



Deep Panuke

Supplier and Infrastructure Assessment 2009 Update (March 2010)

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1 INTRODUCTION

Condition 11 of Canada-Nova Scotia Benefits Plan Decision Report and Development Plan Decision Report (the Decision Report) as issued by the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) on October 3, 2007 requires Encana to provide a Supplier and Infrastructure Assessment on an annual basis during the development phase of the Deep Panuke Offshore Gas Project (the Project).

The initial submission in response to this Condition 11 requirement (document number DM-EN-RP-RE-011) was submitted to the CNSOPB in March 2009 and is posted on the CNSOPB website (Original Assessment).

This document provides an update to the Original Assessment. In accordance with the requirement in the Decision Report Condition 11, Encana will submit a further update to the CNSOPB in March 2011.

2 PROJECT BACKGROUND AND OVERVIEW

2.1 Development Phase Activities

The Project is broken into six Elements for the Development Phase and can be summarized as follows:

Element	Overview
0 – Project Management	Engineering and project management based in Halifax.
1 – Drilling and Completions	Drill and complete one subsea disposal well. Re-enter and re-complete four existing wells as subsea production wells. Install subsea trees.
2 - Subsea Flowlines, Umbilicals and Structures	Interfield Flowlines and umbilicals to connect wells to Production Field Centre (PFC).
3 - Export Pipeline	Subsea export flowline (22-inch) from PFC to Goldboro (173 km). Onshore pipeline (3km) and associated facilities in Goldboro with tie in to Maritimes and Northeast Pipeline.
4 - Production Field Centre (PFC)	Jack-up hull with topsides and utilities to process and export produced gas.
5 - Ready for Operations	Shorebase operations and vessel services for production phase. Recruitment and training of operations personnel. Preparation of procedures and other documentation.

2.2 Major Contractors

Single Buoy Moorings Inc. (SBM) was awarded a contract for the design, construction, transportation, installation, commissioning, start-up, and lease of the PFC as well as a contract for the management of project operations during the production phase of the Project.

Acergy was awarded a contract for engineering, procurement, installation and commissioning of the infield flowlines and umbilicals.

Allseas Canada Limited (Allseas) was awarded a contract for engineering, procurement, installation and commissioning of the export pipeline.

Other key contractors are identified by project element in Section 3.

2.3 Tendering in 2009

The principles and processes for procurement for the Deep Panuke Project are described in Section 4 of this report. The process involves:

- posting of expressions of interest (EOI) to maximize opportunities for local and regional suppliers and workers
- assessing EOI responses and other candidates to identify qualified bidders
- issuing formal request for proposal (RFP) packages to qualified bidders

Tender activities by Encana and its major contractors, including participation by Nova Scotian companies, is summarized in the table below for 2009, and since the project sanction in 2007.

	Expressions of Interest (EOI)			RFP Packages		
	Number Posted	Nova Scotia Companies		Number Issued	Nova Scotia Companies	
		Responded	Accepted		Participated	Successful
2009	98	175	134	106	150	33
Cumulative from 2007	212	398	306	169	293	76

3 PROJECT UPDATE

3.1 Element 0 - Project Management and Engineering

The project management team has grown from 77 individuals to more than 100 people in the Halifax office. More than 80% of such individuals are Nova Scotian residents. Ten Nova Scotian professionals, with engineering, commerce and technical backgrounds, who are early in their careers have been engaged pursuant to the Developing Skills Initiative program.

In addition to the project management team and the support required for the team, contracts have been awarded to companies and businesses with Nova Scotian and/or Canadian offices for services such as customs brokerage and consulting, certification, freight forwarding, third party inspection, integrity management, quality management, and marine warranty survey services. Some of the companies contracted by Encana to provide these services include:

- Spectrol Group
- Germanischer Lloyd
- Lloyd's Register
- EM&I Stantec
- London Offshore Consultants
- PF Collins

3.2 Element 1 - Drilling and Completions

As discussed in the March 2009 Supplier and Infrastructure Assessment, there are a number of drilling services, logistics, and support companies that have maintained a presence in Nova Scotia and Newfoundland and Labrador. The following contracts were awarded to companies with Nova Scotian and/or Canadian offices in 2009:

Secunda Marine	- supply vessel
Maersk	- supply vessel
Offshore Logistics	- shorebase facilities
Newalta	- waste management
Imperial Oil	- marine gas oil
Sabre Safety Canada	- supplied air systems and services
FI Canada	- tubular running and bucking services
AMEC Earth & Environmental	- meteorological and oceanographic services
Fugro Jacques Geosurveys Inc.	- rig positioning
PRAXES Emergency Specialists Inc	- medical services
Oceaneering Canada Limited	- ROV services

