

Date: July 30, 2019

Amendment No. 5

to

Request for Proposal (RfP)

for

Selection of Smart Grid Implementing Agency (SGIA)

for

Implementation of Smart Grid in Rourkela City

Volume – I

Reference Clause	Existing Provision	Amended Provision																							
Volume-I, Section C: Introduction Clause 3.1 (Project Cost Details)	The total approved project cost is 98.45 cr. which includes the implementation of Field hardware, IT hardware, IT software, 1st year FMS charges, PMC Charges and Network Backhaul under different Smart Grid functionality namely....	The total approved project cost is Rs. 80 98.45 cr. which includes the implementation of Field hardware, IT hardware, IT software, and is exclusive of 1st year FMS charges, PMC Charges and Network Backhaul under different Smart Grid functionality namely Smart Grid Control Centre, Advanced Metering Infrastructure, SCADA , GIS.																							
Volume-I, Section D: Instruction to Bidders Clause 3.6 (Eligibility Criteria)	The Bid may be submitted by a Single Bidder OR by the Lead member of the Consortium on behalf of the Consortium of maximum 3 members (including Lead Member). The single bidder or the consortium members (in case bidder is a consortium) jointly should have following experiences: a. Meter Manufacturing b. IT & Communication Service Provider c. c. System Integration	<p>The bidder can be an individual organization or a consortium of maximum three (3) organizations meeting the Pre-Qualification Criteria under Clause 4.</p> <p>The single bidder or the consortium members (in case bidder is a consortium) can be any of the following agencies:</p> <p>a. Meter Manufacturer; or b. IT & Communication Service Provider; or c. System Integrator</p> <p>The Lead/ Single Bidder should meet its respective Pre-Qualification Criteria along with the Pre-Qualification Criteria of the others (as given below) either individually or through consortium or through Sub-Contractor:</p> <table><tr><th rowspan="2">S.No</th><th rowspan="2">Lead Bidder/ Single Bidder</th><th colspan="3">Consortium/ Sub-Contractor</th></tr><tr><th>Meter Manufacturer</th><th>IT & Communication Service Provider</th><th>System Integrator</th></tr><tr><td>1</td><td>Meter Manufacturer</td><td></td><td>√</td><td>√</td></tr><tr><td>2</td><td>IT & Communication Service Provider</td><td>√</td><td></td><td>√</td></tr><tr><td>3</td><td>System Integrator</td><td>√</td><td>√</td><td></td></tr></table> <p>As per above table, the bidder shall meet Pre-Qualification Criteria of Meter Manufacturer, IT & Communication Service Provider and System Integrator either individually or through consortium or through Sub-Contractor along with its respective Pre-Qualification Criteria.</p>	S.No	Lead Bidder/ Single Bidder	Consortium/ Sub-Contractor			Meter Manufacturer	IT & Communication Service Provider	System Integrator	1	Meter Manufacturer		√	√	2	IT & Communication Service Provider	√		√	3	System Integrator	√	√	
S.No	Lead Bidder/ Single Bidder	Consortium/ Sub-Contractor																							
		Meter Manufacturer	IT & Communication Service Provider	System Integrator																					
1	Meter Manufacturer		√	√																					
2	IT & Communication Service Provider	√		√																					
3	System Integrator	√	√																						

		<p>In case of a Single Bidder, to meet the Pre-Qualification Criteria (Clause 4 (G, F, B, C, D, E)), the Bidder may use credentials of its</p> <ul style="list-style-type: none"> i. Holding Company; or ii. Associate Company (in which the Bidder has major shareholding i.e. more than 20%); or iii. Sub-Contractors <p>In case of a Consortium, the Lead Bidder may use credentials of its</p> <ul style="list-style-type: none"> i. Holding Company; or ii. Associate Company (in which the Bidder has major shareholding i.e. more than 20%); or iii. Sub-Contractors <p>In such an event, the Single Bidder/ Lead Bidder would be required to furnish along with the bid, a letter of undertaking from the Holding Company/ Associate Company/ Sub-Contractors (Company) supported by Board resolution, extending support for execution of the contract by the bidder in case of award. In case the Sub-Contractor is not a company, the legal authorisation of the firm or the sole proprietor, as the case may be, for such letter of undertaking may be furnished.</p> <p>Multiple bidders can use credentials of the same Sub-Contractors subject to the condition that this Sub-Contractor cannot participate as Bidder/ Consortium Member in the bid process.</p> <p>The bidder has to submit detailed roles & responsibilities of the Consortium Members/ Sub-Contractor partners to PFCCL/ OPTCL along with the bid.</p>
Volume-I, Section D: Instruction to Bidders	Refer Annexure-1	Refer Annexure-1
Clause 4 (Pre-Qualification Criteria)		
Volume-I, Section D: Instruction to Bidders	In case Bidder does not manufacture or produce any major equipment or component of the overall Solution to be provided as the Scope of Work, then the Bidder is required to submit the Manufacturer's /OEM's Authorization stating the required support from the Manufacturer/ OEM	In case Bidder does not manufacture or produce any major equipment or component of the overall Solution to be provided as the Scope of Work, then the Bidder is required to submit the Manufacturer's /OEM's Authorization stating the required support from the Manufacturer/ OEM with respect to supply, support, etc. for a period of eight (8) ten (10) years from the date of operational acceptance of the system by PFCCL/ OPTCL. If more than one Manufacturers' Authorization Form is submitted for any OEM/ Services, the successful bidder shall select and confirm the same to PFCCL/ OPTCL before execution of work.
Clause 5.1		

	with respect to supply, support, etc for a period of ten (10) years from the date of operational acceptance of the system by PFCCL/ OPTCL.	
Volume-I, Section D: Instruction to Bidders Clause 5.2	For start-up firms, gazette notification dated 17 Feb 2016, G.S.R. 180 (E) and policy circular No. 1(2)(1)/ 2016-MA dated 10th March 2016, and the subsequently issued guidelines shall be considered for waiving off respective qualifying requirements for sourcing of meters subject to mandatorily meeting quality and technical specifications as specified in Volume-1 and Volume-2 of this RFP.	MSEs/ Start-ups meeting the specified technical specification under Clause 4 shall be considered qualified if they meet 80% of the requirement specified in Pre-Qualification Criteria under Clause 4. The relevant MSEs/ Start-ups certificate issued by governing body shall be submitted along with the bid.
Volume-I, Section E: Tender Opening & Bid Evaluation Clause 6.5.1 (Technical Evaluation Criteria)	Refer Annexure-2	Refer Annexure-2
Volume-I, Section F: General Conditions of Contract Clause 19.1 (Payment Schedule)	Refer Annexure-3	Refer Annexure-3
Volume-I, Section F: General Conditions of Contract Clause 20.1 (Performance Security)	The Contractor shall, within fourteen (14) days of the notification of Contract award, provide a Performance Security equivalent to 10% of estimated contract cost of Rs 100 Crore. i.e. Rs 10 Crore for the due performance of the Contract in the amounts and currencies specified in the RFP based on the format	The Contractor shall, within fourteen (14) days of the notification of Contract award, provide a Performance Security equivalent to 10% of 30% of the estimated contract cost of Rs 100 Crore. i.e. Rs 3 Crore 10 Crore for the due performance of the Contract in the amounts and currencies specified in the RFP based on the format prescribed in Annexure 10: Proforma For Bank Guarantee For Contract Performance.

