

TENDER DOCUMENT FOR UGLD SURVEY OF LAHORE (East/West).

1. INTRODUCTION & BACKGROUND

Sui Northern Gas Pipelines Limited (SNGPL), a leading gas utility company, is undertaking a comprehensive Underground Leakage Detection (UGLD) survey for its extensive pipeline network spanning Lahore (east and west). The pipeline network, which covers a total of 20,358 kilometers, requires a systematic and thorough survey to detect any potential methane gas leakage along its course. This survey will be critical for maintaining safety standards and preventing any potential hazards related to gas leakage and gas losses.

The survey must be completed within a 12-month period, with a target of surveying approximately 1000 kilometers of pipeline each month. To ensure the survey's successful execution, SNGPL is inviting bids from bidders with the necessary expertise, equipment, and resources to carry out the entire UGLD survey of Lahore region. This includes providing the required manpower, vehicles, equipment, fuel, and comprehensive management services. The selected bidder must adhere to the defined timelines and safety standards set forth by SNGPL.

2. SCOPE OF WORK

The bidder's responsibilities will encompass all aspects of the UGLD survey, ensuring that the project is completed to the highest standards of quality, safety, and accuracy.

2.1 Manpower

The bidder will be responsible for the deployment of well-trained UGLD survey teams for Lahore. Each survey team will consist of:

- 1) **Engineer:** A skilled Engineer with experience in operating UGLD equipment, having minimum Education of BSc Engineering, and should have valid PEC Registration.
- 2) **Surveyor:** A skilled surveyor with experience in operating UGLD equipment, holding a Diploma of Associate Engineer (DAE).
- 3) **Leak Detection Inspector (LDI):** A certified professional, having a valid Training certificate from TTC or Equivalent.
 - a) SNGPL reserves the right to conduct skill assessments for both the Surveyor and LDI at any time during the survey.
- 4) **Helpers (Unskilled Laborers):** Two helpers per team, responsible for performing plunger-based bar hole creation on the surface. This will assist in the accurate identification of gas leaks.

Each team is expected to cover a minimum of **3.7 km of pipeline per day**, with the number of teams deployed in each region based on the forecasted monthly target.

All personnel must be trained, provided with necessary safety gear, and insured by the bidder. This ensures that the teams comply with SNGPL's high safety and operational standards.

SNGPL reserves the right to remove/replace manpower not found suitable to carry out any test.

2.2 Vehicles & Logistics

The bidder shall provide one **dedicated vehicle per team**, responsible for transporting team members, equipment, and other necessary tools to and from the survey sites. The vehicles must meet the following requirements:

1. **Condition:** All vehicles must be in optimal working condition.
2. **Registration & Insurance:** Vehicles must be legally registered and insured.
3. **Seating Capacity:** Vehicle must have a total seating capacity of minimum 6 people.
4. **Tracking System:** Vehicles should be equipped with a GPS tracker for monitoring purposes.
5. **Compliance:** The vehicles must adhere to the Health, Safety, and Environment (HSE) standards set by SNGP.
6. **Claim:** Bidder can claim his payment of transportation on per kilometer basis.

The bidder will also be responsible for providing fuel for all vehicles, ensuring that there is no interruption in the survey process.

2.3 Equipment

The bidder is required to supply all necessary equipment for the successful completion of the UGLD survey. This includes:

1. **UGLD Meters:**
 - 1.1. **Option-I:** Bidder can arrange his own UGLD meters to carry out survey. Each team deputed must have at least 1 No of UGLD meter at site. These meters should be capable of detecting methane gas leakage from underground pipelines.
 - 1.2. **Option-II:** The bidder can opt to rent these meters from SNGPL, subject to a monthly rental payment. In case of renting the meter from SNGPL, a performance guarantee must be provided by the bidder, based on the book value of the UGLD meters which is approximately 0.5 million per meter as per book value. Bidder will be responsible for safety of equipment and security will be confiscated in case of any damage/loss to UGLD meters refundable on successful completion of work.
 - 1.3. Bidder will have to submit option-I or option-II rates along with their expression of interest. In case of option-II, detail of rent rates of 01 UGLD meter can be obtained from SNGPL Head Office, prior to submission of their EOI.
 - 1.4. In case of option-II, if any fault comes during the survey, bidder will bear the cost of repair claimed by the company.
2. **Plungers (Metallic):** Required for the creation of surface bar holes during the survey.
3. **Measuring Wheels:** Used to measure the exact length of the surveyed pipeline, ensuring accurate reporting.
4. **GPS Equipment:** For recording the exact coordinates of detected leaks.

