
| 96 | Information to bidder/18./pdf sheet 63 | Necessary Communication equipment (Industrial grade) such as Layer2 switches, Router, Networking cables, patch cords etc. for integrating the Substation Automation System with<br>Purchaser's SCADA System through NBSP Communication network shall be in the scope of the Bidder | We are offering Layer2 Switches only as per Tender BoQ | Noted |
| 97 | 4.2/General System<br>Design<br>/pdf sheet no.21 | The offered SAS shall support remote control and monitoring from<br>Remote Control centers (MCC/BCC) via gateways. | We are supplying RTU under present scope.Our scope is limited upto sub-station end only.Any integration work with MCC/BCC is not under present scope of tender. | Bidder to refer TPCODL response for the similar query above. |
| 98 | Price Schedule for RTU/pdf sheet 65 | RTU System Applications Software Licenses with OS | We shall be be offering 7 No. common RTU configuration software along with Laptop which is sufficient to cater the complete requirement. | Please refer phase wise RFP requirement of the configuration tools and accordingly perpetual software license shall be considered. |

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| 99 | Price Schedule for RTU/pdf sheet 65 | Software for Local and Remote configuration of Ethernet Switches | The offered Layer2 Ethernet switch is capable for web based configuration.Pls acknowledge | In addition to web based configuration, bidder to provide appropriate configuration tools for managing configuration and management. |
| 100 | Price Schedule for RTU/pdf sheet 65 | 24 V DC System Battery, Battery Charger, DCDB and Microprocessor Based Controller | We request TPCODL to excldue the same our scope | Please adhere to the RFP requirement |
| 101 | Price Schedule for RTU/pdf sheet 68 | Earthing and Earth Pit | 1.We understand that the offered RTU shall be connected to the existing Eathing system of The station.Pls confirm our understanding.<br>2.In case of Earth Pit requirement,one no.at each sub-station is required.Pls clarify | No, the understanding is not correct. Please adhere to the RFP requirement |
| 102 | General | Warranty | We undesstand that the materials under present scope shall be delivered in 1 Lot. | Delivery of the material will be as per the PO. |
| 103 | General | Warrnaty | We understand that the gurantee shall start after the commissioining of each sub-station seperately. | Bidder to refer TPCODL response for the similar query above. |
| 104 | General | RTU Integration | We understans that our scope shall be limited upto station end only.Any integration with SCADA/ADMS is not in prsent scope. | Bidder to refer TPCODL response for the similar query above. |
| 105 | General | RTU Integration | We are supplying RTU under present scope.Our scope is limited upto sub-station end only.Any integration work with MCC/BCC is not under present scope of tender. | Bidder to refer TPCODL response for the similar query above. |
| 106 | 1.6/RTU/pdf sheet 195 | The RTU shall have min 5,000 Physical I/O tags | We understansd that the same is related to the I/O handling capability only including hard & soft I/Os. | Bidder to refer TPCODL response for the similar query above. |
| 107 | 1.10/RTU/pdf sheet 195 | Disturbance and fault record collection over IEC 60870-5-104 protocol | We understand that the requirement is for collection of Disturbance record (comtrade file) | Noted |
| 108 | 1.12/RTU/pdf sheet 195 | Web Server functionality to monitor and configure the RTU along with Substation IEDs by<br>authorized users (AAA functionality). | We understand that the requirement is for Remote configuration for RTUs which can be done through configuration software.IEDs are not the part of scope. | Bidder to refer TPCODL response for the similar query above. |
| 109 | 1.24/RTU/pdf sheet 197 | All the cards/modules of the RTU, Ethernet Switch etc. must have conformal coating for protection against harsh environments. | Offered RTU has been tested for corrosive environment as per DIN EN 60068-2-60 Method 4.So, separate conformal coating is not required.Pls acknowledge | Please adhere to the RFP requirement |
| 110 | 1.26/RTU/pdf sheet 197 | Internal battery backup to hold data in SOE buffer with time & date in case of failure of supply. | We understand the purpose of interbnal battery is for saving of configuration program and event data in the RTU.Our offered RTU stores this data in non-volatile memory.So, the requirement of internal battery is not there | purpose of internal battery is for saving of configuration program, processor clock and event data in the RTU. |
