

Tender Name: Supply, Installation, Commissioning and CAMC of Water level Monitoring System in NW-5 and NW-64

Tender No. : Iwai/Tech/NW-5 and NW-64/Water Level/2024

PRE- BID QUERIES

| Sr. No. | Page No. | Clause No. | Section Name | Statement as per NIT | Query by Bidder | Reply |
|---------|----------|----------------------|--------------------------------------|---|---|--|
| 1 | 32 | 17.1.1(b) | Qualification for works | For this purpose, the "Similar Works" means "Supply, Installation of Water level monitoring system/or similar type instruments for water level measurement in river, ponds, dam." | It seems that a hydrostatic sensor has been specified. However, considering your application, which focuses on water level monitoring, the inclusion of temperature and pressure measurement appears unnecessary and may not align with the primary objective. Based on your requirements and the nature of the application, we recommend considering a radar-type water level sensor. Radar sensors offer reliable, non-contact measurement, making them ideal for continuous monitoring in challenging environments without being affected by factors such as water temperature or pressure variations. This would provide a more efficient and suitable solution for your project needs. | Tender Conditions prevail. |
| | 72 | 2 (a). Scope of Work | SECTION-VI: TERMS OF REFERENCE (ToR) | Pressure Level Sensor : The Sensor should be a rugged probe built to measure and store the following parameter in an absolute (non-vented) instrument for long-term level monitoring with inbuilt data logging facilities. i. Water Level ii. Pressure iii. Temperature | | Tender Conditions prevail. |
| 2 | 77 | 4.6 | Stages of Payment (ToR) | 1. 25% Supply of buoys to nearby place to the site or Bhuwaneshwar office 2. 75% Installation & Commissioning of Water Level Monitoring System | We kindly request you to consider increasing the percentage of payment released against the supply portion to 75% instead of the current 25%. This adjustment would better accommodate the financial requirements of the project, as the current 25% release against supply does not adequately cover the costs associated with procurement, installation, and other related expenses. Releasing a larger portion of the payment upon supply would ensure smoother project execution and help alleviate financial strain, as receiving the remaining balance only after project completion would be challenging for any firm from a financial standpoint. | Tender Conditions prevail. |
| 3 | | | | Configuration Method" and "Manual Data Downloading : Existing Specification: - Configuration Method: Wirelessly via Bluetooth using a smartphone. Manual Data Downloading: Wirelessly via Bluetooth using a smartphone. | Proposed Change: a. Configuration Method: Wirelessly via Bluetooth using a smartphone or USB connectivity through a laptop (as an optional method for enhanced security and reliability). b. Manual Data Downloading: Wirelessly via Bluetooth using a smartphone or USB connectivity through a laptop (as an optional method for secure data transfer). | Tender Conditions prevail. |
| 4 | | | | Incorporation of Solar Panel for Battery Charging: The current tender specifications mention the use of rechargeable and non-rechargeable alkaline or lithium batteries but do not include any provision for solar power backup. | To ensure an uninterrupted and sustainable power source, we recommend integrating a solar panel for charging the battery bank. | The contractor may provide solar connectivity however, the CAMC and O&M of solar panels are deemed to be included in the quoted price. (Refer amendment) |
| 5 | | | | Elimination of Bluetooth-Based Configuration: The tender currently specifies Bluetooth connectivity for configuring the device. | This feature is unnecessary, as all sensors and IoT devices can be designed to auto-upgrade, calibrate, and reconfigure directly from the cloud server. Eliminating Bluetooth dependency will enhance security, simplify device management, and reduce potential technical vulnerabilities. | In addition to Bluetooth configuration of device through cloud server will also be considered. (Refer amendment) |
| 6 | | | | Ensuring Two-Way Cloud Communication: | The system should be capable of both transmitting data to the cloud server and receiving instructions from it. o This will enable seamless remote monitoring, automated updates, and real-time configuration, ensuring long-term system stability without manual intervention. | Tender Conditions prevail. |