All equipment must be **calibrated, maintained, and certified** for accuracy and safety. Regular checks and maintenance of these devices will be conducted by the bidder to ensure their continuous

and effective performance. Bidder must submit all the requisite calibration certificates of the equipment along with the bid document.

2.4 Survey Execution & Work Norms

The survey will be executed in strict compliance with SNGPL's technical standards, operational guidelines, and safety procedures. Specific tasks to be carried out include:

1. **Leak Detection:** The surveyor and LDI will mark and report all detected leakages at leak points, providing the exact GPS coordinates, photographic evidence, and detailed descriptions of each underground leak.
2. **Daily, Weekly, and Monthly Progress Reporting:** The bidder will provide regular progress reports, both in digital and hard copy formats, outlining the daily, weekly, and monthly activities and accomplishments. These reports will be submitted to the designated SNGPL executives in corrosion control department of Lahore region for review.
3. **Corrosion Control Manual Compliance:** The survey will be carried out in accordance with SNGPL's Corrosion Control Manual, ensuring that all necessary procedures are followed to maintain the integrity of the pipelines. The staff of successful bidders will be provided with specified training regarding corrosion control manual, so that compliance to corrosion control manual is accomplished.
4. **Verification & Quality Control:** SNGPL will conduct random checks to verify the accuracy and quality of the survey work. This may include field inspections, reviewing reports, and verifying GPS coordinates.

Survey execution will be carried out **TBS-wise** ensuring systematic coverage of all pipeline segments. The bidder must provide daily updates, including the identification of any leakage points and marking them on **DLMs**.

3. PROJECT DURATION & TARGETS

The total duration of the contract is **12 months**, commencing from the start date. The scope of work requires the surveying of the entire **20,358 km pipeline network** in Lahore (east/west).

1. **Monthly Target:** The bidder is expected to meet a monthly survey target of approximately **1,000 km** of pipeline.
2. **Daily Target:** Each team must survey an average of **3.7 km per day** to meet the monthly target.
3. **Deployment Plan:** The bidder must submit a deployment plan indicating the number of teams allocated to each region of Lahore to meet the monthly targets.
4. **Resource Details:** Bidder must submit resource details including vehicle details, valid driving license of drivers, DAE diplomas of surveyors and TTC certificates of any equivalent qualification of LDI along with their bids. Bidder must also submit calibration certificates of all equipment's that will be used by the teams at site.
5. The progress of the surveys will be monitored on a daily basis, with SNGPL tracking the completion of the survey against the established targets. Any deviations from the agreed targets must be reported immediately, and corrective actions should be implemented by the bidder to

ensure the timely completion of the project. Bidder will have to submit daily, weekly and monthly report as per clause 2.4(ii).

4. ADDITIONAL REQUIREMENTS

4.1 Safety Standards

SNGPL places a strong emphasis on the safety of all personnel involved in the survey process. The bidder must ensure that all survey teams are trained in health and safety protocols. Additionally, the bidder must supply necessary personal protective equipment (PPE) including but not limited to : Helmets, gloves and necessary safety gear.

4.2 Documentation and Compliance

The bidder must maintain accurate and up-to-date records of all survey work conducted. These records should include:

1. **Daily Survey Logs:** Detailed logs outlining on DLMS, the specific pipeline sections surveyed, including GPS coordinates and the number of kilometers covered.
2. **Leakage Reports:** Detailed descriptions of detected leaks, along with photographic evidence and GPS coordinates.
3. **Equipment Calibration Records:** Documentation proving that all equipment has been calibrated and maintained in accordance with SNGPL's requirements.

These records should be readily available for inspection by SNGPL at any time during the contract period.

5. BID SUBMISSION & EVALUATION

Interested bidders are invited to submit their bids, which will be evaluated based on the following criteria:

1. **Experience and Expertise:** The bidder's experience in conducting similar UGLD surveys, including references and past project details.
2. **Technical Capabilities:** Availability of qualified personnel, equipment, and vehicles to meet the survey requirements.
3. **Compliance with SNGPL Standards:** The ability to adhere to SNGPL's technical, safety, and reporting standards.
4. **Cost:** A competitive cost proposal that includes all necessary expenses for labor, equipment, logistics, and management.

The bidder must ensure that the bid includes all necessary documentation, including proof of insurance, certifications, and compliance with regulatory requirements.