

**STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

In the Matter of the Application for an
Underground Gas Storage Permit Pursuant
to Environmental Conservation Law (ECL)
Article 23, Title 13, by

DEC Permit
Application ID No.
8-4432-00085

FINGER LAKES LPG STORAGE, LLC,

Applicant.

BRIEF OF *AMICUS* PARTY NATIONAL PROPANE GAS ASSOCIATION

INTRODUCTION

Amicus party National Propane Gas Association (“NPGA”) submits this brief in accordance with the procedural schedule established by the Chief Administrative Law Judge. NPGA supports permitting the project because it can be constructed and operated in an environmentally benign fashion and because it is infrastructure necessary to providing reliable and reasonably priced propane to the millions of consumers in the Northeast and the Midwest who heat their homes, heat their water, and cook with propane to meet essential human needs.

NATIONAL PROPANE GAS ASSOCIATION

NPGA is a national trade association dedicated to advancing the interests of its members before federal and state governments. NPGA’s 3,000 members—predominantly small, family-owned businesses—make up an industry that provides propane to fuel homes, farms, businesses, and vehicles in all fifty states. The industry serves approximately nine million customers (principally households) and employs approximately 40,000 industry individuals nationwide.

PROPANE

Propane (C₃H₈) is a naturally occurring, non-toxic hydrocarbon that is a clean, domestic fuel. The United States today produces enough propane to meet all of its domestic needs as well as to export significant volumes to markets in other countries. Propane is an element of the natural gas stream and can also be produced from crude oil refining. Over 70 percent of propane produced in the U.S. today comes from the natural gas stream. When combusted it has a criteria pollutant and greenhouse gas profile similar to natural gas. Unlike natural gas, (1) it is an easily portable fuel and (2) it is not itself a greenhouse gas. Propane can be transported by pipeline, rail, truck, barge, and ship. Propane is a low-carbon fuel, like natural gas. Propane space heating, water heating, and cooking have, on a life cycle basis, essentially one-half the carbon footprint of comparable electric applications. As a result, propane represents a tried and true technology that can readily assist in the transition to a low-carbon economy. Policy makers should, therefore, promote the use of this domestic fuel because it can contribute to attaining the environmental goals (as to both criteria pollutants and greenhouse gases) as well as the energy security goals of the State of New York and the United States. Although the Finger Lakes LPG Storage project (“Finger Lakes”) will be able to store both butane and propane, NPGA’s interest in this proceeding stems from the urgent need for large-scale propane storage to support markets in the Northeast, the Mid-Atlantic, and the Midwest.

PROPANE DEMAND IN NEW YORK AND THE NORTHEAST

Propane is an essential fuel for approximately a quarter-million New York households for space heating, water heating, and other applications. Approximately a quarter-million more use propane for cooking. (*See* Draft Supplemental Environmental Impact Statement (DSEIS) at 16-17.) The state consumes approximately 370 million gallons of propane per year. (DSEIS at 16.)

More broadly, the Northeast consumes 1.8 billion gallons per year (DSEIS at 12.) The principal application for propane in the residential and commercial sectors is space heating, which is by definition weather sensitive. The result is that 70 percent or more of propane in these sectors is consumed during the winter months, with as much as 50 percent in the two peak winter months. (See DSEIS at 12, 15; see also <http://www.eia.gov/petroleum/weekly/propane.cfm#tabs-res-propane-prices-avg>.) In U.S. markets demand for propane can be shown as a bell curve, with the curve more acute the more northerly the location.

