

Enbridge is proposing to build the Line 5 tunnel beneath the Straits of Mackinac to satisfy requirements of an agreement made with former Michigan Governor R. Snyder. Enbridge could continue pumping product through Line 5 if Enbridge proposed and worked toward constructing a tunnel. Enbridge now states the tunnel must be constructed because the Line 5 pipeline (s) are deteriorating and unsafe. The proposed tunnel is equally dangerous.

Enbridge Line 5 Tunnel project is unnecessary, poses severe environmental impact to the Straits of Mackinac, the Great Lakes waters, shorelines, and ecology, worsens the climate crisis by increasing greenhouse gas emissions, threatens Michigan economically, violates treaty rights of the Bay Mills Indians, and is dangerous due to the risk of explosions during and after tunnel construction with potential for associated or subsequent pipeline rupture.

Michigan does not need the Enbridge Line 5 Tunnel or the Line 5 pipeline.

- **Alternatives to the Line 5 tunnel** – Environmental Defense Canada published a report detailing how Line 5 could be shuttered in an orderly fashion with little effect on consumers. Line 78, constructed to replace Line 6B that ruptured, also goes to Sarnia and if used at full capacity could nearly accommodate the Line 5 product. Existing rail and tankers could make up a residual shortfall. These data do not account for the proposed transition to renewable energy by Michigan, Ontario, Quebec and the United States and Canada which will diminish fossil fuel demand over the next 10 years.

https://environmentaldefence.ca/wp-content/uploads/2022/02/Closing_Enbridge_Line_5_Pipeline.pdf

- **Gasoline/propane cost impacts** – Gasoline prices will not increase substantially if the tunnel is not built and Line 5 is shuttered, according to Neil K. Earnest, an independent energy industry consultant employed by Enbridge Energy. “My estimate of the increase in Wisconsin transportation fuel prices is the same as that for Michigan gasoline prices, i.e., approximately 0.5 cents per gallon,” wrote Neil K. Earnest. Enbridge Energy court documents suggest an increase of 2 cents/liter for gasoline in Ontario, Canada. A similar 0.5 cent increase per gallon was estimated for jet fuel and diesel in Michigan and Wisconsin.
- **Propane supply for the Upper Peninsula** – The amount of propane removed from Line 5 for some Upper Peninsula residents is small. We need alternatives to Line 5 propane in case of supply disruptions. Cost effective alternatives include:
 - One rail car per day to transport propane from Superior to Rapid River OR
 - Three to four tank trucks per day to transport propane from Superior to Rapid River OR
 - Increasing the rail deliveries of propane to the existing facility at Kincheloe.

*It is important to note that heat pumps and increased solar energy in the Upper Peninsula will also reduce propane use and requirements, as will warmer winters.

Gary Street M.S., P.E., retired Dow Chemical Facilities Engineer,

https://www.oilandwaterdontmix.org/ensuring_an_uninterrupted_propane_supply_to_michigans_upper_peninsula

The Enbridge Line 5 tunnel and pipeline pose environmental hazards.

- **Greenhouse gas emissions/climate change** – “When compared to a scenario in which the existing Line 5 pipeline no longer operates, construction and operation of the proposed Line 5 tunnel project and pipeline would lead to an increase of about 27 million metric tons of CO₂e annually in global greenhouse gas emissions from the production

and combustion of oil.” Peter Erickson, greenhouse gas emissions expert and senior scientist at the Stockholm Environmental Institute affiliated with Tufts University.

- <https://elpc.org/news/listen-to-the-experts-line-5-permit-must-be-denied/>
- **Surface water impacts/lake bottom impacts** – The risk that the current Line 5 pipelines rupture during the tunneling process is not 0 and could be increased by the tunnel boring and lakebed excavation. The current pipelines, designed with a 50-year life span, are 69 years old, damaged by anchor strikes with thinning walls and eroded surface coating.

Risk = consequences X probability of failure. The consequences of an oil spill are enormous, and the probability of failure is not 0 given the age and integrity of the pipelines, the harsh and unpredictable conditions of the Straits of Mackinac and the weather that impedes 24/7 year-round monitoring. Dr. Seymour Spence, associate professor of Environmental Engineering, University of Michigan

- <https://news.engin.umich.edu/2021/05/the-future-of-line-5-engineering-under-lake-michigan/>

Construction of the Enbridge Line 5 Tunnel is too dangerous.

