

## Main features and Guidance notes of SBD for appointment of Advanced Metering Infrastructure (AMI) Service Provider for Smart Prepaid Metering in India

1. This Model Standard Bidding Document (SBD) has been prepared for the selection and appointment of Advanced Metering Infrastructure (“AMI”) Service Provider (“AMISP”) for Smart Prepaid Metering in India on Design Build Finance Own Operate Transfer (DBFOOT) basis by the DISCOMs
2. The provisions in angle brackets (< >) are for guidance and should be omitted from the RFP before it is issued to prospective Bidders
3. All Project-specific provisions in the model RFP have been enclosed in square parenthesis ([]) and may be modified, as necessary, before issuing the RFP to prospective Bidders. The square parenthesis should be removed after carrying out the required modification. DISCOM is advised to carefully read the SBD and insert DISCOM specific and RFP specific details in the blank and/or highlighted portions
4. Incorporation of a Special Purpose Vehicle (SPV) by the Selected Bidder for project implementation would be mandatory, in both cases, where the Bidder is either a Sole bidder or a Bidding Consortium.
5. However, if a Central Public Sector Enterprise (CPSE) / Public Sector Undertaking (PSU) or Subsidiary/ Joint Venture of a CPSE/ PSU is either the sole Bidder or a member of a Bidding Consortium, then creation of an SPV is not mandatory. In such an event, few changes as mentioned in the guidance note section of the RFP shall be adhered to.
6. The Model RFP includes the following sections:

Section	Description
1. Request for Proposal (RFP) Notice	This Section includes the Notice for Request for Proposals
2. Eligibility and Qualification Requirement	This Section contains information regarding specific eligibility and qualification requirements applicable for prospective bidders to be considered for further evaluation of their proposals
3. Instruction to Bidders and Bid Data Sheet	“Bid Data Sheet” contains information specific to selection and corresponds to the clauses in “Instructions to Bidders” that call for selection-specific information. “Instructions to Bidders” provides information to help prospective bidders prepare their proposals
4. Bidding Forms- Technical Proposal	This Section includes the forms for Technical Proposal that are to be completed by the prospective bidders
5. Bidding Forms- Financial Proposal	This Section includes the financial forms that are to be completed by the prospective bidders, including the bidders’ costing and pricing
6. Project Requirements	This Section describes the background information of the Project, Scope of Work, System Requirement, Specifications, Quality Requirements, Service Level Agreement (SLA), Standards,

	Activities and Tasks, Plans, Deliverables, Documentation and other requirements/ details related to and/or connected with the Project
7. Contract Form and Condition of Contract	This Section includes standard contract form. It includes General Conditions of Contract (“GCC”) and Special Conditions of Contract (“SCC”). The SCC include clauses specific to this contract to supplement the General Conditions.
8. Contract Related Forms	This Section includes the form used to notify Award of the Contract to the successful bidder and the form for Performance Security to be furnished by the bidder

7. The scope of services of the AMISP is to implement end-to-end smart prepaid metering in the selected AMI Project area, operating the AMI System for ‘Total Meter-months’ and thereafter transfer the ownership of the entire AMI system along with its valid licenses, and any data collected during the Project to the DISCOM at the end of the Contract Period. The functions of AMISP shall include the following:
- i. Supply, installation, integration, testing and commissioning of Smart pre-paid metering, Communication Infrastructure, Head End System (HES), Meter Data Management system (MDM) with prepaid functionality, Consumer Portal, Mobile Application, Network Operation cum Monitoring Centre (NOMC), auxiliary LT components, along with necessary hardware and software
  - ii. AMI System integration
  - iii. Consumer indexing on de-novo basis
  - iv. Development of a comprehensive consumer engagement plan
  - v. Generation of automated energy audit reports
  - vi. Operation, maintenance, and support services after the successful completion of the Operational Go-Live of the system
  - vii. Training of DISCOM personnel
  - viii. Other activities to be carried out to ensure successful installation and commissioning
8. Exclusions from AMISP’s Scope of Work:
- i. Construction of building for NOMC;
  - ii. Lighting system for NOMC;
  - iii. Interior and Integrated Building Management System (IBMS) of building for NOMC;
  - iv. Air conditioning and ventilation for NOMC;
  - v. Firefighting system for NOMC;
  - vi. A.C. input power and back-up supply for NOMC;
  - vii. Any modifications required in the existing system of the DISCOM (Billing, Website, etc.).
9. **Project Structure:**
- i. The bidding shall be conducted under Single Stage Two-Envelope Bidding process
  - ii. The Financial Bid shall include only the cost of different meter types and the person-day rate for executing new requirement for software components. While providing the financial quote, the Bidder must consider the lump-sum payment to AMISP. The Bidder shall accordingly quote the AMISP Service Charge for Contract Period. The AMISP Service