PROPANE SUPPLY AND DEMAND ARE NOT SYNCHRONOUS

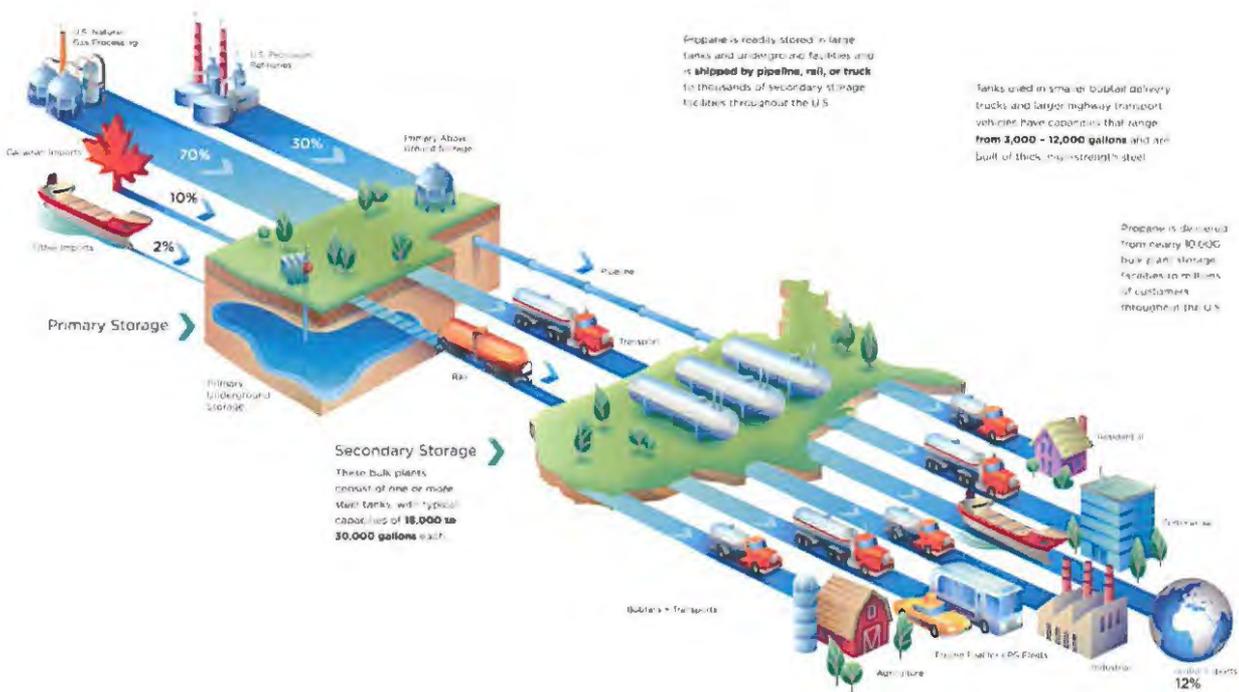
In contrast to the demand profile, propane production—from the natural gas stream and from crude oil refineries—tends to be relatively uniform across the year. (See DSEIS at 15-16; see also <http://www.eia.gov/petroleum/weekly/propane.cfm#tabs-res-propane-prices-avg>.) Propane markets, therefore, are like natural gas markets in that consumption peaks in winter months while production is relatively uniform throughout the year. In both energy markets the essential equilibration between supply and demand is performed by infrastructure. Liquids pipelines, such as the Enterprise TEPPCO system that serves New York, have little ability to increase throughput in winter months because liquids are not compressible. Moreover, the TEPPCO system carries other commodities in batches such that propane markets must compete for capacity on the pipeline system.

The principal answer to the inherent propane supply-demand imbalance is storage—essentially pre-positioning propane that is produced throughout the year as near to markets as possible in anticipation of cold weather. There are essentially three levels of propane storage—large-scale facilities such as Finger Lakes (“primary” storage), much smaller facilities with

above-ground storage tanks at propane retailers (“secondary” storage), and storage (above ground or below ground) at households and businesses (“tertiary” storage).

AN OVERVIEW OF PROPANE INFRASTRUCTURE

The illustration below is a simplified explanation of the propane value chain. As noted previously, propane is produced either from the natural gas stream or from crude oil refining. It can be transported by pipeline, truck, rail, barge or ship. The functional aspect of a project such as Finger Lakes is shown as the Primary Underground Storage in the illustration. It supports downstream transportation modalities, downstream storage, and end-use consumers.

