

CENTRALIZED CONTRACTS GROUP

NIT No.: TPCODL/CCG/24-25/1000002515

Corrigendum No. – I**Dt.: 12-08-2025****Tender Enquiry No- TPCODL/CCG/24-25/1000004257**

Tender Subject – 2 Years Rate Contract for Supply with supervision of Fault Passage Indicator & DCU & SITC of Compact FPI for TPCODL, TPSODL, TPWODL & TPNODL.

Corrigendum Summary:**A] Clause 1.3: Revised Calendar of Event shall be as follows:**

Existing Clause	Proposed Clause
Due Date of Posting Consolidated replies to all the pre-bid queries as received - 04-08-2025	Due Date of Posting Consolidated replies to all the pre-bid queries as received - 12-08-2025
Due date and time of receipt of Bids – 10.05.2025, 17:00 Hours	<i>Revised timeline</i> 20-08-2025, 17:00 hours.
<i>The pre bid reply is as per below annexure-I, other terms and conditions will remain same as per NIT No :-</i> <u>TPCODL/CCG/24-25/1000004257</u>	

NOTE : All Other Terms & Conditions of the tender shall remain unchanged as per NIT document, GCCs and Pre-bid reply.

Approved By,

Sd/-
(Head – Centralized Contracts Group)

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Annexure -I

Sr. No.	Description as per Bid Document	Query / Clarification / Deviation	Odisha Discom's Response
1	3	4	5
1	FPI configuration option should be through wireless device like dongle with supporting software and remote, should not through hardware like USB Cable.	This is a hand held device (HHD) where the user needs to send engineer to come and stand below the device mounted on the line and configure from ground level every time for each devices. Which is not logical and not practical.	Remote configuration is a must, however local configuration with wireless connectivity (wifi/bluetooth) should be provisioned as hardwired connection over Ethernet /USB port is difficult for FPI controllers mounted at high position in the poles.
2	Considering the lightning prone geography, need to consider SPD for FPI.	Need clarity about this requirement	SPD to be considered in FPI controllers/DCUs for protection against the volatage surges.
3	Hard rebooting of FPI through SMS shall be included in specification as a standard feature.	Restarting 1000s of FSIs is not feasible and any solution needing such interventions are not robust.	Hard rebooting of FPI through SMS by using Modems. No deviations acceptable. Please adhere to tender specifications.
4	The FPI shall be supplied along with suitable Remote Control Unit, having a LCD display, common for all the Overhead Fault Passage Indicator. The supplier shall supply one number of Remote Control Unit free of charge along with every 9 numbers of FPIs	This is a hand held device (HHD) where the user needs to send engineer to come and stand below the device mounted on the line and configure from ground level every time for each devices. Which is not logical and not practical.	FPI should have controller/DCU/RCU.

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5	Bright Red flash light (LEDs) for permanent faults, Preferably Green LED for transient fault with different blinking rate Preferably Yellow LED for low battery indication Bidder to submit the offered equipment details of features for indication of above faults categories.	Any specific reason for different color ..?	No deviations acceptable. Please adhere to tender specifications.
6	More than 15 years	10 years of expected operational life under standard operating	No deviations acceptable. Please adhere to tender specifications.
7	FPI should transmit real time line loading (phase wise), fault data to ADMS through FPI.	Pls specify	FPI should transmit real time line loading (phase wise), fault data to ADMS through FPI over IEC-60870-104 and MQTT. By using DCU, the fault data should transmit real time line loading(Phase wise), fault data to SCADA over IEC-60870-104 and MQTT protocol.
8		In the Payment Terms, it is mentioned that ICT (Installation, Testing & Commissioning) is included. We request clarification regarding the scope of installation—whether it pertains to: Communicable FPIs with DCU, Communicable FPIs without DCU, or Only Compact type FPIs. Additionally, we observed that there is no separate provision to quote the ICT charges in the price bid format. Kindly confirm how this component should be addressed.	For compact FPI the scope of work is complete SITC and for others supply and supervision will be the under scope of works.

