



Ensuring the Waters of the Great Lakes Basin Are
Healthy, Public, and Protected for All

October 14, 2022

VIA ELECTRONIC MAIL TO: katie.l.otanez@usace.army.mil

Katie L. Otanez

U.S. Army Corps of Engineers – Detroit District

477 Michigan Avenue

Detroit, Michigan 48226

RE: FLOW Scoping Comments – Notice of Intent to Prepare a Draft Environmental Impact Statement for the Enbridge Line 5 Tunnel Project, Mackinac and Emmet Counties, Michigan

Dear Ms. Otanez:

Thank you for the opportunity to comment on the U.S. Army Corps of Engineers’ (“Corps”) scoping of Enbridge’s Line 5 Tunnel Project (the “Project”). As a law and policy center whose mission is to ensure the Great Lakes are healthy, public, and protected for all, For Love of Water (“FLOW”) believes that an orderly shutdown of Enbridge’s Dual Pipelines in the Straits of Mackinac is imperative. We do not, however, support tethering the shutdown of the existing Dual Pipelines to a Project that will not resolve underlying the environmental and cultural concerns about siting a major oil pipeline in the middle of America’s greatest surface freshwater resource.

Although a federal agency always has an obligation under the National Environmental Policy Act (“NEPA”) to take a “hard look” at the environmental consequences of a project proposal in an Environmental Impact Statement (“EIS”), *see League of Wilderness Defs.-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1075 (9th Cir. 2012), the Corps’ duty here is magnified by the intense public interest in Enbridge’s Project. The public is deeply concerned about the risk of a catastrophic tunnel explosion, the economic feasibility and environmental impacts of constructing the tunnel, and the long-term climate impacts of the Project. The public needs more information than Enbridge has provided to understand the risks and benefits of the Project.

FLOW is submitting these comments with two objectives in mind. First, we want to ensure that the Corps corrects certain structural deficiencies in the Notice of Intent that will otherwise prevent the agency from taking the requisite hard look at Enbridge’s Project. Second, we want to inform the Corps’ substantive analysis of the market and regulatory conditions related to Enbridge’s Project. In short, as Enbridge implicitly concedes, there is no long-term public need for the Project from an energy standpoint, and the Project would undermine federal greenhouse-gas reduction policies.

I. Structural Concerns

A. Regionalize the Purpose and Need Statement

The Corps' NEPA Implementation Procedures specify that "the scope of analysis used for analyzing both impacts and alternatives should be the same scope of analysis used for analyzing the benefits of a proposal." 33 C.F.R. § Pt. 325, App. B, § 7(b)(3). The Corps' Notice of Intent does not comply with this scoping rule because it references the regional and international benefits of Line 5 but proposes a Purpose and Need Statement that is hyper localized:

The purpose of the project is to provide transportation of light crude oil, light synthetic crude oil, light sweet crude oil, and natural gas liquids *between Enbridge's existing North Straits Facility and Mackinaw Station*, and to approximately maintain the existing capacity of the Line 5 pipeline while minimizing environmental risks.

NOI, p. 50076 (emphasis added). To properly scale the scope of analysis, the Purpose and Need Statement must be revised to replace the italicized, local endpoints with Line 5's regional endpoints—Enbridge's Superior, Wisconsin, and Sarnia, Ontario, terminals. This connection is what secures the purported regional benefits Enbridge wishes to provide. Enbridge's proposed tunnel is merely the company's preferred way of routing one portion of Line 5.

The Corps is not obligated to "to prioritize an applicant's goals over other potentially relevant factors, including effectively carrying out the agency's policies and programs or the public interest." National Environmental Policy Act Implementing Regulations Revisions, 87 FR 23453-01; *see also Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997) (recognizing that "the Corps has the duty under NEPA to exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project") (quotation marks omitted). This is especially true where, as here, an applicant's preferred statement would preordain the proposed action. *Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1070 (9th Cir. 2010) ("An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency's power would accomplish the goals of the agency's action, and the EIS would become a foreordained formality.") (quotation marks omitted).

