THE PROPOSED PILGRIM PIPELINE: CUTTING A SWATH THROUGH NEW YORK COMMUNITIES TO MOVE BAKKEN CRUDE

Issues Paper -

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The Proposed Project

Pilgrim Pipeline Company is proposing to build a bi-directional pipeline, spanning 178 miles, that would transport Bakken crude oil and refined petroleum products (including gasoline and heating oil) between Albany, New York, and Linden, New Jersey. The proposed pipeline would more or less parallel the New York State Thruway (I-87) from Albany, connecting to distribution points along the way, before turning east at the I-287 beltway to reach the Phillips 66 Bayway refinery in Linden, New Jersey. In Ulster County, the pipeline path would run through the towns of Esopus, Lloyd, New Paltz, Plattekill, Rosendale, Saugerties, and Ulster, and the City of Kingston. Other affected counties in New York include Albany, Greene, Orange, and Rockland Counties. Company maps indicate that while the pipeline is proposed to run primarily along the Thruway right-of-way, it also traverses private lands at points along the route. Landowners in New York and New Jersey have been contacted by the company requesting access to conduct a preliminary survey of their property to identify the path of the pipeline centerline, as well as wetlands and archeological surveys. The company's letter to property owners states that the Company "must" conduct these surveys, and that property owners' permission was being requested "as a courtesy," and property owners have reported tactics of intimidation by the Company to gain access to their property after being denied.

At the time of this writing, permit applications have not yet been submitted by the company; however, a company representative speaking at a Town Board meeting in Kinnelon, New Jersey, told the Board that the company will begin the permitting process with New York authorities in December.

Pilgrim Pipeline: The Company

Pilgrim Pipeline Holdings is a Connecticut-based affiliate of Petroleum Solutions Management LLC, based in Winter Haven, Florida.³ The company was formed specifically for this project, but its leadership team, Pilgrim president Errol B. Boyle and vice president Roger L. Williams, have a long history in the oil business and are both former top executives of Koch Industries,⁴ a privately-owned conglomerate heavily invested in the oil and gas industry and owning more than 4,000 miles of crude

¹ Project brochure and map accompanying Right-of-Entry Survey Permission Agreement that was sent to property owners.

² Pilgrim Pipeline Company, Right-of-Entry Survey Permission Agreement.

³ Brian Nearing "Thruway Eyed for Crude Oil Pipeline to New Jersey," The Times Union, 3/12/14: http://www.timesunion.com/business/article/Thruway-eyed-for-crude-oil-pipeline-to-New-Jersey-5312618.php ⁴ For more background on Pilgrim management, see http://pilgrimpipeline.com/staff/.

oil pipelines.⁵ In January, 2000, Koch Industries was made to pay the largest civil fine ever imposed under federal environmental law at that time—a \$30 million civil penalty—to resolve claims related to more than 300 oil spills from its pipelines and oil facilities in six states.⁶

Bakken Crude: Fracked and Volatile

The Pilgrim Pipeline will not be transporting just any crude oil but a particularly volatile type of crude extracted from North Dakota's Bakken Shale field by means of hydraulic fracturing, or hydrofracking as the process is conventionally called. Large-scale exploitation of Bakken crude did not begin until 2007, although it has been known for some time that a large oil reserve was buried in the region in shale deposits two miles under ground. With modifications to hydrofracking technology, originally developed to recover natural gas from shale deposits, extracting Bakken oil became technically and economically feasible. In a very short time, Bakken has become one of the most prolific oil-producing reserves in the U.S., increasing from over 100,000 barrels per day in 2007 to over one million barrels per day in April and May 2014. Today, Bakken crude oil accounts for over 10% of total U.S. oil production.⁷

A type of light sweet crude oil, it is not something you would want to put in your coffee. Bakken crude is more volatile than other crudes because of characteristics of the geology and the method of extracting it. Under ground, the crude is intermixed with natural gas and other gas-infused liquids, which the density of the shale prevents from escaping. The fissures created through hydrofracking are so small that only the lightest oil, mixed with dissolved gas, flows out, producing a particularly combustible crude cocktail.⁸

