Proposed project 2021 NGTL System Expansion project.

The project

The Western Canada Sedimentary Basin (WCSB) is one of North America's most prolific natural gas production basins, and it is of key importance to the Canadian economy. Given the production of natural gas in Alberta and B.C., the most important issue for WCSB producers is getting their product to market. Natural gas producers have asked NOVA Gas Transmission Ltd. (NGTL) to increase natural gas transportation service on our existing natural gas pipeline system in Alberta. We are proposing to construct and operate multiple pipeline sections and compressor unit additions as part of the 2021 NGTL System Expansion Project (the project).



We have studied options for a number of pipeline additions that will generally follow our existing NGTL pipeline corridors in western Alberta. The pipeline additions we have proposed add to our existing assets in three key areas along our Grande Prairie and Edson Mainlines:

- Grande Prairie West Area
- Grande Prairie South Area, and
- Edson South Area.

In total, NGTL is planning to add 344 km of newly built 48-inch (1219 mm) diameter pipeline to the NGTL System. These various pipeline sections are located within the study areas starting in the County of Grande Prairie, extending through the Municipal District of Greenview No. 16, Yellowhead County and end in Clearwater County.

In addition to pipelines, we're proposing to add a control valve at our January Creek site at LSD NE-27-054-14-W5, and 30MW compressor station unit additions at three existing NGTL compression sites:

- Didsbury Compressor Station Unit Addition (LSD NE and SE-29-30-02-W5M) in Mountainview County,
- Nordegg Compressor Station Unit Addition (LSD SW-20-043-12-W5M) in Clearwater County, and
- Beiseker Compressor Station Unit Addition (LSD NE-24-027-25-W4M) in Rockyview County.

We submitted an application to the National Energy Board (NEB) under section 52 of the National Energy Board Act in Q2 2018 with an anticipated in-service date in Q2 2021 for all project components. We have been engaging all stakeholders, landowners, and Aboriginal groups on the project, and will continue to throughout the life of these assets. We collect input through meaningful conversations, and incorporate that input into the project's planning, development and operations.

Project schedule

Q3 2017	We began early engagement with Aboriginal groups, landowners and stakeholders on certain project components
Q1 2018	Broad Aboriginal community, landowner, and stakeholder engagement began on project study areas
Q1 2018	Section 52 Project Description filing to the NEB
Q2 2018	Regulatory filing to the NEB, followed by regulatory review process
Q2 2020	Anticipated regulatory approval to construct
Q3 2020	Begin construction
Q2 2021	Anticipated in-service dates for all project components. Stakeholder engagement and consultation is ongoing throughout all phases of the project.

At TC Energy, our approach is to safely deliver the energy the world needs in an economically, environmentally and socially responsible manner. Here's how we deliver on this commitment:

Commitment to engagement and addressing issues

Making sure our stakeholders, landowners and Aboriginal groups are engaged and respected is critical to TC Energy's success. We are committed to sharing information and seeking input to help improve our plans – for us, for our stakeholders, landowners and Aboriginal groups as a whole. We are currently in the early stages of engagement for the project and are looking to collect feedback on our planned study area and additions to the NGTL System. In the coming months, we will be contacting potentially affected stakeholders, and Aboriginal groups to discuss routing, land use, survey work, early land access, socio-economic effects, and environmental studies for the project.

TC Energy's approach to engagement with stakeholders, landowners and Aboriginal groups is aimed at understanding concerns and addressing issues related to our projects and operations. We consult early and often, invite feedback, and continue to provide updates and address concerns throughout the regulatory process and operations. Our project team will work with local communities to ensure there are opportunities to provide input on the project. We will continue to provide updated information as it becomes available, and look forward to hearing your input and feedback for consideration as part of project planning. The updated information will include any changes made during the project planning based on feedback from the engagement activities.

TC Energy's preferred method for addressing the concerns of stakeholders, landowners and Aboriginal groups, is through direct and respectful discussion. Issues received or identified through ongoing engagement are systematically tracked and followed up on to promote resolution. In the event that resolution through this approach is not achievable, the parties may consider use of the NEB's collaborative Alternative Dispute Resolution (ADR) Process. More information about NEB processes can be found at www.neb-one.gc.ca.

To ensure ongoing engagement with stakeholders, landowners and Aboriginal groups throughout the life cycle of our facilities, regionally located community and Aboriginal relations personnel are assigned to each operating region and are the first point of contact for public awareness and any future enquiries after the project begins operations.

Engaging Aboriginal groups

Building and maintaining relationships with Aboriginal groups near our proposed projects and existing facilities is an integral part of TC Energy's business. TC Energy works with communities to identify potential effects of company activities on each community to find mutually satisfactory solutions and benefits.

Community benefits

The proposed project will offer economic benefits and strengthen the economy on a local, provincial and national level.

- Employment opportunities Construction will require the services of equipment operators, welders, mechanics, truck drivers, labourers and more. TC Energy has a Vendor Registration site where interested local service providers can express interest in working with us. Please visit us at www.TCEnergy.com for more information about how to register with us.
- Business opportunities Pipeline construction will create demand for local goods and services including food and accommodation, hardware, industrial parts, automotive parts and servicing, fuel and more.