		prescribed in Annexure 10: Proforma For Bank Guarantee For Contract Performance.	
Volume-I, Section F: General Conditions of Contract Clause 23.1 (Sub-Contracting)		The Contractor shall not be permitted to subcontract its -obligations under the Contract with OPTCL. However, scope of work related to auxiliary supply and services may be subcontracted after seeking prior approval of PFCCL and OPTCL	The Contractor shall not be permitted to subcontract its obligations to the subcontractor for the scope of the work as mentioned in its bid under the Contract with OPTCL. However, scope of work related to auxiliary supply and services may be subcontracted after seeking prior approval of PFCCL and OPTCL. The subcontractor for the scope of work as mentioned in its bid and the new sub-contractor replacing that sub-contractor, must fulfil all the Eligibility Criteria and Pre-Qualification Criteria as required for the given scope under Clause 3.6 & 4 of Volume-I, Section D: Instruction to Bidders.
Volume-I, Section F: General Conditions of Contract Clause 30.1 (Liquidated Damages, Penalty and Incentive)		Except as provided under Clause 36.1 below, if the Contractor fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, OPTCL shall without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.5% of the value of the Goods or Related Services of contract value for each week or part thereof of delay until actual delivery or performance, subject to a maximum of 10% of contract value, cumulatively for entire sum of Liquidated Damages across entire contract	Except as provided under Clause 36.1 below, if the Contractor fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, OPTCL shall without prejudice to all its other remedies under the Contract, deduct from the Contract Price , as liquidated damages, a sum equivalent to 0.5% of the value of the Goods or Related Services of 30% of the contract value for each week or part thereof of delay until actual delivery or performance, subject to a maximum of 10% of 30% of the contract value , cumulatively for entire sum of Liquidated Damages across entire contract
Volume-I, Section F: General Conditions of Contract Clause 39.4 (Consequences of Termination)		Upon Termination of the Contract, the Contractor shall: a) Prepare and present a detailed exit plan within five (5) calendar days of termination notice receipt to CEO, OPTCL ("Exit Plan")..... The Contractor and the Authorized	Clause 39.4 (d) to be added as: d) In the event of termination of the Contract Agreement due to an Event of Default by WESCO or SGIA, as the case may be, during the implementation phase the following Termination Payments shall be made upon handing over the services infrastructure created by SGIA: i. Termination Due to the SGIA's Event of Default A. Performance Security of the SGIA shall be forfeited and adjusted

	Personnel from OPTCL will sign a completion certificate at the end of successful completion (all points tracked to closure) of the exit Plan	<p>against the loss faced by WESCO on such event.</p> <p>B. WESCO would step-in to operation of the project area immediately.</p> <p>C. SGIA may take away any equipment/ materials supplied but not installed nor paid without creating any damage to the existing system.</p> <p>ii. Termination Due to WESCO's Event of Default</p> <p>A. The contract would get terminated if WESCO does not pay the SGIA for more than 3 months without any fault of the agency.</p> <p>B. WESCO shall pay to SGIA by way of Termination Payment an amount equal to the value of work completed but not paid (30%) considering the payment terms and linked to the milestones.</p>

Volume – II

Reference Clause	Existing Provision	Amended Provision
Volume-II Clause C.4(u) (Responsibilities for the Implementation Plan)	To provide storing, maintenance of storing area and security including full responsibility for protection from theft and fire for all the items to be supplied. The warehouse may be a temporary storage area to be constructed by contractor or the same may be taken on rent in OPTCL premises	To provide storing, maintenance of storing area and security including full responsibility for protection from theft and fire for all the items to be supplied. The warehouse may be a temporary storage area to be constructed by contractor or the same may be taken on rent in OPTCL premises
Volume-II Clause D.1.2 (General Scope of work)	Selected bidder to provide 12 months "Warranty support" after Go-Live of project area and 36 months "Post implementation support" after the end of warranty period	Deleted
Volume-II Clause D.1.8 (General Scope of work)	Proposed AMI Software should be scalable in nature taking into consideration an average growth rate of consumers and associated infrastructure to be 7.5 % per annum for the complete project duration from the	Proposed AMI Software should be scalable in nature taking into consideration an average growth rate of consumers and associated infrastructure to be 5% 7.5% per annum for the complete project duration from the date of award of contract to selected bidder. Enterprise Wide License for the software components is a

	date of award of contract to selected bidder. Enterprise Wide License for the software components is a mandatory requisite. Proposed AMI Software and associated equipment's should be capable of handling at-least 50000 connections, without any additional infrastructure and cost implication to OPTCL	mandatory requisite. Proposed AMI Software and associated equipment's should be capable of handling at-least 1,40,000 (assuming 5% consumer growth per annum for 10 years) 50000 —connections, without any additional infrastructure and cost implication to OPTCL
Volume-II Clause D.1.26 (General Scope of work)	The equipment models shall be supported by the OEM for a minimum period of next five years	The equipment models shall be supported by the OEM for a minimum period of next ten five years (i.e. 2 years of implementation and 8 years of O&M) from the date of supply.
Volume-II Clause D.4 (Timelines for Delivery and Implementation)	The bidder is expected to complete the Enterprise Wide-implementation of AMI system on all connections within 12 months from the date of award of contract by the PFCCL..... The detailed BOQ is given in Annexure E.....The contractor shall have to maintain the system for Eight (8) years after operational acceptance by <OPTCL>. During the seven years of maintenance, Contractor shall maintain system availability as mentioned in this document.	The bidder is expected to complete the Enterprise Wide-implementation of AMI system on all connections within 12 24 months from the date of award of contract by the PFCCL..... The detailed BOQ is given in Annexure-E-‘Volume-IV of the RfP (BoQ and Price Schedule)’The contractor shall have to maintain the system for Eight (8) years after operational acceptance by <OPTCL>. During the seven eight years of maintenance, Contractor shall maintain system availability as mentioned in this document.
Volume-II Clause E.1.20 (Scope of Work)	The bidder shall guarantee for providing service & expansion support in the aforesaid area (at least for backward compatibility) for at least 15 years.	The bidder shall guarantee for providing service & expansion support in the aforesaid area (at least for backward compatibility) for at least 10 15 years (i.e. 2 years of implementation and 8 years of O&M).
Volume-II Clause E.1.22 (Scope of Work)	The offered solution including (H/w, s/w, OS, licenses & others) shall have life cycle of 5 years from post go Live.	The offered solution including (H/w, s/w, OS, licenses & others) shall have life cycle of 8 5 years from post go Live
Volume-II Clause E.1.38 (Scope of Work)	Failure Rate: Less than 0.75% failure rate per annum for all network communications equipment over the required operating life (i.e. 7 years) of the system. (Failure is defined as any occurrence when the equipment is not functioning per design	Failure Rate: Less than 0.75% failure rate per annum for all network communications equipment over the required operating life (i.e. 8 7 years) of the system. (Failure is defined as any occurrence when the equipment is not functioning per design specification).

	specification).	
Volume-II Clause E.2.2.4.1 (Advanced Metering Infrastructure (AMI))	Single phase and three phase whole current Smart meter shall be type tested for all the type tests as per IS: 16444 (latest version) and three phase CT operated Smart Meter shall be type tested for all the type tests as per IS: 16444 Part-2 (latest version) in a government approved laboratory. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444 and IS 16444 Part-2. The supplier shall have to submit all type test certificates along with the bid	Single phase and three phase whole current Smart meter shall be type tested for all the type tests as per IS: 16444 (latest version) and three phase CT operated Smart Meter shall be type tested for all the type tests as per IS: 16444 Part-2 (latest version) in a government approved laboratory. The number of sampling for testing of meters and criteria for conformity would be as per IS 16444 and IS 16444 Part-2. The supplier shall have to submit any one Meter variant BIS Licence as per IS:16444 along with the Bid and rest of the Meter variant's BIS Licence before commencement of Supply all type test certificates along with the bid

Annexure D (Volume-II): Table of Compliance

The Bidder shall annotate the Table of Contents of each section and appendix of Volume – II & III (Technical Specifications) to provide a high-level summary of compliance status. In all cases, the following symbols, and no others shall be used:

C - Bid complies with all requirements in the adjacent paragraph.

A - Bid is not compliant with the requirements in the adjacent paragraph, but a functional alternative is proposed.

X - Bid takes exception to the requirements of the adjacent paragraph and no functional alternative is proposed.

