State Electric Company Ltd

Supply, Installation and Commissioning of

Advanced Metering Infrastructure (AMI)

Summarized Information Sheet for Bidders

Project Overview:

State Electric Company Limited (STELCO) is inviting proposals for the development and deployment of an Automated Metering Infrastructure (AMI) system. This project aims to enhance operational efficiency, improve customer service, and reduce operational costs through the implementation of advanced smart metering technologies.

Project Scope:

- The AMI system is to be designed to accommodate 150,000 smart kWh meters and 10,000 smart water meters.
- **Meter Supply:**
  - 80,000 single-phase smart kWh meters
  - 20,000 three-phase smart kWh meters
  - 1,000 CT-operated meters
  - 110 CT-VT-operated meters

  Meter shall be supplied to STELCO as per an agreed delivery schedule.

- **Proof-of-Concept (PoC):** the bidder shall implement a proof of concept for the proposed system, at a location decided by STELCO. Through this implementation the Bidder should demonstrate the capability and effectiveness of the system . The investment cost should be borne by the bidder and shall be compensated after successful completion. If firm is not successful in completing PoC within this time frame; the firm will be disqualified.
- **The Head-End System (HES) / Meter Data Management System (MDMS) :** The HES must manage secure, two-way communication with smart meters, ensuring reliable data collection and command execution. The HES must support industry-standard communication methods, including but not limited to RF Mesh, Power Line Communication (PLC), GSM/GPRS, NB-IoT, and LoRaWAN, ensuring flexibility and compatibility in various environments. The MDMS should store, process, and analyze the collected data, seamlessly integrating with STELCO's ERP, billing, and other information systems. Both systems must be scalable, support data validation and reporting, comply fully with DLMS/COSEM standards and industry security standards.
- **Utility billing system :** Develop a robust, scalable utility billing system capable of handling all aspects of customer billing, including tariff management, invoicing, payment processing, and account management. The system should support multiple customer classes (residential, commercial, government, industrial, etc) and can handle complex billing scenarios such as block tariffs through several unit brackets for each customer class, time-of-use tariffs, demand charges, and prepaid billing.
- **Customer Portal :** Develop customer self-service portal for online service applications, online bill payment, usage tracking, and account management.

- **Mobile application :** Develop a mobile application for Android and iOS platforms that allows customers to manage all utility-related activities. This includes viewing and paying bills, prepaid recharging, monitoring energy usage, receiving notifications, and managing account settings. Ensure the mobile app integrates seamlessly with the utility billing system, providing real-time updates and a consistent user experience across all platforms.
- **Future IT/OT Requirement**: the system shall be open to integrate future IT/OT requirements in EV charging and Streetlight monitoring.
- **Hardware and Licensing:** Bidders must include all necessary hardware and licenses required to establish the full AMI system, including meters, communication devices, and software licenses. *Wherever SIM cards are required for communication devices, STELCO will provide them***.**
- **Training:** Comprehensive training for STELCO personnel and provision of ongoing system support.

Contractor Responsibilities:

- **Commissioning & Proof of Concept:** The contractor will manage the commissioning, proof of concept, and full integration of the smart meters and associated systems to ensure they meet performance standards and integration requirements.
- **Modular Design:** The AMI system must be designed to support the addition of licenses without requiring significant upgrades, ensuring long-term scalability.
- **System Demonstration:** The contractor may be required to demonstrate the system's capabilities and performance during the proof of concept phase, ensuring that all components work seamlessly together.
- **Vendor Interoperability:** The AMI system must be capable of integrating with meters from various vendors. The vendor shall demonstrate this capability by incorporating additional brands into the system during the deployment phase, ensuring interoperability and flexibility in future meter selection
- **Training & Support:** The contractor will provide both initial and refresher training for STELCO personnel and commit to ongoing technical support for a minimum of 5 years.

Financial Arrangements:

- **Contractor-Financed Project:** This is a contractor-financed project. Eligible bidders must be prepared to finance the project under the terms specified by STELCO.

Eligibility Requirements:

- **Original Equipment Manufacturers (OEMs):** Only OEMs with proven experience in deploying smart metering systems are eligible to participate in this tender. Joint ventures (JVs) or partnerships are not eligible.
- **Experience & References:** The bidder must have completed at least 3 AMI deployments. STELCO reserves the right to request references from the contractor’s previous clients and to require demonstrations of past deployments to evaluate the contractor's capability and the system's performance.

Bid Submission:

Bidders must submit detailed proposals that outline their approach to the project, including timelines, technical specifications, proof of concept plans, and financial terms. Proposals should also include references from previous projects and, if requested, arrangements for demonstrating system performance.