

## The Future of Energy, Now

Cerilon is an international, privately-held corporation, headquartered in Calgary, Alberta. The company is focused on developing and managing a portfolio of energy transition, chemical and professional services companies. An unwavering ESG-focus, long-term partnerships, strategic agility and the ability to rapidly integrate technological advancements enhance project replicability, speed-to-market and return on investment. Cerilon is well positioned to provide energy transition solutions and expertise that can help create a better future.

## Our Foundational Project: Cerilon GTL North Dakota

Cerilon GTL North Dakota will be the first large-scale, natural-gas fed Gas-To-Liquids (GTL) facility to be built in North America. The facility will also include carbon capture and sequestration, making this nominally 24,000 barrel-per-day facility the first of its kind in the world. It will be built near Trenton, in Williams County, North Dakota.

Cerilon chose western North Dakota for the project because of the abundant natural gas supply, suitable geology for carbon sequestration, and transportation access to markets. Cerilon is planning for two GTL facilities of similar capacity located on the same site. This project is the first of many and will be developed using best-in-class approaches for engaging with the local community and government, demonstrating deep care for the environment and working with partners with strong track records in project development and execution.



**Timeline:** Final investment decision 2026. Project start-up in 2029



**Products:** Group III+ Base Oils, GTL Naptha; GTL Diesel, with optionality to produce a GTL Transition Aviation Fuel (TAF).



**Feedstock:** 240 MMscf/d natural gas for each facility



**Job Creation:** Over 2,500 direct, indirect and induced jobs during construction; over 100 direct employment opportunities with an additional 2,000+ indirect and induced jobs during operations



**Production:** A nominal 24,000 bbl/day production for each facility

## About the Facility

This innovative facility will transform natural gas into unique, high-performance synthetic products, including industry-leading Group III+ base oils, ultra-low sulphur diesel and naphtha. GTL facilities incorporate proven processes and technologies to achieve this conversion. The first step of the GTL process is syngas generation, converting natural gas into synthesis gas. The second step, the Fischer-Tropsch (FT) process, involves a series of reactions to convert the synthesis gas into a waxy feedstock. The final step applies a suite of technologies to upgrade this waxy feedstock into high-quality final products.

GTL-derived products are higher quality and burn more efficiently than their crude oil-based counterparts. Cerilon's ultra-low sulfur diesel is virtually odourless, non-toxic, more readily biodegradable, and can be stored longer, making it suitable for use in sensitive or confined environments, like marinas or in underground mines. Cerilon will be the first significant producer of Group III+ base oils in North America. Use of these top-tier base oils increases energy efficiency, which creates fuel and greenhouse gas savings. The facility can also produce a synthetic aviation fuel (straight/synthetic paraffinic kerosene), which Cerilon refers to as Transition Aviation Fuel (TAF). TAF produced using natural gas in a facility that includes CCS can play an important role in the transition to sustainable aviation fuel.

The inclusion of pre-combustion carbon capture makes this the lowest-carbon footprint GTL facility in the world. This energy transition solution will bring social, economic and environmental benefits while also producing useful, lower-carbon products. Cerilon is establishing global, industry-leading partnerships to deliver this pioneering GTL facility, which will be followed by replicated GTL facilities.

## Current Status

Cerilon is focused on establishing commercial and financial arrangements for the facility and is progressing with engineering and permitting to achieve a target start-up in 2029. Cerilon has continued to progress the project development consistent with its master project plan and continues to appreciate the strong support provided by all stakeholders. Financing for construction is progressing as planned.

The facility requires a number of State and County authorizations for siting and environmental components. Key permits are issued by the North Dakota Department of Environmental Quality, the North Dakota Public Service Commission and Williams County. Cerilon has submitted all major permit applications and anticipates that these regulatory reviews will be complete by the end of 2024.

The project is currently progressing into front-end engineering and design (FEL 3), supported by Worley as the engineering contractor.

## Strategic Site Selection

The site for Cerilon GTL North Dakota was selected for its proximity to natural gas supply through the Northern Border Pipeline; access to rail and road loading facilities to support product shipment with limited additional infrastructure required; proximity to the Cochin pipeline, a major offtake transport option for naphtha; access to sufficient electrical power for startup and for interconnection to the grid to supply excess electricity; access to other utilities and services; and suitable geology for carbon capture and sequestration (CCS).







