

MLPs

IMPACT OF OIL EXPORTS ON MIDSTREAM MLPs

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- Allowing oil exports would reinforce U.S.'s dominant position in the global energy market
- Oil export growth would not come at the expense of booming U.S. refined products exports
- Oil exports would be additive to midstream volumes based on continued production gains from higher U.S. producer netbacks (from narrowing spread to global oil price)
- Oil exports would be additive to midstream capital expenditures, based on additional coastal infrastructure and pulling forward additional midstream infrastructure development
- Oil exports would not, however, trigger a build-out of the scale we have seen for natural gas infrastructure related to LNG exports and re-oriented pipeline flows

WEBCAST:



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The probability of a change, perhaps even a repeal, to the 1973 legislative ban on exporting crude oil has increased this year. In part, this is due to the sharp increase in domestic oil production due to the shale boom, which has seen the U.S. become one of the top energy producers in the world. In addition, the recently announced Iran nuclear agreement that will see Iran sanctions lifted may add to the political pressure to allow U.S. oil exports.

Allowing U.S. companies to export crude oil with no restrictions would immediately benefit U.S. energy producers (higher relative prices, outlet for volumes), oilfield services companies (higher activity), and midstream MLPs (higher volumes through pipelines and processing plants). In this paper, we attempt to roughly quantify the scale of the capital investment opportunity for MLPs should crude oil exports be allowed and put that opportunity in the context of existing capital investment opportunities for MLPs.

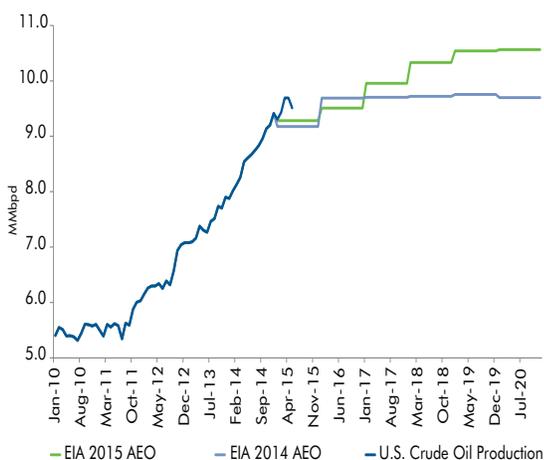
In the end, lifting the crude oil ban would clearly be a positive for midstream infrastructure development, supporting distribution growth for MLPs. But we don't view it as a potential large windfall for midstream MLPs. With or without oil exports, we maintain a positive outlook on MLPs and their ability to maintain historical annual distribution growth of 6-8% over the next several years.

MARKET POTENTIAL FOR U.S. OIL

The U.S. produces approximately 9.5 million barrels per day of oil (as of latest EIA data, May 2015). On average in 2012, the U.S. produced 6.5 million barrels of oil per day. The 46% increase over 3 years has been driven by growth in unconventional drilling methods applied to emerging and mature basins. We view 3.5 mmbbls/d of oil exports as a reasonable target for U.S. exports to have

a meaningful enough impact on the global oil market and on midstream capital expenditures. The U.S. currently imports approximately 7.3 mmbbls/d of oil, and current U.S. refinery throughput is approximately 15.8 mmbbls/d. In order to realize 3.5 mmbbls/d oil surplus, the U.S. would need to grow production 26% from today's levels, or 2.5 mmbbls/d, based on the simplified math below.

Exhibit 1: U.S. Historical & Projected Oil Production



Source: U.S. Energy Information Administration (EIA) as of May 31, 2015.

Exhibit 2: Back of the Envelope Export Calculation

	2014	Current Production Rate	Production Rate to Reach 3.5mmbbls/d Surplus
Production	8.7	9.5	12.0
Net Imports	7.3	7.3	7.3
Total Supply	16.1	16.8	19.3
Refinery Throughput (Demand)	15.8	15.8	15.8
Excess (Potential Exports)	0.2	1.0	3.5

Source: CBRE Clarion and EIA as of July 31, 2015, BP 2015 Statistical Review of World Energy as of June 24, 2015.

