

TANZANIA PETROLEUM DEVELOPMENT CORPORATION



TENDER NO. PA/031/2018-2019/C/32

FOR

CONSULTANCY SERVICES FOR UNDERTAKING DETAILED ENGINEERING DESIGN AND SUPERVISION OF COMPRESSED NATURAL GAS (CNG) PROJECT DAR ES SALAAM

Expression of Interest

Date: 24th September 2018

1. This Invitation for Tenders follows the General Procurement Notice for this Tender which appeared in the PPRA, Tanzania Procurement Journal, Issue No. 12206 dated 21st June 2018.
2. The Tanzania Petroleum Development Corporation (TPDC) has set aside funds for its operation during the financial year 2018/2019. It is intended that part of the proceeds of the fund will be used to cover eligible payment under the contract for **consultancy services for undertaking detailed engineering design (DED) and Supervision of construction of compressed natural gas (CNG) system in Dar Es Salaam.**
3. The Tanzania Petroleum Development Corporation (TPDC) now invites eligible consulting firms to indicate their interest in providing the services which include but not limited to the following tasks:

A. Consultancy service for undertaking Design works

- i) Carry out analysis and survey to identify the most feasible site for constructing a Mother CNG Station along the existing Ubungo - Mikocheni pipeline route or along any appropriate location from the available NNGI take-off points within Dar Es Salaam. Consideration should be given to a location that will lead to the ease access of vehicles/ CNG trucks entering the station as well as minimizing the construction and installation costs, time and with minimal Environmental Impact;
- ii) Prepare and submit a report of the identified site for CNG station;
- iii) Assist the Client during site acquisition negotiations with land Owners or relevant Authorities for CNG Station construction;

- iv) Obtain all necessary permits for implementation of this project from different Authorities such as local Government, EWURA permits, NEMC, DAWASA, etc.;
- v) Carry out ESIA study for the proposed CNG Mother and daughter stations and submitting the ESIA report to the Client as well as NEMC certificate;
- vi) Prepare inception report covering Methodologies to be used for undertaking this assignment, various CNG technologies that can be opted for this project, cost benefit analysis for each option, time schedule for undertaking this assignment, Standards to be used for implementing CNG project and advise the client accordingly;
- vii) Establish risks Assessment in the overall project and provide mitigation measures to each of the identified risks;
- viii) Prepare Environmental Management Scheme as well as Safety Procedures to be followed during construction and operation of the CNG project;
- ix) Prepare time schedule to be used for manufacturing, procurement construction and installation of one mother CNG stations, CNG virtual pipeline as well as 3 daughters CNG stations based on the requirement/demand to be provided by the client and advice the client accordingly;
- x) Carryout design of the required CNG system based on the current demand of the existing customers as well as in consideration of future demand and advise the client accordingly. The targeted customers to be supplied with this system includes Lake Cement in Kigamboni, Watercom in kigamboni, Ferry Market in Kivukoni, Muhimbili Hospital in Upanga, Kirua Steel in Kibaha, UDART and other customers such as UBER, IPP Energy, Fuel stations owners such as Oilcom, Camel etc. that will require CNG for vehicles usage;
- xi) Carry out Detailed Engineering Design of the overall CNG system based on the Acceptable International Standards such as ISO, BS, IGEM, API, ASME or any other equivalent international codes and standards; The designed mother CNG station system should also have a provision of at least one (1) CNG-Vehicle refueling system;
- xii) Carry out Detailed Engineering Design of the proposed daughter CNG Stations (decompression skids, delivery system, storage and metering system) at the pre-selected end customers based on the Acceptable International Codes and Standards;
- xiii) Carry out Engineering Design of the required virtual CNG pipeline system to meet the demand of the pre-selected end customers based on the Acceptable International Codes and Standards; Establish number of movement of the CNG virtual pipeline per each pre -selected customer to meet their demand based on the distances from the Mother CNG station and in consideration of the road traffic and turn down;

- xiv) Prepare Bill of Quantity (BOQ) for each CNG system which include BOQ for each component for the CNG mother stations, BOQ for CNG virtual pipeline, and the BOQ for each component of the daughter stations as well as the BOQ for refueling station and advise the client accordingly, There should not be any lump sum amount;
- xv) Prepare list of material specification for each component of the CNG system and if there is alternative materials prepare costs benefit analysis for each option and advise the client accordingly;
- xvi) Assist client in preparation of tender documents for procurement of a contractor who shall undertake construction works of CNG project in Dar Es Salaam.

