Pre-Bid Query Response Sheet

Upon the querries asked by different prospective bidders against the tender for Supply of Different Types of SMART ENERGY METERS and Supply, Installation, Testing, Commissioning, Integration, Communication, Operation & Maintenance of HEAD END SYSTEM Under Smart Metering Solution

Tender Enquiry No- TPCODL/ P&S/ 167/ 20-21				
Sr. No.	**Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No**	**Description as per Bid Document**	**Query / Clarification / Deviation submitted by prospective bidders**	**TPCODL Response**
1	**2**	**3**	**4**	**5**
1	TN 167/3 of 446	OPEN TENDER NOTIFICATION FOR SUPPLY OF DIFFERENT TYPES OF SMART ENERGY METERS AND SUPPLY, INSTALLATION, TESTING, COMMISSIONING, INTEGRATION, COMMUNICATION, OPERATION & MAINTENANCE OF HEAD END SYSTEM UNDER SMART METERING SOLUTION	Request Tata Power to include **Installation, testing, commmissioning and Integration of Smart Meters in Bidder's scope**. Such Turnkey contract modality will be benifitted to Tata Power in terms of techno-commerical aspects, hassle free execution and operation and smooth integration with Tata Power's legacy systems. This will also ensure responsibility for timely execution and adherence to SLA.	As per tender
2	TN 167/1.1 Scope of work/ 5 of 446	Open Tenders are invited through e-tender bidding process from interested eligible bidders for entering into a RATE CONTRACT for Part-A items valid for a period of TWO (2) Years	Tata Power is requested to place **FIRM oder** for Part A itmes (Smart Meters) so that Bidder can offer better prices considering volume of the project. However prices can be kept firm for addition of Smart meters in future to the extent of mutually agreeable percentage till the contract execution period.	As per tender
3	TN 167/1.1 Scope of work/ 5 of 446	Facility Management services for 7 Years	Request Tata Power to change FMS period to **60 Months** which is widely followed by Utlites in India. Also FMS has to be complete system including all components in the scope.	As per tender
4	TN-167/ 1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To It Page 7 of 446	In case the Bidder cannot meet all the Eligibility Criteria by himself, the Bidder can form a Consortium with another Smart Meter manufacturer, System Integrator and / or OEM of the Head End System (HES).	**Proposed Amendment:** In case the Bidder cannot meet all the Eligibility Criteria by himself, the Bidder can form a Consortium with another Smart Meter manufacturer, System Integrator and / or OEM of the Head End System (HES) or **HES provider.** **Request to allow that HES OEM global experience shall be considered.**	As per tender

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5	TN_167_FINAL / cl. no. 1.7 /sub cl. 1 of General Requirement/ Pg no.7 of 446	The bidder should have presence in India for **last 10 Years** and must have registered office in India.	Iskraemeco having a legacy of more than 75 years in metering business globally. We started our India operation in 2019 with global centre of excellence and integrated manufacturing hub. Company has invested in India and supporting "Make in India" initiatives. **Such requirement of last 10 years of operation is restrictive and will discourage global manufacturer to come and do business in India.** **Kindly delete the "last 10 years" from the clause**	As per tender
6	TN_167_FINAL / cl. no. 1.7 /sub cl. 2 of General Requirement/ Pg no.7 of 446	BIS of all the offered meters	We have already received the BIS for 5-60A single phase smart meter as per IS 16444 (Part-1). Our 3phase WCM and LTCT meter is in process of type testing and likely to get BIS in due course of time. **We would like to request you to accept the BIS of certificate before commencement of supply.** Firm order can be placed only on receipt of BIS certificate from us. Kindly amend the clause suitably.	As per tender
7	TN_167_FINAL / cl. no. 1.7 /sub cl. 2 of General Requirement/ Pg no.7 of 446	**Requirement** The bidder should be an OEM of SMART Energy Meter having their own manufacturing unit established within INDIA. TPCODL reserve the right to confirm the manufacturing facility by visiting bidder's plant / works.	We understand that TPCODL intends to evaluate the capability of the meter manufactures as well as the HES, which are the two key components in this tender. We strongly believe that a SI will have the overall idea to execute a critical project of this scale and nature, which requires deployment considering not only smart meters but also HES and communication. **We would request you to kindly allow a System Integrator to be also the bidder who can work with smart meter manufacturer as well as HES provider to undertake this project**.	As per tender

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8	TN 167/1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To It/ Page 8 of 446	1. General Requirements: 3.The bidder must integrate their HES with major communication network service providers like Reliance Jio /Airtel/ Vodafone Idea on /LTE 4G	**Request Tata Power to Amend the clause as below:** 3.The bidder must integrate their **offered** HES with major communication network service providers like Reliance Jio /Airtel/ Vodafone Idea on /LTE 4G. **Since Bidder will be an SI they may offer HES from their partner meeting the QR requirement.**	As per tender
9	TN 167/1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To It/8 of 446	1. General Requirements: 4. The bidder must integrate their HES with TPCODL MDM system.	**Request Tata Power to Amend the clause as below:** 4. The bidder must integrate their **offered** HES with TPCODL MDM system. **Since Bidder will be an SI they may offer HES from their partner meeting the QR requirement.**	As per tender
10	NIT Document Clause No. 1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To it Page No. 6 of 35 // (8 of 446)	2. Technical Requirements: Sr. No. (1) The bidder should have supplied at least 10,00,000 nos. of Static energy meters **and 50,000 SMART Energy Meters** during the last 5 Financial Years.	**Our submission: Sir, we request you to kindly amend the clasue as "The bidder should have supplied at least 10,00,000 nos. of Static energy meters and 50,000 SMART Energy Meters / AMR Enabled Meters during the last 5 Financial Years.**	As per Corrigendum-I
			The bidder should have supplied at least 10,00,000 nos. of Static energy meters and 1,25,000 (50% of tender qty) SMART Cellular Energy Meters during the last 5 Financial Years in India.	As per Corrigendum-I
		2. Technical Requirements:	**Request Tata Power to Amend the clause as below:** 2. The bidder or their **offered HES partner** should have experience of HES implementation for Advance Metering Infrastructure (AMI) on Cellular technology with at least Three (3) utilities in India during last Three (5) years	As per tender
			Our submission: Sir, we request you to allow the meter manufacturer to participate only for the Part A i.e. for the Rate Contract of Smart Meters. Accordingly Part B is meant for HES & FMS, which shall have separate qualification requirement for the HES Provider.	As per tender

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11	TN 167/1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To It/8 of 446	2. The bidder should have experience of HES implementation for Advance Metering Infrastructure (AMI) on Cellular technology with at least Three (3) utilities in India during last Three (3) years	The bidder should have experience of HES implementation for Advance Metering Infrastructure (AMI) on Cellular technology with at least Three (3) utilities in India during last Seven (7) years.	As per tender
			We are having more than 15 years of experience of deploying AMI on cellular globally. As we have started our India operation last ear only, requesitng you to delete the requirement of "in India" from the referred clause. Kindly amend suitably.	As per tender
			Proposed Amendment: The bidder should have experience of HES implementation for Advance Metering Infrastructure (AMI) on Cellular technology with at least Three (3) utilities in India/global during last Three (3) years.	As per tender
12	TN 167/1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To It/8 of 446	2. Technical Requirements: The bidder should have experience of handling data of more than 3 lakhs meters on cellular technology.	Request Tata Power to modify the clause as below: a) The bidder should have experience of handling data of more than 3 lakhs meters on cellular technology. **OR** b) The bidder should have experience of handling data of more than 1 lakh meters on RF technology.	As per Corrigendum-I
			Our submission: Sir, we request you to allow the meter manufacturer to participate only for the Part A i.e. for the Rate Contract of Smart Meters. Accordingly Part B is meant for HES & FMS, which shall have separate qualification requirement for the HES Provider.	As per Corrigendum-I
			The bidder should have PO of 2.5 lakhs meters on cellular technology and should have experience of minimum 50% qty data handling	As per Corrigendum-I

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13	TN 167/1.7 Bidder Qualification Criteria / Eligibility Criteria And Notes To It/8 of 446	**2. Technical Requirements:** Bidder should have experience of integration of their HES with Meter Data Management System (MDMS), billing applications. **Indicative Documents to be submitted with Bid** Letter from utilities / customers be provided in support of this claim.	**Request Tata Power to Amend the clause as below:** Bidder should have experience of integration of their **offered** HES with Meter Data Management System (MDMS), billing applications. **Since Bidder will be an SI they may offer HES from their partner meeting the QR requirement.**	As per tender
			Bidder should have experience of integration of their HES with Meter Data Management System (MDMS)/ SAP, billing applications.	As per tender
			As per our understanding, the completion certificates from utilities/customers will suffice. Please confirm.	Letter/ WCC from Utilitities/ customers will suffice
14	**2. Technical Requirements** Page 8	Bidder shall submit satisfactory performance certificates for the past 1-year experience from 3 reputed companies. The work against these issued certificates should have been completed in last 7 years from the original date of bid submission. In case, the bidder has a previous association with Tata Power or its associated group of companies for similar products and services, **the performance feedback for that bidder by Tata Power or its associated group of companies User Group shall only be considered irrespective of performance certificates issued by any third organization**.	Bidder shall submit satisfactory performance certificates from 3 reputed Companies/ Utilities.	As per tender
			We understand that bidder has to provide performance feedback from Tata Power group in case of any previous project experience. However if bidder has an ongoing project under implementation performance certificate will not be valid. Request you to please make necessary modifications suitable for under implementation projects.	Ongoing project's Performance certificate/ feedback of Tata Power or its associated group of companies will also be considered.

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15	TN_167_FINAL / cl. no. 1.7 /sub cl. 7 of Technical Requirement/ pg no.8	The bidders must have CMMI Level 3 certified.	We are having ISO 27001 which is suitable for our nature of work and data security. Kindly amend the clause as " The bidders must have CMMI Level 3 / ISO 27001 certificate".	As per tender
16	TN_167_FINAL / cl. no. 1.7 /sub cl. 1 of Financial Requirement/ pg no.9	The Bidder and Consortium partner/s, if any, shall have each executed AMI Projects with minimum One (1) project costing not less than the amount equal to **50 Crores (Rupees Fifty Crores)** during past five (05) years as on original date of bid submission. Copies of **POs / LOI**s and Work Completion Certificate issued by the client.	All our contract is under NDA and we can't share the value or PO / LOI copy. However, we will be happy to share the performance letter along with contact details of customer in case you want to verify anything more. Kindly amend the clause accordingly. We assume that this clause can be met by any of the consortium members. Please confirm if our understanding is correct. Our submission: Sir, as you are aware in India this AMI is recent concept and very few AMI Project finalised in India out of which most of them are still under execution. So, we request you to kindly also accept AMI Projects **under implementaion and amend the clause as:** **"The Bidder and Consortium partner/s, if any, Copies of POs / LOIs and Work Completion shall have each executed / under execution AMI Projects with minimum One (1) project costing not less than the amount equal to 50 Crores (Rupees Fifty Crores) during past five (05) years as on original date of bid submission".** **Dear Sir, we are executing PSPCL AMI Project worth Rs. 75.64 Crores. P O Copy enclosed for your kind reference.** The Bidder and Consortium partner/s, if any, shall have each executed / under execution of AMI Projects with minimum One (1) project costing not less than the amount equal to 100 Crores (Rupees Hundred Crores) and one any project execution experience of minimum 25 Cr. (Rupees Twenty Five Crores) during past five (05) years as on original date of bid submission.	The Bidder shall have executed AMI Projects with minimum One (1) project having PO value of INR 30 Crore (Rupees Thirty Crore) and above during past five (05) years as on original date of bid submission. Ongoing projects meeting the PO value criteria shall also be considered. OR The Bidder shall have executed AMI projects of cummulative value of 50 Crore (Rs. Fifty Crore) during past five (05) years as on original date of bid submission. Copies of POs / LOIs and Work Completion Certificate issued by the client. For ongoing projects, certification of satisfactory progress issued by the client.

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17		Copies of POs / LOIs and Work Completion Certificate issued by the client.	**Our submission: Sir, in line with above request kindly limit to Purchase Order / LOI copies.**	As per tender
18	TN_167_FINAL / cl. no. 1.7 /sub cl. 2,3 & 4 of Financial Requirement/ pg no.9		We understand that we can use our parent / sister company's financial credential for this bid. Please confirm	Parent company's financial credential can be considered provided the Parent company holds a majority stake in the Bidder and the Parent Company shall provide an additional BG for 5% of the Contract Value. The Parent company shall give an undertaking to the effect and the Bidder shall submit such undertaking along with the Bid.
19	TN_167_FINAL / cl. no. 1.7 /note to to Bidder's Eligibility Criteria / pg no.10	ii. All partners of the consortium shall be jointly and severally liable for execution of the contract in accordance with the Contract terms.	This clause add unnecessary risk element to the overall bid value. Kindly amend this clause as *"Each party shall be severally responsible for their scope of work and overall liability of each party shall be limited to their contract Value".*	As per tender
20	TN 167/ 2.0 Evaluation Criteria/ 10 of 446	TPCODL reserves the right to split the order line item wise and / or quantity wise, among more than one Bidder	Request Tata Power to delete this requirement because in case of splitting the order, Bidders may not quote the best rates which they would have otherwise quoted considering the whole quantity. **Also as an SI it is not possible to quote in this modality.**	As per tender

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21	TN 167/4.0 Bid Opening & Evaluation process/15 of 446	4.7 Reverse Auctions and Price Matching Option: TPCODL reserves the right to conduct the reverse auction AND / OR Manual Negotiations	Please appreciate the fact that the said tender involves lot of technological deliverables and long term commitments which can be fulfilled by the serious bidders who has experience in similar nature of work. Hence it is expected that the tender shall be awarded to the bidder who is Techno-commercially competent. Conducting Reverse Auction might risk the interest of serious bidder. Therefore we request Tata Power to accept our request of removal of Reverse Auction and conduct manual negotiation post closure of the Techno-commercial discussions.	As per tender
22	TN 167/4.0 Bid Opening & Evaluation process/15 of 446	4.7 Reverse Auctions and Price Matching Option: For case where more than one bidders have to be awarded (including Rate Contract / Outline Agreement) Price Matching Option will be exercised…..	Request Tata Power to delete this requirement because in case of splitting the order, Bidders may not quote the best rates which they would have otherwise quoted considering the whole quantity. **Also as an SI it is not possible to quote in this modality.**	As per tender
23	TN 167/5.0 Award Decision/16 of 446	5.1 Rate Contract / Outline Agreement	Tata Power is requested to place FIRM order so that Bidder can pass on better prices considering volume of the project.	As per tender
24	TN 167/7.0 Post Award Contract Administration/16 of 446	a) For supply of energy meters - Rate Contract shall be issued on successful bidder with a validity period of TWO consecutive Years		As per tender
25	TN_167_FINAL/7.3 Delivery Requirement/Page 17 of 446	Note: 2) Out of the above total quantity 20% of the meters shall be of other OEM.	We request TPCODL to remove this requirement. Please note that bidder may not get best support from the competitors to fulfill this requirement. TPCODL can directly purchase the meters from the other OEM. However, in such case, quantity of meters to be supplied in this tender shall be finalised accordingly.	As per tender

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			Please clarify if 2 meter makes are needed to be proposed as part of the bid. If so, please clarify if the 2nd manufacturer can participate as a sub-contractor.	Sub- contractors are allowed however subject to approval of TPCODL.
26	TN 167/7.0 Post Award Contract Administration/17 of 446	**Delivery period shall be** a) For supply of energy meters - 60 days from date of receipt of release order / CAT-A issuance, whichever is later. b) For providing Solution for HES - Completion Schedule / Delivery period shall be as per timelines defined in Technical Specifications.	Delivery period to be mutually agreed during course of execution considering entire AMI project timelines/milestones.	As per tender, however detail schedule can be discussed during the execution.
27	TN 167/7.0 Post Award Contract Administration/17 of 446	**7.3 Delivery Requirement :** For Supply of Energy Meters and HES (Receipt of 1,000 endpoints data to HES - 3 months Receipt of 1000 meters data in MDMS - 4 months)	Delivery period to be mutually agreed during course of execution considering entire AMI project timelines. Also considering quantum of work we request Tata Power to extend the completion time of 2nd year work by 6 additional months. Therby the total execution period will change to **30 Months.**	As per tender, however detail schedule can be discussed during the execution.
28	Against Providing HES Solution Page 16 of 35	stabilization of system. (Stabilization means all items in scope of the tender for HES as required to be delivered.)- 12 MONTHS	As per our understanding, stabilization of the system is done after the system is rolled out for entire system. Whereas as per the RFP, meter deployment will be done in 2 years and hence it means the HES deployment will be done in phase B i.e. year 2 to be able to provide stabilization to the entire system.	As per tender
29	TN 167/7.0 Post Award Contract Administration/18 of 446	**7.5 Payment Terms**	Request Tata Power to amend the payment terms (as applicable) inline with the Tata Power AMI, Mumbai project being executed since that project is in modality of SI, the payment terms are linked with various Milestones defined in the project.	As per tender

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30	Against Providing HES Solution Page 17 of 35	Against Providing HES Solution Payment shall be made within 45 days of bill submission duly certified by user department as per below details: (B) Service (1) 25% of yearly value shall be paid on quarterly basis in arrears as per SLA compliance	Please clarify if 25% of yearly value of the entire services scope be paid quarterly and rest 75% at the end if the year. Please confirm	Payment will be done quarterly basis as per tender.
31	TN 167/ANNEXURE I Schedule for Items/21 of 446	The bids will be evaluated commercially on the overall lowest cost in line item basis	**Request Tata Power to amend the clause as below:** The bids will be evaluated commercially on the overall lowest cost as mentioned in the **"Total All Inclusive Cost of Ownership (Part-A +B)"** **As an SI it is not possible to quote in this modality.**	To be amended The bids will be evaluated on Total All Inclusive Cost of Ownership basis. The bidder should quote cautiosly and comepetetively for all line items. TPCODL reserves the right to withdraw any line item all together or change the quantity of any line item without any changes in unit rate of that item .
32	TN 167/ANNEXURE I Schedule for Items/21 of 446	The quantity may vary as per actual requirement.	Request Tata Power to cap the quantity variation to**"-5% to +20%"** of the tender quantity.	As per tender
33	TN 167/ANNEXURE I Schedule for Items/21 of 446	FMS charges shall not be less than 20% of the contract value.	**Request Tata Power to amend the clause as below:** FMS charges shall not be less than 20% of the **Supply & Services value.** **Note: FMS shall be for the full scope and the ratio to be considered including Cloud, FMS of Smart meters, HES and recurring SIM charges during FMS period.**	As per Corrigendum-I Please note that FMS is only in the HES.
34	TN_167_FINAL/ ANNEXURE I Schedule for Items/ Page No.22	Part-B/ Supply … system integration with MDMS…	The HES-MDM integration can be delivered using REST Web Services (APIs). Utility to ensure full support and efforts for integration at MDM end in case MDM package is awarded to a different bidder.	TPCODL shall ensure necessery support MDMS provider.

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35	TN 167/ANNEXURE IV Schedule of Commercial Specifications/25 of 446	Excise duty, Sales Tax, Octroi etc.	Request Tata Power to amend this form considering GST era.	1 b,1c,1d can be read as "inclusive of all applicable duties, taxes and cess".
36	TN_167_FINAL/Annexure VI/Page 27 of 446	The original price bids of the bidders shall be reduced on pro-rata basis against each line item based on the final all inclusive prices offered during conclusion of the auction event for arriving at Contract amount	TPCODL to note that reduction in price/ discounting on pro-rata basis is not feasible. However Bidder confirm that after reverse auction none of the prices will be revised upward.	the conditions for RA shall be finalyzed by TPCODL prior to RA and shall be communicated to all eligible bidders.
37	TN 167/TECHNICAL SPECIFICATION/45 of 446	4.33 Communication module of meter for AMI: …….In case of 4G / NB-IoT based communication, a provision of local read via Bluetooth communication (Bluetooth module housed & enabled in NIC), has to be provided with HHU on the format which must be pushed to HES.	As the communication/data transfer would happen through 4G/2G network, Bluetooth does not give any additional benefit.	Tender Specification to be complied
38	TN_167_FINAL/ 4.2.1 NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION/ Page No.47	4.2.2.10 The bidder should have back to back Service Level Agreements (SLA) with NIC (RF) provider, communication network provider and component suppliers, meeting this specification	Can bidder propose communication over RF+cellular / only RF / only cellular? Utility to clarify.	As per Corrigendum-I
39	TN_167_FINAL/ 4.2.1 NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION/ Page No.47	4.2.2.10 The bidder should have back to back Service Level Agreements (SLA) with NIC (RF) provider, communication network provider and component suppliers, meeting this specification	Utility to note that the service provider provides cellular network on shared infrastrcuture and therefore donot commit to any SLA. Unavailability of network leading to unavailability of data shall not be considered for SLA calculation.	Tender Specification to be complied

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40	TN 167/TECHNICAL SPECIFICATION/48 of 446	The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	Tata Power is requested to clarify if any other software integration is required apart from HES-MDMS integration.	Tender Specification to be complied
41	TN 167/TECHNICAL SPECIFICATION/ 71 of 446	Special Test: The bidder shall ensure that API (Application protocol interface) is compatible with TPCODL'S CFW.	Tata Power is requested to clarify if any other software integration is required apart from HES-MDMS integration.	Tender Specification to be complied
42	TN 167/TECHNICAL SPECIFICATION/73 of 446	Bidder to be provide free of cost 02 nos. of jig for retrieving data from memory of meter with every new design of meter in which previous jig supplied cannot be used. Jig should be such that NVM can be push fit on this jig and data can be retrieve from this NVM.	NVMs are non removable in the field. Please clarify if the requirement is redundant.	For use in LAB condition
43	TN_167_FINAL/4.2 NIC MODULE DETAILS & INTEGRATION/Page 96 of 446	With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition	We understand that NIC card provided should support 4G technology with Fall back on 2G.	Tender Specification to be complied
44	TN_167_FINAL/ 2 Scope of Work (HES)/ Page No.228	HES shall integrate with existing TPCODL's IT OT systems like MDMS, SCADA, SAP, iNMS and as the use cases specify	Utility to note that HES will be integrated only with MDMS using REST Web Services (APIs). Integration with any other 3rd party system will be through MDMS.	Tender Specification to be complied

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45	TN_167_FINAL/ 3 Functional Requirements/ Page No.228	HES should be interoperable with different 4G/LTE network providers (bidder to submit back-to back agreement with TSP's minimum 4 nos.)	There are limited no. of TSPs in indian market who provide 4G with fallback on 2G. We will provide complaince/declaration on HES interoperability with different 4G/LTE network providers.	Tender Specification to be complied
46	TN_167_FINAL/ 3 HES Modules:/ Page No.231	vi). Outage Management System module (OMS): The HES system shall have outage management module for easy identification of the end points without power, instantly, for quick restoration using the last gasp feature of the communication devices. The alarm will be logged by the head end, displayed on the GUI, and optionally shall send SMS to the appropriate owners/users.	OMS is generally not part of HES and should be excluded from HES requirement.	Tender Specification to be complied
47	TN_167_FINAL/ 3 HES Modules:/ Page No.231	vii). Power Quality Monitor (PQM): Power quality related information such as voltage, frequency and harmonics can be visualized device wise/ area wise with the help of this module.	PQM is generally not part of HES and should be excluded from HES requirement.	Tender Specification to be complied
48	TN_167_FINAL/ 4 4G Connectivity (with fall back on 2G) & Lease Line SOW for Smart Metering/ Page No.232	14. SITC of Complete Hardware, software, Accessories etc. required for termination of Leased line connectivity is under SCOPE of Bidder. 15. Laying of fibre if required is also in scope Bidder.	Utility to provide complete address along with lattitude and longitude of the location for feasibility study of leased line connectivity atutility's datacentre.	To be discussed during Blueprint stage
49	TN_167_FINAL/ 4 4G Connectivity (with fall back on 2G) & Lease Line SOW for Smart Metering SIM Card Management :/ Page No.233	4G network should have fall back on 2G network.	We request TPCODL to consider 4G network without Fallback option.	Tender Specification to be complied
50	TN_167_FINAL/ 5 Integration:/ Page No.237	5.1 MDM Integration:	HES will be integrated with MDMS using REST Web Services (APIs). Integration with any other 3rd party system will be through MDMS. Utility to confirm.	Tender Specification to be complied
51	TN_167_FINAL/6 General IT Infra & Cloud Service provider guidelines/Page 239 of 446	RPO and RTO of the DR system should not be more than 30 minutes for any system.	It is not practical to maintain RPO & RTO of 30 minutes. Since data is already stored in meters, we recomment to consider RPO of 2 Hours & RTO of 12 Hours	Tender Specification to be complied

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52	TN_167_FINAL/6 General IT Infra & Cloud Service provider guidelines/Page 240 of 446	CSP to adhere TPCODL back up and restore policy	Please share TPCOLD's backup & restore policy.	To be discussed during Blueprint stage
53	TN_167_FINAL/ 8 Mandatory requirements before Rollout/ Page No.241	3. As the proposed system will be integrated with different IT-OT system of TPCODL (SCADA, Solar, SAP, OMS, and GIS etc.); to ensure interoperability with these systems, any upgrade required in the hardware/software (including 3rd party items) of proposed solution shall be the responsibility of bidder during the entire warranty and post warranty FMS period.	Utility to note that HES will be integrated only with MDMS using REST Web Services (APIs). Integration with any other 3rd party system will be through MDMS.	Noted
54	TN_167_FINAL/ 8 Mandatory requirements before Rollout/ Page No.241	3. As the proposed system will be integrated with different IT-OT system of TPCODL (SCADA, Solar, SAP, OMS, and GIS etc.); to ensure interoperability with these systems, any upgrade required in the hardware/software (including 3rd party items) of proposed solution shall be the responsibility of bidder during the entire warranty and post warranty FMS period.	Upgrade in 3rd party hardware/ software and integration efforts required at 3rd party application end shall not be scope of bidder. Request Utility to remove this clause.	Bidder to ensure interoperability of any upgrade in Hardware and Software without any cost during warranty and post warranty FMS period
55	TN_167_FINAL/ 11 Service Level Agreement:/ Page No.247	Bidder to share responsibility matrix along with bid document.	Requirement of responsibility matrix not clear. Please elaborate.	In case bidder is consortium the responsibility matrix shall be shared during submission of bid
56	TN_167_FINAL/13 Technical Scoring Criteria:/Page 250 of 446	13 Technical Scoring Criteria:	We understand that this criteria is not required to be followed for evaluation of this tender. Please confirm.	Tender Specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
1	2	3	4	5
57	TN_167_FINAL/11.0 Guarantee/Page 218 of 446	Bidder shall further be responsible for 'free replacement at site' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the purchaser	Latent Defect is not applicable for the items to be supplied under this project. Since Guarantee clause is already included in the tender, this clause may be deleted.	Any Deviations on GCC - Composite shall be clearly mentioned in the bid in the prescribed 'Deviation Sheet'. TPCODL reserves the right to reject bids with major deviations on the GCC. The T&Cs can be discussed with the short-listed bidder/s prior to the award of Contract
58	TN 167/8.0 SECURITY CUM PERFORMANCE DEPOSIT/300 of 446	(a) 5% of the PO value if purchase order value is more than Rs 5 Crores. (b) 10% of the PO value if purchase order value is less than Rs 5 Crores	Request Tata power to keep Security and BG liability cumulatively not more than 10%.	
59	TN 167/GENERAL CONDITIONS OF CONTRACT/309 of 446	**LIQUIDATED DAMAGES:** Liquidated damages @1% of the total executed contract value per week or part thereof, for the period of delay in integrated completion, subject to maximum 10% of the value of the contract shall become leviable without prejudice to other rights of the TPCODL	**Request Tata Power to amend the clause as below:** Liquidated damages @**0.5%** of the **Unexecuted portion** per week or part thereof, for the period of delay in integrated completion, subject to maximum 10% of the value of the **Unexecuted portion** shall become leviable without prejudice to other rights of the TPCODL.	
60	TN 167/18.0 CONFIDENTIALITY/310 of 446		Request to mention the term of confidential period	
61	TN 167/20.0 INDEMNITY/312 of 446	The Associate shall at all times indemnify, keep indemnified and hold harmless the TPCODL and its officers, directors, employees, affiliates, agents, successors and assigns……..	Please exclude affiliates, successors, assigns.The Associate shall be liable only where the loss, damage etc. is solely attributable to the Associate.	
62	TN 167/21.1 Liability/312 of 446	Except for any specific liability which may be identified……..	Associate shall not be liable for any sort of consequential/indirect Damages or loss	
63	TN 167/22.0 FORCE MAJEURE/313 of 446	"Force Majeure" shall mean any event or circumstance or combination of events or circumstances referred below and their consequences that wholly or partly prevents or unavoidably delays……..	Please add pandemic, lock down, quarantine, government order in Force majeure	
64	TN 167/23.1 Suspension for Convenience/313 of 446	TPCODL may, at any time and at its sole option, suspend execution of all or any portions of the schedule of items of contract to be……..	it is applicable subject to adequate compensation to Associate.	

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
1	2	3	4	5
65	TN 167/24.1 Breach of Contract/314 of 446		Request to clarify the period of corrective period	
66	TN 167/24.3 Termination for Convenience of TPCODL		it is applicable subject to adequate compensation to Associate.	
67	Page 54 of 104 Page 339 of 446 (GCC)	ANNEXURE – H UNDERTAKING FOR COMPETENCE OF WORKMEN	Does the bidder need to prepare this undertaking at the time of bid submission or at the contracting stage?	To be submitted along with Bid.
68	Page 62 of 104 Page 347 of 446 (GCC)	ANNEXURE-K	We assume that annexure-K shall be filled during contracting stage. Please confirm.	To be submitted along with Bid.

