KEEPING THE US CRUDE OIL EXPORTS FLOWING

With the lifting of crude export restrictions in the US, the tank storage boom has begun writes Andy Lipow

A year ago, prospects seemed dim that the lifting of the US crude oil export ban would become a reality with the Congress and President at odds on nearly every issue. However, in mid-December 2015, as part of the deal on tax and spending legislation, the ban on crude oil exports was lifted.

THE DIKE IS BREACHED AND THE DAM HAS BROKEN

Prior to the lifting of the export ban, it was perfectly legal to export all the crude one wanted for use in Canada. According to the Energy Information Administration (EIA), exports to Canada grew from less than 50,000 barrels per day in 2011 to a peak of 524,000 barrels per day in May 2015. Alaskan North Slope crude oil could also be exported as long as it was transported on a Jones Act tanker.

Soon after the legislation was enacted, companies were racing to announce that they had exported crude oil to destinations other than Canada. It was first reported that Vitol was loading a crude oil cargo out of the Enterprise Products Partners terminal in early January. On December 30, 2015, ConocoPhillips and NuStar said they had exported the first cargo of crude oil and it was loading out of Corpus Christi.

During the next few months, reports of additional crude oil exports surfaced. Citgo reportedly sold a cargo to its parent company PDVSA, Trafigura had sold a cargo into Israel and ExxonMobil sold a cargo loading out of Beaumont Texas to an affiliated refinery in Italy. Cosmo Oil purchased a crude oil cargo for one of its refineries in Japan.

At its fourth quarter 2015 earnings call on January 28, 2016, Enterprise Products CEO Jim Teague said that they had nominations to move six million barrels of crude oil.

The problem of disposing a North American light sweet crude oil surplus for a refining system built to handle heavy sour crude oil had been solved. The only thing left to do was ensure that enough pipeline, storage and dock logistics were available along with favorable arbitrage economics to keep the export flow going.

THE PORT OF CORPUS CHRISTI

Due to its proximity to the Eagle Ford Shale, the Port of Corpus Christi has greatly benefitted from shipments of crude oil to water. Pipelines owned by Nustar, Energy Transfer Partners, Kinder Morgan, Magellan, Enterprise and Plains can deliver vast amounts of production to area terminals for subsequent loading. This of course includes not only exports, but shipments via Jones Act Tankers and barges to other ports in the United States including Houston, St James, Philadelphia and even Los Angeles.

It is estimated that there is at least 1.4 million barrels per day of inbound pipeline capacity available to deliver into 11 million barrels of terminal storage. According to its website, the port loaded nearly 30 million tonnes or about 600,000 barrels per day of crude oil in 2015. But is that enough storage?

The industry does not think so. Or at least at $100 per barrel oil it did not think so. In 2015, NuStar added another 400,000 barrels of storage and Plains and Enterprise are constructing a new terminal with more than two million barrels of storage which is expected to come on line in 2018.

In nearby Ingleside, Occidental is constructing an oil terminal to handle both LPG's and crude oil exports which could add another couple of million barrels of storage. Whether Cheniere goes through with their liquids terminal is still an open question.

THE PORT OF HOUSTON

It seems these days that the Houston area is awash in crude oil and its coming from everywhere. Not only is there more crude oil heading to Houston, it is of varying qualities and coming from different directions. All of which means that one needs more logistics to move it around and meet the requirements of refiners, traders, pipeline company shipping schedules and vessel dock windows.

From the south, Houston can receive crude oil from the Eagle Ford, Kinder Morgan and Enterprise Pipeline systems. From the Permian Basin, Magellan and Plains own and operate major truck lines while Enterprise is building a new Permian Basin pipeline, coming on stream next year. Cushing is now connected to Houston via the Seaway Pipeline system. Houston can receive crude oil from Canada and North Dakota from Enbridge's Flanagan South Pipeline. Soon Houston will receive additional quantities of crude oil via the TransCanada Cushing Market Link by way of Beaumont/Port Arthur.

To handle all of these movements, the estimated 66 million barrels of storage at third party terminals and eight area refineries with 2.6 million barrels per day of capacity does not seem to be enough for the almost three million barrels per day of inbound pipeline

capacity. Not to mention the fact that the area refineries are still importing crude.

So like Corpus Christi, the industry has asked for, and is getting, more storage. The most notable project is the Fairway Energy Cavern project just south of Houston adding 10 million barrels of storage in caverns in the first phase of their project, which is expected to be on line in 2017. Phase two could add another nine million barrels of storage. Meanwhile Enterprise, TransCanada, Magellan, Genesis and others are adding an additional eight million barrels of crude oil storage. Some companies are converting fuel oil tanks to store crude oil.

Additional dock capacity is on the way. Magellan has announced more capacity at Galena Park coming on line in 2018 while the Texas Deepwater Industrial Port is developing approximately 1,000 acres on the Houston Ship Channel that could have five vessel and two barge docks.

THE BEAUMONT PORT ARTHUR BOOM

While most of the publicity about crude oil exports goes to the Corpus Christi and Houston areas, the Beaumont Port Arthur region is seeing a significant expansion in logistics and distribution facilities.

The Beaumont Port Arthur area can receive crude oil from the Permian Basin via the Sunoco Permian Express System. Cushing is directly connected to Beaumont Port Arthur by the TransCanada Cushing Market Link Pipeline and also receives oil from the Seaway Pipeline system via a lateral coming over from Houston. Energy Transfer Partners along with their partner Phillips66 is developing a pipeline system from North Dakota to the Gulf Coast while at the same time constructing the Bayou Bridge pipeline from Beaumont and Port Arthur to Lake Charles and potentially eastward to St James.

With over 30 million barrels of terminal storage capacity and more than 2.4 million barrels of inbound pipeline capacity, Beaumont Port Arthur is seeing nothing short of a significant storage building boom. Sunoco Logistics has permits to construct over five million barrels of storage, much of which is underway, while Enterprise is building six million barrels. Phillips66 announced a seven million barrel expansion of its Beaumont terminal.

TOO LITTLE OR TOO MUCH TANKAGE?

The current infrastructure building boom got underway years ago when crude oil prices were $100 per barrel and were forecast to go even higher. US oil production rose from 5.3 million barrels per day in 2009 and peaked in April 2015 just shy of 9.7 million barrels per day. With oil prices in the $30's, production has since declined to about 9 million barrels per day.

Some tankage will always be needed for logistics and distribution. Some tankage will be used for storage. One might look at Cushing Oklahoma, with its 20+ inbound and 12+ outbound pipeline systems for guidance. In 2006, storage tank capacity was around 32 million barrels. Today it is closer to 90 million. In July 2014 inventory levels dropped below 18 million barrels. In February 2016 inventory exceeded 66 million.

Crude oil production levels, the relative price of crude oil in North America to other markets, the market price structure and the cost of transportation will determine whether exports will continue to grow and if more infrastructure is needed.

There used to be a simple answer. If the market was backwardated, there was too much storage. If the market was in contango, there was never enough. The answer today just got a bit more complicated.

FOR MORE INFORMATION

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