

**CENTRALIZED CONTRACTS GROUP**

NIT No.: TPCODL/CCG/25-26/100008710

**Corrigendum No. – I****Dt.: 24.04.2026****Tender Enquiry No- TPCODL / CCG / FY 25-26 / 100008710****Tender Subject – 2 Years RC for SITC of FRTU & Accessories for TPSODL, TPCODL, TPWODL & TPNODL****Corrigendum Summary:****A] Clause 1.3: Revised Calendar of Event shall be as follows:**

Existing Clause	Proposed Clause
Date by which Interested and Eligible Bidder to pay Tender Fee and confirm participation as mentioned in “Procedure to Participate in Tender” <b>12.04.2026, 18:00 Hours</b>	<i>Revised timeline 27.04.2026</i>
Due Date of receipt of pre-bid queries by e-mail, if any <b>14.04 .2026, 18:00 Hours</b>	<i>Revised timeline 29.04.2026</i>
Due Date of Posting Consolidated replies to all the pre-bid queries as received: <b>17.04 .2026, 18:00 Hours</b>	<i>Revised timeline 01.05.2026, 18:00 Hours</i>
Due date and time of receipt of Bids – <b>24.04.2026, 17:00 Hours</b>	<i>Revised timeline 04.05.2026, 18:00 Hours</i>

NOTE : All Other Terms & Conditions of the tender shall remain unchanged as per NIT document, GCCs and prebid replies as per Corrigendum -1 .

Approved By,

Sd/-

(Head – Centralized Contracts Group)

**Tender no. - TPCODL/CCG/2025-26/100008710**

**Tender Description - 2 Years RC for SITC of FRTU & Accessories for TPSODL, TPCODL, TPWODL & TPNODL**

Sl. No.	Tender Reference (Document name/Page no./Clause no./Clause name)	Pre-Bid Queries	Bidder	TPCODL_CEG Response
1	Commercial Capability Item 1 The bidder should have Average Annual turnover of atleast Rs. 10 Cr. for any of last 3 Financial Year (FY) out of FY 18-19, FY 19-20, FY 20-21, FY 21-22 & FY 22-23.		The financial Year considered are FY18-19 to FY22-23, Is this the typographical mistake for not considering FY23-24, FY24-25 and FY25-26 or bidder to consider the mentioned financial years only, Please Confirm Can bidder submit the joint turnover Annual Turnover alongwith FRTU OEM, Please Confirm?	Last three financial years upto FY25-26
2	Prices shall be on FOR Basis, inclusive of Transit Insurance / Packing & Forwarding and ITC charges and shall be inclusive of unloading & stacking at DISCOM site / store locations. (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 18/Clause 13.1 (2)/Special Conditions of		Please Confirm the Material to be supplied at respective locations or at Stores. In Case the material is to be supplied / stored at respective DISCOMs Stores, we request shifting of FRTU Panels from Stores to respective sites shall be in respective DISCOM Scope?	This is a SITC Project. The Transportation upto to Central store should be taken care by the Bidder. Shifting from DISCOM store to site is in the scope of Purchaser. However contract to discuss in this matter .
3	FRTU Data Sheet Item No. 29 Auxiliary Power Supply of FRTU shall be 24V DC (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL / TPCODL / TPWODL / TPNODL"/Page No. 47/4.1/FRTU Technical Specification)		Please Confirm all the 159 numbers FRTU Auxiliary Power Supply will be 24V DC Only. In case the requirement differs , please confirm the segregation of 24V DC & 48V DC Supply requirement	1. The FRTU/Ethernet Switch/Modem cum Router should support Auxiliary Power Supply range of 18-72 V DC as per the GTP mentioned in the RFP. 2. Most of the RMUs have the auxiliary voltage of 24V DC.
4	ITC Part- The installation and commissioning shall be completed within two weeks from the date of intimation from Odisha DISCOMs post site clearance. (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 19/Clause 13.1 (7)/Special Conditions of Contract)		Bidder will ensure the ITC activity as specified in the tender document, However in case of delay towards Respective Discoms site readiness / Site not available/Outage not available, Bidder assumes that the ITC activities will certainly be closed within the RO Period. In Case the Bidder's resources are idle at site due to above mentioned scenarios, in such scenario how the bidder will be compensated.	1. The Project timeline is 300 days from the date of issue of RO. 2.The RO will be issued as per the requirement of RMU automation need from time to time, hence site readiness after project timeline will not be an issue. However contract to discuss in this matter .
5	TP Odisha DISCOM reserves the right to short close the issued Release Order / Rate contract, in case of any quality or performance issues. (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 19/Clause 13.1		Bidder will ensure the Quality and Performance requirement as per the Tender Document and beyond. In such circumstances, bidder can expect ROs will be released for the entire quantity as per the Rate Contract issued to the bidder. Please Confirm?	The RO will be issued as per the requirement of RMU automation need from time to time, not in one go. However contract to discuss in this matter .
6	<b>Payment Terms</b> 80 % payment will be released within 60 days from date of receipt of materials at store/site and 20 % Payment will be released within 30 days from the date of invoice certification of complete ICT. But the time capping between supply and site availability for ITC will be 90 days. Any further delay in making the site available beyond 90 days will lead to remittance of balance 20 % payment of Supply Part to BA on immediate basis for each such site.20% retention terms apply site wise, individually, and not collectively for all the sites of the Purchase Order. Payment of 20% retained amount of an ITC completed site will not be withheld for pendency of ITC at any other site or sites.For MSME bidders 80% payment will be released within 45 days from date of receipt of materials at store/site. Other clauses in payment terms will remain same as above.		<b>Please Clarify:</b> 1) "But the time capping between supply and site availability for ITC will be 90 days" - Request respective DISCOMs to select the sites which are ready, so that ITC part can be completed in project timelines and Bidder will get the payment to take care of his Cash Flow. 2) Bidder will ensure the Supply and ITC of material as per the RO released against the RC. However it is requested all respective ROs shall be closed as per the timelines defined in the Tender Document. 3) It is also requested last RO to be released shall ensure that the Supply and ITC services are completed before the expiry of RC.	1) The Project timeline is 300 days from the date of issue of RO. 2)Bidder to adhere to timeline as per the RFP. 3)The project shedule of last RO has nothing to do with RC validity, hence the suggestion that "last RO to be released shall ensure that the Supply and ITC services are completed before the expiry of RC" is not acceptable.
7	Bidder to consider Multifunction meter for each Breaker panels of RMUs, which shall be mounted on the RMU panel. These meters shall be integrated to FRTU on MODBUS in daisy		Request all Discoms to consider the mounting of MFM in the RMU Panel in their scope. Bidder will ensure the integration of the same with proposed FRTU. Please Confirm?	MFM need to be mounted inside the FRTU panel.
8	In the event that area of contaminated or biological hazard is identified, Associate shall ensure that plant, equipment, personnel and any activity associated with the work is carried out in		Kindly arrange to share the EIC document of Discoms	EIC of respective DISCOMs will be submitted to the qualified bidders during the Kick off meeting
9	Bidder shall provide Software up-gradation (if any), Patch Management services including sub-vendor products for next 5 years over and above as mentioned in item a. (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 101/Clause 9 / Warranty, Maintenance, Upgrades, Patch Management & Database Modification		Please clarify the exact requirement for next five year we have to provide Remote / Telephonic Support or we have to visit the sites for the same during this period, Since as per the RFP it is a Warranty Support not as Annual Maintenance Contract.	Maintenance Under Warranty : Bidder to make site visit as per the requirement mentioned in the RFP, irrespective of maintenance support (to ensure availability as per SLA), Software Upgradation, Patch Management etc.
10	Maintenance services for the supplied Hardware, System and application Software up-gradation, Patch Management services including sub-vendor products during the Standard warranty period		We understand that maintenance services for 5 years will be applicable site wise and as per RO released against RC. Kindly confirm.	maintenance services for 5 years will be applicable site wise as per the RFP.
11	Database modification during Warranty Period All database modification major or minor is in the scope of the bidder, after the system handover and during the warranty period. The Scope covers FRTU configuration and necessary changes for control center communication.		We request All Discoms to quantify the numbers of new Bays/RMUs to be included in 5 years warranty as it is impossible for bidders to estimate the cost involved without any estimates for 5 years period.	Configuration changes /database modification required in FRTU in case to case basis where site visits may not be required and the same things could be taken care during the Maintenance activities.