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
Queries on 1Ph SMART Energy Meter				
1	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 1 SCOPE Page No. 2 of 49 Pg 41 of 446	This specification covers the technical requirements of design, manufacturing, testing & integration with Network Integration Card(NIC) for communication over **4G with fall back to 2G for communication network provider**, at meter manufacturer's works, packing, forwarding, supply and unloading at store, of Single Phase Two Wire,230V, 10-60 A static smart energy meters of accuracy class 1.0 (here after referred as meters) complete with all accessories and meter box for efficient and trouble free operation.	**Kindly include the 3G communication in fallback. It will increase the reliability in communication where 2G n/w shall not be available the fallback 3G will support for reliable communication.** **Kindly amend the clause for same**	Tender specification to be complied
2	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 1 SCOPE Page No. 2 of 49 Pg 41 of 446	This specification covers the technical requirements of design, manufacturing, testing & integration with Network Integration Card(NIC) for communication over **4G with fall back to 2G for communication network provider**, at meter manufacturer's works, packing, forwarding, supply and unloading at store, of Single Phase Two Wire,230V, 10-60 A static smart energy meters of accuracy class 1.0 (here after referred as meters) complete with all accessories and meter box for efficient and trouble free operation.	**Our submission: Sir, kindly include the 3G Communication in fallback. It will increase the reliability in Communication where 2G Network shall not be available the fallback 3G will support for reliable Communication.** **Kindly amend the clause for same**	Tender specification to be complied
3	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 1 SCOPE Page No. 2 of 49 Pg 41 of 446	This specification covers the technical requirements of design, manufacturing, testing & integration with Network Integration Card(NIC) for communication over 4G with fall back to 2G for communication network provider, at meter manufacturer's works, packing, forwarding, supply and unloading at store, of Single Phase **Two Wire,230V,** 10-60 A static smart energy meters of accuracy class 1.0 (here after referred as meters) complete with all accessories and meter box for efficient and trouble free operation.	**Our submission: Sir, Meter shall have reference voltage 240V AC however shall comply 230V also as per specifications.** **So, we request you to kindly accept.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
4	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 1 SCOPE Page No. 2 of 49 Pg 42 of 446	This specification covers the technical requirements of design, manufacturing, testing & integration with Network Integration Card(NIC) for communication over 4G with fall back to 2G for communication network provider, at meter manufacturer's works, packing, forwarding, supply and unloading at store, of Single Phase **Two Wire,230V,** 10-60 A static smart energy meters of accuracy class 1.0 (here after referred as meters) complete with all accessories and meter box for efficient and trouble free operation.	**Meter shall have reference voltage 240V AC however shall comply 230V also as per specs.** **Kindly accept.**	Noted
5	Pg 42 of 446 Cl 4 GENERAL TECHNICAL REQUIREMNTS	Single phase two wire, static watt-hour, VAR-hour direct connected type smart meter without application of any Multiplication Constant	VAR- hour not applicable on 1Ph Static Watt hour meter as per the requirement in the specs	Noted
6	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 3 of 49 Pg 42 of 446	4.03) Basic Current (Ib) & rated Maximum current (Imax): Ib= 10A; Imax= 60 A (Meter shall be able to **continuously carry 120% of Imax,** meeting the accuracy requirements)	**Our submission: Sir, kindly note that as per IS 16444 (Part 1) Load will be disconnected at 105% Imax. This spec requirement is conflicting with the requirement of IS.** **You are requested to clarify the same.**	To be complied as per IS16444
7	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 3 of 49 Pg 42 of 446	4.03) Basic Current (Ib) & rated Maximum current (Imax): Ib= 10A; Imax= 60 A (Meter shall be able to **continuously carry 120% of Imax,** meeting the accuracy requirements)	**Kindly note that as per IS 16444 (Part 1) Load will be disconnected at 105% Imax. This spec requirement is conflicting with the requirement of IS.** **You are requested to clarify the same.**	To be Complied as per IS

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
8	Pg 42 of 446 Clause No. 4.04	Reference Conditions for testing the performance of the meter : Vref = 230 V	Meter may kindly be accepted with reference voltage of 240V however shall be suitable for 230V.	Noted
9	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 4 of 49 Pg 42 of 446	4.07) Power Consumption: Voltage circuit: Maximum 5.0 W and 15 VA **Current Circuit : Max 4VA** (The additional power requirement during data transmission shall not exceed 7W per communication module).	**Kindly amend the power consumption as per IS 16444 since 4VA limit is applicable as per IS 13779.**	To be Complied as per IS 16444
10	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 3 of 49 Pg 42 of 446	4.07) Power Consumption: Voltage circuit: Maximum 5.0 W and 15 VA **Current Circuit : Max 4VA** (The additional power requirement during data transmission shall not exceed 7W per communication module).	**Our submission: Sir, kindly amend the Power consumption as per IS 16444 since 4VA limit is applicable for conventional Class 1.0 Meter as per IS 13779.**	To be complied as per IS16444
11	Pg 43 of 446 Cl 4.23 Self Diagonostic Feature	The meter shall have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery	We will provide the single display of RTC Status (OK or fail) to fulfill the requirement	Tender specification to be complied
12	Pg 43 of 446 Cl 4.23 Self Diagonostic Feature	The meter shall have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (v) Status of NIC (installed/ discovered/ normal)/ Signal Strength	We will provide an LED indication to show the Status on Module & signal strength on display	Tender specification to be complied
13	Pg 44 of 446 Cl 4.25 Alternate mode of supply to the meters	In case of meter power failure, the reading/data should be retrieved with the help of battery or other power source	Comply. The meter data downloading through optical port on Battery mode	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
14	Pg 44 of 446 Cl 4.27	Minimum Internal diameter of the terminal holes- 9.5mm (minimum) Minimum Depth of the terminal holes- 22 mm + 1 mm	9.5 mm 16 mm +1mm	Tender specification to be complied
15	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 5 of 49 Pg 44 of 446	4.30) Security feature: Meters should push **mid night data on daily basis which should include CKWh, CKVAh, MD KW(Current-Rising), MD KVA (Current-Rising), TOD KWH(both off peak and peak) and TOD KVAh(both off peak and peak)**	**Push data shall be as per table 4 of DLMS IS 15959 (Part 2).** **You are requested to kindly accept the same.**	Tender specification to be complied
16	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 5 of 49 Pg 44 of 446	4.30) Security feature: **Meters should push** mid night data on daily basis which should include CKWh, CKVAh, MD KW(Current-Rising), MD KVA (Current-Rising), TOD KWH(both off peak and peak) and TOD KVAh(both off peak and peak)	**Our submission: Sir, Push Data shall be as per table 4 of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
17	Pg 45 of 446 Cl 4.32 Calibration	There shall be provision for firmware update to change payment mode from Prepaid to Postpaid and vice versa; similarly for metering mode from Import only to Export-Import (NET mode) and vice versa, through proper authentication process remotely over the air (OTA). The change should be recorded as Transaction event. Billing should be done at that time of firmware upgrade so that readings at which this upgrade has happened are logged in meter and system.	Both payment method and metering mode will be configurable as per IS 16444. Firmware upgrade not required to change mode. The event will be recorded and the programming count will increase on configuration change Billing should NOT be done at becasuse the firmware upgradation will not effect the recording of meter.	Tender specification to be complied
18	Pg 45 of 446 Cl 4.33 Communication module of meter for AMI	Meter should have provision of communication module compatible with both the variant mentioned in IS 16444 PART-1. This module should be able to get connected to the NAN / WAN network of service provider (4G/NB-IoT) of TPCODL. Meter should be able to provide required power supply to NIC provided by communication provider, if separately required, recommended/finalized by TPCODL. In case of 4G / NB-IoT based communication, a provision of local read via Bluetooth communication (Bluetooth module housed & enabled in NIC), has to be provided with HHU on the format which must be pushed to HES.	The communication will be 4G only and optical port will be provided for the Local communication. Bluetooth comm. will be provided as desired	To be complied as per tender clasue No: 4.2
19	Pg 45 of 446 Cl 4.33 Communication module of meter for AMI	4.33 Communication module of meter for AMI: …….In case of 4G / NB-IoT based communication, a provision of local read via Bluetooth communication (Bluetooth module housed & enabled in NIC), has to be provided with HHU on the format which must be pushed to HES.	As the communication/data transfer would happen through 4G network, Bluetooth does not give any additional benefit. Also presently no 4G chipset manufcaturer provides Bluetooth feature in the module.Request delete this requirement.	To be compied as per tender clause No. 4.2

