Enbridge’s
Energy
Infrastructure
Projects

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Crude Oil and Liquids Pipelines

Line 3 Replacement Program

Construction of the $5.3-billion Canadian portion of the Line 3 Replacement Program is complete and began commercial service in December 2019. Meanwhile, we continue to await final permitting before construction can begin in Minnesota, to enable completion of the US$2.9-billion American portion of the project.

Right-of-way reclamation is essentially complete in most of the nine construction spreads in Canada. With the new replacement pipeline operational in Canada, the existing Line 3 pipeline will be decommissioned in accordance with regulatory requirements.

In the U.S., the Wisconsin segment of the project entered service in May 2018, after construction was completed in December 2017. Construction in Minnesota and North Dakota will begin concurrently, upon receipt of all permits and approvals.

- Type: Crude oil and liquids pipeline
- Status: Complete (Canada and Wisconsin); pre-construction (Minnesota)
- Length: 1,031 miles (1,660 km)
- Expected in-service date: December 2019 (Canada); 2H 2020 (U.S.)
- Expected initial capacity: 390,000 barrels per day
- Expected to transport: Light, medium and heavy crude
- Estimated capital cost: C$5.3 billion in Canada, US$2.9 billion in the United States
Natural Gas Transmission Pipelines

Atlantic Bridge


Our goal is to place all the Atlantic Bridge facilities into service as soon as possible. On Oct. 27, 2017, the Federal Energy Regulatory Commission (FERC) granted Algonquin Gas Transmission’s request to place into service the Atlantic Bridge Connecticut facilities to provide 40,000 dekatherms per day of incremental firm transportation service.

- Type: Natural gas pipeline
- Status: Under review
- Peak day capacity: 132,700 dekatherms per day (Dth/d)
- Expected to transport: Natural gas
- Initial in-service date: November 2017
- Full in-service target date: 2020
- Ownership: Algonquin Gas Transmission, LLC; Maritimes & Northeast Pipeline, LLC (U.S.); Maritimes & Northeast Pipeline Limited Partnership (Canada)
- FERC docket number: CP16-9-000
Greater Philadelphia Expansion Project

Limited infrastructure capabilities hinder the ability to meet Philadelphia’s energy demands, despite the abundance of domestic natural gas in the nearby shale formations.

To meet these challenges, Enbridge Inc. is proposing the Greater Philadelphia Expansion Project, which will create a scalable platform to address the region’s natural gas needs by upgrading and expanding its existing infrastructure to provide more natural gas to the area.

- Type: Natural gas pipeline
- Status: Under review
- Peak day capacity: Scalable; up to 475,000 dekatherms per day (Dth/d) is possible
- Expected to transport: Natural gas
- Expected in-service date: 2021
PennEast Pipeline Project

The PennEast Pipeline Project will provide Enbridge Inc. with a strategic opportunity to leverage existing assets by directly connecting northeast Pennsylvania Marcellus shale production to the Texas Eastern Transmission and Algonquin Gas Transmission systems, and will allow Enbridge Inc. to further strengthen its relationship with some of its biggest customers.

The PennEast Pipeline will reliably meet growing energy demand in New Jersey and Pennsylvania while providing environmental and economic benefits to the region, and will transport enough clean, affordable and abundant natural gas to serve 4.7 million homes.

- Type: Natural gas pipeline
- Status: Under review
- Length: 118 miles
- Peak day capacity: 1.1 billion cubic feet per day (Bcf/d)
- Expected to transport: Natural gas
- Expected in-service date: 2020
- Ownership: Enbridge Inc. (20%). Other partners include: Southern Company Gas; NJR Pipeline Company, a subsidiary of New Jersey Resources; South Jersey Industries; and UGI Energy Services (UGIES), a subsidiary of UGI Corporation.
- Operator: UGI Energy Services
- FERC docket number: CP15-558-000
- Project website: Click here
Rio Bravo Pipeline Project

The Rio Bravo Pipeline Project is designed to transport up to 4.5 billion cubic feet per day of natural gas from the Agua Dulce supply area to NextDecade’s Rio Grande LNG project in Brownsville, Texas.

