RFP- CLARIFICATION, MODIFICATION & AMENDMENTS

RFP No [IN-WBSEDCL-299327-CW-RFB]

Supply, Installation and Maintenance of Smart Meter with Communication System and Cloud Based Head End System for AMI Solution on TOTEX Model

e-Tender Notice No: WBSEDCL/IT&C/33.10(XVII-B)-World Bank-II / 452 Date: 29.08.2022

PRE-PROPOSAL MEETING HELD ON: 14.09.2022

West Bengal State Electricity Distribution Company Limited
(A Government of West Bengal Enterprise)
(I T & Communication Cell)
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A. Modifications/Corrections to RFB clauses

Sl. No.	Tender clause No.	Page No.	Description of clause	Modification to the clause
1		3	2. The West Bengal State Electricity Distribution Company Limited now invites sealed bids from eligible Bidders that can design, deploy, and maintain the Smart Metering system in TOTEX model. ..... its successful Operational Go-Live and maintain the system throughout the contract period of 10 years **from the date of LoA**, including 2 years of implementation period in Garia CCC, ...	2. The West Bengal State Electricity Distribution Company Limited now invites sealed bids from eligible Bidders that can design, deploy, and maintain the Smart Metering system in TOTEX model. ..... its successful Operational Go-Live and maintain the system throughout the contract period of 2 years for implementation and 8 years from Go-Live Acceptance **from the date of Contract signing date**, in Garia CCC, ...
2	ITB 4.3	9	A firm that is a Bidder (either individually or as a JV member) shall not participate as a Bidder or as JV member in more than one Bid except for permitted alternative Bids. This includes participation as a Subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.	**Modification to ITB 4.3 under BDS** BDS 4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate as a Bidder or as JV member in more than one Bid except for permitted alternative Bids. Firms that qualify as Meter Manufacturers shall not be allowed to participate as a Subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member or a Meter Manufacturer may participate as a subcontractor in more than one Bid.
3	BDS 42.2	42	Addition to the existing clause under ITB 42.2	The **most advantageous Bidder** will be requested to participate in the Meter samples for testing and solution demonstration (please refer to Section C.a) that outlines the procedure for meter testing and demonstration of solution. Failure in meter sampling and demonstration by the **most advantageous Bidder** shall result in the annulment of the Notification of Award and forfeiture of Bid Security **as per ITB 50.2**. The Notification of Award can then be issued to the **next most advantageous Bidder**.

4	3.2	47	The bidder should have average annual turnover of Rs. 500 Crores during three financial years ending on 31- Mar-2022	The bidder should have a minimum average annual turnover of Rs. 500 Crores for the last three financial years ending on 31- Mar-2022
5	4.6.5	52	Documentary Evidence: Qualifying Requirement Criteria - References along with requisite contract/ Purchase Order (PO)/ Work Order (WO). The references should indicate client name, scope of work, Project start date – as per the format prescribed in Form 4.2 (a);	Work Orders / Letter of Award; and experience/completion certificate. The confidential contents in the work order / certificate (such as Price etc.) may be masked **(if there any NDC)** before submitting. The relevant information can also be provided by the Bidder under their own signatures. However, WBSEDCL will have the liberty to ask for client verification.
6	1.6 (a) 4.6.6., 1.6 (i)	52, 54	Manufacturing experience for Static/Smart electricity meters The proposed Meter Manufacturer should have manufactured and supplied Static electricity meters/ Smart electricity meters. Minimum **20 Lacs** static electricity meters (cumulative) in last 7 years in India/Global power distribution utility AND Minimum **1 Lac** Smart Electricity Meters (cumulative) in last 7 years in **India/Global** power distribution utility	Manufacturing experience for Static/Smart electricity meters (for Meter Manufacturer) The Bidder should have manufactured and supplied Static electricity meters/Smart electricity meters. Minimum **10 Lacs** static electricity meters (cumulative) in last 7 years in India/Global power distribution utility AND Minimum **1 Lac** Smart Electricity Meters (cumulative) in last 7 years in power distribution utility
7	1.6 (a)	53	**a) Time Schedule:** to complete the Plant and Installation Services from the effective date specified in Article 3 of the Contract Agreement for determining time for completion of pre-commissioning activities is: 24 months from the date of Letter of Award (LoA). No credit will be given for earlier completion. Post installation, the Bidder shall provide Operational support & Maintenance services for a period of 96 months.	Note that Implementation timeline shall be 24 months from the **Contract signing date** and NOT from the date of Letter of Award (LoA). O&M services shall be for a period of 96 months post-Go-Live Acceptance date.

8	A.1	67	27. Load Survey Parameters for last 60 days Real Time Clock – Date & Time Current(I) Voltage (V) Block Energy – kWh-(Import) **Block Energy –kVAh-(Lag)** **Block Energy –kVAh-(Lead)** Block Energy –kVAh-(Import) Block Energy – kWh-(Export) Block Energy –kVAh-(Export)	27. Load Survey Parameters for last 60 days Real Time Clock – Date & Time Current(I) Voltage (V) Block Energy – kWh-(Import) Block Energy –kVAh-(Import) Block Energy – kWh-(Export) Block Energy –kVAh-(Export)
9	B.1	74	Display parameters in auto scrolling mode LCD Test Credit Balance in INR **Relay status** Meter Sr. No. Date Time Cumulative kWh Current month MD Instantaneous Voltage Instantaneous Current Instantaneous Load KW Tamper count	The push button Display parameters to be considered for Sample Meters are as follows: 1. For 1-Ph Smart Meters: a) LCD test b) Credit balance in INR (In Pre-paid Mode) c) Date d) Real Time e) Cumulative kWH (Imp) f) Cumulative kWH (Exp) g) Current maximum demand in kW h) Instantaneous Power factor i) Instantaneous Voltage j) Instantaneous Current k) Neutral current l) Last month billing Maximum Demand in KW m) Last Month billing Kwh (Imp) n) Last Month billing Kwh (Exp) o) Earth Load Indication (If condition occurred) p) Meter Cover Forcibly open Tamper event. q) Cumulative kWH (Imp) in HR r) Cumulative kWH (Exp) in HR s) Cumulative kVAH (Imp) in HR t) Cumulative kVAH (Exp) in HR 2. For 3-Ph Smart Meters: a) LCD test b) Credit balance in INR (In Pre-paid Mode) c) Date d) Real Time e) Cumulative kWH (Imp) f) Cumulative kWH (Exp) g) Current maximum demand in kW h) Instantaneous Power factor (Phasewise) i) Instantaneous Voltage (Phasewise) j) Instantaneous Current (Phasewise) k) Neutral current

				l) Last month billing Maximum Demand in KW m) Last Month billing Kwh (Imp) n) Last Month billing Kwh (Exp) o) Earth Load Indication (If condition occurred) p) Meter Cover Forcibly open Tamper event. q) Cumulative kWH (Imp) in HR r) Cumulative kWH (Exp) in HR s) Cumulative kVAH (Imp) in HR t) Cumulative kVAH (Exp) in HR
10	B.1	76	c) Current **2%** to 600% of rated basic current	c) Current **5%** to 600% of rated basic current
11	GTP		Re-connection mechanism: For reconnection mechanism a local reset button shall also be provided on the Smart Meter.	**Reset button on meter for local re-connection not required.**
12	GTP		A serial port (RS232 or RJ11) shall also be provided inside the terminal cover to enable automatic meter reading through Modem, if required in future.	**RJ11 not necessary. Optical port mandatory for offline download via BCS and to connect external modem if utmost necessary.**
13	2.3	133	Note: The aforementioned quantity is indicative. Utility reserves the right to increase or decrease the number of items under this Contract subject to the limit of - 20% (twenty percent) up to +30% (thirty percent) of the existing number of items (mentioned above), covered under this Contract, without any change in the unit prices or other terms and conditions of this Contract and the Bid. Final quantity will be ascertained during the first 5 years of the project, from the date of issuance of LOA.	Note: The aforementioned quantity is indicative. Utility reserves the right to increase or decrease the number of items under this Contract subject to the limit of **- 20% (twenty percent) up to +20% (twenty percent)** of the existing number of items but the increase of quantity should be restricted by the Clause 39.2.5 of Section VIII-GCC, without any change in the unit prices or other terms and conditions of this Contract and the Bid. **Final quantity will be ascertained up to the *date of Go-Live Acceptance* of the project, from the date of *signing of Contract*.**
14	2.7.1	136	Note: The aforementioned quantity is indicative. Utility reserves the right to increase or decrease the number of items under this Contract subject to the limit of - 20% (twenty percent) up to +30% (thirty percent) of the existing number of	This clause is deleted.