| 111 | 1.28/RTU/pdf sheet 197/pdf sheet 197 | Separate set of communication modules shall be used for communicating to slave IEDs and to Purchaser's FEP/Master Systems. | We understand that there is a requirement for separate ports for communcation with IEDs and Master instead of modules.Pls confirm. | Please adhere to the RFP requirement |
| 112 | 1.33.1/RTU/pdf sheet 198 | Inbuilt Redundant Ethernet ports with single IP address for simultaneous communication with<br>IEDs (IEC61850 ED1, ED2). | We understand that the requirement is for redundant communcation with IEDs.We fulfill the same with separate IP address of both ports. | Please adhere to the RFP requirement |
| 113 | 1.33.1/RTU/pdf sheet 198 | 6 nos. RS 485 electrical ports for communication with seral devices over IEC60870-5-103,<br>Modbus and IEC 60870-5-101 protocol. | Our offered RTU has 4 Nos. RS485 and 2 Nos. of RS232 Port. The RS232 port can be used as RS485 with the help of a convertor. | RTU should have in-build RS485 port. Converter is not envisaged. |

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| 114 | 1.34/RTU/pdf sheet 198 | Hot replacement of all I/O modules | The Hot Swap Feature posses risk of Safety for the personal doing maintenance. In addition to that also it may lead to malfunction of device if the activity is not properly and carefully carried out. | Bidder to confirm the required functionality is available in the proposed RTU, otherwise it will be considered as deviation. |
| 115 | Training | | We shall be be offering 5 days on site training | Traing man-days are mentioned in the RFP and bidder to consider accordingly. |
| 116 | 1.33.2/ Protocols/ pdf sheet 198 | should generate XML file for integration/engineering with vendor Independent SCADA systems | The tag list can be exported in .csv formal,seperated value | Please adhere to the RFP requirement |
| 117 | 1.33.2/ Protocols/ pdf sheet 198 | SNMP (v1, v2c and v3) for Health monitoring of the Hardware. | SNMP V3 is backward compatible to SNMP V1 & SNMP V2, pls consider the same. | Bidder to refer TPCODL response for the similar query above. |
| 118 | 1.34.c/RTU/pdf sheet 199 | High disturbance immunity, meeting the requirements of the IEC directives 89/336/EEC and 73/23/EEC when placed in cabinets. | We understand that other relevant standard shall also be accpetable for the requirement.Pls acknowledge | Please adhere to the RFP requirement |
| 119 | 1.34.1.b/Analog Input Sub System /RTU/pdf sheet 200 | Fuse protection and fuse failure detection | Pls elaborate the requirement | Fuse protection and fuse failure detection is a stand feature of I/O module |
| 120 | 1.34.2.b/Digital Input Sub System /RTU/pdf sheet 200 | Monitoring of A/D conversion | Pls elaborate the requirement | The requirement mentioned in the RFP is self-explanatory |
| 121 | 1.34.1.b/Analog Input Sub System /RTU/pdf sheet 200 | Cross-Talk attenuation between selected and unselected channel shall be more than 80 Db | Pls elaborate the requirement | The requirement mentioned in the RFP is self-explanatory |
| 122 | 1.34.1.c/Design and Performance requirement of Analog Input modules/pdf sheet 201 | Protection for continuous overload up to 200% of all input ranges. Such overload on any analog input point shall not affect the accuracy of the next analog input in the same range. | Loading up to 150% of the input value shall not sustain any failures to the AI channel. Please accept the same. | Please adhere to the RFP requirement |
| 123 | 1.34.1.c/Design and Performance requirement of Analog Input modules/pdf sheet 201 | Input impedance (Voltage input) – 2 Megaohms<br>Shunt resistance – 250 ohms<br>Common Mode Voltage – 100 V | Analog input for offered RTU complying to following. Input impedance 52 Ω at ±20 mA, 10.5 kΩ at ±10 V, Common-mode rejection current inputs, min. 90 dB (1 Hz to 1 MHz), Common-mode rejection voltage inputs min. 50 dB (1 Hz to 5 kHz) min. 70 dB (5 kHz to 1 MHz). Kindly consider the same. | Please adhere to the RFP requirement |
| 124 | 1.34.2.b/Digital Input Signal Monitoring/ /pdf sheet 202 | Fuse protection and fuse failure detection, Communication monitoring<br>Cable monitoring, | Pls elaborate the requirement of these signals in digital input of RTU. | Fuse protection and fuse failure detection is a standard feature of I/O module |
| 125 | 1.43 Reliability/ pdf sheet 208 | Reliability of the equipment's offered shall be better than 99.9999% per year availability for overall end equipment. RTU relatability and availability calculation shall be provided with engineering document for approval. | Have attached the MTBF document for the offered RTU. Please consider the same | Please submit Reliability document for offered RTU/solution in line with RFP requirement. |
