

## **Project Summary OGExplorer (Oil & Gas Explorer) Tool**

### **Introduction**

The overall objectives for ongoing development of a web-based tool, formerly called the Oil and Gas Industry Nodal Analysis (OGINA) tool and now known as OGExplorer (Oil & Gas Explorer) is to allow users the ability to access information about Canada's highly integrated oil, natural gas and oil sands industries in a user-friendly interactive e-learning environment and become familiar with the world leading research and technology development activities that the Government of Canada is undertaking or supporting, to address the energy and environmental challenges associated with producing Canada's bitumen, oil and natural gas resources. The ultimate intent, once the OGExplorer tool has been completed, is to incorporate OGExplorer into the Canadian Federal web pages of Departments engaged in domestic energy or environmental projects in the bitumen, oil and natural gas sectors and also to link OGExplorer to the web pages of international oil and gas related Partnerships, which the government of Canada has joined and with whom the Government of Canada participates in projects internationally. Such a broadly available and accessible web-based platform will benefit Canada by advancing knowledge and information regarding not only the energy and environmental challenges facing Canadian and international producers of bitumen, oil and natural gas, but also the effective science-based solutions being developed in Canada to ensure the long-term environmental, economic and social sustainability of Canadian and global energy production. Development of the OGExplorer web tool is an ongoing and consultative process predicated upon periodic availability of resources.

The primary objectives of this most recent project were to further enhance the usability and content of OGExplorer in the key areas identified in the 2010 user review of the application and to incorporate selected enhanced graphical features, such as a demonstration of a virtual walkthrough of a facility to enable project stakeholders to evaluate the functionality of such a feature and determine if such a feature should be incorporated for all represented facility types. Additionally, modifications to programming and the relational database structure were to be made to OGExplorer to facilitate continued easy access to increasing categories of information.

### **Description of work undertaken to further develop OGExplorer during fiscal year 20012-12:**

#### **Programming**

- Extend XML database
  - add visualization section
  - add icon element for display enhancement
  - add data for these new fields

- Extend OGExplorer interface class
  - develop code to map visualization data to website
  - develop code to map flash icon to currently selected node
  - add search interface code
- Modified Flash diagrams
  - incorporate Visualization access in dropdown
  - pass control to code which builds a floating child window for content, not a new separate web page
- Extended batch build processes to incorporate new database and flash content features

### **Web Interface Enhancements**

- Modified main access to the application to default to Flow Diagrams.
- Left side menu modified to allow access to main data categories directly - Industry Descriptions, Glossary, etc.
- Left side menu format changed.
- The default homepage, which is now a flow diagram, contains the links to the new navigation "look & feel"
- Dropdown links from flow diagrams all bring up a child window which floats over the current main page. This allows the user to remain in the current navigation state.
  - Child windows contains data specific to the dropdown with consistent headers and titles.
- When more information is available on a webpage, the access to the information now uses Google Document Viewer. This viewer has embedded print capability and other useful features. Additionally, this provides a consistent interface regardless of the document type accessed.
  - Generalize handling of document types to allow any document type to be viewed from any viewing category at any node.
- Accessing images is in a separate floating child window.
- Added Visualization access. Currently this accesses a descriptive slideshow for the currently selected industry node.
- Added search capability to site.

### **Code and Data Cleanup**

- General code cleanup as required.
- Inline code documentation as required.
- XML data corrected where issues were identified.

### **Content Enhancement**

- Photographed a gas processing plant to provide walk-through imagery for new flash capabilities.
- Limited review of text and photographic content of the application.

## **Project Summary**

The work undertaken during fiscal year 2011-12 has resulted in several notable enhancements to the OGExplorer web tool. Expansion of the relational database structure has provided for the inclusion of additional information regarding R&D projects and virtual imaging of facilities, all of which has the potential to be easily accessed for any given facility type depicted in the flow diagrams which make up the OGExplorer interface. This will greatly enhance the ability to easily store and access information about government of Canada led or supported activities related to the energy or environmental challenges at specific facility types and will enable the user to visually understand the breadth of energy and environmental research being undertaken in Canada. Additionally, a highly efficient search function has been developed and incorporated into the OGExplorer tool, which allows users to identify a specific area or subject of interest and results in OGExplorer providing a list of interactive links to all data related to the search criteria within the OGExplorer database. Finally, a virtual facility visualization platform has been created with high resolution digital photographs to depict a typical gas processing facility and serves as a demonstration for project stakeholders to determine if this utility should be considered for all facilities depicted in OGExplorer, as a possible component of subsequent development activities.

## **Future Recommendations**

The essential functionality of OGExplorer is now in a mature state of development. Future efforts need to be directed more attention towards grooming the current contents of OGExplorer and more fully populating the application to address key information gaps. Accordingly, it is recommended that further development efforts be focused on the following matters:

- Preparation of custom icons for nodes currently lacking descriptive or intuitive icons.
- Review and editing of the textual information currently contained within OGExplorer to ensure that it is correct, substantially complete and properly indexed or mapped within the application, and that any key information gaps are completed.
- Review of the photographs and figures contained within OGExplorer to ensure they are correctly indexed within the database, and that any key gaps are completed.
- Translation of the OGExplorer materials into other languages to facilitate multi-lingual usage (e.g., include French).
- Upgrade from Flash to HTML5 to align with current industry practice which is beginning to move away from Flash handling of graphics to HTML5 handling of graphics to provide long-term maintainability.