The dangers posed by the volatility of Bakken crude were made dramatically clear in recent accidents involving its transport by rail. In the worst of these, in Lac Megantic, Quebec, a 72-car oil train derailed in July 2013, causing multiple explosions and fires, and resulting in 47 deaths and extensive damage to the town. Derailments in Aliceville, Alabama and Casselton, North Dakota in the same year also resulted in serious fires, though no one was injured. These and other incidents have prompted the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) to issue a safety alert on January 2, 2014, to the general public, emergency first responders, and shippers and carriers warning about the particular volatility of Bakken crude oil. 10

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⁵ Koch Pipeline Company, L.P.: kochpipeline.com

⁶ U.S. EPA, "Koch Industries to Pay Record Fine for Oil Spills in Six States," News Release, 1/13/2000:

⁷ U.S. Energy Information Administration, "Bakken Oil Production Forecast to Top 1 Million Barrels per Day Next Month," 11/15/13: http://www.startribune.com/business/222019911.html http://www.eia.gov/todayinenergy/detail.cfm?id=13811

⁸ Alison Sider and Nicole Friedman, "Oil from U.S. Fracking Is more Volatile than Expected," The Wall Street Journal, 6/24/14: http://m.us.wsj.com/articles/north-dakotas-bakken-oil-fields-to-get-new-pipelines-1403810341?mobile=y

⁹ John Frittelli et al., "U.S. Rail Transportation of Crude Oil: Background and Issues for Congress," Congressional Research Service, 5/5/14: http://fas.org/sgp/crs/misc/R43390.pdf

¹⁰ PHMSA, U.S. Department of Transportation, "Safety Alert: Preliminary Guidance from OPERATION CLASSIFICATION," 1/2/14:

 $http://phmsa.dot.gov/pv_obj_cache/pv_obj_id_111F295A99DD05D9B698AE8968F7C1742DC70000/filename/1_2_14\%20Rail_Safety_Alert.pdf$

The Alleged Benefits of the Pipeline: Fact vs. Fiction

In Pilgrim's promotional materials, the company extols the benefits of a crude oil pipeline for New York. Each of these claims is looked at more closely below.

CLAIM #1: The pipeline would be a safer mode of transporting crude oil than rail or barge.

THE REALITY: All three modes of transporting crude oil carry risk. According to PHMSA data, pipelines spill more oil per ton-mile than do rail shipments, but have a lower incidence of injuries and fatalities. 11 The true safety risk of moving Bakken crude by pipeline may be underestimated, however, since most crude oil transported by pipeline is less volatile than Bakken crude, and less prone to fireballs and explosion. In contrast, most of the oil shipped by rail in the U.S. is from the Bakken region. 12 It is therefore not surprising that incidents involving rail shipments are higher.

Historically, oil transportation by rail had a low incidence of oil spills compared to other modes of transport. Over the period 1996-2007, trains consistently spilled less crude oil per ton-mile than trucks or pipelines. Barges have had still lower spillage rates. 13 Once large-scale production of Bakken crude began in 1997, the sheer volume of crude transported by rail grew enormously. Whereas only 9,500 rail carloads of crude oil were transported in 2008, this number increased to 234,000 carloads in 2012, and to 434,000 carloads in 2013 (equivalent to about 300 million barrels). ¹⁴ The volume of crude oil carried by rail increased 423% between 2011 and 2012 alone, and the volume moving by barge has increased by 53%. 15 Today, industry ships about 600,000 barrels of Bakken crude a day to east coast refineries on barges and trains. (A single barrel holds 42 gallons of crude oil.) These trains can be made up of as many as 100 tanker cars linked end-to-end, each car capable of carrying 30,000 barrels of oil. 16

With the enormous increase in rail transport of Bakken crude oil, came a significant increase in the number of accidents. A string of derailments and major accidents in 2013 has heightened concerns about the safety of crude oil shipments by rail. More oil was spilled from rail accidents that year than in the previous four decades, combined. Here, in New York, we had three close calls, with a derailment in Cheektowaga of a train carrying crude oil; a derailment in Ulster, just north of Kingston, involving a train with 97 empty oil cars; and a collision between a truck and a train carrying empty oil tankers in West Nyack.17