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9	VDC 24 V or Higher	Our complete system operates on 12V DC.	Noted. All the units of FPI (controller & modem) should operate on same DC voltage. As most modems operate on 24V DC, hence the solution must be fit for all equipment.. However, Need to discuss with Engineering Team about the system control philosophy
10	2 Nos. Ethernet Ports/FRTU (Both the port should support IEC 104 other standard protocols for communication with Modem) A galvanically isolated USB port for local engineering through laptop	Our product is standardized and comes with a single Ethernet port, which is capable of transmitting data to SCADA either via modem or through direct hardwiring. We are unable to modify the hardware, as the DCU quantity is very low and, globally, we provide this model with only one Ethernet port. Additionally, we do not see any practical requirement for a second port. We kindly request you to accept the same. Yes, we have a separate serial port available for engineering purposes.	For External FPI Controller : The FPI controller should have 2 Nos. Ethernet Ports (Both the port should support IEC 104 other standard protocols for communication with Modem). A galvanically isolated USB port for local engineering through laptop is required. For Internal inbuilt FPI Controller : The controller should have wireless connectivity (wifi/bluetooth) for local access & configuration. If modem is also inbuilt, there should be tight integration of FPI controller & modem. However, if external modem is provisioned, then FPI controller should have 2 Nos. Ethernet Ports (Both the port should support IEC 104 other standard protocols for communication with Modem).
11	Required	FPI DCU does not required support web access due to hardware limitations. It is designed solely to indicate the fault location and is not a protection device. As it operates on DI/DT principles and does not require frequent setting adjustments, web-based software is not necessary.	FPI controller should support Web access . No deviations acceptable. Please adhere to tender specifications.
12	Approved make- Raychem, Oblum, Elpro.	We also manufacturer for LA against your TS so request you to please consider Our Make (ELEKTROLITES Power) for the same. And already approved by TATA Power	Not Accepted.OEM to discuss with Engineering

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		Orissa, we see the last tenders where our competitor deny to provide the LA to us.	
13	5.1.5 The FPI should capture 3 Phase waveforms and measure zero sequence current to detect current imbalance.	Our device does an capacitive Voltage reading, so we are not able to give zero sequence current. Please consider the same.	Applicable for Compact and Commnicable type FPI ; However during detail engineering It will be decided , Bidder to discuss the exact requirement.
14	5.4.1 The FPIs shall be powered by inductive pickup from the 11kV conductor with a minimum operating current of 5A. During faults, when the system is down, FPIs shall be powered by lithium-Ion battery.	Does this mean that the fpi is not expected to operate at load currents below 5A? Please confirm.	The FPIs shall be powered by inductive pickup from the 11kV conductor with a operating current of 5A or less. During faults, when the system is down, FPIs shall be powered by lithium-Ion battery.
15	5.8.2 The event storage capacity shall be at least 1000 events.	As its integrated to scada more event history is not essentials. Minimum of 100 events are suffeicent to maintain the proper networks. More events will lead the more data consumption. We offered FPI is most advanced technology product i.e Built in RTU, Built in type Modem, built in DCU. There is no additional requirement of these. Very compact in size. We request to consider the same.	In Compact FPI (Inbuilt DTU) Type of FPI ,it is acceptable

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16	14.0 TENDER SAMPLE For communicable FPI- Bidders to provide all required equipment and demo of one communicable FPI unit data communication and integration testing and only successful bidder shall be qualified for further processing. Commissioning of one unit of FPI in case of new vendor to be done.	We have executed the POC in TGSPDCL utility. Team can verify the same installation or allow us to execute the pilot at your networks.	In advance, Product explanation /Demonstration is required.
17	Compact FPI Define	We offered FPI is most advanced technology product i.e Built in RTU, Built in type Modem, built in DCU with multiple charging support, Solar Panel, conductive charging for recharging batteries There is no additional requirement of these. Very compact in size. Is that Compact FPI means modem, DCU not required. Please define more clearly about this requirement. So that we can offer the suitable model with best pricing	In advance, Product explanation /Demonstration is required. Noted. The offered solution should meet the tender specifications/GTPs. The Compact FPI OPERATION PRINCIPLE is mentioned in the page no 7. Compact FPI should transmit real time faults as per the required fault details as per the RFP through IEC-60870-5-104 & MQTT simultaneoulsy send SMS also. No external protocol converter will be accepted. NEEDS to include SMS part details in the TS
18	Communicable FPI	We understand that utility required FPI which can support only sms function no DCU required. But in our case its, Built in RTU, Modem along with multiple charging support, Solar Panel, conductive charging for recharging batteries can we offer the same.	Compact FPI is communicable with SCADA on 104 protocol & MQTT with inbuilt DTU along with FPI to avoid theft of DTU and its components

