Corrigendum- 1

TPNODL/OT/2021-2022/2200000030 Dtd.21.05.2022

Rate Contract for SITC of RTU System – 33/11 kV Primary Substations (50 Nos.) in TPNODL Area.

Dated 23th June 2022

Following changes in tender document is made; (Event Calender, Annexure-I & Technical Specification)

Event Calendar:

(e)	Last date and time of receipt of Bids	02.07.2022 up to 15:00 Hrs
(f)	Date & Time of opening technical bids & EMD	02.07.2022 up to 15:30 Hrs

Annexure-I

Price Schedule & BoM for RTU System – 33/11 kV Primary Substations (50 Nos.)

1	2	3	4	5	6	7
Sl.	**Item**	**Description**	**UOM**	**HSN/S AC Code**	**Qty / PSS**	**Total Required Quantity (A)**
		Nos. of 33/11 kV Primary Substations	**50**			
A	**Pre-Wired RTU Panel**					

1	**Pre-Wired RTU Panel**	**Pre-Wired RTU Panel RTU Redundancy :** Mandatory I/O Requirement: with 16 DI, 8 DO, 8 AI with Auxiliary relay for each Digital Input & Output **Communication Ports per RTU :** 3 Nos. Ethernet ports/CPU (one Ethernet Port for Master and another for IED Communication), 4 Nos. RS 485 electrical ports for communication with serial devices over IEC60870-5-103, MODBUS (Serial) and IEC 60870-5-101 protocol in the RTU. To meet the additional RS485 ports requirement, Bidder shall propose Industrial grade Serial Server of 8 Ports as a optional item. This server shall communicate with RTU on Modbus TCP/IP protocol or Open Protocol as considred in the RTU. **Power supply:** Redundant 18-72 VDC (24 V/48 V DC) Supply with Diode Oring unit and MCBs with add-on NO contact **Protocols :** IEC 60870-5-101, IEC60870-5-103, IEC 60870-5-104, IEC 61850 (ED1, ED2), RSTP, MODBUS (Serial & TCP/IP), SNMP (V1.0, V2.0, V3.0), NTP & SNTP, **Software Licenses:** RTU OS, Application Software, Configuration tools, Diagnostic tools. Logic building Application-Interlock logic, Calculation Package, SMS Utility Software for Main & Standby Application Software Licenses with 5000 Physical I/O tags, 40 IEDs - IEC61850 (ED1, ED2), 25 IEDs - Serial Protocol, RTU shall Communicate to Eight Independent Remote SCADA Master on IEC 60870-5-104 **Mounting:** To be supplied with prewired panel (Rittal/Siemens or equivalent, size : 2300 mm x 800 mm x 800 mm, both side opening), IP Class : IP54/55. Other **Accessories**: Interface Modules, Pre-fabricated cables for I/O modules, Auxiliaries Relays for Power Supply monitoring, MCBs for all type of Power Supplies	No. / Substation		1	**50**

2	**Managed Layer2 Ethernet Switch (RTU Panel**	**Managed L2 Ethernet Switch for IED Communication & for SCADA Integration Communication Ports**: 12 PORT (Copper ports) 10/100 MBPS **Power Supply:** Input power supply 18-72 VDC Supply with Diode Oring unit and MCBs with add-on NO contact **Mounting Arrangement:** To be mounted in RTU Panel **Preferred Make**: Ruggedcom/Hirschman/MOXA **Software:** Software for Local and Remote configuration of Ethernet Switches - Enabling Monitoring, Configuration, Maintenance and backup of configuration files **Shall support:** 802.1Q VLAN, 801.2p, 802.1d STP, 802.3ad (Port aggregation), 802.1w RSTP, 802.1s MSTP, 802.3ad LACP, IEEE 802.1ab Link Layer Disscovery Protocol and also suitable for Ring Configuration, IEEE 1613 compliance, IEC 61850, MODBUS, Ethernet/IP Compliance, IEEE1588 V2, Suitable for PRP/HSR architecture,Web-based, Telnet & Command Line Interface (CLI) for quickly configuring major managed functions, SNMPv1/v2c/v3 for different levels of network management, SNTP.	**Nos. / RTU**		**2**	**100**
3	**Networking Accessories**	**Networking Accessories for Integration of IEDs, Ethernet Switches & RTU** All required networking accessories like Patch Panel (for each ethernet switch), Patch cords (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.	**Set / Substation**		1	50
Sub Total of RTU System						
B	**Pre-Wired SIC Panel**					
1	**Pre-Wired SIC Panel (Quantity on basis of Site Requirement)**	**Signal Interface Panel SIC- Panel for Termination of field cable and housing of interface and I/O modules as per the RTU Configuration Input/Output Interface**: For integration of I/O modules, interface modules etc. These I/O, Interface modules shall communicate to both Main and Stand-by RTU as per Item no. 1. **Communication Ports:** Interface modules shall have ports to communicate with Main & Standby RTU **Protocols :** Interface modules shall use Open Protocols, No proprietary protocols are envisaged SNMP (V1.0, V2.0, V3.0), NTP & SNTP **Software:** Interface Module shall be in-line with RTU Application Software (If Applicable) **Power supply:** Redundant 18-72 VDC, 24 V/48 V DC Supply with Diode O-ring unit and MCBs with add-on NO contact Mounting: To be supplied with prewired	**No**		1	