¹⁷ Riverkeeper, "Crude Oil by Rail: A Dangerous Record of Failure": http://www.riverkeeper.org/campaigns/riverecology/crude-oil-transport/

¹¹ Incident report data provided by PHMSA, 2003-2013. Also, John Hageman, "As Safety Questions Persists, Crude Oil Transportation Modes Show Differing Records," Forum News Service, 4/7/14: http://www.prairiebizmag.com/event/article/id/18552/

¹² Association of American Railroads, "Moving Crude Oil by Rail," 12/2013: http://dot111.info/wpcontent/uploads/2014/01/Crude-oil-by-rail.pdf

¹³ John Frittelli et al., "U.S. Rail Transportation of Crude Oil: Background and Issues for Congress," Congressional Research Service, 5/5/14: http://fas.org/sgp/crs/misc/R43390.pdf

¹⁴ John Frittelli et al., "U.S. Rail Transportation of Crude Oil: Background and Issues for Congress," Congressional Research Service, 5/5/14: http://ecowatch.com/2014/03/19/pipeline-spills-crude-oil-ohio/http://fas.org/sgp/crs/misc/R43390.pdf 15 ibid.

¹⁶ Association of American Railroads, 12/2013; Frittelli et al.

The rash of accidents has increased pressure for new safety standards. In addition to the safety alert issued by PHMSA that was mentioned earlier, the agency also released plans for unannounced spot inspections, and sampling and monitoring the movement and classification of crude oil within and out of U.S. oil fields. In July 2014, the U.S. Department of Transportation issued proposed regulations that would reduce the speed limit of trains carrying crude from the Bakken region and for updating tank cars to better withstand damage from derailment. The U.S. National Transportation Safety Board has noted that DOT-111 tank cars, which carry Bakken crude, have a high incidence of tank failures during accidents. In addition to the safety alert

And what of the pipeline record? Unfortunately, PHMSA does not require pipeline operators to report the different sources of oil they transport, and therefore the proportion of pipeline incidents involving Bakken crude, specifically, cannot be determined from PHMSA incident data. However, we do know that much less Bakken crude is transported by pipeline than by rail, which carries about three-quarters of all Bakken crude that is produced. There has not been a significant expansion of pipeline capacity for Bakken crude oil as there has been for rail, although several projects have recently been proposed. Pilgrim would be the first pipeline serving east coast markets.

As to the record of crude oil pipelines generally, according to PHMSA, pipeline operators reported 1,880 crude oil spills nationwide between 2003 and 2013, or about one incident every other day. The incidents resulted in over 44 million gallons of crude oil spilled, and in 26 fatalities and 56 injuries. Fires occurred in 22 different crude oil spills. Total property damage was estimated to be over \$2.5 billion. The spill data is based on self-reporting and therefore likely underestimates the true amount of crude oil spilled from pipelines, since many leaks go undetected by pipeline owners. In many cases, according to PHMSA data, it is members of the public that identify spills. ²¹

It is very important to note that the Pilgrim pipeline is proposed to be bi-directional, and therefore comprised of two pipelines—one carrying Bakken crude oil to the refinery and the other carrying refined products to markets. Some of these refined products, such as gasoline, are extremely flammable. According to company information, the pipeline will carry 140 million barrels of crude oil and another 140 million barrels of refined products each year.²²

Inspection of pipelines is a major concern. According to an analysis of inspection records by the nonprofit Public Employees for Environmental Responsibility (PEER), PHMSA only has 135 inspectors to oversee 2.6 million miles of pipeline, and only a fifth of that pipeline system has been inspected by

¹⁸ PHMSA, "Operation Safe Delivery: Enhancing the Safe Transport of Flammable Liquids: http://www.phmsa.dot.gov/hazmat/osd/chronology

¹⁹ Stancil, Paul L. (2012-02-17). "<u>DOT-111 Tank Car Design</u>". National Transportation Safety Board, Office of Railroad, Pipeline and Hazardous Materials Safety.