			items (mentioned above), covered under this Contract, without any change in the unit prices or other terms and conditions of this Contract and the Bid. Final quantity will be ascertained during the first 5 years of the project, from the date of issuance of LOA.	
15	2.13	149	**A. During installation and commissioning period** *Upto 24 months from the date of **issuance of LoA**.*	**A. During installation and commissioning period** *Upto 24 months from* **Contract signing date.**
16	2.13	150	**B. During O&M period** *(beyond 25 months from issuance of LOA)*	**B. During O&M period** *(up to 96 months form date of Operational Go-Live)*
17	PCC 12.5	405	a. Value of the Letter of Credit (LC) will be 2 months of monthly payment bill considering total number of Consumer meter under scope of this project. **The exact amount will be decided after placement of LOA.**	Value of the Letter of Credit (LC) will be 2 months of monthly payment bill considering total number of Consumer meter under scope of this project. **The exact amount will be decided after the signing of the Contract.**
18	Form – N	452	c. The Letter of Credit is confirmed, conditional, standby & irrevocable.	The Letter of Credit is revolving, confirmed, conditional, standby & irrevocable. In case of an event of LC revocation it will be reinstated with the same amount.
19	PCC 12.6	407	Payment of Mobilization Advance by the Employer shall be made to the Contractor after **acceptance of LOA by the Contractor**. Subsequent payments shall be made as per successful completion of payment milestones as defined in Section X Appendix 1.	Payment of Mobilization Advance by the Employer shall be made to the Contractor after **the signing of the Contract by both the parties and as per the provisions for the advance payment**. Subsequent payments shall be made as per successful completion of payment milestones as defined in Section X Appendix 1.
20	Contract Form (Appendix 1)	429	Schedule (**T0 = Date of LoA**)	Schedule (**T0 = Date of Contract Signature**)
21	Contract Form – N	452	a. Value of the Letter of Credit (LC) will be 2 months of monthly payment bill considering total number of Consumer meter under scope of this project. The exact amount will be	Value of the Letter of Credit (LC) will be 2 months of monthly payment bill considering total number of Consumer meter under scope of this project. The exact amount will be decided after **the Contract signing date**.

			decided after **placement of LOA**.	
22	2.20	176	Future integration and support services for meeting the future expansion requirement envisaged under this project and Day to day operations of the AMI system under supervision and authority of WBSEDCL.	Any changes or new integrations shall be taken care through the change management as per the contract.
23	-	-	General	Submission of meter samples and demonstration of solution. **See amendment for updated clause.**
24	F	88	Requirement: 5-30A, 10-60A, 20-100A	Scope of 5-30A 3-phase meter has been removed from the RFB.
25			General	Date of signing of the Contract, Effective date of the contract shall be read as Contract Signing Date- throughout the document.
26	4.6.5	52	The Bidder must have manufacturing facility in India for Static and Smart Energy Meters. AND It must be in Metering Business for at least **10 years** as on date of Bid Submission.	The Bidder must have manufacturing facility in India for Static and Smart Energy Meters. AND It must be in Metering Business for at least **7 years** as on date of Bid Submission.
27	-	-	General	The "**EPC Contractors**" will be read as "**Contractors/Developers/Others**" all other terms and conditions of this Contract and the Bid will remain unchanged.

B. Responses to pre-bid queries received from participants

C. Queries received on Sections – I (ITB), II (BDS), and III (Evaluation & Qualification Category)

Sl. No.	Tender clause No.	Page No.	Context of the Query/Text details	Query details/Clarification sought	WBSEDCL Response
1	4.3	11	A firm that is a Bidder (either individually or as a JV member) shall not participate as a Bidder or as JV member in more than one Bid except for permitted alternative Bids. This includes participation as a Subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.	Bidder should also be allowed to participate as OEM/Subcontractor in multiple bids.	As per Bid
2	Request for bids	5	Contract Value (Estimated) = Rs. 280 Crores + GST	Considering the recently finalized AMI tenders, the estimated value of the project is on a lower side. It is requested to kindly review the same and amend accordingly. It is understood that Capex portion (i.e. 40%) shall be based on discovered price and not on estimated price. May please confirm.	As per Bid
3	33.2	30	The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 15. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than Specialized Subcontractors if permitted in the bidding document), or any other firm different from the Bidder.	The Participant has implemented smart meter solution at its Mumbai and Delhi distribution arms and has hands on experience of AMI implementation from a distribution utility perspective. Hence, it is requested to kindly consider the experience of bidder's subsidiary which is a distribution licensee and in which the bidder has majority shareholding, for evaluation against qualification criteria. The same was also allowed in previous tender of	As per Bid

				WBSEDCL for AMI implementation.	
4	ITB 51	43	The Adjudicator proposed by the Employer is: Before signing of contract Agreement [insert name and address of proposed Adjudicator]. The daily fee for this proposed Adjudicator shall be: Rs. 10,000.00 per day.	Kindly confirm whether the adjudicator shall be appointed on full time basis. Also, the fee of the adjudicator is on a higher side and will increase the cost of the project. Hence it is requested to kindly review the adjudicator fee and revise the same downward.	As per Bid
5	4.6.2	51	4.6 For bidders who wish to qualify as EPC contractors 4.6.2 Specific Experience the Bidder must have experience of integration of Headend System with MDM for at least 2,50,000 consumers/ end-points (cumulatively) in Electricity Distribution Utility in the last seven (7) years which are in operation for at least one (1) year.	We observe that specific experience quantity is too high whereas in MP smart meter tender (KfW funded) only required 20000 consumers for the Work of more than 10 Lakh smart meter. We request you amend the clause 4.6.2 Specific Experience as per below: 4.6.2 Specific Experience: Bidder must have experience of integration of MDAS/head-end system with MDM on standard interfaces and data exchange models for at least [20,000] consumers (cumulatively) in an Indian/ Global Utility (power sector) in the last 5 (five) years from the last date of submission of bid which are in operation for at least 1 (one) year. OR Bidder should have installed, integrated, tested and commissioned control centre hardware and application software for at least [50,000] Metering points (cumulatively) in Indian/ Global Utility (power sector) in last 5	As per Bid

				(five) years from the last date of submission of bid which are in operation for at least 1 (one) year. Here, Metering points means energy meters at consumer premise, distribution transformer meter and feeders. Kindly clarify please	
6	3.1-3.6	46-49	3. Financial situation 3.1. Financial Capabilities* 3.2. Average Annual Turnover* 3.3. Financial Resources* 3.4. Positive Net Worth * 3.5. Net Worth * 3.6. Bid Capacity*	We request to modify the Financial eligibility in JV/Consortium bid, so that the tender participants will increase. Like in JV bids Lead member will be the sole authority upto the contract period, henceforth the share of lead bidder may increased upto 89%, however the other JV bidders share cannot be less than 10%. For example: JV ratio 89:11, in that condition lead partner must meet 89% of Financial situation & other partner must meet 11% of Financial situation. Kindly confirm.	As per Bid
7		55, 56, 83, 144	Qualification Requirements for sub-contractors/vendors /OEMS: 1. Technical Experience The proposed Communication solution and NIC provider must have following deployment capabilities in Utilities: i. Must have been implemented AMI / AMR projects in at least 2 Power utilities in the last 5 years. ii. Each project must have a minimum deployment of 2,00,000 meters All such projects must be in operation successfully for a minimum of 1 year prior to the date of publication of this RFB. 2. Interoperability The Communication solution or NIC provider must provide an undertaking that the proposed	Kindly accept Bidder's valid pre-qualification and technical empanelment certificate for the required communication technology, issued by REC and approved by the committee constituted vide the letter issued by the Ministry of Power F.No.14/02/2021-UR&SI-II-Part(1)-(E-258136) dt. 10th January 2022, at the time of bid submission This is a standardized procedure drafted by Ministry of Power, Govt. of India for successful demonstration of end to end AMI prepaid solution	As per Bid.

			solution has been implemented with at least 3 different makes of smart meters in India and HES. HES deployment capabilities – cumulative no. of meters in AMI project, single large deployment, Integration of HES with COTS MDMS etc.	for India which are going to be deployed at the pan India level	
8	3.6	48	**Bid Capacity:** The bid capacity of the contractor should be equal to or more than the estimated cost of the work put to Tender. The bidding capacity shall be worked out by the following formula: Bidding Capacity = [A x N x 2] – B Where, i) A = Maximum turnover in any one year during the last three years (in case of bidders having multiple lines of businesses, turnover only against, which shall be duly certified by a Chartered Accountant) ii) N = Number of years prescribed for completion of work (till go-live) for which bids have been invited iii) B = Value of existing commitments and ongoing works (this will include works against which notification of intention of award/	Please remove this clause and follow the Standard bidding document to align & make more competitive.	As per Bid
9	III.1	55	The proposed HES must have following deployment capabilities in Utilities: i. Successfully Commissioned cumulative 10 Lacs meters in AMI project. ii. Single Large AMI deployment experience of at least 30,000 Smart meters iii. Successful integration of HES with at least 2 COTS MDMS products (COTS MDMS products shall be such MDMS products that are listed in Gartner's Market Guide for MDM 2021). All such projects must be in operation successfully for a	Since HES is software Its functionality is not dependent to cellular or RF. Hence request your good office to Change Subject QR as, HES must have following deployment capabilities in Utilities: i. Successfully Commissioned cumulative 1 Lacs meters in AMI (Cellular or RF) project. ii. Single Large AMI deployment experience of at least 30,000 Smart meters	As per Bid