Only one symbol shall be assigned to paragraph and shall indicate the worst case level of compliance for that paragraph. This annotation may be hand written.

The Bidder shall also underline, on the compliance copy, all requirements to which exceptions have been taken (X) or to which alternatives have been proposed (A).

Each alternative shall be clearly and explicitly described. Such descriptions shall use the same paragraph numbering as the bid document sections addressed by the alternatives. All alternative descriptions shall be in one contiguous section of the bidder's proposal, preferably in the same volume, and titled "Alternatives." A separate section titled "Exceptions" should be provided containing any discussion or explanation chooses to provide concerning exceptions taken. Alternatives which do not substantially comply with the intent of the bid documents will be considered exceptions.

Any clause which is not included in this compliance table shall be treated as "fully complied" or C

OPTCL/PFCCL will assess the merits of each alternative and exception and will be the sole judge as to their acceptance.

Technical Specification of Hinge Type Meter Box Made of Engineering Plastic For Single Phase Whole Current Smart Meter

1. DESIGN AND CONSTRUCTION

The meter box shall be weather proof, tamper proof and made of transparent engineering plastic conforming to IS:11731. Type test of material is required to be furnished along with the offer

- i. The meter box should be unbreakable un-deformable and should withstand the temperature up to 140 deg. cent.
- ii. Thickness of the base should be at least 2.0 ± 0.2 mm and cover should be of not less than 0.8 mm.
- iii. The overall dimensions of the box will be such that a minimum clearance of 10 mm shall be maintained from top and both sides of the meter. However, the clearance at bottom should be of 70 mm. from the meter and 25 mm from the terminal block. Besides, there should be minimum clearance of 10mm in the front from the face of meter.
- iv. The top cover of the meter box should be of Hinge type. The cover and base shall have groove all along with the fitting edge, so that after fixing the top cover, no wire or any device can be, temporary or permanently, inserted in the box. The locks will be moulded in the cover and base and will not be separate pieces fixed later. There will be no holes to access the locks from any side. Additional provision to provide lash wire utility seals on meter box shall be made.
- v. Meter shall be fitted with the base of box through unidirectional type screw or by some other better means in such a way so that once the meter is fitted with the base; it cannot be removed from the base and become an integral part with base. The meters shall be supplied duly mounted on the base of meter box and the cover shall be placed separately in the cartoon.
- vi. Suitable circular holes with adjustable cable glands shall be provided at the bottom of the meter box for inlet and outlet of consumer's service cables. The incoming and outgoing gland shall be positioned such that they disable direct access to terminals through glands.
- vii. Meter Box cover shall be provided with a suitable arrangement (slot) to read the meter electronically through CMRI by using Optical Cable/Port Directly. The Optical Port Slot on meter cover should meet the standard requirement of IEC1107 for dimensions. The Optical Port slot shall be designed in such a way that there should not be any possibility to insert any wire, tool through the slot to tamper the meter.
- viii. The top cover of meter Box should have spring loaded pushbutton with spindle in module barrel perfectly in alignment to operate push button of the meter to read display parameter on pushbutton mode.
- ix. The boxes shall be specific to the meter mounted in it. Thus, the Serial Number of the meter should be indelibly engraved/ marked on the base of meter box as well as on the cover of meter box.
- x. The box should have proper mounting arrangement so that it could be mounted on wall or the pole, as the case maybe.
- xi. The overall dimensions of the meter box shall vary according to the different make of meters. However, it shall comply with the minimum requirements as described above.
- xii. The individual meter manufacturers shall submit the specific drawing to accommodate there make meter only.

2. TESTING FACILITIES

The bidder must clearly indicate the details of testing facilities available in the works of manufacturer and whether the facilities are adequate to carry out all the Routine and Acceptance tests. These facilities shall be available to OPTCL Engineers, if deputed to

carry out or witness the tests in the manufacturer's works. The tenderer must have all in-house testing facility to carry out acceptance & routine tests on the meter box as per relevant IS. If any test cannot be carried out in the manufacturer works, the same shall be clearly stated. All testing equipment's shall be duly calibrated in the NABL approved laboratories.

The meter box comprises of base and cover shall pass the following tests, which are to be conducted on the box at any independent NABL accredited laboratory and test reports will be carried out as per IS: 14772.

1. Test of HDT minimum $120 \pm 5^\circ\text{C}$ (at $1.8\text{MPa}^\circ\text{C}$),
2. Test for mechanical strength
3. Glow wire test at 650°C as per IS: 11000
4. Material Identification test

ACCEPTANCE TEST

1. Physical verification of dimensions of the box.
2. Compatibility of the box for housing the single-phase meter and ensuring ease of connecting and reading the meter.

3. NAME PLATE AND MARKINGS:

The meter box shall have an anodized aluminium name plate clearly visible, effectively secured against removal and indelibly and distinctly marked with all essential particulars as per relevant standards. In addition to the requirement as per relevant standard, following information shall clearly & indelibly be embossed on the cover of the meter box.

- a) Name of Purchaser: OPTCL
- b) Code name of manufacturer:
- c) Project Name, Tender Number & date:
- d) Year and month of manufacture:
- e) Guarantee: ... Years
- f) Sign of Danger

4. INSPECTION:

All Acceptance tests and inspection shall be carried out at the place of manufacturer unless otherwise specially agreed upon by the manufacturer and OPTCL at the time of purchases. The manufacturer shall offer to the inspector representing OPTCL all the reasonable facilities, free of charge, for inspection and testing, to satisfy him that the material is being supplied in accordance with this specification. Inspection of the sample shall be carried out jointly by representative of OPTCL. The representative / Engineer of OPTCL attending the above testing shall carry out testing as per IS: 14772 (amended up to date) & this specification and issue a test certificate approval to the manufacturer and give clearance for dispatch. The manufacturer shall give minimum 14 days' notice for inspection of material.

5. PACKING:

The meter box shall be suitably packed in corrugated boxes in order to avoid damage during transit or handling.

6. REJECTION:

OPTCL may select one complete meter box at random from each type & make and shall test the same for all the acceptance and routine tests at any third party NABL Lab.

The 5 days advance intimation shall be given to the bidder and if the bidder fails to attend the same on the date informed, the testing will be carried out in absence of bidder's representative. The results of the testing lab shall not be disputed by the bidder. If the meter box fails in above random sample testing, the lot will be rejected.

Technical Specification of Hinge Type Meter Box Made of Engineering Plastic for 3-Phase Whole Current Meters (10-60a)

1. DESIGN AND CONSTRUCTION

- i. The meter box shall be weatherproof, tamper proof and made of transparent engineering plastic conforming to IS: 11731. Type test of material is required to be furnished along with the offer.
- ii. The meter box should be unbreakable un-deformable and should withstand the temperature up to 140 deg. cent.
- iii. Thickness of the base and cover should be at least 2 mm.
- iv. Clearance of 30 mm shall be maintained from top and left side of the meter. A Clearance of 120 mm at-least may be provided at the right side of meter to place Modem for automatic remote meter reading in future and also arrangement for hanging the modem be provided. However, the clearance at bottom should be of 75 mm. from the meter and 45mm from the terminal block. Besides, there should be minimum clearance of 15 mm in the front from the face of meter.
- v. The top cover of the meter box should be of Hinge type having at least 2 nos. U clamps to hold the cover with base with tamper proof sealing arrangement. The cover and base shall have groove all along with the fitting edge, so that after fixing the top cover, no wire or any device can be, temporary or permanently, inserted in the box.
- vi. Internal hinges: A minimum of 2 nos. internal hinges well protected against corrosion shall be provided on left side of the box. The hinges of the door shall be concealed, and they shall be fixed to the flanges provided to the base and cover of the box in such a manner that the door opens by a minimum of 120 degrees.
- vii. Meter shall be fitted with the base of box through screw or by some other better means in such a way so that once the meter is fitted with the base; it cannot be removed from the base and become an integral part with base. The meters shall be supplied duly mounted on the base of meter box.
- viii. Suitable circular holes with adjustable cable glands shall be provided at the bottom of the meter box for inlet and outlet of consumer's service cables. The incoming and outgoing gland shall be positioned such that they disable direct access to terminals through glands.
- ix. The top cover of meter Box should have spring loaded push button with spindle in moulded barrel perfectly in alignment to operate push button of the meter to read display parameter on push button mode
- x. The boxes shall be specific to the meter mounted in it. Thus, the Serial Number of the meter should be indelibly engraved/ marked on the base of meter box as well as on the cover of meter box.
- xi. The box should have proper mounting arrangement so that it could be mounted on the wall or the pole, as the case may be.
- xii. The overall dimensions of the meter box shall vary according to the different make of meters. However, it shall comply with the minimum requirements as described above.
- xiii. The individual meter manufacturers shall submit the specific drawing accordingly to accommodate there make meter only.