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19	FPI with DCU	As explained above its most advanced technology product & very operating friendly, Built in RTU, Modem along with multiple charging support, Solar Panel, conductive charging for recharging batteries. No additional DCU, Additonal Solar panel, additonal modem, PT is not required.	In advance, Product explanation /Demonstration is required. Noted. The offered solution should meet the tender specifications/GTPs. The Compact FPI OPERATION PRINCIPLE is mentioned in the page no 7. Compact FPI should transmit real time faults as per the required fault details as per the RFP through IEC-60870-5-104 & MQTT simultaneoulsy send SMS also. No external protocol converter will be accepted. NEEDS to include SMS part details in the TS
20	Qualification requirement	We understand that Technical Pre-Qualification Requirements of OEM will be considered for his authorised bidder. As this technology is having very few manufactirers and OEM are supplying directly or thorough authorised partners. We request to consider the same.	It will be as per NIT.
21	Qualification requirement- Performance certificates	Globally - its very difficult to get the performance certificates as utility will procure the rate contract basis same like Tatapower. They do the installation, erections by them selves. In this case please consider for to submit the purchahse orders, delivery proofs, tax invoices along with self declaration letter from OEM.	Tender clause remains same.
22	Qualification requirement- Performance certificates	We have executed the POC recently in india Hyderabad & we have awarded the order for the same. Presently project is ongoing. We request to	Subject to consideration after successful demonstration ;however Contract to respond for better clarify

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		consider for POC as performance certificate.	
23	Commercial Capability	As we registered under MSME, startup companies we request to consider our OEM financial credentials for bidder. We have awarded the projects of 20cr & currently under running. We request consider our request for submitting the bid.	It will be as per NIT.
24	Delivery Period Delivery period shall be 60 + 15 days (considering the approval of CAT-A / drawing / GTP) from date of receipt of release order for the first lot however for remaining lots the delivery period will be 60 days from RO date.	We request to consider for 90 days as minimum manufacturing period is required. & conducting the routine inspections.	It will be as per NIT.
25	MAF format	We request to include the Manufacturer authorisation letter in order to confirm for gurantee period and after sales service.	MAF is required; however Contract to respond for better clarify
26	Scope of Work	Our manufacturing capabilities are currently limited to the following products: Fault Passage Indicators (FPI) Distribution Control Units (DCU) We do not manufacture or supply Compact FPIs. Kindly clarify	There are 3 BOQ Line Item 01- Communicable FPI without DCU 02-Communicable FPI with DCU 03-Compact FPI ,If still any doubt ,Please discuss with Contract

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27	Ingress Protection of enclosure – IP67 or better	The top section of the line sensor is IP55 to allow the opening for the conductor. The bottom electronics section is IP65. This is an overhead sensor and not expected to be submerged in water at any point while installed on a distribution pole. IP67 indicates it can be submerged in 1m of water for 30 minutes.	Ingress Protection of enclosure – IP67 or better for all the equipments/parts exposed to outside environment. No deviation is acceptable.
28	Suitable diameter of jaw	The line sensor can be installed on Dog, Wolf, Panther and Goat conductors. The Zebra conductor size is too large.	Conductor size may vary so Zebra also to be included with DOG, Panther, Goat, Wolf, Coyote etc.
29	The relay PCB should have conformal coating	The PCB does not have conformal coating. That only provides benefits if the external housing allows water infiltration.	The relay PCB should have conformal coating considering the Odisha Climate is very saline & corrosive in nature. No deviation is acceptable.
30	Current measurement accuracy – 0.5% for 100A to 600A, 0.25A for low current.	The MM3 sensor has an accuracy of 2% or 2A, whichever is larger	During Detail Engineering ,will be decided
31	Light Power – 40 lumens	The MM3 LED is 34 lumens	Light Power should be 40 lumens considering the full broad day light conditions.;However during detail engineering it will be decided.
32	Flash period for transient faults	The MM3 LED flashes RED at the same period for both sustained and transient fault conditions	During Detail Engineering ,will be decided
33	Low Battery Indication	The MM3 does not use batteries and therefore does not have a low battery indication. When the super capacitor is low on energy, a SCADA point will be raised indication the device will power down until sufficient operating current is restored. Our approach of using Super capacitors	Noted