| 126 | 1.42 Cybersecurity/pdf sheet 208 | RTU shall be NERC-CIP/NIST 7628, IEC62351, IEC 62443 and IEEE 1686 compliant. | Our offered RTU shall be complaint to Cyber security norms as per BDEW white paper, IEC 62443-2, IEEE 1686, IEC 62351-3. Conformance statement attached. Please accept the same. | Please adhere to the RFP requirement |
| 127 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 1.1. Scope of work | Rate Contract for RTU based Automation for Conventional Substations | We understand unit rate contract is applicable for each billable line item. Kindly confirm. | Query of the bidder is not clear |

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| 128 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 1.6. Right of Acceptance/ Rejection | v. Filled in Schedule of Deviations as per Annexure III | We understand bidder can submit their offer with deviations as per caluse 1.4.5 Duly signed and stamped 'Schedule of Deviations' as per Annexure III on bidder's letter head. Evaluation shall be done by TDCDOL. Kindly confirm. | Major deviation will lead to rejection. |
| 129 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 2.0 Evaluation Criteria | TPCODL however, reserves right to split the order line item wise and/or quantity wise among more than one Bidder. Hence, all bidders are advised to quote their most competitive rates against each line item. | We understand order split shall be done station wise and not line item wise. Kindly confirm. | Yes |
| 130 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 4.6. Reverse Auctions | TPCODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products/ services being asked for in the tender. | We understand All technically qualified bidder shall be eligible for RA conducted. And not limited to lower bidder only. Kindly confirm. | Please refer clause "4.6 Reverse Auction" of the RfP (Pg. 12). |
| 131 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 7.1. Special Conditions of Contract | After finalization of tender, TPCODL shall place a Rate Contract for a period of Two (02) years to the successful bidder. | We understand unit rate contract is applicable for each billable line item. However prices of the bought out items may increase due to inrease in raw material cost. We request to reduce this time to 01 year. | Prices will remain firm till the contract period (02 years). No escalation is permitted. |
| 132 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | BillofQuantitymentionedinthetablesareindicative,thismayvarytomeetthefunctionalorsiterequirement.ItistheresponsibilityoftheBiddertoincludeallHardware,Softwareand Services as per functional requirement specified in the RFP and as per the phases mentioned. | We understand bid evaluation shall be done as per BOM/price schedule only complying RFP requirement. Kindly confirm. | Evaluation will be based on technical and commercial evaluation and criteria as per the RFP |
| 133 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | All cabling (Communication, Power Supply, Field, Interfaces) is in Bidder's scope. This includes supply, laying, termination and connection to equipment. | We understand bid evaluation shall be done as per BOM/price schedule only complying RFP requirement. Kindly confirm. | Evaluation will be based on technical and commercial evaluation and criteria as per the RFP |
| 134 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | All Networking accessories and all types of Cables required for integration of other systems shall be considered by the bidder. | We understand bid evaluation shall be done as per BOM/price schedule only complying RFP requirement. Kindly confirm. | Evaluation will be based on technical and commercial evaluation and criteria as per the RFP |
| 135 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | NecessaryCommunicationequipment(Industrialgrade)suchasLayer2switches,Router,Networkingcables,patchcordsetc.forintegratingtheSubstationAutomationSystemwith Purchaser'sSCADASystemthroughNBSPCommunicationnetworkshallbeinthescopeoftheBidder.AllstructurecablingatSub-Stations(ifany)isinBidderscope.AlltheCommunication equipment shall be DC Powered. | 1. Kindly confirm supply of router is not part of present scope.<br>2. Any work outside of the station/mcc/bcc is nit in present scope.<br>3. We understand bid evaluation shall be done as per BOM/price schedule only complying RFP requirement. Kindly confirm. | Please refer TPCODL response for the similar query above. |