- Annual revenue to support local services Pipeline construction will result in tax payments to municipal, provincial and federal governments. When the pipeline is operational, annual tax payments will help support schools and hospitals, emergency services, recreation facilities, recycling programs and other local programs vital to sustaining communities.
- Investments in local communities Giving back to the communities where we operate is part of our culture. Whether it's partnering with community groups, supporting local initiatives or encouraging our employees to be involved in their neighbourhoods, the goal of our Community Investment Program is to build strong and vibrant communities across North America. TC Energy also has a long history of providing support for education and training in the communities where we do business. More information about our Community Investment Program is available online at TCEnergy.com.

Minimizing our environmental footprint

TC Energy has a long-standing commitment to protect the environment where we live and work. As part of our commitment, and in support of regulatory processes, TC Energy assesses the potential effects that may be associated with construction and operation of a proposed project. Some examples of potential effects associated with a project like a compressor station or pipeline project are effects to soil, water, vegetation, fish and wildlife, archaeological resources, air quality and noise, infrastructure and services, and communities and their economies.

The Environmental and Socio-Economic Assessment (ESA) that will be prepared for the proposed project considers these potential project effects, proposes mitigation and evaluates the significance of residual and cumulative effects once these measures are implemented. An Environmental Protection Plan (EPP) is also developed during the regulatory and consultation process to identify the necessary mitigation and locations to be used during construction to manage environmental effects, and to ensure equivalent land capability following reclamation.

What to expect during construction and beyond

During construction, there will be an increase in traffic flow in and around the project area. TC Energy will make efforts to minimize the traffic by selecting construction site locations close to the project. There will be heavy equipment onsite for earth moving, excavation material handling/hauling, welding and testing. After the facilities have been built, there will be minimal traffic associated with ongoing operations and maintenance. Construction activities typically generate a certain amount of noise. TC Energy will meet applicable limits on noise throughout construction and the ongoing operations of the Project. Measures will be taken to prevent topsoil/surface material loss from wind and water erosion, topsoil and subsoil mixing, and to establish a vegetative cover that is compatible with surrounding vegetation and land use.

Once construction has been completed, the land surface will be reclaimed. On freehold lands, landowners will have the right to fully use and enjoy the right-of-way subject to the terms of the right-of-way agreement and the National Energy Board Act and National Energy Board Damage Prevention Regulations. Crossing a pipeline with an agricultural vehicle is authorized if it meets the conditions of the NEB's Damage Prevention Regulations. Activities that do not require authorizations are: cultivation to a depth of less than 45 cm below the surface of the ground; or any other activity to a depth of less than 30 cm and that does not result in a reduction of the earth cover over the pipeline to a depth that is less than the cover provided when the pipeline was constructed. To provide for public safety and to protect property and the environment, making a Click- or Call- Before You Dig and obtaining authorization from TC Energy is required prior to disturbing the ground within 30 meters of our pipelines.

Pipeline safety

For more than 65 years, TC Energy has been a leader in the safe and reliable operation of North American energy infrastructure. From design to construction, to operations and maintenance, safety is integral to everything we do. We use top quality steel and industry-leading welding techniques throughout our pipeline system to meet and exceed industry standards. We take additional safety precautions when the pipeline crosses roads, railways, waterways and communities. During construction, welds are checked by x-ray and/or ultrasonic inspection methods and then we pressure-test the pipe, which is coated to protect against corrosion. We also use sophisticated inspection devices to record information about the internal conditions of the pipeline.

TC Energy monitors its pipelines 24 hours a day, 365 days a year. If a drop in pressure is detected, we quickly identify the problem area and isolate that section of the pipe, closing the valves that control the flow of gas. Trained crews are dispatched by land or helicopter, depending on the location. If there is an incident, we work closely with authorities, emergency responders and the media to ensure residents in the area are aware of the situation and are safe.

Emergency preparedness and response

Our goal is to ensure that our pipeline and energy facilities operate safely every day and that the public, our employees and the environment are not negatively affected by an incident involving our facilities. We have an industry-leading safety record, and our goal is to have zero-safety incidents at our facilities. Being prepared for the rare cases when something does go wrong is part of our commitment to ensuring the safety of the communities where we operate.

The proposed project components will be designed, built and operated in a safe and environmentally responsible manner. In the unlikely event of an emergency, our comprehensive Emergency Response Program would be activated. We train our staff to know exactly what to do in the event of an emergency, both during construction and ongoing operations and work with area emergency responders to ensure a co-ordinated response in the event of an incident.

In the event of an emergency, please contact TC Energy's 24-hour emergency line at 1-888-982-7222.