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		versus batteries ensures a zero maintenance device reducing longer term OPEX	
34	Internal Battery of FPI	The MM3 does not use batteries. It uses super capacitors which provide 24 hours of operation after an interruption of line current. Our approach of using Super capacitors versus batteries ensures a zero maintenance device reducing longer term OPEX	Noted
35	FPI Power Up Current – 5A	The MM3 requires 10A initially and can be pre-charged at the office prior to deployment. The line current can drop to 7A during low load periods. Below 7A, the line sensor will use the 24 hours of backup power in the super capacitor until the line current returns to above 7A.	Shall check during demonstration
36	Inbuilt Radio Range – 100 meter	The MM3 use an inbuilt cellular modem and does not require short range radios. Our approach reduces install times and points of failure.	Shalll check during demonstration

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37	SMS Alert	The MM3 sends alarms to SCADA and the optional AMPLE software. SMS messaging is not supported. Most capable modern SCADA systems provide alarm to SMS configuration as a centralized efficient approach for managing alarm and support philosophys.	It is required to utilise SMS facility parallel communcation along with SCADA commucation. The Modem should have SMS sending & receiving features. SCADA (Multi master) reporting simultaneously SMS alert also required.
38	Data Transmission Rate	The MM3 uses a commercial 4G LTE cellular modem and the data transmission rate is determined by the carrier	4G fallback to 2G
39	Multi-Master reporting	The MM3 supports communication to 2 master stations. Our other utility clients use virtual IP addresses to communicate to backup SCADA master stations. Therefore only 1 or 2 master stations are active at any time. This provides for a centralized efficient approach for managing communications configurations and avoids multiple site visits	The offered solution should meet the tender specifications/GTPs. The FPI controller should support 8 SCADA masters with single ASDU over IEC104 simultaneously. No deviation acceptable. Bidder to adhere to the tender specifications.
40	FPI Data downloading at site	The Sentient Energy solution was designed to be fully managed remotely without site visits. The sensor communicates and can be programmed through SCADA commands. Sentient Energy also offers the AMPLE analytics software to be installed on enterprise servers which are accessed from company personnel remotely.	Subject to consideration after successful demonstration

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41	Hard rebooting of FPI through SMS	The solution does not use SMS messaging. Reboots occur automatically in the sensor through internal watchdog timers if an error is detected or after a pre-defined amount of uptime of the sensor. Additionally, SCADA commands can initiate a reboot.	Subject to consideration after successful demonstration
42	The FPI should report to 8 masters with one single CASDU	Each line sensor communicates directly to the SCADA master and it supports 2 concurrent masters. Our other utility clients use virtual IP addresses to communicate to backup/alternate SCADA master stations	The offered solution should meet the tender specifications/GTPs. The FPI controller should support 8 SCADA masters with single ASDU over IEC104 simultaneously. No deviation acceptable. Bidder to adhere to the tender specifications.
43	Once an outage or other abnormality occurs, the waveforms are sent from the two secondary sensors to the gateway-sensor which analyzes the 3-phase waveform and detects & classified the fault.	Each line sensor has a separate 4G LTE cellular modem and SIM card. The sensor data can be sent to our optional enterprise software, called AMPLE, which can merge the 3-phase waveform for analysis. This improves the reliability of the solution as a single failure of the master sensor does not interrupt all 3 phases of the installation.	Subject to consideration after successful demonstration
44	In addition to these the FPI should be able to detect High impedance fault and broken conductor fault.	The Sentient Energy solution does not have a dedicated algorithm for high impedance faults or broken conductor faults. These may be detected by our predictive analytics anomaly detector in parallel with our AMPLE software. We have included information on the advanced analytics that	Subject to consideration after successful demonstration

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		our AMPLE solution delivers.	
45	The FPI should capture 3 Phase waveforms and measure zero sequence current to detect current imbalance.	The optional AMPLE analytics software captures the waveforms from each FPI and calculates the zero sequence current. We have included information on the advanced analytics that our AMPLE solution delivers.	Subject to consideration after successful demonstration
46	The FPIs shall be powered by inductive pickup from the 11kV conductor with a minimum operating current of 5A. During faults, when the system is down, FPIs shall be powered by lithium-ion battery.	The minimum operating current is 7A. When the line current drops below 7A, the FPI uses the 24 hour super capacitor to continue operating until the line current returns to above 7A. The FPI is powered by a super capacitor. Our approach of using Super capacitors versus batteries ensures a zero maintenance device reducing longer term OPEX.	Subject to consideration after successful demonstration
47	The FPI shall be supplied along with suitable Remote Control Unit, having a LCD display, common for all the Overhead Fault Passage Indicator. The supplier shall supply one number of Remote Control Unit free of charge along with every 9 numbers of FPIs.	The Sentient Energy solution was designed to be managed remotely to avoid costly site visits and lost time. No Remote Control Unit is designed or needed for the system. All configuration and testing is performed through SCADA commands or by the AMPLE enterprise software interface.	Subject to consideration after successful demonstration