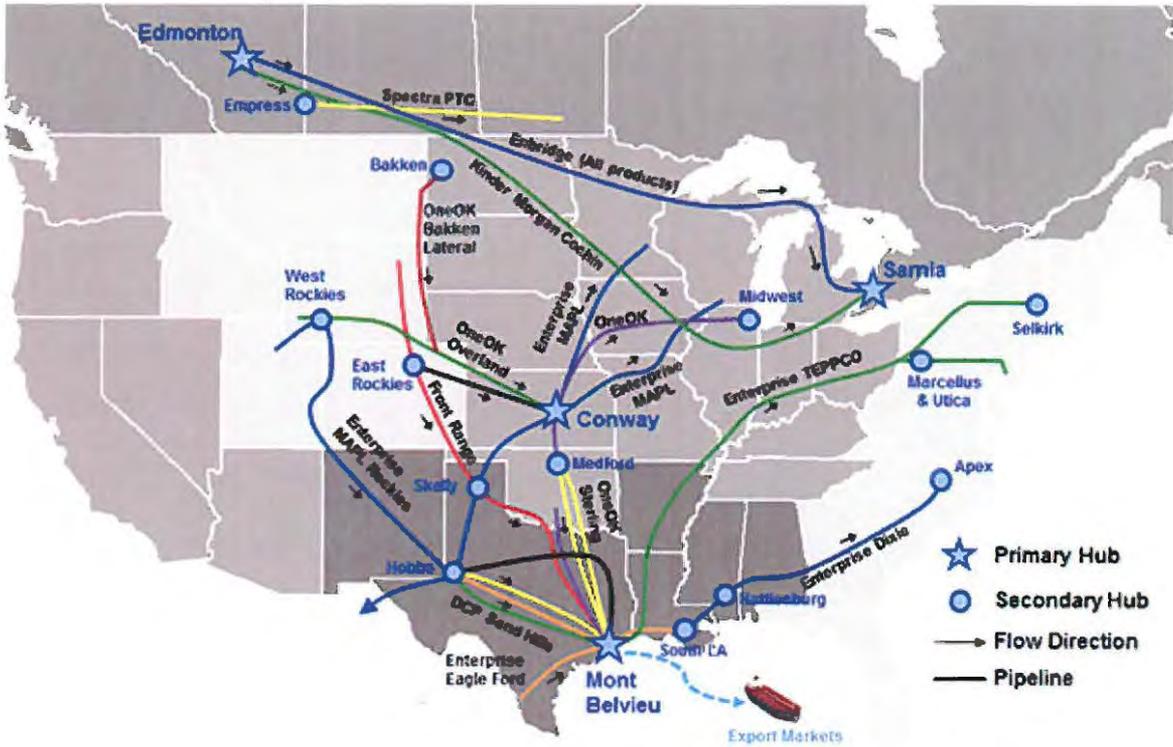


THE FINGER LAKES PROJECT IN THE NATIONAL INFRASTRUCTURE

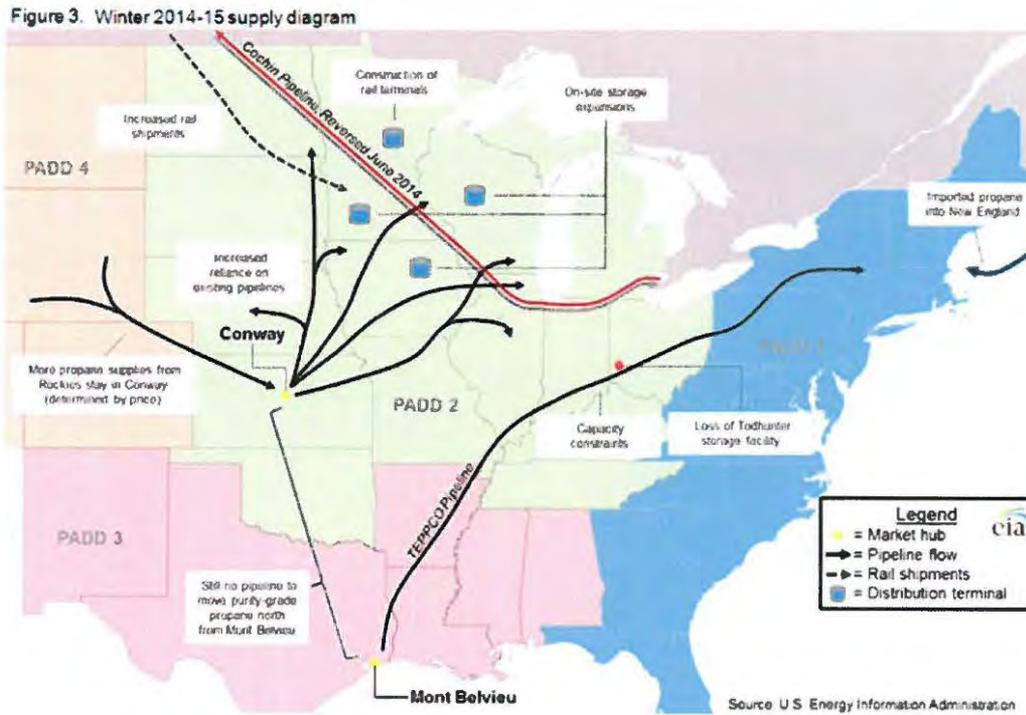
The Finger Lakes project would become a part of the national infrastructure that delivers propane. The two diagrams below are simple schematics of the propane delivery system in the eastern portion of the United States. The first, prepared by Natural Resources Canada, illustrates