Enbridge entered into a definitive agreement on Feb. 13, 2020 whereby Enbridge would acquire Rio Bravo Pipeline Company, LLC (RBPL) from NextDecade for a cash purchase price not to exceed $25 million, with $15 million paid at closing and the balance paid upon NextDecade’s reaching a positive final investment decision (FID) on its Rio Grande LNG export facility in the Port of Brownsville, Texas.

Enbridge and NextDecade in September 2019 had announced a Memorandum of Understanding (MOU) to jointly pursue the development of the Rio Bravo Pipeline (Rio Bravo) and other natural gas pipelines in South Texas to transport natural gas to NextDecade’s Rio Grande LNG project located in Brownsville, Texas.


Enbridge now owns 100% of RBPL and is responsible for the development, financing, construction, and operations of the Rio Bravo Pipeline. NextDecade will continue to be responsible for the development, financing, construction, and operations of its Rio Grande LNG export facility.

Read the Feb. 13, 2020 news release.

- Type: Natural gas pipeline
- Status: Proposed
- Peak day capacity: 4.5 Bcf/d (billion cubic feet per day)
- Expected to transport: Natural gas
- Ownership: Enbridge (100%)
Spruce Ridge Program

The Spruce Ridge Program involves adding two new sections of pipeline and additional compression to existing facilities on the natural gas transmission system in northeastern British Columbia.

The new sections of pipe—known as loops—will be constructed as separate segments that largely parallel the existing pipeline. The two new pipeline loops—Aitken Creek and Chetwynd—and accompanying compression upgrades will increase the transportation capacity of the system to accommodate customer demand in a safe and reliable way.

Collectively, these projects will increase transportation capacity by up to 402 million cubic feet per day (MMcf/d).

For the Aitken Creek Loop, clearing will begin in early 2020, and pipeline construction in the second half of 2020. For Compressor Station 2, facility construction will begin in spring 2020. Enbridge is currently evaluating when to commence construction of the Chetwynd Loop and remaining facilities and will provide stakeholders with an update once the schedule is finalized.

- **Type:** Natural gas pipeline
- **Status:** CER approved
- **Peak day capacity:** Up to 402 MMcf/d
- **Expected to transport:** Natural gas
- **Expected in-service date:** 2021
- **Ownership:** Enbridge Inc. (100%)
- **Operator:** Enbridge Inc.
T-South Reliability and Expansion Program

Enbridge is undertaking upgrades and a number of reliability enhancements on the southern portion of its natural gas transmission system (T-South) which stretches from south of Chetwynd, British Columbia, to the southernmost point at the Canada/U.S. border at Huntingdon/Sumas.

This work, known as the T-South Reliability and Expansion Program, will involve: replacing old compressor station units with new, more reliable and efficient units; adding an additional compressor station unit; and undertaking smaller upgrades and operational maintenance at various facilities along the system.

These upgrades are being done as part of operating a safe natural gas pipeline system, and to accommodate an incremental 190 MMcf/d of firm capacity.

- **Type:** Natural gas infrastructure
- **Status:** Preliminary work began with clearing in late 2019; main construction to start in spring 2020
- **Peak day capacity:** Up to 190 MMcf/d
- **Expected in-service date:** Late 2021
- **Ownership:** Enbridge Inc. (100%)
- **Operator:** Enbridge Inc.
Tupper West Expansion Project

To meet increased natural gas demand, Enbridge is proposing to expand its Tupper West Plant in northeastern British Columbia.

In early 2016, Enbridge acquired two gas plants and associated sales pipelines approximately 22 kilometers (km) southwest of Dawson Creek, BC. The plants, Tupper Main and Tupper West, were built in 2008 and 2011, respectively, with 110 and 210 MMscfd licensed gas processing between the two facilities.

To meet increased demand, Enbridge is proposing to expand the Tupper West Plant, known as TPW1. The Tupper West Expansion, known as TPW2, is a 198 MMscfd expansion immediately to the south of the existing plant. The Project will service new gas supply from producers and will be shipped through pipelines to market.