			minimum of 1 year prior to the date of publication of this RFB.	iii. Successful integration of HES with at least 2 MDM solution should have been successfully integrated with at least 2(two) nos. of different Billing Systems in Indian/ Global Utility(ies) (power/ water/natural gas/ telecom) or with Billing/ Other IT systems of 2 (two) different Indian/ Global Utility(ies) in last 7 (seven) years	
10	4.6.2	51	**For EPC contractors** The Bidder must have experience of integration of Headend System with MDM for at least 2,50,000 consumers/ end-points (cumulatively) in Electricity Distribution Utility in the last seven (7) years which are in operation for at least one (1) year.	Proposed: The Bidder must have experience of integration of Headend System with MDM for at least ~~2,50,000~~ 50,000 (Fifty Thousand Only) consumers/ end-points (cumulatively) in Electricity Distribution Utility in the last seven (7) years which are in operation for at least one (1) year.	As per Bid
11	4.6.4	51	**For Distribution Licensee** The Bidder must have executed (as employer of contract) and operated an AMI Project for a minimum of 2,00,000 smart electricity meters. All such meters should be in successful operation successfully for a minimum of 1 year from the date of publication of this RFB.	Proposed: The Bidder must have executed (as employer of contractor or Contractor) and operated an AMI Project for a minimum of ~~2,00,000~~ 50,000 (Fifty thousand) smart electricity meters. All such meters should be in successful operation successfully for a minimum of 1 year from the date of publication of this RFB.	As per Bid
12		54		Please Clarify, Weather eligible OEM of Meter, HES, can support multiple bidder.	Meter OEMs shall not support multiple Bidders.
13	4.6.1	51	The Bidder must have, implemented Eligible project(s) in the last 7 (seven) Financial Years with aggregate value of at least INR 140 Crores in not more than two contracts	We understand that aggregate INR 140 Cr should be from AMI business. Kindly confirm.	As per Bid

14	4.6.6	52	The Bidder should have manufactured and supplied Static electricity meters/ Smart electricity meters. Minimum 20 Lacs static electricity meters (cumulative) in last 7 years in India/Global power distribution utility AND Minimum 1 Lac Smart Electricity Meters (cumulative) in last 7 years in power distribution utility	The Bidder should have manufactured and supplied 20 lacs Static electricity meters/ 2 lacs Smart electricity meters as per BIS 16444. in last 7 years in India/Global power distribution utility. Please give equal weightage to new and experience Smart Meter manufacturers under Make in India and Atmanirbhar Bharat Schemes.	As per Bid
15	II	54	The proposed Communication solution and NIC provider must have following deployment capabilities in Utilities: i. Must have been implemented AMI / AMR projects in at least 2 Power utilities in the last 5 years. ***ii. Each project must have a minimum deployment of 2,00,000 meters All such projects must be in operation successfully for a minimum of 1 year prior to the date of publication of this RFB.***	The proposed Communication solution and NIC provider must have following deployment in Utilities: i. Must have been implemented AMI projects in at least 2 AMI Projects in the last 5 years. ii. *Each project must have a minimum deployment of 50,000 Smart meters All such projects must be in operation successfully for a minimum of 1 year prior to the date of publication of this RFB.* Existing clause shall only allow 2/3 of Indian bidders to bid.	As per Bid
16	4.2	50	The Bidder must have the following certifications – ISO 9001:2008 (or latest) OR CMMI Level 3 (or higher) AND ISO 27001:2013 (or latest)	We request you to kindly amend the clause as follow The Bidder must have the following certifications – ISO 9001:2008 (or latest) AND CMMI Level 3 (or higher) AND ISO 27001:2013 (or latest)	As per Bid
17	4.6.7	53	The smart meters must have valid BIS test certification and be compliant to IS16444 and its latest amendments.	We request you to kindly accept any rating of Single phase and Three phase Smart meter BIS test certificate as per IS 16444 for bidding purpose.	As per Bid

ii. Queries received on Section – IV (Bidding Forms, Guaranteed Technical Parameters)

Sl. No.	Tender lause No.	Page No.	Context of the Query/Text details	Query details/Clarification sought	WBSEDCL Response
1.	A.1.36	68	GTP for Single Phase Point No. 36 Provision for connectivity – RS 232	Since the offered meter is already having optical port and BLE (Bluetooth Low Energy) for manual reading and remote reading can be done at HES, hence additional RS 232 port is not required in the meter	This shall be accepted
2.	C.1	79	NIC card- The plug-in type communication WAN module shall be in accordance to the variant - 2, C3 as defined under IS 16444 And Plug and play type communication modules shall be deployed in the Smart Meters, these modules shall be field-deployable	NIC card – Plug-in type communications may not be suited for meters having built-in communications. Plug and play type communication module will have associated implementation challenges like Project implementation cost & time, Post implementation warranty and guarantee conditions & composite field testing. As the Traceability will be lost if the modules are replaced in field and the same would affect warranty of meter, hence the modules should not be allowed to be swapped in field. We therefore requesting WBSEDCL to make comms module as per manufacturer design following IS-16444 (i.e. allow fixed comms or plug-in type comms in the offered meters)	WBSEDCL requires the meters have swappable comms./NIC modules to ensure that the complete system does not need to be replaced in case of an equipment failure and a new comm./NIC module can be installed at the field itself. However, if the manufacturer is willing to replace the entire equipment at their own expenses, this can be accepted.
3.	C.1.	79	Network should have proper cyber security system and that shall also be subjected to Annual Security Audit from CERT-In listed auditors	Request to please clarify the scope of network for which annual cyber security audit is required	Annual Audit shall be under the scope of the bidder
4.	C.1.	80	The 4G/NB IoT Cellular WAN module shall support both IPv4 /IPv6	The Offered meter shall operate on GPRS fall back and integrate with IPv6	Only IPv6 stack is acceptable

			schema as per availability from network service provider	(IPv4 and IPv6 both stacks not possible)	
5.	C.1.	79	Shall support UMTS/HSPA+ and GSM/EDGE, GPRS fallback and integrate dual IPv4 and IPv6 stacks.	The Offered meter shall operate on GPRS fall back and integrate with IPv6 (IPv4 and IPv6 both stacks not possible)	Only IPv6 stack is acceptable
6.	B.1.39	76	GTP for Three Phase 39. Power supply back up for: a) Sorting recorded values b) for taking reading c) for downloading data	Since these smart meters will communicate with HES, manual meter reading during power off is seldom required. These are typical post-paid meters features which can be eliminated in smart meters	Manual meter reading during power-off using Optical port-based reading must be supported.
7.	B.1.36	76	GTP for Three Phase Point No. 36 Provision for connectivity – RS 232	Since the offered meter is already having optical port and BLE (Bluetooth Low Energy) for manual reading and remote reading can be done at HES, hence additional RS 232 port is not required in the meter	This shall be accepted
8.	Clause A.2, Clause A.2 and Clause 3.3. (Section 7)	70, 71 & 215, 71 and 216, 72. 79, 216 & 249,	GTP for Meter Box of Single Phase and Three phase - Heat Deflection Temperature (Min. 140° C @ 1.8 MPa) (Ref. Std. IS/ASTM), Dimensions, Viewing Window Size, Fixing, Having Neo-propane gasket, Push Button for meter reading during power off etc.	Kindly accept manufacturer specific design which should comply IS 14772 (Indian Standard – General requirements for accessories for household and similar fixed electrical installations – specification)	As per Bid.
9.	D.3	84	Acquisition of meter data on demand & at user **selectable periodicity**	Acquisition of meter data on demand & at **scheduled intervals**	The meter and HES shall support Pull and Push data for 5/15/30 Min intervals
10.	D.3	84	Communication Device status and History	Communication Device status	The clause shall remain unchanged
11.	D.4	85	HES shall interface with MDM on standard interfaces	HES shall interface with MDM on standard Web based interfaces	Integration with the MDM shall be via CIM supported interfaces. Details of the integration interface shall be provided to the

					successful bidder. The clause shall remain unchanged
12.	E.3	86	Disaster Recovery Management- RPO should be 30 mins and RTO shall be than 4 hours	RPO should be 4 Hours and RTO shall be than 12 hours	As per Bid.
13.	1.15	114	**OEM Format:** Communication provider Head End System Cloud Service Provider	Please confirm any authorization is mandatorily required for Communication provider, Head End System Provider and Cloud Service Provider. If yes please provide the format.	The same MAF certificate shall be required to be submitted for - - Meter manufacturer OEM (as a Sub-contractor), - HES OEM, - Communication provider (for RF), - Cloud provider
14.	B.1	77	d) Software for Smart prepaid Metering, Billing, collection, Tariff, vending, POS, Database @ central server	Prepaid modules should be in MDM scope. Request you to remove this requirement.	The clause must be read as - The meter shall be able to support Prepaid metering, Billing (TOD wise), Collection, Tariffs, and data storage for 60 days without any additional software/firmware upgrade. Prepayment and Vending shall be implemented via the MDM/SAP IS-U.
15.	A.1	68,96	Display for Prepaid Mode: (f) Present load cost in Rs/KWH	Kindly note that this parameter 'Present load cost in Rs/kWh' is not supported by IS 15959 Part-2. You are requested to delete this requirement from spec.	The meters shall not display Prepayment tariff in the meter display. Applicable rate at particular time (on at off-peak and peak hours/different slab rate) shall be implemented via the Prepayment system of SAP IS-U.
16.	A.1	70,129	The main communication protocol of the meter will be through RF with NIC card or GPRS/3G or 4G LTE. The main communication protocol of the meter will be through integrated	Kindly accept 4G fall back 2G	SW.1. Introduction: ..... The communication module for Smart meter should be pluggable NIC card on 4G (fallback to 2G) network based cellular Communication..... TS.3.1.1.: The plug-in type communication WAN

