

Petroleum Resources

Discover the region's world-class hydrocarbon potential

Our province has a wide range of oil and gas resources both onshore and offshore. Offshore Nova Scotia is a proven oil and gas rich region with an estimated potential for **more than 120 trillion cubic feet of natural gas and 8 billion barrels of oil**. This creates exciting prospects for both investors and explorers.

The province also has 10 exploration and production agreements with companies working towards onshore discovery. Nova Scotia's onshore is a frontier area for exploration with significant oil and gas potential. Increased activity is expected to create new opportunities and develop economic benefits for the province.



Offshore

The Play Fairway Analysis (PFA) identified rich hydrocarbon potential offshore. This potential exists in both deep and shallow water on the continental shelf. In shallow waters there is a substantial opportunity in small-scale traps that could contain both oil and gas. The deep-water slope shares the same geological attributes as other successful producing Atlantic Water regions, such as Brazil and the Gulf of Mexico. Attributes of offshore geology include large sand rich delta systems, multiple source rocks, and a mobile salt substrate.



Onshore

Nova Scotia sits in the Maritimes Basin, a large depo-centre comprised of continental and marine sediment that extends over 155,000 square km of the Atlantic Region. For over 135 years, onshore oil and gas exploration has occurred in Nova Scotia and continues to provide new opportunities for today's energy industry. Conventional petroleum exploration activity is focused on two key rock units that have demonstrated the presence of oil and gas. Oil-seeps along our shores have led to a number of wells being drilled; small quantities of hydrocarbons have been discovered.



Support Community

Nova Scotia is blessed with natural resources that have the potential to generate almost every kind of energy, but it is our partnerships with people that constantly turn that potential into prosperity. Our experienced local supply community has an international reputation for excellence in several areas including engineering, fabrication, and supply services and have been recognized for meeting challenging project requirements. The provincial government supports exploration activity and has a timely and fair regulatory process. The province also has a world-class education system that produces highly skilled workers, which helps ensure that industry standards are met.

Activity

Calls for Bids

The Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) has identified, on a three-year rolling basis, regions of the offshore that will be available for competitive bidding starting in 2014. The *Play Fairway Analysis* assessed Nova Scotia's oil and gas potential, which led to interest from *Shell Canada* and *BP Canada* in the 2011/2012 Calls for Bids. Both entities have committed to spending a combined total of \$2.05 billion on exploration over six years. The province will release new geoscience research in time for the 2014 Call for Bids.

Deep Panuke

The Deep Panuke Project, operated by *Encana Corporation*, produces natural gas from the Deep Panuke Field, 250 kilometres southeast of Halifax on the Scotian Shelf. The natural gas is processed offshore and transported via subsea pipeline to Goldboro, Nova Scotia, and then on to markets via the Maritimes and Northeast Pipeline. The design capacity of the project is 300 MMscfd of sales gas; since the end of 2013, Deep Panuke has been receiving its full gas potential, with estimates of 630 BCF recoverable.

Sable Offshore Energy Project

The Sable Offshore Energy Project encompasses one of the largest known natural gas deposits remaining in North America. The Sable Project involves the development of five major natural gas fields that lie 225 kilometres off the Nova Scotia coast and contain approximately two TCF of recoverable gas reserves and 60 MMbbl of condensate. Once produced, the natural gas is transported via subsea pipeline to an onshore gas plant and later distributed to its markets via the Maritimes and Northeast Pipeline. Its markets include Nova Scotia, New Brunswick, and New England.

Onshore Exploration and Development Opportunities

Nova Scotia has ample onshore exploration and development opportunities. The province has seven conventional oil and gas exploration agreements and one exploration agreement for coal gas. These companies are actively working on their exploration agreements by drilling wells and completing seismic programs. The province also has two production agreements for coal gas and one production lease for shale gas.

Play Fairway Analysis

The *Play Fairway Analysis* (PFA) is the result of a \$15 million research investment by Nova Scotia to provide an industry standard analysis of the geology offshore and its oil and gas potential. The PFA identified rich hydrocarbon potential in offshore Nova Scotia with an in-place resource estimate of 120 TCF of gas and eight billion barrels of oil.

The PFA has played a pivotal role in stimulating industry interest in exploration of Nova Scotia offshore resources. The PFA has:

- Examined relative risk, total volume potential, and the four play components (reservoir, seal, charge, and trap)
- Identified significant potential for giant fields in the deep water for both oil and gas
- Shown that in present day shallow water, there is opportunity for both oil and gas existing traps; the shallow water depth of Nova Scotia's offshore is attractive for exploration
- Led to lands included in the 2012 Calls for Bids, which awarded exploration rights for 10 deep-water parcels and 2 shallow-water exploration parcels.

Get Involved

To learn more about Nova Scotia's current project details and potential opportunities, visit

novascotia.ca/energy