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Sl. No.	Tender Reference (Document name/Page no./Clause no./Clause name)	Pre-Bid Queries	Bidder	TPCODL_CEG Response
12	Auxiliary Relays for Digital Outputs- Required, Auxiliary relays with Min 10 Ampere rating with 2 NO contacts for each Digital outputs (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 4, 51/Clause 1.1, 4.1 / Scope of Work & FRTU Technical Specification		Please Confirm, whether the Auxiliary Relays are required for each Digital Input & Output or As mentioned in the Scope / Price Schedule since the qty mentioned in the BOM for Digital Input is only 5088 Nos. (i.e. 32 X 159 = 5088) as against 12720 Nos. (159 X 80 = 12720) considering the Item 4 of the Scope of Work and I/O Table Sheet 51 state that DI Requirement = 80 Nos. Digital Output is only 2544 Nos. (i.e. 16 X 159 = 2544) as against 5088 Nos. (159 X 32 = 5088) considering the Item 5 of the Scope of Work and I/O Table Sheet 51 state that DO Requirement = 32 Nos. Request all Discoms to revisit and confirm the actual requirement.	Interposing Relay with Mounting Base for Digital Output - 32 nos. Contact Multiplier Relay with Mounting Base- 32 nos.
13	Door Layout of FRTU (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 126, FRTU Technical Specification		With Reference to Door Layout Drawing, it is a representation of 4 Way RMU, Bidder Consider that all the I/O requirement (i.e. 80 DI, 32 DO and 8 AI) indicated in Tender Document is on the basis of one FRTU Panel \ RMU (Either 3 Way or 4 Way). Please Confirm?	Provision of Two no.of 4 way RMU integration should be done in single RMU having 80 DI, 32 DO for TPCODL while provision of single 4way RMU integration with 48DI & 16 DO for TPNODL/TPWODL/TPSODL.
14	Should provide latest Microsoft Windows based maintenance and configuration tools. The tools should have functionality of both remote and local access. (Reference Document "Tender		How many configuration software license shall be Considered DISCOMs wise?	5 no of license configuration software with logic building application for each DISCOM
15	The FRTU should support features i.e. Logic Development, Auto-Change over of source functionality, Communication between FRTUs for automatic GRID management. These features shall be available by default without any additional Hardware & Software.		The requirement of Auto-Change over of source functionality and Communication between FRTUs for automatic GRID management. This requirement is same as Annexure-2 (Page - 125), Self-Healing via Autochangeover, Please Confirm	Auto change over functionality should be provisioned in FRTU.
16	All customized software shall be supplied as part of the code management library along with the source code or other distribution image against which the code changes are to be applied		Only the project specific configuration files relevant to this project will be provided. Please acknowledge?	Noted
17	Unloading, Storage scope (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 157/Clause 13.5 / Dispatch & Delivery Instructions		We request to exclude unloading, Security of material and transit of material from Stores / Any other Location to installation point from Bidder's scope.	This is a SITC Project. The Transportation upto to Central store should be taken care by the Bidder including unloading. Shifting from DISCOM store to site is in the scope of Purchaser. However contract to discuss in this matter .
18	Testing & Commissioning of FRTU with all accessories and seamless integration with Purchaser's SCADA Systems, and RTU system of the 33/11 kV Primary Substations. (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No.		We understand the configuration at control center and 33/11 kV Primary Substations end will be done by respective Discoms. Please Confirm?	The configuration at control center end will be done by DISCOM. The necessary P2P testing of the offered FRTU system with DISCOM's SCADA System is in bidder's scope.
19	Standard warranty period of 5 Years from the date of system handover after SAT (Reference Document "Tender Document _CCG_SITC of FRTU for		We propose warranty of 60 months (5 years) from handover after SAT or 66 months from supply whichever is earlier. Please confirm?	Noted
20	SLA will be prepared and adhered to by Bidder (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 100/Clause 9 / Warranty, Maintenance, Upgrades, Patch Management & Database Modification		Since Annual Maintenance Contract (AMC) is not in the scope of work, it is only the Warranty Support, so SLA is not applicable. However with reference to point 17 above, bidder will extend the necessary support on Non-Consumable items against manufacturing defects, Please Confirm?	SLA is applicable as per the Tender document. No Deviation is accepted.
21	Bidder to ensure that all the product own and sub-vendor product offered are tested at CPRI Lab for cyber security as per the Guidelines of MoP Order No.25-L7 /6/2018-PG dated 2nd July, 2020 (Reference Document "Tender Document _CCG_SITC of FRTU for TPSODL/TPCODL/TPWODL/TPNODL"/Page No. 43/Clause 2 / Applicable Standards		As per the MoP order the clause is applicable only for FRTU, manufactured or assembled in India. In case bidder is proposing the FRTU manufactured and assembled outside India, and submit the certificate issued by DNV or KEMA will be accepted or not. Kindly confirm. Bidder can submit the supportive undertaking in this regard on behalf of OEM. Please Confirm?	As per the MoP order the clause is applicable for FRTU, not manufactured or assembled in India. However Cybersecurity compliance is mandatory as per MoP irrespective of its origin.
22	General Query		Please confirm Type, Number of Devices and Protocol to be integrated with FRTU at site. Exclusively also confirm devices to be integrated on MQTT and its purpose.	Please refer page no 45 of NIT( GTP for FRTU).
23	General Query		There is no line item for earthing in Bid Price Schedule and elsewhere in the NIT document, so we understand this clause is not applicable to bidders. Please confirm? Bidder can use the existing Electronic Earthing Arrangement for the system supplied by them under this NIT as per site requirement. Please confirm ?	Purchaser proposes to use the existing earthing system of RMU for proposed FRTU Panel. In case of special requirement of the bidder, then earth pit along with cable are in the scope of the bidder.

