



Invitation for Expressions of Interest (EOI)

Play Fairway Analysis

***As part of the Offshore Petroleum Play Fairway Analysis
and Geoscience Data Package Program***

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Offshore Energy Research Associations
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1. Introduction and Background

The Offshore Energy Technical Research (OETR) Association is a not-for-profit organization dedicated to fostering research to enhance petroleum exploration and development of Nova Scotia's offshore. OETR was incorporated in March 2006, with grants from the Nova Scotia Department of Energy.

Further information on the Offshore Energy Research Associations is available at <http://www.offshoreenergyresearch.ca/>

In 2008, the Government of Nova Scotia committed additional funding of approximately \$18 million to the Association to enable it to undertake further research to support offshore energy development. A significant portion of this (in the order of \$15 million) will be used to fund a comprehensive program of geoscience studies, data acquisition and research projects, together with other related initiatives, with the goal of stimulating renewed offshore petroleum exploration activity. This Expression of Interest concerns the technical components of a modern standard Play Fairway Analysis.

2. Program Introduction

In early April 2009, the OETR Association awarded an 18-month contract to RPS Energy. OETR has commissioned RPS Energy to coordinate and manage this industry standard Play Fairway Analysis project for offshore Nova Scotia.

The ultimate goal of this program is to address specific issues that have been identified as reasons for the decline in exploration interest, most notably the lack of a basic geological framework and a publicly available package of geoscience data to complement the framework, and by doing so to help promote further offshore exploration.

3. Scope of Work

OETR is seeking a geoscience contractor to carry out a Play Fairway Analysis of the Nova Scotia Atlantic Margin basins. The chosen contractor will provide the structured play fairway evaluation that will integrate insights from some of the world's leading exploration thinkers and the local petro-technical community in Nova Scotia to develop innovative solutions to the complex problem of better understanding the geology and petroleum potential of offshore Nova Scotia. The integration of international and local experts alongside the contracted geoscience team is critical in solving the geoscience problems on the margin and building a product that can then be used to promote the return of investment.

The geoscience contractor will integrate a number of special projects to form the play fairway model based on sequence and seismic stratigraphy. A number of special projects have been identified that will provide the foundations of the Play Fairway Analysis. These projects were identified based on many meetings and workshops in which some of the world's leading exploration thinkers and local

petro-technical community participated. Most noticeable in this regard was the Plate Reconstruction Workshop (May 11-13, 2009). These special projects include the following:

- Project 1: Plate Tectonics Modeling
- Project 2: Biostratigraphy
- Project 3: Geochemistry / Petroleum Systems Modeling
- Project 4: Seismic database preparation / Synthetics
- Project 5: Reprocessing seismic lines of around 3,300km seismic data
- Project 6: Reprocessing of "bible" lines of around 3,000km seismic data
- Project 7: Seismic Rock Physics Review
- Project 8: Salt Structural Interpretation
- Project 9: Reservoir Quality
- Project 10: Play Fairway Evaluation

Projects 1-9 feed into project 10, the Play Fairway Analysis. RPS Energy is managing projects 1-9 and managing the integration of all 10. In order to conduct the Play Fairway Analysis the geoscience contractor will also be provided with the following:

- A data set consisting of approximately 70,000km of 2-D data and 30,000km² of 3-D data. The data will be cross equalized and phase matched. Synthetics for around 20 wells will also be included.
- The sequence stratigraphic framework will be established through the biostratigraphic analysis of around 20 key wells. These, plus the wells with synthetics will be linked with a broad grid of reprocessed 6,300km 2-D data.

Based on the information in the paragraphs above the geoscience contractor will be asked to undertake the following work:

- Seismic mapping.
- Creation of Gross Depositional Environment (GDE) Maps integrating stratigraphy, seismic structural interpretation.
- Interpretation of GDEs in terms of source, reservoir, seal distributions.
- Integration of the whole range of input projects to create Common Risk Segment (CRS) maps (i.e. adding up projects 1-10).
- Yet-to-Find Analysis (Yet-to-Find Volumes) and Analogue Basin reviews.

The contractor will work with RPS Energy, OETR and the providers of each of the above packages to create the integrated solution. The integration will take place through regular integration meetings. The whole program will be subject to peer reviews from respected external experts.

The work would begin in September 2009, and be completed in September/October 2010.

4. Play Fairway Analysis – Skills Required

- Seismic interpretation for around 10 sequences.
- Seismic facies analysis.
- Structural interpretation.
- GDE Mapping.
- CRS Mapping.
- Yet-to-Find Analysis and Analogue Basin reviews.
- Integrated exploration thinking and expertise.

5. Evaluation Process

OETR is seeking a geoscience contractor to carry out a Play Fairway Analysis of the Nova Scotia Atlantic Margin basins. The application process for this work package will have three phases:

1. Expression of Interest - Submission of a response to the Expression of Interest. This document requests contractors to provide responses to the questions posed in Section 6 and to express interest in undertaking this work. All applicants will be contacted via e-mail on the outcomes of this first phase of the application process.
2. Structured Interview - Applicants who were successful in the first phase will be invited for an interview based on a structured questionnaire. This questionnaire will be provided in advance.
3. Commercial Response - On the basis of the structured interviews in the second phase OETR will ask those applicants who were successful to submit a financial proposal.

