

# Investing in Michigan's future

Life takes energy, and Line 5 has delivered it safely for more than 65 years. Line 5 helps heat Michigan homes, schools, hospitals, and businesses, fuels vehicles, and powers industry by safely and reliably transporting light crude oil, light synthetic crude oil and natural gas liquids (NGLs).

Michigan families and businesses rely on the energy transported through the 645-mile, Line 5 pipeline that originates in Superior, Wisconsin, travels through Michigan's Upper and Lower peninsulas, and ends in Sarnia, Ontario, Canada. Area-refineries also rely on Line 5 to produce the fuel that powers the agricultural industry, and the cars, buses, boats, and trucks that keep Michiganders on the go. In addition to manufacturing, product from Line 5 supports tourism, wineries and other businesses residents and tourists alike have come to know.

Consider the transportation alternatives to Line 5:

- 2,000 trucks one way per day.
- 800 rail cars one way per day.



## Great Lakes Tunnel Project

Placing the pipeline in a new Great Lakes Tunnel will provide extra layers of safety and environmental protection making a safe pipeline even safer, while creating Michigan jobs and securing the energy consumers in Michigan and the region rely on every single day to live their lives and fuel the economy.

The Great Lakes Tunnel Project will house a replacement segment of Line 5 in the Straits. It also will protect one of the most important natural resources in the world by eliminating the risk of an anchor strike and virtually eliminating the potential of any release from Line 5 into the Straits.

The Great Lakes Tunnel Project is undergoing extensive state and federal review and is moving forward. In January 2021, the Michigan Department of Environment Great Lakes and Energy (EGLE) completed its review and issued permits for the Great Lakes Tunnel Project to relocate the portion of the Line 5 pipeline that runs along the bottom of the Straits of Mackinac. The EGLE permits are an important milestone for the Great Lakes Tunnel Project and are part of the process to authorize its construction.

A certificate is also needed from the Michigan Public Service Commission (MPSC) to relocate the segment of pipeline into the Great Lakes Tunnel. Enbridge filed for this permit in April 2020 and anticipates approval in the summer of 2022.

In addition, permits are also required from the United States Army Corps of Engineers. These Corps permits include an Environmental Impact Study (EIS) of the project prior to issuing permits.



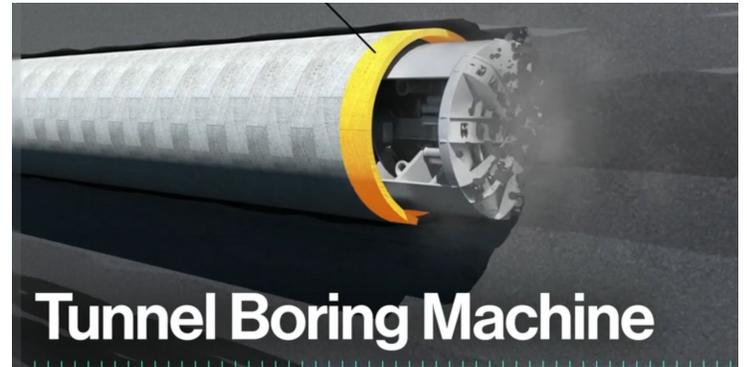
- > Subsurface data for tunnel design was collected in 2019 from the Highland Eagle, a drilling vessel supporting the required geotechnical work for this effort.

### Economic Impact

As a large construction project in northern Michigan, the tunnel will provide well-paying jobs for Michigan workers. It will also enhance environmental protections while continuing to meet the fuel and other energy needs on which area families, businesses, manufacturers, and tourism, rely.

## Design Highlights

- The tunnel will be constructed in accordance with the Tunnel Agreement entered between Enbridge and the Mackinac Straits Corridor Authority (Authority).
- Enbridge's and the Authority's teams, including the contractors retained by Enbridge developed the design of the tunnel.
- The tunnel design has been finalized. The tunnel will be bored through rock any where from 60 to 250 feet below the lake bed, using an apparatus called a tunnel boring machine.
- The Tunnel will be constructed from the south side of the Straits and traveling north which will minimize environmental impacts while allowing safe construction, operation and maintenance of the tunnel. Work on the south side would be confined to 25 acres owned by Enbridge and on land owned by other utilities with which Enbridge has easement agreements. Enbridge will