- Charge shall be inclusive of all costs related to installation, operation and maintenance of the AMI Project
- iii. Technically qualified Bidder with the lowest Financial Bid shall be considered as the Successful Bidder and shall be considered for award of the AMISP Contract
  - iv. The ownership of the meters shall remain with the AMISP during the contract period as mentioned in Clause 4 of the amendments notified in CEA (Installation and Operation of meters) Regulations, 2022 dated 28<sup>th</sup> Feb 2022.
  - v. Payments to the AMISP shall be made monthly on the basis of the total number of meters in operation and maintenance phase at the end of each month Post-Operational Go-Live. The payment shall also include any lumpsum payment for new meters which are installed and integrated, lumpsum payment towards installation and commissioning of auxiliary LT items, payment towards change request/new requirement completed and agreed cost for replacement of meters due to vandalism, theft, force majeure, etc. (as applicable)
  - vi. To facilitate the AMISP in implementation of the project, Utility, at its discretion, may provide to the successful bidder an interest-bearing advance payment against an advance payment security furnished by the successful bidder in the form of a bank guarantee for [15] % of the Contract Price. The advance payment shall be [70] % of the advance payment security furnished.
  - vii. As per the Revamped Distribution Sector Scheme, the DISCOM shall receive Government Budgetary Support (GBS) from Central Government of 15%/ 22.5% of the approved cost of the metering works including the operational cost:
    - For consumer metering, GBS shall not be more than Rs. 900/ 1350 per consumer meter basis the state category (“Other than Special Category States” and “Special Category States”). DISCOM shall provide a minimum lumpsum amount of INR 900/ 1350 per meter in the RFP (Form 1 of Section 5) calculated assuming smart metering cost of Rs. 6000 per meter over the project life. In case the price discovered in the Bid is less than Rs. 6000 per meter over the project life, the DISCOM shall be eligible for GBS of 15/22.5% of the discovered cost only. In such cases, the DISCOM will be required to pay the remaining amount to meet the minimum lumpsum payment requirement as provided in the RFP.
    - For DT/ Feeder metering, the DISCOM shall provide a minimum lumpsum amount of INR 3450/ 5175 per DT meter in the RFP (Form 1 of Section 5) calculated assuming smart metering cost of Rs. 23,000 per DT meter over the project life and a minimum lumpsum amount of INR 6300/ 9450 per Feeder meter in the RFP (Form 1 of Section 5) calculated assuming smart metering cost of Rs. 42,000 per Feeder meter over the project life. In case the price discovered in the Bid is less than or greater than Rs. 23000 per DT meter or Rs. 42000 per Feeder meter over the project life, the DISCOM shall be eligible for GBS of 15/22.5% of the discovered cost.
  - viii. For the purpose of evaluating the bidder’s qualification requirements, the utility shall estimate the project value based on per unit estimates considered/ sanctioned under RDSS scheme. However, in case of any difference from the same, the utility shall determine the estimated project cost and take necessary approvals from their respective competent authority before publishing of the tender.
  - ix. Accounting process of AMISP payment:

- *Transaction Nature:* Payment to the AMISP by the DISCOM shall be considered as an Operational Expenditure on DISCOM's account
  - *Regulatory Treatment:* DISCOM to consider AMISP payments (AMISP service charge along with the lumpsum payment per meter) as operational expenditure while filing ARR and tariff review petition to the state ERC
  - *GST Implications:* As this is an OPEX project, GST shall be paid by the AMISP. The ITC will be recovered throughout the contract period
- x. Quantity variation to the limit of - 20% and up to +30% shall be permissible through Change Order under the Contract without any change in the unit prices
  - xi. The overall contract period shall be earlier of (a) 10 (ten) years from the date of execution of the Contract or (b) As soon as the "Meter-Months" exceeds "Total Meter-months"
  - xii. DISCOM shall establish a Direct Debit Facility for the entire online consumer payments to ensure recovery of the amount due to be paid to the AMISP. The Direct Debit Facility would include a bucket filling approach whereby all consumer recharges and bill payments from the 11th (eleventh) working day of every month up to 10th (tenth) working day of the immediately succeeding month will be routed directly to the AMISP till such time the payment due to the AMISP is recovered in its entirety
  - xiii. Establishing the Direct Debit facility shall act as a condition precedent to award of the contract by the utility to the selected bidder. In case of failure of Utility to establish direct debit facility, then contract signing shall be put on hold and the utility would have to propose an alternate payment security mechanism and would need to approach the Nodal Agency (REC) for necessary approval and further course of action.
  - xiv. DISCOMs with direct charge on their entire revenue account need to obtain No Objection Certificate (NOC) from their lenders prior to creation of Direct Debit Facility. In case NOC is not available and Direct Debit facility cannot be established, DISCOM shall approach the Nodal Agency, i.e., REC prior to issuance of smart prepaid metering tenders for facilitating suitable alternate payment security mechanism such as Letter of Credit, Escrow, etc. on case-to-case basis
  - xv. SBD stipulates a project manager and 3 key experts in the areas of System Integration, Cyber Security and Communication Protocol. However, the number of key experts and field engineers/supervisors for deployment have to be decided by the AMISP as per requirement including for execution of new requirements related to software components
  - xvi. Utility Shall ensure process inter-lock as follows:
    - Any new consumer added to the Utility database shall be routed through the AMI system to ensure accurate tagging/ indexing of consumers.
    - Any modifications/ new additions in the network assets of the Utility, e.g., O&M works that lead to new asset addition (DT/ Feeders etc.), segregation of existing assets (Feeder segregation, creating of dedicated feeders etc.) shall be routed through the AMI system and the Utility shall ensure that the said asset is reflected in the AMI system/ any Utility software.
10. DISCOM to provide information on contiguous electrical locations (which will be ring fenced with boundary meters) for end-to-end smart metering and non-contiguous electrical locations for

dispersed metering within the selected AMI Project Area along with relevant network and consumer details. DISCOM to enter brief details on the Project Area with details added as an annexure to the SBD as required. DISCOM to ensure that area selected for end-to-end metering is ring-fenced with boundary meters. This would include a pictorial representation of the Project boundary w.r.t DISCOM's and AMISP's roles and responsibilities for physical installation of Smart Meters.

11. For supply, installation, and commissioning of Auxiliary LT items like service cable, DT cable, meter distribution box etc., DISCOM shall assess their requirements and define the various enabling accessories required for successful installation and functioning of the Smart System Meter. Components provided in Section B of the Annexure of the Financial proposal are illustrative and DISCOM shall modify the list of items based on their requirements.
  - a. Payment against these Auxiliary LT items shall be paid to the AMISP on a lumpsum (capex) basis, as per terms and conditions of the AMISP contract.
  - b. The cost of above auxiliary items shall not be included in the per meter per month cost discovered as part of the bidding process. Cost for these components shall be quoted separately under Section B of the Annexure of the Financial proposal.
  - c. Rates per unit quoted by the bidder shall not exceed the SoR rates as approved by the Utility. In case SoR is not available for any specific item, rate per unit quoted by the bidder shall not exceed the estimated unit rate to be provided by the Utility.
  - d. AMISP shall raise a separate invoice for these Auxiliary LT items on a quarterly basis and Utility shall review and make the payment as per terms and conditions of the contract.
  - e. Funding for Auxiliary LT items shall be made from Distribution Infrastructure works component sanctioned for the Discom under RDSS. In case these auxiliary LT items are not sanctioned under RDSS, the same may be funded from Discom's own funds.
12. Except for the number of Smart Meters, no other provision in the SBD for AMISP shall be modified by the DISCOM without prior approval from the Nodal Agency. The quantity of smart meters to be installed should be based upon As-Is consumer database as well as projected load growth in the selected AMI Project Area during the Contract Period. Accordingly, the DISCOM should provide the appropriate quantity of smart meters to be installed for the AMI project
13. The AMISP shall provide meter LTCTs for LTCT meters as per the specifications provided by the DISCOM. DISCOM shall provide CTPTs to AMISP for HT-CTPT meters. In case DISCOM require AMISP to procure meter HT-CTPTs, the number and specifications for the same need to be provided by DISCOM
14. Only BIS certified smart meters shall be installed in the Project Area. However, in case DISCOM require additional meter specifications over and above the BIS standards, DISCOM shall provide the same as annexure to the SBD. This Annexure needs to be approved by the nodal agency on case-to-case basis prior to issuance of tender.