			NIC card of RF/ GPRS/ 3G/ 4G/ LTE/ NBIoT (As per site requirement) with proper security.		module shall be based on Cellular 4G with fallback to 2G capabilities as per Indian telecom Standards. 1. NIC Card: The plug-in type communication WAN module shall be based on Cellular 4G fallback to 2G. NIC card should be on 4G and fall back to 2G.
17.	A.1	71,100	Battery for downloading and Display power up purpose should not be less than 650 mAh (±10%) and it should be chargeable.	Kindly note that in clause TS.3.13.6 (TS.5.13.6 for 3 Phase meters) of spec mentioned the requirement of battery for power off condition as 'Lithium / Lithium-ion' Battery. Please note that 'Lithium' battery is a primary (non-rechargeable) battery. Kindly amend the requirement here also accordingly.	Both RTC Battery & Display Battery (Battery for downloading in power off condition) will have to be Non-rechargeable having a minimum life of 10 years. Battery for downloading and Display power up purpose should not be less than 650 mAh (±10%)
18.	B.1	73,102	Indication of status of relay i.e. Connected / Disconnected should be available on display as well as through communication.	Kindly note that icon shall appear on display when relay is disconnected. Please accept the same.	This is accepted.
19.	B.1	73.102	Smart Prepaid Features	Kindly note that all the prepaid features and functionalities shall be controlled / managed by MDM. Kindly accept the same.	The meter firmware shall accept prepayment functionalities including - - change of Payment mode via remote configuration via the HES, - recharge amount, time details - previous balance, time details

iii. Queries received on Section – VII (Employer's Requirements)

Sl. No.	Tender clause No.	Page No.	Context of the Query/Text details	Query details/Clarification sought	WBSEDCL Response
1.	2.2	132	Communication Infrastructure: RF Mesh/4G (with fallback to 2G) /NB-IOT communication network.	It is understood that the AMI system can be planned on any of the given communication methodology or a mix of these. May kindly confirm.	This is confirmed.
2.	2.9	140	point 4(a) in the table: Head End System Perpetual License for 4.30 Lac consumers	It is understood that the HES perpetual license is required for 4.8 lac consumers, as per the scope of the project. May kindly confirm	License requirement shall be for 4.8 lac end-points.
3.	2.10	144	The bidder shall ensure that its supplied HES are integrated with the Utility-supplied MDMS...	Kindly provide the details of the MDMS being installed under package 1 along with the status of implementation. This is required for estimation of integration efforts. Also, it is understood that the delay in implementation of MDMS shall not be a reason for application of LD on the contractor for this project. Request to kindly confirm	Integration with MDMS shall be based on CIM specifications on json. Details of the MDM including details of the integration interfaces shall be shared with the successful bidder. Delay in integration of HES with MDM due to delay in implementation of MDM shall not be consider as reason for application of LD.
4.	2.13	150	point 2 penalty: Condition needs to be fulfilled for next meter Lot order to be processed by the Employer.	Kindly clarify the penalty clause.	Fulfillment of criteria A.1 and A.2 for cumulative meter installed up to that point shall be considered as condition for the ordering of the subsequent lot. E.g.: If the Bidder has already installed Lots 1 and 2 i.e. 160,000 meters, criteria A.1 and A.2 shall be fulfilled to consider completion of Milestone 4. The next lot of meters (Lot 3) cannot be ordered prior to that.

5.	2.18	168	The bidder should have minimum 20 no technical persons on roll of the company having relevant experience.	Is there any declaration required for confirmation of 20 technical persons on rolls. Kindly confirm	No declaration necessary.
6.	2.18	168	The key expert's profile as declared by the bidder shall remain deployed to this project during the entire implementation period with successful 'Go-live' of entire system.	The "key experts" mentioned here are the same as 9 nos. experts given in 2.18.1.1. Kindly confirm	This is confirmed.
7.	1.2	130	Meters shall support Postpaid and Prepayment via Payment Mode switch command via MDM passed through the HES.	Meter shall support Pre-paid features at MDM /HES (as per IS 15959 Part 2) and also at meter end and the same shall be mutually agreed between vendor & WBSEDCL. There are many benefits of having prepaid features at meter end, as the meter can calculate the account balance own its own based on the real time consumption and tariff configured in it, thereby making the meter self-resilient and less dependent on WAN communication network	Prepayment functionality shall be supported via the MDM and SAP ISU. The meters shall support Payment mode changes - Postpaid to Prepaid and vice versa including prepayment OBIS Codes for recharge time, amount, last balance, last balance time.
8.	2.10.3	144	The Cyber security system shall also be subjected to Annual Security Audit from CERT-In listed auditors at the cost of the Vendor during contract period. Bidder shall implement the recommendations/remedial actions suggested by the Auditor after audit.	Please clarify the scope of Cyber security system	Scope of Cyber-Security system shall be to maintain security and sanctity of consumer data on the bidder supplied Cloud and in transmitting data between the HES-MDM, HES-meters, meters-Installation app, etc. Details of the security requirements shall be as already detailed in the RFB. The bidder must at their own expense conduct an Annual Security Audit from an CERT-In certified auditor.

9.	2.10.4.1	144	Data exchange with the smart meters shall be standard DLMS interfaces and shall comply with IS15959 Part II and Part III standards	Data exchange with the smart meters shall be standard DLMS interfaces and shall comply with IS15959 Part II standards	This is accepted.
10	2.10.4.4	145	2.10.4.4: Integration with HHU/CMRI	Since we are offering mobile app for local reading instead of HHU/CMRI, hence this clause will not be applicable to us	The bidder shall ensure manual meter data collection via mobile app (in case meter is non-responsive in the field).
11	2.11	146	Parameter 4: 8 hour interval for 1 phase and 3 phase	Meter have facility to capture Load profile data for every 15 min. Integration period & same shall be sent to backend system on daily basis. However, we can read on demand Instantaneous data as and when required. Daily Data polling will lead to increase data volume as well as data charges. Instantaneous data will not add value in energy accounting and reporting. Requesting to amend the clause.	As per Bid.
12	2.11.2.II	147	Meter analytical data availability report. Event logs such as Tamper and Power outages	These Reports shall be part of MDM not HES.	While Reporting and Analytics is a functionality of the MDM, the SLAs for the installed meter population must be managed by the bidder via their own reporting from the HES. Logs for Tamper events and Outages shall also be displayed. The clause shall remain unchanged.
13	20.10.VI	179	Responsibility matrix for Operational activities during the Operation & Maintenance period: Meter Burnt + Meter	Meter Burnt due to utility's fault or any other reasons (which is not because of Meter), shall be replaced on chargeable basis. Kindly	As per Bid.

			terminal Burnt - Meter to be replaced within 24 hours	allow replacement time as 72 Hrs	
14	3.10.VII	199,233	Meter shall have provision for supporting both the variants of communication module. The module shall be able to connect to NAN or WAN (as per the plugged RF or Cellular module) for two-way communication and any of these two will be used at a time.	Please provide clarity on Variants, which are being referred here. The offered meter operates on WAN. Same should be acceptable	As per Bid.
15	2.3.XVII	211	The bidder will have to submit sample meters along with pilfer proof meter box and all the accessories including requisite software in sealed casing / carton along with relevant documents as per provision laid down in NIT.	Please confirm quantity of samples	See amendment for updated clause.
16	3.7	264	Acquisition of meter data on demand & at user selectable periodicity. On demand meter read may be for single meter (unicast) or for a group of meters (multicast).	The responsibility of same lies with MDM, Not HES. Many of the MDM features are asked in HES. Requesting to remove those	The HES shall be able to request meter data at pre-scheduled intervals (scheduled Pull requests) or on-demand (on-demand Pull requests). Intervals of 15/30 mins for scheduled Pull must be supported
17	3.7	266	HES shall provide support for importing devices and associated information from third party systems like SAP, GIS, CRM, OMS, etc. through MDMS	HES can provide basic information from SAP/CRM. HES Do not import third party devices	Third party information shall consist of DT details GIS Coordinate information, Installation address, etc,.
18	3.7	267	HES will provide thin client web portal enabled dashboard services for utility users. Dashboard should be dynamic to user specific	HES can provide role-based access to utility users	This is accepted.
19	3.7	268	Each report can be viewed and downloaded in standard reporting format (Excel, PDF, CSV etc.) and shall be distributed via SFTP, Email or file dump	The report can be downloaded in PDF/XML format	As per Bid.