# CERILON

A local, stable, responsible and reliable domestic supplier of superior products

## Our GTL Products

### Base Oils



**High VI, pour point properties, good oxygen stability, top-tier volatility and cold-flow properties, clear and water-white, virtually odourless.** Cerilon's base oils will be premium quality synthetic fluids classified as Group III+ base oils, which are the best base oils currently available. Use of these base oils increases engine efficiency and creates fuel and greenhouse gas emission savings. These top tier Group III+ base oils will have many uses in energy transition and lower-carbon applications, including as specialty fluids in hybrid electric vehicles, high quality lubricants that improve fuel efficiency for gasoline-powered engines and as industrial lubricants in a wide range of applications. Cerilon will be the first significant producer of Group III+ base oils in North America, reducing the need to import these products.

### GTL Diesel



**Ideal for both hot and extremely cold climates, low emissions, very high cetane (>70 compared to 44 conventional), clear water-white appearance, non-toxic to aquatic organisms, and readily biodegradable.** Cerilon's ultra-low sulfur diesel will be a drop-in alternative for crude oil-based diesel that offers a higher cetane level and cleaner engine burn with reduced emission levels. Unlike conventional diesel, GTL diesel is non-toxic, nearly odourless and is readily biodegradable. Its low-sulfur makeup means it has a longer storage capability, making it suitable for military applications.

### GTL Naphtha



**Highly paraffinic, essentially aromatics free, nominally no sulfur, virtually odourless, clear water-white appearance.** Naphtha is a mixture of hydrocarbons that can be sold for further processing or used as a diluent in the Canadian oil sands for pipeline transport.

### GTL Transition Aviation Fuel (TAF)



**Highly paraffinic, essentially aromatic free, nominally no sulfur, virtually odorless.** GTL Transition Aviation Fuel (TAF) is a high quality, synthetic, middle distillate fuel (straight/synthetic paraffinic kerosene) derived from natural gas that can be used as a fully fungible, drop-in aviation fuel to contribute towards reducing greenhouse gas emissions.



## Project Economics

Cerilon's 30-plus year economic model paired with long-term energy price forecasts by the US Energy Information Administration (EIA) and other recognized forecasting bodies show stable, attractive financial returns, using long-term conservative assumptions. The financial strength of the project is enabled by:

- An optimized product mix,
- Limited domestic production relative to total local demand for our Group III+ base oils, further underpinned by forecasted growing demand in North America for these products, and
- The high purity levels of all products planned, and abundance of locally available natural gas, as well as other unique properties of the products.

## Related Media Releases

- **September 27, 2024:** [North Dakota Public Service Commission Approves a Certificate of Site Compatibility](#)
- **June 4, 2024:** [Cerilon GTL ND Moves into FEED](#)
- **May 1, 2024:** [Cerilon Awards GTL Project Agreement to Worley](#)
- **April 4, 2024:** [Williams County Approves the Conditional Use Permit for Cerilon GTL North Dakota](#)
- **March 13, 2024:** [Cerilon and Chevron Enter Into Technology Licencing agreements](#)
- **November 7, 2023:** [Soci t  Generale To Act as Financial Advisor](#)
- **March 15, 2023:** [Worley to Engineer Cerilon North Dakota Gas-to-Liquids Facility](#)
- **March 9, 2023:** [ABB Wins Automation Contract for Cerilon's First Gas-to-Liquids Plant](#)

## Project Benefits



**Enhanced opportunities.** New technology, business opportunities, quality jobs and tax revenue to the County and the State.



**Environmental responsibility.** An environmentally responsible solution to excess natural gas production and takeaway limitations.



**Energy security.** Strategic energy self-sufficiency and security by using existing and future gas supplies to generate premium quality synthetic energy products in the state.



**Improved local services.** Impetus for improved local utilities and services.



**Downstream industry growth.** Contribution to the growth of North Dakota's downstream industry.



**Lower-carbon solution.** Supports North Dakota's carbon neutrality goals.

Last Edited: 01-Nov-2024