43 67 GRAND PRAIRIE WEMBLEY GPM115 VALVE SITE DIMSDALE Redwillow River GPML LOOP NO. 3 (ELMWORTH) Wapiti River 666 WAPITI GPM90 VALVE SITE GPM85 VALVE SITE Proposed pipeline Existing pipelines Existing NGTL facility •

Grande Prairie West area

Valhalla

The Valhalla Section includes the proposed addition of 35.7 km of 48-inch (1219 mm) diameter pipeline beginning at NE 29-075-09 W6M and ending at SW 17-072-09 W6M in the County of Grande Prairie.

Elmworth

The Elmworth Section includes the proposed addition of 46.9 km of 48-inch (1219 mm) diameter pipeline beginning at NW 24-068-07 W6M and ending at SE 12-071-10 W6M between the County of Grande Prairie and the Municipal District of Greenview No. 16.



Grande Prairie South area

Karr

The Karr Section includes the proposed addition of 56.8 km of 48-inch (1219 mm) diameter pipeline beginning at NE 26-067-05 W6M and ending at NW 28-063-01 W6M in the Municipal District of Greenview No. 16.

Deep Valley section

The Deep Valley Section includes the proposed addition of 69.1 km of 48-inch (1219 mm) diameter pipeline beginning at SE-25-058-24 W5M and ending at NW 28-063-01 W6M in the Municipal District of Greenview No. 16.



Grande Prairie South area cont'd

Colt section

The Colt Section includes the proposed addition of 13.5 km of 48-inch (1219 mm) diameter pipeline beginning at NW 01-057-22 W5M and ending at NW 36-057-23 W5M in Yellowhead County.



Edson South area

Robb section

The Robb Section includes the proposed addition of 41.8 km of 48-inch (1219 mm) diameter pipeline beginning at SE-11-053-18 W5M and ending at NW 23-049-16 W5M in Yellowhead County.



Edson South area cont'd

Dismal Creek section

The Dismal Creek Section includes the proposed addition of 31.8 km of 48-inch (1219 mm) diameter pipeline beginning at SW 03-047-14 W5M and ending at NW 23-049-16 W5M in Yellowhead County.



Brewster section

The Brewster Section includes the proposed addition of 48.6 km of 48-inch (1219 mm) diameter pipeline beginning at SW 20-043-12 W5M and ending at SE 14-039-10 W5M in Clearwater County.

- A 30 MW compressor station unit addition are proposed for the Nordegg Compressor Station at LSD SW 20-043-12 W5M in Clearwater County.
- A 30 MW compressor station unit addition and coolers are proposed for the Didsbury Compressor Station at LSD NE and SE-29-30-02-W5M in Mountainview County.
- A 30 MW compressor station unit addition and coolers are proposed for the Beiseker Compressor Station located at LSD NE 24-027-25 W4M in Rockyview County.
- The installation of a control valve and associated pipeline tie-ins located near our January Creek site at LSD NE 27-054-14 W5M in Yellowhead County has been proposed to safely facilitate the flow of gas from the January Creek Lateral to the Western Alberta System.

TC Energy periodically provides project information beginning at the early stages of project development, continuing throughout the life of the project. The information provided is intended to give people the opportunity for meaningful input. Please be aware that as projects progress, new information becomes available and details may change from the time of this printing. Please contact TC Energy (using the contact information listed below) with any questions.



About TC Energy

We are a Canadian company, with over 65 years of experience building and operating pipelines throughout North America. We are an industry leader in safety and reliability. We believe in making a positive difference in the lives of others by investing in our communities. TC Energy takes our commitment to being a good neighbour seriously and takes pride in being a strategic community partner and an employer of choice.

TC Energy plays a vital role in connecting energy supplies to key North American markets with assets in our natural gas pipelines, energy and oil pipelines portfolios.

We operate one of the largest natural gas transmission networks in North America, tapping into virtually every major gas supply basin and transporting over 25 per cent of the continent's daily natural gas supply. We are North America's third largest provider of natural gas storage and related services with more than 664 billion cubic feet of storage capacity.

Our 4,300 km Keystone Pipeline System transports approximately 20 per cent of western Canadian crude oil exports to key refineries in the U.S. Midwest and Gulf Coast, where it is converted into fuel and other useful petroleum products.

Our success is a reflection of our exceptional team of employees who bring skill, experience, energy and dedication to the TC Energy family. Not only do they contribute the success of our company, their work has a positive social and economic impact on the places they call home across seven Canadian provinces, 33 U.S. states and five states in Mexico.

You can find out more about our business, our history, and our focus on the future by visiting www.TCEnergy.com

Contact us

We invite you to contact TC Energy with any questions or comments you have about the proposed project:

> Phone: 1-855-895-8754 Email: 2021NGTL@tcenergy.com Web: www.2021ngtl.com

> > Or write the project team at:

Attention: Cole Thomson, TC Energy Public Affairs Project Lead 450 - 1 Street S.W. Calgary, AB Canada, T2P 5H1

If you would like further information regarding the National Energy Board's approval process, we would be pleased to provide you with information or you can contact the regulator directly:

National Energy Board

Suite 210, 517 - 10 Avenue S.W. Calgary, AB Canada, T2R 0A8

> Phone: 1-800-899-1265 Email: info@neb-one.gc.ca Web: www.neb-one.gc.ca