It is feasible for the U.S. to become a major player in the oil supply market globally, based on a constrained U.S. refining complex and excess production potential. With a clear global market for oil production, it is reasonable to assume the U.S. could expand production to meet an incremental 3.5 mmbbls/d of export demand, assuming sufficiently high oil prices. All of this is to say the potential exists for the surplus of U.S. oil to grow large enough to support significant exports.

New U.S. supply would be attractive to importers because it would offer supply diversification away from the Middle East and Russia, but those export countries (as evidenced by recent OPEC actions) will not give up market share easily.

Alaska Senator Lisa Murkowski, the most vocal proponent of U.S. exports in Congress, has recently made the case that the U.S. should first target major U.S. trade partners for exports. The most logical first wave of potential partners for U.S. exports are countries that: (1) have existing relationships and (2) import large quantities of oil from the Middle East or Russia. The U.S. has an opportunity to serve a growing market and is well-positioned as an attractive counterparty. We believe there is a sufficient market for U.S. oil.

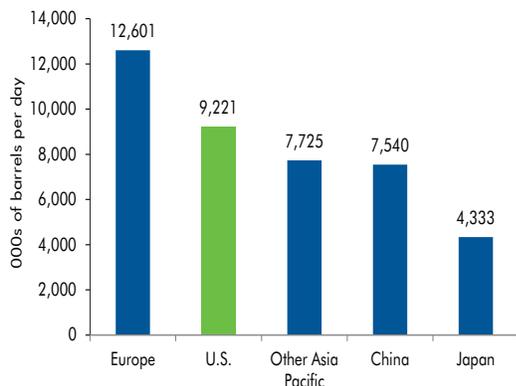
U.S. DOMINANCE IN THE GLOBAL ENERGY MARKET PLACE

The U.S. ranks among the world’s largest importers and exporters of oil & refined products. In 2014, the U.S. exported more refined products (gasoline, diesel fuel, propane, etc.) than any other country. If oil exports were allowed, the U.S. should climb further up the list of energy exporters.

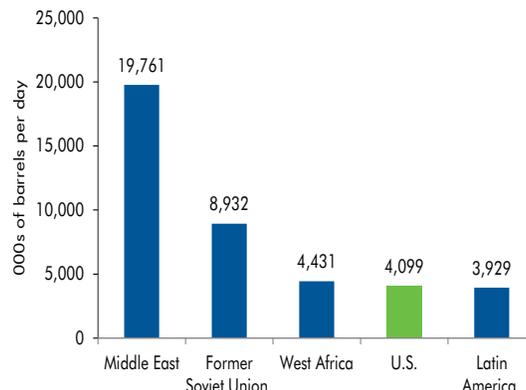
Given the dynamics of already high refinery utilization, we would not expect crude oil exports to displace exports of refined products.

Refined product export volumes would likely remain elevated and growing even with oil exports. In order to export oil, therefore, the U.S. would need to build out additional terminal infrastructure along the Gulf Coast to facilitate the additional volumes. However, the infrastructure required would be significantly less capital intensive than what is needed for LNG exports.

**Exhibit 3: 2014 Imports:
Oil & Refined Products**



**Exhibit 4: 2014 Exports:
Oil & Refined Products**



Source: BP 2015 Statistical Review of World Energy as of June 24, 2015. Other Asia Pacific includes countries in Asia, ex-China, and Japan.

IMPLICATIONS FOR MLPs

In order to support export volume of 1.5 mmbbls/d to 3.5 mmbbls/d, we estimate incremental near-term midstream capital expenditures would total \$1.9 billion to \$4.5 billion. These estimates are based on the amount of additional infrastructure we estimate would be needed along the Gulf Coast, including incremental storage, pipeline connectivity and dock expansion.

Beyond that, we estimate the overall midstream capital to support additional production resulting from exports to be in a range between \$10 billion and \$20 billion over the next five years (assuming ban were lifted today), depending on the ultimate export volume. These expenditures would include pipeline expansions, processing facilities, field-level storage and other connectivity capital expenditures.

The incremental infrastructure that producers would need midstream companies to build would be significantly less than the magnitude of the build-out required to export LNG. The capital required to liquefy natural gas at the point of origin to make it transportable on LNG tankers is much greater than the capital required to develop an oil terminal for free flowing oil to load onto an oil tanker.