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24	General Query		1) Kindly confirm that Cement floor along with required Civil works for FRTU panel erection is available at respective sites or provision of the same is in respective Discoms scope.	1. Bidder can use the available trenches, cable tray and plinth as applicable. However bidder to note at each site the requirement will be captured during site visit planned as per the RFP with successful bidder. 2. As per site requirement bidder may have to carryout Civil Activity for proper installation of FRTU panel as per minimum height mentioned in the RFP along with trenches and Cable tray.
25	General Query		Kindly confirm the following of FRTU Panel a) Minimum/ Maximum size of the FRTU panel which has to be provided by the bidder? b) IP Protection Class of FRTU Panel - IP55 / IP65 / IP67??? c) Is the FRTU Panel shall be with front and Back Door??	a) Please refer the detail specs on Panel. (Max 1150 mm X 800 mm) which will be finalised during detail engineering. b) Bidder to note that, most of the RMUs are installed under the sky, as per the RFP it is proposed to consider panel IP55 with Canopy. However, if any bidder are offering higher IP class of the panel then, preference will be given during technical evaluation. c) FRTU Panel with front door opening only.
26	General Query		Please confirm the make and protocol of the Device/s to be integrated with supplied FRTU if any?	Please refer page no 45 of NIT( GTP for FRTU).Annexure – 1: Preferred/Approved Make of Equipment/System and Please refer page no 45 of NIT( GTP for FRTU) for support of protocol.
27	General Query		Please confirm The aggregate liability for any or all claims including liquidated damages and indemnification shall not exceed 100% of the total contract value.	Contract will respond
28	General Query		Please confirm the payment terms clause? Will the Payment Terms be different for each Discoms??	Contract will respond
29	General Query		Supply of Sim Card - Sim Card will be provided by TPWODL. Please Confirm?	SIMs will be provided by DISCOM
30	General Query		Request All DISCOMs to confirm the sufficient space with Base Frame is available adjacent to all RMUs to erect the FRTU Panels.	1. Bidder can use the available trenches, cable tray and plinth as applicable. However bidder to note at each site the requirement will be captured during site visit planned as per the RFP with successful bidder. 2. As per site requirement bidder may have to carryout Civil Activity for proper installation of FRTU panel as per minimum height mentioned in the RFP along with trenches and Cable tray. 3. Adequate space will be provided for civil works for erection/installation of FRTU panels.
31	General Query		In Case of AC & DC Power Supply used in RMU to be monitored from Purchasers' SCADA System through FRTU. We request each discoms to confirm that required Transducers/Soft signal required for monitoring of the power supply are available in RMU cabinet or will be provided by discoms. Kindly confirm.	The potention free contact for AC fail indication & DC fail indication is available with RMU which need to be extended to FRTU for configuration.
32	General Query		We understand that ITC cost is for the Module/s indicated alongwith with FRTU Rack. ITC of additional module (During Detailed Engineering / Monitoring and Control of Additional RMUs/other Device) is payable extra by respective discoms. Kindly confirm?	Provision of Two no.of 4 way RMU integration should be done in single RMU having 80 DI, 32 DO for TPCODL while provision of single 4way RMU integration with 48DI & 16 DO for TPNODL/TPWODL/TPSODL.
33	General Query		Any addition of the modules / software / services during detailed engineering will be charged extra. After the award of the contract, Survey will be mutually done with respective DISCOMs team with best care to capture as much detail as possible. However, in case there arise additional requirements, same shall be extra as applicable. Please confirm.	Provision of Two no.of 4 way RMU integration should be done in single RMU having 80 DI, 32 DO and 8 AI. There is no provision of additional modules/software/services in the NIT document.
34	General Query		Since There is no line item for Cyber Security Audit in the NIT document, Hence services of Third Party Auditor is not required, However, the proposed system architecture and system will ensure the Cyber Security requirement applicable for Seconadry Distribution System. Please confirm?	Cybersecurity compliance is mandatory as per MoP for FRTU. DISCOM reserves right to go for cyber security audit in any one/two sites by bidder if any discrepancies being found. The gap identified need to be complied in all sites by the bidder. Hence, separate no line item is considered in the NIT document.