B. Consultancy service for supervision of construction and installation works

- i) Review work plan proposed by the contractor and advise the client accordingly;
- ii) Manage supervision on behalf of the client for procurement of materials, construction works and commissioning of CNG system to be conducted by the contractor;
- iii) Review contractor's method statements and material orders;
- iv) Review contractor's document submission and provide specialist technical advice;
- v) Review contractor's quality assurance and quality control procedures;
- vi) Monitor construction quality, work progress, safety and costs on behalf of the client;
- vii) Monitor equipment installation, testing and commissioning of the overall system;
- viii) Issue variations and day work orders (subject to agreed cost limit and employer's agreement) on behalf of client;
- ix) Review and Issue payment certificates as per milestone achieved by the contractor;
- x) Hold regular site meetings with the contractor and present daily, weekly and monthly progress reports to the client during contract execution period;
- xi) Hold regular progress meetings with the client;
- xii) Attend to witness Factory Assessment Test (FAT) with the client, for all major equipment such as Compression system and its accessories, Pressure Regulating System and metering facilities, CNG virtual pipeline

(CNG Tube skids) other equipment/materials to be procured by the contractor. All these facilities will also be inspected by the recognized third Party inspector at the costs of the contractor during manufacturing;

- xiii) Review and approve the As Built Drawings as well as the final project completion report submitted by the Contractor to the client;
- xiv) Review the Operation and Maintenance Manuals submitted by the contractor to the client;
- xv) Review and manage the training program to TPDC and GASCO employees proposed by the contractor on the Operation and Maintenance of the infrastructure.

4. Key Personnel

In order to execute his obligations the Consultant shall provide qualified key staff for the assignment and shall prepare a work program and a corresponding manning schedule, showing the timing of activities and the corresponding staff input required for execution of the consultant services, DED and projects supervision works. The Consultant shall employ only such key staff whose CV's have been approved by the Employer. In addition to the expert personnel, the Consultant shall determine support staff to assist with on-site supervision of the works. The minimum requirements of these key staff are as indicated below:

i) Team Leader

The Team Leader must be a professional registered engineer with a degree in civil engineering/gas engineering/petroleum engineering/mechanical engineering/ chemical engineering or equivalent qualification. He/She must have at least 10 years post-graduation experience in gas pipeline design and construction. He/She must have been a team leader on at least three (3) gas construction projects in the past 7 years. He/She must also have participated in the design of at least three (3) projects of similar nature and magnitude during his/her career. Fluency in both written and spoken English is necessary.

ii) Senior Gas Engineer

The Gas Transmission Engineer must be a professional registered engineer with a degree in gas engineering or equivalent qualification. He/She must have at least 7 years post-graduation experience in natural gas distribution systems design and construction. He/She must have been a Gas Engineer on at least two (2) gas distribution systems designs and construction projects in the past 7 years.

iii) Gas Network Engineer

Engineer must have a degree in gas engineering or equivalent qualification. He must have at least 5 years post-graduation experience in the field of gas network design. He must have served as a Gas Network Engineer in at least two (2) gas distribution systems designs and construction projects in the past 5 years.

iv) Senior Surveyor

The Senior Surveyor must be a professional with minimum of a degree in Land Surveying. He must have at least 7 years cumulative experience in pipeline or similar linear project design and construction. He/She must have been a Surveyor for two (2) gas distribution systems designs and construction projects in the past 7 years.

v) Health, Security, Safety and Environmental (HSSE) Manager

HSSE manager must be a professional registered mechanical engineer or process engineer or electrical engineer or equivalent qualification with degree or masters in safety related programs. He/she must have at least 10 years post graduate. Experience of working as HSSE manager in projects related to gas distribution systems designs and construction projects. He/she must have been working as HSSE manager in the construction of gas distribution systems designs and construction projects in the past 10 years.

vi) Senior Mechanical Engineer

The Senior Mechanical Engineer must be a professional registered engineer with minimum of a degree in Mechanical Engineering. He must have at least 7 years cumulative experience in gas distribution systems designs and construction projects or similar linear project design and construction. He/She must have been a Mechanical Engineer on at least two (2) gas distribution systems designs and construction projects in the past 7 years.

vii) Senior Civil Engineer

The Senior Civil Engineer must be a professional registered engineer with a minimum of a degree in Civil Engineering. He/She must have been a Civil Engineer on at least two (2) natural gas pipeline construction projects in the past 7 years.