20	3.7	268	Security module must manage security keys and certificates. System shall be able to report any security breach or unauthorized communication devices logged in.	The Data shall be AES-128 encrypted and shall be having our Key Management system.	As per Bid
21	3.7	269	Configure the look, feel, and functionality of the HES in accordance with business needs, business processes, and business conventions. (e.g. GUI, content, look and feel of screens, validation rules, exception handling, etc.).	We will offer our standard HES with standard GUI.	As per Bid
22	3.7	269	Ability for utility through user interface to set up alarm and event notifications that can be directed to a combination of configurable email addresses, cellular text messages or phone numbers	The events and alarm are not configurable and same functionality can be taken from MDM	As per Bid.
23	3.7	269	• Asset Management • AMI Installation Support • Meter Data • Data Validation and Exception Handling	As per SBD, the same is included in scope of MDM and we request to please include the same in scope of MDM	As per Bid.
24	3.7	269	Network Management System: After GIS integration with MDMS, topology, location (lat/long) and status of all network nodes shall be visible on GIS map.	These functionalities shall be carried out at MDM end. MDM should be responsibility of utility as MDM works as repository of all data integration of AMI system with other business functions so we request to modify this clause and such functionalities should be in the scope of utility.	As per Bid
25	3.7	269	Enable WBSEDCL to get console access of cloud virtual machine by thin client and perform operations	A GUI/website would be given to WBSEDCL users for performing diagnostic/actions so that cloud infra is never exposed and remain secured all the time.	This is accepted.

26	2.13	149	Table 1 AMI System SLA Table 2 Penalty Table for SLA	Since major part of project is Opex based so these penalties would be too high for an AMISP. Please consider our proposed SLA attached with this document	As per Bid.
27	Parameter Snapshot	207,240	The occurrence and restoration of tamper should be equal to 5 min (**programmable**).	Kindly note that tamper persistence time is not field programmable as per IS 15959 Part-2. You are requested to accept the same.	This is accepted
28	GTP		Relay shall be provided in all phases in the meter to let alone fraud and single wire tamper.	Kindly note that single wire tamper is not applicable for 3 phase meters. seems to be typographical error and the same may be deleted from spec.	Relay required in Phase as well as Neutral in Single Phase Meters. Relay required for all three phases as well as neutral in Three Phase Meters. This means 2 relays reqd in 1-ph meters and 4 relays reqd in 3-Ph Meters. As-per Bid.
29	GTP		Power Consumption: Voltage circuit: Less than 1.5W/10VA as per IS 14697 Current circuit: Less than 1.0VA as per IS 14697	Kindly accept power consumption as per IS 16444 Part-2.	Power consumption as per IS 16444 Part-2.
30	GTP		The meter shall be provided with meter to NIC connectivity LED and Network Status LED.	Kindly note that the communication module shall be provided with Rx, Tx LEDs for communication status with meter alternatively. Please accept the same. NIC card status shall be provided on display as per spec.	As per Bid.
31	GTP		Display for Auto and manual mode must be listed by two headers: "Auto Display Mode" "Push Button Mode"	Kindly accept appropriate headers for Auto Display and Push Button display modes alternatively.	As per Bid.
32	GTP		Each parameter shall be on meter display for 10 sec and the time gap between two auto display cycles shall be 120 sec.	Kindly accept continuous display cycles alternatively instead of time gap between successive display cycles.	May be accepted but Header (AUTO) should come at the start of display sequence. During Push button display

					Header "PUSH' should come at the start of display sequence.
33	GTP		Display for Prepaid Mode: (f) Present load cost in Rs/KWH	Kindly note that this parameter 'Present load cost in Rs/kWh' is not supported by IS 15959 Part-2. You are requested to delete this requirement from spec.	As per Bid.
34	GTP	199, 233	Dis-connector spec: Utilization Categories: UC2 or better	Kindly note that 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.	Till 10-60A rating UC1 may be used. For 100A, UC2 or better
35	GTP		Two extra LED for KVArh impulse and Load control Status to be incorporated as display in meter body.	Kindly note that a separate LED shall be provided for kVArh pulse output and Load Switch status shall be provided as an icon on meter display. Please accept the same.	KVARh LED not required in Single Phase Meters. Only required in 3 phase meters in addition to KWh LED. Therefore to summarise, one LED (KWh) reqd for 1-ph meter and 2 LEDs (One for KWh & One for KVARh) reqd in case of 3 phase meters. As per Bid.
36			The meter shall have **alphanumeric display** with at least 7 full digit with LCD backlit display, having minimum character height of 10 mm.	Kindly note that meter shall be provided with 8 digit 7 segment display with necessary icons for identification. You are requested to accept the same.	May be accepted.
37		63	7) Appendix to Technical Part: Plant	Kindly clarify the documents/submission required from bidder under this appendix with respect to this AMI project	Please provide details of the solution and the systems being proposed including solution architecture, functionality, etc.
38	2.20	177	The Bidder's Responsibilities under Operation & Maintenance Services: The Bidder shall make available the following	Please clarify who will establish the Network Operations cum Monitoring Centre (NOMC)? If Bidder to establish, please share	NOMC shall not be under scope of the Bidder.

			man-power resources at the utility's Network Operations cum Monitoring Centre: 1) One (1) Project Manager cum Supervisor, 2) One (1) System Administrator, 3) One (1) Metering expert	the BOQ of NOMC & specification.	
39	3.4	221	This specification covers the following for Three Phase Four Wire 5-30A, 10-60A and 20-100A, Static Watt hour smart meters of accuracy class 1.0 with modular pluggable communication modules and integrated load control switches along with Meter Box suitable to house three-phase smart meter.	We will offer (20-100)A with RF communication during sample testing. Request you to accept the same.	Scope of sample testing has been removed from the RFB. The Bidder must ensure that the RF/GPRS/or otherwise communication module can be swapped in the field by another communication module of the same type provided by the Bidder.
40	3.4	229	The meter should be fitted with SHUNT for measuring current in the phase element.	Kindly also accept for measuring current in the phase element with shunt or CT.	This will be accepted.
41	3.4	228	The meter cover shall be transparent with viewing window for easy reading of displayed parameters and observation of operation indicators.	Meter cover fully transparent, no separate viewing window required kindly accept the same.	This will be accepted.
42	3.4	230	The sealing screws used for the meter cover shall be fixed upside down so that these are tightened from the rear and for screw less design also for fixing the base and cover provision for sealing must be there.	The sealing screws will be tightened from the front side only kindly accept.	This will be accepted.
43	3.4	230	A run through screw (stud) has to be provided from bottom side & sealing is to be done on the top side of the meter.	Screws are provided from top side and sealing can be done also on the top side of the meter.	This will be accepted.
44	3.4	241	The manufacturer shall also provide software for android or windows based HHUs along with software for traditional CMRI/HHU devices The manufacturer has to provide software capable of	We will provide BCS software for local communication downloading purpose. kindly accept.	As per bid.

			downloading all the data stored in meter memory through CMRI/HHU/Mobile app/Laptop/PC		
45	3.4	246	Tamper Alerts: i) All Phase Voltages ≤ 30% of Vref. ii) I3x>5% of Ib	Kindly review the tamper logic it should be all phase voltage should be zero.(as per IS-16444)	This is accepted.
46	3.4	246	Mode :- CT open tamper ,Current Unbalance ,phase miss, Over current.....	Kindly review the tamper mode all tampers are perform only import mode kindly accept.	1. Power Related Tamper: Power Failure 5. CT Open Tamper 7. Current Unbalance Tamper will be applicable in both Import Mode and Import-Export Mode
47	3.5	249	The meter box shall have sufficient number of mounting brackets made out of same material as of meter box with provision for hole of suitable diameter for mounting the box on the wall or on wooden board with suitable screws.	Box have 2key hole & 2circular holes for Mounting instead of mounting bracket	This is accepted.
48	3.5	249	Incoming and outgoing cable arrangement: Required number of holes at bottom with suitable diameter shall be provided in the box for cable/wire entry. The holes must be totally covered with neoprene rubber gasket (NRG).	Incoming and outgoing cable arrangement: 02 number of holes at bottom with plastic Gland with rubber washer will be provided in the box for cable/wire entry. The holes covered with Plastic glands instead of rubber gasket please accept.	This is accepted.
49	3.5	249	The meter box cover shall be made overlapping type having collars on all four (4) sides and shall be provided with Neoprene rubber gasket	The meter box cover will be overlapping type having collars on all four (4) sides and will be provided with EPDM rubber gasket please accept.	This is accepted.
50	3.5	250	One push button is to be provided on the front side of the top cover of meter box for taking meter reading during power off condition without opening of meter box cover.	2nos push button provided on Box top cover for taking meter reading kindly accept.	This is accepted.