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
20	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 49 Pg 45 of 446	4.33) Communication module of meter for AMI: In case of 4G / NB-IoT based communication, a provision of local read via **Bluetooth communication (Bluetooth module housed & enabled in NIC),** has to be provided with HHU on the format which must be pushed to HES.	**Our submission: Sir, this Bluetooth is a new requirement in Smart Meter which will take the development.** **So, we request you to kindly remove this Bluetooth Communication requirement for this technical specifications.**	Tender specification to be complied
21	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 49 Pg 45 of 446	4.33) Communication module of meter for AMI: In case of 4G / NB-IoT based communication, a provision of local read via **Bluetooth communication (Bluetooth module housed & enabled in NIC),** has to be provided with HHU on the format which must be pushed to HES.	**Our submission: Sir, this Bluetooth is a new requirement in Smart Meter which will take the development.** **So, we request you to kindly remove this Bluetooth Communication requirement for this technical specifications.**	Tender specification to be complied
22	Pg 45 of 446 Cl 4.37 Ultrasonic welding / Chemical Bonding	Meter cover and body should be continuous & seamless ultrasonically welded only or should be chemically bonded.	Comply with Chemically welded break to open requirement	Tender specification to be complied
23	Pg 45 of 446 Cl 4.1 DISCONNECTOR SWITCH	Over current tripping should be disabled by default while supply and should have easy enabling provision (with configurable threshold)	The threshold for Over load will be configurable as per IS16444 and tripping enable/disable will not be provided as it is not mentiones in IS16444 (Meter will behave as mentioned in IS16444 in case of Overload & Overcurrent condition)	Tender specification to be complied
24	Pg 45 of 446 Cl 4.1 DISCONNECTOR SWITCH	The cumulative number of ON/OFF operations shall also be made available in meter data and HES.	Each operation of the switches will be logged by the meter as an event with date, time stamp and snapshot parameters as per IS 16444. Cumulative number of operrations can be explored at HES end	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
25	Pg 45 of 446 Cl 4.1 DISCONNECTOR SWITCH	The make of the load switch should be of reputed make like Grooner, KG or equivalent and same shall be confirmed by the bidder during tendering.	We comply Shunt+Relay for Phase channel and CT+Relay for Neutral channel of reputed make like KG Tech, WANJIA, RAMWAY for compact design	Tender specification to be complied
26	Pg 46 of 446 Cl 4.1 DISCONNECTOR SWITCH	Utilization Categories : UC2 or better	Utilization Categories : UC1 or UC2	Tender specification to be complied
27	Pg 46 of 446 Cl 4.1 DISCONNECTOR SWITCH	Disconnector Switch: Utilization Categories- UC2 or better	As per IS 16444 Part 1 Amendment 2 'Category UC1 is applicable to smart meters rated at maximum current upto 100A.' Request modify the UC rating as UC1 for Single Phase 10-60A Smart Meter.	Tender specification to be complied
28	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.1 DISCONNECTOR SWITCH Page No. 7 of 49 Pg 46 of 446	6) Utilization Categories **UC2 or better**	**As per IS 16444 (Part-1):2015 Standard Integrated Load Limiting Switch UC1 is applicable to Smart Meters Rated at Maximum Current up to 100A.** **You are requested to accept UC1.**	Tender specification to be complied
29	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.1 DISCONNECTOR SWITCH Page No. 7 of 49 Pg 46 of 446	6) Utilization Categories **UC2 or better**	**Our submission: Sir, as per IS 16444 (Part-1):2015 Standard Integrated Load Limiting Switch UC1 is applicable to Smart Meters Rated at Maximum Current up to 100A.** **You are requested to kindly accept UC1.** **Supporting BIS Amendment No. 2 dated August 2019 is enclosed for your kind reference.**	Tender specification to be complied
30	Pg 46 of 446 Cl 4.2.2.3 NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION	The NIC is plug-in type & shall be replaceable at site in hot swappable condition, in event of any failure but it should be integrated in meter body in such way that it should have separate cover & sealing arrangement with screw.	The NIC is plug-in type & shall be replaceable at site with same OEM same 4G/GPRS technology NIC in event of any failure but it should be integrated in meter body and should have separate sealing arrangement with screw. More elaboration is required on hot swappable condition.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
31	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.2.1 NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION Page No. 7 of 49 Pg 46 of 446	4.2.2.3) The NIC is plug-in type & shall be **replaceable at site in hot swappable condition**, in event of any failure but it should be integrated in meter body in such way that it should have separate cover & sealing arrangement with screw.	**Kindly not that the plug-in module shall be field replaceable with same Make of Meter. There may chance for damage in plug in module while hot swapping.** **Kindly remove the hot swapping clause from specification.**	Tender specification to be complied
32	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.2.1 NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION Page No. 7 of 49 Pg 46 of 446	4.2.2.3) The NIC is plug-in type & shall be **replaceable at site in hot swappable condition**, in event of any failure but it should be integrated in meter body in such way that it should have separate cover & sealing arrangement with screw.	**Our submission: Sir, kindly not that the plug-in module shall be field replaceable with same Make of Meter.** **There may chance for damage in plug in Module while hot swapping.** **Kindly remove the hot swapping clause from specification.**	Tender specification to be complied
33	Pg 47 of 446 Cl 4.2.2.10 NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION	4.2.2.10 TPCODL consider NIC as a part of meter. The bidder should have back to back Service Level Agreements (SLA) with NIC (RF) provider, communication network provider and component suppliers, meeting this specification	Since the scope of supply is Smart Meter with 4G NIC , this clause is out of context as agreement with Communication network would have to be done by TPCODL. However the Meter supplier will ensure that supplied Smart Meter with 4G NIC will be meeting the communication requirements of the specification.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
34	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION Page No. 8 of 49 Pg 47 of 446	4.2.2.11) The NIC module placement in meter housing should be such that it is ensured that the NIC can be removed from meter without removing the meter from meter box. This NIC should be **online field replaceable.**	**Pl elaborate the requirement online field replaceable**	Tender specification to be complied
35	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. NIC MODULE DETAILS & INTEGRATION FOR 4G BASED COMMUNICATION Page No. 8 of 49 Pg 47 of 446	4.2.2.11) The NIC module placement in meter housing should be such that it is ensured that the NIC can be removed from meter without removing the meter from meter box. This NIC should be **online field replaceable.**	**Our submission: Sir, please elaborate the requirement online field replaceable.**	Tender specification to be complied
36	Pg 47 of 446 Cl 4.3 (a) 4.3.2 Communication capabilities and software feasibilities	4.3.2 It should be the responsibility of the bidder to ensure integration of meter into HES**.**For cellular fallback, the Module should have backward compatibility.	Understand the NIC should communicate on 4G by default and fall back on 2G. Pl confirm.	compatible with 4G and Fall back to 2G technology
37	Pg 47 of 446 Cl 4.3 (a) 4.3.3 Communication capabilities and software feasibilities	4.3.3 It shall be possible to reconfigure the meters for RTC, TOD slots reprogramming, DIP , billing date, display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. And billing should be done whenever any above mentioned attribute is changed. The change should be recorded as upgrade event.	Billing will be done in case of TOD slots reprogramming only as the other parameters configuration will not effect the metering/ calculation	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
38	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 8 of 49 Pg 47 of 446	4.3.3) It shall be possible to reconfigure the meters for RTC, TOD slots reprogramming, DIP (Demand Integration period), billing date, display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. **And billing should be done whenever any above mentioned attribute is changed.** The change should be recorded as upgrade event.	**Kindly delete the requirement of billing when RTC is changed.**	Tender specification to be complied
39	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 8 of 49 Pg 47 of 446	4.3.3) It shall be possible to reconfigure the meters for RTC, TOD slots reprogramming, DIP (Demand Integration period), billing date, display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. **And billing should be done whenever any above mentioned attribute is changed.** The change should be recorded as upgrade event.	**Our submission: Sir, kindly remove the requirement of Billing when RTC is changed.**	Tender specification to be complied
40	Pg 47 of 446 Cl 4.3 (a), 4.3.5 Communication capabilities and software feasibilities	Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded within 5 minutes OTA.	Comply but the timing of data download OTA depends on the network capability/ bandwidth	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
41	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 8 of 49 Pg 47 of 446	4.3.5) Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded within 5 minutes OTA.	**Data downloading through OTA shall depend on Signal strength at that time.** **You are requested to kindly remove the requirement of time limit for Data Downloading through OTA.**	Tender specification to be complied
42	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 8 of 49 Pg 47 of 446	4.3.5) Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded **within 5 minutes OTA.**	**Our submission: Sir, Data downloading through OTA shall depend on Signal strength at that time.** **You are requested to kindly remove the requirement of time limit for Data Downloading through OTA.**	Tender specification to be complied
43	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.9) Bidder should also provide software for changing/upgrading meter firmware in mass and should support integration of this software with HES. Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Kindly clarify whether Supply of CMRI is tender supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU.** **please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
44	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.9) Bidder should also provide software for changing/upgrading meter firmware in mass and should support integration of this software with HES. Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Our submission: Sir, kindly clarify whether Supply of CMRI is tender Supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU.** **please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication
45	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.11) List of **events to be reported should be configurable** over the air(OTA). The meter should have "Last Gasp" and “First Breath” feature to facilitate sending alerts to the HES during fully powered off / On condition.	**List of Events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Shall be provided during detail engineering
46	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.11) List of **events to be reported should be configurable** over the air(OTA). The meter should have "Last Gasp" and “First Breath” feature to facilitate sending alerts to the HES during fully powered off / On condition.	**Our submission: Sir, the list of Events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same in line with DLMS IS 15959 (Part 2) Standard**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
47	Pg 48 of 446 Cl 4.3 (a), 4.3.14 Communication capabilities and software feasibilities	4.3.14 The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	A composite system including Smart Meters, Communication network & Head End system is being sought against this tender. The output from Head end system would be integrated with TPCODL's MDM. No other software is required to be provided by Bidder. Please confirm.	Tender specification to be complied
48	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.17) **Communication NIC/ network should be immune with any external Magnetic field/ ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.**	**Kindly note the Radio Communication is based on the Electromagnetic Waves and the distructive Test may effect the Signal Pattern and Temporarely effect the Communication.** **The Communication shall work properly after the distructive Test.** **Kindly accept the same**	Tender specification to be complied
49	Pg 48 of 446 Cl 4.3 (a), 4.3.17 Communication capabilities and software feasibilities	Communication NIC/ network should be immune with any external Magnetic field/ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.	Meter immunity will be as per CBIP325 and sample approved by Tata power	Tender specification to be complied
50	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.17) **Communication NIC/ network should be immune with any external Magnetic field/ ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.**	**Our submission: Sir, kindly note that the Radio Communication is based on the Electromagnetic Waves and this distructive Test may effect the Signal Pattern and temporarily effect the Communication of Meter.** **The Communication shall work properly after the distructive Test.** **Kindly accept the same**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
51	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.18) **Meter once powered up with NIC card should be self-detected and its basic name plate details & current readings are transferred to HES.**	**Kindly note that in DLMS IS15959 (Part 2), the Name Plate requirement is for the Meter and the NIC Module is part of Meter.** **You are requested to kindly accept the Meter Name Plate details.**	Tender specification to be complied
52	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (a) Communication capabilities and software feasibilities Page No. 9 of 49 Pg 48 of 446	4.3.18) **Meter once powered up with NIC card should be self-detected and its basic name plate details & current readings are transferred to HES.**	**Our submission: Sir, kindly note that in DLMS IS15959 (Part 2) Standard the Name Plate requirement is for the Meter and the NIC Module is part of Meter.** **You are requested to kindly accept the Meter Name Plate details.**	Tender specification to be complied
53	Pg 49 of 446 Cl 4.3 (a),4.3.20 Communication capabilities and software feasibilities	Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	The requirements majorly required for RF solution However Network different error codes given on display and LED's indication on module will be provided to comply it and know the communication status	Tender specification to be complied
54	Pg 49 of 446 Cl 4.3(b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	Abnormal Magnetic field is defined as below; a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magnetomotive force to be applied shall be generally >10000 AT. b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT) c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.	Comply the magnet clause as per CBIP325	To be complied as per CBIP325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
55	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 10 of 49 Pg 49 of 446	4.4.1) **Abnormal Magnetic field is defined as below; a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT. b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT) c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.**	**Meter shall be immune at stray magnetic field as per CBIP-325. Meter may be either immune or run at Vref, Imax, UPF in the event of logging of presence of abnormal magnetic induction with date & time as per CBIP-325.** **You are requested to kindly accept the same.**	To be complied as per CBIP-325
56	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 10 of 49 Pg 49 of 446	4.4.1) **Abnormal Magnetic field is defined as below;** **a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT.** **b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT)** **c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.**	**Our submission: Sir, Meter shall be immune at stray Magnetic Field as per the prevailing CBIP-325.** **i.e Meter may be either Immune or Record at Vref., Imax., UPF in the event of logging of presence of abnormal Magnetic induction with date & time as per CBIP-325.** **You are requested to kindly accept the same.**	To be complied as per CBIP-325
57	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 10 & 11 of 49 Pg 49 & 50 of 446	4.4.2) **Electrostatic Discharge (ESD) Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot the event logging threshold values as per table no. 1 in 4.6**	**Our submission: Sir, Abnormal Voltage and Frequency generating Device which generates the ESD is a non-standard Device and none of the NABL Lab issue the certificate of field strength of this non standard Devices.** **As per CBIP-325 ESD limit is 35 kV.** **You are requested to kindly accept the Meter behavior either Immune or Log Event with ESD up to 35kV.**	To be complied as per CBIP-325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
58	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 10 & 11 of 49 Pg 49 & 50 of 446	4.4.2) **Electrostatic Discharge (ESD) Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot the event logging threshold values as per table no. 1 in 4.6**	**Abnormal Voltage & frequency generating device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of field strength of this non standard devices. As per CBIP-325 ESD limit is 35 kV.** **You are requested to kindly accept the Meter behavior as either Immune or Log Event with ESD up to 35kV.**	To be complied as per CBIP-325
59	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 11 of 49 Pg 50 of 446	4.4.4) Meter should be immune to high/low frequency jammer devices. Meter shall log the event in its memory as **'JAMMER'** with date and time stamp, the threshold values as per table no. 1 in 4.6.	**Our submission: Sir, Jammer Device which generates the ESD is a non-standard Device and none of the NABL Lab issue the certificate of such non standard devices.** **You are requested to kindly accept Meter behavior as either Immune or log Event.**	Tender specification to be complied
60	Pg 49 & 50 of 446 Cl 4.3(b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.2. Electrostatic Discharge (ESD) :Meter shall be immune up to 50 kV and shall record accurate energy as per IS- 13779:1999/ CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV with snap shot the event logging threshold values as per table no. 1 in 4.6	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event	To be complied as per CBIP325
61	Pg 49 & 50 of 446 Cl 4.3(b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.4 Meter should be immune to high/low frequency jammer devices. Meter shall log the event in its memory as 'JAMMER' with date and time stamp, the threshold values as per table no. 1 in 4.6	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event	To be complied as per CBIP325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
62	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 11 of 49 Pg 50 of 446	4.4.4) Meter should be immune to high/low frequency jammer devices. Meter shall log the event in its memory as 'JAMMER' with date and time stamp, the threshold values as per table no. 1 in 4.6.	**Jammer device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of such non standard devices.** **You are requested to kindly accept meter behavior as either immune or log event.**	Tender specification to be complied
63	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 11 of 49 Pg 50 of 446	4.4.5) The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, **micro waves like magnetron etc**. the threshold values as per table no. 1 in 4.6.	**Our submission: Sir, for Microwave there is no limit and Meter may be damaged within fraction of seconds.** **Microwave based testing is hazardous to person conducting this test.** **You are requested to kindly accept the same and remove this requirement.**	Noted
64	Pg 49 & 50 of 446 Cl 4.3(b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.5 The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, micro waves like magnetron etc. the threshold values as per table no. 1 in 4.6.	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event	To be complied as per CBIP325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
65	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.3 (b) IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Page No. 11 of 49 Pg 50 of 446	4.4.5) The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, **micro waves like magnetron etc**. the threshold values as per table no. 1 in 4.6.	**For Microwave there is no limit and meter may be damaged within fraction of seconds. Microwave based testing may hazardious to person apply testing.** **You are requested to kindly accept the same and remove this requirement.**	Noted
66	Pg 50 of 446 Cl 4.3 c) NEUTRAL DISTURBANCE & OTHER TAMPERS	4.5.2 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of chopped signal/ DC signal/ DC pulse up to 330V (both + & - DC) and for any value beyond this of any low frequency and harmonics. Meter shall log the event in to memory as ''Neutral Disturbance' with date & time stamp the thresholds are as per table no. 1 in 4.6	4.5.2 We comply with load switch disconnection in order to prevent the tamper condition and any failure/erratice metering	Tender specification to be complied
67	Pg 50 of 446 Cl 4.3 c) NEUTRAL DISTURBANCE & OTHER TAMPERS	4.5.3 The meter shall record energy proportional to the current and V Ref (230V) when any of the tamper circuits enclosed as per annexure1 are used to tamper energy using any type of diode or a variable resistance or a variable capacitance, energy saving device. Or any DC injection as per 4.5.2.	4.5.3 We comply with load switch disconnection in order to prevent the tamper condition and any failure/erratice metering	Tender specification to be complied
68	Pg 50 of 446 Cl 4.3 c) NEUTRAL DISTURBANCE & OTHER TAMPERS	4.5.4 In any tamper when then voltage falls below 190V then only the meter will start defraud recording at Vref, UPF and actual RMS current. When voltage is above 190V only, event shall be recorded as per prevailing tamper condition.	4.5.4 Comply if voltage falls below 190V in ND condition. Else the meter will work as per Cl 4.05 of specs, the voltage variation accuracy is required from 0.6 Vref to 1.2 Vref.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
69	Pg 50 of 446 Cl 4.3 c) NEUTRAL DISTURBANCE & OTHER TAMPERS	4.5.5 Single Wire tamper : When neutral is disconnected from both load side and supply side, the meter should record energy as per rated parameters (Vref)actual current and UPF& subsequently log the event as per table no.1 in 4.6.	4.5.5. We comply with load switch disconnection in order to prevent the tamper condition (Meter power OFF)	Tender specification to be complied
70	Pg 50 of 446 Cl 4.3 c) NEUTRAL DISTURBANCE & OTHER TAMPERS	4.5.6 Current mismatch - Meter should logged current mismatch event as per thresholds in table no.1. Priority of logging this event in memory of meter is higher than EL. Further, earth LED shall glow & log event as per its own logic irrespective of this logic.	The tamper indications will be provided on LCD.	Tender specification to be complied
71	Pg 50 of 446 Cl 4.4 ABNORMAL TAMPER CONDITIONS	4.6.1 Meter shall be immune to the influence of Magnet, ESD, Jammer, microwaves as per clause 4.53 during all the tamper conditions of Annexure-I. The meter shall record forward energy under any abnormal conditions as given in the Annexure- I, for all 38 tamper conditions, with above abnormal influencing signals. 4.6.2 All the tamper events mentioned in table no. 1, shall be logged in the memory of the meter with date and time stamp of occurrence (of abnormal event) and restoration (of normal supply) along with instantaneous electrical parameter (Voltage, Current (phase and neutral)), energy (kWh &KVAh), PF ,. The event register compartmen tsize shall be as per table no.1	Comply as per above given compliances. Tamper Log details will be as per IS15959 Part-2	Tender specification to be complied
72	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 12 of 49 Pg 51 of 446	4.6.5) **For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for occurrence (T1) and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event (T3).**	**For all tamper event the time stamp and snapshot parameters shall be recorded at end time of event for occurrence (T2) and for restoration (T4).** **You are requested to accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
73	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 12 of 49 Pg 51 of 446	4.6.5) For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for **occurrence (T1) and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event (T3).**	**Our submission: Sir, for all tamper Event the time stamp and snapshot Parameters shall be recorded at end time of event for Occurrence (T2) and for Restoration (T4).** **You are requested to kindly accept the same.**	Tender specification to be complied
74	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 12 of 49 Pg 51 of 446	4.6.5) **During abnormal & tamper conditions, the current shall be recorded as active current and line current.**	**OBIS codes are not available for active current & line currents either in IS 15959 Part2 or in the OBIS code list provided in this spec. Event snap current shall be provided for which OBIS code is available in OBIS code list provided in this spec.**	Tender specification to be complied
75	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 12 of 49 Pg 51 of 446	4.6.5) **During abnormal & tamper conditions, the current shall be recorded as active current and line current.**	**Our submission: Sir, the OBIS Codes are not available for Active Current and Line Currents either in DLMS IS 15959 (Part 2) Standard or in the OBIS Code list provided in this specifications** **Event snap Current shall be provided for which the OBIS Code is available in OBIS Code list provided in this specifications.**	Tender specification to be complied
76	Pg 51 of 446 Table No.1 Tamper table	ESD/JAMMER	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	Tender specification to be complied
77	Pg 52 of 446 Table No.1 Tamper table	Single Wire	Comply with load switch disconnection in order to prevent the tamper condition (Meter power OFF)	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
78	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 13 of 49 Pg 52 of 446	TABLE NO.1 Single Wire = 0 Hr 30 Min 0 sec (SW) Threshold Value for Occurrence of Events a) At a current of >500mA under tamper condition of neutral missing (where battery is used for voltage reference). Meter will perform the fraud energy registration above 500mA assuming Vref (from battery) and UPF. **b) At a current of >1 amps under tamper condition of neutral missing (where third CT is used for voltage reference). Meter will perform the fraud energy registration above 1A assuming Vref (from third CT) and UPF.**	**Single wire condition shall be provided as per option (a) i.e. at >500mA with Battery.** **You are requested to kindly remove the requirement (b) i.e. using 3rd CT from the specification.**	Tender specification to be complied
79	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 13 of 49 Pg 52 of 446	TABLE NO.1 Single Wire = 0 Hr 30 Min 0 sec (SW) Threshold Value for Occurrence of Events a) At a current of >500mA under tamper condition of neutral missing (where battery is used for voltage reference). Meter will perform the fraud energy registration above 500mA assuming Vref (from battery) and UPF. **b) At a current of >1 amps under tamper condition of neutral missing (where third CT is used for voltage reference). Meter will perform the fraud energy registration above 1A assuming Vref (from third CT) and UPF.**	**Our submission: Sir, Single Wire condition shall be provided as per option (a) i.e. at >500mA with Battery.** **You are requested to kindly remove the requirement (b) i.e. using 3rd CT from this specification.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
80	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 14 of 49 Pg 52 of 446	Power OFF = 0 Hr 05 Min 0 sec Over Load 0 Hr 30 Min 0 sec (OL) (If enabled) Threshold Value for Occurrence of Events Actual Voltage OFF **> 120% Imax**	**Kindly note that as per IS 16444 (Part 1) Load will be Disconnected at 105% Imax. This spec requirement is conflicting with the requirement of IS.** **You are requested to kindly clarify the same.**	To be complied as per IS16444
81	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 14 of 49 Pg 52 of 446	Power OFF = 0 Hr 05 Min 0 sec Over Load 0 Hr 30 Min 0 sec (OL) (If enabled) Threshold Value for Occurrence of Events Actual Voltage OFF **> 120% Imax**	**Our submission: Sir, kindly note that as per IS 16444 (Part 1) Load will be Disconnected at 105% Imax.** **This spec requirement is conflicting with the requirement of IS Standard.** **You are requested to kindly clarify the same.**	To be complied as per IS16444
82	Pg 52 of 446 Table No.1 Tamper table	Neutral Disturbance	Comply if voltage falls below 190V in ND condition.	Tender specification to be complied
83	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 13 of 49 Pg 52 of 446	Neutral Disturbance = 0 Hr 01 Min 0 sec (ND) Threshold Value for Restoration of Events Voltage <115% of Vref Current > 10% Ib AND Frequency>47Hz **OR** Frequency<52Hz	**Seems to be typographical error. This should be 'AND' not 'OR'.** **You are requested to kindly amend the specification accordingly.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
84	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 13 of 49 Pg 52 of 446	Neutral Disturbance = 0 Hr 01 Min 0 sec (ND) Threshold Value for Restoration of Events Voltage <115% of Vref Current > 10% Ib AND Frequency>47Hz **OR** Frequency<52Hz	**Our submission: Sir, it seems to be typographical error. This should be 'AND' not 'OR'.** **You are requested to kindly amend the specification accordingly.**	Noted
85	Pg 53 of 446 Table No.1 Tamper table	Microwave immediate	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	Tender specification to be complied
86	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 14 of 49 Pg 53 of 446	Persistence Time for Occurrences **Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Meter shall not be able to detect 'Microwave' condition.** **You are requested to kindly remove the same from specification.**	Noted
87	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.4 ABNORMAL TAMPER CONDITIONS Page No. 14 of 49 Pg 53 of 446	Persistence Time for Occurrences **Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Our submission: Sir, Meter shall not be able to detect 'Microwave' condition.** **You are requested to kindly remove the same from the specification.**	Noted
88	Pg 53 of 446 Table No.1 Tamper table	Temperature Rise : Occurrence : Temperature >70˚C	Occurrence : Temperature > 70 +/- 5˚C Restoration : Temperature < 60˚C +/- 5˚C	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
89	Table No.1 Tamper table	Tampers Compartment Size	Tamper Compartment size will be 80+80+40 events for voltage related, current related and other events	Tender specification to be complied
90	Pg 53 of 446 Cl 4.5 EVENT COMPARTMENTS	Transaction events compartment size shall be minimum 100 events	Transaction events compartment size shall be minimum 32 events as per IS15959 Part -2	Tender specification to be complied
91	Pg 54 of 446 Cl 4.6 General Constructions	Components make list	Reputed Component makes list will be as per the the attcahed seperate sheet	Tender specification to be complied
92	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 1. **Measurement/ computing chips**	**Kindly note that 'Silergy' (earlier Maxim) is a reputed Make & using as Metering Chip Application.** **Kindly include the same.**	Tender specification to be complied
93	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 1. **Measurement/ computing chips**	**Our submission: Sir, kindly note that 'Silergy' (earlier Maxim) is a reputed Make and used as Metering Chip Application.** **So, we request you to kindly include the 'Silergy' Make also in the list.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
94	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54of 446	Component Function 2. **Memory chips/NVM**	**Please add 'ROHM' also since this is a well reputed Make.**	Tender specification to be complied
95	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 2. **Memory chips/NVM**	**Our submission: Sir, please add 'ROHM' also since this is a well reputed Make.**	Tender specification to be complied
96	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 3. **Display modules**	**Kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), Holitec, Yeboo' since these are well reputed Glass Manufacturers.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
97	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 3. **Display modules**	**Our submission: Sir, kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), 'Holitec', Yeboo' since these are well reputed Glass Manufacturers.**	Tender specification to be complied
98	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 4. **Optical port**	**Please add 'Wuhan' also since this is a reputed Make.**	Tender specification to be complied
99	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 4. **Optical port**	**Our submission: Sir, please add 'Wuhan' also since this is a reputed Make.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
100	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54of 446	Component Function 6. **Electronic components**	**Please add NXP, Yageo , Samwha ,Epcos, Fairchild , Osram, Toshiba since these are reputed Makes**	Tender specification to be complied
101	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 6. **Electronic components**	**Our submission: Sir, please add NXP, Yageo , Samwha, Epcos, Fairchild , Osram, Toshiba since these are reputed Makes**	Tender specification to be complied
102	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 8. **Micro controller and RTC having separate battery**	**Please add 'Silergy (Maxim Integrated)' also since this is a reputed make.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
103	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 15 of 49 Pg 54 of 446	Component Function 8. **Micro controller and RTC having separate battery**	**Our submission: Sir, please add 'Silergy (Maxim Integrated)' also since this is a reputed Make.**	Tender specification to be complied
104	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 16 of 49 Pg 55 of 446	Component Function 9. **Temperature sensor**	**Now the Smart Micro-controllers are available in which Temperature Sensor is in-built. Hence, there is no need to use separate sensors.** **We request you to kindly accept the same.**	Noted
105	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 4.6 GENERALCONSTRUCTIONS Page No. 16 of 49 Pg 55 of 446	Component Function 9. **Temperature sensor**	**Our submission: Sir, now the Smart Micro-controllers are available in which Temperature Sensor is in-built.** **Hence, there is no need to use separate sensors.** **We request you to kindly accept the same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
106	Meter Technical Specification Clause No. 5.1.3 METER BODY Pg 55 of 446	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent (i.e. chart of Lexan 500R compared with the alternative material)** on prior approval from the TPCODL. (the bidders should submit material data sheet in technical bid)	**Our submission: Sir, please also accept equivalent material like, LEXAN 143/143R for Meter base, as the same material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
107	Meter Technical Specification Clause No. 5.1.3 METER BODY Pg 55 of 446	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent (i.e. chart of Lexan 500R compared with the alternative material)** on prior approval from the TPCODL. (the bidders should submit material data sheet in technical bid)	**Our submission: Sir, please also accept equivalent material like, LEXAN 143/143R for Meter base, as the same material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
108	Pg 55 of 446 Cl 4.7 METER BODY	5.1.8 The Meter body shall be such that the liquid or chemical shall not reach the electronic parts if liquid is injected from meter body such as meter terminals, push button, display, NIC card casing etc. Necessary protection and water tight sealing to be provided at terminals and Push buttons etc.	Comply with IP51. However pls mention the testing procedure to explore.	Tender specification to be complied
109		5.2.5 The terminals and connections shall be suitable to carry up to 120 % of Imax continuously. The size, design & material of Bus-bar /Shunt/Terminal shall be with suitable cross sectional area, so that temperature rise at the terminal block will not be more than 35°C above ambient temperature of 45°C at 120% of I max loading for 06 hrs. continuous. This test shall be repeated at CPRI/ERDA on any meter for every 25000 meters or whenever required, without any cost implications towards TPCODL. It shall also be done on tender sample & on pre-manufacturing sample.	Rise in terminal block temperature is not related to satisfactory operation & measurement by the meter. Hence the requirement of influence of temperature rise may be limited to the requirements of IS 13779. Please confirm.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
110	Meter technical specification Clause No. 5.2.6 Terminals, Terminal Block Pg 56 of 446	To get the desired temperature rise & avoid hot spots the design of the each terminal **screw shall be Allen head screw** & shall be operated with **Allen key. The Size of the Allen screw shall be 6mm dia**	**Our submission: Sir, Alternatively, Slotted headless Grub / Set Screws of M6 size for Terminal screws may also be accepted.** **Kindly confirm the acceptability of the same.**	Tender specification to be complied
111	Pg 56 of 446 Cl 5.2.6 TERMINALS, TERMINAL BLOCK	To get the desired temp rise & avoid hot spots the design of the each terminal screw, terminal screw shall be an Allen screw head & shall be operated with allen key only. Size of the allen screw is 6mm dia. (OEM should supply one Allen Key for every 1000 meters supplies.	Comply screws heads will be flat headed with minus shape. However explore Allen Type M6 Screw (Nickle Plated MS screw)	Tender specification to be complied
112	Meter technical specification Clause No. 5.2.7 Terminals, Terminal Block Pg 56 of 446	To get the desired temperature rise & avoid hot spots the design of the each terminal **screw shall be Allen head screw** & shall be operated with **Allen key. The Size of the Allen screw shall be 6mm dia**	**Our submission: Sir, alternatively, Slotted headless Grub / Set Screws of M6 size for Terminal screws may also be accepted.** **Kindly confirm the acceptability of the same.**	Tender specification to be complied
113	Pg 56 of 446 Cl 5.2/5.2.9 TERMINALS, TERMINAL BLOCK	The manner of fixing the conductors to the terminals shall ensure adequate and durable contact such that there is no risk of loosening or undue heating. Terminals shall be preferably with Allen screw with at least 8 mm dia for better contact area. Terminal & screw should not be damaged during regular opening and tightening. (MS terminals not accepted)	Comply screws heads will be flat headed with minus shape. However explore Allen Type M6 Screw (Nickle Plated MS screw)	Tender specification to be complied
114	Pg 57 of 446 Cl 5 TERMINALS, TERMINAL BLOCK	5.2.11 Minimum Depth of the terminal holes shall be of 22 mm.	Minimum Depth of the terminal holes : 18 mm	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
115	Pg 59 of 446 Cl 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE)	Meter serial number and NIC serial number shall be recorded and communicated for all profiles of data. The meter shall be capable of recording load profile of 45 days with 15 min integration period for kWh, kVAh, KW, kVA, Voltage, Phase and Neutral current, Metering Current, Power Factor, Temperature (˚C) for ON days/time. Meter shall be capable of recording daily Energy and Demand 00:00 to 24:00 Hrs kWh and kW, kVAh and kVA in BCS for 45 days. Midnight energy value of cumulative KWh, KVAh along with Current (Rising Demand) KW and Current (Rising Demand) KVA along with daily consumption kWh should be available in meter memory for last 45 days. Load survey data should be at least with 5 decimal place	Meter Sr. No. will be provided in nameplate details and all profiles testing reports in BCS as per IS 15959 part-2. The Load Survey profile parameters will be as per IS15959 Part-2	Tender specification to be complied
116	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.5 PARAMETERS IN BCS Page No. 20 of 49 Pg 59 of 446	**NIC fail should be depicted on Meter display and suitable indication should be available at HES**	**A common Icon shall be provided on Meter Display for any type of Tamper which serves the purpose of Utility.** **You are requested to kindly accept the same.**	Tender specification to be complied
117	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.5 PARAMETERS IN BCS Page No. 20 of 49 Pg 59 of 446	NIC fail should be depicted on Meter display and **suitable indication should be available at HES**	**Our submission: Sir, a common Icon shall be provided on Meter Display for any type of Tamper which serves the purpose of Utility.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
118	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	The meter shall be capable of recording load profile of 45 days with 15 min integration period for kWh, kVAh, KW, kVA, Voltage, **Phase and Neutral current**, Metering Current, Power Factor, Temperature (˚C) for ON days/time.	**Our submission: Sir, the OBIS Codes for Phase and Neutral Currents are not available in OBIS Code list of Block Load Profile for Single Phase Smart Meter provided in this specification under ANNEXURE-II.** **So, you are requested to kindly remove the requirement of same and accept average Current as per the OBIS Code list (Block Load Profile) for Single Phase Smart Meter provided in this specifications.**	Noted
119	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	The meter shall be capable of recording load profile of 45 days with 15 min integration period for kWh, kVAh, KW, kVA, Voltage, **Phase and Neutral current**, Metering Current, Power Factor, Temperature (˚C) for ON days/time.	**Our submission: Sir, the OBIS Codes for Phase and Neutral Currents are not available in OBIS Code list of Block Load Profile for Single Phase Smart Meter provided in this specification under ANNEXURE-II.** **So, you are requested to kindly remove the requirement of same and accept average Current as per the OBIS Code list (Block Load Profile) for Single Phase Smart Meter provided in this specifications.**	Noted
120	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	Midnight energy value of cumulative KWh, KVAh along with Current **(Rising Demand) KW and Current (Rising Demand) KVA** along with daily consumption kWh should be available in meter memory for last 45 days.	**OBIS codes are not available for Rising demand kW & kVA in OBIS code list for Single Phase Smart Meter provided in this specification under ANNEXURE-II.** **So, you are requested to kindly remove the requirement of same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
121	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	Midnight energy value of cumulative KWh, KVAh along with Current (Rising Demand) KW and Current (Rising Demand) KVA along with **daily consumption kWh** should be available in meter memory for last 45 days.	**Kindly note that Daily Consumption is a derived parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Noted
122	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	Midnight energy value of cumulative KWh, KVAh along with Current **(Rising Demand) KW and Current (Rising Demand) KVA** along with daily consumption kWh should be available in meter memory for last 45 days.	**Our submission: Sir, the OBIS Codes are not available for Rising demand kW & kVA in OBIS code list for Single Phase Smart Meter provided in this specification under ANNEXURE-II.** **So, you are requested to kindly remove the requirement of same.**	Noted
123	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	Midnight energy value of cumulative KWh, KVAh along with Current (Rising Demand) KW and Current (Rising Demand) KVA along with **daily consumption kWh** should be available in meter memory for last 45 days.	**Our submission: Sir, kindly note that 'Daily Consumption' is a derived parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
124	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	**Load survey data should be at least with 5 decimal place**	**Load survey energies shall be provided with 3 decimal digits.** **You are requested to kindly accept the same.**	Tender specification to be complied
125	Pg 59 of 446 Cl 5.7 INSTANTANEOUS PARAMETERS	INSTANTANEOUS PARAMETERS	The Instantaneous profile parameters will be as per IS15959 Part-2	Tender specification to be complied
126	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7 INSTANTANEOUS PARAMETERS Page No. 20 of 49 Pg 59 of 446	**Cumulative Power Off Duration** 00000	**Our submission: Sir, the OBIS Code is not available for 'Cumulative Power Off duration' in Instantaneous Parameters in the OBIS Code list available with this spec for Single Phase Smart Meters.** **You are requested either provide the OBIS Code for the same or remove the requirement from the specifications.**	Tender specification to be complied
127	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.1 GENERAL INFORMATION Page No. 21 of 49 Pg 60 of 446	Meter shall be capable for providing below mentioned general parameters in BCS and HES Meter Serial number Firmware Version Manufacturer's **Name Manufacturing Date (MM/YY)**	**Only Manufacture Year shall be provided in line of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
128	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.1 GENERAL INFORMATION Page No. 21 of 49 Pg 60 of 446	Meter shall be capable for providing below mentioned general parameters in BCS and HES Meter Serial number Firmware Version Manufacturer's **TOD profile**	**The same shall be available at Billing profile.** **You are requested to kindly accept the same.**	Tender specification to be complied
129	Pg 60 of 446 Cl 5.7.1 GENERAL INFORMATION	GENERAL INFORMATION	The profile parameters will be as per IS15959 Part-2	Tender specification to be complied
130	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.2 BILLING PARAMETERS Page No. 21 of 49 Pg 60 of 446	Both Export-Import mode, below mentioned parameters should be for both Export and Import. 4) **Consumption (Reading date, Current Month &12 History, time zone register wise) kWh and kVAh**	**Consumption is derived Parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
131	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.2 BILLING PARAMETERS Page No. 21 of 49 Pg 60 of 446	Both Export-Import mode, below mentioned parameters should be for both Export and Import. 6) **Mode of operation of dis-connector switch**	**Separate report shall be provided for the same.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
132	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.2 BILLING PARAMETERS Page No. 21 of 49 Pg 60 of 446	Both Export-Import mode, below mentioned parameters should be for both Export and Import. 7) Monthly power ON**/OFF hours**	**OBIS code for 'Monthly power OFF hours' is not available in the OBIS code list for Single Phase Smart Meters provided with this spec.** **You are requested to kindly remove the requirement from spec.**	Tender specification to be complied
133	Pg 60 of 446 Cl 5.7.2 BILLING PARAMETERS	BILLING PARAMETERS	The profile parameters will be as per IS15959 Part-2	Tender specification to be complied
134	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.8.3 NAME PLATE AND MARKING Page No. 21 of 49 Pg 60 of 446	The base color of Name plate shall be blue(as of TPCODL logo)Indelibly and distinctly marked with all essential particulars as per relevant standards along with the following. iv. Serial number **(Meter serial number shall be laser printed on name plate instead of sticker).**	**Kindly accept indelible printing alternatively.**	Tender specification to be complied
135	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.8.3 NAME PLATE AND MARKING Page No. 21 of 49 Pg 60 of 446	However the following shall be printed in bar code on the meter nameplate.(**shall be laser printed on name plate instead of sticker**) All data shall be laser printed on meter along with Sr.NO and date of manufacturing. No sticker to be used to avoid loss of data in event of fire.	**Kindly accept indelible printing alternatively.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
136	Pg 68 of 446 Cl 5.8.2 Output devices	3. Communication LCD indicator-Meter display shall have indication in context to NIC. The blinking should be slow when NIC is detected; blinking should be fast when NIC had searched the network and it should be stable when it is successfully latched to the HES.	Comply with LED indication status on NIC module instead of Meter LCD display	Tender specification to be complied
137	Pg 70 of 446 7.2 METER BOX	Meter Box:Meter box shall be of polycarbonate transparent type (Degree of protection-IP55) Cable entry to meter **box should be from side and gland should be such aligned** that cable should enter meter box in upward direction to ensure that in case of rain water does not enter meter box by flowing along the cable.	Request modify the requirement as "Cable entry and exit from bottom and suitable gland should be provided".	Tender specification to be complied
138	Meter Box Technical Specification METER Box Clause No. 7.2 Pg 70 of 446	Cable entry to meter box should be **from side** and gland should be such aligned that cable should enter meter box in upward direction to ensure that in case of rain water does not enter meter box by flowing along the cable.	**Our submission: Sir, from this clause we understand that Cable Glands are required in Bottom side of the Meter Box. So, that Cable should enter Meter Box in upward direction to ensure that in case of Rain water does not enter Meter Box by flowing along the Cable.** **Kindly confirm.**	Tender specification to be complied
139	Pg 72 of 446 11.0 SAMPLE	**Sample:** **Tendering Stage:** Bidders are required to manufacture 04 numbers of sample meters as per the TPCODL specification (sealed, unsealed and openable base and cover to view/test the inner circuits)and submit the samples (non-returnable) along with bid for approval	3 nos of Samples have been sought for other ratings, while 4 nos have been specified for Single Phase Smart Meter. Kindly confirm the quantity of samples required.	Tender specification to be complied
140	Pg 76 of 446 Anneure-1	Connection diagrams of tampers for 1Ph	Load switch will disconnect in case of Neutral Miss & Neutral Disturbancve conditions	Shall be provided during detail engineering
141	Pg 81 to 88 of 446 Annecure-2 OBIS Codes and profile parameters	OBIS Codes and profile parameters	OBIS Codes and profile parameeters will be as per IS15959 Part-2. However comply it as per Tata Power requirements and can be verified during commencement sample approvals	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
142	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.6 LOAD SURVEY(FOR PRE-PAID, POST-PAID & NET METER MODE) Page No. 20 of 49 Pg 59 of 446	**Load survey data should be at least with 5 decimal place**	**Our submission: Sir, the Load Survey Energies shall be provided with 3 decimal Digits.** **You are requested to kindly accept the same.**	Tender specification to be complied
143	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7 INSTANTANEOUS PARAMETERS Page No. 20 of 49 Pg 59 of 446	**Cumulative Power Off Duration** 00000	**Our submission: Sir, the OBIS Code is not available for 'Cumulative Power Off duration' in Instantaneous Parameters in the OBIS Code list available with this specifications for Single Phase Smart Meters.** **You are requested either provide the OBIS Code for the same or remove the requirement from the specifications.**	Shall be provided during detail engineering
144	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.1 GENERAL INFORMATION Page No. 21 of 49 Pg 60 of 446	Meter shall be capable for providing below mentioned general parameters in BCS and HES Meter Serial number Firmware Version Manufacturer's **Name Manufacturing Date (MM/**YY)	**Our submission: Sir, only Manufacture Year shall be provided in line of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
145	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.1 GENERAL INFORMATION Page No. 21 of 49 Pg 60 of 446	Meter shall be capable for providing below mentioned general parameters in BCS and HES Meter Serial number Firmware Version Manufacturer's **TOD profile**	**Our submission: Sir, the same shall be available at Billing profile.** **You are requested to kindly accept the same.**	Tender specification to be complied
146	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.2 BILLING PARAMETERS Page No. 21 of 49 Pg 60 of 446	Both Export-Import mode, below mentioned parameters should be for both Export and Import. 4) **Consumption (Reading date, Current Month &12 History, time zone register wise) kWh and kVAh**	**Our submission: Sir, the 'Consumption' is derived Parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
147	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.2 BILLING PARAMETERS Page No. 21 of 49 Pg 60 of 446	**BILLING PARAMETERS** Both Export-Import mode, below mentioned parameters should be for both Export and Import. 6) **Mode of operation of dis-connector switch**	**Our submission: Sir, separate report shall be provided for the same.** **You are requested to kindly accept the same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
148	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.7.2 BILLING PARAMETERS Page No. 21 of 49 Pg 60 of 446	Both Export-Import mode, below mentioned parameters should be for both Export and Import. **7) Monthly powe**r ON**/OFF hours**	**Our submission: Sir, the OBIS Code for 'Monthly Power OFF hours' is not available in the OBIS Code list for Single Phase Smart Meters provided with this specifications** **You are requested to kindly remove the requirement from spec.**	Tender specification to be complied
149	TECHNICAL SPECIFICATION OF SINGLE PHASE SMART ENERGY METER WITH BOX Clause No. 5.8.3 NAME PLATE AND MARKING Page No. 21 of 49 Pg 60 of 446	The base color of Name plate shall be blue(as of TPCODL logo)Indelibly and distinctly marked with all essential particulars as per relevant standards along with the following. iv. Serial number (Meter serial number shall be **laser printed** on name plate instead of sticker). However the following shall be printed in bar code on the meter nameplate.(shall be **laser printed** on name plate instead of sticker) All data shall be laser printed on meter along with Sr.NO and date of manufacturing. No sticker to be used to avoid loss of data in event of fire.	**Our submission: Sir, kindly accept Indelible Printing alternatively.**	Tender specification to be complied
150	Meter Box Technical Specification METER Box Clause No. 7.2 Pg 70 of 446	Cable entry to meter box should be **from side** and gland should be such aligned that cable should enter meter box in upward direction to ensure that in case of rain water does not enter meter box by flowing along the cable.	**Our submission: Sir, from this clause we understand that Cable Glands are required in Bottom side of the Meter Box. So, that Cable should enter Meter Box in upward direction to ensure that in case of Rain water does not enter Meter Box by flowing along the Cable.** **Kindly confirm.**	Tender specification to be complied
Queries on 3Ph Whole Current SMART Energy Meter				
151	Clause No. 4.04	Reference Conditions for testing the performance of the meter : Vref = 230 V	Meter may kindly be accepted with reference voltage of 240V however shall be suitable for 230V.	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
152	Cl 4.23 Self Diagonostic Feature	The meter shall have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery (iv) NIC card status	The meter will have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery.... single status of RTC OK/fail for Real time clock & RTC battery (iii) Memory status (iv) Battery status	Tender specification to be complied
153	Cl 4.25 Alternate mode of supply to the meters	In case of meter power failure, the reading/data should be retrieved with the help of battery or other power source	Comply. The meter data downloading through optical port on Battery mode	Noted
154	Cl 4.27 Minimum Internal diameter of the terminal holes & minimum Depth of the terminal holes	9.5mm(minimum) 20mm (minimum)	9.5 mm(minimum) 16 mm (minimum)	Tender specification to be complied
155	4	4.33 Communication module of meter for AMI: …….Size /form factor of NIC card will be provided by TPCODL to the bidder and bidder should make necessary arrangement for the same..	The NIC card size and form factor is part of the design of the Smart Meter and hence would be the choice of Bidder. Request remove this condition.	Tender specification to be complied
156	4.36 Harmonics recording	The meter should record the current and voltage THD. The meter should record harmonics up to 20th harmonic Average THD of all phase for voltage THD and current THD. THD values shall have 30 minutes integration period in load survey. Accuracy of harmonics recording shall be as per meter accuracy class. The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.	The meter will record the THD as per IS13779. THD values in load survey is not applicable as per IS15959 Part-2	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
157	4.36	Harmonics recording: The meter should record the current and voltage THD. The meter should record harmonics up to 20th harmonic Average THD of all phase for voltage THD and current THD. THD values shall have 30 minutes integration period in load survey. Accuracy of harmonics recording shall be as per meter accuracy class. The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.	3Phase Whole Current meters will be used primarily for residential and small commercial consumers whose loads will have little harmonic impact on the Distribution system. Also bringing in Harmonic measurement separately for Whole current Meters will increase design complexity and result in higher cost which would not be in commensurate with the benefits reaped from such data. Request delete this requirement.	Tender specification to be complied
158	Cl 4.38 Ultrasonic welding / Chemical Bonding	Meter cover and body should be continuous &seamless ultrasonically welded only or should be chemically bonded.	Comply with Chemically welded break to open requirement	Tender specification to be complied
159	Cl 4.1 DISCONNECTOR	The cumulative number of ON/OFF operations shall also be made available.	Each operation of the switches will be logged by the meter as an event with date, time stamp and snapshot parameters as per IS 16444. Cumulative number of operrations can be explored at HES end	Tender specification to be complied
160	Cl 4.1 DISCONNECTOR	The make of the load switch should be of reputed make like Grooner (German) or equivalent	We comply CT+Relay of reputed make like KG Tech, WANJIA, RAMWAY for compact design	Tender specification to be complied
161	Cl 4.2.2 NIC MODULE DETAILS & INTEGRATION	TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.	Meter communication module will be 4G with fall back 2G network. The communication module can interchange with same OEM same technology NIC module	Tender specification to be complied
162		4.3.2 It should be the responsibility of the bidder to ensure integration of meter into HES**.**For cellular fallback, the Module should have backward compatibility.	Understand the NIC should communicate on 4G by default and fall back on 2G. Pl confirm.	Tender specification to be complied
163	Cl 4.3 Communication capabilities and software feasibilities	4.3.3 It shall be possible to reconfigure the meters for RTC,TOD slots reprogramming, DIP (Demand Integration period), billing date ,display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. And billing should be donewhenever any above mentioned attribute is changed. The change should be recorded as upgrade event.	Billing will be done in case of TOD slots reprogramming only as the other parameters configuration will not effect the metering/ calculation	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
164	Cl 4.3 Communication capabilities and software feasibilities	4.3.5 Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded within 5 minutes OTA.	Comply but the timing of data download OTA depends on the network capability/ bandwidth	Tender specification to be complied
165	Cl 4.3 Communication capabilities and software feasibilities	4.3.18 Communication NIC/ network should be immune with any external Magnetic field/ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.	Meter immunity will be as per CBIP325	Tender specification to be complied
166	Cl 4.3 Communication capabilities and software feasibilities	4.3.21 Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
167	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.1 Abnormal Magnetic field is defined as below; a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT. b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT) c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.	Meter immunity will be as per CBIP325 and sample approved by Tata power	To be complied as per CBIP-325
168	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.2. Electrostatic Discharge (ESD) :Meter shall be immune up to 50 kV and shall record accurate energy as per IS- 13779:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot the event logging threshold values as per table no. 1 in 4.6	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event	To be complied as per CBIP-325
169	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.4 Meter should be immune to high/low frequency jammer devices. Meter shall log the event in its memory as 'JAMMER' with date and time stamp, the threshold values as per table no. 1 in 4.6	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event	To be complied as per CBIP-325

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170	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.4.5 The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, micro waves like magnetron etc. the threshold values as per table no. 1 in 4.6.	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event	To be complied as per CBIP-325
171	Cl 4.5 Neutral Disturbance & other tampers	4.5.1 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of Chopped signal/ DC signal/ DC pulse upto 330V and for any value beyond this. Meter shall log the event into memory as 'Neutral Disturbance' with date & time stamp the thresholds are as per table no. 1 in 4.6	Comply. Pls provide the testing circuit diagram for chopping	Tender specification to be complied
172	Cl 4.5 Neutral Disturbance & other tampers	4.5.2 The meter should log event as 'High Neutral current' with snapshot when all three phase currents are zero and neutral current is present.	High Neutral current not applicable as per IS15959 Part-2	Tender specification to be complied
173	Cl 4.6 ABNORMAL TAMPER CONDITIONS	4.6.3 During abnormal & tamper conditions, the current shall be recorded as active current and line current. 4.6.6 All tamper/event logging thresholds values shall be configurable from remotes.	During abnormal & tamper conditions, the current will be recorded as IS15959 Part-2 Tamper threshold will be factory configurable	Tender specification to be complied
174	Table No.1 Tamper table	ESD/JAMMER	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	Tender specification to be complied
175	Table No.1 Tamper table	Microwave immediate	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	Tender specification to be complied
176	Table No.1 Tamper table	Meter shall be provided with feature for terminal cover opening with time stamping.	Terminal cover Open tamper not applicable as per IS15959 Part2	Tender specification to be complied
177	Table No.1 Tamper table	No Display	Not applicable as per IS 15959 Part-2	Noted
178	Table No.1 Tamper table	Temperature Rise	Not applicable as per IS 15959 Part-2	Noted
179	Table No.1 Tamper table	Tampers Compartment Size	Tamper Compartment size will be 80+80+40 events for voltage related, current related and other events	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
180	Cl 4.6 ABNORMAL TAMPER CONDITIONS	4.6.10 The meter shall record in export registers in case of reversal of all CT terminals.The meters are to be used for registration of energy consumed by the consumer, as such the meters shall be programmed for import mode and in case of reversal of energy direction (reversal of all CT terminals) meter shall register energy separately in export mode i.e. in case of CT reversal, meter shall record scalar (not vector sum) sum of energy.	The meter will register the energies in export register if the meter is in Net metering mode. The meter will register the energy in the forward register in CT reversal condition if the meter is in Forward mode	Tender specification to be complied
181	Cl 4.7 EVENT COMPARTMENTS	Transaction events compartment size shall be minimum 100 events	Transaction events compartment size shall be minimum 32 events as per IS15959 Part -2	Tender specification to be complied
182	Cl 5 General Constructions Page 66	Components make list	Reputed Component makes list will be as per the the attcahed seperate sheet	Tender specification to be complied
183	Cl 5.1 METER BODY	5.1.9 The Meter body shall be such that the liquid or chemical shall not reach the electronic parts if liquid is injected from meter body such as meter terminals, push button, display, NIC card casing etc. Necessary protection and water tight sealing to be provided at terminals and Push buttons etc.	Comply with IP51. Hoever pls mention the testing procedure to explore.	Tender specification to be complied
184	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.1 Terminal block should be in single mould with meter body base. (Not separate)	Both Terminal block & meter body base are separate but assure it can not be removed without breaking	Tender specification to be complied
185	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.6 To get the desired temp rise & avoid hot spots the design of the each terminal screw, terminal screw shall be an Allen screw head & shall be operated with allen key only. Size of the allen screw is 8mm dia. (OEM should supply one Allen Key for every 1000 meters supplies.	Comply screws heads will be flat headed with minus shape. However explore Allen Type M6 Screw (Nickle Plated MS screw)	Tender specification to be complied
186	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.9 The manner of fixing the conductors to the terminals shall ensure adequate and durable contact such that there is no risk of loosening or undue heating.Terminals shall be preferably with Allen screw with at least 8 mm dia for better contact area. Terminal & screw should not be damaged during regular opening and tightening. (MS terminals not accepted)	Comply screws heads will be flat headed with minus shape. However explore Allen Type M6 Screw (Nickle Plated MS screw)	Tender specification to be complied