the pipeline and storage network in some detail. At present North American storage hubs exist at Mont Belvieu, Texas, Conway, Kansas, Edmonton, Alberta, and Sarnia, Ontario. (More recently an underground storage facility has also opened in Utah.) Reference to this map demonstrates the strategic location of Finger Lakes, providing a significant supply of stored propane volumes to satisfy demand within New York, New England, and the Mid-Atlantic.

NPGA has also included the second map, prepared by the U.S. Energy Information Administration. Although somewhat less detailed, it makes the important point that the Kinder Morgan Cochin pipeline, a historically important source of propane supply to the Midwest, is now out of service, making existing infrastructure all the more important. In that same vein, the Enterprise TEPPCO pipeline, which was constructed in World War II, historically had two lines flowing into New York. Recently, as a result of the extraordinary growth in the production of natural gas liquids, one of those lines has been reversed to flow toward the U.S. Gulf Coast. The result is that propane delivery infrastructure to New York and New England is now significantly reduced. (See http://www.dec.ny.gov/docs/materials_minerals_pdf/20141202bsktodec.pdf. As noted previously, Enterprise TEPPCO is a batch pipeline, and propane is just one of a number of commodities that move through it.)



Source: Natural Resources Canada



In simplest terms, Finger Lakes would permit the propane industry to preposition propane at a strategic location near market demand in summer months, when the pipeline system is not constrained, in order to provide supply in the winter heating season, when the pipeline system is constrained. (The TEPPCO system has been constrained in most recent winters. *See* DSEIS at 13.) From Finger Lakes, propane could move in winter months to consumers within a several-hundred-mile radius by pipeline, by rail, and by truck. By providing a significant supply option, this asset in the marketplace will add energy security to an area within a radius of several hundred miles. This storage is needed because propane retailers have insufficient storage (secondary storage) to meet market needs. (DSEIS at 13.) Moreover, the presence of inventory at this location will tend to moderate prices when weather-driven demand would tend to cause prices to spike, because demand for propane is essentially inelastic during the winter heating season. Tightness in winter supplies can cause local propane prices to increase dramatically. (DSEIS at 13-14.)

In all likelihood, most propane stored at the Finger Lakes project will arrive by pipeline or rail, as these are the most economical forms of transportation. For example, more than half of the propane market in the Northeast was supplied by pipeline and rail. (DSEIS at 12.) Indeed, recent estimates by Finger Lakes conclude that movements into and out of the facility will occur almost entirely by pipeline. (http://www.dec.ny.gov/docs/materials_minerals_pdf/20141202bsktodec.pdf.) Storing propane in the Finger Lakes facility will, therefore, minimize winter-time long-distance transportation of the fuel, thereby further ameliorating greenhouse gas emissions that would result from moving propane by means of diesel-fueled motor carriers.

Propane has been stored safely in salt caverns in the Finger Lakes region for over six decades and can be stored safely in the Finger Lakes project. Indeed, this very facility was previously used for many years to store propane. Similarly, propane has been stored in salt caverns in Mont Belvieu, Texas since the 1950's and in salt caverns in Conway, Kansas and Sarnia, Ontario. Storing propane in facilities such as this is not new, nor is it experimental in any sense. Rather, it has been done for decades, and practices and procedures to do it safely and in an environmentally benign fashion are well known. Accordingly, NPGA supports approval of the Finger Lakes project as an environmentally sound facility that will provide enormous consumer benefits to the citizens of the State of New York and the citizens of the states within hundreds of miles of the facility.