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Sl. No.	Tender Reference (Document name/Page no./Clause no./Clause name)	Pre-Bid Queries	Bidder	TPCODL_CEG Response
1	Price Schedule/Page No.21	Mandatory spares	<b>Mandatory spares</b>   Whether mandatory spares to be quoted separately or included in equipment price? <b>In BOQ format</b>   <b>No separate row for spares. Kindly clarify where to include mandatory spares.</b>	Please refer page no- 5 & 134 of the Nit document. Mandatory spares are to be considered accordingly.
2	Pre- Qualification Criteria /Page no.9	Technical Experience / Performance " <b>The bidder / OEM (either or) should have performance certificates for a similar or higher rating of work from at least 2 reputed companies and one of them must be from Power utilities in India. The work against these issued certificates should be completed in last Five years from the date of bid submission. In case the bidder has got previous association with Tata Power / TPCODL / TPSODL / TPNODL / TPWODL for supply of similar product, performance feedback of the same will be solely considered. The performance certificate and contact details of the client need to be submitted.</b>	Whether RTU completion certificates are acceptable as supporting credentials for meeting the eligibility criteria of this tender, given that the RTU installation work has been completed at TPNODL?	The RTU completion certificate is an added advantage and will be taken care during the technical evaluation, however the experience on FRTU project work is mandatory as FRTU project work is a outdoor activity. No deviation will be accepted, Bidder to adhered to the tender specifications.
3	Input / Output Requirement / page no.51	Digital Inputs (DI) Digital Output (DO) Analog Input (AI)	kindly clarify exact requirement of "Digital Inputs (DI) Digital Output (DO) Analog Input (AI) "	Provision of Two no.of 4 way RMU integration should be done in single RMU having 80 DI, 32 DO for TPCODL while provision of single 4way RMU integration with 48DI & 16 DO for TPNODL/TPWODL/TPSODL.
1	Page - 48	The FRTU proposed for the current application is non-redundant. However, the offered FRTU platform supports redundancy in hot standby mode with bumpless auto changeover.	Kindly clarify the requirement for redundancy, as our present FRTU does not support this feature	1. FRTU used for RMU automation will be non-redundant. 2. However, the proposed FRTU shall provide the redundancy with additional hardware only without any additional software license for achieving the redundancy.
2	Page - 49	The specification requires support for IEC 61131-based programming logic, specifically Functional Block Diagram (FBD) language with arithmetic and logical functions for implementing interlock logic in SCADA controls.	Please note that earlier, only PLC logic was specified; however, this time FBD language has been explicitly mentioned. Kindly confirm the requirement.	Bidder to consider the FRTU supporting all application software and configuration tools for configuration of FRTU to make the grid self sustainable. (Group Control, Load Shedding, Control Logic, Reverse Blocking AutoReclose, Self Healing). Hence the support for IEC61131 is must.
3	Page - 50	It is mentioned that the Master Station shall be able to establish a virtual connection through the FRTU with any IED for data transfer, configuration visualization, and parameter download. Typically, such functionality is applicable in substation RTUs. However, for RMU automation, IEDs communicating over IEC 61850 or other IP-based protocols are generally not present.	Kindly clarify the applicability of this requirement (IED pass-through functionality).	Please refer the tender specifications which is self explanatory on IED pass-through. The applicability is optional in RMU automation as per site requirement.
4	Page - 50	The FRTU is required to support multiple protocols, including IEC 61850 Edition 1 & 2, IEC 60870-5-104, IEC 60870-5-103, Modbus (Serial & TCP/IP), and MQTT.	Kindly confirm whether IEC 61850 GOOSE communication is also expected as part of this requirement.	Please refer the GTP of FRTU. Bidder to adhered to the tender specifications.
5	Page - 50	The specified I/O configuration is 80 DI + 32 DO + 8 AI.	Please note that our FRTU cabinet can accommodate only 6 I/O modules, whereas the required configuration would need 8 I/O modules. Kindly advise on this deviation.	Provision of Two no.of 4 way RMU integration should be done in single RMU having 80 DI, 32 DO for TPCODL while provision of single 4way RMU integration with 48DI & 16 DO for TPNODL/TPWODL/TPSODL.