Regionalizing the Purpose and Need Statement is also warranted because Enbridge's 645-mile Line 5 pipeline is almost 70 years old and past the end of its projected operational life. As Line 5 needs a systemic makeover to keep operating for another 99 years, Enbridge's Project should not be segmented and evaluated in isolation from the entire operation. This is particularly true given that a federal court recently determined that Enbridge is trespassing on the Bad River Reservation in northern Wisconsin. Whatever the remedy in that case, it is likely to have significant repercussions on the configuration and/or operation of Line 5.

B. Incorporate the Public Interest in Maximizing Great Lakes Protection into the Purpose and Need Statement

The Corps' Purpose and Need Statement in the Notice of Intent is also deficient for lack of recognition of the public interest in protecting the Great Lakes. At a time when much of the world is suffering from extreme water shortages, maximizing protection of the Great Lakes must be an explicit objective. The Great Lakes contain 84% of North America's fresh surface water and are the cultural backbone for eight states, two provinces, and multiple tribes and First Nations. With the country confronting chronic drought and other costly impacts from climate change, protection of the largest and most valuable surface freshwater system in the world is an economic and environmental imperative. Relegating the public's interest in averting a major oil spill in, under, or near the Straits of Mackinac to a vague clause at the end of the statement fails to acknowledge the importance of protecting this globally unique resource.

The Corps' NEPA regulations expressly authorize the agency to expand the Purpose and Need Statement in this manner:

whenever the NEPA document's scope of analysis renders it appropriate, the Corps also should consider and express that activity's underlying purpose and need from a public interest perspective

33 C.F.R. § Pt. 325, App. B, § 9(b)(4). Bearing in mind that a principal purpose of the EIS is to inform the Corps' public interest determination under Section 10 of the Rivers and Harbors Act, the Purpose and Need Statement should give primacy to the protection of the Great Lakes over Enbridge's private, profit-driven interest. To the extent that the public has an interest in bringing a certain quantity of petroleum projects to market, it is immaterial whether those products come from Line 5 or any other source as long as market conditions remain stable. Enbridge's own expert has determined that a Line 5 shutdown would have a de minimis impact on fuel prices.¹

C. Consider a Range of Reasonable Alternatives to Meet the Revised Purpose and Need Statement

In order to meet the objectives of a Purpose and Need Statement that focuses on the connection between Enbridge's Superior and Sarnia terminals and gives primacy to the public's interest in maximizing protection of the Great Lakes, the Corps should, at a minimum, consider the following alternatives:

1. An alternative to connect Enbridge's Superior and Sarnia terminals without crossing the Great Lakes.

¹ Expert report of Neil K. Earnest, President, Muse Stancil & Co., p. 72 (concluding that an immediate shutdown of Line 5 would impact regional gas prices by approximately one-half cent per gallon), *available at* <https://assets.nationbuilder.com/oilandwaterdontmix/pages/3717/attachments/original/1654628101/Report-expert-Enbridge-expert-Neil-Earnest-Muse-Stancil.pdf?1654628101>

2. An alternative to use existing capacity in other pipelines and, if necessary, other transportations solutions—such as rail and truck transport of natural gas liquids—in lieu of building new pipeline infrastructure.²
3. A tunnel alternative that fully eliminates the risk of oil intrusion into the Straits of Mackinac in the event of an explosion or similar event.
4. A “no action” alternative.

D. Require Enbridge to Provide Missing Information to Inform Consideration of Each Alternative

The Corps must evaluate the reasonably foreseeable adverse effects of each alternative. *See* 40 C.F.R. § 1502.21(a). The term “‘reasonably foreseeable’ includes impacts that have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.” *Id.* § 1502.21(d). If the Corps lacks “available information relevant to reasonably foreseeable significant adverse impacts . . . essential to a reasoned choice among alternatives, and the overall costs of obtaining it are not unreasonable, the agency shall include the information in the environmental impact statement.” *Id.* § 1502.21(b). Line 5 currently generates about \$1.5 million in revenue each day; therefore, cost should be no obstacle in using available information to close any material data gaps necessary to fully explore each alternative.³

With respect to Enbridge’s preferred alternative, there are critical data gaps in Enbridge’s geotechnical analysis. Experts in geotechnical engineering and tunneling⁴ have reviewed the existing information and technical reports produced by Enbridge and have concluded that the Project’s geotechnical work completed thus far is inadequate and raises serious concerns regarding the feasibility, integrity, and planning for the construction of the tunnel. The EIS must undertake a complete engineering review of the existing data and technical information.