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187	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.10 Internal diameter of the terminal holes shall be minimum 9.5 mm; minimum clearance between adjacent terminals shall be 10 mm. Minimum Depth of the terminal holes shall be of 20 mm.	5.2.10 Internal diameter of the terminal holes shall be minimum 9.5 mm; minimum clearance between adjacent terminals shall be 10 mm. Minimum Depth of the terminal holes shall be of 16mm.	Tender specification to be complied
188	Cl 5.6 MD Integration	The MD integration period shall be 15 minutes (integration period programmable by MRI at site and also thru AMR with adequate security level). The MD resetting shall be automatic at the 1st of the month i.e. 0000 hours of 1st day of the month. Manual MD reset button shall not be available. Last six MD values shall be stored in the memory and one to be displayed in the Auto scroll mode. MD shall be recorded and displayed with minimum three digits before decimal and minimum two digits afterdecimal points. MD integration shall be of sliding Type at an interval of 10 min.	Sliding interval should be 5 minutes for 15 minutes MD IP anf if sliding interval of 10 minute is required then the MD IP should be 30 minutes	Tender specification to be complied
189	Cl 5.7 Parameters in BCS	Fail to be log in memory in the following conditions only in BCS not in display a) RTC fail b) NVM memory fail c) Battery fail d) NIC card fail	Fail to be log in memory in the following conditions only in BCS not in display a) RTC fail b) NVM memory fail c) Battery fail	Tender specification to be complied
190	Cl 5.7 Parameters in BCS	'High THD' to be log in memory in the following conditions only in BCS not in display a) THDV any phase higher than threshold b) THDI any phase higher than threshold	Not applicable as per IS 15959 Part-2	Tender specification to be complied
191	Cl 5.7.1 Load Survey parameters	Load Survey parameters for prepaid & postpaid mode	Parameters will be as per IS15959 Part-2	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
192	5.7.1	Load Survey: …. j) THD Voltage phase wise k) THD Current phase wise	3Phase Whole Current meters will be used primarily for residential and small commercial consumers whose loads will have little harmonic impact on the Distribution system. Also bringing in Harmonic measurement separately for Whole current Meters will increase design complexity and result in higher cost which would not be in commensurate with the benefits reaped from such data. Request delete this requirement.	Tender specification to be complied
193	Cl 5.7.2 INSTANTANEOUS PARAMETERS	INSTANTANEOUS PARAMETERS	The Instantaneous profile parameters will be as per IS15959 Part-2	Tender specification to be complied
194		4.3.15 The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	A composite system including Smart Meters, Communication network & Head End system is being sought against this tender. The output from Head end system would be integrated with TPCODL's MDM. No other software is required to be provided by Bidder. Please confirm.	Tender specification to be complied
195		5.2.5 The terminals and connections shall be suitable to carry up to 120 % of Imax continuously (Imax 100 A). The size, design & material of Busbar /Shunt/ Terminal shall be with suitable cross sectional area so that temperature rise will not be more than 20 ˚C above ambient temperature of 45˚C at 120% of I max loading for 06hrs continuous. This test of temp. rise shall be done on tender samples & will also be done on any samples from any supplied lot..	Rise in terminal block temperature is not related to satisfactory operation & measurement by the meter. Hence the requirement of influence of temperature rise may be limited to the requirements of IS 13779. Please confirm.	Tender specification to be complied

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196	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 1 SCOPE Page No. 2 of 37	three phase four wire,**3x230 voltage,**20-100A, whole current static smart energy meters of accuracy class 1.0 (here after referred as meters)	**Meter shall have reference voltage 240V AC however shall comply 230V also as per specs.** **Kindly accept.**	Noted
197	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 .1 DISCONNECTOR Page No. 7 of 37	4.03) Basic Current (Ib) & rated Maximum current (Imax) **Ib= 20A; Imax= 100 Amps** (Meter shall be able to continuously carry 120% of Imax Meeting the accuracy requirements)	**In India 3 Phase 10-60 Amp. Current Rating Meters are widely used.** **Above 60 Amp. Load Connections may be converted to CT Operated Meter Service connections.** **We request you to kindly amend Meter Current Rating to 10-60 Amp. and BIS Licence and Type Test Reports of same Current rating may kindly be accepted.**	Tender specification to be complied
198	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 3 of 37	4.03) Basic Current (Ib) & rated Maximum current (Imax) Ib= 20A; Imax= 100 Amps **(Meter shall be able to continuously carry 120% of Imax Meeting the accuracy requirements)**	**Kindly note that as per IS 16444 Part1 Load will be disconnected at 105% Imax. This spec requirement is conflicting with the requirement of IS.** **You are requested to kindly clarify the same.**	To be complied as per IS16444

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
199	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 4 of 37	4.07) Power Consumption Voltage circuit: Maximum 5.0 W and 15 VA **Current Circuit :Maximum 4VA**	**Kindly amend the power consumption as per IS 16444 since 4VA limit is applicable as per IS 13779.**	To be complied as per IS16444
200	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 4 of 37	4.13) Minimum Insulation resistance at test voltage 500+/- 50 V dc a)Between frame & current ,voltage circuits as well as auxiliary circuits connected together: **b)Between each current (or voltage circuit) & each and every other circuit. :**	**Please note that voltage wires are solidly connected to current wires inside the meter hence this requirement is not applicable.** **You are requested to kindly remove the requirement from the specification.**	Tender specification to be complied
201	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 37	4.36) Harmonics recording **The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.**	**The OBIS Code is not available in DLMS IS 15959 (Part 2) Category D2 for the same. OBIS code list is for 3 Phase Whole Current meter is not available in this specification.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
202	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 .1 DISCONNECTOR Page No. 7 of 37	2) Operating Current range **<u>20 mA to 120 A</u>**	**Kindly accept maximum operating current range up to I Max. only (i.e 60 Amp in case of 3Phase 10-60 Amp. Smart Meter)**	Tender specification to be complied
203	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 .1 DISCONNECTOR Page No. 7 of 37	6) Utilization Categories **<u>UC2 or better</u>**	**As per IS16444 (Part 1):2015 Standard the Category UC 1 is applicable to Smart Meters rated at maximum Current up to 100A.** **In support, we have enclosed a copy of BIS Amendment No. 2 to IS:16444 (Part 1) stating 'Category UC 1 is applicable to Smart Meters rated at maximum Current upto 100A'.**	Tender specification to be complied
204	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 37	**<u>With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.</u>**	**We understand that the 4G fallback 3G and 2G is required as per mentioned in single phase spec.** **Pl confirm.** **It is not recommenced to hot swapping of electronic device. There may be chances of damage of devices.** **You are requested to remove the hot swapping requirement.**	Tender specification to be complied

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205	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 37	b) NIC card shall support remote Device Management Capability such as Reset, Configuration, **Log Check,** Ping, and over the air Firmware upgrade	**Requirement is not clear. Please elaborate the same. Kindly note that same is also not mentioned in IS15959 requirement. Hence the HES communication also need to be defined.**	Tender specification to be complied
206	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 37	f) NIC shall also support on-demand / schedule reading, connect / disconnect, **time sync,** configuration and over the air firmware upgrade from the head-end system.	**Kindly note that the time sync is the HES feature. Kindly confirm the same.**	Tender specification to be complied
207	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 and 8 of 37	g) NIC shall have persistent network connectivity throughout as defined by 4G and **NBIoT standards. It shall support self-configuring and self-healing features.**	**Sir, the Utility use the Private Networks for Security reasons. The self-configuration shall not be possible for the Private Networks.** **So, please remove this requirement from the Technical specification.** **From NB-IoT and 4G any one Communication Technology shall be provided in NIC Card.** **Please confirm.**	NIC shall have persistent network connectivity throughout as defined by 4G fall back on 2G. It shall support self-configuring and self-healing features.

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
208	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	**i) Support for possibility for provision of a unique certificate/key in each card for mutual authentication with the HES from security point of view.** **j) NIC shall support standard security protocols.** **k) NIC shall be compliant with cyber security norms.**	**Kindly not that the security shall be as per IS 15959 part 2. Kindly confirm** **Same clarification shall be applicable for other variant also**	Tender specification to be complied
209	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	l) NIC shall register with network i.e. **login and logout of each terminal to the HES.** It shall be recognized in the HESas authorized node.	**Pl elaborate the login and logout requirement. This Data is not mentioned in DLMS IS15959 (Part 2) Standard.** **Kindly confirm same need to be provided as per IS**	Tender specification to be complied
210	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	m) **Attributes such as Firmware version, Hardware version, Signal strength values, packet error rate, should be pushed periodically to HES for effective communication management.**	**As per IS 15959 Part2 'Device ID, Push Setup ID, RTC + 10 instant parameters' are allowed in Periodic Push. Also the OBIS codes are not supported by IS 15959 Part2 for the mentioned parameters.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
211	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	n) **Data must be encrypted with AES-256 bit.**	**Kindly not that the security shall be as per IS 15959 part 2. Kindly confirm** **Same clarification shall be applicable for other variant also**	Tender specification to be complied
212	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	p) Colour coded LED (a) For latching on to the network (b) For latched on to the network (c) For data flow indication. q) **Meter display should have provision for showing if NIC card if : 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES**	**The same requirements already covered in above clause (p).** **Kindly accept with clause (P)**	Tender specification to be complied
213	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.3) Meter data should remain intact with timings. **And billing should be done whenever any above mentioned attribute is changed.** The change should be recorded as upgrade event.	**Kindly remove the requirement of billing when RTC is changed.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
214	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.5) Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. **The complete data shall be downloaded within 5 minutes OTA.**	**Data downloading through OTA shall depend on signal strength at that time.** **You are requested to kindly remove the requirement of time limit for Data Downloading through OTA.**	Tender specification to be complied
215	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.9) Bidder should also provide software for changing/upgrading meter firmware in mass and should support integration of this software with HES. Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Kindly clarify whether Supply of CMRI is tender supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU.** **please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication
216	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.10) Additional exceptional events should also be communicated to HES by meter immediately after the occurrence **through RF / RF Mesh.** It should also indicate the restoration of the same event.	**The NIC requirement is with cellular. It seems typo error, Kindly amend as per cellular**	Noted
217		4.3.13) Last mile **mesh network** must support auto-registration and self-healing feature to continue operation using easiest possible available route in case of failure of any communication **device in the mesh.** Self-registrations in first communication.		
218		4.3.14) Also, the Bidder must ensure that, the mode of communication used **for RF** shall be consistent with the Government of India stipulations.		

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219	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.11) **List of events to be reported should be configurable over the air(OTA)**.	**List of events to be reported shall be provided as per Table8 (Object list of Event Push to HES) of IS 15959 Part2.** **You are requested to accept the same.**	Tender specification to be complied
220	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 10 of 37	4.3.15) The Bidder's supplied meter with **third party communication module should have suitable hand-shaking features to allow a third-party MDMS** (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	**Our submission: Sir, we understand this clause is applicable to Bidders who shall supply 3rd Party NIC Card.** **However, kindly note that NIC Card has to be integrated with 3rd Party MDM.**	Tender specification to be complied
221	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 10 of 37	4.3.18) **Communication NIC/network should be immune with any external Magnetic field/ESD/Jammer/HV voltage influence such that it shall not affect the normal overall functionality.**	**Kindly note the radio communication is based on the electromagnetic waves and the distractive test may effect the signal pattern and temporary effect the communication. The communication shall work properly after the distractive testing.** **Kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
222	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 10 of 37	4.3.19) Meter once powered up with NIC card should be self-detected by RF network and its basic name plate details & current readings are transferred to HES.	**Kindly note that in IS15959 (Part 2) the Name Plate requirement is for the Meter and the NIC module is part of Meter.** **You are requested to kindly accept the Meter Name Plate detail.**	With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition. Meter nameplate to be provided as per tender specification.
223	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 10 and 11 of 37	Abnormal Magnetic field is defined as below; **a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT.** **b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT)** **c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.**	**Meter shall be immune at stray magnetic field as per CBIP-325. Meter may be either immune or run at Vref, Imax, UPF in the event of logging of presence of abnormal magnetic induction with date & time as per CBIP-325.** **You are requested to accept the same.**	To be complied as per CBIP-325
224	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 11 of 37	4.4.2) Electrostatic Discharge (ESD) **Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999/CBIP-325. Meter shall log the event into memory as ' ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot, the event loggingthreshold values as per table no. 1 in 4.6**	**Abnormal Voltage & frequency generating device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of field strength of this non standard devices. As per CBIP-325 ESD limit is 35 kV.** **You are requested to accept meter behavior as either immune or log event with ESD up to 35kV.**	To be complied as per CBIP-325

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225	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 11 of 37	4.4.4) **Meter should immune to high/low frequency jammer devices. Meter shall log the event in its memory as" JAMMER" with date and time stamp, the threshold values as per table no. 1 in 4.6.**	**Jammer device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of such non standard devices.** **You are requested to accept meter behavior as either immune or log event.**	Tender specification to be complied
226	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 11 of 37	4.4.5) The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, **micro waves like** magnetron etc. the threshold values as per table no. 1 in 4.6.	**For Microwave there is no limit and meter may be damaged within fraction of seconds. Microwave based testing may have help hazards to person apply testing.** **You are requested to kindly accept the same and remove the requirement.**	Noted
227	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.5 Neutral Disturbance & other tampers Page No. 11 of 37	4.5.1) The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. **DC injection shall be tested both in phase and neutral.**	**Neutral CT is used for CT Bypass Tamper Event not for Measurement hence we request you to kindly remove the requirement of DC injection Test from Neutral.**	Tender specification to be complied

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228	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 11 of 37	4.6.2) For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for occurrence (T1) and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event (T3).	**For all tamper event the time stamp and snapshot parameters shall be recorded at end time of event for occurrence (T2) and for restoration (T4).** **You are requested to kindly accept the same.**	Tender specification to be complied
229	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 11 of 37	4.6.3) **During abnormal & tamper conditions, the current shall be recorded as active current and line current.**	**OBIS codes are not available for active current & line currents either in IS 15959 Part2. OBIS code list is not available for 3 Phase Whole Current meters in this spec.** **You are requested to kindly accept phase currents in line with IS 15959 Part2.**	Tender specification to be complied
230	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 12 of 37	4.6.4) **The events for which the restoration not occurred those should not be removed from meter memory and FIFO should not be applicable for unrestored event.**	**Separate report shall be provided for the unrestored events.** **You are requested to kindly accept the same.**	Tender specification to be complied
231	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 12 of 37	4.6.8) Table No.1 Persistence Time for Occurrences Persistence Time for Restoration Threshold Value for Occurrence of Events Threshold Value for Restoration of Events **Compartment Size**	**Compartments shall be provided as per IS 15959 Part2. Size shall be available for compartments not for the individual type of events.** **You are requested to kindly accept the same.**	Tender specification to be complied

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232	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Occurrence of Events Current difference >30% between phases and **I min 10% of Ibasic**	**Kindly note that requirement should be 'Imin > 10% of Ibasic', '>' is missed.** **Seems to be typographical error and same may be amended accordingly.**	Noted
233	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Occurrence of Events I >1% of Ib and Power Factor **≤ 0.5 in any phase**	**As per IS 15959 Part 2, low PF tamper is global tamper not phase wise so for occurrence system PF <= 0.5 and for restoration system PF >= 0.7. Kindly accept**	Noted
234	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Restoration of Events Voltage <115% of Vref&Current > 10% Ib AND Frequency > 47 Hz **OR** Frequency < 53 Hz	**Seems to be typographical error. This should be 'AND' not 'OR'.** **You are requested to kindly amend the specification accordingly.**	Noted
235	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Persistence Time for Occurrences **Over current= 0hr 30min 0sec (OL)**	**Kindly note that as per IS 16444 Part1 Load will be disconnected at 105% Imax. This spec requirement is conflicting with the requirement of IS.** **You are requested to clarify the same.**	To be complied as per IS16444

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236	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Occurrence of Events >Preset value (default value set **at 120%Ib)**	**Seems to be typographical error. Value should be '120% Imax' for occurrence and '100% Imax' for restoration.** **You are requested to kindly amend the specification accordingly.**	Noted
237	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 14 of 37	4.6.8) Table No.1 Persistence Time for Occurrences **Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Meter shall not be able to detect 'Microwave' condition. You are requested to kindly remove the same from specification.**	Noted
238	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 14 of 37	4.6.8) Table No.1 Persistence Time for Occurrences **No Display** 0 Hr 30 Min 0 sec	**Meter shall not be able to detect 'No display' condition. We shall provide jig for read data for no display meters. Kindly accept the same.**	Noted
239	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 14 of 37	4.6.9) Meter shall latch & store cumulative count **and cumulative durations** all the tampers events which have logged /occurred / stored in memory of meter from the date of energization till life of meter.	**OBIS code is not available for 'Cumulative tamper duration' in either IS 15959 Part2. OBIS code list is not available for 3 Phase WC meters in this specification.** **You are requested to provide OBIS code for the same or delete the requirement from technical specification.**	Tender specification to be complied

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240	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.7 Event compartments Page No. 14 of 37	4.7.1) The event compartments shall be **IS 15959 Part-1** table 9.	**Seems to be typographical error. Standard applicable for Smart 3 Phase whole current meters is IS 15959 Part2.** **You are requested to amend accordingly.**	Tender specification to be complied
241	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 1. **Measurement/ computing chips**	**Please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' make also acceptable. Also 'Silergy' (earlier Maxim) is a reputed make & using as Metering chip application.** **Kindly include the same.**	Tender specification to be complied
242	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 2. **Memory chips/NVM**	**Please add 'ROHM' also since this is a well reputed make.**	Tender specification to be complied
243	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 3. **Display modules**	**Kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), Holitec, Yeboo' since these are well reputed glass manufacturers.**	Tender specification to be complied

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244	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 4. **Optical port**	**Please add 'Wuhan' also since this is a reputed Make.**	Tender specification to be complied
245	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 6. **Electronic components**	**Please add NXP, Yageo , Samwha ,Epcos, Fairchild , Osram, Toshiba since these are reputed makes**	Tender specification to be complied
246	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 8. **Micro controller and RTC having separate**	**Please add 'Silergy (Maxim Integrated)', ,'Texas Instrument','ST' also since these are reputed Makes.** **Please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable.**	Tender specification to be complied
247	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 17 of 37	Component Function 9. **Temperature sensor**	**Now the Smart Micro-controllers are available in which Temperature Sensor is in-built. Hence, there is no need to use separate Sensors.** **We request you to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
248	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.2 Terminals, Terminal Block Page No. 18 of 37	5.2.8 Temperature sensor to be provided from inside near the terminal block of the energy meter for sensing the temperature	**The position of Temperature Sensor shall be as per Manufacturer Design instead of near Terminal Block which shall serve the purpose of Utility. Hence, we request you to kindly accept the same.**	Tender specification to be complied
249	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.6 MD Integration Page No. 20 of 37	MD shall be recorded and displayed with minimum three digits before decimal and minimum two digits after decimal points. **MD integration shall be of sliding Type at an interval of 10 min.**	**In the same clause mentioned that MD integration period shall be 15 minutes. From this we understood that default integration period shall be 15 minutes with sub-integration period 5 minutes and configurable to 30 minutes with sub-integration period of 10 minutes.** **You are requested to kindly clarify if the requirement is different from what we understood.**	Tender specification to be complied
250	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7 Parameters in BCS Page No. 20 of 37	Last six months history data (kWh &kVAh (lag only) current & TOD reading and MD(kW & kVA(lag only) current & TOD) with data and time) and **at least last 25 tamper events for each tamper shall be available in the non volatile Memory.**	**Our submission: Compartments shall be provided as per IS 15959 Part2. Size is applicable for compartments only not for type of events.** **You are requested to accept the same.**	Tender specification to be complied
251	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7 Parameters in BCS Page No. 20 of 37	**'High THD' to be log in memory in the following conditions only in BCS not in display**	**The OBIS Code is not available for the same in IS 15959 Part 2. OBIS code list is not available for 3 phase whole current meters in this spec.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied

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252	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days c) **Actual neutral current**	**OBIS code is not available for neutral current in Load Survey data of IS 15959 Part2 for category D2. OBIS code list is not available for 3 Phase Whole Current meter in the spec.** **You are requested to kindly remove the same from specification.**	Tender specification to be complied
253	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days d) **Average PF**	**Kindly note that Average PF, Demands kW & kVA are a derived parameters and the same shall be available at BCS end.**	Tender specification to be complied
254	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days **j) THD Voltage phase wise** **k) THD Current phase wise**	**OBIS code is not available for THD voltages & currents inn IS 15959 Part2. OBIS code list for 3 Phase Whole Current meter is not available in this spec.** **You are requested to kindly provide the same or remove the requirement from specification.**	Tender specification to be complied

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255	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days **l) Demand(KW)** **m) Demand(KVA)**	**Demands kW, kVA are derived parameters and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
256	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	Meter shall be capable of recording daily Energy and Demand 00:00 to 24:00 Hrs kWh, kVAh, kW, kVA in BCS for 45 days. Midnight energy value of cumulative kWh, kVAh and **daily consumption kWh, kVAh** should be available in meter memory for last 45 days.	**Kindly note that daily consumption is a derived parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
257	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	Load survey data should be at least with **5 decimal place**	**Load Survey Energies shall be provided with 3 decimal digits.** **You are requested to kindly accept the same.**	Tender specification to be complied

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258	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.2 Instantaneous Parameters Page No. 22 of 37	**Cumulative Power ON Duration** 00000	**OBIS code for 'Cumulative Power ON duration' is not available in IS 15959 Part Part 2 for category D2 Instantaneous Parameters. OBIS code list is not available for 3 Phase WC meters with this spec.** **You are requested either to provide the OBIS code for the same or remove the requirement from specifications**	Tender specification to be complied
259	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.3 General Information Page No. 22 of 37	Meter shall be capable for providing below mentioned general parameters in memory **Manufacture Date (MM/YY)**	**Only manufacture year shall be provided in line of IS 15959 Part2. You are requested to accept the same.**	Tender specification to be complied
260	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.3 General Information Page No. 22 of 37	Meter shall be capable for providing below mentioned general parameters in memory **TOD profile**	**The same shall be available at Billing profile.** **You are requested to kindly accept the same.**	Tender specification to be complied
261	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.4 Billing Parameters Page No. 22 of 37	4) **Mode of operation of disconnector switch**	**Same shall be available in a separate report.** **You are requested to accept the same.**	Tender specification to be complied

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262	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.8.1 Auto Scroll mode& push button mode in Post paid mode Page No. 23 of 37	Following shall be continuously displayed in auto scroll and push button mode in the given order; **TOD Cum. kWh (T1,T2,T3)** **TOD Cum. kVAh (T1,T2,T3)**	**Kindly note that as per clause 5.5 of spec default TOD zones are 2 only.** **Here it seems to be typographical error and same may be amended as (T1+T2) instead of (T1+T2+T3) for both parameters.**	Noted
263	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.9 Output Device Page No. 26 of 37	1. Pulse Rate:……The test output device shall have constant **pulse rate of (preferred value- 400) pulse** / kWh & pulse/kVArh.	**Meter constant shall be as per manufacturer design.** **You are requested to kindly accept the same.**	Noted
264	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 6.0 NAME PLATE AND MARKING Page No. 27 of 37	The name plate data should be laser printed. The base color of Name plate shall be blue(as of TPCODLlogo)Indelibly and distinctly marked with all essential particulars as per relevant standards along with the following. iv.Serial number (Meter serial number shall be **laser printed on name plate instead of sticker**). However the following shall be printed in bar code on the meter nameplate.(shall be **laser printed on name plate instead of sticker**).	**Kindly accept indelible printing alternatively.**	Tender specification to be complied

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265	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 19.0 GUARANTEED TECHNICAL PARTICULARS Page No. 37 of 37	B) Component data 9. **Temperature sensor**	**Now the smart Micro-controllers are available in which Temperature Sensor is in-built. Hence, there is no need to use separate sensors.** **We request you to kindly accept the same.**	Tender specification to be complied
266	Meter Technical Specification Clause No. 5.1.3 METER BODY	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent on prior approval from the TPCODL. (If different material offered the bidders should submit material data sheet in technical bid)**	**Our submission: Sir, please also accept equivalent material like, LEXAN 143/143R for Meter base, as the same material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
267	Meter Technical Specification Clause No. 5.2.1 Terminals, Terminal Block	Terminal block should be in **single mould with meter body base. (Not separate)**	**Our submission: Sir, kindly note that Terminal Block shall have sliding arrangement mounted from inside of the Meter Body so that it becomes integral part of the Meter.** **We request you to kindly accept the same.**	Tender specification to be complied
268	Three Phase Whole Current Smart Meter Clause No.4.28 GENERALTECHNICAL REQUIREMNTS	clearance between **adjacent terminals is 10 mm** (minimum). Similarly in clause no. 5.2.10 “Terminals, Terminal Block” it is mentioned that minimum clearance between adjacent terminals shall be 10 mm.	**Our submission: Sir, we request you to kindly also accept clearance and crepage distance between adjacent Terminals as per Clause No. 6.60 of IS 13779 / CBIP 325.** **Please confirm the acceptability of the same.**	Tender specification to be complied

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269	Meter Technical Specification Clause No. 5.1.3 METER BODY	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent on prior approval from the TPCODL. (If different material offered the bidders should submit material data sheet in technical bid)**	**Our submission: Sir, please also accept equivalent Material like, LEXAN 143/143R for Meter Base, as the same Material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
270	Meter Technical Specification Clause No. 5.2.1 Terminals, Terminal Block	Terminal block should be in **single mould with meter body base. (Not separate)**	**Our submission: Sir, kindly note that Terminal Block shall have sliding arrangement Mounted from inside of the Meter Body so that it becomes integral part of the Meter.** **We request you to kindly accept the same.**	Tender specification to be complied
271	Three Phase Smart Meter GENERALTECHNICAL REQUIREMNTS Clause No. 4.28	**clearance between adjacent terminals is 10 mm (minimum).** Similarly in clause no. 5.2.9 “Terminals, Terminal Block” it is mentioned that minimum clearance between adjacent terminals shall be 10 mm. Also in Clause no. 5.2.12, it is mention that the terminals should have center to center distance of 11.5mm.	**Our submission: Sir, we request you to kindly also accept clearance and crepage distance between adjacent terminals as per clause no. 6.60 of IS 13779 /CBIP 325.** **Please confirm the acceptability of the same**	Tender specification to be complied

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272	Three Phase Smart Meter Clause No. 5.2.14	'Terminals, Terminal Block' the preferred meter size shall be **HxWxT= 235x300x120mm.** Height is from the base of the terminal block. Further the bidder can check the dimensions and space availability in the **existing TPCODL meter boxes** at our MMG department for accommodating the smart meters in same boxes and meter body design should be such that it should accommodate in existing boxes of TPCODL.	**Our submission: Sir, Every Meter Manuracture has their own specific Dimensions / Terminal Block Size.** **However, gainst this clause we shall propose our size of TPDDL Meter Casing is as follows: 299mm x 193mm x 104mm approx. (With Terminal Cover)** **We request you to kindly confirm your acceptance / allow Meter Manufacturer's existing dimenssions.**	Tender specification to be complied
273	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 1 SCOPE Page No. 2 of 37	three phase four wire,**3x230 voltage,**20-100A, whole current static smart energy meters of accuracy class 1.0 (here after referred as meters)	**Our submission: Sir, Meter shall have reference Voltage 240V AC however shall comply 230V also as per specifications.** **Kindly accept the same.**	Noted
274	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 .1 DISCONNECTOR Page No. 7 of 37	4.03) Basic Current (Ib) & rated Maximum current (Imax) **Ib= 20A; Imax= 100 Amps** (Meter shall be able to continuously carry 120% of Imax Meeting the accuracy requirements)	**Our submission: Sir, in India 3 Phase 10-60 Amp. Current Rating Meters are widely used.** **Above 60 Amp. Load Connections may be converted to CT Operated Meter Service connections.** **We request you to kindly amend Meter Current Rating to 10-60 Amp. and BIS Licence and Type Test Reports of same Current rating may kindly be accepted.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
275	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 3 of 37	4.03) Basic Current (Ib) & rated Maximum current (Imax) Ib= 20A; Imax= 100 Amps **(Meter shall be able to continuously carry 120% of Imax Meeting the accuracy requirements)**	**Our submission: Sir, kindly note that as per IS 16444 (Part 1) Load will be disconnected at 105% Imax.** **This specifications requirement is conflicting with the requirement of IS Standard** **You are requested to kindly clarify the same.**	To be complied as per IS16444
276	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 4 of 37	4.07) Power Consumption Voltage circuit: Maximum 5.0 W and 15 VA **Current Circuit :Maximum 4VA**	**Our submission: Sir, kindly amend the Power Consumption as per IS 16444 since 4VA limit is applicable for conventional type Meter as per IS 13779 Standard**	To be complied as per IS16444
277	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 4 of 37	4.13) Minimum Insulation resistance at test voltage 500+/- 50 V dc a)Between frame & current ,voltage circuits as well as auxiliary circuits connected together: **b)Between each current (or voltage circuit) & each and every other circuit. :**	**Our submission: Sir, please note that the Voltage Wires are solidly connected to Current Wires inside the Meter hence this requirement is not applicable for Whole Current / direct connected Meters.** **You are requested to kindly remove the requirement from the specification.**	To be complied as per IS13779, IS16444

