

atlanticcanada megaprojects

Major project investment is helping to redefine the economy of Nova Scotia and Atlantic Canada. The current projects include a number of offshore and onshore oil and gas, mining and manufacturing projects. The growth in resource and manufacturing projects is also matched by a growth in investment at the local level in transportation systems, infrastructure, and residential and commercial property.

The **Halifax Gateway** offers a combination of multimodal transportation and logistics services using modern infrastructure. Improvements to infrastructure are underway as evidenced by

the +\$300 million being spent by both the **Port of Halifax** and at the **Halifax International Airport**, as well as improvements to **CN Rail** service over the last decade, and the ongoing expansion of the **Halifax Logistics Park** in the Burnside Business Park.

This new infrastructure is helping to position the Halifax Gateway to handle the flow of goods and services that will come from these major projects and from a growing economy. These improved services will also have a positive impact on other firms in the region which will have better access to global markets.

\$129B

Labrador

Iron Ore in Labrador & Quebec \$9B+

LabMag Iron Ore: \$7.75B (2016-19)
Kami Iron Ore: \$1.3B (2014-16)

Details: There are several iron ore projects in various stages of development in Labrador including the two listed above. There is also about \$20 billion of mining projects planned in Quebec. These projects will largely rely on the Ports of Sept-Îles and Port Cartier to move product to markets in Asia and Europe.

Gateway Impact: These projects will require some larger components during the construction phase which, if imported from other countries, could be shipped by container through Halifax or Montreal. Halifax has had some experience barging large components into northern projects and could expand on that role in the future as activity increases in Labrador and Quebec.

Shale Gas Development

Start: after 2014

Details: If one or more LNG export facilities moves ahead in Nova Scotia there will be a need for new shale gas development. There have been estimates of billions of dollars of upstream development in Nova Scotia and New Brunswick to support these projects. There is currently a moratorium on shale gas development in Nova Scotia.

Key Components: If shale gas projects move ahead, the development would require drilling equipment, gas processing facilities and pipeline construction.

Gull Island Hydro Development \$4B+

Start: 2019 End: 2027

Details: Nalcor has split the development of the Lower Churchill project into two segments. The larger Gull Island portion (2,250 MW) may be developed shortly after the Muskrat Falls project is complete. Power from Gull Island could flow through Quebec or through an expansion to connect to the Maritime Link.

Gateway Impact: Halifax is well positioned to move components for any expansion to the Maritime Link (#5) but would compete with the Port of Montreal or direct shipping to Goose Bay for the construction of a hydro facility at Gull Island which is west of the Muskrat Falls project.

Maritime Link \$1.6B

Start: 2013 End: 2017

Details: Emera Newfoundland and Labrador is building a \$1.6 billion subsea transmission line between the island of Newfoundland and Nova Scotia for the Muskrat Falls hydro project.

Key Components: The transmission lines will require steel towers, insulators and wires. The marine cables are 180 km long and will be imported from overseas. The converter stations require steel for the structures and electronics and equipment for the station.

Muskrat Falls Hydro Project \$7B

Start: 2012 End: 2017

Details: Nalcor and Emera are partnering on the Muskrat Falls hydro project which is the first phase of the Lower Churchill hydro development. The Muskrat Falls project includes the 824 MW Muskrat Falls facility (\$3.4 billion) and supporting transmission infrastructure between Muskrat Falls and the existing Churchill Falls facility (HVAC line) and a transmission line (HVDC line) to the Island of Newfoundland (\$2.8 billion). A total of 1,500 km of transmission lines will be built. At its peak in 2015, about 3,100 people are expected to be employed on the project in Newfoundland and Labrador.

Key Components: The facility at Muskrat Falls will require large turbines, mechanical and electrical components, plus steel and rebar for the concrete. The transmission lines will require steel towers, insulators and wires. The converter stations require steel for the structures along with electronics and equipment for the station.

Voisey's Bay Underground Mine \$2B

Start: 2015 End: 2019

Details: Vale announced in March that it will develop an underground mine at Voisey's Bay that will extend the life of the mine. Work is expected to begin in 2015 with first production from the underground reserves in 2019. The project will extend the mine's lifetime until at least 2035.

Hebron Oil Project \$14B

Start: 2010 End: 2024

Details: Final sanction by the project proponents was given in late 2012 for Newfoundland and Labrador's fourth oil field at Hebron. Kiewit-Aker Contractors is the engineering, procurement and construction manager for the gravity base structure (GBS) and construction began late last year at the Bull Arm fabrication site in Newfoundland and Labrador. First oil is planned for 2017 but development drilling will continue until about 2024. ExxonMobil Canada is the operator of the project.

