**U.S. Gulf Coast Refineries & Removing the Oil Export Ban**

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*Growing Prosperity of Gulf Coast Refineries*

While the news media in North America have tied themselves in knots over declining world oil prices and unemployment outcomes, another market phenomenon has been quietly underway on the U.S. Gulf Coast, the growing prosperity of oil refineries. And even with the disruption caused by the removal of the ban on crude oil exports, nothing it appears will stop this prosperity in the short and medium term.

In 2008, "U.S. oil production bottomed out at about 5 million barrels per day (b/d), but in 2014 it had risen to 8.7 b/d, a 73 percent increase," as shale oil from the Permian, Eagle Ford and Bakken formations flowed into refineries.[1] By mid 2015, "gross inputs to U.S. refineries exceeded 17 million b/d , a new record.[2] More than 50% of the country's refinery capacity and most of the country's heavy crude capacity was located on the Gulf. By January 2015, U.S. "refining capacity was running well above 90%, an increase of 400,000 b/d from just two years ago."[3] The "region's 51 operating refineries -- with atmospheric crude distillation units -- recorded a capacity totalling 9.7 million barrels per stream day, 81% of which was located at facilities with coking capacity."[4]

Gulf Coast refineries receive heavy crude from Venezuela, Canada and Mexico. The dependence on heavy crude by Gulf Coast refiners has been the big hit on the industry from those observing "from away," but as a spokesman from Valero stated in July 2014, the "company processes about 50 percent light sweet crude, up from 1/3 just five years ago."[5]

Venezuela, Canada, and Mexico "are battling it out over oil prices" quite literally tripping over each other to offer discounts.[6] The main issue: there aren't many places around the world that can refine heavy crude; this is has become problem as lighter crudes are squeezing out the refining space along the Gulf Coast.

Refineries having been gearing up to add capacity to produce more gasoline, diesel and other products. Valero, the world largest independent refiner, has built two new hydocrackers, and Marathon is expediting its new hydrocrackers along of the Gulf Coast. Each company is spending billions for increases of hundreds of 1000's of barrels of feedstocks per day.[7] Kinder Morgan is going ahead with spending $370 million on two 50,000 b/d condensate splitters along the Houston Ship Channel.[8] "Teapots," smaller refineries, are also capitalizing on the prosperity. Blue Dolphin, a teapot in Nixon TX, for example opened a 10,000 b/d plant in 2012. Shale oil at the close by Eagle Ford basin makes all this possible, and of course and the supply overflow.[9]

By mid 2015, there were more than 30 refinery expansions worth more than $14 billion across the U.S. This is in stark contrast the more two dozen refineries take out of commission in the 1990s.

The refinery sector commissioned a survey through its lobby group, the American Fuel & Petrochemical Manufacturers, to analyze the state of industry. Veris Consulting conducted the survey from Nov. 5 to Dec. 5, 2014, reporting in March 2015. The consultants surveyed of 23 companies and 69 refineries representing 61 percent of all U.S. refining capacity.[10] Here's what they concluded:

- "Processing heavy crude does not physically prevent refiners from processing more volumes of light crude. Under the right circumstances, more light crude can be used."[11]
- "Between 2007, prior to the tight oil production surge, and 2013, *crude imports dropped by 2.3 million b/d. ... Light and medium crude imports declined the most*, and since 2007 super light crude imports practically disappeared."[12]
- "The decline of finished petroleum products demand left *a surplus U.S. refining capacity*. In 2009, the U.S. went from *net product importer to a net product exporter*, while fully supplying shrinking U.S. demand."[13]
- "Between 2006 and 2013, before the beginning of tight oil production increases, respondents increased their use of super light crude the most. Heavy and light crude oil volumes also increased with medium volumes declining slightly."[14]
- Also from 2013 to 2016, heavy and super light crude inputs increased, again with super light increasing the most. Medium and light crude reductions are typically coming out of import reductions.[15]
- When comparing 2007 to 2016, respondents forecast increases in the yields of lighter streams**,** while heavier streams decline.[16]
- Finally, U.S. refiners are *not capacity constrained* in the near term on the use domestic tight oil.[17]

It also helps that refiners are not constrained by transportation infrastructure. The new Keystone XL southern leg from Cushing OK to the Gulf has assisted a build-up of inventories with Gulf refiners.[18]

*Removing the Export Ban*

Talk about removing the oil export ban began in earnest with a couple liberal think tanks in 2013 and 2014. At the end of 2014, Republicans took over the U.S. Senate, and U.S Senator Lisa Murkowski (R Alaska), chairman of the Energy and Natural Resources Committee made it plain that she wanted the ban removed. (Indeed, when I was in Washington in November 2014 quite a head of steam had built up within chattering classes in support of lifting the ban.)