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48	The FPI shall be equipped with remote Test and Reset features, so that the functionalities including status of battery and flag can be tested without removing the FPI from the line. The Remote Control Unit shall capable of performing the following operations:	No Remote Control Unit is available. The Sentient Energy solution was designed to be managed remotely to avoid costly site visits and lost time. No Remote Control Unit is designed or needed for the system. All configuration and testing is performed through SCADA commands or by the AMPLE enterprise software interface.	Subject to consideration after successful demonstration
49	GSM/GPRS Communication Interface	Each sensor has an inbuilt 4G LTE cellular modem. No external communication module is required.	4G fallback to 2G
50	Ingress Protection of enclosure – IP67 or better	The top section of the line sensor is IP55 to allow the opening for the conductor. The bottom electronics section is IP65. This is an overhead sensor and not expected to be submerged in water at any point while installed on a distribution pole. IP67 indicates it can be submerged in 1m of water for 30 minutes.	Ingress Protection of enclosure – IP67 or better for all the equipments/parts exposed to outside environment. No deviation is acceptable.
51	Suitable diameter of jaw	The line sensor can be installed on Dog, Wolf, Panther and Goat conductors. The Zebra conductor size is too large.	Conductor size may vary so Zebra also to be included with DOG, Panther, Goat, Wolf, Coyote etc.
52	The relay PCB should have conformal coating	The PCB does not have conformal coating. That only provides benefits if the external housing allows water infiltration.	The relay PCB should have conformal coating considering the Odisha Climate is very saline & corrosive in nature. No deviation is acceptable.
53	Current measurement accuracy – 0.5% for 100A to 600A, 0.25A for low current.	The MM3 sensor has an accuracy of 2% or 2A, whichever is larger	Current measurement accuracy should be 0.5% for 100A to 600A and 0.25A for low current.

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54	Light Power – 40 lumens	The MM3 LED is 34 lumens	Light Power should be 40 lumens considering the full broad day light conditions.
55	Flash period for transient faults	The MM3 LED flashes RED at the same period for both sustained and transient fault conditions	As per the RFP; For Flash Period for transient faults - 2 flash every 12 sec and/ or Green flashing LED.
56	Low Battery Indication	The MM3 does not use batteries and therefore does not have a low battery indication. When the super capacitor is low on energy, a SCADA point will be raised indication the device will power down until sufficient operating current is restored. Our approach of using Super capacitors versus batteries ensures a zero maintenance device reducing longer term OPEX.	Noted
57	Internal Battery of FPI	The MM3 does not use batteries. It uses super capacitors which provide 24 hours of operation after an interruption of line current. Our approach of using Super capacitors versus batteries ensures a zero maintenance device reducing longer term OPEX.	Noted
58	FPI Power Up Current – 5A	The MM3 requires 10A initially and can be pre-charged at the office prior to deployment. The line current can drop to 7A during low load periods. Below 7A, the line sensor will use the 24 hours of backup power in the super capacitor until the line current returns to above 7A.	As per the RFP.

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59	Inbuilt Radio Range – 100 meter	The MM3 use an inbuilt cellular modem and does not require short range radios. Our approach reduces install times and points of failure.	The Modem should have SMS sending & receiving features. No deviation acceptable.
60	SMS Alert	The MM3 sends alarms to SCADA and the optional AMPLE software. SMS messaging is not supported. Most capable modern SCADA systems provide alarm to SMS configuration as a centralized efficient approach for managing alarm and support philosophys.	It is required to communcate other deveices to single master, means 1 master and 8 slaves. Inbuilt Radio Range minimum 100 meter for local communcation with 3x3 =9 of FPI intercommunication with one is master & others are slave. Further this will ensure for local configuration of FPI if other wireless communication are not available.
61	Data Transmission Rate	The MM3 uses a commercial 4G LTE cellular modem and the data transmission rate is determined by the carrier	Noted
62	Multi-Master reporting	The MM3 supports communication to 2 master stations. Our other utility clients use virtual IP addresses to communicate to backup SCADA master stations. Therefore only 1 or 2 master stations are active at any time. This provides for a centralized efficient approach for managing communications configurations and avoids multiple site visits.	The offered solution should meet the tender specifications/GTPs. The FPI controller should support 8 SCADA masters with single ASDU over IEC104 simultaneously. No deviation acceptable. Bidder to adhere to the tender specifications.