15. Test and inspections shall be under the complete purview of the AMISP and its sub-contractors. It shall be ensured that there are no conflicts in roles played between AMISP personnel carrying out tests / inspections, and those assigned responsibilities of quality assurance (QA) and quality control (QC). However, if the DISCOM so desires, it may choose to witness the tests at its own cost as per its convenience. DISCOM shall only certify the Operational Go-Live of the AMI system.
16. The Bidder shall provide an indicative list of equipment necessary to meet the technical specifications, functional & performance requirements as per SBD at the time of submission of Bid. Post award of Contract, the Selected Bidder/ AMISP shall submit a detailed Bill of Quantities (BoQ) for materials and services to be provided under the Contract as a part of the Project Implementation Plan and shall keep this BoQ updated along with its Exit Management Plan.
17. The Project Implementation Schedule provided in the SBD has been prepared considering installation of 1-2 million Smart Meters. DISCOM may appropriately change the timeline of the project in case of larger/ smaller deployments.
18. The guidance notes and SBD for AMISP are to be followed. However, in case of any contradiction, the provisions in the operational guidelines for the Revamped Distribution Sector Scheme issued vide letter 31.03.2022 shall prevail along with any further amendments therein.

## **Annexure - Key Changes in AMISP SBD**

### **Changes in QR related clauses:**

1. In cases where Non-Disclosure Agreement (NDA) has been signed with the Client, Bidder may produce the Client Certificate as supporting document in place of Work Order/ Contract as proof for prior experience.
2. Experience for HES, MDM Solution provider and RF Technology/ solution provider – Condition of the solution being in operation for at least 1 (one) year has been removed.
3. “RF Solution Provider” has been modified to “RF Technology/ Solution provider”. Experience outside of India included for assessing successful integration of RF solution with NIC/ Communication module.

### **Other Changes:**

4. O&M period increased to 93 months, as installation milestone is expedited to 27 months. Subsequently, Total meter-months calculation has been updated.
5. AMISP shall be liable to pay Liquidated Damages if Installation Milestone is delayed by more than 27 months from date of execution of Contract.
6. Utility, at its discretion, may provide an interest-bearing advance of 70% of advance payment security furnished by the bidder. The advance payment security to be furnished by the bidder for the same has been modified to [15] % of the Contract price.
7. Per unit cost to be quoted by the bidder for Auxiliary LT components shall not exceed the approved SoR rates/ estimate rates provided by the Utility.
8. For payment towards Auxiliary LT items, AMISP shall raise a separate invoice on a quarterly basis and Utility shall review and make the payment as per terms and conditions of the contract.
9. In case of an AIF, an undertaking by the competent authority, based on delegation of authority accorded by the Fund/ board resolution of its investment manager can be submitted in place of a board resolution under Form 19.
10. Utility shall pay interest to the AMISP on delayed payment amount from the due date of payment, which shall be 45 days from date of invoice for AMISP monthly payment and 60 days from date of invoice for Capex payment of LT auxiliary components.