		panel (Rittal or equivalent, size : 2300 mm x 800 mm x 800 mm, both side opening), IP Class IP54/55 Other Accessories: Pre-fabricated cables for I/Os cards, Auxiliaries relays for power supply monitoring, MCBs for all type of Power Supplies, Necessary TBs, Din rail channels and other accessories.				
Sub Total of SIC Panel						
C	**Contact Multiplier Relay with Mounting Base**					
1	**CMR with Mounting Base for Digital Inputs**	**Contact Multiplier Relay with Mounting Base:** 1. Contact Material : Silver Alloy 2. Contact Rating : 5 Amps. @ 24 V/48 V DC 3. Contact Resistance : 50 Mohms max. (Initial) 4. Dielectric Strength : i) Between open contacts : 500 V RMS ii) Between Contact and Coil : 2000 V RMS 5. Insulation Resistance : 500 Mohms @ 500 V DC, 250 C 6. Operate time at Nominal Voltage : 20 milli seconds 7. Release time at nominal Voltage : 10 milli seconds 8. Ambient temperature : -40ºC to +70ºC 9. Life expectancy : i) Mechanical : 20 million DC Relay ii) Electrical : More than 100,000 Operations 10. Coil Resistance at Nominal Voltage (DC) : 30,000 Ohms +10% at 250ºC 11. Type of Contact Multiplier : 2 NO + 2 NC with LED Indicator + Free wheeling 12. Type of mounting : DIN RAIL MOUNTING WITH SOCKET 13. No. of Poles : 2 NO + 2 NC 14. Other Accessories: Necessary TB, Din rail channel and other accessories to mount in CRP	Nos./ Substation		16	800
Sub Total of Contact Multiplier Relay with Mounting Base						
D	**Interposing Relay with Mounting Base for Digital Output**					