2. TESTING FACILITIES:

The bidder must clearly indicate the details of testing facilities available in the works of manufacturer and whether the facilities are adequate to carry out all the Routine and Acceptance tests. These facilities shall be available to OPTCL Engineers, if deputed to carry out or witness the tests in the manufacturer's works. The tenderer must have all in-house testing facility to carry out acceptance & routine tests on the meter box as per relevant IS. If any test cannot be carried out in the manufacturer works, the same shall be clearly stated. All testing equipment's shall be duly calibrated in the NABL approved laboratories.

The meter box comprises of base and cover shall pass the following tests;

- i. Un-breakability test: -Shall not get damage or deform while dropping from a height of 10 ft. and hammered with 2 kg Hammer to test its un-breakability.
- ii. Boiling water test:-It should pass the boiling water test as prescribed in IS: 13010.

3. NAME PLATE AND MARKINGS:

The meter box shall have an anodized aluminium name plate clearly visible, effectively secured against removal and indelibly and distinctly marked with all essential particulars as per relevant standards. In addition to the requirement as per relevant standard, following information shall clearly & indelibly be embossed on the cover of the meter box.

- a) Name of Purchaser: OPTCL
- b) Code name of manufacturer:
- c) Project Name, Tender Number & date:
- d) Year and month of manufacture:
- e) Guarantee: ... Years
- f) Sign of Danger

4. INSPECTION:

All Acceptance tests and inspection shall be carried out at the place of manufacturer unless otherwise specially agreed upon by the manufacturer and OPTCL at the time of purchases. The manufacturer shall offer to the inspector representing OPTCL all the reasonable facilities, free of charge, for inspection and testing, to satisfy him that the material is being supplied in accordance with this specification. Inspection of the sample shall be carried out jointly by representative of OPTCL. The representative / Engineer of OPTCL attending the above testing shall carry out testing as per IS: 14772 (amended up to date) & this specification and issue a test certificate approval to the manufacturer and give clearance for dispatch. The manufacturer shall give minimum 14 days' notice for inspection of material.

5. PACKING:

The meter box shall be suitably packed in corrugated boxes in order to avoid damage during transit or handling.

6. REJECTION:

OPTCL may select one complete meter box at random from each type & make and shall test the same for all the acceptance and routine tests at any third party NABL Lab.

The 5 days advance intimation shall be given to the bidder and if the bidder fails to attend the same on the date informed, the testing will be carried out in absence of bidder's representative. The results of the testing lab shall not be disputed by the bidder. If the meter box fails in above random sample testing, the lot will be rejected.

Volume – III

Reference Clause	Existing Provision	Amended Provision
Volume-III Section A (1.5)(AMI Hardware & Software – Other Specifications)	Current Rating: 5-30A/ 10-60A (asper the requirement of the utility)	Current Rating: 5-30A/ 10-60A (as per the requirement of the utility) <ul style="list-style-type: none"> • Single Phase Smart Meters - 5-30A / 10-60A(as per the requirement of the utility) • Three Phase Smart Meters - 10-60A / 20-100A (as per the requirement of the utility)
Volume-III Section A(AMI Hardware & Software – Network Items - Core Router – S.No. 6)	The router forwarding performance shall be minimum 10Mpps	The router forwarding performance shall be minimum 10 Mpps and scalable upto 20 Mpps.
Volume-III Section A(AMI Hardware & Software – Network Items – Field Office Router – S.No. 1)	Router shall have RISC-based processors providing robust routing and security	Router shall have RISC-based processors or higher providing robust routing and security
Volume-III Section A(AMI Hardware & Software – Network Items – Field Office Router – S.No. 2)	Router shall have two 10/100/1000 Mbps routed ports(RJ- 45)and one Giga bit SFP Routed Port	Router shall have minimum two 10/100/1000 Mbps routed ports(RJ- 45) and minimum one Giga bit SFP Routed Port
Volume-III Section A(AMI Hardware & Software – Network Items – Field Office Router – S.No. 3)	The router shall have three WAN Interface card slots supporting LAN/WAN/Voice interface cards-Ethernet, V.35,E1, FXS/FXO, 3GModuleetc.	The router shall have three WAN Interface card slots supporting LAN/WAN/Voice interface cards-Ethernet, V.35, E1, FXS/FXO ,3GModule etc.
Volume-III Section A (AMI Hardware & Software – Network Items – Field Office Router – S.No. 9)	The router should have Field-Programmable Gate Array (FPGA) to improve the uplink performance and router should have the ability to ease utilization of the main processor by transmittingLayer2 packets directly via the Multi Gigabit Fabric.	The router should have Field-Programmable Gate Array (FPGA)/ equivalents to improve the uplink performance and router should have the ability to ease utilization of the main processor by transmittingLayer2 packets directly via the Multi Gigabit Fabric.

Volume-III Section A(AMI Hardware & Software – Network Items - S.No. 24)	Transparent Interconnection of Lots of Links (TRILL) support to increase the scale of enterprise data centres	Transparent Interconnection of Lots of Links (TRILL) or equivalent support to increase the scale of enterprise data centres.
Volume-III Section A(AMI Hardware & Software – Network Items – Field Office Switch – S.No. 26)	The switch should support RMON, XRMON, and sFlow	The switch should support RMON/ 5 XRMON, and sFlow
Volume-III Section A (AMI Hardware & Software – Network Items – Field Office Switch – S.No. 30)	The switch should support encapsulation (tunneling) protocol for over lay network that enables amore scalable virtual network deployment	The switch should support encapsulation (tunneling) protocol/ equivalent for over lay network that enables amore scalable virtual network deployment
Volume-III Section A (AMI Hardware & Software – Network Items – Field Office Switch – S.No. 34)	The switch should support Access control lists(ACLs) – Minimum3KACLs to be supported	The switch should support Access control lists (ACLs) – Minimum 2K 3K ACLs to be supported
Volume-III Section C Clause 8 (1.3a)(IT Component – Servers – SAN Switch)	Offered SAN switches shall be highly efficient in power consumption. Bidder shall ensure that each offered SAN switchshall consume less than 100 Watt of power.	Offered SAN switches shall be highly efficient in power consumption. Bidder shall ensure that each offered SAN switch shall consume less than 100-150 Watt of power.
Volume-III Section C Clause 9 (IT Component – Storage Items - SAN Storage)	The Storage system should be unified (Block and File), with minimum X TB usable capacity in RAID 5 (4+1). Bidders must include 1 Hot Spare drive for every 12 drives. It should contain at least 64 GB cache per controller.	The Storage system should be unified (Block and File), with minimum X TB usable capacity in RAID 5/ 6 (4+1) . Bidders must include 1 Hot Spare drive for every 12 drives. It should contain at least 64 GB cache per controller.
Volume-III Section C Clause 9 (IT Component – Storage Items -	Storage should contain minimum 4 No. of FC 8/16 Gb/s ports and 2 No. of 1/10GbE iSCSI ports. These ports must have backward compatibility. Storage should have at least 4	Host Interface: Storage should contain minimum 4 No. of FC 8/16 Gb/s ports and 4 2 No. of 1/10GbE iSCSI ports. FC These ports must have backward compatibility. Storage should have at least 4 ports of 12 Gbps SAS backend across controllers.