THE WINTER OF 2013-2014

The winter of 2013-2014 provided the greatest challenge for the propane industry in at least twenty-five years and perhaps in the one-hundred year history of the industry. Although the difficulties centered on the Midwest, they seriously affected the entire eastern portion of the country. These difficulties occurred in the face of record U.S. propane production in both 2013 and 2014. (See, e.g., http://www.eia.gov/dnav/pet/pet_sum_snd_a_epllpz_mbb1_a_cur.htm.) The challenges began with a record grain harvest in the Midwest, causing propane usage for grain drying to increase by 500% in the fall of 2013. Coincidentally, a major pipeline (Kinder Morgan Cochin) providing propane to the upper Midwest ceased operation for several weeks to undertake construction preparatory to reversing flow in 2014. Shortly thereafter the Polar Vortex descended upon the United States, when propane inventories were already low as a result of grain drying. As a result of these events, propane supplies for home heating became extremely tight. (See <http://www.eia.gov/petroleum/weekly/archive/2014/140115/twipprint.html>;

<http://www.eia.gov/petroleum/weekly/archive/2014/140129/twipprint.html>;

<http://www.eia.gov/petroleum/weekly/archive/2014/140226/twipprint.html>;

<http://www.eia.gov/special/alert/propane/?src=home-b4>;

http://www.eia.gov/pressroom/presentations/propane_03122014.pdf;

http://www.eia.gov/pressroom/presentations/propane_briefing_04222014.pdf.) A very thorough

analysis of 2013-2014 conditions was prepared by the Competition Bureau and the National Energy Board of Canada. Although the analysis focuses largely on Canada, U.S. conditions are discussed in detail given that the propane market is essentially a unified North American market.

See <http://www.nrcan.gc.ca/energy/crude-petroleum/15681#exsum>.)

These circumstances were particularly focused on the Midwest—with Wisconsin and Minnesota at the heart of it. But the extreme demand for propane and the tightness of supplies spread to the entire Midwest and placed pressure on both the Northeast and the Southeast. Throughout the winter NPGA was concerned that these extreme conditions would spread to the Northeast. Although supply remained tight in the Northeast, conditions were better than in the Midwest. This difference resulted, however, from the fact that approximately a half-dozen shiploads of propane from Europe arrived in New England during the winter. These were the first seaborne imports since approximately 2008, and they were only possible because Europe experienced a mild winter. Nevertheless, wholesale and retail propane prices spiked throughout the eastern half of the nation. (A comparison of propane prices in the winters of 2013-2014 and 2014-2015 can be found at <http://www.eia.gov/petroleum/weekly/propane.cfm#tabs-res-propane-prices-avg>.)

THE LESSON OF THE WINTER OF 2013-2014

U.S. propane markets reached near-crisis levels in the winter of 2013-2014. Yet in both years U.S. propane production broke historical records. How can this be? Propane production from the natural gas stream has skyrocketed with the exploitation of natural gas from shale formations over the last five years. The conundrum then is: how could the United States experience a propane crisis when propane production had exceeded prior levels and the nation easily produced more than enough propane to supply its domestic needs?

The conclusion from the winter of 2013-2014 was that the crisis resulted from an infrastructure problem. There was more than enough propane, but it was not located where markets needed it, and there was inadequate infrastructure to move it in timely fashion to the places where market demands for it existed. Enormous supplies of propane were located in the Gulf Coast area, some of it destined for export markets, but infrastructure constraints made it difficult to move the propane to the Midwest and Northeast, where it was needed for heating loads.

Storage at Finger Lakes would be a major asset useful for avoiding circumstances such as those that occurred in the winter of 2013-2014. It would permit large volumes to be stored near the market demand in advance of the winter heating season. As winter advanced, propane could be delivered by pipeline, rail, and truck to areas where it is needed in a very short period of time, unlike the two to three weeks that it takes propane to flow to New York from the Gulf Coast.

FINGER LAKES WILL BENEFIT THE CITIZENS OF NEW YORK

The Finger Lakes project will benefit the citizens of New York. It will allow a large volume of propane to be stored near the market needs and in a facility from which propane could be delivered to any part of the state of New York in one day or less. The result will be security of

supply for New Yorkers and citizens of adjoining states. Operation of the project will also tend to moderate prices during conditions of high demand. In all likelihood New Yorkers would not have seen the propane price spikes that they did see in the winter of 2013-2014 if Finger Lakes had been operational.

As noted previously NPGA is confident that Finger Lakes can be constructed in a safe and environmentally benign fashion. It is the role of the State of New York to ensure that this happens in its *parens patriae* role with respect to its citizens. But the state also has a responsibility to enhance the welfare of its citizen by ensuring that essential needs—such as heating and cooking—are met at reasonable cost. NPGA believes that approval of the Finger Lakes project is consistent with both of these roles of the state.

CONCLUSION

For the reasons stated above, NPGA respectfully requests that the permit for the Finger Lakes project be granted.

Respectfully submitted,

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