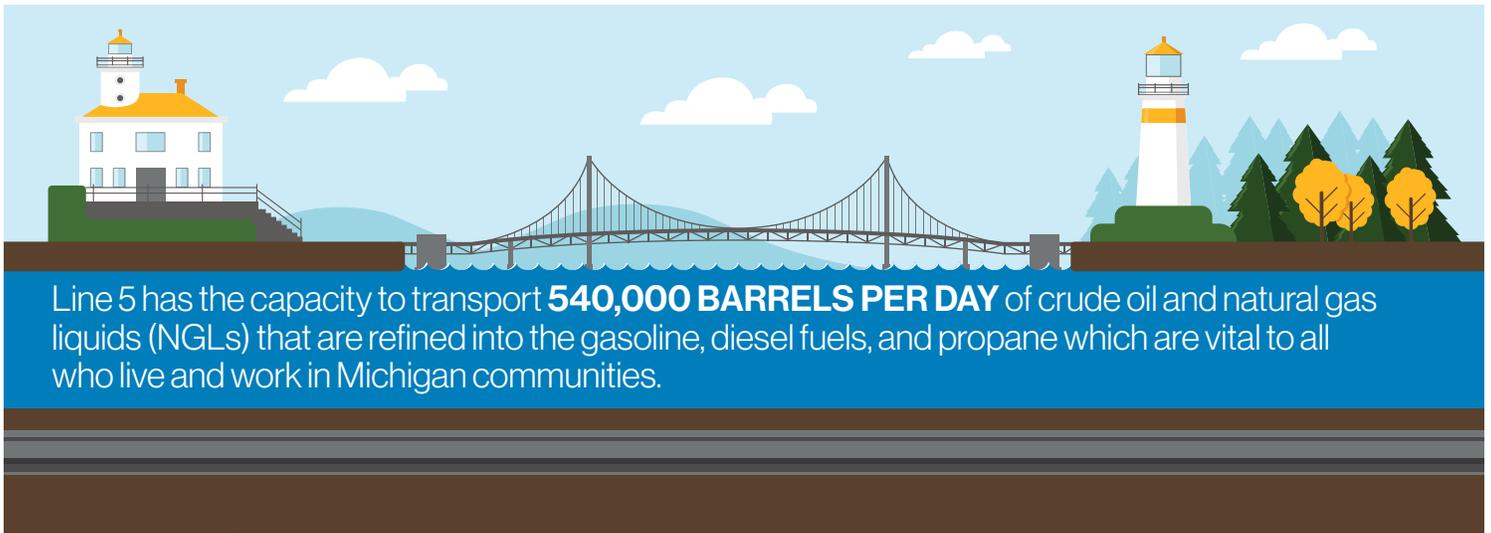
maintain an approximately 115-foot buffer from the shoreline of Lake Michigan. There are no wetlands, protected species or significant cultural resources within this proposed workspace.

- The tunnel boring will end on the north side of the Straits, using workspace within approximately 16 acres owned by Enbridge. To help minimize the extent of impacts on natural resources, the workspace primarily will be located within uplands to avoid forested wetlands. Enbridge will maintain at least a 50-foot buffer from the shoreline of Lake Michigan. Some protected plant species will be impacted on the north side and we will work with the applicable agencies to offset these impacts.

## Environmental

The Tunnel will be designed and constructed to mitigate potential impacts to the environment. Enbridge is committed to minimizing environmental impacts not only throughout construction but after the replacement segment of Line 5 is in operation.

- Contractors will stockpile topsoil and reuse it for site restoration.
- Rock cuttings from the tunnel also might be used as structural fill. Cuttings not suitable for reuse will be stockpiled separately and removed from the site.
- All water generated as part of the boring activities will be cleaned prior to discharge.



Line 5 has the capacity to transport **540,000 BARRELS PER DAY** of crude oil and natural gas liquids (NGLs) that are refined into the gasoline, diesel fuels, and propane which are vital to all who live and work in Michigan communities.

### Anticipated Schedule

Enbridge will continue to advance the project, which Enbridge will pay for, and which nearly 70% of Michiganders support. Once we receive all permits, we are committed to starting construction within the timeframe stated in the Tunnel Agreement with the State of Michigan.

### What Line 5 Makes Possible

From vehicles to hand sanitizers to mobile phones, computers, and aviation fuel supplying more than half of the jet fuel to the Detroit Metropolitan Airport, Line 5 is critical to all aspects of daily living. Product from Line 5 is essential to manufacturing more than 6,000 items, including clothing, medicine, vitamins, shampoo, toothpaste, medical equipment, and other necessities and products used every day.

Additionally, Line 5 meets 55 percent of Michigan's propane needs. Families and businesses in the Upper Peninsula alone rely on Line 5 to meet 65 percent of their propane needs, which in turn heats their homes, provides hot water and helps them prepare warm meals.



Tax revenue is used for schools, transportation, community projects, and other services that help sustain our quality of life

### Construction Jobs: Tunnel and L5 Straits Pipeline Segment Replacement

We anticipate that over two million work hours will be needed to complete this project and Enbridge is committed to using Michigan labor.

Energy shortages impact quality of life from home heating, to transportation of goods and people, as well as business and industry. While we welcome alternative energy solutions, there is a need and a place for reliable North American petroleum supply here in Michigan.



## Energy Diversity

Since our initial investment in wind power in 2002, we've committed more than \$6 billion (US) in capital to renewable energy and power transmission projects either in operation or under construction. These projects, include wind, solar, geothermal and waste heat recovery, and have the capacity to generate nearly 2,172 megawatts (MW) net of zero-emission energy. That's enough to meet the electricity needs of nearly 962,000 homes, based on net generation figures.

We believe that working toward lower impact energy solutions is in everyone's best interest. Our portfolio of renewable energy projects is diversified and growing.



## The big picture: Connecting supply with demand