²⁰ PHMSA, Crude Oil Pipeline Incidents Reported between 2003-2013, PHMSA Data as of September 4, 2014.

²¹ 30% of incident reports To PHMSA were made by the public in reported incidents from July 2010 and 2012. David Shaw et al., "Leak Detection Study – DTPH56-11-D-000001: Final Report," PHMSA, U.S. Department of Transportation, 12/10/12.

²² Pilgrim Pipeline Company, "Myths and Facts About the Pilgrim Pipeline," communication to the Town of Rosendale, 9/18/2014.

PHMSA or its state partners since 2006. ²³ Even when pipelines are inspected and problems are found, pipeline companies have dragged their heels in addressing them. In March, 10,000 gallons of crude oil leaked into a nature preserve near Cincinnati, Ohio, as a consequence of corrosion in the pipeline. Five years earlier, the company, Mid-Valley Pipeline Co., had been ordered to address the corrosion after a system-wide inspection, and in 2012 was fined \$48,700 for its failure to comply. ²⁴

As with train transport, pipeline spills represent a very small fraction of the total product shipped, but incidents are far too common, and the damage that even small spills cause can be irreparable, as the next section makes clear. Bakken crude oil, because of its unusual volatility, poses particular safety concerns in any mode of transport. Recognizing that all modes of crude oil distribution have risks, Forbes Magazine concludes, "You really do need to pick your poison for crude." 25

It is not a matter of choosing, however. In claiming that a pipeline is safer than other modes of transport, Pilgrim is implying that once the company builds a pipeline, rail and barge transport of Bakken crude will end in New York. This will not be the case. First, the current quantity of crude oil transported through New York is well over twice the amount that the proposed pipeline will carry (140 million barrels per year by pipeline, compared to 300 million barrels by rail in just 2013, alone—and this is not counting the crude oil transported by barge down the Hudson.) Second, export markets for products refined from U.S. crude are booming, and the pipeline will serve to increase existing capacity to sell to these markets from New York Harbor. Exports of gasoline and diesel fuel to Latin America have been surging, and U.S. heating oil exports have exceeded imports for 34 consecutive months.²⁶ Third, market conditions play a major role in determining the preferred mode of transport, with rail providing flexibility that a pipeline does not to move product to different markets in response to changing market conditions. In the case of another proposed pipeline, the Keystone XL project, companies do not see it as an either/or: "We would like to bring that crude oil down by pipeline, specifically the Keystone XL pipeline, but we also want to have access from rail and ship," Bill Day, vice president of Valero, a crude oil refiner, told The New York Times, "We want multiple means to deliver crude oil to our refineries."27

Pilgrim's bi-directional pipeline will facilitate expansion of markets—both domestic and foreign--for refined products made from Bakken crude. U.S. refiners are currently selling more fuel abroad than ever before, as U.S. crude production soars. "The bottom line is U.S. refiners are pushing products

²³ Cited in Marcus Stern and Sebastian Jones, "Pipeline Safety Chief Says Regulatory Process Is 'Kind of Dying,'" Bloomberg Businessweek, 9/11/13: http://www.businessweek.com/news/2013-09-11/pipeline-safety-chief-says-regulatory-process-is-kind-of-dying

²⁴ Carrie Blacksmith and Jennifer Edwards Baker, "Oil Spill at Nature Preserve 'Absolutely Terrible," Cincinati.com, March 19, 2014: http://www.cincinnati.com/story/news/local/2014/03/18/crews-investigate-colerain-gas-leak/6554741/

²⁵ James Conca, "Pick Your Poison for Crude—Pipeline, Rail, Truck or Boat," Forbes Magazine, 4/26/14: http://www.forbes.com/sites/jamesconca/2014/04/26/pick-your-poison-for-crude-pipeline-rail-truck-or-boat/

²⁶ Platts, McGraw Hill Financial, http://www.platts.com/news-feature/2014/oil/us-fuel-oil-demand/index; American Fuel and Petrochemical Manufacturers, Annual Report 2014, http://annualreportafpm.org/mobilizing-the-nation/; U.S. Energy Information Agency, http://www.eia.gov/todayinenergy/detail.cfm?id=15951.