1	**Interposing Relay for Digital Output**	**Interposing Relay with Mounting Base for Digital Output** 1. Auxiliary Power. : 24 V / 48 V DC 2. Input signal from field : 24 V / 48 V DC 3. Input impedance : More than 50 Kohms 4. Output signal of the RTU : 24 V / 48 V DC 5. Contact mechanism : Self Reset 6. Contact Make & Carry : 30 A for 3 Sec. & 5A continuously at 660V 7. Number of Contacts : 2 NO + 2 NC with LED Indicator + Free wheeling 8. Operating time : Less than 15 msec. 9. Other Accessories: Necessary TB, Din rail channel and other accessories to mount in RTU/CRP Panel	Nos./ Substation		8	400
Sub Total of Interposing Relay with Mounting Base						
E	**Instrumentation Cable for Status, Control & Power Supply**					
1	**Instrumentati on Cable 12 C X 1.5 mm2, Armored cable for Status and Indications**	**Instrumentation Cable for Status and Indications** 12 C X 1.5 mm2, Armored, 1100 V Rated, Annealed Stranded Copper, PVC insulated, Overall shielded field cable Preferred Make: CCI / FINOLEX / HAVELLS / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika	Meters/ Substation		150	7500
2	**Instrumentati on Cable 12 C X 1.5 mm2, Armored for Control Output**	**Instrumentation Cable for Control Output** 12 C X 1.5 mm2. Armored, 1100 V Rated, Annealed Stranded Copper, PVC insulated, Overall shielded field cable **Preferred Make**: CCI / FORT GLOSTER / FINOLEX / HAVELLS / Indian aluminum Cables / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika	Meters/ Substation		150	7500
3	**Twisted Pair Shielded & Over all shielded Instrumentati on Cable 5 P X 1.0 mm2, Armored for Analog Input**	**Twisted paired Shielded & Overall Shielded Cable for Analog Inputs** 5 P X 1.0 mm2, Armored, Copper twisted paired and Overall shielded cable for Analog inputs from CRP/Field panel to the RTU panel **Preferred Make**: CCI / FORT GLOSTER / FINOLEX / HAVELLS / Indian aluminum Cables / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika	Meters/ Substation		50	2500
4	**4 C X 2.5 mm2 mm2 Copper cable for extension of CT & PT(If Required)**	**Control Cable for CT & PT Extension** 4 C X 2.5 mm2, multistrand copper cable for extending CT & CVT inputs to the MFM in the CRP panel. **Preferred Make**: CCI / FORT GLOSTER / FINOLEX / HAVELLS / Indian aluminum Cables / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika/Prime	Meters/ Substation		60	3000

5	**3 C X 2.5 mm2 Armored cable for AC Power Supply**	**Power Supply Cable from ACDB to RTU Panel** 4 C X 2.5 mm2, Armored Multistrand Power Supply cable for extending Power Supply from ACDB to RTU Panel **Preferred Make**: CCI / FORT GLOSTER / FINOLEX / HAVELLS / Indian aluminum Cables / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika	Meters/ Substation		20	1000
6	**2 C X 4 mm2 Armored cable for DC Power Supply**	**Power Supply Cable from DCDB to RTU Panel** 2 C X 4 mm2, Armored Multistrand Power Supply cable for extending Power Supply from DCDB to RTU Panel Preferred **Make:** CCI / FORT GLOSTER / FINOLEX / HAVELLS / Indian aluminum Cables / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika	Meters/ Substation		20	1000
Sub Total of Instrumentation Cable for Status, Control & Power Supply						
F		**Communication Cable for MFM, IEDs Integration**				
7	**4P X 0.36 mm2, Armored Communicatio n Cable for MFM**	**Communication Cable:** 2 P X 0.36 mm2 Armored multistrand Pair and Overall shielded, for Multifunction Meter looping. **Preferred Make :** Belden/LAPP/SATYAM/KEC/Digisol/Polycab /Parashield	Meters/ Substation		50	2500
8	**Armored CAT6 UTP Cable**	**Armored CAT6 UTP Cable Preferred Make :** Systemax/Finolex/Polycab/Digisol	Meters/ Substation		150	7500
9	**Un-Armored CAT6 UTP Cable**	**Un-Armored CAT6 UTP Cable Preferred Make :** Systemax/Finolex/Polycab/Digisol	Meters/ Substation		50	2500
Sub Total of Communication Cable for MFM, IEDs Integration						
G	**Earthing and Earth Pit**					
1	**Earthing and Earth Pit**	**Earthing:** a) **Earth Pit**: Separate Earth Pits should be provisioned for attaining the resistance value of maximum 2 Ohms. b) **Earthing Wires:** RTU Panels, SIC Panel are to be wired with Earth Pit. Copper wires size should be minimum of 10 Sq.mm. (Green) **Services for Earthing & Earth Pit** Installation and Commissioning of Earth Pit and laying and termination of earthing cable for RTU and DC System	Set / Substation		1	50
Sub Total of Earthing and Earth Pit						
H	**Engineering Configuration Laptop**					