Host Interface)	ports of 12 GbpsSAS backend across controllers.	
Volume-III Section C Clause 9 (IT Component – Storage Items - Disk Type)	Disk types are 600/900 GB (10K/15K SAS Drives). Flash Drives - 200/400 GB	Disk types are 600/900/ 1200/1800 GB (10K/15K SAS Drives). Flash Drives - 200/400/ 920 GB/ 1.92 TB or higher
Volume-III Section C Clause 12(1.1) (IT Component – Firewall)	The Firewall shall be a non-ASIC based firewall and should have Multi core architecture to mitigate against the sophisticated threats	The Firewall shall be a non-ASIC based firewall and on multiprocessor or should have Multi core architecture to mitigate against the sophisticated threats.
Volume-III Section C Clause 12(1.3) (IT Component – Firewall)	Firewall shall deliver IMIX throughput of minimum 15 Gbps and must deliver 1 Gbps of NGFW (FW+IPS+App Control) throughput in production environment with real world traffic blend enabling logging, Natting and recommended security.	Firewall shall deliver IMIX throughput of minimum 15 Gbps and must deliver 4 4Gbps of NGFW (FW+IPS+AppControl+ Anti-Malware) throughput in production environment with real world traffic blend enabling logging, Natting and recommended security.

Volume – IV

The Amended Volume-IV is enclosed at Annexure-4.

Volume-I, Section D: Instruction to Bidders Clause 4 - Pre-Qualification Criteria

Existing Provision			Amended Provision		
Sub Clause	Qualification Criteria	Supporting Documents Required	Sub Clause	Qualification Criteria	Supporting Documents Required
General Qualification Criteria			General Qualification Criteria		
G.1	The Sole Bidder/ Lead member/ Member of Consortium shall be a Company incorporated under the Companies Act 1956/ 2013.	a. Self-attested copy of certificate of incorporation. b. Self-attested copy of Memorandum of Association (MoA) and Article of Association (AoA).	G.1	The Sole Bidder/ Lead member/ Member of Consortium shall be a Company incorporated under the Companies Act 1956/ 2013.	a. Self-attested copy of certificate of incorporation. b. Self-attested copy of Memorandum of Association (MoA) and Article of Association (AoA).
G.2	The Sole Bidder / Lead member of Consortium Bidder should have presence in India for the last 5 financial years as on 31.3.2019.		G.2	The Sole Bidder / Lead member of Consortium Bidder should have presence in India for the last 5 financial years as on 31.3.2019	
G.3	The Sole Bidder / any Member of Consortium bidder shall not be blacklisted by any Central/ State Govt./ PSU or any entity controlled by them for providing similar services	Affidavit for no blacklisting on appropriate non-judicial stamp paper duly notarized.	G.3	The Sole Bidder / any Member of Consortium bidder shall not be blacklisted by any Central/ State Govt./ PSU or any entity controlled by them for providing similar services	Affidavit for no blacklisting on appropriate non-judicial stamp paper duly notarized.
G.4	The sole Bidder/ Consortium members together must have successfully executed & implemented at least one Smart Grid/AMI/AMR/SCADA/ DMS/ OMS projects in an Indian Power Distribution Utility in the last 5 financial years (i.e. FY 2014-15 onwards).	Proof of Work order & performance certificate/ work order completion certificate to be submitted. For Distribution Franchisee / Distribution Licensee: Self-experience certificate duly signed by MD/CEO of the company	G.4	The sole Bidder/ Consortium members must have successfully executed & implemented at least one Smart Grid/ AMI/ AMR/ SCADA/ DMS/ OMS projects in any Global Power Distribution Utility in the last 5 financial years (i.e. FY 2014-15 onwards)	Proof of Work order & performance certificate/ work order completion certificate to be submitted. For Distribution Franchisee / Distribution Licensee: Self-experience certificate duly signed by the Authorized Signatory who is authorized to sign the Bid document. MD/CEO of the company
G.5	Undertaking from the Bidder for investment of 70% of project cost	The Undertaking should be on Non-Judicial Stamp Paper duly notarized.	G.5	Undertaking from the Bidder for investment of 70% of project cost	The Undertaking should be on Non-Judicial Stamp Paper duly notarized.
G.7	The Sole Bidder/ Lead member of Consortium Bidder should have following certificates which should be valid as on date of bidding:		G.7	The Sole Bidder/ Lead member of Consortium Bidder should have these certificates which should be valid as on date of bidding:	
a)	1. ISO 9001:2008/2015 2. ISO 27001 3. ISO 50001 4. CMMI Level 3 DEV or above for Software Development. OR CMMI level 3 SVC (Service delivery project from IT & OT	Copy of Self-attested valid Certificates	a)	1. ISO 9001:2008/2015 2. ISO 27001 3. ISO 50001 4. CMMI Level 3 DEV or above for Software Development. OR CMMI level 3 SVC (Service delivery project from IT & OT	Copy of Self-attested valid Certificates
b)	The Sole Bidder / Lead member of Consortium Bidder should possess minimum Class 'B' or above electrical contractor licenses issued by Electrical Inspectorate of any State Govt.	Copy of Self Attested Class 'B' Electrical or above electrical contractor licenses issued by Electrical Inspectorate of any State Govt. To be submitted.	b)	In case the Bidders is a Distribution Franchisee / Distribution Licensee , the Sole Bidder / Lead member of Consortium Bidder should possess minimum Class 'B' or above electrical contractor licenses issued by Electrical Inspectorate of any State Govt.	Copy of Self Attested Class 'B' Electrical or above electrical contractor licenses issued by Electrical Inspectorate of any State Govt. To be submitted.
c)	The Bidder / Consortium member having meter manufacturing	Copy of self-attested valid certificates.	c)	The Bidder/ Consortium member having	Copy of self-attested valid certificates.