²⁷ Clifford Krauss, "Looking for a Way around Keystone XL, Canadian Oil Hits the Rails," The New York Times, 10/3013: http://www.nytimes.com/2013/10/31/business/energy-environment/looking-for-a-way-around-keystone-xl-canadian-oil-hits-the-rails.html?pagewanted=all&module=Search&mabReward=relbias%3Ar%2C%7B%221%22%3A%22RI%3A9%22%7D

everywhere," Francisco Blanch of Bank of America Merrill Lynch told the Wall Street Journal. The US Geological Survey estimates that the Bakken contains 7.38 billion bbl of undiscovered, technically recoverable crude, and producers and refiners will continue to seek to expand markets for their products until reserves are exhausted or the economics of drilling for increasingly less accessible oil no long make sense. One industry projection estimates average production of Bakken crude rising to 1.7 million barrels per day per year, taking into account declining productivity of older wells. With the Pilgrim Pipeline, we will likely see much more oil moving through the State of New York.

CLAIM #2: The pipeline will provide a more environmentally-sound way of transporting petroleum products.

REALITY: As was stated above, based on PHMSA data, more barrels of oil have spilled per ton-mile from pipelines than from rail. The effects of pipeline spills, large and small, can be devastating. Four years after a pipeline rupture in July 2010 spewed more than 840,000 gallons of tar sands crude into Michigan's Kalamazoo River—the largest inland crude oil spill in the U.S. — the region still suffers its effects. Thirty-five miles of the river remained closed for two years, and some areas are still closed or restricted. In December 2013, the EPA ordered that Enbridge, the pipeline owner, dredge the river — work that continues today. The agency estimated that 162,000 gallons of oil would remain in the Kalamazoo even after dredging.

In another recent incident, in October 2013, 20,600 barrels of Bakken crude oil spewed into a wheat field from a pipeline, with an estimated clean up cost of \$4 million. The farmer had reportedly smelled crude oil for days before stumbling upon the spill in his field, which spread over 7.3 now unfarmable acres. Early detection has been an issue with pipelines: Advanced leak detection system have only identified leaks 5% of the time, according to a PHMSA leak detection study.²⁹

Whether from pipeline or rail, oil spills can be extremely damaging to wildlife and ecosystems, farmland, recreational areas, and property, polluting land and surface waters, contaminating drinking water supplies, and threatening public health and safety. Crude oil contains numerous compounds toxic to humans and animals (like benzene, toluene, and other light hydrocarbons known to cause cancer), and even small spills can have outsized impacts on water resources and the environment.

According to the U.S. Environmental Protection Agency, one pint of oil released into the water can spread and cover one acre of water surface area and can seriously damage an aquatic habitat. Crude oil can remain trapped in sediments for many years, where it is very slowly removed by natural processes.

 $^{^{28}}$ U.S. Environmental Protection Agency, "EPA's Response to the Enbridge Oil Spill," 7/9/14: http://www.epa.gov/enbridgespill/

²⁹ PHMSA, "Operation Safe Delivery: Enhancing the Safe Transport of Flammable Liquids: http://www.phmsa.dot.gov/hazmat/osd/chronology

³⁰ U.S. EPA, "Koch Industries to Pay Record Fine for Oil Spills in Six States," News Release, 1/13/2000.

In the majority of cases, cleanup of pipeline spills is only partially successful. According to PHMSA data, of the more than 44 million gallons of crude oil spilled between 2003 and 2013, about 26 million barrels of oil remain are not cleaned up, polluting the environment for years into the future.³¹

CLAIM #3: The pipeline will protect against fuel shortages and improve resilience.