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63	FPI Data downloading at site	The Sentient Energy solution was designed to be fully managed remotely without site visits. The sensor communicates and can be programmed through SCADA commands. Sentient Energy also offers the AMPLE analytics software to be installed on enterprise servers which are accessed from company personnel remotely.	FPI Data downloading at site through local engineering laptop & at remote over 4G network . No software installation at Vendor location or sharing of any FPI communication data to third party is not envisioned here. However, Vendor can demonstrate their products/solutions. In the Demo, this feature should be demonstrate. Needs clarification.
64	Hard rebooting of FPI through SMS	The solution does not use SMS messaging. Reboots occur automatically in the sensor through internal watchdog timers if an error is detected or after a pre-defined amount of uptime of the sensor. Additionally, SCADA commands can initiate a reboot.	Noted. However, Hard rebooting of FPI through SMS by using Modems for external applications only. As per the RFP, Our main purpose to hard reboot is when ever the FPI is not communicating with SCADA then we will send a message to hard reboot. In the Demo, this feature should be demonstrate. Needs clarification.
65	The FPI should report to 8 masters with one single CASDU	Each line sensor communicates directly to the SCADA master and it supports 2 concurrent masters. Our other utility clients use virtual IP addresses to communicate to backup/alternate SCADA master stations.	The offered solution should meet the tender specifications/GTPs. The FPI controller should support 8 SCADA masters with single ASDU over IEC104 simultaneously.
66	Once an outage or other abnormality occurs, the waveforms are sent from the two secondary sensors to the gateway- sensor which analyzes the 3-phase waveform and detects & classified the fault.	Each line sensor has a separate 4G LTE cellular modem and SIM card. The sensor data can be sent to our optional enterprise software, called AMPLE, which can merge the 3-phase waveform for analysis. This improves the reliability of the solution as a single failure of the master sensor does not	No deviation acceptable. Bidder to adhere to the tender specifications.

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		interrupt all 3 phases of the installation.	
67	In addition to these the FPI should be able to detect High impedance fault and broken conductor fault.	The Sentient Energy solution does not have a dedicated algorithm for high impedance faults or broken conductor faults. These may be detected by our predictive analytics anomaly detector in parallel with our AMPLE software. We have included information on the advanced analytics that our AMPLE solution delivers.	No software installation at Vendor location or sharing of any FPI communication data to third party is not envionsioned here. As per the RFP. In the Demo, this feature should be demonstrate to understand the complete solution..
68	The FPI should capture 3 Phase waveforms and measure zero sequence current to detect current imbalance.	The optional AMPLE analytics software captures the waveforms from each FPI and calculates the zero sequence current. We have included information on the advanced analytics that our AMPLE solution delivers.	No software installation at Vendor location or sharing of any FPI communication data to third party is not envionsioned here.
69	The FPIs shall be powered by inductive pickup from the 11kV conductor with a minimum operating current of 5A. During faults, when the system is down, FPIs shall be powered by lithium-Ion battery.	The minimum operating current is 7A. When the line current drops below 7A, the FPI uses the 24 hour super capacitor to continue operating until the line current returns to above 7A. The FPI is powered by a super capacitor. Our approach of using Super capacitors versus batteries ensures a zero maintenance device	The FPIs shall be powered by inductive pickup from the 11kV conductor with a operating current of 5A or less. During faults, when the system is down, FPIs shall be powered by lithium-Ion battery/super capacitor.