i. Limitations of the Geotechnical Work Completed

Among the identified concerns, Enbridge’s Geotechnical Data Report (“GDR”) reveals that Enbridge completed only 20 borings over the 19,000 feet of open water, roughly one boring for every 950 feet. The recommended spacing for the adverse conditions (identified in the GDR) is 100 to 200 feet for hard rock tunnels and 50 to 100 feet for mixed face tunnels. The closest

² This alternative is discussed in detail on pages 7-10 of the attached amicus brief filed by the Great Lakes Business Network in the Bad River Band’s federal case against Enbridge. The evidence cited therein demonstrates that Enbridge can use existing capacity in other pipelines it owns to transport a substantial portion of Line 5’s existing volume of petroleum products. Other entities would be able to meet any remaining demand shortfall at refineries currently served by Line 5.

³ MLive, Whitmer threatens profit seizure as Enbridge Line 5 closure deadline looms, <https://www.mlive.com/public-interest/2021/05/whitmer-threatens-profit-seizure-as-enbridge-line-5-closure-deadline-looms.html>

⁴ Brian O’Mara has over 30 years of professional consulting experience in geo-environmental engineering and construction. His portfolio includes deep experience with tunneling, geology, and hydrogeology on behalf of oil and gas companies, as well as public sector clients such as the Michigan DEQ, USEPA, and other regional, county, and municipal clients. FLOW’s comments incorporate Mr. O’Mara’s findings.

borings completed were spaced more than 300 feet apart and the maximum spacing between borings approached 1,800 feet or nine times (900 percent) farther than recommended. Based on the borehole identification numbers provided in the GDR and obvious spacing gaps between some borings, it is clear that Enbridge planned to complete eight additional open water borings. The GDR does not discuss why these borings were not completed.

ii. Findings of Poor Rock Quality

Analysis of the rock coring logs and the rock core photographs reveals extremely poor rock quality. The bedrock is described as “fractured” more than 700 times and “extremely fractured” 366 times in the GDR. The bedrock is described as “extremely weathered” or “highly weathered” more than 200 times in the GDR. Based upon the Rock Classification Systems for Engineering Purposes (ASTM STP984-EB984), more than 75 percent of the rock cores collected beneath the Straits have “Very Poor” or “Poor” rock quality. Approximately 120 of the recorded values (more than 25 percent) were Zero, the absolute worst quality. As is often the case, the “Very Poor” to “Poor” Rock Quality Designation (“RQD”) values were not limited to the uppermost bedrock. Many of these low values were observed to persist for tens or hundreds of feet and in some cases persisted to the end of the boring. Rock quality should improve with depth, but this is often not the case in the rock cores collected. Per the ASTM STP984 guidance, “...low RQD values should be considered a ‘red flag’ for further action.”

The Michigan Public Service Commission (“MPSC”) in its July 27, 2022, Order also noted the “*evidence of highly fractured and brecciated rock*” in the proposed tunnel’s construction pathway.⁵ Enbridge’s geotechnical expert, Michael A. Mooney, Grewcock Chair Professor of Underground Construction & Tunneling, Colorado School of Mines, also affirmed the fact that Enbridge encountered “highly fractured rock” necessitating an unanticipated need for the tunnel to be constructed deeper below the lakebed.

“The depth to rock was determined to be deeper than assumed during the Alternative study and the resulting vertical profile takes the tunnel deeper in order to remain fully within rock. The geotechnical investigation also revealed highly fractured rock in places that would yield high groundwater pressures during construction.”⁶

These data directly contradict Enbridge’s assertion that the tunnel will be bored through solid bedrock. Poor rock quality and the likelihood of karst regions in the area formed from the dissolution of soluble rocks such as limestone, dolomite, have not been assessed adequately as part of the project planning and design. Because Enbridge’s characterization of subsurface geology is demonstrably inadequate, other risks cannot be adequately determined. For example, Enbridge indicates that a bentonite slurry will be injected at high pressure into the front chamber

⁵ MPSC Order in Case U-20763, p. 36 (“However, hydraulic conductivity testing of the rock at tunnel depth was very limited, especially within the middle of the alignment. When tests were available, there were indications of zones of higher hydraulic conductivity within the bedrock. There is also evidence of highly fractured and brecciated rock within the rock formations that the tunnel passes through.”), available at <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y000003Sdv8AAC>