Geotechnical engineering impacts – Geological engineers reviewed Enbridge’s tunnel plans, geological survey data, and risk assessment. Enbridge changed the tunnel design, making the tunnel more economical but more dangerous, invalidating the original safety study. The proposed tunnel construction site beneath the Straits of Mackinac is poor quality bedrock with fault zones, unconsolidated sediment, and high ground water pressures, reported Brian O’Mara, geological engineer, and tunnel project expert. Enbridge reported that there are no gas hazards at the site, but methane gas was detected at the site.

Mike Wilczynski, hydrogeologist, and former Senior Geologist with the Department of Environmental Quality is concerned about the 5 million gallons of wastewater per day containing bentonite clay that Enbridge proposes dumping into Lake Michigan from the tunnel construction. The bentonite discharge could cause huge environmental harm, including to fishing industries and drinking water.

https://www.oilandwaterdontmix.org/red_flags_about_the_proposed_enbridge_great_lakes_tunnel_project?gclid=EAlaIqobChMI1PWZ6-Ds-QIVmMDICh0iEQFUEAAYASACEgl-2_D_BwE

https://d3n8a8pro7vhmx.cloudfront.net/oilandwaterdontmix/pages/26/attachments/original/1644926523/Brian_O'Mara_MSCA_Comments_Feb_16_2022.pdf?1644926523

Risk of tunnel explosion – Gary Street and Brian O’Mara, both geological engineers, are concerned about explosion caused by methane and/or sulfur dioxide during tunnel construction or after the tunnel is constructed. An explosion would be devastating environmentally, economically, and result in loss of human life.

<https://www.watershedvoice.com/2022/04/08/column-why-the-enbridge-line-5-tunnel-is-a-pipe-bomb-at-the-straits/>

- **Economic impacts** – Michigan State University and lead investigator Professor Robert B. Richardson, estimate that a spill in the Straits of Mackinac caused by a Line 5 breach could have an economic impact exceeding \$6.3 billion.
 - \$697.50 damaged natural resources and mitigation costs
 - \$4.8 billion lost tourism revenue
 - \$61 million impact to commercial fishing
 - \$233 million impact to municipal water systems
 - \$485 million in economic impact to coastal property values
 - Richardson, RB, Brugnone, N. Oil spill economics: estimates of the economic damages of an oil spill in the Straits of Mackinac in Michigan. https://forloveofwater.org/wp-content/uploads/2018/05/FLOW_Report_Line-5_Final-release-1.pdf
 - https://www.mlive.com/news/grand-rapids/2018/05/study_puts_63_billion_price_tag.html

Construction of a tunnel in the Straits of Mackinac violates indigenous people's rights.

- **Indigenous community impacts** – The proposed Line 5 tunnel violates the Bay Mills Indian's treaty rights. The Treaty of 1836 guaranteed the Anishinaabeg hunting and fishing rights along the Straits of Mackinac and Lake Huron. Tunnel construction could disrupt sacred Anishinaabeg landmarks on the floor of the Mackinac Straits.
 - <https://www.narf.org/cases/enbridges-line-5-pipeline/#:~:text=On%20August%2012%2C%202020%2C%20a,members%20against%20oil%20giant%20Enbridge.>

Enbridge acted irresponsibly defying Michigan's Public Trust Doctrine.

- **Is Enbridge Energy trustworthy?**
 - Enbridge Line 5 spilled 33 times and 1.1 million gallons of product.
 - Enbridge Line 6B spilled 1.1 million gallons of oil into the Kalamazoo River, remained undetected by Enbridge despite safety concerns, creating the 2nd largest inland oil spill in United States history.
 - Enbridge was not forthcoming about damage to Line 5 including the status of the protective coating covering the pipeline, anchor strikes to the pipelines within the Straits of Mackinac, and loss of supports to the pipeline, leaving it suspended above the lake floor.
 - Enbridge received fines of \$1.8 million because they did not properly inspect Line 5 and other pipelines.