The drilling and completions program was delayed from its original planned start of mid-2009. Prior to the Deep Panuke program the Rowan Gorilla III (RGIII) drilling rig was engaged by another local operator in a program that concluded in October 2009. Rowan Companies then undertook work on the rig in Halifax Harbour to prepare it for the Encana drilling program. Encana then undertook its own harbour program in November 2009 to install equipment and make related modifications for drilling at Deep Panuke. The rig was eventually towed from Halifax Harbour in the last week of 2009.

Although the bulk of drilling and completions related spending will be pushed to 2010 as a result of the later than anticipated start of the drilling program, local expenditures were made by both Rowan and Encana pursuant to the fabrication required for the harbour programs in October and November 2009. Contracts were awarded to the following local companies to support this work:

Allswater Marine	- marine engineering and project management
Marener Industries	- fabrication, installation, seafastening
Hydraulic Systems /Ozark Services	- fabrication and hydraulic and electrical support
Safeway and Aluma	- scaffolding
Dominion Diving	- bottom survey
Sagittarius	- security

3.3 Element 2 - Subsea Flowlines, Umbilicals and Structures

Five wellhead protection structures supplied by Cherubini Metal Works were installed by Aker Marine Contractors with the vessel Boa C in July 2009.

Vetco Gray subsea wellheads and trees were received throughout the fall of 2009 and were loaded on the RGIII during the harbour program.

Acergy Canada provided a supplier briefing in April 2009, and posted several EOI's via the BIDS portal (www.bids.ca) throughout the year in preparation for delivery and installation of subsea flowlines, umbilicals and controls.

Acergy also has indicated that it will use ports at Sheet Harbour, NS and the Strait of Canso, NS for vessel mobilization during the subsea program.

To support its scope of work, Acergy have awarded the following contracts to the following companies with offices in Nova Scotia:

Aecon Fabco	- SSIV structure fabrication
Oceans Limited	- Weather downtime analysis
Mathers Logistics Limited	- Marine logistics services

3.4 Element 3 - Export Pipeline

Allseas Canada Limited installed the 22-inch 173 km export pipeline from Goldboro to the Deep Panuke field using the vessels *Lorelay* (pipelay), *Manta* (survey), and *Calamity Jane* (trenching). Three pipehaul vessels were used to shuttle sections of pipe from the storage yard at Sheet Harbour, NS to the field location.

Shore approach preparatory work near Goldboro was completed in 2009 by Allseas' subcontractor McNally Tideway, and following pipe pull to shore, McNally Tideway completed site restoration.

Smaller subcontracts were awarded to local suppliers participating in the program, including:

- Martin Marietta	-quarrying
- J & T Van Zutphen Construction	-civil construction
- Partners Construction	-trucking

The onshore section of the pipeline and related facilities were designed by Atlantic Gas Engineers, a joint venture between CBCL Limited Consulting Engineers of Halifax and Cimarron Engineering Limited of Alberta.

Contracts were awarded to the following companies relative to installation of the onshore pipeline:

Robert B. Somerville	– pipeline & facilities construction and installation
R. MacLean Forestry	– right-of-way clearing

3.5 Element 4 - Production Field Centre (PFC)

Major components for the PFC include the following:

- hull
- topsides
- accommodations
- legs
- riser caisson

- flare boom

As was noted in the March 2009 Supplier and Infrastructure Assessment , efforts by SBM to identify Canadian bidders for the hull and topsides work were unsuccessful and this work is being executed in Abu Dhabi, United Arab Emirates (UAE).

The Original Assessment also noted that efforts by SBM to award the accommodations work to Canadian bidders were unsuccessful and that this work also is being executed in Abu Dhabi. SBM has sourced the legs and riser caisson for the PFC from suppliers in Europe.

The remote execution of major PFC components has made it difficult for local and other Canadian vendors to compete on a best value basis to provide goods and services for the construction of the hull and topsides of the PFC. Nonetheless, local suppliers and workers have been successful relative to smaller components including the following which were identified in the Original Assessment:

- Flare boom - Aecon Fabco
- Communications - Rutter

3.6 Element 5 - Ready for Operations (RFO)

In 2009, Encana commenced an effort with ExxonMobil to undertake a competitive tender process on a joint basis for supply base services that will extend into the production operations phase of the Deep Panuke Project.