	experience shall have BIS certification for IS: 16444 with latest amendments for the meter to be supplied against this bid.																																	
A. Financial Qualification Criteria																																		
F.1	MINIMUM AVERAGE ANNUAL TURNOVER (MAAT): The Minimum Average Annual Turnover (MAAT) requirement of the bidder (The Average of Best Three Financial Years out of the Last Five Financial Years preceding i.e. FY 2013-14) as indicated in the following Table-Fin-1 shall not be less than Rs. 100 Crores . In case the Bidder is in existence for less than three financial years, the average annual turnover shall be sum of turnover in the completed no of financial years divided by three for the purpose of meeting the above criteria. Turnover of the bidding company on standalone basis only (excluding its associate companies on Standalone Basis) shall be considered for arriving at Annual Turnover. While calculating the turnover, only project related turnover shall be taken into consideration. Note: <i>i. In case of Consortium, the MAAT shall be considered jointly/together of all members.</i>																																	
	Table-Fin-1 (To be attached with Annexure 8: Format of Summary of Audited Financial Statements) Error! Reference source not found. MAAT Schedule (Name of Bidder or Consortium Partner)																																	
	<table><tr><th>Sl. No</th><th>Financial Year</th><th>Project Related Annual Turnover (excluding associate companies on Standalone Basis) of the Bidder (in INR Crores)</th><th>Best Three Years Project Related Annual Turnover (excluding associate companies on Standalone Basis) of the Bidder (in INR Crores)</th></tr><tr><td>1</td><td>2013-14</td><td></td><td></td></tr><tr><td>2</td><td>2014-15</td><td></td><td></td></tr><tr><td>3</td><td>2015-16</td><td></td><td></td></tr><tr><td>4</td><td>2016-17</td><td></td><td></td></tr><tr><td>5</td><td>2017-18</td><td></td><td></td></tr><tr><td colspan="3">A. Total of best 3 FY Project related Annual Turnover</td><td></td></tr><tr><td colspan="3">B. = (A/3) Average of project related Annual Turnover for best 3-FY</td><td></td></tr></table>	Sl. No	Financial Year	Project Related Annual Turnover (excluding associate companies on Standalone Basis) of the Bidder (in INR Crores)	Best Three Years Project Related Annual Turnover (excluding associate companies on Standalone Basis) of the Bidder (in INR Crores)	1	2013-14			2	2014-15			3	2015-16			4	2016-17			5	2017-18			A. Total of best 3 FY Project related Annual Turnover				B. = (A/3) Average of project related Annual Turnover for best 3-FY				
	Sl. No	Financial Year	Project Related Annual Turnover (excluding associate companies on Standalone Basis) of the Bidder (in INR Crores)	Best Three Years Project Related Annual Turnover (excluding associate companies on Standalone Basis) of the Bidder (in INR Crores)																														
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B. = (A/3) Average of project related Annual Turnover for best 3-FY																																		
Note : 1. The bidder has to furnish the certificate from the Statutory Auditor of the Bidder(s) certifying the Project related Annual Turnover of the company only (excluding its Associated Companies on Standalone Basis) based on audited accounts of the last Five Financial Years. In case the bidder has executed any project in Consortium, the project related turnover certified by the Statutory Auditor of the Bidder(s) should reflect his share of the project related turnover only.																																		
LIQUID ASSETS AND ACCESS TO CREDIT FACILITY: Bidder shall be financially sound and stable. The liquid assets as per the Audited Accounts at the end of the last Financial Year and credit facility available from bank duly certified by the Bank at the end of the month preceding to the date of submission of the tender together as indicated in the following format should not be less than Rs.30 Crores . For this purpose, the liquid Assets and Un-Utilized Credit facilities of Partners of Consortium shall be considered together.																																		
F.2																																		

	Meter Manufacturing experience shall submit any one Meter variant BIS Licence as per IS:16444 along with the Bid and rest of the Meter variant's BIS Licence before commencement of Supply have BIS certification for IS: 16444 with latest amendments for the meter to be supplied against this bid.																																	
A. Financial Qualification Criteria																																		
F.1	MINIMUM AVERAGE ANNUAL TURNOVER (MAAT): The Minimum Average Annual Turnover (MAAT) requirement of the bidder (The Average of Best Three Financial Years out of the Last Five Financial Years preceding i.e. FY 2013-14) as indicated in the following Table-Fin-1 shall not be less than Rs 75 Crores Rs. 100 Crores . In case the Bidder is in existence for less than three financial years, the average annual turnover shall be sum of turnover in the completed no of financial years divided by three for the purpose of meeting the above criteria. Turnover of the bidding company on standalone basis only (excluding its associate companies on Standalone Basis) shall be considered for arriving at Annual Turnover. While calculating the turnover, total only-project-related turnover shall be taken into consideration. <u>Note:</u> i. In case of Consortium, the MAAT shall be considered jointly/together of all members.																																	
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F.2 LIQUID ASSETS AND ACCESS TO CREDIT FACILITY: Bidder shall be financially sound and stable. The liquid assets as per the Audited Accounts at the end of the last Financial Year and credit facility available from bank duly certified by the Bank at the end of the month preceding to the date of submission of the tender together as indicated in the following format should not be less than Rs. 10 Crore Rs.30 Crores . For this purpose, the liquid Assets and Un-Utilized																																		

<p style="text-align: center;">Table-Fin – 2 (To be attached with Annexure 8: Format of Summary of Audited Financial Statements) Liquid Assets and Un-Utilised Credit Facility Schedule</p>			
Liquid Assets as on 31.03.20...		Un-Utilised Credit Facility Month ending	
Description	(Rs. in Cr)	Description	(Rs. in Cr)
Cash in Hand		Cash Credit	
Cash at Bank		LC and BG	
Fixed Deposits		Others (PI Specify)	
Total Liquid Assets		Total Un-Utilised Credit Facility	
Grand Total: Total Liquid Assets + Total Un-Utilised Credit Facility.			
Note:			
(i) Liquid Asset: The liquid Assets as per the last Audited Accounts prior to the year of Tender shall be considered.			
(ii) Un-Utilised Credit Facility: The latest Un-Utilised credit facility as per the Banker's Certificate as per the proforma(Annexure-VII) at the end of Month preceding to the Month of Tender shall be considered.			
(iii) In case of Consortium above (Fin-2) shall be furnished independently by each partners duly certified by Statutory Auditor of the Bidder(s).			
Technical Qualification Criteria			
B. Experience as a Meter Manufacturer			
Sub Clause	Qualification Criteria	Supporting Documents Required	
B.1	<p>The Bidder or a member of consortium bidder should have experience of manufacturing or supply of Static Electricity Meters for power distribution utilities in India in the last 5 financial years (i.e. FY 2014-15 onwards) as per the following:</p> <ul style="list-style-type: none">● Minimum 2,50,000 Single-phase meters.● Minimum 1,00,000 Three phase Whole Current meters.● Minimum 10,000 LTCTTVM/ HTCTTVM. <p>All these meters shall either be AMR Meters or shall have Communication port.</p>	<p>i. Factory License Certificate/ MoA mentioning nature of Business.</p> <p>ii. Proof of Work order/Purchase order.</p> <p>iii. Performance certificate/ work order completion certificate to be submitted.</p>	

	Credit facilities of Partners of Consortium shall be considered together.			
<p style="text-align: center;">Table-Fin – 2 (To be attached with Annexure 8: Format of Summary of Audited Financial Statements) Liquid Assets and Un-Utilised Credit Facility Schedule</p>				
Liquid Assets as on 31.03.20...		Un-Utilised Credit Facility Month ending		
Description	(Rs. in Cr)	Description	(Rs. in Cr)	
Cash in Hand		Cash Credit		
Cash at Bank		LC and BG		
Fixed Deposits		Others (PI Specify)		
Total Liquid Assets		Total Un-Utilised Credit Facility		
Grand Total: Total Liquid Assets + Total Un-Utilised Credit Facility.				
Note:				
(i) Liquid Asset: The liquid Assets as per the last Audited Accounts prior to the year of Tender shall be considered.				
(ii) Un-Utilised Credit Facility: The latest Un-Utilised credit facility as per the Banker's Certificate as per the format at Table-Fin-2 proforma(Annexure-VII) at the end of Month preceding to the Month of Tender shall be considered.				
(iii) In case of Consortium above (Fin-2) shall be furnished independently by each partners duly certified by Statutory Auditor of the Bidder(s).				
Technical Qualification Criteria				
B. Experience as a Meter Manufacturer				
Sub Clause	Qualification Criteria		Supporting Documents Required	
B.1	The Bidder or a member of consortium bidder should have experience of manufacturing or supply of Static Electricity Meters for power distribution utilities in India in the last 5 financial years (i.e. FY 2014-15 onwards) as per the following: <ul style="list-style-type: none">Minimum 2,50,000 Single-phase meters.Minimum 1,00,000 Three phase Whole Current meters.Minimum 10,000 LTCTTVM/ HTCTTVM. All these meters shall either be AMR Meters or shall have Communication port.		i. Factory License Certificate/ MoA mentioning nature of Business. ii. Proof of Work order/Purchase order. iii. Performance certificate/ work order completion certificate to be submitted.	