⁶ MPSC Case U-20763, Corrected Direct Testimony of Michael Mooney, p. 19, available at <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000TVPVGA5>

of the tunnel boring machine (“TBM”) to balance earth and water pressures. Over-pressurization of the bentonite slurry can lead to a “blow-out” or “frac out” condition where the slurry is displaced well beyond the immediate vicinity of the TBM and can breach through the bedrock and overlying sediments.

iii. Potential Explosion Hazard

Other concerns include the determination that there was methane dissolved in groundwater that will “de-gas” when the water enters the much lower atmospheric pressure of the tunnel, shaft, and portal. If the methane concentration in air is between 5 and 15 percent, the Lower Explosive Limit (“LEL”) and the Upper Explosive Limit (“UEL”), respectively, it can lead to deadly and destructive explosions. The Dynamic Risk Report, upon which Enbridge and the state agencies relied, assumed there would be no methane present during construction.⁷ In its Order, the MPSC has determined that Enbridge must produce additional information concerning methods of reducing the risk of ignition “to enable the Commission to determine whether the potential risk of explosion in the tunnel may be further reduced or eliminated.”⁸

Finally, the construction of the proposed Project would take place directly subjacent to the western arm of Line 5 on the bottomlands of the Straits of Mackinac. Given the inadequate characterization of the subsurface geology as well as the known rock quality, the construction of the tunnel immediately below an active pipeline presents a clear-and-present danger to public health and safety and the environment. The continued operation of Line 5 transporting oil and natural gas liquids while construction is underway must be fully analyzed.

II. Enbridge’s Project Is Incongruous with Market and Regulatory Conditions

The Corps’ Notice of Intent specifically indicates that there will be an examination of “energy needs.” As Line 5 transports refined oil sourced from Albertan oil sands, it is important for the Corps to examine the demand-side energy needs for Albertan-sourced oil conveyed by Line 5. Given industry predictions of future demand-side constraints resulting from the electrification of transportation, the ongoing disinvestment in Albertan oil production, global legislative prohibitions on the sale of light-duty vehicles utilizing gasoline and diesel fuels, and the evolving global consensus to reduce greenhouse gas emissions to avoid the most catastrophic effects of climate change, the need for further infrastructure investment in a tunnel for Line 5 cannot be justified.

A. The Project Is Likely to Become a Stranded Asset

Enbridge, in recent filings with the Federal Energy Regulatory Commission (“FERC”) requested permission to “truncate” the depreciation period for its pipeline assets to 20 years in recognition that “decarbonization” efforts by federal, state, provincial, and local governments “may influence market demand for pipelines.” Enbridge’s filing with FERC constitutes an explicit

⁷ A deadly methane explosion killed 22 men who were constructing the Port Huron water intake tunnel, which extended some 5 miles beneath the lakebed of Lake Huron within similar bedrock formations.

⁸ MPSC Order in Case U-20763, p. 45, available at <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y000003Sdv8AAC>

acknowledgment that long-term, demand-side reductions for oil will depress market demand for pipeline services.

The assessment of the economic life of the pipeline is as important as the estimation of the physical life in the calculation of appropriate depreciation rates given the long-lived nature of pipeline assets. Unless otherwise stipulated pursuant to the terms of a Facilities Surcharge project, the remaining lives of all asset groups reflect a truncation date of December 31, 2040, based on an economic life review of the Lakehead system. There are several factors, considerations and uncertainties which support the use of a December 31, 2040 truncation date. These include current and anticipated competition to the Enbridge Mainline, actions by state and local governments and the uncertainty arising from the recent acceleration in the pace of Federal (United States and Canada), state/provincial and local governments passing decarbonization legislation or adopting policies that may influence the market demand for pipelines. An example of the latter is found in the recent issuance by President Biden of an Executive Order Page 6 of 13 1313 titled: “Tackling the Climate Crisis at Home and Abroad”, which unveiled detailed climate plans designed to meet his campaign promise that the United States achieves a 100% clean energy economy and net zero emissions no later than 2050.⁹

As acknowledged by Enbridge, long-term market trends and recent events strongly suggest the need for fossil fuel-related infrastructure is decreasing significantly. Reduced demand for transportation fuels will directly affect the future need for pipeline capacity. The construction of a tunnel to house the Line 5 pipeline is unneeded, unnecessary, and likely to become a stranded asset. Given that the proposed Enbridge tunnel has a projected service life of 99 years, prudence requires examination of future need for further pipeline infrastructure. The trends accelerating the reduction in future demand for transportation fuels are well documented.

