

Who am I

Good morning Mr. Chairman, Senators, Representatives, ladies and gentlemen. I am Mark Makelky. For the last 3 and ½ months I've been your Director of the North Dakota Pipeline Authority. By your actions in the last legislature you created the office of the North Dakota Pipeline Authority within the North Dakota Industrial Commission.

First I will give you a little background on myself, where I came from and how I came to be standing here today.

I was raised in Minot. I obtained my B.S. degree in Civil Engineering from UND in 1975. I'm a registered Professional Engineer in 4 states. I used to work for MDU Resources Group. Most of my 31 years there were spent working for Williston Basin Interstate Pipeline Company. That is the part of MDU that produces and transports natural gas. So I am reasonably familiar with the natural gas industry. But I will be the first to admit- when it comes to oil, refined products and renewable energy, I have lots to learn. So, when we reach the end of this please be gentle with your questions.

When I'm not thinking about pipes, I like to play with old cars, camp, fish, hunt and other outdoor activities. If you have 3 or 4 hours after the meeting, I will show and tell you all about the 1941 Chevy I restored from the ground up.

*
*
*

One of my assignments was to update the transportation bottleneck Whitepaper report originally prepared by Lynn Helms and Ron Ness in July of 2006. I've tried to update the information contained within that report with what has happened over the last year as well as add some background information that may not be generally known. I will try to touch on the major points of my report for you today.

Regulatory Background

It's important to understand most oil pipelines operate as common carriers governed by the requirements of the Interstate Commerce Act (ICA). The pipelines do not own the products they transport. Producers, marketers or others desiring service typically contract with the pipeline company to ship their products on the pipeline. If the requests for shipments exceed the pipeline's capacity, the space must be allocated among them in a non-discriminatory manner. This usually occurs on what is called a "pro rata" basis. The pipeline company is required to allocate their capacity in a non-discriminatory manner to all shippers who meet the terms of their pipeline tariff, also known as conditions of service.

The Federal Energy Regulatory Commission (FERC) regulates the rates charged, the terms of service, and apportionment policies of those pipelines that operate in interstate commerce. For pipelines that operate strictly in an intrastate capacity, their rates and tariffs are regulated by state agencies such as public service commissions. There can be times when both requirements may apply.

In North Dakota, the Public Service Commission (PSC) regulates the construction of an interstate common carrier's facilities and also pipeline safety matters for intrastate facilities. Pipeline safety on interstate pipelines is regulated by the Federal Department of Transportation (DOT) and the applicable

There are many other state and federal agencies that must issue permits for the actual construction of facilities. Some examples are: air and water quality permits, wildlife agency permits, historical society permits, public land permits, and many more.

Production

Crude oil production in North Dakota is up. July production figures at the Oil and Gas Division indicate we are now producing about 123,000 barrels per day. Unlike Richland County, Montana where it appears area production has peaked, North Dakota's is on the rise. In Mountrail County production has improved over 24 % in the last month.

Export Capacity

Export capacity for crude oil out of North Dakota is also improving. There are two significant players when it comes to crude oil pipelines out of North Dakota – Enbridge North Dakota and Belle Fourche Pipeline. Enbridge runs along the northern tier of the state and delivers to Clearbrook Minnesota and the Belle Fourche system runs along eastern Montana with connections into western North Dakota. Belle Fourche delivers crude oil to Casper and Guernsey Wyoming.

Enbridge Improvements

Enbridge is currently working on completion of their Phase 5 expansion which will bring their capacity from Minot to Clearbrook up to 110,000 bpd. Prior to expansion that capacity was 75,000 to 80,000 bpd.

They are also working conceptually on their Phase 6 expansion which would bring that capacity up to 155,000 bpd. Phase 6 is now in an extended open season until the end of September. The rate structure and tariff provisions proposed by Enbridge to go with Phase 6 met with some resistance from some current and future customers of their pipeline. They are working to resolve those and hope to have them mostly resolved before they go to the FERC with a proposal. If not, there could be further delays to the project. If Phase 6 goes forward as proposed, it will nearly double Enbridge's pre Phase 5 capacity.

Belle Fourche Improvements

Belle Fourche Pipeline is also making changes and improvement to their facilities. A reversal of their traditional southern flow and some looping on one of their pipe sections in the Alexander area will improve market accessibility to southwest North Dakota producers.

Truck Shipment

Until excess pipeline capacity is provided to all producing areas in North Dakota, we will continue to see significant truck movements of crude oil. The Oil and Gas Division reports that nearly 35% of the oil produced presently leaves the lease by truck. That fits with what industry people tell me in that they suspect about a third of North Dakota's production is being moved around by truck.

Rail shipment in our area is just not a practical alternative. Lack of railcars and a limited number of sidings equipped with appropriate loading and unloading facilities makes this method of shipment expensive in our region.

Refinery Issues

As the pipeline capacity constraints work themselves out we will see the capacity bottleneck moving downstream. Refineries are trying to keep up with the U.S. demand for petroleum products. The U.S. consumes 21 million bpd of petroleum products. We produce over 5 million bpd of our own crude oil and import over 10 million bpd from foreign countries. We also import 4 million bpd of refined

products. Clearly we need to look for ways to meet these needs. Western Canada has become important to meeting U.S. requirements.

This situation is the driving force behind all the proposed Canadian pipeline proposals you hear about coming into the U.S. such as TransCanada's Keystone, Enbridge's Alberta Clipper and Southern Lights as well as others. We should be supportive of these projects for national security reasons, but urge them to proceed all the way to southern U.S. refinery markets to limit bottlenecks created in our region.