REALITY: While transport of crude oil via pipeline is less likely to be disrupted by severe weather events than rail or barge, the proposed Pilgrim pipeline — which will only connect the Port of Albany, a refinery in New Jersey, and a few terminals in between — is not going to protect New York against the kind of fuel shortages it saw during Hurricane Sandy, which shut down two refineries — including the Phillips 66 Bayway refinery that would be processing crude from Pilgrim³² — as well as 25 fuel terminals that were already supplied by pipelines and by ship.³³ In New York, the main problem during Sandy and in its aftermath was the loss of electricity at gas stations and wholesale suppliers. The Governor has announced plans to ensure back up power supply as well as to create a strategic fuel reserve—a far more sensible solution to bolstering resilience in the short-term.

For the longer term, the path to real resilience in the face of climate change is not more fossil fuel but less of it, as is clearly recognized in the draft New York Energy Plan, the New York Sun Initiative, the NYS Department of Environmental Conservation's Climate Smart Communities Initiative, and the Mid-Hudson Regional Sustainability Plan. The more communities can reduce the need for oil – through improved energy efficiency in transportation and buildings, through expanded use of renewable energy, and through the development of microgrids to ensure emergency services and access to critical resources during severe weather events — the less communities will suffer the effects of climate change and fossil fuel insecurity.

The Pilgrim Pipeline will only serve to facilitate more production of fossil fuel, not just for east coast markets but also for overseas markets, further increasing greenhouse gas emissions at a time when New York State has committed to reduce its own emissions by 80 percent by 2050. If we in New York are truly committed to mitigating climate change and increasing our resiliency to its effects, we need to focus on building out clean energy infrastructure while discouraging long-term investments like pipeline infrastructure that further lock us into a fossil fuel future.

The Regulatory Process for Approval

The first stop for the Pilgrim Pipeline Company will be the NYS Thruway Authority, which will need to decide whether to approve this use of the Thruway right-of-way for this purpose. The company will also have to secure an exception by the NYS Department of Transportation to its Accommodation Plan, which does not allow for longitudinal use of right-of-ways other than for telecommunications

 $^{\rm 31}$ Richard Stover, "America's Dangerous Pipelines," Center for Biological Studies:

http://www.biologicaldiversity.org/campaigns/americas_dangerous_pipelines/index.html#video

³² Cyrus Sanati, "Was the Gas Shortage Preventable?," Fortune Magazine, 11/5/12: http://fortune.com/2012/11/05/was-the-gas-shortage-preventable/

³³ Coral Davenport, "U.S. to Store Gasoline for Crises in the Northeast," The New York Times, 5/2/14: http://www.nytimes.com/2014/05/02/nyregion/us-to-store-gasoline-for-crises-in-the-northeast.html

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infrastructure.³⁴ Members of the public, municipalities, and local and county elected officials who would like to make their voices heard on this proposed project should contact Thruway Authority and

NY DOT, as well as NYDEC and State and Federal elected representatives.

There is no single agency at the federal or state level responsible for reviewing and approving proposed crude oil pipeline projects. The Federal Energy Regulatory Commission (FERC) only has jurisdiction over rates charged to move oil through pipelines and not over construction and operation of those pipelines. At the state level, Public Service Law does not contain any provision for siting petroleum pipelines. The NYS Public Service Commission is only responsible for approving natural gas pipeline projects, not crude oil pipelines.

Agencies that have jurisdiction will likely include the U.S. Army Corps of Engineers (COE) (because of potential impacts to federal wetlands) and the NYS Department of Environmental Conservation. According to the NYS Department of Environmental Conservation (DEC), the pipeline would be subject to state and local jurisdiction, and to State Environmental Quality Review (SEQR). However, SEQR provisions allow for the process to be handled at the federal level under NEPA, as long as it allows the state or local agency to make findings based on the federal Environmental Impact Statement. The company may pursue the federal route since Army Corps of Engineers and possibly other federal agencies will be involved, and since the pipeline is proposed to run through two states — New York and New Jersey. It is also possible that Pilgrim could present some other regulatory review option altogether.

Citizens for Local Power is a community-based organization working to empower communities in the Mid-Hudson region to transition to a resilient, locally-based clean energy economy. Combining advocacy, research, public education, and coalition-building, CLP works across party lines with municipalities, elected officials, environmental and energy NGOs, local media, labor, and the public.

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³⁴ Communication with the NYS Thruway Authority.