In July 2018, Enbridge proposed to sell $4.3 billion of Canadian natural gas gathering and processing assets to Brookfield Infrastructure and its Partners (BIP). On October 1, Enbridge transferred provincially regulated assets to NorthRiver Midstream Inc. and the federally regulated assets will be transferred sometime in 2019.

As part of the sale, the Tupper West Expansion Project is being transitioned to NorthRiver Midstream Inc., a wholly owned subsidiary of Brookfield. Enbridge will continue ongoing engagement to support the project until it is complete.

- Type: Natural gas infrastructure
- Status: Proposed
- Expected in-service date: Fall 2020
- Ownership: Enbridge G and P Limited Partnership
- Operator: Enbridge G and P Limited Partnership
Natural Gas Distribution

Chatham-Kent Rural Pipeline Expansion Project

There is a growing demand for natural gas in rural Chatham-Kent, Ontario particularly in the fast-growing greenhouse sector. As a result, Enbridge Gas is expanding our existing natural gas system in the area.

The project has received Ontario Energy Board approval and is currently under construction, consisting of two sections both within the Municipality of Chatham-Kent. Construction is expected to be complete by the end of 2019.

Kingsville Transmission Reinforcement

The greenhouse market in the Leamington and Kingsville areas is growing fast, and there is also an increased demand for natural gas from residential, commercial and industrial customers in Windsor-Essex, Chatham-Kent and surrounding areas.

To support this growth, Enbridge Gas is constructing a 20-inch diameter, 19-km natural gas pipeline from the Town of Lakeshore to the Town of Kingsville.

The project was approved by the Ontario Energy Board (OEB) in September 2018. Construction began in mid-2019 and will be complete by the end of 2019.

Learn more at the Enbridge Gas website.
Kirkwall Hamilton Project

Natural gas demand has increased across Ontario, Quebec, eastern Canada and the northeast United States. To meet that demand, Enbridge Gas is proposing to construct a new 48-inch diameter natural gas pipeline located within the City of Hamilton (Flamborough), generally paralleling its existing Dawn-Parkway natural gas transmission system.

The proposed project is subject to Ontario Energy Board approval. If approved, construction could begin as early as spring 2021 and be complete by the end of 2021.

Owen Sound Reinforcement

To meet the growing demand for safe, affordable and reliable natural gas, Enbridge Gas is proposing to build up to 36 kilometres of 12-inch natural gas pipeline between the Municipality of West Grey and the Township of Chatsworth, Ontario.

The project is subject to Ontario Energy Board (OEB) approval and is currently in the planning stages. The project will support economic growth in the region from Waterloo to Wiarton.

Learn more at the Enbridge Gas website.
Sarnia Industrial Pipeline Reinforcement Project

Demand for natural gas from industries in the Sarnia, Ontario area is increasing.

As a result, Enbridge Gas is proposing to construct a new natural gas pipeline between our existing Dow valve site and Bluewater interconnect transmission stations in the Township of St. Clair, Ontario. The proposed pipeline will be 20 inches in diameter, and approximately 1.2 km in length.

The project is subject to approval by the Ontario Energy Board. If approved by the OEB, construction of the proposed project is planned to begin as early as spring 2021, with an in-service date of fall 2021.

Windsor Pipeline Replacement Project

In Windsor, Essex County and Chatham-Kent, Ontario, there is a need to ensure our natural gas pipelines and infrastructure continue to deliver natural gas reliably. With that in mind, Enbridge Gas Inc. is proposing to replace the Windsor Line natural gas pipeline. Our proposed project involves replacing approximately 64 km of the existing Windsor Line, which is a combination of 8-inch and 10-inch diameter pipelines, with a new 6-inch diameter pipeline that will be constructed in the vicinity of the existing pipeline.

Our proposed project is subject to Ontario Energy Board approval. If approved, construction could begin as early as spring 2020 and be complete by the end of 2020.
Offshore Projects

SPOT and Texas COLT

Enbridge, through the Seaway Pipeline System, has two existing docks for export on the Gulf Coast at Freeport and Texas City. Freeport has a draft of 42 feet and can load at 20,000 barrels per hour and Texas City has a draft of 45 feet and can load at 35,000 barrels per hour. Texas City also has the capability to partially load a Very Large Crude Carrier (VLCC).