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| 136 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | AllannualmaintenancechargesofsuppliedHardware,OS&SoftwareareinclusiveintheWarrantyandPostWarrantyofBidder'sOwneditems,Sub-vendoritems,Communicationand Networking items, software licenses their renewal, upgrades etc. | We understand AMC is part of scope under warranty period of 5 year as standard , plus 5 year more as extended warranty. Kindly clarify the t&c (e.g. hardware replacement, man power requirement etc.) of AMC. | Bidder to refer clause no. 14.6 for the scope under warranty and post warranty and applicable SLA are self-explanatory in the RFP. |
| 137 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Consolidated Price Schedule | *Optional Item not included in total cost for Phase #1 Training (50 Man-days) Mandatory Spares | 1. Kindly confirm optional item is not applicable for any of the phase. since missing in ph-2 BOM.<br>2. Kindly confirm 50 man days training is applicabel for both phases seperatly.<br>3. Kindly confirm spares are applicable for ph-2 only. | 1. requested optional item unit cost will be used for any addition/deletion during detailed engineering. The same may also be used for procuring loose item/RTU.<br>2. 50 man-days of training are considered for each phase separately.<br>3. List of spare are applicable for both the phases |
| 138 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Consolidated Price Schedule | Standard and Extended Warranty - 5 YEAR after SAT +5 year+ 5year | We understand However prices of the bought out items may increase due to inrease in raw material cost. We request to reduce this warranty period maximum to 05 year after commissioning/SAT. | Bidder to consider the warranty and post warranty as per RFP. Any change in price will be the responsibility of the bidder. |
| 139 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | BOM for RTU Based Automation System for 22 Nos. of Conventional Substations (Phase # 1) Tata Power Preferred/approved Make: RITTAL / SIEMENS / PYROTECH / PRESIDENT | We offer our manufactured panel complying to all TS requirement. Since we are standard & approved panel manufacturer of all/major state utility, central utility, major EPC players. Kindly include. | Please refer Annexure – 6: Approved Make of Equipment/System |
| 140 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | Managed L2 Ethernet Switch for 33 & 11 kV IED Communication | | |
| 141 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | Instrumentation Cable 12 Core Armored 0.5 mm2 for Status and Indications & 10C X 2.5 mm2 Copper cable for extension of CT Ac power cable supply | 1. kidly recheck all the cables size & core once. It seems some typo error. Kindly confirm.<br>2. We noticed auxuliary Ac power cable quntities are missing in BOM/price schedule. Kindly include & confirm the quantity. | Bidder can add additional line item for AC Power Cable as per the industry standard for applicable load under this RFP. |
| 142 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - Substation Automation - System Information to Bidder | Mounting: To be supplied with prewired panel (Rittal or equivalent, size : 2300 mm x 800 mm x 800 mm, both side opening), IP54/55 for indoor and IP65/67 for outdoor application. | We offer our manufactured panel complying to all TS requirement. Since we are standard & approved panel manufacturer of all/major state utility, central utility, major EPC players. Kindly include. | Please refer Annexure – 6: Approved Make of Equipment/System |
| 143 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - DATA SHEET FOR : Layer 2 Managed Switch for RTU | 7 Suitable for PRP/HSR architecture Mandatory - RTU shall comply to RSTP, HSR and PRP network protocol | We understand RTU shall have provision of RSTP, HSR and PRP network protocol. However RTU system & architecture shall be based & devloped on non PRP requirement. | The offer RTU should comply to RSTP, HSR and PRP network protocol. |
| 144 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 3.2 RTU Project Specifications | The Conventional substations where there is no Control room / insufficient space in Control room for housing RTU, SIC & DC System, these systems shall be installed in outdoor switchyard. Bidder to make the appropriate housing arrangement for installation of these panels for outdoor application. | Kindly confirm the meaning & requirement of appropriate housing arrangement.<br>We understand any civil work or kiosk supply is not in bidder scope. Kindly confirm. | Bidder to refer TPCODL response for the similar query above. |

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| 145 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 3.3.1 RTU Project Specifications | Supply, installation and wiring of multipliers for providing potential free contacts for Digital Inputs such as status indication of Isolators, Breakers and others signal in the existing CRP/Field Marshalling Box as per "Indicative Signal List" | We understand laying of control cables is limited to within control room. Any cables laying from switchyard is not part of present scope. | Bidder to refer TPCODL response for the similar query above and consider accordingly. |