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Amendment

| <u>Tender Specs</u> | <u>Updated Specs</u> |
|--|---|
| <u>Pressure Level Sensor: -</u> | |
| <ul style="list-style-type: none"> Sensor should be an intelligent probe built to measure and store water level, pressure, and temperature data in an absolute (non-vented) instrument for long-term level monitoring. | Sensors should be an intelligent probe built to measure and store water level, pressure, and temperature data in an absolute (Vented / Non vented Strain Gauge) instrument for long-term level monitoring. |
| <ul style="list-style-type: none"> The Sensor probe should have inbuilt data logging. | The Sensor probe and datalogging unit should be inbuilt or separate. In case of separate unit, the data logging/Telemetry unit should be stored separately in a secured box with lock. |
| <ul style="list-style-type: none"> The Sensor probe should have inbuilt battery and also capable of connecting with external DC power source by using cable and connectors. | <p>The Sensor probe should have inbuilt / external battery, which should be capable of connecting with external / internal DC power / solar power source by using cable and connectors.</p> <p>The contractor may provide solar connectivity however, the CAMC and O&M of solar panels are deemed to be included in the quoted price.</p> |
| <ul style="list-style-type: none"> The probe body shall be constructed primarily of durable titanium with a Delrin® nose cone. | The probe body shall be constructed primarily of durable titanium / stainless steel / gold. |
| <ul style="list-style-type: none"> Accuracy shall be as follows: <ul style="list-style-type: none"> Accuracy shall be $\pm 0.05\%$ full scale (FS) across factory-calibrated pressure and temperature range. | <ul style="list-style-type: none"> Accuracy shall be as follows: <ul style="list-style-type: none"> Accuracy shall be $\pm 0.05\%$ - $\pm 0.1\%$ full scale (FS) across factory-calibrated pressure and temperature range. |
| <u>Telemetry Unit: -</u> | |
| Cellular modem of telemetry unit should cover most bands (lockout): | The Cellular modem should support 4G with fallback to 2G/3G |
| <ul style="list-style-type: none"> LTE Global - B1(2100), B2(1900), B3(1800), B4(AWS1700), B5(850), B8(900), B12(700), B13(700), B18(800), B19(800), B20(800), B26(850), B28(700) 2G Quadband - B2(1900), B3(1800), B5(850), B8(900) | LTE FDD: Band 1/3/5/8 LTE TDD: Band 34/39/40/41 GSM: 900/1800 MHz |
| <ul style="list-style-type: none"> Housing material of telemetry unit must be of Ryton | Housing material of telemetry unit must be of Ryton or injection moulded housing rated to a IP67 or better. |
| <ul style="list-style-type: none"> Telemetry unit should have on-board memory of minimum 512MB | Telemetry unit should have on-board / external memory of minimum 512MB |
| <ul style="list-style-type: none"> Telemetry unit should have internal barometer with +/- 1 hPa accuracy for barometric compensation. | Telemetry unit should have internal barometer with +/- 1 hPa accuracy for barometric compensation with resolution of data logged as 1mm |
| <ul style="list-style-type: none"> Telemetry unit should have sealed electronics compartment | Telemetry unit should have sealed electronics compartment with small data display panel in the logging unit with RS232/RS485 comms for cabled communication or Bluetooth or cloud configured. |
| <ul style="list-style-type: none"> Telemetry unit should be wirelessly configured via Bluetooth using Smartphone and for manually downloading the data. | Telemetry unit should be remotely configured / wirelessly configured through Bluetooth using Smartphone / SMS from Authorized number or using command from the server, configuration through HTTP. Storing and forwarding of data, in case of communication failure. |
| <ul style="list-style-type: none"> Telemetry unit should have communication protocols of HTTPS (Hydro Vu), FTP, SMS (alarms) | Server communication using protocol like MQTT, HTTP/HTTPS (Hydro Vu), SMS (alarms), FTP. |


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