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
278	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 37	4.36) Harmonics recording **The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.**	**Our submission: Sir, the OBIS Code is not available in DLMS IS 15959 (Part 2) Category D2 for the same.** **The OBIS Code list for 3 Phase Whole Current Meter is not available in this specification.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied
279	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 .1 DISCONNECTOR Page No. 7 of 37	2) Operating Current range **20 mA to 120 A**	**Our submission: Sir, kindly accept maximum operating current range up to I Max. only (i.e 60 Amp in case of 3Phase 10-60 Amp. Smart Meter)** **Sir, in India 3 Phase 10-60 Amp. Current Rating Meters are widely used.** **Above 60 Amp. Load Connections may be converted to CT Operated Meter Service connections.** **We request you to kindly amend Meter Current Rating to 10-60 Amp. and BIS Licence and Type Test Reports of same Current rating may kindly be accepted.**	Tender specification to be complied
280	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4 .1 DISCONNECTOR Page No. 7 of 37	6) Utilization Categories **UC2 or better**	**Our submission: Sir, as per IS16444 (Part 1):2015 Standard the Category UC 1 is applicable to Smart Meters rated at maximum Current up to 100A.** **In support, we have enclosed a copy of BIS Amendment No. 2 to IS:16444 (Part 1) stating 'Category UC 1 is applicable to Smart Meters rated at maximum Current upto 100A'.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
281	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 37	**With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.**	**Our submission: Sir, we understand that the 4G fallback 3G and 2G is required as per mentioned in Single Phase specifications.** **Please confirm.** **It is not recommenced to hot swapping of Electronic Device. There may be chances of damage of Devices.** **You are requested to kindly remove the hot swapping requirement.**	Tender specification to be complied
282	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 37	b) NIC card shall support remote Device Management Capability such as Reset, Configuration, **Log Check,** Ping, and over the air Firmware upgrade	**Our submission: Sir, requirement is not clear.** **Please elaborate the same.** **Kindly note that same is also not mentioned in DLMS IS15959 Standard requirement.** **Hence, the HES Communication also need to be defined.**	Tender specification to be complied
283	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 37	f) NIC shall also support on-demand / schedule reading, connect / disconnect, **time sync,** configuration and over the air firmware upgrade from the head-end system.	**Our submission: Sir, kindly note that the time sync is the HES feature.** **Kindly confirm the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
284	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 7 and 8 of 37	g) NIC shall have persistent network connectivity throughout as defined by 4G standards. It shall support **self-configuring and self-healing features.**	**Our submission: Sir, the Utility use the Private Networks for Security reasons. The self-configuration shall not be possible for the Private Networks.** **So, please remove this requirement from the Technical specification.** **Please confirm.**	Tender specification to be complied
285	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	i) Support for possibility for provision of a unique certificate/key in each card for **mutual authentication with the HES from security point** of view. j) NIC shall support standard **security protocols.** k) NIC shall be compliant with **cyber security norms.**	**Our submission: Sir, kindly not that the security shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm** **Same clarification is required for other Meter variant also required in this tender.**	Tender specification to be complied
286	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	l) NIC shall register with network i.e. **login and logout of each terminal to the HES.** It shall be recognized in the HES as authorized node.	**Our submission: Sir, please elaborate the login and logout requirement.** **This Data is not mentioned in DLMS IS15959 (Part 2) Standard.** **Kindly confirm same need to be provided as per IS Standard.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
287	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	m) Attributes such **as Firmware version, Hardware version, Signal strength values, packet error rate, should be pushed** periodically to HES for effective communication management.	**Our submission: Sir, as per DLMS IS 15959 (Part 2) 'Device ID, Push Setup ID, RTC and 10 instant Parameters' are allowed in Periodic Push.** **Also the OBIS Codes are not supported by DLMS IS 15959 (Part 2) Standard for these mentioned Parameters.**	Tender specification to be complied
288	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	n) **Data must be encrypted with AES-256 bit.**	**Our submission: Sir, kindly not that the security shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm** **Sir, same clarification is required for other Meter variants of this tender.**	Tender specification to be complied
289	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.2 NIC MODULE DETAILS & INTEGRATION Page No. 8 of 37	p) Colour coded LED (a) For latching on to the network (b) For latched on to the network (c) For data flow indication. q) **Meter display should have provision for showing if NIC card if : 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES**	**Our submission: Sir, the same requirements already covered in above Clause No. (p).** **Kindly accept with Clause No. (p)**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
290	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.3) Meter data should remain intact with timings. **And billing should be done whenever any above mentioned attribute is changed.** The change should be recorded as upgrade event.	**Our submission: Sir, kindly remove the requirement of Billing when RTC is changed.**	Tender specification to be complied
291	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.5) Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded **within 5 minutes OTA.**	**Our submission: Sir, Data downloading through OTA shall depend on signal strength at that time.** **You are requested to kindly remove the requirement of time limit for Data Downloading through OTA.**	Tender specification to be complied
292	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.9) Bidder should also provide software for changing/upgrading meter firmware in mass and should support integration of this software with HES. Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Our submission: Sir, kindly clarify whether Supply of CMRI is tender supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU.** **Please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
293	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.13) Last mile **mesh network** must support auto-registration and self-healing feature to continue operation using easiest possible available route in case of failure of any communication **device in the mesh.** Self-registrations in first communication.	**Our submission: Sir, the NIC requirement is with Cellular.** **Here it seems to be a typographical error.** **Kindly amend as per Cellular**	NIC shall have persistent network connectivity throughout as defined by 4G fall back on 2G.
294	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 8 of 37	4.3.11) List of **events to be reported should be configurable** over the air(OTA).	**Our submission: Sir, list of Events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Tender specification to be complied
295	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 10 of 37	4.3.15) The Bidder's supplied meter with **third party communication module should have suitable hand-shaking features to allow a third-party MDMS** (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	**Our submission: Sir, we understand this clause is applicable to Bidders who shall supply 3rd Party NIC Card.** **However, kindly note that NIC Card has to be integrated with 3rd Party MDM in the event of Order placed.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
296	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 10 of 37	4.3.18) **Communication NIC/network should be immune with any external Magnetic field/ESD/Jammer/HV voltage influence such that it shall not affect the normal overall functionality.**	**Our submission: Sir, kindly note that the Radio Communication is based on the Electromagnetic Waves and the distructive test may effect the signal pattern and temporarily effect the Communication.** **The Communication shall work properly after the distructive testing.** **Kindly accept the same.**	Tender specification to be complied
297	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.3 Communication capabilities and software feasibilities Page No. 10 of 37	4.3.19) Meter once powered up with NIC card should be self-detected by RF network **and its basic name plate details** & current readings are transferred to HES.	**Our submission: Sir, kindly note that in DLMS IS15959 (Part 2) the Name Plate requirement is for the Meter and the NIC Module is part of Meter.** **You are requested to kindly accept the Meter Name Plate detail.**	With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition. Meter nameplate to be provided as per tender specification.
298	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 10 and 11 of 37	Abnormal Magnetic field is defined as below; **a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT.** **b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT)** **c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.**	**Our submission: Sir, Meter shall be immune at stray Magnetic field as per the prevailing CBIP-325. Meter may be either immune or run at Vref, Imax, UPF in the event of logging of presence of abnormal Magnetic Induction with date & time as per the prevailing CBIP-325.** **You are requested to kindly accept the same.**	To be complied as per CBIP-325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
299	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 11 of 37	4.4.2) Electrostatic Discharge (ESD) **Meter shall be immune up to 50 kV and shall record accurate energy as per IS-13779:1999/CBIP-325. Meter shall log the event into memory as ' ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot, the event loggingthreshold values as per table no. 1 in 4.6**	**Our submission: Sir, Abnormal Voltage and Frequency generating Device which generates the ESD is a Non-standard Device and none of the NABL Lab issue the certificate of field strength of this non standard Devices.** **As per CBIP-325 ESD limit is 35 kV.** **You are requested to kindly accept meter behavior as either immune or log event with ESD up to 35kV.**	To be complied as per CBIP-325
300	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 11 of 37	4.4.4) **Meter should immune to high/low frequency jammer devices. Meter shall log the event in its memory as" JAMMER" with date and time stamp, the threshold values as per table no. 1 in 4.6.**	**Our submission: Sir, Jammer Device which generates the ESD is a non-standard Device and none of the NABL Lab issue the certificate of such non standard Devices.** **You are requested to accept Meter behavior as either Immune or log Event.**	Tender specification to be complied
301	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.4 Immunity against external influencing signals Page No. 11 of 37	4.4.5) The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, **micro waves like** magnetron etc. the threshold values as per table no. 1 in 4.6.	**Our submission: Sir, for Microwave there is no limit and meter may be damaged within fraction of seconds.** **Microwave based testing hazards to person conducting this test.** **You are requested to kindly accept the same and remove the requirement.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
302	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.5 Neutral Disturbance & other tampers Page No. 11 of 37	4.5.1) The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. **DC injection shall be tested both in phase and neutral.**	**Our submission: Sir, Neutral CT is used for CT Bypass Tamper Event not for Measurement hence we request you to kindly remove the requirement of DC injection Test from Neutral.**	Tender specification to be complied
303	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 11 of 37	4.6.2) For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for occurrence **(T1)** and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event **(T3).**	**Our submission: Sir, for all Tamper Event the time stamp and snapshot Parameters shall be recorded at end time of event for Occurrence (T2) and for Restoration (T4).** **You are requested to kindly accept the same.**	Tender specification to be complied
304	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 11 of 37	4.6.3) During abnormal & tamper conditions, the current shall be recorded as **active current and line current.**	**Our submission: Sir, the OBIS Codes are not available for Active Current and Line Currents either in DLMS IS 15959 (Part 2) Standard.** **The OBIS Code list is not available for 3 Phase Whole Current Meters in this specifications.** **You are requested to kindly accept Phase Currents in line with DLMS IS 15959 (Part 2) Standard.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
305	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 12 of 37	4.6.4) The events for which the restoration not occurred those should not be removed from meter memory and FIFO **should not be applicable for unrestored event.**	**Our submission: Sir, separate report shall be provided for the unrestored Events.** **You are requested to kindly accept the same.**	Tender specification to be complied
306	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 12 of 37	4.6.8) Table No.1 Persistence Time for Occurrences Persistence Time for Restoration Threshold Value for Occurrence of Events Threshold Value for Restoration of Events **Compartment Size**	**Our submission: Sir, Compartments shall be provided as per DLMS IS 15959 (Part 2) Standard.** **Size shall be available for compartments not for the individual type of Events.** **You are requested to kindly accept the same.**	Tender specification to be complied
307	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Occurrence of Events Current difference >30% between phases and **I min 10% of Ibasic**	**Our submission: Sir, kindly note that requirement should be 'Imin > 10% of Ibasic', '>' is missing.** **It seems to be a typographical error and same may be amended accordingly.**	Noted
308	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Occurrence of Events I >1% of Ib and Power Factor **≤ 0.5 in any phase**	**Our submission: Sir, as per DLMS IS 15959 (Part 2) Standard, low PF tamper is global tamper not Phase Wise.** **So, for Occurrence system PF <= 0.5 and for Restoration system PF >= 0.7.** **Kindly accept.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
309	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Restoration of Events Voltage <115% of Vref&Current > 10% Ib AND Frequency > 47 Hz **OR** Frequency < 53 Hz	**Our submission: Sir, it seems to be typographical error.** **This should be 'AND' not 'OR'.** **You are requested to kindly amend the specification accordingly.**	Noted
310	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Persistence Time for Occurrences **Over current= 0hr 30min 0sec (OL)**	**Our submission: Sir, kindly note that as per IS 16444 (Part 1) Load will be disconnected at 105% Imax.** **This specifications requirement is conflicting with the requirement of IS Standard.** **You are requested to clarify the same.**	Tender specification to be complied
311	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 13 of 37	4.6.8) Table No.1 Threshold Value for Occurrence of Events >Preset value (default value set **at 120%Ib)**	**Our submission: Sir, Seems to be typographical error.** **Value should be '120% Imax' for occurrence and '100% Imax' for restoration.** **You are requested to kindly amend the specification accordingly.**	Noted
312	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 14 of 37	4.6.8) Table No.1 Persistence Time for Occurrences **Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Our submission: Sir, Meter shall not be able to detect 'Microwave' condition.** **You are requested to kindly remove the same from specification.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
313	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 14 of 37	4.6.8) Table No.1 Persistence Time for Occurrences **No Display** 0 Hr 30 Min 0 sec	**Our submission: Sir, Meter shall not be able to detect 'No Display' condition.** **We shall provide Jig for Read Data for no Display Meters.** **Kindly accept the same.**	Noted
314	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.6 Abnormal and Tamper conditions Page No. 14 of 37	4.6.9) Meter shall latch & store cumulative count **and cumulative durations** all the tampers events which have logged /occurred / stored in memory of meter from the date of energization till life of meter.	**Our submission: Sir, the OBIS Code is not available for 'Cumulative Tamper duration' in either DLMS IS 15959 (Part 2) Standard.** **The OBIS Code list is not available for 3 Phase Whole Current Meters in this specification.** **You are requested to kindly provide the OBIS Code for the same or remove this requirement from the Technical Specification.**	Shall be provided during detail engineering
315	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 4.7 Event compartments Page No. 14 of 37	4.7.1) The event compartments shall be **IS 15959 Part-1** table 9.	**Our submission: Sir, seems to be a typographical error.** **Standard applicable for Smart 3 Phase Whole Current Meters is DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly amend accordingly.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
316	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 1. **Measurement/ computing chips**	**Our submission: Sir, please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable.** **Also 'Silergy' (earlier Maxim) is a reputed Make & using as Metering chip application.** **Kindly include the same.**	Tender specification to be complied
317	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 2. **Memory chips/NVM**	**Our submission: Sir, please add 'ROHM' also since this is a well reputed Make.**	Tender specification to be complied
318	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 3. **Display modules**	**Our submission: Sir, kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), 'Holitec', 'Yeboo' since these are well reputed Glass Manufacturers.**	Tender specification to be complied
319	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 4. **Optical port**	**Our submission: Sir, please add 'Wuhan' also since this is a reputed Make.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
320	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 6. **Electronic components**	**Our submission: Sir, please add NXP, Yageo, Samwha ,Epcos, Fairchild , Osram, Toshiba since these are reputed Makes**	Tender specification to be complied
321	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 37	Component Function 8. **Micro controller and RTC having separate**	**Our submission: Sir, please add 'Silergy (Maxim Integrated)', ,'Texas Instrument','ST' also since these are reputed Makes.** **Please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable.**	Tender specification to be complied
322	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5 GENERALCONSTRUCTIONS Page No. 17 of 37	Component Function 9. **Temperature sensor**	**Our submission: Sir, now the Smart Micro-controllers are available in which Temperature Sensor is in-built.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
323	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 19.0 GUARANTEED TECHNICAL PARTICULARS Page No. 37 of 37	B) Component data 9. **Temperature sensor**	**Hence, there is no need to use separate Sensors.** **We request you to kindly accept the same.**	Noted
324	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.2 Terminals, Terminal Block Page No. 18 of 37	5.2.8 Temperature sensor to be provided from inside **near the terminal block** of the energy meter for sensing the temperature	**Our submission: Sir, the position of Temperature Sensor shall be as per Manufacturer Design instead of near Terminal Block which shall serve the purpose of Utility.** **Hence, we request you to kindly accept the same.**	Tender specification to be complied
325	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.6 MD Integration Page No. 20 of 37	MD shall be recorded and displayed with minimum three digits before decimal and minimum two digits after decimal points. **MD integration shall be of sliding Type at an interval of 10 min.**	**Our submission: Sir, in the same clause mentioned that MD integration period shall be 15 minutes. From this we understood that default integration period shall be 15 minutes with sub-integration period 5 minutes and configurable to 30 minutes with sub-integration period of 10 minutes.** **You are requested to kindly clarify if the requirement is different from what we understood.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
326	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7 Parameters in BCS Page No. 20 of 37	Last six months history data (kWh &kVAh (lag only) current & TOD reading and MD(kW & kVA(lag only) current & TOD) with data and time) and **at least last 25 tamper events for each tamper shall be available in the non volatile Memory.**	**Our submission: Sir, Compartments shall be provided as per DLMS IS 15959 (Part 2) Standard.** **Size is applicable for compartments only not for type of Events.** **You are requested to kindly accept the same.**	Tender specification to be complied
327	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7 Parameters in BCS Page No. 20 of 37	**'High THD' to be log in memory in the following conditions only in BCS not in display**	**Our submission: Sir, the OBIS Code is not available for the THD in DLMS IS 15959 (Part 2) Standard.** **The OBIS Code list is not available for 3 Phase Whole Current Meters in this specifications.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied
328	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days c) **Actual neutral current**	**Our submission: Sir, the OBIS Code is not available for Neutral Current in Load Survey Data of DLMS IS 15959 (Part 2) Standard for Category D2.** **The OBIS Code list is not available for 3 Phase Whole Current Meter in this specifications.** **You are requested to kindly remove the same from specification.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
329	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days d) **Average PF**	**Our submission: Sir, kindly note that Average PF, Demands kW and kVA are a derived Parameters and the same shall be available at BCS end.**	Tender specification to be complied
330	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days **j) THD Voltage phase wise** **k) THD Current phase wise**	**Our submission: Sir, the OBIS Code is not available for THD Voltages & Currents in DLMS IS 15959 (Part 2) Standard.** **The OBIS Code list for 3 Phase Whole Current Meter is not available in this specifications.** **You are requested to kindly provide the same or remove the requirement from specification.**	Tender specification to be complied
331	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 45 power ON days **l) Demand(KW)** **m) Demand(KVA)**	**Our submission: Sir, the Demands kW, kVA are derived Parameters and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
332	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	Meter shall be capable of recording daily Energy and Demand 00:00 to 24:00 Hrs kWh, kVAh, kW, kVA in BCS for 45 days. Midnight energy value of cumulative kWh, kVAh and **daily consumption kWh, kVAh** should be available in meter memory for last 45 days.	**Our submission: Sir, kindly note that daily Consumption is a derived Parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
333	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.1 Load survey (for pre-paid & postpaid meter mode) Page No. 21 of 37	Load survey data should be at least with **5 decimal place**	**Our submission: Sir, Load Survey Energies shall be provided with 3 decimal Digits.** **You are requested to kindly accept the same.**	Tender specification to be complied
334	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.2 Instantaneous Parameters Page No. 22 of 37	Meter shall be capable for following Instantaneous Parameters in Memory and should be available in BCS. **Cumulative Power ON Duration** 00000	**Our submission: Sir, the OBIS Code for 'Cumulative Power ON duration' is not available in DLMS IS 15959 (Part 2) for Category D2 Instantaneous Parameters.** **The OBIS Code list is not available for 3 Phase Whole Current Meters with this specifications.** **You are requested kindly either to provide the OBIS code for the same or remove the requirement from specifications**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
335	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.3 General Information Page No. 22 of 37	Meter shall be capable for providing below mentioned general parameters in memory **Manufacture Date (MM/YY)**	**Our submission: Sir, only Manufacture year shall be provided in line of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Noted
336	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.3 General Information Page No. 22 of 37	Meter shall be capable for providing below mentioned **general parameters** in memory **TOD profile**	**Our submission: Sir, the same shall be available at Billing profile.** **You are requested to kindly accept the same.**	Tender specification to be complied
337	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.7.4 Billing Parameters Page No. 22 of 37	**Billing Parameters** 4) **Mode of operation of disconnector switch**	**Our submission: Sir, 'Operation of disconnector switch' shall be available in a separate report.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
338	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.8.1 Auto Scroll mode& push button mode in Post paid mode Page No. 23 of 37	Following shall be continuously displayed in auto scroll and push button mode in the given order; **TOD Cum. kWh (T1,T2,T3)** **TOD Cum. kVAh (T1,T2,T3)**	**Our submission: Sir, kindly note that as per Clause No. 5.5 of specifications default TOD zones are 2 only.** **Here, it seems to be a typographical error and same may be amended as (T1 + T2) instead of (T1 + T2 + T3) for both the Parameters.**	Noted
339	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 5.9 Output Device Page No. 26 of 37	1. Pulse Rate:……The test output device shall have constant **pulse rate of (preferred value- 400) pulse** / kWh & pulse/kVArh.	**Our submission: Sir, Meter Constant shall be as per Manufacturer design.** **You are requested to kindly accept the same.**	Noted
340	SPECIFICATION FOR THREE PHASE 4 WIRE WHOLE CURRENT SMART METER WITH BOX Clause No. 6.0 NAME PLATE AND MARKING Page No. 27 of 37	The name plate data should be laser printed. The base color of Name plate shall be blue(as of TPCODLlogo)Indelibly and distinctly marked with all essential particulars as per relevant standards along with the following. iv.Serial number (Meter serial number shall be **laser printed** on name plate instead of sticker). However the following shall be printed in bar code on the meter nameplate.(shall be **laser printed** on name plate instead of sticker).	**Our submission: Sir, kindly accept Indelible Printing alternatively.**	Tender specification to be complied
341	Meter Technical Specification Clause No. 5.1.3 METER BODY	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent on prior approval from the TPCODL. (If different material offered the bidders should submit material data sheet in technical bid)**	**Our submission: Sir, please also accept equivalent material like, LEXAN 143/143R for Meter base, as the same material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
342	Meter Technical Specification Clause No. 5.2.1 Terminals, Terminal Block	Terminal block should be in **single mould with meter body base. (Not separate)**	**Our submission: Sir, kindly note that Terminal Block shall have sliding arrangement mounted from inside of the Meter Body so that it becomes integral part of the Meter.** **We request you to kindly accept the same.**	Tender specification to be complied
343	Three Phase Whole Current Smart Meter Clause No.4.28 GENERALTECHNICAL REQUIREMNTS	clearance between **adjacent terminals is 10 mm** (minimum). Similarly in clause no. 5.2.10 "Terminals, Terminal Block" it is mentioned that minimum clearance between **adjacent terminals shall be 10 mm.**	**Our submission: Sir, we request you to kindly also accept clearance and crepage distance between adjacent Terminals as per Clause No. 6.60 of IS 13779 / CBIP 325.** **Please confirm the acceptability of the same.**	Tender specification to be complied
344	Meter Technical Specification Clause No. 5.1.3 METER BODY	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent on prior approval from the TPCODL. (If different material offered the bidders should submit material data sheet in technical bid)**	**Our submission: Sir, please also accept equivalent Material like, LEXAN 143/143R for Meter Base, as the same Material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
345	Meter Technical Specification Clause No. 5.2.1 Terminals, Terminal Block	Terminal block should be in **single mould with meter body base. (Not separate)**	**Our submission: Sir, kindly note that Terminal Block shall have sliding arrangement Mounted from inside of the Meter Body so that it becomes integral part of the Meter.** **We request you to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
346	Three Phase Smart Meter GENERALTECHNICAL REQUIREMNTS Clause No. 4.28	**clearance between adjacent terminals is 10 mm (minimum).** Similarly in clause no. 5.2.9 “Terminals, Terminal Block” it is mentioned that minimum clearance between **adjacent terminals shall be 10 mm.** Also in Clause no. 5.2.12, it is mention that the terminals should have **center to center distance of 11.5mm.**	**Our submission: Sir, we request you to kindly also accept clearance and crepage distance between adjacent terminals as per clause no. 6.60 of IS 13779 /CBIP 325.** **Please confirm the acceptability of the same**	Tender specification to be complied
347	Three Phase Smart Meter Clause No. 5.2.14	‘Terminals, Terminal Block’ the preferred meter size shall be **HxWxT= 235x300x120mm.** Height is from the base of the terminal block. Further the bidder can check the dimensions and space availability in the **existing TPCODL meter boxes** at our MMG department for accommodating the smart meters in same boxes and meter body design should be such that it should accommodate in existing boxes of TPCODL.	**Our submission: Sir, Every Meter Manuracture has their own specific Dimensions / Terminal Block Size.** **However, gainst this clause we shall propose our size of TPDDL Meter Casing is as follows: 299mm x 193mm x 104mm approx. (With Terminal Cover)** **We request you to kindly confirm your acceptance / allow Meter Manufacturer's existing dimenssions.**	Tender specification to be complied
Queries on 3Ph LTCT SMART Energy Meter				
348	Clause No. 4.04	Reference Conditions for testing the performance of the meter : Vref = 230 V	Meter may kindly be accepted with reference voltage of 240V however shall be suitable for 230V.	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
349	Cl 4.23 Self Diagonostic Feature	The meter shall have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery (iv) NIC card status	The meter will have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery.... single status of RTC OK/fail for Real time clock & RTC battery (iii) Memory status (iv) Battery status	Tender specification to be complied
350	Cl 4.27 Minimum Internal diameter of the terminal holes & minimum Depth of the terminal holes	5mm(minimum) 20mm (minimum)	Minimum Internal diameter of the terminal holes : 5mm (minimum) Minimum Depth of the terminal holes : 15mm for S1 & 17mm for S2	Tender specification to be complied
351	Cl 4.34 Ultrasonic welding / Chemical Bonding	Meter cover and body should be continuous &seamless ultrasonically welded only or should be chemically bonded.	Comply with Chemically welded break to open requirement	Tender specification to be complied
352	Cl 4.39 Terminal Arrangement	The terminal pin shall be 12 pin Zig zag arrangement with phase voltage terminal in between current terminals as mentioned in clause no. 5.2.11	The terminal pin shall be 11 pins with Zigzag arrangement for Phase Voltage terminals in between current	Noted
353	Cl 4.38 Harmonics recording	The meter should record the current and voltage THD. The meter should record harmonics up to 20th harmonic Average THD of all phase for voltage THD and current THD. THD values shall have 30 minutes integration period in load survey. Accuracy of harmonics recording shall be as per meter accuracy class. The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.	The meter will record the THD as per IS14697. THD values in loas survey is not applicable as per IS15959 Part-3	Tender specification to be complied
354	Cl 4.40 The preferred meter size shall be	235x300x120mm (further the bidder can check details space available in existing box at our MMG store before design)	The meter size will be as per the Genus Product	Noted
355	Cl 4.1 NIC MODULE DETAILS & INTEGRATION	TPCODL intends to leverage 4G as theprimary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.	Meter communication module will be 4G with fall back 2G network. The communication module can not be interchanged with any other interface card.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
356	Cl 4.1 NIC MODULE DETAILS & INTEGRATION	(q) Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
357	Cl 4.2 Communication capabilities and software feasibilities	4.3.3 It shall be possible to reconfigure the meters for RTC,TOD slots reprogramming, DIP (Demand Integration period), billing date ,display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. And billing should be donewhenever any above mentioned attribute is changed. The change should be recorded as upgrade event.	Billing will be done in case of TOD slots reprogramming only as the other parameters will not effect the calculation of the meter	Tender specification to be complied
358	Cl 4.3 Communication capabilities and software feasibilities	4.3.5 Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded within 5 minutes OTA.	The timing of Data download over the air depends on the network capability	Tender specification to be complied
359	Cl 4.3 Communication capabilities and software feasibilities	4.3.18 Communication NIC/ network should be immune with any external Magnetic field/ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	Tender specification to be complied
360	Cl 4.3 Communication capabilities and software feasibilities	4.3.21 Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
361	Cl 4.3 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.3.1 Abnormal Magnetic field is defined as below; a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT. b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT) c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.	Meter will comply the magnet clause as per CBIP325	To be complied as per CBIP- 325