1	**Engineering Configuration Laptop**	**Configuration Laptop** **Hardware:** Laptop with latest processor, 1 TB SSD, 8 GB RAM, DVD RW, Ethernet Port, 4 USB Ports, 1 HDMI Port, 15" Display with 1 No. Serial to USB converter **Software License:** Microsoft Windows compatible with latest version of configuration software, Microsoft Office License pack, Antivirus Symantec Endpoint protection small business edition with three year subscription, Configuration & Maintenance Software tools, Diagnostic tools. Logic building Application of RTU and Protection IEDs, Simulation Software, Applicable Software licenses for SIC System and shall be in-line with RTU Software	Nos		-	8
Sub Total of Configuration Laptop						
I	**Multi Function Meter & Digital Panel meter for Measuring DC volatge and cureent of Battery**					
1	**Multi Function Meter .** **(Not considered based on Feeders , MFM are included with CRP Panels So we have given less count here Consider it's a final count)**	**Multi Function Meter:** **Requirement : For all 33 & 11 KV Feeders, Bus Voltages (33 & 11 kV), Station Trf, ACDB Multifunctional 3-phase Power meter, four quadrant active and reactive energy polyphase static meter** **CT Type: Ring CT** **Form Factor: 96 X 96 mm** **Accuracy Class: 0.2 S as per IEC62053:22** **Voltage Inputs: Operating range : 690 V AC line-to-line, 460 V AC line-to-neutral** **Current Inputs: 1A / 5A (User selectable CT secondary 1A / 5A, PT Secondary)** **Wiring configurations: 3OP2, 4LN3, 3DIR2, 4LL3, 3OP3, 3LN3, 3LL3, 3BLN3, 3BLL3 (All wiring configurations selected via the front panel)** **Communication Port: RS 485 Serial Port with removable connector** **Protocols: MODBUS RTU, Assignable Register map, Device Address (User Configurable - (1-247))** **Auxiliary Supply: 24 V / 48 V DC** **Other Accessories: Necessary TB, Din rail channel and other accessories for flash mounting in CRP** **Preferred Make: SATEC PM130EH+ or equivalent** **Services for MFM:** **Installation and Commissioning of Multifunction Meters in CRP Panel and its integration with RTU with required configuration for Control Centre communication over IEC-104**	Nos./ Substation		4	200

2	**PROGRAMMABLE TRANSDUCER OF DC CURRENT AND DC VOLTAGE SIGNALS with RS 485 Transmisiion to RTU**	Transducers Should Capable for the continuous conversion of one quantity: high voltage or high current signal, uni or bipolar signal into a standard d.c. current or d.c. voltage signals, or into a digital form available through the RS-interface. **Should be capable to measure both Voltage and Current in same device. Volatge and Current Ratings are : -110 to +110 V DC , -250 A to + 250 V DC** The transducer is configurable through the programmer. With the aid of the programmer and the LPCon program, one can reprogram following parameters: - measurement averaging time, - conversion characteristic, - preservation of the output signal at overflows, - narrowing of the output signal, - RS485 transmission parameters to RTU. Please check page NO 8 in Data sheet for all details.	Nos./ Substation			1	50
Sub Total of Multi Function Meter							
J	**Industrial grade Serial Server**						
1	**Industrial grade Serial Server (Quantity on basis of site requirement)**	**Industrial grade Serial Server:** **Communication Ports:** 2 Nos. Ethernet ports, 8 Nos. RS485 ports This server shall communicate with RTU on Modbus TCP/IP protocol or Open Protocol as considered in the RTU. **Power supply**: Input DC supply of 18-72 VDC (24/48 V DC) with Diode Oring unit and MCBs with add-on NO contact **Protocols** : IEC 60870-5-101, IEC60870-5-103, MODBUS (Serial & TCP/IP), IEC 60870-5-104, SNMP (V1.0, V2.0, V3.0), NTP & SNTP **Software Licenses**: Serial Server OS, Application Software, Configuration tools, Diagnostic tools. **Mounting**: Din-rail mountable/19" Rack Mountable Serial Server Managed Switch **IP Class** : IP54/55.	EA			-	1
Grand Total Supply (A+B+C+D+E+G+H+I+J)							
K	**Services for RTU Panel, Communication and Other Supplied System**						