B.2	The Bidder or a member of consortium bidder must have successfully supplied or implemented AMR or AMI projects in an Indian Power Distribution Utility during the last 5 financial years (i.e. FY 2014-15 onwards). The Bidder should have either supplied or implemented Meters with inbuilt/ modular/ external communication module and associated DCU /Gateway/ Router (as applicable) and MDAS/ HES application. a) One (1) project completed with >= 70,000 meters OR b) Two (2) Projects completed with >= 50,000 meters each OR c) Three (3) projects completed with >= 30,000 meters each	i. Individual Client's PO/ WO/ LOI/ LOA/ Contract/ Certification on client letterhead. ii. Performance certificate from the client needs to be submitted.
B.3	The Bidder or a member of consortium bidder must have Supplied or implemented a project of minimum 1000 Smart Meters with GPRS or RF communication in India in last 5 financial years (i.e. 2014-15 onwards).	i. Client's PO/ WO/ LOI/ LOA/ Contract/ Certification on client letter head. ii. Execution Performance Certificate from the client.
B.4	The Bidder or a member of consortium bidder should have quality certifications for its manufacturing and services function. a) ISO9001 and ISO14001 b) Minimum CMMI Level 3	Self-attested Valid Certificate.
B.5	The Bidder or a member of consortium bidder should be an authorized implementation Partner of OEM products proposed in the bid and should possess all the necessary authorizations of the OEM to supply, customize, implement and support their OEM solutions.	Authorization letter from OEM for next 10 years support (as per Annexure 15. Format of Manufacturer's Authorization of Supply and Support)
B.6	The Bidder or a member of consortium bidder should have relevant BIS Certification or should have applied for the same for the offered product.	Copy of the Valid Certificate or copy of the application submitted for BIS certificate. However, the Bidder must obtain and submit the BIS certificate before commencement of supply.
C. AMI / AMR Experience		
C.1	The Bidder or a member in case of consortium Bidder must have successfully implemented AMR or AMI in an Indian Power Distribution Utility with minimum 80,000 consumers in the last 5 financial years (i.e. FY 2014-15 onwards).	i. Individual Client's PO/ WO/ LOI/ LOA/Contract/ Certification on client letterhead. ii. Performance certificate and contact details of client's needs to be submitted.

B.2	The Bidder or a member of consortium bidder must have successfully supplied or implemented AMR or AMI projects in an Indian Power Distribution Utility during the last 5 financial years (i.e. FY 2014-15 onwards). The Bidder should have either supplied or implemented Meters with inbuilt/ modular/ external communication module and associated DCU /Gateway/ Router (as applicable) and MDAS/ HES application. a) One (1) project completed with >= 33,000 70,000 meters OR b) Two (2) Projects completed with >= 50,000 meters each OR c) Three (3) projects completed with >= 30,000 meters each	i. Individual Client's PO/ WO/ LOI/ LOA/ Contract/ Certification on client letterhead. ii. Performance certificate from the client needs to be submitted.
B.3	The Bidder or a member of consortium bidder must have Supplied or implemented a project of minimum 1000 Smart Meters with GPRS or RF communication in India in last 5 financial years (i.e. 2014-15 onwards).	i. Client's PO/ WO/ LOI/ LOA/ Contract/ Certification on client letter head. ii. Execution Performance Certificate from the client.
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B.5	The Bidder or a member of consortium bidder should be an authorized implementation Partner of OEM products proposed in the bid and should possess all the necessary authorizations of the OEM to supply, customize, implement and support their OEM solutions.	Authorization letter from OEM for next 10 years support (as per Annexure 15. Format of Manufacturer's Authorization of Supply and Support)
B.6	The Bidder or a member of consortium bidder should have relevant BIS Certification or should have applied for the same for the offered product. shall submit any one Meter variant BIS Licence as per IS:16444 along with the Bid and rest of the Meter variant's BIS Licence before commencement of Supply	Copy of the Valid Certificate or copy of the application submitted for BIS certificate. However, the Bidder must obtain and submit the BIS certificate before commencement of supply.
C. AMI / AMR Experience		
C.1	The Bidder or a member in case of consortium Bidder must have successfully implemented AMR or AMI in an Indian Power Distribution Utility with minimum 33,000 80,000 consumers in the last 5 financial years (i.e. FY 2014-15 onwards).	i. Individual Client's PO/ WO/ LOI/ LOA/Contract/ Certification on client letterhead. ii. Performance certificate and contact details of client's needs to be submitted.

D. IT & Communication Service Provider Experience		
D.1	The Bidder or a member of consortium bidder must have successfully implemented RF Mesh Technology (NIC and Network Component along with respective software i.e. HES/NMS) and/ or GPRS Technology for smart metering project with connect/ disconnect facility in any Indian or Global Power Distribution Utility in the last five (5) financial years (i.e. 2014-15 onwards) meeting any one of the following criteria: a) One project completed with >= 1,00,000 nodes OR b) Two projects completed with >= 70,000 nodes in each project OR c) Three projects completed with >= 50,000 nodes in each project At least one project should be in operation for at least 1 year as on Bid Due Date.	Performance certificate/ completion certificate from client.
D.2	The Bidder or a member of consortium bidder should have experience of interoperability / Integration /implemented RF / GPRS communication network, consisting of at least two (2) meter manufacturers, in at least one project in any Indian or Global Power Distribution Utility	Client's certificate mentioning interoperability / Integration of two (2) different make of meters on single communication network.
D.3	The Bidder or a member of consortium bidder should have implemented an AMI Project of minimum 1000 nos of Smart Meters in India and scope must include Supply, Installation of AMI, Head End System (HES) and Meter Data Management System (MDMS) and integration with existing MDMS and Data Analytics of any Indian Power Distribution Utility.	a) Client's PO/ WO/ Lol/ LoA/ Contract on client letterhead. b) Performance Certificate/ Project Completion Certificate.
E. Experience as System Integrator		
E.1	The Bidder or the lead member of the consortium bidder should have system integration experience of AMI/ AMR with MDM and Billing application for minimum 40,000 meters and the same should be in successful operation for at least one year as on Bid Due Date.	a) Client's PO/ WO/ Lol/ LoA/ Contract on client letterhead. b) Performance Certificate/ Project Completion Certificate.

D. IT & Communication Service Provider Experience		
D.1	The Bidder or a member of consortium bidder must have successfully implemented RF Mesh Technology (NIC and Network Component along with respective software i.e. HES/NMS) and/ or GPRS Technology for smart metering project with connect/ disconnect facility in any Indian or Global Power Distribution Utility in the last five (5) financial years (i.e. 2014-15 onwards) meeting any one of the following criteria: a) One project completed with >= 1,00,000 nodes OR b) Two projects completed with >= 70,000 nodes in each project OR c) Three projects completed with >= 50,000 nodes in each project At least one project should be in operation for at least 1 year as on Bid Due Date.	Performance certificate/ completion certificate from client.
D.2	The Bidder or a member of consortium bidder should have experience of interoperability / Integration /implemented RF / GPRS communication network, consisting of at least two (2) meter manufacturers, in at least one project in any Indian or Global Power Distribution Utility	Client's certificate mentioning interoperability / Integration of two (2) different make of meters on single communication network.
D.3	The Bidder or a member of consortium bidder should have implemented an AMI Project of minimum 1000 nos of Smart Meters in India and scope must include Supply, Installation of AMI, Head End System (HES) and Meter Data Management System (MDMS) and integration with existing MDMS and Data Analytics of any Indian Power Distribution Utility.	a) Client's PO/ WO/ Lol/ LoA/ Contract on client letterhead. b) Performance Certificate/ Project Completion Certificate.
E. Experience as System Integrator		
E.1	The Bidder or the lead member of the consortium bidder should have system integration experience of AMI/ AMR with MDM and Billing application for involving minimum 30,000 meters and the same should be in successful operation for at least one year as on Bid Due Date.	a) Client's PO/ WO/ Lol/ LoA/ Contract on client letterhead. b) Performance Certificate/ Project Completion Certificate. c) For Distribution Franchisee/ Distribution Licensee: Self-experience certificate duly signed by the Authorized Signatory who is authorized to sign the Bid document.