viii) CNG Expert

The CNG Expert must be a professional with minimum of a degree in Petroleum/Gas Engineering. He must have at least 7 years cumulative experience in natural gas pipeline project design and construction of CNG. He/She must have been a Petroleum Engineer on at least two (2) CNG projects in the past 7 years. He/She must also have participated in the design of at least 2 projects of similar nature and magnitude during his/her career.

ix) Safety Engineer

Safety Engineer should have at least the following qualifications: Engineering Graduate in Metallurgical/Mechanical/Process and Chemical Engineering; possess a QAIIRCA Registered Auditor Certificate; over 5 years' experience in Quality Systems or Industrial HSE Management within Oil and Gas related industries; construction/Mechanical Hydraulic; Pressure Vessel activities etc.

x) Other Staff

In addition to the expert personnel designated above, the Consultant shall determine the support and back-up staff deemed necessary to assist with on-site supervision of the works.

5. Language

The Consultant together with all key personnel shall be fluent in both written and spoken English and all documentation and reports for this work shall be in English.

6. OBLIGATION OF THE CLIENT

The consultant will be provided with the following facilities:-

- i) Information on estimates of gas throughput for the pipeline and technical parameters such as gas properties, off-take pressures and others;
- ii) Assistance to the Consultant to access information from other Ministries and Government institutions; and
- iii) Access to relevant information to the extent of its availability.
- iv) The client will provide technical and qualified personnel to work with the consultant on earmarking land for CNG and any other support that may be required by the consultant

7. TIMELINE

Timeline for the consultancy service for undertaking design part shall be 8 weeks while for supervision shall be based on the timeline to be established by the contractor.

8. Interested consulting firms must provide information indicating that they are qualified to perform the services by submitting consultant's profile, Registration with relevant bodies such as, but not limited to, Company Registration Certificates, Business License, VAT Certificate, TIN Certificate, Certificate of Incorporation, Tax Clearance certificate, Power of Attorney, Engineering Registration Board, Contractor Registration Board etc.; The firm should indicate experience of undertaking at least two (2) assignment for Consultancy services in CNG projects particularly in Detailed Engineering Designs and Project management and supervision of construction works for natural gas pipelines and CNG systems comprised of Mother and daughter facilities;

Foreign companies may be exempted from local legal registration requirements but should have relevant legal registration of recognized Board from their respective countries;

Consultants are strongly encouraged to associate to enhance their qualifications.

9. A consultant will be selected in accordance with the procedures set out in the Public Procurement Act No. 7 of 2011 and the Public Procurement Regulations, 2013 – Government Notice No. 446 as amended in 2016.

1. Selection will be conducted through the Quality and Cost based selection (QCBS) procedures specified in the Public Procurement Regulations.
2. This is not a request for proposals. After a review of the expression of interest, a shortlist will be prepared, and shortlisted consultants will be invited to submit their proposals through a letter of invitation including specific terms of reference.

3. Interested eligible consultants may obtain further information from the office of the Secretary TPDC Tender Board, Tanzania Petroleum Development Corporation, Benjamin William Mkapa Towers, Tower "A", Azikiwe/Jamhuri Streets, P.O. Box 2774, Dar-es-Salaam, Room number 101 on the 10th floor between 9:00 and 15:00 hours from Monday to Friday inclusive except on Public Holidays.
4. Expressions of Interest (EoI) must be delivered to the address below, in a sealed envelope by hand or courier at room number 401 on the 4th floor at or before 11:00 hours on Tuesday 16th October 2018 The outer cover shall be clearly marked; Tender Number **TENDER NO. PA/031/2018-2019/C/32 CONSULTANCY SERVICES FOR UNDERTAKING DETAILED ENGINEERING DESIGN AND SUPERVISION OF CONSTRUCTION OF COMPRESSED NATURAL GAS (CNG) PROJECT IN DAR ES SALAAM". NOT TO BE OPENED BEFORE 11:00 HOURS ON TUESDAY 16TH OCTOBER 2018.**
5. Deadline for submission of Expression of Interest shall be on Tuesday 16th October 2018 at 11:00 hour's local time. Expression of Interest will be opened promptly thereafter and in the presence of Tenderers representatives who choose to attend opening ceremony at Benjamin William Mkapa Pension Towers, Tower "A", Azikiwe/Jamhuri Streets at TPDC Board Room number 106 on the 10th floor.
6. Late, Portion of Electronic, not received, not opened and not read out in public at the opening ceremony shall not be accepted for evaluation irrespective of the circumstances.

**Managing Director,
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