B. The Electrification of Transportation

Petroleum industry economists are warning that peak oil demand is near or may have already arrived. British Petroleum’s chief economist recently explained why it will undertake a fundamental restructuring of its business model to invest in zero-carbon energy sources:

The advent of electric vehicles and the growing pressures to decarbonise the transportation sector means that oil is facing significant competition for the first time within its core source of demand. This has led to considerable focus within the industry and amongst commentators on the prospects for peak oil demand – the recognition that the combined forces of improving efficiency and building pressure to reduce carbon emissions and improve urban air quality is likely to cause oil demand to stop increasing after over 150 years of almost uninterrupted growth.¹⁰

Market indicators suggest that investment in new oil pipeline infrastructure is highly questionable in light of clear trends indicating a precipitous drop in oil consumption in future

⁹ Enbridge May 2021 Depreciation Study Update, filed with FERC on May 21, 2021.

¹⁰ BP, Peak oil demand and long-run prices, <https://www.bp.com/en/global/corporate/energy-economics/spencer-dale-group-chief-economist/peak-oil-demand-and-long-run-oil-prices.html>

years. Reduction in oil demand necessarily correlates with less need for pipeline carrying capacity.

The world's major automotive manufacturers are rapidly transitioning away from gasoline and diesel powered vehicles. All major global original equipment manufacturers are making clear that petroleum-free electric drivetrains will dominate their future manufacturing investments and that future product offerings will not use transportation fuels. General Motors has committed to “an all-electric future” and will phase out all gasoline-fueled vehicles by 2025.¹¹ Ford has joined with 27 European car manufacturers, pledging to make all light-duty vehicles and vans electric-powered by 2035.¹²

Analysis by the world's 8th largest bank, BNP Paribas, indicates that “the economics of oil for gasoline and diesel vehicles versus wind-and solar-powered electric vehicles (“EVs”) are now in relentless and irreversible decline, with far-reaching implications for both policymakers and the oil majors.”¹³

Authoritative sources predict dramatic reductions in U.S. consumption of transportation fuels. In 2021, the adoption of electric vehicles reduced oil demand in the U.S. by 3.3 percent—almost 1.5 millions of barrels of oil per day.¹⁴ Attainment of the Biden Administration's goal of 50 percent of all new light-duty vehicle sales being electric by 2030 would result in a 34-percent reduction in crude oil demand.¹⁵

According to Wood MacKenzie, if the U.S. were to attain a reduction in greenhouse gas emissions sufficient to meet the goal of stabilizing global temperature at or below 2 degrees Celsius, oil demand for transportation fuels would be reduced by 70 percent (35 million barrels per day).¹⁶

C. Divestment in Alberta Oil Sands

Oil sand oil transported by Enbridge faces significant market challenges as financial institutions, pension funds, and insurers withdraw support for both the production and transportation of Athabaskan oil. According to a recent survey of 250 institutional asset managers, nearly two-thirds indicated that peak oil demand will occur by 2030.¹⁷ Fifty-seven major financial

¹¹ GM, Our Path to an All-Electric Future, <https://www.gm.com/electric-vehicles>

¹² Ford, Ford Joins Appeal to the EU For 100% All-Electric Vehicle Sales By 2035, May 2022 <https://media.ford.com/content/fordmedia/feu/en/news/2022/05/17/ford-joins-appeal-to-the-eu-for-100--all-electric-vehicle-sales-.html>

¹³ Mark Lewis, Wells, Wires and Wheels, PNB Paribas, August 2019 <https://docfinder.bnpparibas-am.com/api/files/1094E5B9-2FAA-47A3-805D-EF65EAD09A7F>

¹⁴ Bloomberg NEF, Zero-Emission Vehicles Progress Dashboard, May 2022 <https://assets.bbhub.io/professional/sites/24/BloombergNEF-Zero-Emission-Vehicles-Progress-Dashboard-May-2022.pdf>