Representatives of the refineries in January 2015 feeling a movement going against their interests were somewhat desperate to receive a hearing. They wrote a letter representing the Consumers and Refiners United for Domestic Energy to Sen. Murkowski indicating that they had "replaced millions of b/d of crude oil from overseas sources with domestic tight oil," and ... "have plenty of capacity for light sweet domestic crude."[19] A turnaround away from heavy crude was on the way for Gulf Coast refiners.

Next, it was the oil producers turn, arriving in Washington in March 2015 and led by big oil: ConocoPhillips and 10 other firms. They reported crude oil production hit 9.4 billion b/d in mid-March, a high point in oil production, and then recommended a fundamental re-balancing on the sale of their respective outputs. The producers noted that refiners had no restrictions on the export of petroleum products; "they [had recently] had been exporting record amounts," while producers were precluded from exporting a drop -- except to Canada since 1985. It was time the ban on raw exports from 1975 was removed.[20]

At the end of May 2015, Texas Governor Greg Abbott signed two resolutions from the State House and Senate promoting the export of oil and natural gas.[21] The resolutions were immediately sent along to U.S. President Barack Obama.

In a somewhat ambiguous signal sent in August 2015, the Administration approved a swap of Mexican heavy crude for lighter crude from the U.S.. Most producers regarded this move as poor substitute for an all-out removal of the ban.[22]

Next came the beginning of slew of reports on the effects of removing the export ban. First out the gate was IHS Global. A veritable cheerleader for the removal side of the debate, IHS declared lifting the ban would amount to free trade in oil, increase production by 1.2 million b/d and up to 2.3 million b/d between 2016 and 2030. It would put pressure to lower global oil prices further and offer further savings for motorists. Moreover, at its peak, it would create almost one million new jobs and contribute to an expanded GDP by $135 million.[23]

In September 2015, there was much contestation in news media reporting over the publication of the U.S. Energy Information Administration analysis on the export ban. The *Oil & Gas Journal* offered a reasonably neutral analysis. EIA found "no difference between projections with and without the current export restrictions in two analyses in which the projected production in current export restriction remains below 10.6 million b/d over the next decade. However, in two other analyses, cases where production in 2025 ranges between 11.7 and 13.6 million b/d, projections without export restrictions show increased production, higher crude exports, reduced product exports, and slightly lower gasoline prices for consumers compared with parallel cases that maintain current export restrictions."[24]

*Bloomberg News* noted a downside to the EIA analysis citing a possible cut in refiners' profits by $22 billion per year. "The refiners will definitely be hurt, there's no question about that," said Charles Ebinger a senior fellow at the Brookings Institution -- otherwise an advocate of removing the ban.[25]

As a U.S. House vote loomed, the refiners took one more shot in early October lobbying Washington. They brought in the big gun, Valero, but Valero was partly undone when reports emerged that even though it opposes foreign exports it was taking advantage of a provision in current legislation that allowed it to export crude to its Levis, QC, refinery (near Quebec City).[26]

The House of Representatives gave the removal of the export ban smooth passage on October 9, 2015 with over half of the Democratic delegation from Texas voting with the Republicans. Besides the refinery sector in opposition, the United Steelworkers Union opposed the move. The White House bleated that it would surely issue a veto.[27]

On Dec. 18, 2015, the U.S. Senate passed final legislation lifting ban by a 2:1 margin. Some last minute finagling resulted in Republicans buying a compromise with a 5-year extension of tax credits for wind and solar power.[28] The White House fell silent and signed the deal -- apparently Democratic politics overwhelmed the climate change agenda.

Less than two weeks after lifting the ban, ConocoPhillips contracted with the Swiss trading firm, Vitol, to send the first ship laden with crude oil to Europe; the Theo T left the Port of Corpus Christi on New Year's Eve.[29] Two more shipments reached Europe in January 2016. These, as it turned out, were symbolic gestures; ConocoPhillips decided to put on a little show for the nation and elsewhere.

In an ancillary development, the Port of Corpus announced a "massive build-out underway to bring more and bigger ships to their docks."[30]

By Jan. 29th, the Houston Chronicle was reporting oil exports were off to slow start. According the EIA, "the U.S. exported 399,000 barrels of oil in the week ending Jan. 22nd, a 25% reduction from the same period a year ago."[31] Michael Levi of the Council on Foreign Relations observed the following on the slow start. There would be little immediate impact because there is little incentive for oil producers to export crude. Light sweet crude delivered to Europe is currently selling under Brent pricing for $3.00 under cost. "Spending three dollars in order to lose money is not something that sane people do," Levi said.[32]

Chris Helman of Forbes noted: "For exports of American oil to make sense the price spread between West Texas Intermediate and Brent would need to be at least wide enough to cover that

cost of shipping the oil."[33] Moreover, "for many oil and gas companies, the oil supply glut is too expansive now to be done away by simply dissolving the rule," a Houston banker observed.

Effectively, there is little downside for the refiners in the short-term, and in the medium term from the point of view of EIA in September 2015 the situation remains stable. Overall, politics was working against the refiners' interests in the case of the ban, whereas the rigours of the marketplace may in the end save their bacon.

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