51	3.5	250	Provision for fitting of external antenna shall also be considered during preparation of design of the box.	External antenna option is not available for smart meter. Not applicable for smart meter.	This is accepted.
52	3.2	194	b) The meter cover shall be transparent with viewing window for easy reading of displayed parameters and observation of operation indicators.	Meter cover fully transparent, no need of separate viewing window.	This is accepted.
53	3.2	195	d) The ETBC shall not be easily detachable from the base and be secured to the base using a hinge or with any other suitable arrangement without hinge.	We will be provided the Nylon thread for terminal cover holding.	This is accepted.
54	3.2	197	a) The sealing screws used for the meter cover shall be fixed upside down so that these are tightened from the rear and for screw less design also for fixing the base and cover provision for sealing must be there.	The sealing screws will be tightened from the front side only.	This is accepted.
55	3.2	197	b) A run through screw (stud) has to be provided from bottom side & sealing is to be done on the top side of the meter.	Screws are provided from top side and sealing can be done also on the top side of the meter.	This is accepted.
56	3.2	198	Meter shall have Lithium / Lithium ion battery with guaranteed shelf life of 5 years and capacity life of 10 years. In case of battery total discharge, same shall not affect the working & memory of the meter even in case of single wire power condition.	Meter will have Lithium / Lithium ion battery with guaranteed shelf life of 2 years and capacity life of 10 years. In case of battery total discharge, single wire operation will not work due to that condition depend on primary battery.	As per Bid.
57	3.2	205	In case a spark of up to 35 kV is applied externally to the meter including its communication port with its cover in place, using a spark gun / ignition coil, meter shall either remain immune & continue to record energy with	We will be provided 35 KV tampering condition as per CBIP 325.	This is accepted.

			allowable accuracy or log the event.		
58	3.2	208	High Frequency Jammer: Meter shall have to be immune on this test.	We will be provided High Frequency Jammer condition as per CBIP 325	This is accepted.
59	3.2	214	Neutral Disturbance Mode - Import & Export	In that condition, the meter will record energy in import mode only during import – export metering mode. Note – The temper condition shall be perform in import mode only. Please amend.	This is accepted.
60	3.3	215	Clearance of 30 + 2 mm from top & both sides of the meter. Bottom side clearance shall be 75 + 5 mm from the lower edge of terminal block of the meter. Clearance from front side and back side of the meter shall be 15 + 2 mm and 10 + 2 mm respectively.	We are offering the clearance of the meter box as Below 30 mm from Left, Right & Top Side. 75 mm from the lower edge of terminal block of the meter. 25mm from front side and 10 mm from the back side of the meter.	This is accepted.
61	3.3	216	Hinge: A minimum of 2 nos. brass/stainless steel hinges in left side of the door and 1 no. brass/stainless steel hinge/stainless steel U type latch with locking arrangement in right side of the door shall be provided inside the enclosure.	We will be provided 2 Nos. hinge pin left hand side & 2 Nos. GI U type latch right hand side with locking/Sealing arrangement.	This is accepted.
62	3.3	216	Suitable grove with locking arrangement shall be provided for opening of the enclosure door.	We will be provided U latch for locking arrangement and same can be used as a door opener	This is accepted.
63	3.3	216	Incoming and outgoing cable arrangement: Required number of holes at bottom with suitable diameter shall be provided in the box for cable/wire entry. The holes must be totally covered with	Grommet will be Provided for entry of incoming and outgoing wires.	This is accepted.

			neoprene rubber gasket (NRG). NRG will be punched for entry of incoming and outgoing cable/wire.		
64	3.3	216	The meter box cover shall be made overlapping type having collars on all four (4) sides and shall be provided with Neoprene rubber gasket of minimum 2.5 mm dia to completely fit in the grooves of the base.	The meter box cover will be overlapping type having collars on all four (4) sides and will be provided with EPDM rubber gasket	This is accepted.
65	3.6	255	The plug-in type communication WAN module shall be based on Cellular 4G/NB IoT with fallback to 3G/2G (only 2G for NB IoT) capabilities as per Indian telecom Standards.	We will be provided 4G CAT1 Fallback with 2G.	This is accepted.
66	2.2	130	Prepayment is being implemented at WBSEDCL as a function of the AMI setup. The SAP IS-U shall have an additional Prepayment module (being implemented). Meters shall support Postpaid and Prepayment via Payment Mode switch command via MDM passed through the HES.	Prepayment module is not in scope of bidder. Please confirm.	Confirmed
67	2.10	145	The HES shall integrate with the bidder-supplied meter installation app for consumer indexing, meter installation, and replacement.	Meter installation app integration shall integrate with MDMS. Request you to accept the same.	The clause shall remain unchanged.
68	2.2	131	Integration with Billing system (Intermittent Solution till MDM Go-Live)	Kindly confirm expected timeline when the MDM will Go live	Integration with MDMS is expected to be completed within 12 months from (Package 3) project kick-off. This can be subject to changes.
69	TS	249	The overall dimensions of the enclosure shall be suitable for housing the single-phase smart meter along with all its attachments/accessories as offered by the bidder and	Please also accept the clearance between top and both side with minimum 30mm, bottom side with minimum 75mm from the lower edge of the terminal	This is accepted.

			there shall be a clearance of **30 + 2** mm from top & both sides of the meter. Bottom side clearance shall be **75 + 5** mm from the lower edge of terminal block of the meter. Clearance from front side and back side of the meter shall be **15 + 2 mm and 10 + 2 mm respectively.**	block of the meter , front side of the meter minimum 15mm and back side of the meter minimum 10mm. Request you to please consider the same.	
70	TS	249	A minimum of **2 nos. brass/stainless steel hinges** in left side of the door and **1 no. brass/stainless steel hinge/stainless steel U type latch with locking arrangement in right side** of the door shall be provided inside the enclosure.	Please also accept 2 nos. hinges in right side of the door and U type latch with locking arrangement in left side of the door. All other Indian utilities are also accept the same, So kindly delete the above requirement.	This is accepted.
71	TS	217	Meter Box Sl. No. (Embossed / laser printing on both the base and covers of Meter Box)	We request that, with Embossed/ Laser printing please also accept printing of Meter Sl. No. on both the base and covers of Meter Box. Please confirm the acceptability of the same.	This is accepted
72	TS	219	**Heat deflection temp. @1.8 MPa-1000 C (Minm. for Engg. Plastic)/1400 C** (Minim. For Polycarbonate. Similarly in, Page no. 70, GTP Sr. No. 3 (a), it is mentioned that Heat Deflection Temperature (**Min. 1400 C** @ 1.8 MPa) (Ref. Std. IS/ASTM), 1000 C (Minimum for Engg. Plastic) **/1400 C (Minimum for Polycarbonate)**	We request you please accept the properties of polycarbonate material with its typical values as per below. Heat Deflection Temp. –120° C @ 1.8 MPa. As per material manufacturers of transparent polycarbonate the HDT value of polycarbonate varies from 120° C to 125° C We request you to kindly confirm the same.	This is accepted
73	TS	249	The overall dimensions of the enclosure shall be suitable for housing the single-phase smart meter along with all its attachments/accessories as	Please also accept the clearance between top and both side with minimum 30mm, bottom side with minimum 75mm from the lower	This is accepted

			offered by the bidder and there shall be a clearance of **30 + 2** mm from top & both sides of the meter. Bottom side clearance shall be **75 + 5** mm from the lower edge of terminal block of the meter. Clearance from front side and back side of the meter shall be **15 + 2 mm and 10 + 2 mm respectively.**	edge of the terminal block of the meter , front side of the meter minimum 15mm and back side of the meter minimum 10mm. Request you to please consider the same.	
74			A minimum of **2 nos. brass/stainless steel hinges** in left side of the door and **1 no. brass/stainless steel hinge/stainless steel U type latch with locking arrangement in right side** of the door shall be provided inside the enclosure.	Please also accept 2 nos. hinges in right side of the door and U type latch with locking arrangement in left side of the door. All other Indian utilities are also accept the same, So kindly delete the above requirement.	This is accepted
75	2.11	146	Parameter 4: 8 hour interval for 1 phase and 3 phase	Meter have facility to capture Load profile data for every 15 min. Integration period & same shall be sent to backend system on daily basis. However, we can read on demand Instantaneous data as and when required. Daily Data polling will lead to increase data volume as well as data charges. Instantaneous data will not add value in energy accounting and reporting. Requesting to amend the clause.	Shall be as per clause
76	3.2.XI	207	Display shall have 35 degree up & down viewing angle from eye level	Please consider as 60 Degree	This is accepted.
77	3.2.XI	207	Every meter shall have a unique alpha-numeric serial no. for displaying either in 9 complete places or in billboard fashion in "Separate Scrolling Mode".	The meter serial no. shall be of 10 Digits and shall have a unique alpha-numeric serial no	This is accepted.

78	3.4 V	224	This specification covers the following for Three Phase Four Wire 5-30A, 10-60A and 20-100A	The Offered meter operates on wide Current Range of 10-100 A	This is accepted

iv. Queries received on Section – VIII (General Conditions of Contract) and IX (Particular Conditions of Contract)

Sl. No.	Tender clause No.	Page No.	Context of the Query/Text details	Query details/Clarification sought	WBSEDCL Response
1	GCC 13	314	The Contractor shall, within twenty-eight (28) days of the notification of contract award, provide a security for the due performance of the Contract in the amount specified in the PCC. (The Bank Guarantee from a Scheduled Bank in India is acceptable to the Employer.)	"World Bank", as implementing agency the Global Environment Facility("GEF") and the Clean Technology Fund ("CTF"), has provided support for a project titled "Partial Risk Sharing Facility for Energy Efficiency. The Programme will support the loans granted by various PFIs and by SIDBI as lender (in such capacity, "SIDBI as Lender"), who are empanelled with the PEA Division to either ESCOs or the Host who are implementing energy saving projects, by providing risk coverage for repayment of such loans. Smart metering project are identified as a Energy Efficiency project, and this project will be funded by SIDBI and other NBFI under this programme. Therefore, it is requested to accept the performance securities issued by this Institutes under the aforementioned programme. The Bank Guarantee from a Scheduled Bank/SIDBI/ Non-banking Financial Institute in India is acceptable to the Employer.)	As per Bid.
2	13.3.1	408	As Performance BG, 5 % of Total Contract Price	Please Consider 3% as per GOI guideline.	As per Bid.
3	12.6	407	IV. Payment shall be made by the Employer within sixty (60) days of approval of Actual Monthly Payment amount.	It is requested to specify the date of approval of actual monthly payment amount.	Approval date of actual monthly payment amount will be the bill submission date with all requisite and complete documents certification date.