¹⁵ Forbes, Exponential Sales Of EVs Means Less Gasoline, Less Crude Oil, Less Greenhouse Gases, June 2022 <https://www.forbes.com/sites/ianpalmer/2022/06/18/exponential-sales-of-evs-means-less-gasoline-less-crude-oil-less-greenhouse-gases/?sh=34d80b4a6a1d>

¹⁶ Wood MacKenzie, What different scenarios tell us about the future of oil and gas, May 2021 <https://www.woodmac.com/news/the-edge/what-different-scenarios-tell-us-about-the-future-of-oil-and-gas/>

¹⁷ BCG, What Institutional Investors Think About the Future of Oil and Gas, January 2022 <https://www.bcg.com/publications/2022/how-investors-see-future-of-oil-gas>

institutions have indicated they will no longer fund oil sand related projects, including UBS, the World Bank, and HSBC, the largest bank in Europe.¹⁸ More broadly, to date, 1,508 institutional investors, representing \$40.4 trillion of assets under management have so far committed to divestment from fossil fuel-related companies.¹⁹

Similarly, the world's largest insurers and reinsurers including Lloyds, Hartford, Swiss Re, Munich Re, and AIG have announced that they will no longer provide insurance coverage for pipelines that convey oil from sands.²⁰

Recognizing that Albertan oil sands have the highest cost of production and will be the first to be curtailed with future reduced demand, seven international oil companies – Statoil, Koch Industries, Imperial Oil, ConocoPhillips, ExxonMobil, Marathon, and Royal Dutch Shell – have divested their interests in Albertan oil sands and will not need Enbridge's future pipeline services.²¹ Canada's carbon tax will further weaken market prospects for crude oil derived from oil sands over the near term. The current carbon tax of \$50 (CA) per ton will reach \$170 per ton by 2030, adding \$25 per barrel to the cost of Albertan crude.²² Alberta's challenge to the imposition of the carbon tax failed as the Canadian Constitutional Court upheld the imposition of the tax.²³

The accelerating divestment of oil sand interests specifically, and fossil fuel interests generally, by both financial institutions and the oil industry itself are clear and unambiguous indicators that further investment in the proposed Line 5 tunnel is unnecessary and imprudent.

D. Legislative Prohibitions on the Sale of ICE Vehicles

Further substantial reduction in the use of transportation fuels will result from the trend, now accelerating, by governmental entities enacting prohibitions on the sale and use of vehicles with

¹⁸ Institute for Energy Economics and Financial Analysis, <https://ieefa.org/oil-gas-divestment>

¹⁹ DivestInvest, <https://www.divestinvest.org/>

²⁰ Institute for Energy Economics and Financial Analysis, <https://ieefa.org/oil-gas-divestment>

²¹ **Statoil.** In December 2016, [Norway's Statoil](#) sold all of its oil sands assets at a loss and exited Western Canada altogether due to low oil prices, domestic pressure from Norwegians, and an "[energy market \(that\) has changed since \(2007\) quite considerably.](#)"

Koch Industries. Koch Industries has [ended plans to build its proposed Muskwa oil sands project](#) west of Fort McMurray.

Imperial Oil. Imperial Oil, the Canadian subsidiary of ExxonMobil, [announced it would "write down" 2.8 billion barrels](#) of its bitumen reserves in Alberta.

ConocoPhillips. ConocoPhillips has indicated that [2 billion barrels of its previously "proven" oil sands reserves](#) might have to stay in the ground. ConocoPhillips also suggested low global oil prices made the reserves uneconomical to produce.

ExxonMobil. ExxonMobil [reduced its reported reserves by 30 percent](#) reducing the value of oil sand assets.

Marathon Oil. Houston-based Marathon Oil [signed a deal to sell](#) its Canadian oil sands operations in an effort to cut the highest-cost assets from its portfolio.

Royal Dutch Shell. Shell sold off all of its oil sands assets for \$7.25 billion. The oil giant's CEO said that the oil sands "[are no longer a strategic fit for Shell.](#)"

²² OilPrice.com, Can Oil Sands be Banned? June 2021 <https://oilprice.com/Energy/General/Can-Oil-Sands-Be-Banned.html>

²³ New York Times, Canada Supreme Court Rules Federal Carbon Tax Is Constitutional, March 2021 <https://www.nytimes.com/2021/03/25/world/canada/canada-supreme-court-carbon-pricing.html>

internal combustion engines. California²⁴ and New York²⁵ have enacted laws banning the sale of new gasoline- and diesel-fueled cars after 2035. Massachusetts and Virginia have “trigger laws” that mandate the implementation of California’s prohibition on the sale of internal combustion engine (“ICE”) vehicles. Ten other states that follow California’s air quality transportation rules may also implement ICE vehicle prohibitions.