Preparations for the operations phase of the Project are ongoing. EnCana and SBM continue to post EOI's and to issue RFP's to address long term operations as well as operational support requirements for the development phase of the Project. Local capability to provide such support is well developed, and a high level of local participation is expected. Much of this work will be deferred until delivery of the PFC in 2011.

4 PROCUREMENT AND PROJECT OPPORTUNITIES

4.1 Principles and Processes

Encana and its contractors satisfy requirements for the acquisition of goods and services in accordance with the following as described in the Canada-Nova Scotia Benefits Plan for the Deep Panuke Project:

- public notification of expressions of interest (EOI) and public notification of lists of bidders and awarded;
- public information sessions and open houses to ensure public awareness of Project requirements and timing;
- formal, competitive request for proposal (RFP) packages consisting of contract terms and conditions, guidance to bidders, and Tender Forms intended to promote Canada-Nova Scotia Benefits and opportunities for disadvantaged individuals or groups and to facilitate evaluations;

- sealed bids, pre-determined evaluation criteria, and formal clarifications;
- multi-disciplinary input to ensure acquisitions are made on the basis of total best overall value where best value is a blend of total cost, quality, technical suitability, reliability, delivery and assurance of supply, while at the same time meeting or exceeding safety and environmental standards;
- de-briefs to unsuccessful bidders on an as-requested basis to facilitate opportunities for improvement.

Respondents to EOI's are evaluated based on factors such as:

- formal environment, health, and safety (EHS) management systems;
- compliance with quality requirements, such as a formal quality management system (QMS) that meets the requirements of ISO 9001:2000;
- corporate status, financial capability, insurance cover, and ability to post financial securities;
- technical suitability of proposed equipment, machinery, tools, goods, processes, and programs;
- organization, experience, availability to do the work, proposed subcontractors, and qualifications of proposed personnel.

As noted in the Original Assessment, local suppliers have demonstrated a high level of familiarity about the qualifications for participation and have a full understanding of how to participate in the bidding for procurement opportunities.

4.2 Response to RFP's

The request for proposal (RFP) package necessary for participation in the Deep Panuke Project can be an extensive package. The Original Assessment suggested that:

- preparation of responses can require significant effort at significant cost;
- some bidders choose not to submit proposals after receiving the RFP package because of the complexity of the requirements.

Encana has indicated a willingness to work with bidders through providing de-briefs or additional guidance with respect to qualification requirements where requested.

4.3 Outcomes

The Original Assessment suggested that:

- some proposals by local companies do not meet the requirements of the RFP or do not provide required information in a satisfactory manner;
- other reasons for unsuccessful proposals from local companies include technical or operational shortcomings, lack of experience, failure to provide evidence of financial capability, inadequate EHS and QMS systems, lack of qualified personnel, equipment and facilities, inability to comply with contractual terms, inability to meet insurance requirements, and failure to be competitive on a best value basis.

These issues were also relevant to 2009 tendering. Except as noted in Section 4.2, it is unlikely accommodation can be made with respect to the factors listed in Section 4.1. It is anticipated that for the remaining procurement packages, the listed reasons for unsuccessful proposals from local bidders should be less relevant to the goods and services that will be required for the operations phase of the project.

5 SUPPLIER CAPABILITY – CONCLUSIONS

The Original Assessment suggested that:

- there is a lack of capacity within the province for heavy construction for large offshore production facilities because of the intermittent nature of investment by oil and gas companies in field development offshore Nova Scotia;
- it is not possible to execute a large-scale offshore development based on the capacities of local shipyards and fabrication facilities; and,
- service and supply capability that had developed in response to exploration and drilling activity had diminished in response to a recent lack of activity.

No new developments in these areas can be reported at this time.

Despite these challenges, the local supply community has been successful in a number of areas, as seen in the statistics provided in Section 2.3.

The Project has benefited from local supplier capability in areas of marine and logistical support, drilling services, and other support services that has developed pursuant to previous offshore oil and gas projects on the East Coast of Canada.

The Halifax-based Project Management Team is comprised of a majority of Nova Scotians, most of whom have worked on other projects in Nova Scotia and/or Newfoundland and Labrador.

Encana believes that it is in the best interest of offshore operators to have a well developed and competitive local supply community. Encana and its contractors will continue to consult with and communicate opportunities to the supply community to ensure that Nova Scotian and Canadian suppliers provide goods and services to the Deep Panuke Project into the operations phase and throughout the life of the field to the extent possible.