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362	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS	4.3.2. Electrostatic Discharge (ESD) :Meter shall be immune up to 50 kV and shall record accurate energy as per IS- 13779:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot the event logging threshold values as per table no. 1 in 4.6 4.3.4 Meter should be immune to high/low frequency jammer devices. Meter shall log the event in its memory as 'JAMMER' with date and time stamp, the threshold values as per table no. 1 in 4.5 4.3.5 The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, micro waves like magnetron etc. the threshold values as per table no. 1 in 4.5	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	Tender specification to be complied
363	Cl 4.4 Neutral Disturbance & other tampers	4.4.1 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of Chopped signal/ DC signal/ DC pulse upto 330V and for any value beyond this. Meter shall log the event into memory as 'Neutral Disturbance' with date & time stamp the thresholds are as per table no. 1 in 4.5 4.4.2 The meter should log event as 'High Neutral current' with snapshot when all three phase currents are zero and neutral current is present. 4.4.3 An event to be provided for invalid phase association with name 'Invalid phase association'	Pls provide the testing circuit diagram for chopping High Neutral current not applicable as per IS15959 Part-3 Invalid phase association not applicable as per IS15959 part-3	Tender specification to be complied
364	Cl 4.5 ABNORMAL TAMPER CONDITIONS	4.6.3 During abnormal & tamper conditions, the current shall be recorded as active current and line current. 4.6.6 All tamper/event logging thresholds values shall be configurable from remotes.	During abnormal & tamper conditions, the current will be recorded as per IS15959 Part-3 Tamper threshold will be factory configurable	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
365	Table No.1 Tamper table	ESD/JAMMER	Meter immune as Per CBIP 325 , No tamper logging in this condition	Tender specification to be complied
366	Table No.1 Tamper table	Microwave immediate	Not applicable as per IS 15959 Part-3	Tender specification to be complied
367	Table No.1 Tamper table	Meter shall be provided with feature for terminal cover opening with time stamping.	Terminal cover Open tamper not applicable as per IS15959 Part3	Tender specification to be complied
368	Table No.1 Tamper table	No Display	Not applicable as per IS 15959 Part-3	Tender specification to be complied
369	Table No.1 Tamper table	Temperature Rise	Not applicable as per IS 15959 Part-3	Tender specification to be complied
370	Table No.1 Tamper table	Tampers Compartment Size	Tamper Compartment size will be 80+80+40 events for voltage related, current related and other events	Tender specification to be complied
371	Cl 4.5 ABNORMAL TAMPER CONDITIONS	4.5.8 The meter shall record in export registers in case of reversal of all CT terminals.The meters are to be used for registration of energy consumed by the consumer, as such the meters shall be programmed for import mode and in case of reversal of energy direction (reversal of all CT terminals) meter shall register energy separately in export mode i.e. in case of CT reversal, meter shall record scalar (not vector sum) sum of energy.	The meter will register the energies in export register if the meter is in Net metering mode. The meter will register the energy in the forward register in CT reversal condition if the meter is in Forward mode	OK
372	Cl 4.5 ABNORMAL TAMPER CONDITIONS	4.5.11 An event to be provided for invalid phase association with name 'Invalid phase association'	Invalid phase association not applicable as per IS15959 part-3	Tender specification to be complied
373	Cl 4.6 EVENT COMPARTMENTS	Transaction events compartment size shall be minimum 100 events	Transaction events compartment size shall be minimum 32 events as per IS15959 Part -3	Tender specification to be complied
374	Cl 5 General Constructions Page 104	Components make list	Component make list will be as per the the attcahed sheet in the mail.	Tender specification to be complied
375	Cl 5.1 METER BODY	5.1.9 The Meter body shall be such that the liquid or chemical shall not reach the electronic parts if liquid is injected from meter body such as meter terminals, push button, display, NIC card casing etc. Necessary protection and water tight sealing to be provided at terminals and Push buttons etc.	Pls mention the testing procedure.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
376	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.1 Terminal block should be in single mould with meter body base. (Not separate)	Both Terminal block & meter body base are separate	Tender specification to be complied
377	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.9 Internal diameter of the terminal holes shall be minimum 5 mm; minimum clearance between adjacent terminals shall be 10 mm. Minimum Depth of the terminal holes shall be of 20 mm.	Internal diameter of the terminal holes shall be minimum 5 mm; minimum clearance between adjacent terminals shall be 10 mm. Minimum Depth of the terminal holes shall be of 15mm minimum	Tender specification to be complied
378	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.12 The terminal pin shall be 12 pin Zigzag arrangement	The terminal pin shall be 11 pins with Zigzag arrangement for Phase Voltage terminals in between current	OK
379	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.13 5.2.13 Pin configuration shall be R-Cin, R volt, R-Cout, Y-Cin, Y volt, Y-Cout, B-Cin, B-volt, B-Cout, Neutral-in, N, N-out	Pin configuration shall be R-Cin, R volt, R-Cout, Y-Cin, Y volt, Y-Cout, B-Cin, B-volt, B-Cout, Neutral-in,N-out	OK
380	Cl 5.2 TERMINALS, TERMINAL BLOCK	5.2.14 The preferred meter size shall be HxWxT= 235x300x120mm.	Meter size will be as per the company product	Noted
381	Cl 5.3 TERMINAL COVER	5.3.1 Terminal cover shall be short type and transparent with polycarbonate LEXAN 143R/943A or equivalent on prior approval from the TPCODL.	Terminal cover shall be short/extended type and transparent with polycarbonate LEXAN 143R/943A or equivalent on prior approval from the TPCODL.	Tender specification to be complied
382	Cl 5.6 MD Integration	The MD integration period shall be 15 minutes (integration period programmable by MRI at site and also thru AMR with adequate security level). The MD resetting shall be automatic at the 1st of the month i.e. 0000 hours of 1st day of the month. Manual MD reset button shall not be available. Last six MD values shall be stored in the memory and one to be displayed in the Auto scroll mode. MD shall be recorded and displayed with minimum three digits before decimal and minimum two digits afterdecimal points. MD integration shall be of sliding Type at an interval of 10 min.	Sliding interval should be 5 minutes for 15 minutes MD IP anf if sliding interval of 10 minute is required then the MD IP should be 30 minutes	Tender specification to be complied
383	Cl 5.7 Parameters in BCS	Fail to be log in memory in the following conditions only in BCS not in display a) RTC fail b) NVM memory fail c) Battery fail d) NIC card fail	Fail to be log in memory in the following conditions only in BCS not in display a) RTC fail b) NVM memory fail c) Battery fail	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
384	Cl 5.7 Parameters in BCS	'High THD' to be log in memory in the following conditions only in BCS not in display a) THDV any phase higher than threshold b) THDI any phase higher than threshold	Not applicable as per IS 15959 Part-3	Tender specification to be complied
385	Cl 5.7.1 Load Survey parameters	Load Survey parameters for prepaid & postpaid mode	Parameters will be as per IS15959 Part-3	Tender specification to be complied
386	Cl 5.7.2 INSTANTANEOUS PARAMETERS	INSTANTANEOUS PARAMETERS	The Instantaneous profile parameters will be as per IS15959 Part-3	Tender specification to be complied
387	Cl 5.8.2 PUSH BUTTON MODE DISPLAY	Display for ESD Tamper Count Latest ESD tamper occurrence date Latest ESD tamper occurrence time	We will not provide Logging for ESD tamper; therefore the display will not be applicable	Tender specification to be complied
388	4	4.35 Communication module of meter for AMI: …….Size /form factor of NIC card will be provided by TPCODL to the bidder and bidder should make necessary arrangement for the same..	The NIC card size and form factor is part of the design of the Smart Meter and hence would be the choice of Bidder. Request remove this condition.	Tender specification to be complied
389	4.3.2	It should be the responsibility of the bidder to ensure integration of meter into HES.For cellular fallback, the Module should have backward compatibility.	Understand the NIC should communicate on 4G by default and fall back on 2G. Pl confirm.	OK
390		4.3.15 The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	A composite system including Smart Meters, Communication network & Head End system is being sought against this tender. The output from Head end system would be integrated with TPCODL's MDM. No other software is required to be provided by Bidder. Please confirm.	Detail to be shared during Blueprinting Stage Further the bidder may refer "Proposed Architecture" for the same
391		5.2.6 TThe terminals and connections shall be suitable to carry up to 100 % of Imax continuously. The size, design & material of Busbar /Shunt/Terminal shall be with suitable cross sectional area so that temperature rise will not be more than 20 ˚C above ambient temperature of 45˚C at 100% of I max loading for 06 hrs continuous. This test of temp. rise shall be done on tender samples & will also be done on any samples from any supplied lot	Rise in terminal block temperature is not related to satisfactory operation & measurement by the meter. Hence the requirement of influence of temperature rise may be limited to the requirements of IS 13779. Please confirm.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
392	5.2.14	The preferred meter size shall be HxWxT= 235x300x120mm. Height is from the base of the terminal block. Further the bidder can check the dimensions and space availability in the existing TPCODL meter boxes at our MMG department for accommodating the smart meters in same boxes and meter body design should be such that it should accommodate in existing boxes of TPCODL	The dimensions are restrictive , hence request delete this requirement	Noted
393	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 1 SCOPE Page No. 2 of 36	This specification covers the technical requirements of design, manufacturing, testing at meter manufacturer's works ,packing, forwarding, supply and unloading at store/site of three phase four Wire,**3x230 voltage**,100/5A, 200/5A current transformer operated ac static meters of accuracy class 0.5S...	**Meter shall have reference voltage 240V AC however shall comply 230V also as per specs.** **Kindly accept**	Noted
394	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 1 SCOPE Page No. 2 of 36	This specification covers the technical requirements of design, manufacturing, testing at meter manufacturer's works ,packing, forwarding, supply and unloading at store/site of three phase four Wire,3x230 voltage,100/5A, 200/5A current transformer operated ac static meters of accuracy class 0.5S (here after referred as meters) complete with all accessories for efficient and trouble free operation with communication module (NIC) compatible **with 4G and fall back to 2G technology.**	**Kindly include the 3G communication in fallback. It will increase the reliability in communication where 2G n/w shall not be available the fallback 3G will support for reliable communication.** **Kindly amend the clause for same**	Tender specification to be complied
395	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.35 Communication module of meter for AMI Page No. 2 of 36	**Tata Power intends to leverage 4G as the primary communication technology with hot swappable 2G /3G Interface Card** as a fall back for meter data acquisition.	**We understand that the 4G fallback 3G and 2G is required as per mentioned in single phase spec. Please confirm.** **It is not recommended to hot swapping of electronic device. There may be chances of damage of devices.** **You are requested to kindly remove the hot swapping requirement.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
396	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 36	4.38) Harmonics recording **The meter shall generate a flag/event whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.**	**The OBIS Code for the same is not available in IS 15959 Part 3 for category D3. OBIS code list is not available for LTCT meters in this specification.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied
397	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	With the service providers offering **4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.**	**We understand that the 4G fallback 3G and 2G is required as per mentioned in single Phase Specifications. Please confirm.** **It is not recommenced to hot swapping of electronic device. There may be chances of damage of devices.** **You are requested to remove the hot swapping requirement.**	Tender specification to be complied
398	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	b) NIC card shall support remote Device Management Capability such as Reset, Configuration, **Log Check**, Ping, and over the air Firmware upgrade	**Requirement is not clear. Please elaborate the same.** **Kindly note that same is also not mentioned in IS15959 requirement. hence the HES communication need to be defined also.**	Tender specification to be complied
399	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	f) NIC shall also support on-demand / schedule reading, **time sync,** configuration and over the air firmware upgrade from the head-end system.	**Kindly note that the time sync is the HES feature.** **Kindly confirm the same**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
400	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	g) NIC shall have persistent network connectivity throughout as defined by 4G standards. It shall support **self-configuring features.**	**The Utility use the private networks for security reasons. The self-configuration shall not be possible for the private networks.** **Please remove this requirement from the technical specification.**	Tender specification to be complied
401	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	**j) NIC shall support standard security protocols.** **k) NIC shall be compliant with cyber security norms.** **l) NIC shall register with network i.e. login and logout of each terminal to the HES. It shall be recognized in the HESas authorized node.**	**Kindly not that the security shall be as per IS 15959 (Part 2).** **Kindly confirm** **Same clarification shall be applicable for other variant also.**	Tender specification to be complied
402	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	**m) Attributes such as Firmware version, Hardware version, Signal strength values, packet error rate, should be pushed periodically to HES for effective communication management.**	**As per IS 15959 Part2 'Device ID, Push Setup ID, RTC + 10 instant parameters' are allowed in Periodic Push. Also the OBIS codes are not supported by IS 15959 Part2 for the mentioned parameters.**	Tender specification to be complied
403	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	n) **Data must be encrypted with AES-256 bit.**	**Kindly not that the security encryption shall be as per IS 15959 part 2. Kindly confirm** **Same clarification shall be applicable for other variant also.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
404	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	q) **Meter display should have provision for showing if NIC card if : 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES**	**The same requirements already covered in above clause (p).** **Kindly accept with clause (P)**	Tender specification to be complied
405	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.3) **And billing should be done whenever any above mentioned attribute is changed. The change should be recorded as upgrade event.**	**Kindly remove the requirement of billing when RTC is changed.**	Tender specification to be complied
406	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.9) Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Kindly clarify whether Supply of CMRI is tender supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU.** **please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication
407	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.10) Additional exceptional events should also be communicated to HES by meter immediately after the occurrence through **RF / RF Mesh**. It should also indicate the restoration of the same event.	**The NIC requirement is with cellular. It seems typo error. Kindly amend as per cellular.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
408	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.11) **List of events to be reported should be configurable over the air(OTA).**The meter should have "Last Gasp" and “First Breath” feature to facilitate sending	**List of events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Tender specification to be complied
409	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.13) **Last mile mesh network must support auto-registration and self-healing feature to continue operation using easiest possible available route in case of failure of any communication device in the mesh. Self-registrations in first communication.** **4.3.14) ….Also, the Bidder must ensure that, the mode of communication used for RF shall be consistent with the Government of India stipulations.**	**The NIC requirement is with cellular. It seems typo error.** **Kindly amend as per cellular**	Noted
410	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.15) **The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS(procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.**	**Our submission: Sir, we understand this clause is applicable to Bidders who shall supply 3rd Party NIC Card.** **However, kindly note that NIC Card has to be integrated with 3rd Party MDM.**	Tender specification to be complied
411	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.18) **Communication NIC/network should be immune with any external Magnetic field/ESD/Jammer/HV voltage influence such that it shall not affect the normal overall functionality.**	**Kindly note the radio communication is based on the electromagnetic waves and the distractive test may effect the sinal pattern and temporary effect the communication. The communication shall work properly after the distractive testing.** **Kindly accept the same**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
412	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.19) **Meter once powered up with NIC card should be self-detected by RF network and its basic name plate details & current readings are transferred to HES.**	**Kindly note that in IS15959 Part 2 the name plate requirement is for the meter and the NIC module is part of meter.** **You are requested to kindly accept the Meter nameplate detail.**	With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition. Meter nameplate to be provided as per tender specification.
413	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 10 of 36	4.3.21) **Meter display should have provision for showing if NIC card if : 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES**	**The same requirements already covered in above clause (p). Kindly accept with clause (P)**	Tender specification to be complied
414	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 10 of 36	Abnormal Magnetic field is defined as below; **a. Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT.** **b. AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT)** **c. Permanent Magnet: Immune up to 0.5T and Event logging >0.5T**	**Meter shall be immune at stray magnetic field as per CBIP-325. Meter may be either immune or run at Vref, Imax, UPF in the event of logging of presence of abnormal magnetic induction with date & time as per CBIP-325.** **You are requested to accept the same.**	To be complied as per CBIP- 325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
415	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 10 of 36	4.3.2) Electrostatic Discharge (ESD) **Meter shall be immune up to 50 kV and shall record accurate energy as per IS-14697:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV with snap shot, the event loggingthreshold values as per table no. 1 in 4.5.**	**Abnormal Voltage & frequency generating device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of field strength of this non standard devices. As per CBIP-325 ESD limit is 35 kV.** **You are requested to kindly accept the Meter behavior as either immune or log event with ESD up to 35kV.**	Noted
416	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 10 and 11 of 36	4.3.4) **Meter should immune to high/low frequency jammer devices. Meter shall log theevent in its memory as" JAMMER" with date and time stamp along with snapshot, the threshold values as per table no. 1 in 4.5.**	**Jammer device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of such non standard devices.** **You are requested to accept meter behavior as either immune or log event.**	Tender specification to be complied
417	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 11 of 36	4.3.5 The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, **micro waves like** magnetron etc. the threshold values as per table no. 1 in 4.5.	**For Microwave there is no limit and meter may be damaged within fraction of seconds. Microwave based testing may have help hazards to person apply testing. You are requested to accept the same and delete the requirement.**	Noted
418	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.4 Neutral Disturbance & other tampers Page No. 11 of 36	4.4.1 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. **DC injection shall be tested both in phase and neutral.**	**DC injection test is not applicable for LTCT meters. You are requested to delete the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
419	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 36	4.5.2) **For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for occurrence (T1) and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event (T3).**	**For all tamper event the time stamp and snapshot parameters shall be recorded at end time of event for occurrence (T2) and for restoration (T4).** **You are requested to kindly accept the same.**	Tender specification to be complied
420	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 36	4.5.3) **During abnormal & tamper conditions, the current shall be recorded as active current and line current.**	**OBIS codes are not available for active current & line currents either in IS 15959 Part3. OBIS code list is not available for 3 Phase LTCT meters in this spec.** **You are requested to accept phase currents in line with IS 15959 Part3.**	Shall be provided during detail engineering
421	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 36	4.5.4) **The events for which the restoration not occurred those should not be removed from meter memory and FIFO should not be applicable for unrestored event**	**A separate report shall be provided for the unrestored events.** **You are requested to accept the same.**	Tender specification to be complied
422	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 12 of 36	4.5.6) All tamper/event logging thresholds values shall be configurable from remotes. Table No.1 ... **Compartment Size**	**Compartments shall be provided as per IS 15959 (Part 1). Size shall be available for compartments not for the individual type of events.** **You are requested to kindly accept the same.**	Tender specification to be complied

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423	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Threshold Value for Occurrence of Events I >1% of Ib and Power Factor **≤ 0.5 in any phase**	**As per IS 15959 Part 3, low PF tamper is global tamper not phase wise so for occurrence system PF <= 0.5 and for restoration system PF >= 0.7. Kindly accept**	Noted
424	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Threshold Value for Restoration of Events Voltage <115% of Vref&Current > 10% Ib AND Frequency > 47 Hz **OR** Frequency < 53 Hz	**Seems to be typographical error. This should be 'AND' not 'OR'.** **You are requested to amend the specification accordingly.**	Noted
425	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Persistence Time for Occurrences **Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Meter shall not be able to detect 'Microwave' condition. You are requested to delete the same from specification.**	Noted
426	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Persistence Time for Occurrences **No Display** 0 Hr 30 Min 0 sec	**Meter is not able to detect No display condition. We shall provide jig for reading data for no display meters. Kindly accept the same.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
427	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 14 of 36	4.5.7) Meter shall latch & store cumulative count **and cumulative durations** all the tampers events which have logged /occurred/stored in memory of meter from the date of energization till life of meter.	**Kindly note that OBIS is not available for 'cumulative duration' in IS 15959 Part3. You are requested to delete the requirement from specification**	Tender specification to be complied
428	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 14 of 36	4.5.9) The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of any two incoming wires. **It shall keep recording correctly in case of unbalance system voltage also as defined above.**	**Kindly note that meter recording shall be as per relevant electrical conditions.** **You are requested to accept the same**	Tender specification to be complied
429	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 15 of 36	All the material and electronic power components used in the manufacture of the meter shall be of highest quality and reputed make to ensure higher reliability, longer life and sustained accuracy as given below or any other equivalent make with the strict approval of TPCODL: Component Function 1. **Measurement/ computing chips**	**Please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' make also acceptable. Also 'Silergy' (earlier Maxim) is a reputed make & using as metering chip application.** **Kindly include the same.**	Tender specification to be complied
430	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 15 of 36	Component Function 2. **Memory chips/NVM**	**Please add 'ROHM' also since this is a well reputed make.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
431	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 15 of 36	Component Function 3. **Display modules**	**Kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), Holitec, Yeboo' since these are well reputed glass manufacturers.**	Tender specification to be complied
432	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 36	Component Function 4. **Optical port**	**Please add 'Wuhan' also since this is a reputed make.**	Tender specification to be complied
433	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 1 SCOPE Page No. 2 of 36	This specification covers the technical requirements of design, manufacturing, testing at meter manufacturer's works ,packing, forwarding, supply and unloading at store/site of three phase four Wire,**3x230 voltage**,100/5A, 200/5A current transformer operated ac static meters of accuracy class 0.5S...	**Our submission: Sir, Meter shall have reference Voltage 240V AC however shall comply 230V also as per specifications.** **Kindly accept Vref. 240 Volts.**	Noted
434	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 1 SCOPE Page No. 2 of 36	This specification covers the technical requirements of design, manufacturing, testing at meter manufacturer's works ,packing, forwarding, supply and unloading at store/site of three phase four Wire,3x230 voltage,100/5A, 200/5A current transformer operated ac static meters of accuracy class 0.5S (here after referred as meters) complete with all accessories for efficient and trouble free operation with communication module (NIC) compatible **with 4G and fall back to 2G technology.**	**Our submission: Sir, kindly include the 3G Communication in fallback. It will increase the reliability in communication where 2G Network shall not be available the fallback 3G will support for reliable Communication.** **Kindly amend the clause for same**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
435	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.35 Communication module of meter for AMI Page No. 2 of 36	Tata Power intends to leverage **4G as the primary communication technology with hot swappable 2G / 3G Interface Card** as a fall back for meter data acquisition.	**Our submission: Sir, we understand that the 4G fallback 3G and 2G is required as per mentioned in Single Phase Meter specifications. Please confirm.** **It is not recommended to hot swapping of Electronic Device. There may be chances of damage of Devices.** **You are requested to kindly remove the hot swapping requirement.**	Tata Power intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.
436	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 36	4.38) Harmonics recording **The meter shall generate a flag/event whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.**	**Our submission: Sir, the OBIS Code for the same is not available in DLMS IS 15959 (Part 3) Standard for category D3.** **The OBIS Code list is not available for LT CT Meters in this Specification.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied
437	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	With the service providers offering **4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.**	**Our submission: Sir, we understand that the 4G fallback 3G and 2G is required as per mentioned in Single Phase Smart Meter Specifications.** **Please confirm.** **It is not recommenced to hot swapping of Electronic Device. There may be chances of damage of Devices.** **You are requested to remove the hot swapping requirement.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
438	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	b) NIC card shall support remote Device Management Capability such as Reset, Configuration, **Log Check**, Ping, and over the air Firmware upgrade	**Our submission: Sir, requirement is not clear. Please elaborate the same.** **Kindly note that same is also not mentioned in DLMS IS15959 Standard requirement. hence the HES communication need to be defined also.**	Tender specification to be complied
439	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	f) NIC shall also support on-demand / schedule reading, **time sync,** configuration and over the air firmware upgrade from the head-end system.	**Our submission: Sir, kindly note that the time sync is the HES feature.** **Kindly confirm the same**	Tender specification to be complied
440	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	g) NIC shall have persistent network connectivity throughout as defined by 4G standards. It shall support **self-configuring features.**	**Our submission: Sir, the Utility use the Private Networks for security reasons.** **The Self-configuration shall not be possible for the Private Networks.** **Please remove this requirement from the technical specification.**	Tender specification to be complied
441	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	j) NIC shall support standard **security protocols.** k) NIC shall be compliant with **cyber security norms.** l) NIC shall register with network i.e. login and logout of each terminal to the HES. It shall be **recognized in the HES as authorized node.**	**Our submission: Sir, kindly not that the Security shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm** **Sir, same clarification applicable for other Meter variant also.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
442	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	**m) Attributes such as Firmware version, Hardware version, Signal strength values, packet error rate, should be pushed** periodically to HES for effective communication management.	**Our submission: Sir, as per DLMS IS 15959 (Part 2) Standard 'Device ID, Push Setup ID, RTC and 10 Instant Parameters' are allowed in Periodic Push.** **Also, the OBIS Codes are not supported by DLMS IS 15959 (Part 2) Standard for the mentioned Parameters.**	Tender specification to be complied
443	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 36	n) **Data must be encrypted with AES-256 bit.**	**Our submission: Sir, kindly not that the Security encryption shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm** **Same clarification shall be applicable for other variant also.**	Tender specification to be complied
444	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.3) **And billing should be done whenever any above mentioned attribute is changed. The change should be recorded as upgrade event.**	**Our submission: Sir, kindly remove the requirement of Billing when RTC is changed.**	Tender specification to be complied
445	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.9) Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Our submission: Sir, kindly clarify whether Supply of CMRI is tender supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU required.** **please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
446	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 36	4.3.11) **List of events to be reported should be configurable over the air(OTA).**The meter should have "Last Gasp" and “First Breath” feature to facilitate sending	**Our submission: Sir, the list of Events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Tender specification to be complied
447	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.13) Last mile **mesh network** must support auto-registration and self-healing feature to continue operation using easiest possible available route in case of failure of any communication **device in the mesh**. Self-registrations in first communication.	**Our submission: Sir, the NIC requirement is with Cellular.** **It seems typographical error.** **Kindly amend as per Cellular**	Noted
448	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.15) **The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS(procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.**	**Our submission: Sir, we understand this clause is applicable to 3rd Party NIC Card Vendor.** **However, kindly note that NIC Card has to be Integrated with 3rd Party MDM in the event of Order.**	Tender specification to be complied
449	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.18) **Communication NIC/network should be immune with any external Magnetic field/ESD/Jammer/HV voltage influence such that it shall not affect the normal overall functionality.**	**Our submission: Sir, kindly note the Radio Communication is based on the Electromagnetic Waves and the distructive test may effect the signal pattern and temporarely effect the Communication.** **The Communication shall work properly after the distructive testing.** **Kindly accept the same**	Tender specification to be complied