Like California and New York, the 27 countries comprising the European Union have banned the sale²⁶ of new petrol and diesel cars beginning in 2035—a timetable that is set to achieve a 55-percent reduction in CO₂ from automobiles in 2030 compared with 2021.²⁷ Significantly, Canada has also announced a prohibition on the sale of both automobiles and light duty trucks by 2035.²⁸ Enbridge is the “leading pipeline operator in Canada’s oil sands region, transporting 60% of U.S.-bound Alberta crude oil production . . . through 17,809 miles (28,661 kilometers) of active crude oil pipelines.” The ineluctable trend leading to the total prohibition on the sale of gasoline-powered vehicles within the next 13 years renders further multibillion-dollar investment in Line 5 infrastructure shortsighted, uneconomical, and reckless.

More than 30 cities and metropolitan areas around the world have signed the C40 Fossil-Fuel-Free Streets Declaration that mandates the use of electric buses by 2025 and prohibits the use of gasoline and diesel-powered vehicles within their jurisdictions by 2030.²⁹ A recent poll found that 63 percent of European city dwellers would support prohibiting the use of gasoline- and diesel-powered automobiles.³⁰ Meanwhile, the global electric bus market size is projected to grow from 112,041 units in 2022 to reach 671,285 units by 2027, at a compound annual growth rate (“CAGR”) of 43.1%, further reducing commercial demand for transportation fuels.³¹

E. Greenhouse Gas Emissions from Extension of the Life of Line 5

In its various applications for permits and authorizations to construct a tunnel, Enbridge indicates that the design life for the tunnel is 99 years. To reap the benefits of this investment, Enbridge

²⁴ New York Times, California to Ban the Sale of New Gasoline Cars, August 2022

<https://www.nytimes.com/2022/08/24/climate/california-gas-cars-emissions.html>

²⁵ Clean Technica, New York Governor Signs Bill Banning Sale Of ICE Vehicles After 2035, September 2021

<https://cleantechnica.com/2021/09/09/new-york-governor-signs-bill-banning-sale-of-ice-vehicles-after-2035/>

²⁶ Enbridge website, Liquid Pipelines, [https://www.enbridge.com/about-us/liquids-](https://www.enbridge.com/about-us/liquids-pipelines#:~:text=Enbridge%20operates%20the%20world's%20longest,km)%%20of%20active%20pipe%20in)

[pipelines#:~:text=Enbridge%20operates%20the%20world's%20longest,km\)%%20of%20active%20pipe%20in](https://www.enbridge.com/about-us/liquids-pipelines#:~:text=Enbridge%20operates%20the%20world's%20longest,km)%%20of%20active%20pipe%20in)

²⁷ Reuters, EU lawmakers back ban on new fossil-fuel cars from 2035, June 2022

<https://www.reuters.com/business/autos-transportation/eu-lawmakers-support-effective-ban-new-fossil-fuel-cars-2035-2022-06-08/>

²⁸ Reuters, Canada to ban sale of new fuel-powered cars and light trucks from 2035, June 2021

<https://www.reuters.com/world/americas/canada-ban-sale-new-fuel-powered-cars-light-trucks-2035-2021-06-29/>

²⁹ Survey of Global Activity to Phase-Out Internal Combustion Engine Vehicles, April 2020 Revision,

[https://theclimaticenter.org/wp-content/uploads/2020/04/Survey-on-Global-Activities-to-Phase-Out-ICE-Vehicles-04.06.2020.pdf](https://theclimatecenter.org/wp-content/uploads/2020/04/Survey-on-Global-Activities-to-Phase-Out-ICE-Vehicles-04.06.2020.pdf)

³⁰ Euronews, 63% of European city dwellers want a ban on petrol and diesel cars, December 2021

<https://www.euronews.com/green/2021/04/12/63-of-european-city-dwellers-want-a-ban-on-petrol-and-diesel-cars>