1	**Services of RTU Panel, Communicatio n and Other Supplied System**	**Integration and Commissioning RTU System** a) Site Survey, Design, Engineering, Finalization of BOM, FDS b) Transportation, Delivery, Unloading and Storage c) Installation and Commissioning of Pre-wired RTU Panel, Networking equipment & other Accessories d) Minor Civil Activities for Installation of RTU panel e) Cable laying, termination and continuity check of all cables (Instrumentation, Communication & Power cables) f) Integration of all Protection, MFM, Condition Monitoring Devices etc. g) Powering up of all supplied materials h) Configuration of RTU and its accessories i) I/O testing, Pre- SAT testing of Hardware and Software functionality j) Integrated FAT & SAT for Hardware and Software k) Integrated testing with Purchaser's SCADA System l) Demonstration of System Capacity and Performance Guarantee Test m) Submission of As-Built Drawings, RTU Backup	Lumpsum / Substation		1	50
2	**Services for SIC Panel**	**Services for SIC Panel :** Integration and Commissioning of SIC Panel a) Design, Engineering, Finalization of BOM b) Transportation, Delivery, Unloading and Storage c) Minor Civil Activities for installation of SIC panel d) Installation and commissioning of Pre-wired SIC and Networking equipment (if Any) e) Cable laying, termination and continuity check of all cables f) Powering up of all supplied materials g) Configuration of SIC Interface Module and its accessories h) I/O testing, Pre- SAT testing of Hardware and Software functionality i) Integrated FAT & SAT for Hardware and Software j) Integrated testing with RTU System / Purchaser's SCADA System k) Submission of As-Built Drawings	AU			1
Total of Services (K)						
Grand Total of Supply + Services						
L	**Standard**	**Standard Warranty**				

1	**Warranty**	Warranty Services for the Bidder's owned & Sub-Vendors supplied Hardware, Software, Up-gradation & Patch Management of Software during the 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. **Preventive Maintance of 1 time/year under warreny period is bidder scope**	Lumpsum			1
Total of Standard Warranty						
Grand Total of Supply + Services						
M	**Standard**	**Training (10 Man-days of Trainer)**				
1		On-site Training on Supplied equipment and Application Software	Man-days			10
Total of Training						
Grand Total of Supply + Services+Standard Warranty + Trainning						
N	**Optional Item: RTU**					
N.1	**Unit Cost to be utilized for addition/ deletion of quantity as per site requirement**	RTU Chassis (if its Rock mount type)-If required	No.		-	
N.2		CPU Module of the RTU	No.		-	
N.3		Power Supply Module of the RTU	No.		-	
N.4		Memory Module of the RTU	No.		-	
N.5		Communication Module (Ethernet)	No.		-	
N.6		Communication Module (Serial)	No.		-	
N.7		DI Cards with Interface Module & Cables for Digital Inputs	No.		-	
N.8		DO Cards with Interface Module & Cables for Digital Output	No.		-	
N.9		AI Cards with Interface Module & Cables for Analog Inputs	No.		-	
N.10		Bus Coupler Module (If Applicable)	No.		-	
N.11		Remote I/O Rack with all accessories, cables etc. (if Applicable)	No.		-	
N.12		Any Other Modules Specific to OEM Solution	No.		-	
N.13		Managed Ethernet Switch - RTU	No.		-	
N.14		CMR Relay with Base	No.		-	
N.15		HDR Relay with Base	No.		-	
Total of Optional Item (N)						
Grand Total of Optional Items						
List of Mandatory Spares						
1	**2**	**3**	**4**	**5**	**6**	**7**
					Total Required	
Sl. No.	**Item**	**Description**	**UOM**	**HSN/SAC Code**	**Quantity (A)**	**Unit Rate (B)**