| 146 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 3.3.2 RTU Project Specifications | a. Data acquisition and Control is primarily planned through BCPUs, therefore the integration of these BCPUs through ethernet switch and upto the RTU is in the scope of the bidder. | Supply of BCPU is not part of present scope. Purchase to provide the .SCD/.ICD of BCPU & any necessary support required for integration with RTU during execution. Kindly confirm. | Noted |
| 147 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 3.3.2 RTU Project Specifications | d. Communication equipment's like Router cum Firewall, POE and its associated power supply and any other accessories required to make through the communication between RTU and MPLS cloud shall be installed in the RTU panel. | We undertand all these requirement mentioned in this clause is not in bidder scope. Kindly confirm. | Bidder to refer TPCODL response for the similar query above. |
| 148 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 3.3.2 RTU Project Specifications | 3.12 Mandatory & Recommended Spares (Please refer Section A, Item 17.0 for Spares Requirement) | We don't recommened any spares. Mandaoty spares shall be considered as pe BOM/price schedule. | Mandatory spare as per the RFP, however bidder shall consider commissioning spare for each phase which will be later handed over to TPCODL. Bidder shall also submit list of recommended spare to maintain the system for 15 years, else bidder shall submit undertaking to provide spare support for 15 years. |
| 149 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - 9.3 Mile Stones<br>Payment | Submission and Approval of following-10%,<br>Successful completion of FAT and resolution of all variances to Purchaser's satisfaction-15%,<br>Delivery of the System (Hardware, Networks, Operating Systems, etc.) & acceptance by TPCODL EIC-20%,<br>Complete installation of the system at Purchaser's site, and successful completion of system startup activities- 15%, Successful completion of SAT and resolution of all variances to Purchaser's satisfaction after completion of all test plans and procedures- 25%,<br>Operational Acceptance and submission As-built drawings, spares: 15% | We request to modify the payment terms as following .<br>Submission and Approval of following-10%,<br>Successful completion of FAT and resolution of all variances to Purchaser's satisfaction-15%,<br>Delivery of the System (Hardware, Networks, Operating Systems, etc.) & acceptance by TPCODL EIC-55%,<br>Complete installation of the system at Purchaser's site, and successful completion of system startup activities- 10%, Successful completion of SAT and resolution of all variances to Purchaser's satisfaction after completion of all test plans and procedures- 5%,<br>Operational Acceptance and submission As-built drawings, spares:- 5% | Payment clause will be applicable as per the Special Conditions of the Contract (SCC) mentioned in Section-A clause 9.3. |
| 150 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - RTU Project Specifications | 1.49.3 Patch Panel & 1.49.4 I/O Box | We understand patch panel & I/O box is not envisaged for this tender. Kindly confirm. | Bidder to refer the indicative bill of material for networking accessories which includes patch panel and IO box requirement. |

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| 151 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - Clause - GCC 6.0 TERMS OF PAYMENT | In case this milestone is not completed beyond 120 days for reasons attributable to TPCODL, the payment corresponding to supply part shall be released subject to submission of BG of equivalent amount by the BA valid for a period of further 12 months. If required, it shall be extended by the BA on request of TPCODL. | We understand for TOP other t&c are applicable & valid expect mentioned above in sr. no. 23. Kindly comfirm. | Payment clause will be applicable as per the Special Conditions of the Contract (SCC) mentioned in Section-A clause 9.3. |
| 152 | TPCODL/P&S/ 1000000099 /21-22 - Rate Contract for RTU based Automation for Conventional Substations - GCC - Clause - 14.2 Guarantee Period | Guarantee Period will be 15 Months from the Date of Commissioning or 24 months from the date of delivery of final lot of supplies made, whichever is earlier. | I assume this clause for guarantee is nor valid. Kindly comfirm. | Warranty clause will be applicable as per the Special Conditions of the Contract (SCC) mentioned in Section-A. |