Key Components: A large share of the activity outside the province will take place in South Korea where Hyundai Heavy Industries is building major components for the project. Major portions of the project will be built in Newfoundland and Labrador which will require over 3,500 people working on the project in 2013 and 2014.

Other Newfoundland and Labrador Offshore Projects \$6B+

White Rose Expansion North Amethyst and South White Rose: \$3.2B (2009-15)
Hibernia Southern Extension: \$1.7B (2009-15)
NL Offshore Exploration: \$1.2B (2011-19)
White Rose Expansion West White Rose: \$2.5B (2013-17)

Details: These projects comprise the bulk of the offshore activity (excluding the Hebron project) in the Newfoundland offshore over the next few years. Project benefits from the offshore projects in Newfoundland and Labrador tend to have only a modest impact on other provinces. Most of the activity outside the province will occur in international markets. The larger international components are usually shipped directly to the fabrication site by charter vessel. Similar to the Hebron project smaller components from Southern Europe and the Middle East would be shipped by container through Halifax if there is a cost savings over St. John's.

Impact: There may be some suppliers for the projects in Nova Scotia that land contracts for the project but the impact is not expected to be significant. The Halifax Shipyard has completed refits and upgrades to drilling rigs used in the Newfoundland offshore in the past and could see more work in the future. Some container traffic from southern Europe and the Middle East could move through Halifax. As with other projects that require skilled trades there could be some continued impact on passenger movements at the airport.

Long Harbour Nickel Processing Plant \$4.2B

Start: 2009 End: 2015

Details: Vale is building a nickel hydromet facility in Long Harbour, NF, to process nickel concentrate from the Voisey's Bay mine in Labrador. A majority of the work on the facility will be completed after Phase One wraps up in 2013.

Impact: The project will create nearly 500 full-time jobs as it moves into the operations phase. The plant will produce 50,000 tonnes of nickel, 5,000 tonnes of copper and 2,500 tonnes of cobalt per year.

Nova Scotia Offshore Exploration \$2B

Start: 2013 End: TBD

Details: There are an estimated 3.3 trillion cubic meters of natural gas and 8 billion barrels of oil in offshore Nova Scotia. Shell Canada acquired four offshore parcels for a record bid of \$970 million in early 2012, and UK-based BP bid \$1.05 billion for four deepwater parcels in the Nova Scotia offshore in late 2012.

Impact: Shell and BP will be actively building up the supplier base in Nova Scotia for the project over the next two years leading up to drilling activity. The drilling activity that will occur in the 2015-2020 period will have a more substantial impact as more materials and supplies will be needed including mud, cement, wellhead structures, piping and parts.

LNG Export Facility H-Energy \$3B

Start: 2016 End: 2020

Details: H-Energy of India is planning an LNG export facility near Melford, NS. The project would have a send out capacity of 1.5 billion cubic feet per day with the possibility of tripling production in the future. The project is expected to begin by shipping LNG to India but could expand to serve other international markets.

Impact: The project would have a similar type of impact as the Pieradae Energy project (#8) but on a smaller scale. If it were to move ahead during the same timeframe as the Pieradae project the labour needs would intensify and labour movements would grow. This would increase passenger movements at the airport.

LNG Export Facility Pieradae Energy \$8.3B

Start: 2015 End: 2019

Details: Pieradae Energy is planning an LNG export facility in Goldboro, NS. The project will include a natural gas liquefaction plant, a power plant and a marine jetty for loading onto ships.

Key Components: This massive project will ensure as much local content as possible but many components will need to be built in other parts of Canada or internationally.

Energy East Oil Pipeline \$12B

Location: Saint John, NB

Start: 2015 End: 2018

Details: TransCanada Corp. announced that it was moving forward with a 1.1 million barrel per day pipeline from western Canada through Quebec, and onward to the Irving Oil refinery in Saint John, NB. The project will also include a \$300 million oil terminal in Saint John that will ship oil to international markets.

Key Components: The massive project will require a large amount of steel and labour. It is uncertain at this time where the steel will be sourced and how it will be moved. The labour requirements will be determined during the engineering phase.

Halifax Shipbuilding Contract \$29.3B

Start: 2015 End: 2035-2040

Details: Irving Shipbuilding of Halifax was awarded the contract to build vessels for the federal government's shipbuilding procurement strategy in 2012. The first phase of the contract will see 6-8 Arctic/Offshore Patrol Ships (AOPS) built for Canada's coastal waters. The second larger phase will see 15 surface combatant ships and will begin in 2020.

Key Components: One of the largest public sector investment projects in Canadian history will require suppliers from all over the world to provide components, parts and services for the next 20-25 years, including; propulsion systems, command and surveillance systems, other pre-fabricated components, steel, logistics and engineering.

Major project information provided by:



www.halifaxgateway.com