A		Mandatory Spares				
A.1		RTU Rack (if its Rock mount type)-If required	Sets		5	15000
A.2		CPU Module of the RTU with Interface to connect other Modules	Nos.		30	45000
A.3		Power Supply module of the RTU	Nos.		30	20000
A.4		Memory Module of the RTU	Nos.		30	20000
A.5		Communication Module (Ethernet) - As per the proposed Solution-If Applicable	Nos.		30	20000
A.6		Communication Module (Serial) - As per the proposed Solution-If applicable	Nos.		30	20000
A.7		DI Cards for Digital Inputs (DI Channels/Module = 16 DI) with Interface Module & Cables	Sets		10	20000
A.8		DO Cards for Digital Output (DO Channels/Module = 8 DO) with Interface Module & Cables	Sets		10	20000
A.9	Mandatory Spares	AI Cards for Analog Inputs (AI Channels/Module = 4 AI) with Interface Module & Cables	Sets		35	20000
A.10		CMR with Base	Sets		25	400
A.11		Interposing Relay with Base	Sets		10	600
A.12		Communication Cable – CAT6 Patch Cord of 2 Meter length	Nos.		50	150
A.13		Communication Cable – CAT6 Patch Cord of 5 Meter length	Nos.		50	400
A.14		Communication Cable – CAT6 Patch Cord of 10 Meter length	Nos.		50	800
A.15		Multifunction Meter	Nos.		10	30000
A.16		IEC 61850 complied L2 Managed Ethernet Switch (RTU Panel)	Nos.		10	120000
A.17		Diode OR-ing Unit (If Applicable)	Nos.		10	15000
A.18		Serial Server(If Applicable)	Nos.		2	15000
A.19		Prorammable Voltage and Current Transducer	Nos.		5	15000
Total of Spares (A)						

Changes Required for Amendment for 50 RTUs Tender

1) Please refer page No 60 in Section E for the changes in Mandatory Spares Quantity in the Tender Document as like below.

Description	UOM	HSN/SAC Code	Total Required Quantity (A)	Unit Rate (B)
Mandatory Spares				
RTU Rack (if its Rock mount type)-If required	Sets		5	15000
CPU Module of the RTU with Interface to connect other Modules	Nos.		30	45000
Power Supply module of the RTU	Nos.		30	20000
Memory Module of the RTU	Nos.		30	20000
Communication Module (Ethernet) - As per the proposed Solution-If Applicable	Nos.		30	20000
Communication Module (Serial) - As per the proposed Solution-If applicable	Nos.		30	20000
DI Cards for Digital Inputs (DI Channels/Module = 16 DI) with Interface Module & Cables	Sets		10	20000
DO Cards for Digital Output (DO Channels/Module = 8 DO) with Interface Module & Cables	Sets		10	20000
AI Cards for Analog Inputs (AI Channels/Module = 4 AI) with Interface Module & Cables	Sets		35	20000
CMR with Base	Sets		25	400
Interposing Relay with Base	Sets		10	600
Communication Cable – CAT6 Patch Cord of 2 Meter length	Nos.		50	150
Communication Cable – CAT6 Patch Cord of 5 Meter length	Nos.		50	400
Communication Cable – CAT6 Patch Cord of 10 Meter length	Nos.		50	800
Multifunction Meter	Nos.		10	30000
IEC 61850 complied L2 Managed Ethernet Switch (RTU Panel)	Nos.		10	120000
Diode OR-ing Unit (If Applicable)	Nos.		10	15000
Serial Server(If Applicable)	Nos.		2	15000
Prorammable Voltage and Current Transducer	Nos.		5	15000

2) Please refer page No 233 and sheet no 8 of data sheet for **PROGRAMMABLE TRANSDUCER OF DC CURRENT AND DC VOLTAGE in** the Tender Document w.r.t below changes ,TPNODL prefer single transducer will measure both Voltage and Current as per below specifications.

TECHNICAL PARTICULARS	TPNODL REQUIREMENT
Make	Rishab/Lumel
Preferred Model	P30H /Equalent model
Input	-/+ 100 V DC , -/+ 250 V DC,-/+400 v DC -/+1A DC. -/+5A DC 0-100V DC, 0-250 V DC,0-400 V DC
Output	0(4)-20 mA
	0(4)-20 mA
	Measurable Voltage and Current Ranges are : -110 to +110 V DC , -20 A to + 20 A DC
	Rs 485
Configurable	Transducer must be configurable with software and software has to be provided with free of cost
Requirement	To measure and show the Voltage and Current of battery voltage od PSS in Scada System through RS485

3) PROGRAMMABLE TRANSDUCER OF DC CURRENT AND DC VOLTAGE Quantity given 50 Nos based on calculation of Single transducer can measure both Voltage and current , Request to bidder propose the same type of solution in a last option change the quantity to 100 and provide 2 Transducers/PSS for Voltage and Current Measurement

4) Section- A page 31 of clause **9.1.1 Delivery schedule for the project SITC of RTU System** changed with below details.