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6		The FRTU is required to comply with NERC-CIP / NIST 7628, IEC 62351, IEC 62443, and IEEE 1686 standards.	Kindly confirm if full compliance with all listed cybersecurity standards is mandatory for this application.	Cybersecurity compliance is mandatory as per MoP guidelines for FRTU particularly IEC 62351, IEC 62443
1	8. INSPECTION AFTER RECEIPT AT STORES	The material received at Tata Power DISCOM store will be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection and one copy of the report shall be sent to Project Engineering department.	We understand that the material to be delivered to the respective TATA power discom's stores. The delivery from store to the site is TATA power scope. Please confirm. If it is in our scope, Kindly share the site location details to quantify the distance and price accordingly	This is a SITC Project. The Transportation upto to Central store should be taken care by the Bidder including unloading. Shifting from DISCOM store to site is in the scope of Purchaser. However contract to discuss in this matter .
2	1.1 Scope of work	18. Services of FRTU Panel, Communication and Other Supplied System.	Design required for the civil foundation required to quantify the work.	1. Bidder can use the available trenches, cable tray and plinth as applicable. However bidder to note at each site the requirement will be captured during site visit planned as per the RFP with successful bidder. 2. As per site requirement bidder may have to carryout Civil Activity for proper installation of FRTU panel as per minimum height mentioned in the RFP along with trenches and Cable tray.
3	Annexure-6 : BOM/Price Schedule	SPD for DC power-1 nos. //SPD for AC power-1 nos. //SPD for serial communication- 2 nos. // SPD for ethernet communication - 1 nos.	Kindly provide the specifications for the SPDs for DC power, AC power, Serial and ethernet communication.	During Technical evaluation , shall be decided.
	13.3 Payment Terms	80 % payment will be released within 60 days from date of receipt of materials at store /site and 20 % Payment will be released within 30 days from the date of invoice certification of complete ICT. But the time capping between supply and site availability for ITC will be 90 days. Any further delay in making the site available beyond 90 days will lead to remittance of balance 20 % payment of Supply Part to BA on immediate basis for each such site.20% retention terms apply site wise, individually, and not collectively for all the sites of the Purchase Order. Payment of 20% retained amount of an ITC completed site will not be withheld for pendency of ITC at any other site or sites.For MSME bidders 80% payment will be released within 45 days from date of receipt of materials at store /site. Other clauses in payment terms will remain same as above. 100% service value ( ITC cost) will be released within 30 days from the date of invoice certification of complete ICT.	We understand the payment will be 80% against delivery and 20% against ITC. Kindly confirm. Note: Page 147/148 Payment terms are differing from the original, kindly confirm.	NIT terms prevails same.
2	Annexure - 1 - Price schedule	Spares	Spare Price to be quoted seperately OR to be convered within the main BOQ line item .	Reply :- It will be mandatory spares with FRTU.

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Sl. No.	Tender Reference (Document name/Page no./Clause no./Clause name)	Pre-Bid Queries	Bidder	TPCODL_CEG Response
2.0.B.2.		The intending bidder must have successfully undertaken at least the following numbers of similar assignments during the last Five years of the value specified herein: a. One project of similar nature of not less than the amount Rs. 3 Cr. Or b. Two projects of similar nature of not less than the amount Rs. 1.5 Cr (each) Or c. Three projects of similar nature of not less than the amount of Rs. 1.0 Cr (each).	Query: Please consider experience of bidder / OEM (either or), not only intended bidder. Order copies has to be submitted by bidder / OEM (either or) in this regard.	Reply :- Bidder can submit the OEM credential to get them qualified but such cases following conditions :- 1) . In case of authorized channel partner Authorization Letter along with MAF from OEM to be submitted in this regard. Warranty & service responsibility is backed by OEM in case of any defects & trouble shooting and under rating from OEM must be submitted on their letter head. 2) OEM should have manufacturing facilities & in house testing facilities for carrying out acceptance test as per tender specifications. 3) The bidder should have dedicated service team along with required spare parts in Odisha to attend issues within 24 hours after receiving complaints. The bidder shall develop dedicated service team in Odisha in the event of award of contract, before commencement of supplies. This is applicable against the pt no Technical Experience / Performance, Manufacturing Capacity ,In-house Testing Facility and experience.
		As per Sl. No. 34, the requirement specifies that the FRTU's Digital Input/Output capacity should be sufficient for two 4-way RMU automation, with a minimum of 80 Digital Inputs (DI), 32 Digital Outputs (DO), and 8 Analog Inputs (AI) in hardwired configuration.	In this regard, we would like to request as per the current requirement 48 Digital Inputs (DI), which is designed with provision for future expansion to meet additional requirements.	Provision of Two no.of 4 way RMU integration should be done in single RMU having 80 DI, 32 DO for TPCODL while provision of single 4way RMU integration with 48DI & 16 DO for TPNODL/TPWODL/TPSODL.
	QR		The intending bidder must have successfully undertaken at least the following numbers of similar assignments during the last Five years of the value specified herein: a. One project of similar nature of not less than the amount Rs. 3 Cr. Or b. Two projects of similar nature of not less than the amount Rs. 1.5 Cr (each) Or c. Three projects of similar nature of not less than the amount of Rs. 1.0 Cr (each).	The intending bidder /OEM (either or )must have successfully undertaken at least the following numbers of similar assignments during the last Five years as per specified herein: The bidder /OEM (either or) should have executed either 50% of the total tender quantity during last 5 years; Or single order of 25% of the total tender quantity during last 5 years; Or 2 orders of 15% each of the total tender quantity during last 5 years. Last day of previous month prior to date of bid submission shall be counted for purpose of years calculation.
	QR		The bidder / OEM (either or) should have performance certificates for a similar or higher rating of work from at least 2 reputed companies and one of them must be from Power utilities in India. The work against these issued certificates should be completed in last Five years from the date of bid submission. In case the bidder has got previous association with Tata Power / TPCODL / TPSODL / TPNODL / TPWODL for supply of similar product, performance feedback of the same will be solely considered. The performance certificate and contact details of the client need to be submitted.	At least two (02) Performance Certificate by any Discoms / PSUs / Reputed companies is to be submitted. The work against these issued certificates should be completed in last 07 years from the date of bid submission. In case the bidder has got previous association with TP Discoms for supply of similar product, performance feedback of the same will be solely considered irrespective of the performance certificate issued by bidder's other customers.