6. Expressions of Interest – Questions

Respondents are required to answer to the following five questions:

1. Timing - Are you interested in being considered for the play fairway evaluation? And if so, can your organization meet the timeline by September / October 2010?
2. Resources & Personnel - What size of geoscience team would you allocate to this project? What percentage is this of your total geoscience resource?
3. Disciplines & Experience - List the disciplines that you would have in the team and their approximate years of experience in your team.
4. Software & Hardware - What workstation platform would you use to undertake the work?
5. Experience in the past 5 years - List the basins on which you have undertaken basin scale play fairway evaluations.

Only companies who have relevant Play Fairway Analysis experience will be considered in this procurement process.

If you have questions pertaining to the Expression of Interest please contact Olivier Van Belle, RPS Program Manager at 902-424-1540 or vanbelleo@rpsgroup.com.

7. Structured Interviews

Companies that are short listed after evaluation of the response to Expression of Interest will be contacted via e-mail to set-up a time for a structured interview. The structured interview will evaluate the contractor's competencies against the list in Section 4, and ideally be based on material developed in the course of the basin evaluations listed in the answer to question 5 in Section 6. The interview will be based on a structured questionnaire. This questionnaire will be provided in advance. Each interview will take place over one day.

The interview will be focused around "special project" number 10, the Play Fairway Analysis. During the interview the content of the projects 1-9 in Section 3 will be provided to give a clear understanding of who is doing what at the moment. The main objective of this interview will be to gauge an applicant's skills and capabilities and experience in the following areas:

- Seismic interpretation.
- Seismic facies analysis.
- Structural interpretation.

- Creation of GDE Maps integrating stratigraphy, seismic structural interpretation.
- Interpretation of GDEs in terms of source, reservoir, seal distributions.
- CRS Mapping.
- Yet-to-Find Analysis and Analogue Basin reviews.
- Integrated exploration thinking and expertise.
- Capability to integrate the whole range of input projects to create CRS maps (i.e. adding up projects 1-10).

Companies that were short listed in the last phase of the selection process associated with the tender document titled Program Management – Offshore Petroleum Play Fairway Analysis and Geoscience Data Package Program (October 18, 2008) will be contacted prior to June 15, 2009 to schedule a structured interview. **These companies must also submit a response to the Expression of Interest by June 15, 2009.** Companies who were not short listed in the selection process associated with this tender will be contacted upon evaluation of their response to the Expression of Interest, during the third week of June, 2009.

The OETR evaluation team will sign confidentiality agreements with the contractor as required. The evaluation team will consist of OETR Program Management Committee members and RPS Energy staff. Structured interviews will exclusively be scheduled in the following weeks.

Interviews in Europe	July 6, 2009 to July 10, 2009
Interviews in USA	July 13, 2009 to July 17, 2009

Once the structured interview phase is completed a short list of applicants will be invited to submit a Commercial Response.

8. Expected Time Frame

The expected schedule for the process to select a contractor to provide the services described above is provided as guidance and may be changed at the Association's discretion.

Deadline for submission of response to Expressions of Interest	June 15, 2009 (4:00 p.m. AST)
Evaluation	
Decision on qualified companies	June 19, 2009
Structured Interviews will be scheduled in these two weeks only	July 6, 2009 to July 10, 2009 (in EU) July 13, 2009 to July 17, 2009 (in US)
Evaluation	
Decision on qualified companies	July 21, 2009
Deadline for submission of Commercial Response	July 31, 2009 (4:00 p.m. AST)
Evaluation	
Final selection decision	Mid August, 2009
Commencement date	September 1, 2009
End date	September/October 2010

Deadline for submission of response to Expressions of Interest is June 15, 2009.

Applicants will be contacted via e-mail on the outcomes of this first phase of the application process. Companies that are short listed will be contacted via e-mail to set-up a time for a structured interview. Only those applicants that are invited to submit a Commercial Response will be considered for funding.

9. Commercial Response

Those contractors that are short listed must submit their **Commercial Response** to the Association by no later than **4:00 p.m. (AST), July 31, 2009**. These responses will be evaluated by the OETR Project Management Committee and a formal recommendation on a successful applicant will be made to the OETR Board of Directors. Short listed companies will be provided with the guidelines for submission of the commercial response.

The Commercial Response will require a list of staff and contractors who will work on the project and their associated day rates, along with a quotation to complete the work. A draft contract will also be provided by OETR.

Notwithstanding the deadlines cited above, the Association reserves the right to consider any proposals received after the above-noted deadlines and to modify the deadlines in its sole discretion.

10. Submission

Written responses to this **Expression of Interest** are to be submitted to the Association by courier, facsimile or mail and must be received by no later than **4:00 p.m. (AST), June 15, 2009**. An electronic copy must also be provided and may be submitted separately by e-mail no later than **4:00 p.m. (AST), June 15, 2009**. Contact and mailing information is provided below.

Contact Name: Olivier Van Belle
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11. Guidelines for Submission of Expressions of Interest

Format: Submissions are to be made both electronically and in writing as outlined in Section 10. The document must be submitted in Word document format as follows: single spaced, single sided, font size 12-point, Times New Roman, 1" margins on all sides, and 5 pages maximum.

The information provided on the following items will be measured against the criteria found in Schedule A.

Item	Comment
Title Page	Title of the proposed project Name, Address and Principal Applicant(s) Contact information
Answers to questions 1-5 in Section 6	Companies are required to strictly answer these questions

Schedule A

EVALUATION CRITERIA

Criteria for Assessment of Expression of Interest

The following are mandatory requirements. Expressions of Interest not meeting them will receive no further consideration during the evaluation process:

- All information requested in this Expression of Interest is provided;
- The applicant demonstrates experience with the requirements identified in the Expression of Interest, including the expertise of the participants and;
- The applicant demonstrates relevant knowledge and experience relating to Nova Scotia.