S.NO	Milestone	Target
1	PO Placement	Zero Day

2	MDL & Project Detailed, Project Execution Schedule submission & approval	Within 10 days from Sr. No. 1
3	Architecture and other Drawings, Bill of Material finalization, Functional and Design Specifications (FDS), FAT & SAT documents submission & approval	Within 20 days from Sr. No. 1
4	Procurement of Hardware, Software and Manufacturing of Panel	Within 50 days from Sr. No. 3
5	Inspection of equipment (FAT)	Within 10 days from Sr. No. 4
6	Delivery of RTU Panel and Automation System	Within 15 days from Sr. No. 5
7	Completion of installation of RTU Panel and other system, cable laying, termination, RTU configuration as per substation data point etc	Within 45 days from Sr. No. 6
8	Pre-SAT Testing	Within 10 days from Sr. No. 7
9	Final Integration Testing with SCADA	Within 10 days from Sr. No. 8
10	Resolving punch points and demonstration to Purchaser	Within 10 days from Sr. No. 9
11	Project closure after resolving of Punch points submission of documents and Software licenses	After 10 days from Sr. No. 10
12	Overall project schedule	180 days

5) 7.1 Special Conditions of Contract Point 6 & 7 , 7.3 Delivery Terms and Project Specification , 7.1.4, Special Conditions of Contract , Section-A ,9.1 Delivery Schedule are contradicted as per tender , So TPNODL request to Follow the **S.NO 4 for the new Delivery schedule for the project SITC of RTU System.**

6) Clause No. 1.34.2.b, Remote Terminal Unit Page 13 of 56, Section-B, Project Specification for **Cable Monitoring** not in the scope of Tender ,Request to bidder acknowledge the same and quote accordingly.

7) Clause No. 1.34.2.c, Remote Terminal Unit Page 13 of 56, Section-B, Project Specification **Differential input circuit to offer common mode isolation** is not applicable, Request to bidder acknowledge the same and quote accordingly.

8) Clause No. 1.38 g, Remote Terminal Unit Page 17 of 56, Section-B, Project Specification **Each Input / Output Supply within the panel shall be through power supply distribution module with MCBs with NO contacts (for supply monitoring)** is not applicable for this tender , Request to bidder acknowledge the same and quote accordingly.

9) Training required for only 10 Man-days, Request to bidder acknowledge the same and quote accordingly.

10) 7.1 Special Conditions of Contract Point No.3 & 14.6 Warranty Support are contradicted as per tender, TPNODL request to consider **Standard warranty period of 5 Years will start from the date of system handover after SAT.**

11) Annexure--7 Clause no 18.0, Page 27 of 60, Section-E, Project Specification **Router part in the scope of NBSP and Router to RTU Ethernet Cable through Conduit/PVC is Part of Bidder which is length of approx. 15-20meters.**

12) For Cable Sizing following changes need to be considered in BoQ **,** Request to bidder acknowledge the same and quote accordingly.

E.6- Power Supply Cable from DCDB to RTU Panel - 2 C X 4 mm2, - 20 METERS

E.7- Power Supply Cable from ACDB to RTU Panel - 4 C X 2.5 mm2, - 20 METERS

F.7- Communication Cable for MFM, IEDs Integration - 2P X 0.36 mm2,

F.9- Un-Armored CAT6 UTP Cable- 2P X 0.36 mm2 -50 METERS.

E.2 - Instrumentation Cable for Control Output -12 C X 1.5 mm2. Armored.

E.4 - Control Cable for CT & PT Extension-4 C X 2.5 mm2.

13) Preventive Maintenance of 1 time/year under warranty period is bidder scope, It's a part of Standard warranty, the same mentioned in BoQ Item of L.1, Request to bidder acknowledge the same and quote accordingly.

14) Request Bidder to check Modified BoQ for changes consider the same and quote accordingly.

Note :- In the event of last date specified for submission of bids and date of opening of bids is declared as a closed holiday for TPNODL, the last date of submission of bids and date of opening of bids will be the following working day at appointed times.

All other terms and conditions of the above tender shall remain unaltered.

Yours faithfully,
-sd-

HoD - Contracts
TPNODL, Balasore