1	2	3	4	5	7	7	7	7	8	9	12	
Sl. No.	Item	Description	UOM	HSN/SAC Code	TPCODL Required Quantity (A)	TPNODL Required Quantity (A)	TPSODL Required Quantity (A)	TPWODL Required Quantity (A)	Total Qty	Unit Rate (B)	GST (%)	Gross Price (E=A*D)
<b>A Pre-Wired FRTU Panel</b>												
1	Pre-Wired FRTU Panel with FRTU	<p><b>FRTU Modules with DI/DO cards</b>                      FRTU Redundancy : Optional                      I/O Requirement: with 80 DI, 32 DO with Auxiliary relay for each Digital Input &amp; Output for TPCODL                      I/O Requirement: with 48DI, 16 DO with Auxiliary relay for each Digital Input &amp; Output for TPWODL/TPNODL/TPSODL.                      Communication Ports per FRTU : 2 Nos. Ethernet ports/CPU (Both the ports should support IEC 104, IEC 61850 &amp; other standard protocols for Communication with Control center and substation IEDs).                      2 Nos. RS 485 electrical ports for communication with serial devices over IEC60870-5-103, MODBUS (Serial) protocol in the FRTU.                      Power supply: Redundant 18-72 VDC (24 V) Supply with MCBs with add-on NO contact                      Protocols : IEC60870-5-103, IEC 60870-5-104, IEC 61850 (ED1, ED2), RSTP, MODBUS (Serial &amp; TCP/IP), SNMP (V1.0, V2.0, V3.0), NTP &amp; SNTP, MQTT                      Software Licenses: RTU OS, Application Software, Calculation Package. Application Software Licenses with 1000 Physical I/O tags, 10 IEDs - IEC61850 (ED1, ED2), 10 IEDs - Serial Protocol, RTU shall Communicate to Eight Independent Remote SCADA Master on IEC 60870-5-104. <b>5 nos. of Configuration software per each DISCOM having Diagnostic tools &amp; Logic building Application (interlock logic, arithmetic, logical etc.)</b>                      Mounting: To be supplied with prewired panel (Reputed make panel, IP Class : IP55/65/67).                      Other Accessories: Interface Modules, Pre-fabricated cables for I/O modules, Auxiliaries Relays for Power Supply monitoring, MCBs for all type of Power Supplies // SPD for DC power-1 nos. //SPD for AC power-1 nos. //SPD for serial communication- 2 nos. // SPD for ethernet communication - 1 nos.</p> <p><b>Interposing Relay with Mounting Base for Digital Output - 32 nos.</b>                      Auxiliary Power. : 24 V DC // 2. Input signal from field : 24 V //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 &amp; Carry : 30 A for 3 Sec. &amp; 5A continuously at 660V // 7. Number of Contacts : 2 NO with LED Indicator + Free wheeling // 8. Operating time : Less than 15 msec.                      9. Other Accessories: Necessary TB, Din rail channel and other accessories]</p> <p><b>Contact Multiplier Relay with Mounting Base- 32 nos</b>                      1. Contact Material : Silver Alloy //2. Contact Rating : 5 Amps. @ 24 V DC // 3. Contact Resistance : 50 Mohms max. (Initial) // 5. Insulation Resistance : 500 Mohms @ 500 V DC, 250 C                      4. Dielectric Strength : i) Between open contacts : 500 V RMS ii) Between Contact and Coil : 2000 V RMS //8. Ambient temperature : -40°C to +70°C // 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 250°C //11. Type of Contact Multiplier : 1 NO + 1 NC with LED Indicator + Free wheeling // 12. Type of mounting : DIN RAIL MOUNTING WITH SOCKET // 13. No. of Poles : 1 NO + 1 NC                      14. Other Accessories: Necessary TB, Din rail channel and other accessories</p> <p><b>Battery Charger - 1 nos</b>                      1. Charger Input Voltage : Single phase (2 wire) voltage 250V AC +30% to -20%, Frequency 50Hz ± 5%.                      2. Constant Voltage and Current limiting charger. Charger with inbuilt battery health monitoring is highly preferable. // 3. Battery &amp; charger Alarms : Potential free contacts must be available to integrate with SCADA for abnormality if any. Most preferred alarms are like: AC supply fail , DC supply fail, Battery Low, Battery Fail, Battery Charger fail, Battery polarity reverse. Serial Communication is preferred.                      4. Charger current : 10 Ampere // 5. Efficiency : Not less than 85% at full rated load                      6. Current limit : 110% of rated load // 7. Regulation : ± 1%                      8. Insulation : Not less than 5 mega Ohms. //9. Protection : AC input MCCB &amp; ELBS with input ON/OFF switch and fuses/ contactor.DC output MCCB with output ON/OFF switch and fuses.Current limit protection, soft start feature, surge suppressor.</p> <p><b>Battery Bank- 1 Set</b>                      1. Voltage : 24 VDC specified at 27 deg.C. //2. Battery Type : SMF, VRLA with chargers of conventional type                      3. Voltage/cell : 12 Volts // 4. Capacity of Batteries : 42 AH,10 Amps //5. Connecting cables : Cable size selection should provide the lowest voltage Drop possible between battery system and operating Equipment.                      6. Method of charging : Constant voltage method and current limit(variable Current)                      7. Efficiency : Not less than 90% at full rated load</p> <p><b>4G Modem cum Router: 1 Nos.</b>                      1. 5G Fall back to 4G/3G/2G //2. Modem should support multiband connectivity with FDD 5G &amp; TDD 5G                      3. Support Band 1,3,5,8,40 and Band 48. // Cellular modem should have dual SIM provision for network redundancy /backup . Dual SIM operation ensures that the cellular connection is always available. It will automatically disconnect the 1st SIM card's low/weak cellular connection and will reconnect to establish a stronger connection using the 2nd SIM card. //5. Network Protocols : TCP/IP ,UDP/IP, HTTP, ARP,DHCP, ICMP, SNMP, V1/V2 &amp; V1, NTP, SSL/TLS //6. Routing : Astatic Routing, RIP 1 &amp; 2, OSPF V2 &amp; V1 //7. VPN : Open VPN , IP Sec, L2TP, PPTP, GRE //8. Alarm Message : Device shall have alarm notification on SNMP trap //9. Management /Monitoring : Cellular modem should shall support Local / Remote management through web HTMLS , SSHP &amp; Telnet- 4. It shall support monitoring through system logs &amp; SNMP version V1/V2 &amp; V3. Notification &amp; command shall be possible over SMS. Firmware upgradation through Web, backup &amp; restore of configuration shall be possible //10. SCADA Protocols : IEC 104 – 104 Master – Multi Slave Mode: The modem should be capable of reading FRTUs in IEC60870-5-104 protocol and communicate with SCADA system on IEC 60870-5-104 protocol upto 8 masters. Adequate data interlock mechanisms should be implemented to avoid data loss.                      11. No Of Antenna : The 5G Cellular modem Should have two antenna connection (MIMO).One is primary cellular antenna &amp; second is diversity antenna(MIMO). Cable should have Low loss RF Cable with minimum 5M. Antenna Should be Omni directional with high gain (High gain ≥5).                      Power Supply : 18-30 V DC // SMS based DO operation: Modem DO should operate based on SMS received &amp; will regain its original position after 60 sections.</p>	No. / Site		100	15	17	50	182		0	
Sub Total of FRTU Panel ( Panel +FRTU+CMR+HDR+DC System+Mdoem) with all accessories												-
<b>B Managed Layer2 Ethernet Switch</b>												