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		reducing longer term OPEX.	
70	The FPI shall be supplied along with suitable Remote Control Unit, having a LCD display, common for all the Overhead Fault Passage Indicator. The supplier shall supply one number of Remote Control Unit free of charge along with every 9 numbers of FPIs.	The Sentient Energy solution was designed to be managed remotely to avoid costly site visits and lost time. No Remote Control Unit is designed or needed for the system. All configuration and testing is performed through SCADA commands or by the AMPLE enterprise software interface.	No software installation at Vendor location or sharing of any FPI communication data to third party is not envionsioned here. If there is no communication and needs to modify the configuration then in that case how to modify the configuration. some alternate solution shoulbe be required. As per RFP.
71	The FPI shall be equipped with remote Test and Reset features, so that the functionalities including status of battery and flag can be tested without removing the FPI from the line. The Remote Control Unit shall capable of performing the following operati	No Remote Control Unit is available. The Sentient Energy solution was designed to be managed remotely to avoid costly site visits and lost time. No Remote Control Unit is designed or needed for the system. All configuration and testing is performed thro	If RCU/DCU is inbuilt with FPI, then local access over wireless connection must be provisioned. Bidder to adhere to specification only.
72	GSM/GPRS Communication Interface	Each sensor has an inbuilt 4G LTE cellular modem. No external communication module is required.	Noted
73	One DCU (if required)/FPI should report at- least 8 master with single CASDU	Our DCU supports Multi Master - 8 master. FPI controller along with Modem complies the 8 master requirement. Please accept.	As per TS # One DCU (if required)/FPI should report at- least 8 master with single CASDU

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74	Battery (Along with charger) backup of 4 hrs. Should be provided for automation unit. Aux PT should be Ph-Ph. Aux Supply :VDC 24 or higher	Battery (Along with charger) backup of 4 hrs. Should be provided for automation unit. Aux PT should be Ph-Ph. Aux Supply :VDC 12- Our solution works on 12VDC and is sufficient for the backup of 4hrs	Noted. All the units of FPI (controller & modem) should operate on same DC voltage. As most modems operate on 24V DC, hence the solution must be fit for all equipment.. However, Need to discuss with Engineering Team about the system control philosophy
75	All ports shall be galvanically isolated 2 Nos. Ethernet Ports / FRTU (Both the ports should support IEC 104 other standard protocols for Communication with MODEM)	DCU has 1 No. of Ethernet Port and is sufficient for the communication with the Modem	As per TS
76	I/O Handling capacity: Min 500 physical Tags	Standard specification for the DCU/FPI controller is for 2-3 Physical tags only. 500 physical tags required additional relay or IO modules/switch relay which is not in line with DCU specification. Please clarify.	I/O Handling capacity DTU: Min 500 Soft Tags
77	Development of Interlock logic	Please clarify	in addition to the SCADA functionality, the controller should support IEC 61131-3.
78	Support of mathematical function - Arithmetic, Logical, Trigonometric functions, Differential and Integration functions, Timer, Counter etc.	Please clarify as the requirement is not related to FPI.FPI working is completely different from the requirement.	The controller should support IEC 61131-3.
79	Status LEDs on all module – for fault indication and Inputs / Outputs	FPI itself is an indicating device which indicate the Fault.	The LEDs on the controller should be provided for indications/inputs/outputs as per the tender documents.

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80	Number of Multi Master Reporting possible with same ASDU	Our DCU supports Multi Master - 8 master. FPI controller along with Modem complies the 8 master requirement. Please accept.	As per TS # One DCU (if required)/FPI should report at- least 8 master with single CASDU
81	Web based monitoring	Monitoring of device can be done through SCADA. Please accept.	Mandatory requirement as per TS
82	Redundant 18-72 VDC (24V DC) Supply with MCBs with add-on NO contact. The Controller shall have adequate protection against reversed polarity, over current and under voltage conditions, to prevent the internal logic from being damaged and becoming unstable causing mal-operation	Our device supports 12 V and it is enough to comply the requirement. Please accept.	Noted. All the units of FPI (controller & modem) should operate on same DC voltage. As most modems operate on 24V DC, hence the solution must be fit for all equipment.. However, Need to discuss with Engineering Team about the system control philosophy
83	Controller health monitoring contacts (CPU, Communication, I/O modules, Power Supply)	Physically LED available for Controller health, Soft DI available.	Accepted
84	Hard rebooting of FPI through SMS (MODEM should have single DO) shall be included in specification as a standard feature.	Rebooting of FPI can be done through SCADA remotely. Please accept.	As per TS
85	Minimum No of TCP/IP Ethernet Port 3 (Among them one must be engineering port) 1 No. of maintenance port, 2 Nos of data port	No of TCP/IP Ethernet Port : 1 Maintenance Port & 1 Data Port	As per TS

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86	DCU and Modem remote configuration should be compatible	Remote configuration through SCADA only	The remote configuration of DCU is only possible through the MODEM, hence DCU & MODEM should be compatible. The offered solutions must have proven record. Noted, This facility should support Web applications.
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