In addition, a substantial portion of midstream spending in recent years was due to the change in directional flow of natural gas and natural gas liquids. Exports of crude oil would not require a similar reshaping of pipeline flows, given that the likely export destinations would be adjacent to current oil refinery demand centers along the Gulf Coast.

BENEFICIARIES OF OIL EXPORTS

We believe the biggest beneficiaries of free trade for U.S. crude oil would be MLPs with asset footprints along the Gulf Coast. Those MLPs would be best positioned to build additional storage capacity and add docks capacity to support exporting oil via tankers.

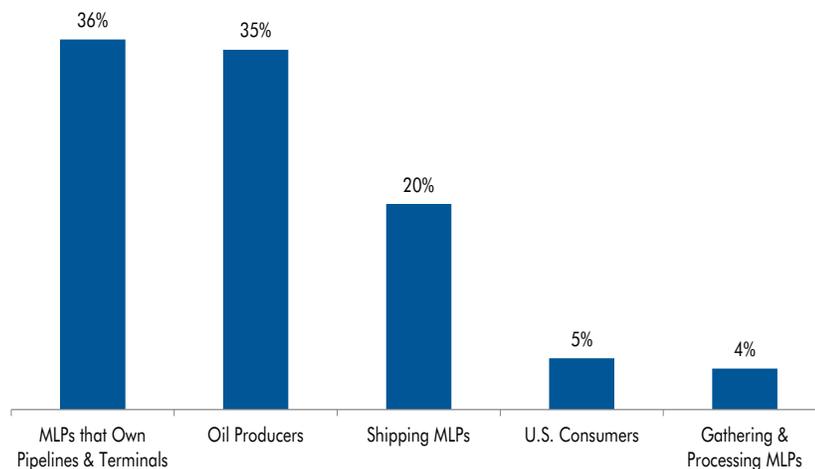
Other beneficiaries of oil exports would be MLPs building new oil pipelines today. The pipelines under construction to take supply away from the Niobrara and Bakken areas are not expected to run at capacity once in-service. The MLPs developing these pipelines have secured the minimum level of volumes commitments they need to ensure project returns in excess of their costs of capital, but the pipelines will have excess capacity. Under a full export scenario, the returns on capital invested in those pipelines today would be much higher due to higher utilization.

Gathering & processing MLPs would also likely benefit from increased producer activity and an increase in associated natural gas production. In addition, given the amount of new oil tankers that would be required to export oil to distant markets like Asia, shipping MLPs would see a benefit in day rates and drop down acquisition backlogs.

We also believe increased U.S. oil exports would drive lower global gasoline prices, because gasoline prices are generally based on global oil prices, and the addition of U.S. oil to the global market should reduce global oil prices, all else being equal. Lower gasoline prices benefit the U.S. consumer. Connecting the dots of oil exports to lower gasoline prices will be critical to achieving political momentum for oil exports. In addition to lower exports, additional exports would drive economic growth. IHS Global has estimated that U.S. economic impact from allowing oil exports could be \$170 billion in additional GDP and 859,000 additional jobs.

At the CBRE Clarion MLP Market Update blog (www.mlpguy.com), we ran an informal poll to determine sentiment among MLP investors with regards to which group would benefit the most from oil export growth. The results below are in-line with our above assessment, although the gathering & processing category ranked lower than even the U.S. consumer, which was a surprise.

Exhibit 5: Poll: Who Benefits the Most from Oil Exports?



Source: CBRE Clarion, www.mlpguy.com as of July 31, 2015.

CONCLUSION

In conclusion, if the oil export ban were to be lifted, we would expect it to be a near-term positive for MLPs with existing oil pipelines and coastal infrastructure due to an immediate increase in volumes through their systems. In addition, we would expect oil exports to be a modest incremental positive with regards to the ongoing energy infrastructure build out being undertaken largely by MLPs. But we don't expect the free trade of oil exports to trigger a capital expenditure cycle of the magnitude we have seen with LNG export facility development plans over the last few years. Importantly, we also don't believe MLPs necessarily need oil exports to support distribution growth at historical 6-8% levels. Exports are additive, but not required for MLP performance in the medium to long term.



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