

*FLOW's latest research shows that just 1-2 propane rail cars or a few tanker trucks a day could replace the aging pipeline's U.P. propane capacity without risking a Great Lakes oil spill.*

## 1 How critical is Enbridge's aging Line 5 pipeline in meeting propane demand in Michigan's Upper Peninsula?

FLOW's latest research shows that 1-2 rail cars or a few tanker trucks a day could replace Line 5's propane supply if the state decommissions the pipeline to prevent a disastrous oil spill in the Mackinac Straits. What's needed now is a little ingenuity and a willingness to look for answers beyond the status quo with a steel pipeline transporting oil and liquid natural gas that was installed underwater in 1953.

*Line 5 supplies only 35-50 percent of the Upper Peninsula's propane, considerably less than Enbridge asserts.*

Line 5 supplies only 35-50 percent of the Upper Peninsula's propane, based on FLOW's estimates using publicly available data. This is because the Upper Peninsula is sparsely populated and fewer than 1-in-5 U.P. residents lives in housing heated by propane. Enbridge's claims about the role of its Line 5 oil and natural gas pipeline in providing propane to U.P. residents continues to shift and evolve. In January 2016, Enbridge asserted that Line 5 met 85 percent of the U.P. propane demand and then reduced that claim to 65 percent in by June 2016.

Enbridge's position has needlessly generated concern among local residents and state lawmakers that shutting down the aging pipeline to prevent a catastrophic oil spill the Mackinac Straits would result in freezing Upper Peninsula residents in their homes.

## 2 What are the viable propane supply alternatives to Line 5?

As part of decommissioning the Line 5 pipeline, a viable alternative is for propane supplier Plains All American to expand propane purification capacity at its existing plant in Superior, Wisconsin. The company then could use 4-5 tanker trucks a day to deliver the propane to its existing storage-and-distribution center in Rapid River, Michigan, north of Escanaba on U.S. 2. Or 1-2 rail cars could deliver the propane from Superior to Escanaba, and then transport it via propane trucks to Rapid River.

This feasible alternative eliminates the need to keep Line 5 in service in Michigan to supply propane to the Upper Peninsula. It allows Rapid River to continue as a storage-and-distribution center, supplying customers currently served by this location.

In addition, Plains All American could increase the capacity of its storage facility at Kincheloe, in the eastern Upper Peninsula, which is not served by Line 5. The energy distribution network is highly adaptable such that Enbridge does not have a monopoly on propane delivery to U.P. distributors.



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## What is Enbridge's current backup plan if its 64-year-old Line 5 pipeline ruptures or shuts down?

A critical issue for Upper Peninsula residents is that there are no other propane backup sources in place to supply current residential and commercial customers if Line 5 ruptured – as it has several times before – or were decommissioned to prevent a Great Lakes oil spill. In other words, there is no “Plan B” in place to secure a stable and sustainable energy supply to U.P. residents and businesses now served by Enbridge. Implementing the viable alternative described above would provide greater energy security to U.P. residents.

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## What does the Upper Peninsula's overall supply and demand of propane look like?

Understanding the U.P. propane market is essential for Michigan given its volatility. In 2013, for example, the U.P. faced a propane shortage triggered by several factors, including (1) increased propane needs from the agricultural industry to dry corn crops during a wet fall harvest, (2) Plains All American's Rapid River propane purifier being taken offline for several weeks for repair, and (3) nationwide high propane prices.

**Supply:** Enbridge's Line 5 provides approximately 35-50 percent of the U.P.'s propane, and competitors using truck or rail supply the rest, according to calculations by FLOW technical experts based on U.S. Census numbers and Enbridge product data.

**Demand:** Only about 18 percent of Upper Peninsula residents, or about 55,000 people, fuel their homes with propane, according to 2010 U.S. Census Bureau data.

Average consumption of propane per household in Michigan is 770 gallons per year, for a U.P. total of about 47,000 gallons per day, roughly the capacity of 4-5 propane tanker trucks or 1-2 rail cars.

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## What should the State of Michigan do next about Line 5?

The State of Michigan in partnership with the Michigan Pipeline Safety Advisory Board<sup>1</sup> is overseeing the completion of two independent studies funded by Enbridge: one on the financial risk to communities and the Pure Michigan economy of a Line 5 oil spill in the Mackinac Straits and the other on alternatives to the aging pipeline that could avoid such a disaster. These two studies are expected by mid-2017.

FLOW supports decommissioning Line 5 in order to protect the Great Lakes, tribal fishing rights, and citizens' public trust rights to navigate, boat, drink, fish, swim, and benefit from these precious waters. The State of Michigan must act with urgency to identify a viable plan for meeting Michigan's energy needs without risking the Great Lakes.

A key piece of that plan must be to identify other sources and means of meeting U.P. propane demand. FLOW's research shows that Enbridge has overstated the U.P.'s dependence on propane from Line 5, finding that just a few tanker trucks or 1-2 rail cars a day could replace Line 5's U.P. propane supply.

Line 5 was never designed as vital infrastructure for Michigan, and more than 60 years later, it still isn't, with at least 90 percent of its crude oil refined in Canada or exported via the Atlantic Ocean.<sup>2</sup>

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- **FLOW (For Love of Water)** — [www.FLOWforWater.org](http://www.FLOWforWater.org), [info@flowforwater.org](mailto:info@flowforwater.org) or 231.944.1568
  - **Oil & Water Don't Mix** — [www.oilandwaterdontmix.org](http://www.oilandwaterdontmix.org)

<sup>1</sup>: See the Michigan Pipeline Safety Advisory Board at [http://www.michigan.gov/energy/0,4580,7-230-73789\\_74071-,00.html](http://www.michigan.gov/energy/0,4580,7-230-73789_74071-,00.html)

<sup>2</sup>: See FLOW's special report, "Eliminating the Line 5 Oil Pipelines' Unacceptable Risk to the Great Lakes through a Comprehensive Alternatives Analysis and Systems Approach," December 14, 2015, at <http://flowforwater.org/wp-content/uploads/2015/12/FLOW-Composite-Report-12-14-15-FINAL.pdf>