4	35.2	414	B. The Employer Event of default	Kindly include the following as the employer event of default: a. Non-payment of pending invoices by the employer b. Payment security mechanism not being established by the employer	As per Bid
5	12.6 III	407	Payment Mechanism: Actual Monthly Payment amount = (Cost per billable reading per month – Deduction as per SLA per month and applicable LD)	Please clarify the term - 'Cost per billable reading per month'	As per Bid.
6	Section IX; PCC 42, Section IX; PCC 15	418, 409, 419	The Termination payment value, Exit Management Plan etc.	We need more clarities on these clauses	As per Bid
7	Section IX; PCC 26.2		The Maximum Penalty out of the above shall be restricted at 20% of Monthly Service Charges.	As per the utility practise for turnkey projects, maximum ceiling limit of penalties is 10% of monthly invoice value. Request to please add the clause and confirm.	As per Bid
8	PCC 13.1	408	PCC 13. Securities PCC 13.3.1 As contract security, the contractor has to furnish a performance security in the form of Bank Guarantee on non-judicial stamp paper of Rs.100/- by any Schedule Bank in India, as per format enclosed Form K. The Performance Bank Guarantee (PBG) shall be submitted to the CE, IT&C Cell, 3rd Floor, 'D' Block, Vidyut Bhavan, WBSEDCL. For any failure towards satisfactory performance on the part of the Bidder(s), the Bank Guarantee will be liable to encashment and forfeiture. As Performance BG, 5 % of Total Contract Price (CAPEX+OPEX) to be submitted within 45 days from the date of issue of	Government of India has initiated the reduction PGB after covid pandemic, hence all utilities demands only 3% of PBG of total contract price from the L1 Bidder. Hence we request to modify accordingly.	As per Bid

			LOA. Validity of PBG will be 10 years from the date of LOA and claim period will be further 6 months.		

v. Queries received on Section – X (Contract Forms)

Sl. No.	Tender clause No.	Page No.	Context of the Query/Text details	Query details/Clarification sought	WBSEDCL Response
1	C.	429	The successful Bidder shall be paid as per a Capex-Opex payment structure with Capex capped at 40% of overall Contract price. The Capex amount shall be paid as per pre-configured payment milestones defined below conditional to the fulfillment of pre-defined delivery and configuration conditions. The balance 60% of the Contract Price shall be paid on a per meter per month (Pro-rata) basis conditional to the fulfillment of defined SLA requirements.	Proposed Payments structure with capex capped at 70% Mov. Adv. -> 10% Commissioning of HES -> 9% Commissioning of Lot1 -> 9% Commissioning of Lot2 -> 9% Commissioning of Lot3 -> 9% Commissioning of Lot4 -> 9% Commissioning of Lot5 -> 8% Commissioning of Lot6 -> 8% Go-Live -> monthly charges per meter	As per Bid
2	D. Appendix 2 Price Adjustment	433	Price Adjustment Formula Price adjustment shall be paid ONLY on the OPEX (O&M) portion as per the following formulae. No price adjustment is payable on CAPEX (supply and installation) portion: ER1 = ER0 { 0.70 + 0.30 x (L1/L0) } – ER0	Our offered prices shall be on FIRM Basis and same shall not be applicable for us.	As per Bid.

vi. General queries received on RFB

Sl. No.	Tender clause No.	Page No.	Context of the Query/Text details	Query details/Clarification sought	WBSEDCL Response
1	-	-	General	**Submission of samples:** Kindly provide the clarity on the number of samples and submission.	See amendment for updated clause.
2			General	In case service cable is required during existing meter replacement, whether the same shall be supplied and installed by WBSEDCL	Additional cabling if required shall be under scope of WBSEDCL. This information shall be captured during the consumer indexing period.
3			General	Kindly confirm if WBSEDCL shall provide the storage facility in various circles for storing the meters and meter boxes	No Storage facility will be provided from WBSEDCL side, bidder needs to arrange this on its own.
4			General	Kindly specify whether the capacity of DR is required to be 100% of the DC capacity.	DR must be 100% of the DC capacity.
5			General	Smart Meters will be dispatched from the factory after issuance of MDCC by WBSEDCL and further testing WBSEDCL lab would not be required prior to installation of meters. Please confirm	Smart meters for each Lot shall undergo SAT as described in the RFB. Meters dispatched from the factory to the bidder's warehouse shall undergo random sample checking (SAT) by WBSEDCL Testing lab. Post-issuance of successful test certificate, they shall be allowed to be installed.
6			Challenges to be faced during Installation of meters	Lots of challenges to be faced during installation related to Space constraint, Service Cables shortage etc. which are into WBSEDCL's scope. If those are not properly managed, then execution of the project may get delayed and vendors should not be made responsible for those delays	As per Bid.

C. Amendments & Addendums

a. Scope of meter sample testing and Demonstration of solution:

After the bid evaluation is completed and before the contract award, the **most advantageous Bidder** must submit Meter samples for testing and conduct a demonstration of the proposed solution within four (4) days of receipt of intimation from WBSEDCL.

Venue or lab to conduct the test:

Office of the **Chief Engineer (DTD), Abhikshan, Sec-V, Salt Lake, Kolkata-91**.

Submission of Sample:

The most advantageous Bidder should submit the sample smart meters along with manufacturer's test result and GTP, on **any working day, from 11.00 A.M. to 04.00 P.M.** to the of the **Chief Engineer (DTD), Abhikshan, Sec-V, Salt Lake, Kolkata-91**. The Bidder will be given a document, jointly signed by the bidder and DTD officials, acknowledging receipt of the following - .

i. **Sample to be submitted per meter type/per OEM = Three (3) i.e.: - 1 for Accuracy & 1 for Tamper & 1 for Physical) with NIC card from each Named meter manufacturer.**
ii. **Three copies of the drawings.**

Time Required for Electrical testing including physical examination and demonstration are as follows:

Sr. No.	Event	Timeline	Responsibility	
			WBSEDCL	Advantageous Bidder
1.	Notification of award	D0	Yes	-
2.	Intimation for submission of meter samples for testing and solution demonstration	D0	Yes	-
3	Submission of meter samples and drawings	D0+4		Yes
4	Issuance of receipt for submission of meter samples	D0+4	Yes	
5	Completion of meter testing, physical verification and solution demonstration	D0+18	Yes	Yes
6	Notification to the Bidder on outcome of meter testing, physical examination and solution demonstration	D0+20	Yes	-

Testing Particulars of Single and Three Phase Meters:

1. HV & IR TEST
2. Voltage Endurance
3. Current Endurance
4. Test of Starting Current
5. Test of No Load (120% & 70% voltages)
6. Accuracy Test in different load points & power factors (UPF, Lag & Lead) for active Phase channel for single phase meter and active in both balanced and unbalanced conditions for three phase meters.
7. Dial Test
8. Test of Meter Constant.
9. Accuracy Test in different load points & power factors...UPF, Lag & Lead) for active Neutral channel for single phase meter and Reactive in Balanced conditions for three phase meters.
10. Repeatability
11. Voltage Variation
12. Frequency Variation
13. Test of Power Consumption
14. Overload & Command disconnection features.
15. All of above in export mode.
16. Detailed Tamper Test as per WBSEDCL guidelines (CT Open, CT Bypass, Low Voltage, Neutral Missing, Neutral Disturbance, Magnet)

All above tests will be carried out as per relevant IS (e.g. IS16444, IS15959), CBIP & WBSEDCL Specifications.

Demonstration of solution (Smart Meter & HES Communication):

The Bidder shall have to present a practical demonstration of their proposed solution including meters, communication, and the proposed COTS HES. Incase the Bidder is proposing multiple HES and communication, the Bidder must demonstrate the proposed solution with all proposed HESs and communication. Required SIM cards, DCUs and NICs should be arranged by the Bidder itself. The sample meters will then be tested compared to manufacturer's test result and GTP, at DTD laboratory, WBSEDCL. The demonstration should showcase the following test cases:

i. Linking of Smart Meter and HES through DCU (in case of RF communication);
ii. Interoperability of NIC card with SIMs from at-least two (2) Telecommunication service providers in India;
iii. Please refer to the following Annexures
    a. Annexure-1: Functionality check for Smart Meter Communication & Head End System (HES)
    b. Annexure-2: Validate Meter data as per Table A28 of IS 15959 Part2 : 2016
    c. Annexure-3: Validate Meter data as per Table A29 of IS 15959 Part2 : 2016 (List of Tests for Category D2 Three Phase a.c. Static Direct Connected Watthour Smart Meter) for 3-Ph 10-60A
    d. Annexure-4: Validate Meter data as per Table A29 of IS 15959 Part2 : 2016 (List of Tests for Category D2 Three Phase a.c. Static Direct Connected Watthour Smart Meter) for 3-Ph 20-100A

Failure during Sample testing and demonstration

If the most advantageous Bidder fails in their subsequent testing and demonstration of solution, the Notification of Award issued by the Employer shall be cancelled (as per BDS 42.2) and the notification of award shall be shared with the next most advantageous Bidder.