1	2	3	4	5	7	TPNODL	TPSODL	TPWODL	8	9	12	
Sl. No.	Item	Description	UOM	HSN/SAC Code	TPCODL Required Quantity (A)	TPNODL Required Quantity (A)	TPSODL Required Quantity (A)	TPWODL Required Quantity (A)	Total Qty	Unit Rate (B)	GST (%)	Gross Price (E=A*D)
1	Managed Layer2 Ethernet Switch (FRTU Panel)	<p><b>Managed L2 Ethernet Switch for IED Communication &amp; for SCADA Integration</b>  <b>Communication Ports:</b> 8 PORT (with 6 Copper ports and 2 Fibre Ports SM) 100/1000 MBPS  <b>Power Supply:</b> Input power supply 18-72 VDC Supply  <b>Mounting Arrangement:</b> To be mounted in FRTU Panel  <b>Preferred Make:</b> Ruggedcom/Hirschman/MOXA/CISCO  <b>Software:</b> Software for Local and Remote configuration of Ethernet Switches - Enabling Monitoring, Configuration, Maintenance and backup of configuration files  <b>Shall support:</b> 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 Discovery 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 &amp; Command Line Interface (CLI) for quickly configuring major managed functions, SNMPv1/v2c/v3 for different levels of network management, SNMP.</p>	No. / Site		100	15	17	50	182			-
<b>C</b>												
1	Multi Function Meter	<p><b>Multi Function Meter: 1 nos.</b>  <b>Requirement :</b> For all 33 &amp; 11 KV Feeders, Bus Voltages (33 &amp; 11 kv), Station Trf, ACDB                      Multifunctional 3-phase Power meter, four quadrant active and reactive energy polyphase static meter  <b>Form Factor:</b> 96 X 96 mm  <b>Accuracy Class:</b> 0.2 S as per IEC62053:22  <b>Voltage Inputs:</b> Operating range : 690 V AC line-to-line, 460 V AC line-to-neutral  <b>Current Inputs:</b> 1A / 5A (User selectable CT secondary 1A / 5A, PT Secondary)  <b>Wiring configurations:</b> 3OP2, 4LN3, 3DIR2, 4LL3, 3OP3, 3LN3, 3LL3, 3BLN3 (All wiring configurations selected via the front panel)  <b>Communication Port:</b> RS 485 Serial Port with removable connector  <b>Protocols:</b> MODBUS RTU, Device Address (User Configurable - (1-247))  <b>Auxiliary Supply:</b> 18-72 V DC (24 V DC)  <b>Other Accessories:</b> Necessary TB, Din rail channel and other accessories for flash mounting in RMU  <b>Preferred Make:</b> Reputed Make</p>	Nos. / Site		100	15	17	50	182			-
<b>Sub Total of Ethernet Switch &amp; MFM</b>												
<b>D</b>												
<b>Instrumentation Cable for Status, Control &amp; Power Supply</b>												
1	Instrumentation Cable 24 C X 1.0mm <sup>2</sup> , Armored cable for Status and Indications	<p><b>Instrumentation Cable for Status and Indications and control</b>                      24C X 1.0 mm<sup>2</sup>, Armored, 1100 V Rated, Annealed Stranded Copper, PVC insulated, Overall shielded field cable  <b>Preferred Make:</b> CCI / FINOLEX / HAVELLS / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika/Equivalent</p>	Meters/ Site		10000	0	0	0	10000			-
2	Instrumentation Cable 16 C X 1.5 mm <sup>2</sup> , Armored cable for Status and Indications	<p><b>Instrumentation Cable for Status and Indications</b>                      16 C X 1.5 mm<sup>2</sup>, Armored, 1100 V Rated, Annealed Stranded Copper, PVC insulated, Overall shielded field cable  <b>Preferred Make:</b> CCI / FINOLEX / HAVELLS / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika/Equivalent</p>	Meters/ Site			1500	1700	5000	8200			-
3	4 C X 2.5 mm <sup>2</sup> Copper cable	<p><b>LT power Cable</b>                      4 C X 2.5 mm<sup>2</sup>, multistrand copper cable for extending CT &amp; CVT inputs to the MFM in the CRP panel.  <b>Preferred Make:</b> CCI / FORT GLOSTER / FINOLEX / HAVELLS / Indian aluminum Cables / Universal Cables / Incab / Asian Cable / KEI / Polycab / Ruchika/Prime/Equivalent</p>	Meters/ Site		2000	300	340	1000	3640			-
<b>E</b>												
<b>Communication Cable for MFM, IEDs Integration</b>												
1	4P X 0.36 mm <sup>2</sup> , Armored Communication Cable for MFM	<p><b>Communication Cable:</b>                      4 P X 0.36 mm<sup>2</sup> Armored multistrand Pair and Overall shielded, for Multifunction Meter looping.  <b>Preferred Make :</b> Belden/LAPP/SATYAM/KEC/Digisol/Polycab/Parashield</p>	Meters/ Site		2000	300	340	1000	3640			-
2	Armored CAT6 SFTP Cable	<p>Armored CAT6 SFTP Cable  <b>Preferred Make :</b> Systemax/Finolex/Polycab/Digisol</p>	Meters/ Site		1000	300	170	500	1970			-
<b>Sub Total of Control /Instrumentation/Communication Cable</b>												
<b>Grand Total Supply (A+B+C+D+E)</b>												
<b>F</b>												
<b>Services for FRTU Panel, Communication and Other Supplied System</b>												
1	Services of FRTU Panel, Communication and Other Supplied System	<p><b>Integration and Commissioning FRTU System</b>                      a) Site Survey, Design, Engineering, Finalization of BOM, FDS //b) Transportation, Delivery, Unloading and Storage //c) Installation and Commissioning of Pre-wired FRTU Panel, Networking equipment &amp; other Accessories //d) Civil Activities for Installation of FRTU panel //e) Cable laying, termination and continuity check of all cables (Instrumentation, Communication &amp; Power cables) //f) Integration of all Protection, MFM, and other IEDs. //g) Powering up of all supplied materials //h) Configuration of FRTU and its accessories //i) I/O testing, Pre- SAT testing of Hardware and Software functionality //j) Integrated FAT &amp; 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, FRTU Backup</p>	Lumpsum / Site		100	15	17	50	182			-
<b>Total of Services (F)</b>												
<b>Grand Total of Supply + Services</b>												
<b>J</b>												
<b>Training (10 Man-days of Trainer)</b>												
1	Train ing	On-site Training on Supplied equipment and Application Software	Man-days		10	10	10	10	40			-

