



Encana Corporation Expression of Interest (EOI)

Supply of Permanent Mechanical Isolation Plugs & Services

BIDS Category: 0257, 0840, 0924

Reference: EOI DC23

Issue Date: October 9, 2018

Closing Date: October 23, 2018

GENERAL

Encana Corporation (Encana) is the owner and operator of the Deep Panuke natural gas project in Nova Scotia's offshore. The project includes facilities required to produce natural gas from the Deep Panuke field, located approximately 175 kilometers offshore Nova Scotia. Natural gas from the Deep Panuke Development is processed offshore and transported, via subsea pipeline, to Goldboro, Nova Scotia for further transport to market via the Maritimes & Northeast Pipeline.

The Development includes the following major infrastructure (the "facilities"):

- Production Field Centre (PFC);
- Five (5) - subsea wells, trees, and protection structures;
- Infield flowlines and umbilicals;
- Gas export pipeline and onshore metering facility;

The Deep Panuke reservoir fluids contain H₂S and CO₂ which are removed from the fluid stream during processing on the PFC and disposed of into a dedicated subsea acid gas injection well. The sales ready product is exported from the PFC via an export pipeline.

Encana's strategy towards the decommissioning of the Deep Panuke facilities will include cost efficient solutions that minimize risk to personnel, provide the least impact on the environment, and utilize proven technology. It is currently Encana's plan that the suspension and decommissioning of the Deep Panuke Development will generally be completed as follows:

- Suspension of Production Operations;
- Decommissioning of the subsea and onshore facilities and PFC removal; and
- Well Abandonment and Final Field Survey.

Respondents are advised that the Work carried out on Deep Panuke shall comply fully with Canada-Nova Scotia Offshore Petroleum Board Regulations and all regulatory requirements. Respondents shall also be required to comply with the Canada Nova Scotia Offshore Petroleum Resources Accord Implementation Act including but not limited to the Benefits requirements as set out in Section 45.

Encana is committed to providing opportunities for Nova Scotian and Canadian companies through employment, procurement and contracting on an internationally competitive basis, with full and fair opportunity for Nova Scotians and Canadians where competitive on a best value basis, and first consideration to Nova Scotians. Pre-qualified companies will be required to complete a Canada-Nova Scotia Benefits Questionnaire and demonstrate their commitment to and compliance with Encana's requirements regarding Canada-Nova Scotia Benefits, during the tender process.

Encana is a leading North American energy producer that is focused on growing its strong portfolio of diverse resource plays producing natural gas, oil and natural gas liquids. By partnering with employees, community organizations and other businesses, Encana contributes to the strength and sustainability of the communities where it operates. Encana common shares trade on the Toronto and New York stock exchanges under the symbol ECA. Further information on Encana Corporation is available on the



company's website, www.encana.com. Further information on Deep Panuke is available at www.encana.com/deeppanuke

SCOPE OF WORK

The Deep Panuke abandonment project includes four (4) subsea sour gas production wells and one (1) subsea acid gas injection (AGI) well, across five (5) subsea well locations. The provider of the Mechanical Isolation Plug services will be capable of fully designing, planning/executing and evaluating the Permanent Mechanical plugging aspects of the wellbore abandonment. The work will be conducted from the Harsh Environment Jack-Up, Mobile Offshore Drilling Unit (MODU) Noble Regina Allen (the "rig") which is capable of working year-round in 45 meters of water at the Deep Panuke field location offshore Nova Scotia, Canada. The rig is currently working offshore Nova Scotia for another operator and is expected to be delivered to Encana in Q3 2019. The wellbores will be accessed with a high-pressure riser system attached to the horizontal subsea trees and tied back to a conventional surface BOP stack on the MODU.

Encana is seeking qualified companies interested in providing the following services:

- 1) Permanent Mechanical Isolation plugs suitable for the bottom hole well environment and having the capability to be set at any point in the 4 ½", 12.6#, SM2535-110 production tubing. Demonstratable success with Q1 quality planning and V0 qualification per ISO 14310 standard is required.
- 2) Handling and running tool for deployment of the Permanent Mechanical Isolation Plugs.

The Permanent Mechanical Isolation plugs will meet or exceed the metallurgical and sealing materials specification for the downhole production equipment and tubing. The deployment equipment must be compliant with NACE-MR-0175 for sour service with a minimum rated working pressure of 35 MPa. In addition, all equipment must be certified to work offshore Eastern Canada.

SCHEDULE FOR THE WORK

Encana is issuing this Expression of Interest to identify the availability of suitable companies, equipment and services to conduct the Work in the offshore Nova Scotia location during the Q3 of 2019 to Q2 of 2020 timeframe. The preferred window for carrying out the Work is between the months of May and September however it is dependent on rig availability. Any decisions on specific timing will be made at a later date.

The pre-planning and engineering effort is expected to take up to one (1) year prior to commencement of field operations. The total time for abandonment operations of all five wells is expected to be approximately 120 days.

COMPANY will require Permanent Mechanical Isolation plugs and Tools to be on location in Halifax at least one month prior to the start-up of rig operations. The rig operations are expected to start in late-2019 and therefore the equipment will need to be in Halifax in Q3 2019. Once the equipment is in the field, periodic NDT may be required if the need arises. However, a visual inspection will be conducted at the end of operations for each well. COMPANY will expect the service provider to have an inspection schedule supplied with their proposal.

Responses to this Expression of Interest must contain the following information:

- A: Confirmation of Respondent's North Atlantic harsh weather experience including references to previous projects similar to the Work. Information provided by Respondent should include but not be limited to the following:
- Project management, and engineering experience;
 - Integrated wellbore project execution experience; and
 - Available proven technologies and emerging technology potential.
- B: Confirmation of equipment and personnel availability (identifying the time frame that the equipment would be available for the Work. Respondent should include the proposed structure of the services



package to successfully accomplish the Work indicating all subcontracts and any preferred vendors.

- C: Details of the make-up of Respondent's early planning team complete with a detailed description of the core competencies of any nominated personnel. This should include details of Respondent's plan to integrate into Encana's Project team in Halifax, Nova Scotia.
- D: A duly completed Pre-Qualification Questionnaire.

GENERAL REQUIREMENTS

EOI respondents are required to have an implemented EH&S Management System and a registered Quality Management System (complete with a current certificate issued by a recognized third party that certifies that the Quality Management System meets the requirements of the ISO 9001 or equivalent). Respondents are also notified that the Work carried out on Deep Panuke shall comply fully with Canada-Nova Scotia Offshore Petroleum Board Regulations and all regulatory requirements.

Respondents are requested to provide a brief Company profile, contact details, managers and key personnel and a summary of related experience on past projects which are similar in scope including details of Respondent's Nova Scotia and Canadian capabilities.

Interested firms are requested to demonstrate their capabilities and experience via a formal response to this EOI and the **Prequalification Questionnaire**, which can be obtained from the email address provided below.

Encana will select qualified bidders using the respondents to this EOI as a guide. Any eventual list of Bidders will be posted on the Encana website website and other industry websites such as the Maritimes Energy Association bulletin.

Encana is under no obligation to proceed with a Request for Proposal as a result of this Expressions of Interest. Only those respondents deemed acceptable by Encana will be invited to participate in the event Proposals are solicited. Encana also reserves the right to award more than a single contract resulting from a Request for Proposal.

Expressions of Interest must be received on or before **October 23, 2018, 2:00 PM Atlantic time**.

All inquiries and Expression of Interest must be clearly marked with the EOI reference number and should be directed to:

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Deep Panuke Project
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