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450	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 36	4.3.19) Meter once powered up with NIC card should be self-detected by RF network **and its basic name plate details** & current readings are transferred to HES.	**Our submission: Sir, kindly note that in DLMS IS15959 (Part 2) Standard the name plate requirement is for the Meter and the NIC Module is part of Meter.** **You are requested to kindly accept the Meter Name Plate details in line with DLMS IS 15959 Standard.**	With the service providers offering 4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition. Meter nameplate to be provided as per tender specification.
451	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.2 Communication capabilities and software feasibilities Page No. 10 of 36	4.3.21) **Meter display should have provision for showing if NIC card if :** **1. Installed,** **2. Getting Network,** **3. Latched with HES,** **4. Communicating with HES**	**Our submission: Sir, the same requirements already covered in Clause No. 4.1 (p) as "Colour coded LED** **(a) For latching on to the network** **(b) For latched on to the network** **(c) For data flow indication".** **Kindly accept indications as mentioned in Clause No. 4.1 (p) (Page No. 7 of 36)**	Tender specification to be complied
452	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 10 of 36	Abnormal Magnetic field is defined as below; **a. Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT.** **b. AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT)** **c. Permanent Magnet: Immune up to 0.5T and Event logging >0.5T**	**Our submission: Sir, Meter shall be immune at stray magnetic field as per CBIP-325.** **Meter may be either immune or run at Vref, Imax, UPF in the event of logging of presence of abnormal Magnetic Induction with date & time as per CBIP-325.** **You are requested to kindly accept the same.**	To be complied as per CBIP- 325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
453	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 10 of 36	4.3.2) Electrostatic Discharge (ESD) **Meter shall be immune up to 50 kV and shall record accurate energy as per IS-14697:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV with snap shot, the event loggingthreshold values as per table no. 1 in 4.5.**	**Our submission: Sir, Abnormal Voltage & frequency generating device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of field strength of this non standard devices.** **As per CBIP-325 ESD limit is 35 kV.** **You are requested to kindly accept the Meter behavior as either immune or log event with ESD up to 35kV.**	To be complied as per CBIP- 325
454	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 10 and 11 of 36	4.3.4) **Meter should immune to high/low frequency jammer devices. Meter shall log theevent in its memory as" JAMMER" with date and time stamp along with snapshot, the threshold values as per table no. 1 in 4.5.**	**Our submission: Sir, Jammer Device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of such non standard Devices.** **You are requested to kindly accept Meter behavior as either Immune or Log Event.**	Tender specification to be complied
455	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.3 Immunity against external influencing signals Page No. 11 of 36	4.3.5 The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, **micro waves like** magnetron etc. the threshold values as per table no. 1 in 4.5.	**Our submission: Sir, for Microwave there is no limit and meter may be damaged within fraction of seconds.** **Microwave based testing is hazards to person cunducting this test.** **You are requested to kindly accept the same and remove the requirement.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
456	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.4 Neutral Disturbance & other tampers Page No. 11 of 36	4.4.1 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. **DC injection shall be tested both in phase and neutral.**	**Our submission: Sir, the DC Injection Test is not applicable for LT CT Meters.** **You are requested to kindly remove the same from specifications.**	Tender specification to be complied
457	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 36	4.5.2) **For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for occurrence (T1) and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event (T3).**	**For all tamper event the time stamp and snapshot parameters shall be recorded at end time of event for Occurrence (T2) and for Restoration (T4).** **You are requested to kindly accept the same.**	Tender specification to be complied
458	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 36	4.5.3) **During abnormal & tamper conditions, the current shall be recorded as active current and line current.**	**Our submission: Sir, the OBIS Codes are not available forActive Current and Line Currents either in DLMS IS 15959 (Part 3) Standard.** **The OBIS Code list is not available for 3 Phase LT CT Meters in this specifications.** **You are requested to kindly accept Phase Currents in line with DLMS IS 15959 (Part 3) Standard.**	Tender specification to be complied
459	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 36	4.5.4) The events for which the restoration not occurred those should not be removed from meter memory and FIFO **should not be applicable for unrestored event**	**Our submission: Sir, a separate report shall be provided for the Un-Restored Events.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
460	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 12 of 36	4.5.6) All tamper/event logging thresholds values shall be configurable from remotes. Table No.1 ... **Compartment Size**	**Our submission: Sir, Compartments shall be provided as per IS 15959 (Part 1).** **Size shall be available for compartments not for the individual type of Events.** **You are requested to kindly accept the same.**	Tender specification to be complied
461	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Threshold Value for Occurrence of Events I >1% of Ib and Power Factor **≤ 0.5 in any phase**	**Our submission: Sir, as per DLMS IS 15959 (Part 3) Standard, low PF tamper is global tamper not phase wise so for occurrence system PF <= 0.5 and for restoration system PF >= 0.7.** **Kindly accept**	Noted
462	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Threshold Value for Restoration of Events Voltage <115% of Vref&Current > 10% Ib AND Frequency > 47 Hz **OR** Frequency < 53 Hz	**Our submission: Sir, seems to be typographical error.** **This should be 'AND' not 'OR'.** **You are requested to amend the specification accordingly.**	Noted
463	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Persistence Time for Occurrences **Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Our submission: Sir, the Meter shall not be able to detect 'Microwave' condition.** **You are requested to remove the same from specification.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
464	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 13 of 36	Persistence Time for Occurrences **No Display** 0 Hr 30 Min 0 sec	**Our submission: Sir, Meter is not able to detect 'NO Display' condition.** **We shall provide Jig for reading Data for NO Display Meters.** **Kindly accept the same.**	Noted
465	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 14 of 36	4.5.7) Meter shall latch & store cumulative count **and cumulative durations** all the tampers events which have logged /occurred/stored in memory of meter from the date of energization till life of meter.	**Our submission: Sir, kindly note that OBIS is not available for 'Cumulative Duration' in DLMS IS 15959 (Part 3) Standard.** **You are requested to kindly remove the requirement from this clause.**	Tender specification to be complied
466	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 4.5 Abnormal Tamper conditions Page No. 14 of 36	4.5.9) The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of any two incoming wires. **It shall keep recording correctly in case of unbalance system voltage also as defined above.**	**Our submission: Sir, kindly note that Meter recording shall be as per prevailing Electrical conditions.** **You are requested to kindly accept the same**	Tender specification to be complied
467	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 15 of 36	All the material and electronic power components used in the manufacture of the meter shall be of highest quality and reputed make to ensure higher reliability, longer life and sustained accuracy as given below or any other equivalent make with the strict approval of TPCODL: Component Function 1. **Measurement/ computing chips**	**Our submission: Sir, please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable. Also 'Silergy' (earlier Maxim) is a reputed Make & using as Metering Chip application.** **Kindly include the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
468	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 15 of 36	Component Function 2. **Memory chips / NVM**	**Our submission: Sir, please add 'ROHM' also since this is a well reputed Make.**	Tender specification to be complied
469	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 15 of 36	Component Function 3. **Display modules**	**Our submission: Sir, kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), Holitec, Yeboo' since these are well reputed Glass Manufacturers.**	Tender specification to be complied
470	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 36	Component Function 4. **Optical port**	**Our submission: Sir, please add 'Wuhan' also since this is a reputed Make.**	Tender specification to be complied
471	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 36	Component Function 6. **Electronic components**	**Our submission: Sir, please add NXP, Yageo , Samwha, Epcos, Fairchild , Osram, Toshiba since these are reputed Makes**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
472	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 36	Component Function 8. **Micro controller and RTC having separate battery**	**Our submission: Sir, please add 'Silergy (Maxim Integrated)', ,'Texas Instrument','ST' also since these are reputed Makes.** **Please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable.**	Tender specification to be complied
473	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5 GENERALCONSTRUCTIONS Page No. 16 of 36	Component Function 9. **Temperature sensor**	**Our submission: Sir, now the Smart Micro-controllers are available in which Temperature Sensor is in-built.** **Hence, there is no need to use separate sensors.** **We request you to kindly accept the same.**	Tender specification to be complied
474	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 19.0 GUARANTEED TECHNICAL PARTICULARS Page No. 36 of 36	B. Electronics parts 9. **Temperature sensor**		Tender specification to be complied
475	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7 Parameters in BCS Page No. 20 of 36	Last twelve months history data (kWh &kVAh* (lag only) cumulative & TOD reading and MD(kW & kVA*(lag only) current, history& TOD) with data and time) and **at least last 25 tamper events for each tamper shall be available in the non volatile Memory.**	**Our submission: Sir, Compartments shall be provided as per DLMS IS 15959 (Part 3) Standard.** **Size is applicable for compartments only not for type of Events.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
476	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7 Parameters in BCS Page No. 20 of 36	'**High THD' to be log in memory in the following conditions only in BCS not in display**	**Our submission: Sir, the OBIS Code is not available for the same in DLMS IS 15959 (Part 3) Standard.** **OBIS Code list is not available for LTCT meters in this spec.** **So, you are requested to kindly provide the OBIS Code OR remove this requirement from the specifications.**	Tender specification to be complied
477	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7 Parameters in BCS Page No. 20 of 36	5.7.1) Load survey (for pre-paid &post paid meter mode) c) **Actual Neutral current**	**Our submission: Sir, the OBIS Code is not available for Neutral Current in Load Survey data in DLMS IS 15959 (Part 3) for category D3.** **Tjhe OBIS Code list is not available for 3 Phase LT CT Meters in the specifications.** **You are requested to kindly remove the same from specification.**	Tender specification to be complied
478	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7 Parameters in BCS Page No. 20 of 36	5.7.1) Load survey (for pre-paid &post paid meter mode) **d) Average PF** **i) Demand KW** **j) Demand KVA**	**Our submission: Sir, Average PF, Demand kW and Demand kVA are derived Parameters and same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
479	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7 Parameters in BCS Page No. 20 of 36	5.7.1) Load survey (for pre-paid &post paid meter mode) **k) THD Voltage phase wise** **l) THD Current phase wise**	**Our submission: Sir, the OBIS Codes are not available for THD Voltage & THD Current in Load Survey Data in DLMS IS 15959 (Part 3) for D3 category.** **The OBIS Code list is not available for 3 Phase LT CT Meters in the specifications** **You are requested to kindly remove the same from specification.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
480	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7.2 Instantaneous Parameters Page No. 21 of 36	Meter shall be capable for following Instantaneous Parameters in Memory and should be available in BCS. **Cumulative Power ON Duration:** 00000	**Our submission: Sir, the OBIS Code for 'Cumulative Power ON duration' is not available in DLMS IS 15959 (Part 3) Standard for category D3 Instantaneous Parameters.** **The OBIS Code list is not available for LT CT Operated Smart meters with in this specifications.** **You are requested kindly either to provide the OBIS code for the same or remove the requirement from specifications**	Tender specification to be complied
481	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7.2 Instantaneous Parameters Page No. 21 of 36	Meter shall be capable for following Instantaneous Parameters in Memory and should be available in BCS. **Vector/phasor diagram (also showing neutral current) In case one of the voltage is missing, vector**	**Our submission: Sir, kindly accept Vector / Phasor diagram at BCS end alternatively.**	Tender specification to be complied
482	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7.3 General Information Page No. 22 of 36	Meter shall be capable for providing below mentioned general parameters in memory ... **Manufacture Date (MM/**YY)	**Our submission: Sir, only manufacture year shall be provided in line of DLMS IS 15959 (Part 3) Standard.** **Please accept the same.**	Noted
483	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7.3 General Information Page No. 22 of 36	Meter shall be capable for providing below mentioned general parameters in memory **TOD profile showing timing and seasons #**	**Our submission: Sir, the same shall be available in Billing profile.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
484	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.7.4 Billing Parameters Page No. 22 of 36	**Meter Should push mid night reads with all billing parameters and rising demand for KW and KVAon daily basis**	**Our submission: Sir, Push Data shall be as per table 4 of DLMS IS 15959 (Part 2).** **You are requested to kindly accept the same.**	Tender specification to be complied
485	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 5.9 Output Device Page No. 26 of 36	The test output device shall have constant pulse rate of **(preferred value- 400) pulse / kWh & pulse/kVArh.** Meter constant shall be indelibly printed on the name plate as imp / KWh & imp/kVArh.	**Our submission: Sir, Meter Constant shall be as per Manufacturer design.** **You are requested to kindly accept the same.**	Noted
486	SPECIFICATION FOR THREE PHASE 4 WIRE SMART LTCT ENERGY METER Clause No. 6.0 NAME PLATE AND MARKING Page No. 26 and 27 of 36	iv. Serial number (**Meter serial number shall be laser printed on name plate instead on sticker**). However the following shall be printed in bar code on the meter nameplate.(**shall be laser printed on name plate instead of any sticker**).	**Our submission: Sir, kindly accept Indelible Printing alternatively.**	Tender specification to be complied
Queries on 3Ph HT SMART Energy Meter				
487	Technical Specification of HT Consumer Smart Energy Meter Clause No. 1 SCOPE Page No. 2 of 35 Pg 166 of 446	Three Phase Four Wire, HT (CT and VT operated) AC Static Smart Meters of accuracy class 0.5s (here after referred as meters) complete with all accessories for efficient and trouble free operation with communication module (NIC) compatible with **4G and fall back to 2G technology.**	**Our submission: Sir, kindly include the 3G Communication in fallback. It will increase the reliability in Communication where 2G Network shall not be available the fallback 3G will support for reliable Communication.** **Kindly amend the clause for same**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
488	Cl 4.23 Self Diagonostic Feature Pg 168 of 446	The meter shall have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery (iv) NIC card status	The meter will have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery.... single status of RTC OK/fail for Real time clock & RTC battery (iii) Memory status (iv) Battery status	Tender specification to be complied
489	Cl 4.25 Alternate mode of supply to the meters Pg 169 of 446	In case of meter power failure, the reading/data should be retrieved with the help of battery or other power source	In case of Power failure, the meter data will be retrieved on battery by downloading through optical port only.	Noted
490	Cl 4.27 Minimum Internal diameter of the terminal holes & minimum Depth of the terminal holes Pg 169 of 446	5mm(minimum) 20mm (minimum)	Minimum Internal diameter of the terminal holes : 5mm (minimum) Minimum Depth of the terminal holes : 15mm for S1 & 17mm for S2	Tender specification to be complied
491	HT Meter Technical Specification Clause No. 4.27 GENERALTECHNICALREQUIREMNTS Pg 169 of 446	Clearance between **adjacent terminals is 10 mm (minimum).** Similarly, in Clause No. 5.2.8 “Terminals, Terminal Block” it is mentioned that: minimum clearance between **adjacent terminals shall be 10 mm.** Also, in Clause No. 5.2.11, it is mention that: the terminals should have **center to center distance of min. 11.5mm.**	**Our submissin: Sir, we request you to kindly also accept clearance and crepage distance between adjacent Terminals as per Clause No. 6.60 of IS 13779 / CBIP 325.** **Please confirm the acceptability of the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
492	Cl 4.32 Calibration Pg 169 of 446	There shall be provision for firmware update to change payment mode from Prepaid to Postpaid and vice versa; similarly for metering mode from Import only to Export-Import (NET mode) and vice versa, through proper authentication process remotely over the air (OTA). The change should be recorded as Transaction event. Billing should be done at that time of firmware upgrade so that readings at which this upgrade has happened are logged in meter and system.	Both payment method and metering mode will be configurable as per IS 16444. Firmware upgradewill not be required for this requirement. On doing the configuration, the event will be recorded the programming count will increase. Billing should not be done at the time of firmware upgrade becasuse the firmware upgradation will not effect the recording of meter.	Tender specification to be complied
493	4.35 Pg 169 of 446	Communication module of meter for AMI: …….Size /form factor of NIC card will be provided by TPCODL to the bidder and bidder should make necessary arrangement for the same..	The NIC card size and form factor is part of the design of the Smart Meter and hence would be the choice of Bidder. Request remove this condition.	Tender specification to be complied
494	Cl 4.38\4 Ultrasonic welding / Chemical Bonding Pg 170 of 446	Meter cover and body should be continuous and seamless ultrasonically welded with an overlapping of 5 mm (min.) or should be seamlessly chemically bonded, so that meter should not open without leaving clear mark.	Comply with Chemically welded break to open requirement	Tender specification to be complied
495	Cl 4.38 Harmonics recording Pg 170 of 446	The meter should record the current and voltage THD. The meter should record harmonics up to 20th harmonic Average THD of all phase for voltage THD and current THD. THD values shall have 30/15 minutes (as applicable) integration period in load survey. Accuracy of harmonics recording shall be as per meter accuracy class. The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached..	The meter will record the THD as per IS4697. THD values in loas survey is not applicable as per IS15959 Part-3	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
496	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4 GENERAL TECHNICAL REQUIREMNTS Page No. 6 of 35 Pg 170 of 446	4.38 Harmonics recording **The meter shall generate a flag whenever the threshold (user configurable) of the 5% THD of the load current and voltage is breached.**	**Our submission: Sir, the OBIS Code for the same is not available in the OBIS code list available with this specifications for HT Meters.** **You are requested kindly either to provide the same or remove the requirement from spec.**	Tender specification to be complied
497	Cl 4.39 Terminal Arrangement Pg 170 of 446	The terminal pin shall be 11 pin Zigzag arrangement with phase voltage terminal in between current terminals as mentioned in clause no. 5.2.11	The terminal pin shall be 11 pins with Zigzag arrangement for Phase Voltage terminals in between current	The terminal pin shall be 10 pin Zigzag arrangement with phase voltage terminal in between current terminals as mentioned in clause no. 5.2.11
498	Cl 4.1 NIC MODULE DETAILS & INTEGRATION Pg 170 of 446	TPCODL intends to leverage 4G as theprimary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.	Meter communication module will be 4G with fall back 2G network. The communication module can not be interchanged with any other interface card.	Tender specification to be complied
499	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 6 of 35 Pg 170 of 446	With the service providers offering **4G services, TPCODL intends to leverage 4G as the primary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.**	**Our submission: Sir, we understand that the 4G fallback 3G and 2G is required as mentioned in Single Phase Smart Meter specifications.** **Please confirm.** **It is not recommenced to hot swapping of Electronic Device. There may be chances of damage of Devices.** **You are requested to kindly remove the hot swapping requirement.**	System and meters to be designed incorporating Hot swapping. Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
500	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 6 of 35 Pg 170 of 446	b) NIC card shall support remote Device Management Capability such as Reset, Configuration, **Log Check,** Ping, and over the air Firmware upgrade	**Our submission: Sir, the requirement is not clear.** **Please elaborate the same.** **Kindly note that same is also not mentioned in DLMS IS15959 Standard requirement.** **Hence, the HES Communication also need to be defined.**	Tender specification to be complied
501	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 6 of 35 Pg 170 of 446	f) NIC shall also support on-demand / schedule reading, **time sync,** configuration and over the air firmware upgrade from the head-end system.	**Our submission: Sir, kindly note that the time sync is the HES feature.** **Kindly confirm the same.**	Tender specification to be complied
502	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 6 of 35 Pg 170 of 446	g) NIC shall have persistent network connectivity throughout as defined by 4G standards. It shall support **self-configuring features.**	**tOur submission: Sir, The Utility use the Private Networks for security reasons. The Self-configuration shall not be possible for the Private Networks.** **Please remove this requirement from the Technical Specifications.**	Tender specification to be complied
503	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 6 and 7 of 35 Pg 170 of 446	j) NIC shall support standard **security protocols.** k) NIC shall be compliant with **cyber security norms.** l) NIC shall register with network i.e. login and logout of each terminal to the HES. It shall be **recognized in the HES as authorized node.**	**Our submission: Sir, kindly not that the Security shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm.** **Same clarification is required for other Meter variant given in this specifications also.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
504	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 35 Pg 171 of 446	m) Attributes such as **Firmware version, Hardware version, Signal strength values, packet error rate, should be pushed** periodically to HES for effective communication management.	**Our submission: Sir, as per DLMS IS 15959 (Part 2) Standard the 'Device ID, Push Setup ID, RTC and 10 Instant Parameters' are allowed in Periodic Push.** **Also the OBIS Codes are not supported by DLMS IS 15959 (Part 2) Standard for these mentioned Parameters.**	Tender specification to be complied
505	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 35 Pg 171 of 446	**n) Data must be encrypted with AES-256 bit.**	**Our submission: Sir, kindly not that the Security encryption shall be as per DLMS IS 15959 (Part 2) Standard. Kindly confirm** **Same clarification shall be applicable for other variant also.**	Tender specification to be complied
506	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.1 NIC MODULE DETAILS & INTEGRATION Page No. 7 of 35 Pg 171 of 446	p) Colour coded LED (a) For latching on to the network (b) For latched on to the network (c) For data flow indication. **q) Meter display should have provision for showing if NIC card if :** **1. Installed,** **2. Getting Network,** **3. Latched with HES,** **4. Communicating with HES**	**Our submission: Sir, the same requirements already covered in same clause (p) "Colour coded LED** **(a) For latching on to the network** **(b) For latched on to the network** **(c) For data flow indication".** **Kindly accept the indicatins as mentioned in Clause No. 4.1 (p)**	Tender specification to be complied
507	Cl 4.1 NIC MODULE DETAILS & INTEGRATION Pg 171 of 446	(q) Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
508	4.3.2 Pg 171 of 446	It should be the responsibility of the bidder to ensure integration of meter into HES**.**For cellular fallback, the Module should have backward compatibility.	Understand the NIC should communicate on 4G by default and fall back on 2G. Pl confirm.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
509	Cl 4.2 Communication capabilities and software feasibilities Pg 171 of 446	4.3.3 It shall be possible to reconfigure the meters for RTC,TOD slots reprogramming, DIP (Demand Integration period), billing date ,display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. And billing should be donewhenever any above mentioned attribute is changed. The change should be recorded as upgrade event.	Billing will be done in case of TOD slots reprogramming only as the other parameters will not effect the calculation of the meter	Tender specification to be complied
510	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 7 of 35 Pg 171 of 446	4.3.3) **And billing should be done whenever any above mentioned attribute is changed**. The change should be recorded as upgrade event.	**Our submission: Sir, kindly remove the requirement of Billing when RTC is changed.**	Tender specification to be complied
511	Cl 4.3 Communication capabilities and software feasibilities Pg 171 of 446	4.3.5 Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded within 5 minutes OTA.	The timing of Data download over the air depends on the network capability	Tender specification to be complied
512	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 7 of 35 Pg 171 of 446	Bidder should also provide base computer software (BCS) for viewing the data downloaded through HES/MRI/laptop/HHU in separate PC/laptop. **Android based or windows based HHU shall be preferred.**	**Our submission: Sir, kindly clarify whether HHU are also in tender Supply scope, if so kindly specify number of HHU required.** **In case if HHUs are in tender Supply scope, kindly accept Linux based alternatively.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
513	4.3.10 Pg 172 of 446	.....Additional exceptional events should also be communicated to HES by meter immediately after the occurrence through **4G / 4G Mesh.** It should also indicate the restoration of the same event.	Communication will be through 4G and request delete 4G mesh.	Noted
514	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 7 of 35 Pg 172 of 446	4.3.11) **List of events to be reported should be configurable** over the air(OTA).	**Our submission: Sir, list of events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Tender specification to be complied
515	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 7 of 35 Pg 172 of 446	4.3.13 Last mile **mesh network** must support auto-registration and self-healing feature to continue operation using easiest possible available route in case of failure of any communication **device in the mesh.** Self-registrations in first communication. 4.3.14) Also, the Bidder must ensure that, the **mode of communication used for 4G** shall be consistent with the Government of India stipulations.	**Our submission: Sir, the NIC requirement is with Cellular.** **It seems typographical error.** **Kindly amend as per cellular**	Noted
516	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 35 Pg 172 of 446	4.3.15 **The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.**	**Our submission: Sir, we understand this clause is for 3rd Party NIC Card Vendor.** **However, kindly note that we shall provide our NIC Card, however, the Integration is to be done MDM in the event of Order.** **Please clarify.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
517	4.3.15 Pg 172 of 446	The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	A composite system including Smart Meters, Communication network & Head End system is being sought against this tender. The output from Head end system would be integrated with TPCODL's MDM. No other software is required to be provided by Bidder. Please confirm.	Tender specification to be complied
518	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 35 Pg 172 of 446	4.3.18) **Communication NIC/network should be immune with any external Magnetic field/ESD/Jammer/HV voltage influence such that it shall not affect the normal overall functionality**	**Our submission: Sir, kindly note the Radio Communication is based on the Electromagnetic Waves and the distructive test may effect the signal pattern and temporarily effect the Communication.** **The Communication shall work properly after the distructive testing.** **We request you to kindly accept the same**	Tender specification to be complied
519	Cl 4.3 Communication capabilities and software feasibilities Pg 172 of 446	4.3.18 Communication NIC/ network should be immune with any external Magnetic field/ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.	Meter immunity will be as per CBIP325	Tender specification to be complied
520	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 8 of 35 Pg 172 of 446	4.3.19) Meter once powered up with NIC card should be self-detected by 4G network **and its basic name plate details** & current readings are transferred to HES.	**Our submission: Sir, kindly note that in DLMS IS15959 (Part 2) Standard the Name Plate requirement is for the Meter and the NIC module is part of Meter.** **You are requested to kindly accept the Meter Name Plate detail.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
521	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.2 Communication capabilities and software feasibilities Page No. 9 of 35 Pg 173 of 446	4.3.21) **Meter display should have provision for showing if NIC card if :** **1. Installed,** **2. Getting Network,** **3. Latched with HES,** **4. Communicating with HES**	**Our submission: Sir, the same requirements already covered in above Clause No. 4.1 (p).** **Kindly accept as mentioned in Clause No. 4.1 (p) (Page No. 7 of 35)**	Tender specification to be complied
522	Cl 4.3 Communication capabilities and software feasibilities Pg 173 of 446	4.3.21 Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
523	Cl 4.3 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Pg 173 of 446	4.3.1 Abnormal Magnetic field is defined as below; a) Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT. b) AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT) c) Permanent Magnet: Immune up to 0.5T and Event logging >0.5T.	Meter will comply the magnet clause as per CBIP325	To be complied as per CBI-325
524	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.3 Immunity against external influencing signals Page No. 9 of 35 Pg 173 of 446	4.3.1) Magnetic Field: Abnormal Magnetic field is defined as below: **a. Continuous DC magnetic induction: >0.20 Tesla ± 5% (Value of the magneto motive force to be applied shall be generally >10000 AT.** **b. AC magnetic induction: >10 milli Tesla (if produced with circular metal core with square cross section as specified in CBIP latest report with 2800 AT)** **c. Permanent Magnet: Immune up to 0.5T and Event logging >0.5T**	**Our submission: Sir, Meter shall be Immune at stray magnetic field as per CBIP-325. Meter may be either immune or Record at Vref, Imax, UPF in the Event of logging of presence of Abnormal Magnetic induction with date & time as per CBIP-325.** **You are requested to kindly accept the same.**	To be complied as per CBI-325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
525	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Pg 173 of 446	4.3.2. Electrostatic Discharge (ESD) :Meter shall be immune up to 50 kV and shall record accurate energy as per IS- 13779:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kVwith snap shot the event logging threshold values as per table no. 1 in 4.6	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	To be complied as per CBI-325
526	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.3 Immunity against external influencing signals Page No. 9 of 35 Pg 173 of 446	4.3.2) Electrostatic Discharge (ESD) **Meter shall be immune up to 50 kV and shall record accurate energy as per IS-14697:1999/CBIP-325. Meter shall log the event into memory as 'ESD' with date & time stamp for any ESD greater than 50 kV with snap shot, the event logging threshold values as per table no. 1 in 4.5.**	**Our submission: Sir, Abnormal Voltage & Frequency generating Device which generates the ESD is a Non-standard Device and none of the NABL Lab issue the certificate of field strength of this non standard Devices. As per CBIP-325 ESD limit is 35 kV.** **You are requested to kindly accept meter behavior as either immune or log event with ESD up to 35kV.**	To be complied as per CBI-325
527	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Pg 173 of 446	4.3.4 Meter should be immune to high/low frequency jammer devices. Meter shall log the event in its memory as 'JAMMER' with date and time stamp, the threshold values as per table no. 1 in 4.5	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	To be complied as per CBI-325
528	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.3 Immunity against external influencing signals Page No. 9 of 35 Pg 173 of 446	4.3.4) **Meter should immune to high/low frequency jammer devices. Meter shall log the event in its memory as" JAMMER" with date and time stamp along with snapshot, the threshold values as per table no. 1 in 4.5.**	**Our submission: Sir, Jammer Device which generates the ESD is a non-standard device and none of the NABL Lab issue the certificate of such non standard devices.** **You are requested to accept Meter behavior as either Immune or Log Event.**	Tender specification to be complied
529	Cl 4.4 IMMUNITY AGAINST EXTERNAL INFLUENCING SIGNALS Pg 173 of 446	4.3.5 The meter should be immune or log the tamper on application of any other higher magnetic field of any frequency waves, micro waves like magnetron etc. the threshold values as per table no. 1 in 4.5	Meter is immune as per CBIP-325. If tamper is detected, meter will log the event.	To be complied as per CBI-325

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
530	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.3 Immunity against external influencing signals Page No. 9 of 35 Pg 173 of 446	4.3.5) The meter should be immune or log the tamper on application of any other higher magnetic field of any **frequency waves, micro waves like magnetron etc**. the threshold values as per table no. 1 in 4.5.	**Our submission: Sir, for Microwave there is no limit and Meter may be damaged within fraction of seconds.** **This Microwave based test is hazards to person conducting this test.** **So, you are requested to kindly accept the same and remove this requirement.**	Noted
531	Cl 4.4 Neutral Disturbance & other tampers Pg 174 of 446	4.4.2 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. DC injection shall be tested both in phase and neutral. Measurement by meter shall not get influenced by injection of Chopped signal/ DC signal/ DC pulse up to 330V (both + & - DC) and for any value beyond this, of any low frequency and harmonics. Meter shall log the event into memory as 'Neutral Disturbance' with date & time stamp the thresholds are as per table no. 1 in clause 4.5 below.	Pls provide the testing circuit diagram for chopping	Tender specification to be complied
532	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.4 Neutral Disturbance & other tampers Page No. 10 of 35 Pg 174 of 446	4.4.2 The meter shall not saturate on passage of direct current, which can cause the meter either to stop recording/ record inaccurately. **DC injection shall be tested both in phase and neutral.**	**Our submission: Sir, DC injection test is not applicable for HT Meters.** **You are requested to kindly accept the same.**	Tender specification to be complied
533	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 10 of 35 Pg 174 of 446	4.5.2) **For all tamper events the time stamp and snapshot parameters shall be recorded at the start time of event for occurrence (T1) and for restoration the time stamp and snapshot parameters shall be recorded at the end time of the event (T3).**	**Our submission: Sir, for all tamper event the time stamp and snapshot Parameters shall be recorded at end time of Event for Occurrence (T2) and for Restoration (T4).** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
534	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 10 of 35 Pg 174 of 446	4.5.3) **During abnormal & tamper conditions, the current shall be recorded as active current and line current.**	**Our submission: Sir, the OBIS Codes are not available for Active Current & Line Currents either in DLMS IS 15959 (Part 3) OR OBIS Code list available with this specifications for HT Meters.** **You are requested to kindly accept Phase Currents in line with DLMS IS 15959 (Part 3) & OBIS Code list for HT Meters available with this specifications.**	Tender specification to be complied
535	Cl 4.5 ABNORMAL TAMPER CONDITIONS Pg 174 of 446	4.5.3 During abnormal & tamper conditions, the current shall be recorded as active current and line current. 4.5.5 All tamper/event logging thresholds values shall be configurable from remotes.	During abnormal & tamper conditions, the current will be recorded as per IS15959 Part-3 Tamper threshold will be factory configurable	Tender specification to be complied
536	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 10 of 35 Pg 174 of 446	Table No.1 .. **Compartment Size**	**Our submission: Sir, Compartments shall be provided as per DLMS IS 15959 (Part 3) Standard.** **Size shall be available for Compartments not for the individual type of Events.** **You are requested to kindly accept the same.**	Tender specification to be complied
537	Table No.1 Tamper table	Tampers Compartment Size	Tamper Compartment size will be 80+80+40 events for voltage related, current related and other events	Tender specification to be complied
538	Table No.1 Tamper table Pg 174 of 446	ESD/JAMMER	Meter immune as Per CBIP 325 , No tamper logging in this condition	Tender specification to be complied
539	Table No.1 Tamper table Pg 175 of 446	Invalid Phase Association	Not applicable as per IS 15959 Part-3	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
540	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 35 Pg 175 of 446	Table No.1 Threshold Value for Occurrence of Events **Current difference > 10% between phases and Imin 10% of Ibasic**	**Our submission: Sir, kindly note that requirement should be 'Imin > 10% of Ibasic', '>' is missing.** **Seems to be typographical error and same may be amended accordingly.**	Noted
541	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 35 Pg 175 of 446	Table No.1 Threshold Value for Occurrence of Events **I >1% of Ib and Power Factor ≤ 0.5 in any phase**	**Our submission: Sir, as per DLMS IS 15959 (Part 3) Standard, low PF tamper is global tamper not Phase Wise so for Occurrence system PF <= 0.5 and for Restoration System PF >= 0.7.** **Kindly accept the same.**	Noted
542	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 35 Pg 175 of 446	Table No.1 Threshold Value for Restoration of Events Voltage <115% of Vref & Current > 10% Ib AND Frequency > 47 Hz **OR** Frequency < 53 Hz	**Our submission: Sir, seems to be typographical error. This should be 'AND' not 'OR'.** **You are requested to kindly amend the specification accordingly.**	Noted
543	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 11 of 35 Pg 176 of 446	**Microwave** immediate (record only 1 event on first application & only one event for next 1min)	**Our submission: Sir, Meter shall not be able to detect 'Microwave' condition.** **You are requested to kindly remove the same from specification.**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
544	Table No.1 Tamper table Pg 176 of 446	Microwave immediate	Not applicable as per IS 15959 Part-3	Noted
545	Table No.1 Tamper table Pg 176 of 446	Meter shall be provided with feature for terminal cover opening with time stamping.	Terminal cover Open tamper not applicable as per IS15959 Part-3	Tender specification to be complied
546	Technical Specification of HT Consumer Smart Energy Meter Clause No. 4.5 Abnormal Tamper conditions Page No. 12 of 35 Pg 176 of 446	4.5.8) The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of any two incoming wires. **It shall keep recording correctly in case of unbalance system voltage also as defined above.**	**Our submission: Sir, kindly note that Meter recording shall be as per prevailing Electrical condition at Meter Terminals.** **You are requested to kindly accept the same**	Tender specification to be complied
547	Cl 5 General Constructions Pg 177 of 446	Components make list	Component make list will be as per the the attcahed sheet in the mail.	Tender specification to be complied
548	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5 GENERAL CONSTRUCTIONS Page No. 13 of 35 Pg 177 of 446	All the material and electronic power components used in the manufacture of the meter shall be of highest quality and reputed make to ensure higher reliability, longer life and sustained accuracy as given below or any other equivalent make with the strict approval of TPCODL: Component Function 1. **Measurement/ computing chips**	**Our submission: Sir, please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable. Also 'Silergy' (earlier Maxim) is a reputed Make & using as Metering chip application.** **Kindly include the same.**	Tender specification to be complied
549	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5 GENERAL CONSTRUCTIONS Page No. 13 of 35 Pg 177 of 446	Component Function 2. **Memory chips / NVM**	**Our submission: Sir, please add 'ROHM' also since this is a well reputed Make.**	Tender specification to be complied

