

## REQUEST FOR TENDER – SUPPLY INSTALLATION TESTING AND COMMISSIONING OF AMR/AMI SMART WATER METERS AT TECHNOPARK PHASE III CAMPUS

### 1. INTRODUCTION.

Technopark Phase III campus invites tenders from eligible bidders for the supply, installation, and maintenance of AMR/AMI smart water meters. The project aims to provide accurate water consumption data and enable effective billing, analytics, and alarms for better water management. The specifications for the tender are outlined below.

### 2. SCOPE AND OBJECTIVES OF THE PROJECT

The project requires the installation of multijet smart water meters with sizes ranging from 15 mm to 150 mm and equipped with RF-based (LPWAN technology) AMR/AMI technology. The meters should be manufactured in compliance with ISI and ISO 4064 standards, IP 68 rated, and have a pressure rating of >16 Bars and environmental temperature ranging from 0 degrees C to 50 degrees C. The successful bidder will be required to supply and install the meters, as well as provide customized billing software that meets the specific requirements of Technopark's accounts team. The software should be able to retrieve readings from existing smart meters within Technopark Phase III campus, provide analytics, alarms, and individual login facilities for companies. The software should also be capable of integrating with the Tally application, and the input format for Tally should adhere to the specific requirements provided by Technopark's accounts team, after custom calculation. The O&M services for the project will be required for five years.

### 3. TECHNICAL SPECIFICATIONS

#### 3.1 AMR/AMI Smart Water Meters

- The water meters shall be MultiJet type MID/ISO approved and equipped with RF-based wireless remote trans-receivers for AMR readings.
- The meters shall have anti-magnetic properties/immunity as specified in ISO: 4064, when tested with 385 m Tesla to 400 m Tesla magnet.
- The meters shall be supplied with all necessary accessories including fitting material, nuts, and nipples as per relevant IS provisions.

#### 3.2 LPWAN Technology

- The remote readings of AMR/AMI water meters shall be obtainable by LPWAN technologies.
- The system shall have the facility to record abnormalities such as high consumption and water leakages, along with necessary alarms.
- The system shall communicate on a daily basis for consumption analysis, consumption profile, and data alarms, and in real-time for battery and tamper alarms.
- The system shall have a minimum 5-year battery life, be capable of replacing the battery in the field without stopping the meter, and operate in the free band frequency available in India, as per the notification of DoT, Gol.

- The system shall be capable of sending alarms for leak or abnormal consumption detection, battery discharge, and module removal.
- The communication shall be encrypted to avoid tampering.
- Loss of communication shall be indicated in the server within 48 hours.
- The transmit power level shall not exceed 20 dB (100mW), and the receive sensitivity should be better than -130 dB.

### 3.3 Utility Portal

- The software shall be web-enabled and provide reports and dashboards for customer interactions, tracking customer activity, notification status by battery strength, alerts, and administrative reports for daily, monthly, or data range activity for billing, usage, notification, and preference management activity.
- The software shall provide database backup/restore functions and have real-time data access.
- The software shall have administrative settings to configure the application features, user roles, and user accounts, including creating and managing user roles for application and managing utility user accounts.
- The software shall be capable of integrating with the Tally application and updating the meter reading offline.
- The software shall be platform-independent for various brands

\*\*\*\*\*