1	2	3	4	5	7					8	9	12
Sl. No.	Item	Description	UOM	HSN/SAC Code	TPCODL Required Quantity (A)	TPNODL Required Quantity (A)	TPSODL Required Quantity (A)	TPWODL Required Quantity (A)	Total Qty	Unit Rate (B)	GST (%)	Gross Price (E=A*D)
<b>Total of Training</b>												-
<b>Grand Total of Supply + Services+Standard Warranty + Training</b>												-
<b>G Mandatory Spares</b>												
1	Mandatory Spares (Unit Cost to be utilised for addition/ deletion of quantity as per site requirement)	FRTU Chassis	No.		3	3	1		7			-
2		CPU Module of the FRTU	No.		5	3	1	3	12			-
3		Power Supply Module of the FRTU	No.		5	3	1	3	12			-
4		Memory Module of the FRTU	No.		5	3	1	3	12			-
5		Communication Module (Ethernet)	No.		5	3	1	3	12			-
6		Communication Module (Serial)	No.		5	3	1	3	12			-
7		DI Cards with Interface Module & Cables for Digital Inputs	Sets		10	6	2	5	23			-
8		DO Cards with Interface Module & Cables for Digital Output	Sets		10	6	2	5	23			-
9		AI Cards with Interface Module & Cables for Analog Inputs	Sets		5	0	1		6			-
11		Any Other Modules Specific to OEM Solution	Lot		1	3	1	1	6			-
12		Managed Ethernet Switch - FRTU	No.		5	3	1		9			-
13		CMR Relay with Base	No.		20	9	4	10	43			-
14		HDR Relay with Base	No.		20	9	4	10	43			-
15		Battery Charger	No.		5	3	1	3	12			-
16		Multi Function Meter	No.		10	0		5	15			-
<b>Total of Mandatory Spares</b>												-
<b>Grand Total of Supply + Services+Standard Warranty + Training + Mandatory Spares</b>												-

\*Mandatory to quote in all line items (If Applicable)

**NOTE:**

- Prices shall be firm till the validity of the contract (As applicable).
- The bids will be evaluated commercially on Overall BOQ basis.
- The unit price to be entered in column "F" of above table is unit price of the tendered item and exclusive of GST.All itemized prices are to be quoted on FOR basis at TPCODL Store -Cuttack or Bhubaneswar, TPWODL Store-Burla, Sambalpur, TPNODL Store- Sovarampur, Balia, Balasore, Odisha, and TPSODL Store- Berhampur, Odisha should be inclusive of freight, insurance, loading & unloading, handling charges and any other charges which may be applicable.
- Issuance of Release Orders (RO) shall be done by respective Discoms as per their requirement.
- The material shall be delivered as per the location captured in the release order.
- The bidders are advised to quote prices strictly in the above format. Failing to do so, bids are liable for rejection.
- The bidder must fill each and every column of the above format. *Mentioning "extra/inclusive"/other conditions in any of the column may lead for rejection of the price bid.*
- No cutting/ overwriting in the prices is permissible.
- The quantity mentioned above are for evaluation purpose only and may vary as per actual site requirement.