³¹ Research and Markets, Global Electric Bus Markets Report 2021-2027, march 2022

<https://www.globenewswire.com/en/news-release/2022/03/21/2406597/28124/en/Global-Electric-Bus-Markets-Report-2022-2027-Reduction-in-Battery-Prices-Increasing-Demand-for-Emission-Free-and-Energy-Efficient-Mass-Transit-Solutions.html#:~:text=The%20global%20electric%20bus%20market,electric%20bus%20and%20coach%20market>

will need to replace the entirety of the aging 645-mile Line 5 system. Such continued investment is at odds with the scientific imperative to reduce greenhouse gas (“GHG”) emissions. If Enbridge were to operate Line 5 for that duration, the GHG emissions associated with the pipeline would exceed 2.7 billion tons.

The Army Corps’ Notice of Intent states that “*climate change, including greenhouse gas emissions and the social cost of greenhouse gases*” are factors that will be examined.³² Expert scientists have already written comprehensive reports detailing the adverse climate impacts of Enbridge’s Project and concluded:

When compared to shutting down Line 5 and not investing in more fossil fuel infrastructure, building the tunnel would result in an estimated 27 million metric tons of CO₂ emitted every year. This is the equivalent of adding 6.8 new coal-fired power plants or nearly 6 million new cars to the road in terms of greenhouse gas emissions.³³

The oil sand oils transported by Line 5 have the highest GHG emission profile. Cumulative GHG emissions from the extraction, processing, and transportation of oil sand oil are 4-5 times greater than emissions attributable to the production of conventional oil.³⁴ More recent scientific measurement efforts indicate that CO₂ emission intensities attributable to oil sand mining are much larger than those previously reported.³⁵

As previously mentioned, Enbridge has asked FERC to allow accelerated “truncated” depreciation on its pipeline system based upon “decarbonization legislation or adopting policies that may influence the market demand for pipelines,” an admission by Enbridge that that investment in fossil fuel-based infrastructure carries significant downside financial risk.

There is now a strong, global scientific consensus that the only effective method of preventing the most catastrophic effects of climate change is to decarbonize the global energy economy by transitioning from fossil fuels to zero-carbon energy sources within an aggressive timeline. The market and regulatory forces driving decarbonization of the economy are not static, and are accelerating and exerting increasing market pressure leading, inexorably, to a reduction in oil demand and pipeline capacity needs.

For the reasons provided above, the Corps’ analysis of “energy need” should result in a determination that Enbridge’s Project is contrary to the public interest. The confluence of future demand-side constraints, including the electrification of transportation, disinvestment in Albertan

³² The National Environmental Policy Act Implementing Regulations Revisions, 87 FR 23453, effective May 20, 2022 requires examination of “direct, indirect, and cumulative effects” of greenhouse gas emissions because GHGs “released by fossil fuel combustion is often a reasonably foreseeable indirect effect of proposed fossil fuel extraction that agencies should evaluate in the NEPA process, even if the pollution is remote in time or geographically remote from a proposed action.”

³³ Michigan Climate Action Network, Experts Find Oil Tunnel will Exacerbate Climate Crisis, https://www.miclimateaction.org/line_5_climate_experts

³⁴ Energy Education, Climate Impacts of Oil Sands, https://energyeducation.ca/encyclopedia/Climate_impacts_of_oil_sands

³⁵ Nature Communications, Measured Canadian oil sands CO₂ emissions are higher than estimates made using internationally recommended methods, April 2019 <https://www.nature.com/articles/s41467-019-09714-9>

oil production, North American and global prohibitions on the sale and use of ICE vehicles, and governmental efforts aimed at reducing GHG emissions are accelerating the transition to a global clean energy economy. These forces driving change are being embraced by public and private interests and represent future trends that will bring measurable economic, environmental, and social benefits. The confluence of these market forces militates against future large-scale investment.

In addition to the foregoing comments, FLOW has serious concerns about other adverse cultural and environmental impacts raised by Indian tribes, environmental organizations, and governmental entities. Rather than repeating those concerns here, FLOW incorporates them by reference and urges the Corps to give them careful consideration. Thank you in advance for protecting the public interest in the Great Lakes.

Sincerely,



Zach Welcker
Legal Director
For Love of Water