As common carriers, these pipelines are required to allow connection and accept shipments of others oil. The shipper/producer must meet the tariff rules and requirements of the common carrier pipe, but assuming they do, the pipeline must accept their shipment.

U.S. refining capacity has improved steadily over the last decade even without the construction of any new refineries. According to the U.S. Department of Energy Information Administration, U. S. refining capacity has grown about 4% over the last 5 years. That's the equivalent of a new 200,000 bpd refinery each year. Most of that growth has been concentrated at refineries in PADD 3 – the Gulf Coast region. PADD – the acronym stands for Petroleum Administration For Defense Districts. They were established during World War 2 for fuel allocation purposes, the designations are still used today for data collection purposes. Refineries need to respond to both changes in market needs for their products and changes in their supply of crude oil available for processing. Recent ultra low sulfur requirements imposed by the U.S. government on motor fuels forced them to make expensive changes to their refineries in the last year. On the crude side, more and more of their supplies are the heavier and more sour crude oils being imported from Canada. Several northern U.S. refineries have made changes to deal with the influx of Canadian crude oil and more are making the switch all the time. Such is the case this fall when several regional refineries are making changes during their usual fall shutdowns for maintenance. We are aware of at least 8 refineries in the Midwest and 4 in the Rockies that will be down to varying levels over the next few months. Unfortunately for us, this comes at a time when area supplies of motor fuels were already short. This has aggravated fuel prices in the region and may have see short term affects on local crude oil prices as well. Processing the heavier crude oils into ultra low sulfur fuels is also expected to wear out equipment sooner than used to be the case with lighter crude oils thus shortening the time between major outages for maintenance at refineries.

Improvements to refining capacity will again move our “bottleneck” problems further downstream to the distribution system for refined products. North Dakota is only served by a few refined product pipelines as well. This will be the subject of an upcoming report where we will explore options for the distribution of refined products in North Dakota. To put it very simply – it's not good for the consumer to be located at the end of a single pipeline.

Tesoro Refinery Expansion

The Tesoro refinery at Mandan has been running at full capacity for some time. Tesoro's refinery yield is about 60% gasoline, 35% diesel fuel and the rest is various other fuels. Currently Williston Basin-produced crude oil supplies nearly 100% of Tesoro's refining needs. However not all the crude oil produced there can be utilized by the refinery. Some crudes have qualities that are incompatible with their facilities.

Under normal circumstances, North Dakota consumers cannot use all Tesoro's refined product output. Therefore much of it is shipped via pipeline to Minnesota. Because the Minnesota market is usually well supplied from various sources, there is little incentive for Tesoro to make the large expenditures

required to send more refined product to Minnesota. However, they have considered increasing their throughput. While some minor improvements could be made to existing facilities, to add significant capacity would require major investment in a new process train. To justify such expansion there would need to be significant change in the regional market for refined products and improvements to the transportation system delivering them. This will be the subject of a future report on refined products.

New Refineries

There has been discussion about construction of new refineries in our region. Hyperion, a Texas energy group, is considering a 400,000 bpd facility near Sioux Falls, South Dakota. That facility is currently in the early permitting stage.

In North Dakota, the Three Affiliated Tribes of the Fort Berthold Indian Reservation have been considering the construction of a 15,000 bpd facility. However their original plans were to use Canadian syncrude as their supply and this won't benefit North Dakota producers or ease pipeline bottlenecks. EPA air and water permits are pending on that project.

There has been consideration of a refinery near Williston located adjacent to the proposed ethanol facility. That project is in the early market evaluation phase.

However, even if one of these facilities is able to get off the drawing board it would be years before North Dakota producers realize any benefit from them.

Quality Restrictions

The July 2006 Whitepaper recommended evaluating quality restrictions on area pipelines and whether that might improve marketability of sweet North Dakota crude oil. A quality bank study has now been completed by Purvin & Gertz. They reported that while restrictions on sour crude oil shipments might improve sweet crude prices, it's not likely to do anything to increase pipeline capacity on the Enbridge North Dakota system.

Production Apportionment

The Oil & Gas Division of the Industrial Commission will be proposing to revise its 50s era rules applicable to the apportionment of crude oil production in the state. While its still not recommended to apportion North Dakota production, updated apportionment rules will be needed if the state ever decides to implement such measures.

What the Industrial Commission and Pipeline Authority Has Done

So what has the Industrial Commission and the Pipeline Authority done to improve North Dakota's crude oil bottleneck?

- Quality Bank mechanisms have been studied
- We've provided support to Enbridge with their expansion plans
- We continue to encourage and support Belle Fourche Pipeline's plans
- We supported construction of the Keystone Pipeline with letters to the PSC and testimony at public hearings.

- Through the Oil and Gas Research Council, the Industrial Commission has established an additional grant round to study the construction of a new refinery in the state.
- The Oil & Gas Division has proposed revisions to its apportionment rules
- So far, we have met with representatives of over 20 companies, and have several more to meet, to learn of their plans and concerns regarding their North Dakota operations and how the Authority or Commission might assist them.
- We have been tracking pertinent matters at the FERC and kept the Commission and affected companies informed of issues.

What We Can and Are Doing

I've concluded the report with the following recommended actions. The North Dakota Pipeline Authority should:

- Stay abreast of problems confronting the crude oil complex serving North Dakota to avoid potential bottlenecks
- Report findings to the North Dakota Industrial Commission on a quarterly basis and to applicable legislative committees
- Facilitate communications and actions among producers, pipeline companies, and government agencies to minimize capacity bottlenecks
- Look for opportunities to streamline state permit approval processes
- Provide assistance to IOGCC and neighboring states in their efforts to improve the regional situation

Mark Makelky
9/17/2007