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550	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5 GENERAL CONSTRUCTIONS Page No. 13 of 35 Pg 177 of 446	Component Function 3. **Display modules**	**Our submission: Sir, kindly include 'Success', 'Tianma' & 'Haijing (Diang-Guang), Holitec, Yeboo' since these are well reputed Glass Manufacturers.**	Tender specification to be complied
551	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5 GENERAL CONSTRUCTIONS Page No. 13 of 35 Pg 177 of 446	Component Function 4. **Optical port**	**Our submission: Sir, please add 'Wuhan' also since this is a reputed Make.**	Tender specification to be complied
552	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5 GENERAL CONSTRUCTIONS Page No. 13 and 14 of 35 Pg 177 & 178 of 446	Component Function 6. **Electronic components**	**Our submission: Sir, please add NXP, Yageo , Samwha ,Epcos, Fairchild , Osram, Toshiba since these are reputed Makes**	Tender specification to be complied
553	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5 GENERAL CONSTRUCTIONS Page No. 14 of 35 Pg 178 of 446	Component Function 8. **Micro controller and RTC** having separate battery	**Our submission: Sir, please add 'Silergy (Maxim Integrated)', 'Texas Instrument','ST' also since these are reputed Makes.** **Please note that 'NEC' & 'Renesas' both are merged hence 'Renesas' Make also acceptable.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
554	HT Meter Technical Specification Clause No. 5.1.3 METER BODY Pg 178 of 446	Meter base shall be opaque with polycarbonate **LEXAN 500R or equivalent** on prior approval from the TPCODL. (If different material offered the bidders should submit material data sheet in technical bid)	**Our submissin: Sir, please also accept equivalent material like, LEXAN 143/143R for Meter base, as the same material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
555	Cl 5.1 Meter Body Pg 178 of 446	5.1.5 Meter cover & base shall be provided with continuous and seamless Ultrasonic welding such that it cannot be opened without breaking the enclosure.	Meter cover & base shall be provided with continuous and seamless Ultrasonic/ chemical welding such that it cannot be opened without breaking the enclosure.	Tender specification to be complied
556	Cl 5.1 METER BODY Pg 178 of 446	5.1.9 The Meter body shall be such that the liquid or chemical shall not reach the electronic parts if liquid is injected from meter body such as meter terminals, push button, display, NIC card casing etc. Necessary protection and water tight sealing to be provided at terminals and Push buttons etc.	Pls mention the testing procedure.	Tender specification to be complied
557	Cl 5.2 TERMINALS, TERMINAL BLOCK Pg 179 of 446	5.2.8 Internal diameter of the terminal holes shall be minimum 5 mm; minimum clearance between adjacent terminals shall be 10 mm. Minimum Depth of the terminal holes shall be of 20 mm.	Minimum Internal diameter of the terminal holes : 5mm (minimum) Minimum Depth of the terminal holes : 15mm minimum	Tender specification to be complied
558	Cl 5.2 TERMINALS, TERMINAL BLOCK Pg 179 of 446	5.2.11 Meter terminal should have 10 terminals arrangement.Terminal configuration shall be R-Cin, R volt, R-Cout, Y-Cin, Y volt, Y-Cout, B-Cin, B-volt, B-Cout, Neutral.	5.2.11 Meter terminal should have 11 terminals arrangement.Terminal configuration shall be R-Cin, R volt, R-Cout, Y-Cin, Y volt, Y-Cout, B-Cin, B-volt, B-Cout, N-in, N-out	Tender specification to be complied
559	Cl 5.3 TERMINAL COVER Pg 179 of 446	5.3.1 Terminal cover shall be short type and transparent with polycarbonate LEXAN 143R/943A or equivalent on prior approval from the TPCODL.	Terminal cover shall be short/extended type and transparent with polycarbonate LEXAN 143R/943A or equivalent on prior approval from the TPCODL.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
560	Cl 5.6 MD Integration Pg 180 of 446	The MD integration period shall be 15 minutes (integration period programmable by MRI at site and also thru AMR with adequate security level). The MD resetting shall be automatic at the 1st of the month i.e. 0000 hours of 1st day of the month. Manual MD reset button shall not be available. Last six MD values shall be stored in the memory and one to be displayed in the Auto scroll mode. MD shall be recorded and displayed with minimum three digits before decimal and minimum two digits afterdecimal points. MD integration shall be of sliding Type at an interval of 10 min.	Sliding interval should be 5 minutes for 15 minutes MD IP anf if sliding interval of 10 minute is required then the MD IP should be 30 minutes	Noted
561	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.6 MD Integration Page No. 16 of 35 Pg 180 of 446	MD integration shall be of sliding Type at an **interval of 10 min.**	**Our submission: Sir, in the same clause mentioned that MD integration period shall be 15 minutes. From this we understood that default integration period shall be 15 minutes with sub-integration period 5 minutes and configurable to 30 minutes with sub-integration period of 10 minutes.** **You are requested to kindly clarify if the requirement is different from what we understood.**	Noted
562	Cl 5.7.1 Load Survey parameters Pg 180 & 181 of 446	Load Survey parameters for prepaid & postpaid mode	Parameters will be as per IS15959 Part-3	Tender specification to be complied
563	Cl 5.7.2 INSTANTANEOUS PARAMETERS Pg 181 of 446	INSTANTANEOUS PARAMETERS	The Instantaneous profile parameters will be as per IS15959 Part-3	Tender specification to be complied
564	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.1 Load survey (for pre-paid, post-paid & NET meter mode) Page No. 17 of 35 Pg 181 of 446	5.7.1) Load survey (for pre-paid, post-paid & NET meter mode) c**) Average PF** **h) Demand KW** **i) Demand KVA**	**Our submission: Sir, the Average PF, Demand kW and Demand kVA are derived Parameters and same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
565	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.1 Load survey (for pre-paid, post-paid & NET meter mode) Page No. 17 of 35 Pg 181 of 446	Load survey data should be at least with **5 decimal place**	**Our submission: Sir, the Load Survey Energies shall be provided with 3 decimal digits.** **You are requested to kindly accept the same**	Tender specification to be complied
566	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.2 Instantaneous Parameters Page No. 17 of 35 Pg 181 of 446	Meter serial number and NIC serial number shall be recorded and communicated for all profiles of data. Meter shall be capable for following Instantaneous Parameters in Memory and should be available in HES **Cumulative Power ON Duration** 00000	**Our submission: Sir, the OBIS Code is not available for 'Cumulative Power ON Duration' in the Instantaneous Parameters of OBIS code list for HT Meters available with this specifications.** **You are requested either to provide the OBIS Code for the same or remove the requirement from the specifications.**	Tender specification to be complied
567	Cl 5.7.4 BILLING PARAMETERS Pg 182 of 446	BILLING PARAMETERS	Parameters will be as per IS15959 Part-3	Tender specification to be complied
568	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.2 **Instantaneous Parameters** Page No. 18 of 35 Pg 182 of 446	**Vector/phasor diagram In case one of the voltage is missing, vector should be made with 2 voltage and all currents.**	**Our submission: Sir, kindly accept Vector / Phasor diagram at BCS end alternatively.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
569	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.3 General Information Page No. 18 of 35 Pg 182 of 446	Meter shall be capable for providing below mentioned general parameters in memory ... **Manufacture Date (MM**/YY)	**Our submission: Sir, only Manufacture year shall be provided in line of DLMS IS 15959 (Part 3) Standard.** **Please accept the same.**	Noted
570	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.3 General Information Page No. 18 of 35 Pg 182 of 446	Meter shall be capable for providing below mentioned **general parameters** in memory **TOD profile showing timing and seasons** #	**Our submission: Sir, the same shall be available in Billing profile.** **You are requested to kindly accept the same.**	Tender specification to be complied
571	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.4 Billing Parameters Page No. 18 of 35 Pg 182 of 446	4) **Consumption (Reading date, Current Month & 12 History, time zone register wise) kWh and kVAh.**	**Our submission: Sir, kindly note that Consumption is a derived Parameter and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
572	Technical Specification of HT Consumer Smart Energy Meter Clause No. 5.7.4 Billing Parameters Page No. 18 of 35 Pg 182 of 446	8) **Monthly power** On/**Off hours**	**Our submission: Sir, the OBIS Code for Monthly Power-Off hours is not available in the OBIS Code list provided with this specification for HT Meters.** **You are requested to kindly remove the same from specification.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
573	Cl 5.9 Output devices Pg 185 of 446	5.9.2 Communication LCD indicator-Meter display shall have indication in context to NIC. The blinking should be slow when NIC is detected; blinking should be fast when NIC had searched the network and it should be stable when it is successfully latched to the HES.	We will provide the ststus LED on module.	Tender specification to be complied
574	6 Pg 185 of 446	Name plate and Marking: …… xxii.Communication Technology is IHD supported (with carrier frequency).	The requirement is not clear. However since IHD is not in the scope of supply, request delete this requirement.	To be ignored
575	Technical Specification of HT Consumer Smart Energy Meter Clause No. 6.0 NAME PLATE AND MARKING Page No. 21 and 22 of 35 Pg 185 of 446	iv. Serial number (**Meter serial number shall be laser printed on name plate instead on sticker**). However the following shall be printed in bar code on the meter nameplate.(**shall be laser printed on name plate instead of any sticker**).	**Our submission: Sir, kindly accept Indelible Printing alternatively.**	Tender specification to be complied
576	7.1 Pg 186 of 446	Type Test: 5) Bidder/BA must submit valid BIS license for manufacturing smart energy meters as per IS 16444 and IS 15959 (Part-3) with all requisite inclusions.	HT Smart Meters have not been developed, type tested and BIS certified by any Meter manufacturer in India yet. This is evidenced from BIS website. In view of this, request modify the requirement as "Successful Bidder shall submit the Type test certificates and BIS license of HT Smart Meters before commencement of supply of HT Smart Meters in this project."	Tender specification to be complied
577	13 Pg 188 of 446	Sample: Tendering stage: Bidders are required to manufacture 03 numbers of sample meters as per the TPCODL specification (sealed, unsealed and open able base and cover to view/test the inner circuits) and submit the samples (non-returnable) along with bid for approval. These samples should be submitted at Meter Testing Lab, Bhubaneswar, Odisha.	As explained above, HT Smart Meters have not been developed yet by any Meter manufacturer. Development of the Meter , Testing and submission of samples within the short duration is not feasible and hence request delete the requirement of HT Smart Meter samples.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
578	Annecure-1 OBIS Codes and profile parameters Pg 191 to 199 of 446	OBIS Codes and profile parameters	OBIS Codes and profile parameeters will be as per IS15959 Part-3 in samples if required. Can be complied in order supply.	Tender specification to be complied
Queries on 3Ph DT SMART Energy Meter				
579	Specification for Smart DT meter Clause No. 1 SCOPE Page No. 2 of 22 Pg No. 202 of 446	The specification covers design, engineering, manufacturing, assembly, inspection, testing & integration with network integration card (NIC) at manufacturers' works before dispatch, forwarding, unloading at store/site and supply of 3 phase 4 wire, **3 X 230 volts,** 100/5 Amp CT (Ratio-Programmable as per requirement) operated static smart meter of Class 0.5s accuracy	**Our submission: Sir, Meter shall have reference Voltage 240V AC however shall comply 230V also as per specifications.** **Kindly accept**	Noted
580	Specification for Smart DT meter Clause No. 1 SCOPE Page No. 2 of 22 Pg No. 202 of 446	The specification covers design, engineering, …….complete with all accessories for efficient and trouble free operation for indoor & outdoor use with communication module (NIC) compatible **with 4G and fall back to 2G technology.**	**Our submission: Sir, kindly include the 3G communication in fall back.** **It will increase the reliability in Communication where 2G Network shall not be available the fallback 3G will support for reliable communication.** **Kindly amend the clause for same**	Tender specification to be complied
581	Clause No. 4.4 Pg 203 of 446	Reference Conditions for testing the performance of the meter : Vref = 230 V	Meter may kindly be accepted with reference voltage of 240V however shall be suitable for 230V.	Noted
582	Cl 4.23 Self Diagonostic Feature Pg 204 of 446	The meter shall have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery (iv) NIC card status	The meter will have indications on meter display, for anomaly/ unsatisfactory / non-functioning of (i) Real Time Clock (ii) RTC battery.... single status of RTC OK/fail for Real time clock & RTC battery (iii) Memory status (iv) Battery status	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
583	Thee Phase Smart Meter technical specification Clause No. 4.25 Pg 204 of 446	**depth of terminal holes 25 mm** Similarly in 5th para clause no. 5.3 “Terminals, Terminal Block” it is mentioned that **depth of terminal holes shall be of 25 mm**	**Our submission: Sir, kindly note that depth of the Terminal hole in Energy Meters shall be provided as per Manufacturer specific design.** **We request you to kindly accept the Terminals as per IS 13779/CBIP 325.**	Tender specification to be complied
584	Thee Phase Smart Meter Technical Specification Clause No. 4.25 Pg No. 204 of 446	**depth of terminal holes 25 mm** Similarly, in 4th para Clause No. 5.3 “Terminals, Terminal Block” it is mentioned that **depth of terminal holes shall be of 25 mm**	**Our submission: Sir, both these are contradictory requirements and kindly note that depth of the Terminal Hole is not specified in any Stadards relevant to Energy Meters & are provided as per Manufacturer specific design.** **so, we request you to kindly accept the Terminals as per IS 14697 / CBIP 325.**	Tender specification to be complied
585	Smart Meter Technical Specification Clause No. 4.26 GENERAL TECHNICAL REQUIREMNTS Pg No. 204 of 446	Clearance between **adjacent terminals is 10 mm (minimum).** Similarly, in Clause No. 5.3, 4th Para “Terminals, Terminal Block” it is mentioned that: minimum clearance between **adjacent terminals shall be 10 mm.**	**Our submission: Sir, we request you to kindly also accept clearance and crepage distance between adjacent Terminals as per Clause No. 6.60 of IS 14697 / CBIP 325.** **Please confirm the acceptability of the same.**	Tender specification to be complied
586	Cl 4.27 Minimum Internal diameter of the terminal holes & minimum Depth of the terminal holes Pg 204 of 446	5.5mm(minimum) 25 mm (minimum)	Minimum Internal diameter of the terminal holes : 5.5mm (minimum) Minimum Depth of the terminal holes : 15mm for S1 & 17mm for S2	Tender specification to be complied
587	4.34 Communication module of meter for AMI: Pg 205 of 446	4.34 Communication module of meter for AMI: …….Size /form factor of NIC card will be provided by TPCODL to the bidder and bidder should make necessary arrangement for the same..	The NIC card size and form factor is part of the design of the Smart Meter and hence would be the choice of Bidder. Request remove this condition.	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
588	Cl 4.35 Harmonics Pg 205 of 446	The meter should record & display THDV and THDI as percentage . It should also indicate individual harmonic minimum up to 11 harmonics for 15 days. Integration period should be 15 minutes.	The meter will record the THD as per IS14697. THD values in loas survey is not applicable as per IS15959 Part-3	Tender specification to be complied
589	NIC MODULE DETAILS & INTEGRATION Pg No. 205 of 446	TPCODL intends to leverage 4G as theprimary communication technology with hot swappable 2G Interface Card as a fall back for meter data acquisition.	Meter communication module will be 4G with fall back 2G network. The communication module can not be interchanged with any other interface card.	Tender specification to be complied
590	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	With the service providers offering 4G services, TPCODL intends to leverage **4G as the primary communication technology with hot swappable 2G Interface Card as a fall back** for meter data acquisition.	**Our submission: Sir, we understand that the 4G fallback 3G and 2G is required as per mentioned in Single Phase Meter Specifications** **Pl confirm.** **It is not recommenced to hot swapping of electronic device.** **There may be chances of damage of Devices.** **You are requested to remove the hot swapping requirement.**	Tender specification to be complied
591	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	b) NIC card shall support remote Device Management Capability such as Reset, Configuration, **Log Check,** Ping, and over the air Firmware upgrade	**Our submission: Sir, the requirement is not clear.** **Please elaborate this requirement.** **Kindly note that same is also not mentioned in IS15959 requirement. Hence, the HES Communication also need to be defined.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
592	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	f) NIC shall also support on-demand / schedule reading, connect / disconnect, **time sync,** configuration and over the air firmware upgrade from the head-end system.	**Our submission: Sir, kindly note that the time sync is the HES feature.** **Kindly confirm the same**	Tender specification to be complied
593	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	g) NIC shall have persistent network connectivity throughout as defined by 4G standards. It shall support self-configuring **and self-healing features.**	**Our submission: Sir, the Utility use the Private networks for security reasons.** **The Self-configuration shall not be possible for the Private Networks.** **Please remove this requirement from the technical specification.**	Tender specification to be complied
594	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	j) NIC shall support **standard security protocols.** k) NIC shall be compliant with **cyber security norms.** l) NIC shall register with network i.e. login and logout of each terminal to the HES. **It shall be recognized in the HES as authorized node.**	**Our submission: Sir, kindly not that the Security shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm** **Same clarification shall be applicable for other variant also.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
595	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	m) Attributes such as **Firmware version, Hardware version, Signal strength values, packet error rate, should be pushed** periodically to HES for effective communication management.	**Our submission: Sir, as per DLMS IS 15959 (Part 2) Standard 'Device ID, Push Setup ID, RTC and 10 Instant Parameters' are allowed in Periodic Push.** **Also the OBIS Codes are not supported by DLMS IS 15959 (Part 2) Standard for these mentioned Parameters.**	Tender specification to be complied
596	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 5 of 22 Pg No. 205 of 446	**n) Data must be encrypted with AES-256 bit at least.**	**Our submission: Sir, kindly not that the Security encryption shall be as per DLMS IS 15959 (Part 2) Standard.** **Kindly confirm** **Same clarification shall be applicable for other Meter variant of this tender.**	Tender specification to be complied
597	NIC MODULE DETAILS & INTEGRATION Pg No. 206 of 446	Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
598	Cl 4.36 Communication capabilities and software feasibilities Pg No. 206 of 446	4.3.2 It should be the responsibility of the bidder to ensure integration of meter into HES**.**For cellular fallback, the Module should have backward compatibility.	Understand the NIC should communicate on 4G by default and fall back on 2G. Pl confirm.	OK

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
599	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 6 of 22 Pg No. 206 of 446	4.3.3) **And billing should be done whenever any above mentioned attribute is changed.** The change should be recorded as upgrade event.	**Our submission: Sir, kindly remove the requirement of Billing when RTC is changed.**	Tender specification to be complied
600	Cl 4.36 Communication capabilities and software feasibilities Pg No. 206 of 446	4.3.3 It shall be possible to reconfigure the meters for RTC,TOD slots reprogramming, DIP (Demand Integration period), billing date ,display parameters etc. through proper authentication process locally through MRI and remotely over the air (OTA). Meter data should remain intact with timings. And billing should be donewhenever any above mentioned attribute is changed. The change should be recorded as upgrade event.	Billing will be done in case of TOD slots reprogramming only as the other parameters will not effect the calculation of the meter	Tender specification to be complied
601	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 6 of 22 Pg No. 206 of 446	4.3.5 Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. **The complete data shall be downloaded within 5 minutes OTA.**	**Our submission: Sir, the Data downloading through OTA shall depend on signal strength at that time.** **You are requested to kindly remove the requirement of time limit for Data downloading through OTA.**	Tender specification to be complied
602	Cl 4.36 Communication capabilities and software feasibilities Pg No. 206 of 446	4.3.5 Optical Communication port shall be available for communication. Communication ports shall not be affected by any type of injection /unauthenticated signals and having proper sealing arrangement. The complete data shall be downloaded within 5 minutes OTA.	The timing of Data download over the air depends on the network capability	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
603	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 6 of 22 Pg No. 206 of 446	4.3.9) .... **Android based or windows based HHU shall be preferred.**	**Our submission: Sir, kindly clarify whether Supply of CMRI is tender Supply scope or not.** **In case if CMRIs are also in tender supply scope then please clarify number of HHU required.** **please accept Linux based CMRI also.**	CMRI is not in tender scope. However neceessary reading software to be provided for local communication
604	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 7 of 22 Pg No. 207 of 446	4.3.11) **List of events to be reported should be configurable** over the air(OTA).	**Our submission: Sir, the list of Events to be reported shall be provided as per Table 8 (Object list of Event Push to HES) of DLMS IS 15959 (Part 2) Standard.** **You are requested to kindly accept the same.**	Tender specification to be complied
605	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 7 of 22 Pg No. 207 of 446	4.3.13) Last mile **mesh network** must support auto-registration and self-healing feature to continue operation using easiest possible available route in case of failure of any communication **device in the mesh.** Self-registrations in first communication.	**Our submission: Sir, the NIC requirement is with cellular. It seems typographical error.** **Kindly amend as per Cellular**	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
606	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 7 of 22 Pg No. 207 of 446	4.3.14) Meter Serial no will be used for tagging of all data of the meters in all database (at HES / MDM/ DCU level etc). However, it will be the responsibility of the Bidder to establish the complete communication solution involving all the meters in the system. Also, the Bidder must ensure that, the mode of communication used for 4G shall be consistent with the Government of India stipulations.	**Our submission: Sir, the NIC requirement is with cellular. It seems typographical error.** **Kindly amend as per Cellular**	Noted
607	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 7 of 22 Pg No. 207 of 446	4.3.15) **The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS(procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.**	**Our submission: Sir, we understand this clause is applicable to Bidders who shall supply 3rd Party NIC Card.** **However, kindly note that NIC Card has to be integrated with 3rd Party MDM.**	Tender specification to be complied
608	Cl 4.36 Communication capabilities and software feasibilities Pg No. 207 of 446	4.3.15 The Bidder's supplied meter with third party communication module should have suitable hand-shaking features to allow a third-party MDMS (procured by TPCODL) to configure, command, read and control smart meters installed at site. The Bidder shall extend all necessary assistance in developing the adaptor software through a third-party for facilitating the above.	A composite system including Smart Meters, Communication network & Head End system is being sought against this tender. The output from Head end system would be integrated with TPCODL's MDM. No other software is required to be provided by Bidder. Please confirm.	Tender specification to be complied
609	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 7 of 22 Pg No. 207 of 446	4.3.18) **Communication NIC/network should be immune with any external Magnetic field/ESD/Jammer/HV voltage influence such that it shall not affect the normal overall functionality.**	**Our submission: Sir, kindly note the Radio Communication is based on the Electromagnetic Waves and the distructive Test may effect the Signal pattern and temporarily effect the Communication.** **The Communication shall work properly after the distructive testing is done.** **Kindly accept the same**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
610	Cl 4.36 Communication capabilities and software feasibilities Pg No. 207 of 446	4.3.18 Communication NIC/ network should be immune with any external Magnetic field/ESD/ Jammer/ HV voltage influence such that it shall not affect the normal overall functionality.	Meter immunity will be as per CBIP325	Tender specification to be complied
611	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 7 of 22 Pg No. 207 of 446	4.3.19) Meter once powered up with NIC card should be self-detected by 4G network **and its basic name plate details** & current readings are transferred to HES.	**Our submission: Sir, kindly note that in DLMS IS15959 (Part 2) Standard the Name Plate requirement is for the Meter and the NIC Module is part of Meter** **You are requested to kindly accept the Meter Name Plate detail.**	Tender specification to be complied
612	Cl 4.36 Communication capabilities and software feasibilities Pg No. 208 of 446	4.3.21 Meter display should have provision for showing if NIC card if: 1. Installed, 2. Getting Network, 3. Latched with HES, 4. Communicating with HES.	Signal Strength on dispaly and LED's on module will be provided for the communication status	Tender specification to be complied
613	Specification for Smart DT meter Clause No. NIC MODULE DETAILS & INTEGRATIO N Page No. 8 of 22 Pg No. 208 of 446	4.3.21) Meter display should have provision for showing if NIC card if **:** **1. Installed,** **2. Getting Network,** **3. Latched with HES,** **4. Communicating with HES**	**Our submission: Sir, the same requirements already covered in above clause 4.1 (p) as:** **"Colour coded LED** **(a) For latching on to the network** **(b) For latched on to the network** **(c) For data flow indication"** **So, we request you to kindly accept the requirement as mentioned in Clause No. 4.1 (p) (Page No. 5 of 22)**	Tender specification to be complied
614	Specification for Smart DT meter Clause No. 4.3.7 Abnormal and Tamper conditions Page No. 8 of 22 Pg No. 208 of 446	4.3.7.1) **During abnormal and Tamper conditions, the current shall be recorded as active current and line current.**	**Our submission: Sir, the OBIS Codes are not available for Active Current and Line Currents in DLMS IS 15959 (Part 3) Standard (category D4).** **The OBIS Code list is not available for 3 Phase DT Meters in this NIT specifications document.** **You are requested to kindly accept Phase Currents in line with DLMS IS 15959 (Part 3) Standard.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
615	Specification for Smart DT meter Clause No. 4.3.7 Abnormal and Tamper conditions Page No. 8 of 22 Pg No. 208 of 446	4.3.7.1) During abnormal and Tamper conditions, the current shall be recorded as active current and line current. **Each such event shall be provided with minimum 25 Nos of counts**	**Our submission: Sir, the Compartments shall be provided as per DLMS IS 15959 (Part 3) Standard.** **Size is applicable for compartments only not for type of Events.** **You are requested to kindly accept the same.**	Tender specification to be complied
616	Cl 4.37 ABNORMAL TAMPER CONDITIONS Pg No. 209 of 446	4.37.1 High Neutral Current	Not applicable as per IS 15959 Part-3	Tender specification to be complied
617	Cl 4.37 ABNORMAL TAMPER CONDITIONS Pg No. 209 of 446	4.37.1Meter shall be provided with feature for terminal cover opening with time stamping.	Terminal cover Open tamper not applicable as per IS15959 Part2	Tender specification to be complied
618	Specification for Smart DT meter Clause No. 4.3.7 Abnormal and Tamper conditions Page No. 9 of 22 Pg No. 209 of 446	Persistence time for restoration Power On Off=0 Hr **5 Min 0 sec**	**Our submission: Sir, the Power On-Off Restoration shall be immediate.** **You are requested to kindly accept the same.**	Tender specification to be complied
619	Cl 4.37 ABNORMAL TAMPER CONDITIONS Pg No. 209 of 446	4.37.2 The meter shall record in export registers in case of reversal of all CT terminals.The meters are to be used for registration of energy consumed by the consumer, as such the meters shall be programmed for import mode and in case of reversal of energy direction (reversal of all CT terminals) meter shall register energy separately in export mode i.e. in case of CT reversal, meter shall record scalar (not vector sum) sum of energy.	The meter will register the energies in export register if the meter is in Net metering mode. The meter will register the energy in the forward register in CT reversal condition if the meter is in Forward mode	ok

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
620	Specification for Smart DT meter Clause No. 4.3.7 Abnormal and Tamper conditions Page No. 9 of 22 Pg No. 209 of 446	4.37.3) The meter shall register correctly if supply neutral is not available at the meter neutral terminal. The meter shall work in absence of any phase. **It shall keep recording correctly in case of unbalance system voltage also as defined above.**	**Our submission: Sir, kindly note that Meter recording shall be as per prevailing Electrical conditions at the Meter Terminals.** **You are requested to kindly accept the same**	Tender specification to be complied
621	Cl 4.37 ABNORMAL TAMPER CONDITIONS Pg No. 209 of 446	4.37.6 Minimum 08 DI&02 DO required (Extendable upto 12 each type for future requirement) to communicate with DT/Breaker/Isolators/FPI ,sensors etc.		Tender specification to be complied
622	Cl 4.37 ABNORMAL TAMPER CONDITIONS Pg No. 209 of 446	4.37.6 Minimum 08 DI & 02 DO required (Extendable upto 12 each type for future requirement) to communicate with DT/Breaker/Isolators/FPI ,sensors etc.	These are unique and non-standard requirement. Request delete the same.	Noted
623	Cl 5 General Constructions Pg No. 210 of 446	Components make list	Component make list will be as per the the attcahed sheet in the mail.	Tender specification to be complied
624	Meter Technical Specification Clause No. 5.2 METER BODY Pg No. 211 of 446	Meter base shall be opaque of Green color with polycarbonate **LEXAN 500R or equivalent** on prior approval from the TPCODL.	**Our submission: Sir, please also accept equivalent material like, LEXAN 143/143R for Meter Base, as the same Material grade is also accepted for Meter Cover.** **Request you to please also consider the same.**	Tender specification to be complied
625	Smart Meter Technical Specification Clause No. 5.2 METER BODY Pg No. 211 of 446	Meter base shall be opaque of **Green color** with polycarbonate LEXAN 500R or equivalent on prior approval from the TPCODL.	**Our submission: Sir, please also accept Meter Base in opaque colour instead of only Green Colour.** **Kindly confirm the same.**	Noted
626	5.2 Meter Body: Pg No. 211 of 446	Meter Body: Meter PCB chamber should be hermetically sealed and pins for connecting NIC card should come out from this hermetically sealed compartment in an adjoining slot where NIC card can be push fit and sealed using TPCODL sealing arrangement.	NIC card will be pushfit and provision is provided for sealing by TPCODL. Hence delete the requirement of "hermetically sealed".	Noted

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
627	Cl 5.3 TERMINALS, TERMINAL BLOCK Pg No. 211 of 446	Internal diameter of the terminal holes shall be minimum 5.5 mm; minimum clearance between adjacent terminals shall be 10 mm. Depth of the terminal holes shall be of 25 mm.	Internal diameter of the terminal holes shall be minimum 5 mm; minimum clearance between adjacent terminals shall be 10 mm. Minimum Depth of the terminal holes shall be of 15mm minimum	Tender specification to be complied
628	Cl 5.4 TERMINAL COVER Pg No. 211 of 446	5.3.1 Terminal cover shall be short type and transparent with polycarbonate LEXAN 143R/943A or equivalent on prior approval from the TPCODL.	Terminal cover shall be short/extended type and transparent with polycarbonate LEXAN 143R/943A or equivalent on prior approval from the TPCODL.	Tender specification to be complied
629	Cl 5.8 Load Survey parameters Pg No. 212 of 446	Load Survey parameters for prepaid & postpaid mode	Parameters will be as per IS15959 Part-3	Tender specification to be complied
630	Specification for Smart DT meter Clause No. 5.8 Load Survey Page No. 12 of 22 Pg No. 212 of 446	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 60 days ... **3) PF of each phase** **4) KWh of each phase**	**Our submission: Sir, the OBIS Codes are not available for Phase Wise PF, Phase Wise kWh in DLMS IS 15959 (Part 3) Standard Category D4.** **The OBIS Code list is not available for DT Meters in this specifications.** **You are requested either to provide the OBIS codes or delete the requirement from the specification.**	Tender specification to be complied
631	Specification for Smart DT meter Clause No. 5.8 Load Survey Page No. 12 of 22 Pg No. 212 of 446	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 60 days … **9) Demand KW** **10) Demand KVA**	**Our submission: Sir, the Demands kW, kVA are derived Parameters and the same shall be available at BCS end.** **You are requested to kindly accept the same.**	Tender specification to be complied
632	Specification for Smart DT meter Clause No. 5.8 Load Survey Page No. 12 of 22 Pg No. 212 of 446	The meter shall be capable of recording 15 minutes average of the following parameters for at least last 60 days … **11) Neutral Current** **12) Vector diagram (three voltages & four currents)** **13) Frequency** **14) THDV** **15) THDI**	**Our submission: Sir, the OBIS Codes are not available for Neutral current, Vector diagram, THDV, THDI in DLMS IS 15959 (Part 3) Standard (Block Load Survey) for category D4.** **The OBIS Code list is not available for DT Meters with this specification.** **So, you are requested to kindly remove the same from specification.**	Tender specification to be complied

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
633	Specification for Smart DT meter Clause No. 5.10 Output Device Page No. 15 of 22 Pg No. 215 of 446	5.10.1) **The test output device shall have constant pulse rate preferably of 400 pulse / kWh & 400 pulse/Kvah.**	**Our submission: Sir, the Meter constant shall be as per Manufacturer design.** **You are requested to kindly accept the same.**	Noted
634	Cl 5.10 Output devices Pg No. 215 of 446	5.10.2 Communication LED- The meter shall be provided with Green color LED for RxD and orange color LED for TxD communication in progress.	We will provide a single red colour LEWB on NIC for TxD & RxD .	Tender specification to be complied
635	Specification for Smart DT meter Clause No. 5.10 Output Device Page No. 15 of 22 Pg No. 215 of 446	5.10.2) Communication LED- The meter shall be provided with **Green color LED for RxD and orange color LED for TxD communication in progress**	**Our submission: Sir, suitable indication shall be provided on LCD for Communication in progress.** **You are requested to kindly accept the same. The same is asked in LT CT Operated Smart Meter the specifications Clause No. 5.9.2.**	Tender specification to be complied
636	Specification for Smart DT meter Clause No. 5.10 Output Device Page No. 16 of 22 Pg No. 216 of 446	However the following shall be printed in bar code on the meter nameplate**(shall be laser printed** on name plate instead of any sticker).	**Kindly accept indelible Printing alternatively.**	Tender specification to be complied
637	7.4 Special Test: Pg No. 217 of 446	Special Test: The bidder shall ensure that API (Application protocol interface) is compatible with TPCODL'S CFW.	A composite system including Smart Meters, Communication network & Head End system is being sought against this tender. The output from Head end system would be integrated with TPCODL's MDM. No other software is required to be provided by Bidder. Please confirm.	Tender specification to be complied
638	13 Tender sample Pg No. 218 of 446	Tender sample: Bidders are required to manufacture 03 sample meters as per the Purchaser specification (sealed, unsealed and openable base and cover to view/test the inner circuits)and submit the sample along with bid for approval.	Meter calls for 8 DI/2DOs , which are unique and not readily available. Hence request consider evaluation of sample LTCT Operated Meters itself against this requirement.	Tender specification to be complied
Queries on Head End System				

Sr. No.	Detailed Reference to concerned Document . Please specify Document No / Clause No / Page No	Description as per Bid Document	Query / Clarification / Deviation submitted by prospective bidders	TPCODL Response
639	B.1 Pg 22 of 446	Facility Management services (inclusive of communication network after go live. Till go live, bidder has to bear the cost of the hosting system on cloud)	As per clause B.2, Do we have to quote hosting charges for 7 yrs or till go-live	Separate quote to be submitted
640	B.2 Pg 22 of 446	Cloud Hosting Charges	7 years	OK
641	B.3 Pg 22 of 446	SIM Card Rental	Rental will be beared by bidder till go-live or 7 years	Rental to be borne by the bidder till go live
642	Pg 227 of 446	20 different variants of various meter OEM	Does that mean 20 meter types need integration with HES? DLMS based Smart Meters ?	All prevailing DLMS Smart meters in INDIA
643	Pg 228 of 446	HES should be interoperable with different 4G/LTE network providers (bidder to submit back-to back agreement with TSP's minimum 4 nos.)	We would suggest to restrict the TSP to 2 no's due to SIM Inventory management	Tender specification to be complied
644	Pg 229 of 446	HES shall have functionality of Gap reconciliation process for Billing data , Daily mid night data, Interval data from the meter on the basis of meter type and for all metering parameters from Meter	This shall be handled by MDMS through VEE	Tender specification to be complied
645	Pg 230 of 446	For any version upgrade bidder need to provision required Infra for Test and Development environment.	As per our understanding, T&D environment shall be available at DC only	Tender specification to be complied
646	Pg 231 of 446	Network management system, inbuilt in the HES, shall be on open standard and shall support third party network equipment.	Kindly elaborate 3rd Party network equipment	Shall be provided during detail engineering
647	Pg 231 of 446	Bidder to ensure Lease line connectivity at TPCODL control centers	Kindly provide the no of CC and address for ILL feasability	Details to be shared during Blueprint stage
648	Pg 233 of 446	TPCODL requires connectivity at 2,50,000 end points scalable upto 0.5 M end points	Kindly suggest the qty to be catered for cloud hosting, as scalability would require scaling of Cloud Infra too	Shall be provided during detail engineering
649	Pg 233 of 446	SIM provided by Bidder should be of industrial Grade	Kindly elaborate	Tender specification to be complied
650	Pg 239 of 446	RPO and RTO of the DR system should not be more than 30 minutes for any system.	We would like to suggest RPO of 2 Hrs and RTO of 8 Hrs due to DNS propogation	Tender specification to be complied