Enbridge has negotiated an option to buy a portion of the Seaport Oil Terminal (SPOT). SPOT will provide direct loading capabilities into VLCCs which will provide a more efficient export solution.

With a design loading rate of 85,000 barrels per hour, SPOT will be able to fully load a VLCC in 24 hours. SPOT is expected to receive permits in 2020 and be in service in 2023.

Texas COLT, a joint venture between Enbridge Inc. and Oiltanking Partners, proposes to construct, own and operate a deepwater export terminal in the Gulf of Mexico, off the coast of Freeport, TX, to export domestically produced crude oil.

The proposed project includes an offshore platform and two offshore loading single point mooring buoys capable of fully loading a two-million-barrel Very Large Crude Carrier (VLCC) in about 24 hours. These offshore facilities would be connected by a 28-mile-long, 42-inch-diameter pipeline to an onshore tank farm that will have up to 15 million barrels of storage capacity.

Texas COLT will remain an option to be pursued should the market demand warrant.
Power Generation

Enbridge Edmonton Power Generation Facility

Enbridge is proposing to build and operate a 20-megawatt power generation facility in the northwest corner of our South Edmonton Terminal property in Strathcona County, AB.

Up to six generator units will be installed, each consisting of a reciprocating, natural gas-fired engine with generator and ancillary equipment. The facility will be tied into the Alberta Integrated Electricity System via adjacent substations. No new substations or transmission lines will be required. The facility will operate on an as-needed basis, in response to electricity demand.

The Project is located entirely within Enbridge’s existing South Edmonton Terminal property.

- Type: Natural gas-fired power generation facility
- Status: Planned
- Expected In-Service Date: May 2021
- Expected Capacity: 20 megawatts

Whitetail Peaking Station

Enbridge’s proposed Whitetail Peaking Station would involve construction of a 186-megawatt (MW) natural gas-fired simple cycle power generation facility about 16 miles (25 kilometers) northeast of Peace River, AB. The proposed project would use four turbine generator packages with dry low-emission technology, four continuous emission monitoring systems, four step-up transformers, and a two-km natural gas pipeline connecting the facility to the NOVA Gas system.

- Type: Natural gas-fired power generation facility
- Status: Planned
- Expected in-service date: 2022
- Expected capacity: 186 megawatts
Power Transmission

East-West Tie (EWT) Transmission Project

The East-West Tie power transmission project in northern Ontario would consist of a new, approximately 280-mile (450-km), double-circuit, 230-kilovolt (kV) transmission line. The project generally parallels an existing double-circuit, 230-kV transmission line corridor that connects the Wawa Transformer Station to the Lakehead Transformer Station near Thunder Bay, ON. The project is being advanced by NextBridge Infrastructure, a partnership between affiliates of Enbridge, NextEra Energy Canada and OMERS Infrastructure.

- Type: Power transmission line
- Status: Under construction
- Length: 280 miles (450 km)
- Capacity: 230 kV
- Expected in-service date: Year-end 2021
Wind Energy

Saint-Nazaire Offshore Wind Project

Enbridge and its partner EDF Renouvelables are developing the Saint-Nazaire Offshore Wind Project in the Loire-Atlantique region in coastal France.

The 480-megawatt (MW) wind farm will feature 80 GE Haliade 160-6MW turbines to be manufactured in France. According to GE, each Haliade turbine powers 5,000 homes; the project is expected to generate the equivalent of 20% of the Loire-Atlantique’s electricity consumption.

Turbines will be located between 12 and 20 kilometres off the Loire-Atlantique coast, at depths ranging from 12 to 25 metres, and deployed an area of about 78 square km.

Enbridge has a 50% ownership stake in the Saint-Nazaire Offshore Wind Project, which is expected to enter service in 2022.

Visit the project website for more information.

- **Type:** Wind energy project
- **Status:** Under construction
- **Location:** Bay of Biscay, about 12 to 20 km off France’s Loire-Atlantique coast
- **Expected in-service date:** 2022
- **Expected capacity:** 480 MW
- **Expected number of turbines:** 80
- **Expected equivalent homes served:** 400,000