Volume-I, Section E: Tender opening and Bid Evaluation Clause 6.5.1 - Technical Evaluation Criteria

Existing Provision					Amended Provision				
S. No	Description	Requirement	Score	Max Marks	S. No	Description	Requirement	Score	Max. Marks
Bidder's Financial Strength					Bidder's Financial Strength				
1.	Financial Capability: The Minimum Average Annual Turnover of the Bidder shall be a minimum of INR 100 Crores during the best three financial years out of the last five financial years i.e. 2013-14 to 2017-18.	100Cr<= Turnover<=150Cr	10	20	1.	Financial Capability: The Minimum Average Annual Turnover of the Bidder shall be a minimum of INR 75 100 Crores during the best three financial years out of the last five financial years i.e. 2013-14 to 2017-18.	75 100 Cr<= Turnover<= 100 150 Cr	10	20
		150Cr<Turnover<=250Cr	15				100 150 Cr<Turnover<= 150 250 Cr	15	
		Turnover >250 cr.	20				Turnover > 150 250 cr.	20	
AMI / AMR Experience					AMI / AMR Experience				
2	The Bidder must have successfully executed & implemented Smart Grid/AMI/AMR projects in an Indian Power Distribution Utility in the last 5 years (i.e. FY 2014-15 onwards).	1,00,000 < No. of meters <= 2,50,000	5	10	2	The Bidder must have successfully executed & implemented Smart Grid/AMI/AMR projects in an Indian Power Distribution Utility in the last 5 years (i.e. FY 2014-15 onwards).	Involving 33,000 1,00,000 < No. of meters <= 1,00,000 2,50,000	5	10
		No. of meters >2,50,000	10				No. of meters Involving > 1,00,000 2,50,000	10	
Meter manufacturing /supply experience					Meter manufacturing /supply experience				
3	As a meter manufacturer or supplier, the Bidder should have experience of manufacturing / supplying of Static Electricity Meters to power distribution utilities in India in the last 5 financial years (i.e. FY 2014-15 onwards). All these meters shall either be AMR Meters or shall have Communication port.	2,50,000 < Cumulative No. of meters in last 5 years <= 5,00,000	5	10	3	As a meter manufacturer or supplier, the Bidder should have experience of manufacturing / supplying of Static Electricity Meters to power distribution utilities in India in the last 5 financial years (i.e. FY 2014-15 onwards). All these meters shall either be AMR Meters or shall have Communication port.	2,50,000 < Cumulative No. of meters in last 5 years <= 5,00,000	5	10
		Cumulative No. of meters in last 5 years > 5,00,000	10				Cumulative No. of meters in last 5 years > 5,00,000	10	
Smart Metering Experience					Smart Metering Experience				
4	The Bidder should have implemented a project involving minimum 1000 Smart Meters with GPRS / RF communication technology in India in last 5 financial years (i.e. 2014-15 onwards).	1,000 <= No. of meters <=5,000	10	20	4	The Bidder should have implemented a project involving minimum 1000 Smart Meters with GPRS / RF communication technology in India in last 5 financial years (i.e. 2014-15 onwards).	1,000 <= No. of meters <=5,000	10	20
		No. of meters >5,000	20				No. of meters >5,000	20	

IT &Communication Experience				
5	The Bidder must have successfully implemented RF Mesh Technology (NIC and Network Component along with respective software i.e. HES/NMS) and/ or GPRS Technology for smart metering project with connect/disconnect facility in any Indian or Global Power Distribution Utility in the last 5 (five) financial years (i.e. 2014-15 onwards) meeting any one of the following criteria: a. One project completed with>=1,00,000 nodes ; OR b. Two projects completed with>= 70,000 nodes in each project ; OR c. Three projects completed with>=50,000 nodes in each project	1,00,000 <= No. of nodes <=1,50,000	5	10
		No. of nodes>1,50,000	10	
Interoperability Experience				
6	To showcase interoperability, Integration with Multiple Meter Manufactures. The Communication provider should have integration experience with at least 2 Indian Meter Manufacturers.	=2	5	10
		>2	10	
System Integration Experience * (refer to note below)				
7	The Bidder or a member of the consortium bidder should have system integration experience of AMI/AMR with MDM and Billing application.	=1	5	10
		>1	10	
8	Approach and Methodology			10
TOTAL				100

IT &Communication Experience				
5	The Bidder must have successfully implemented RF Mesh Technology (NIC and Network Component along with respective software i.e. HES/NMS) and/ or GPRS Technology for smart metering project with connect/disconnect facility in any Indian or Global Power Distribution Utility in the last 5 (five) financial years (i.e. 2014-15 onwards) meeting any one of the following criteria: d. One project completed with>=1,00,000 nodes ; OR e. Two projects completed with>= 70,000 nodes in each project ; OR f. Three projects completed with>=50,000 nodes in each project	1,00,000 <= No. of nodes <=1,50,000	5	10
		No. of nodes>1,50,000	10	
Interoperability Experience				
6	To showcase interoperability, Integration with Multiple Meter Manufactures. The Communication provider should have integration experience with at least 2 Indian Meter Manufacturers.	=2	5	10
		>2	10	
System Integration Experience * (refer to note below)				
7	The Bidder or a member of the consortium bidder should have system integration experience of AMI/AMR with MDM and Billing application.	=1	5	10
		>1	10	
8	Approach and Methodology			10
TOTAL				100

Volume-I, Section F: General Conditions of Contract - Clause 19.1 - Payment Schedule

Existing Provision			Amended Provision		
The amount corresponding to the sum of Grant from NSGM (i.e. 30% of CAPEX) would be paid to the SGIA in line with the payment terms as per NSGM's Guidelines:			The following amount would be paid to the SGIA:		
S. No	Milestone	Payment (% of NSGM 30% GRANT)	S. No	Milestone	Payment (Percentage of 30% of Price quoted by the SGIA limited to 30% of NSGM approved DPR cost as per Volume-I, Section C: Introduction Clause 3.1)
1	a) Approval of survey reports for 25% of project area coverage. b) Delivery, site installation and commissioning of data centre with related hardware, software and equipment c) Delivery, site installation and integration of first lot of 10% smart meters each with related hardware, software and equipment and successful completion Field Installation and Integration Test (FIIT).	15%	1	(i) Issuance of LoA to SGIA by OPTCL (ii) Updation of web portal of NSGM regarding award details and KPIs (iii) Approval of survey reports for 25% of project area coverage	10%
2	Delivery of smart meters along with related hardware, software and equipment at Project site after Factory Acceptance Test (FAT). This payment shall be released on pro-rata basis considering delivery, site installation & integration of 6 equal lots (100%-Initial lot of 10% smart meters) of each with related hardware, software and equipment after successful completion Field Installation and Integration Test (FIIT) of each lot.	25%	2	(i) Delivery, site installation and commissioning of data centre with related hardware, software and equipment (ii) Delivery, site installation and integration of first lot of 10% smart meters each with related hardware, software and equipment (iv) And successful completion Field Installation and Integration Test (FIIT).	20%
3	Installation, commissioning & integration of all AMI Hardware, Software, field material in Project Area & Site Acceptance Test (SAT)	20%	3	Payment shall be released in 6 equal instalments of 5% each (against 15% of the smart meters along with related hardware, software and equipment) on successful delivery post Factory Acceptance Test (FAT), site installation, integration and completion of Field Installation and Integration Test (FIIT)	30%
4	Successful completion of the Guaranteed Performance Test (GTP) of the AMI system.	15%	4	Installation, commissioning & integration of all AMI Hardware, Software, field material in Project Area & Site Acceptance Test (SAT)	15%
5	Operational Acceptance	15%	5	Successful completion of the Guaranteed Performance Test (GTP) of the AMI system.	15%
6	Completion of 1-year warranty period (1 st year FMS)	10%	6	After completion of works Operational Acceptance	5%
	Total	100%	7	Completion of 1 year from Commercial Operation Date (COD)	5%
				Total	100%