Annexure-1: Functionality check for Smart Meter Communication & Head End System (HES)

Test to be performed for each category of meter (1-Ph 5-30A, 3-Ph 10-60A & 20-100A)

Sl No.	Functionality	Description	Remarks
1	Meter Reading on HES as On demand mode.	Check the time for on demand data pull	
	I) Read register reading		
	II) Read current snapshot		
	III) Read load profile data		
	IV) Read billing data		
	V) Read midnight data		
	VI) Read full reading of meter		
2	Meter Reading on HES as Schedule Job execution.	Scheduler & relevant data report checked	
3	Meter Push data on HES.	Check meter push data as per push profile	
4	Meter Connect & Disconnect operation.	Perform connect & diconnect operation from HES and check the Load switch status	
5	Meter Connect & Disconnect with current billing Data .	On time of connect disconnect event, capturing of current billing data	
7	Meter Settings Change from HES	OK report/snapshot to be attached	
	I) APN change		
	II) Push Schedule		
	III) load interval (Integration Period) change		
	IV) internal TOD change		
8	Meter Connect & Disconnect based on load limiter.	As per IS 16444	
15	All programming request from HES to be simulated and checked during inspection	To be checked with meter	
	I) Real Time Clock		
	II) Demand integration period		
	III) Load limit (kw)		
	IV) Image transfer		
	v) Metering mode (Normal/ Net meter)		
	vi)Payment mode (Pre-paid/ Post-paid)		
	vii) MD reset time change		
9	Time synchronization on demand and Schedule basis.	To be checked	
10	Max demand reset execution remotely.	Remote MD Reset value captured and checked with meter display	
11	Remote Firmware Upgrade (FOTA).	After FOTA check the version in Meter and as well as in HES	
12	Schedule Job change as per business required.	Change of different schedule job from HES and check for its execution	
13	Meter configuration from meter configurator tool/BCS and operations for non-communication metering location (accessing meter through optical port)	Connecting BCS/ tool through optical port of the meter	
	I) APN configuration		
	II) Connect disconnect operation		
	III) Configure push schedule		
	IV) Meter reading on Power-off condition		
14	Check first breadth and last gasp	when meter will be power up and power down, same information will be received on HES for that meter	
16	Temper, alarms and events		
	I) Perform tempering like earth load, megnet, cover open etc.	posible tamper reports to be attached	
	II) See alarm should be reflected on backend system immediately (as soon as tamper occurrence)	Tamper captured on occurrence	
	III) Read events from meter to get insight of tampering.	tamper report to be provided	
17	Data validation as per Test table A28 & A29 of IS 15959 Part2: 2016 as per Annexure 2 , 3 & 4		

Annexure-2: Validate Meter data as per Table A28 of IS 15959 Part2 : 2016 (List of Tests for Category D1 Single Phase a.c. Static Direct Connected Watthour Smart Meter) **for 1-Ph 5-30A**

** Note: Cluase no. refer to IS 15959 (part1) and table number are refer to IS 15959 Part2 : 2016

Item No.	Particulars of Test	Clause & Table number Reference to Note	Test description	Remarks
(1)	(2)	(3)		
7.0 (a)	Instantaneous Parameters	Table A1	check the instant parameters	
7.0 (b)	Snap Shot of Instantaneous Parameters		check the values of the instant parameters	
7.0 (c)	Scaler Profile		check the scaler of the instant parameter	
8.0	Block Load Profile Parameters	Table A2	check the load survey	
9.0	Selective access by Range for Block Load Profile	11.3	check the load survey by the selective access	
10.0	Daily Load Profile Parameters	Table A3	check the daily energy	
11.0	Access by Range for Daily Load Profile	11.3	check the daily energy by selective access	
12.0	ToU setting	9	check the TOD setting	
13.0	Billing Profile Parameters	Table A4	Check the billing parameters	
14.0	Billing Period	10.1 and 10.2	Billing period resets are driven by an instance of the single action schedule	
15.0	Billing Period Counter	11.2.1 and 11.2.2	This counter should increase	
17.0	Event code & Event logging:	8.1, 8.2 and Table A11	Check the event code & logging of the tampers & events	
	(a) Indian Event Reference Table - Current Related	Table A5	check the event code & logging of the current related tampers	
	(b) Indian Event Reference Table - Power Related	Table A6	check the power related events	
	(c) Indian Event Reference Table -Transaction Related	Table A7	check the transaction related events	
	(d) Indian Event Reference Table - Others	Table A8	check the other events	
	(e) Indian Event Reference Table - Non Roll Over	Table A9	check the non roll events	
	(f) Indian Event Reference Table - Control	Table A10	check the control events	
19.0	General Purpose Parameters:			
	(a) Name Plate Details	Table A12	check the name plate details of the meter	
	(b) Programmable Parameters	Table A13	check the programmable parameters	

Annexure-3: Validate Meter data as per Table A29 of IS 15959 Part2 : 2016 (List of Tests for Category D2 Three Phase a.c. Static Direct Connected Watthour Smart Meter) **for 3-Ph 10-60A**
**** Note: Cluase no. refer to IS 15959 (part1) and table number are refer to IS 15959 Part2 : 2016**

Item No.	Particulars of Test	Clause Reference to (see NOTE)	Test description	Remarks
(1)	(2)	(3)		
7.0 (a)	Instantaneous parameters	Table A14	check the instant parameters	
7.0 (b)	Snap shot of instantaneous parameters		check the values of the instant parameters	
7.0 (c)	Scaler profile		check the scaler of the instant parameter	
8	Block load profile parameters	Table A15	check the load survey	
9	Selective access by range for block load profile	11.3	check the load survey by the selective access	
10	Daily load profile parameters	Table A16	check the daily energy	
11	Selective access by range for daily load profile	11.3	check the daily energy by selective access	
12	ToU setting	9	check the TOD setting	
13	Billing profile parameters	Table A17	Check the billing parameters	
14	Billing period	10.1 and 10.2	Billing period resets are driven by an instance of the single action schedule	
15	Billing period counter	11.2.1 and 11.2.2	This counter should increase	
17	Event code and Event logging:	8.1, 8.2, G-1, G-2 and Table A25	Check the event code & logging of the tampers & events	
(a)	Indian Event Reference Table - Voltage Related	Table A18	check the event code & logging of the current related tampers	
(b)	Indian Event Reference Table - Current Related	Table A19	check the power related events	
(c)	Indian Event Reference Table - Power Related	Table A20	check the transaction related events	
(d)	Indian Event Reference Table - Transaction Related	Table A21	check the other events	
(e)	Indian Event Reference Table - Other	Table A22	check the non roll events	
(f)	Indian Event Reference Table - Non Roll Over	Table A23		
(g)	Indian Event Reference Table - Control	Table A24	Download the log entry by selective access	
19	General Purpose Parameters:			
(a)	Name Plate Details	Table A26	check the name plate details of the meter	
(b)	Programmable Parameters	Table A27	check the programmable parameters	

Annexure-4: Validate Meter data as per Table A29 of IS 15959 Part2 : 2016 (List of Tests for Category D2 Three Phase a.c. Static Direct Connected Watthour Smart Meter) **for 3-Ph 20-100A**

**** Note: Cluase no. refer to IS 15959 (part1) and table number are refer to IS 15959 Part2 : 2016**

Item No.	Particulars of Test	Clause Reference to (see NOTE)	Test description	Remarks
(1)	(2)	(3)		
7.0 (a)	Instantaneous parameters	Table A14	check the instant parameters	
7.0 (b)	Snap shot of instantaneous parameters		check the values of the instant parameters	
7.0 (c)	Scaler profile		check the scaler of the instant parameter	
8	Block load profile parameters	Table A15	check the load survey	
9	Selective access by range for block load profile	11.3	check the load survey by the selective access	
10	Daily load profile parameters	Table A16	check the daily energy	
11	Selective access by range for daily load profile	11.3	check the daily energy by selective access	
12	ToU setting	9	check the TOD setting	
13	Billing profile parameters	Table A17	Check the billing parameters	
14	Billing period	10.1 and 10.2	Billing period resets are driven by an instance of the single action schedule	
15	Billing period counter	11.2.1 and 11.2.2	This counter should increase	
17	Event code and Event logging:	8.1, 8.2, G-1, G-2 and Table A25	Check the event code & logging of the tampers & events	
(a)	Indian Event Reference Table - Voltage Related	Table A18	check the event code & logging of the current related tampers	
(b)	Indian Event Reference Table - Current Related	Table A19	check the power related events	
(c)	Indian Event Reference Table - Power Related	Table A20	check the transaction related events	
(d)	Indian Event Reference Table - Transaction Related	Table A21	check the other events	
(e)	Indian Event Reference Table - Other	Table A22	check the non roll events	
(f)	Indian Event Reference Table - Non Roll Over	Table A23		
(g)	Indian Event Reference Table - Control	Table A24	Download the log entry by selective access	
19	General Purpose Parameters:			
(a)	Name Plate Details	Table A26	check the name plate details of the meter	
(b)	Programmable Parameters	Table A27	check the programmable parameters	

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