
LOOP Transitions From Imports to Exports

Outbound crude shipments growing.

Morningstar Commodities Research

25 November 2019

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Data Sources for This Publication

EIA
RBN Energy
U.S. Census

To discover more about the data sources used, [click here](#).

The Future is Exports

The Louisiana Offshore Oil Port (LOOP) deepwater terminal, located in the Gulf of Mexico, was built in the 1980s to facilitate growing crude imports needed to feed Gulf Coast and Midwest refineries in light of declining domestic production. In the shale era, LOOP's role as an import terminal declined as domestic production surged and U.S. refiners reduced their dependence on overseas oil. Since a federal ban on exports was lifted in December 2015, Gulf Coast crude exports have increased to 2.6 million barrels/day on average between January and August 2019 according to the Energy Information Administration. The majority of crude exports are shipped from Texas ports, but volumes leaving Louisiana have grown this year and the LOOP facility's future is now firmly tied to exports. This note looks at LOOP's transition from imports to exports.

LOOP is the nation's only deep-water tanker port and consists of three mooring buoys located 18 miles offshore in 110 feet of water in the Gulf of Mexico. These buoys can accommodate "very large" and "ultra large" crude carriers (VLCCs and ULCCs) that hold between 1 million-3 million barrels of oil. The terminal unloads inbound tankers into a 25-mile long subsea pipeline to the Clovelly storage facility. Clovelly has 71 million barrels of nameplate capacity consisting of eight underground salt dome caverns and 21 above ground tanks. The storage at Clovelly is connected by pipeline to approximately 2.4 million barrels of downstream refining capacity in the Louisiana Gulf Coast region. Originally a dedicated import facility, LOOP is fast developing into an export hub that ships domestic shale, Gulf of Mexico output, and eventually Canadian crude into world markets.

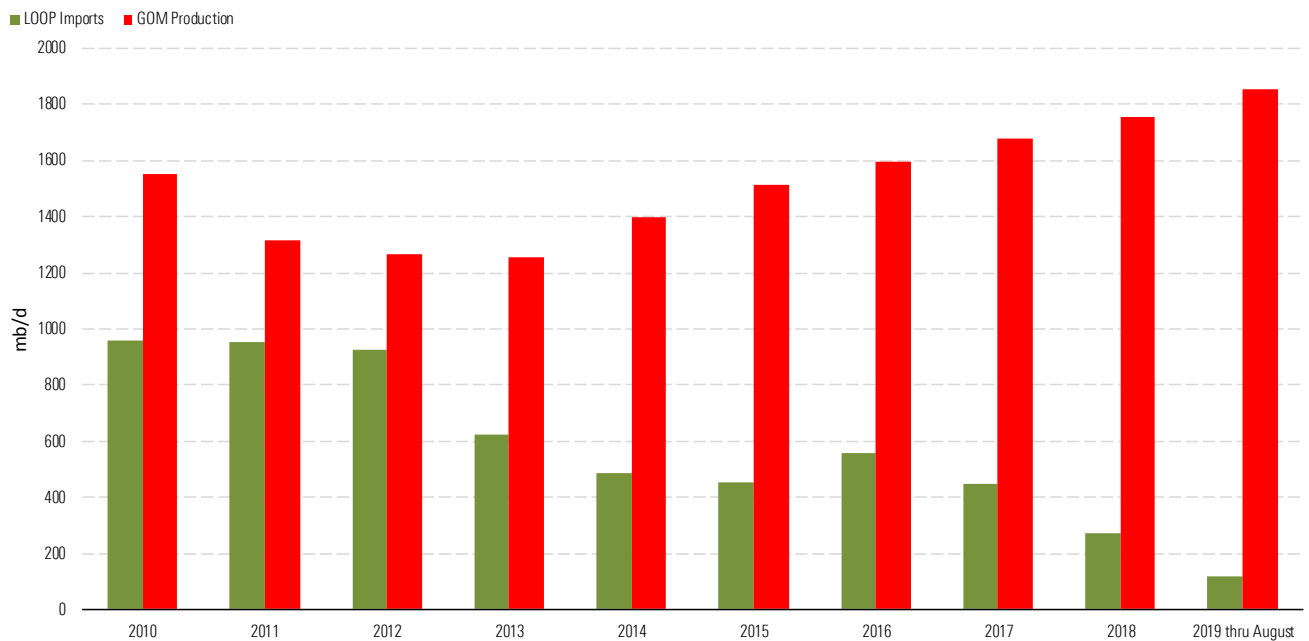
We previously detailed the redirection of Louisiana crude supply in the shale era as more domestic barrels from Texas and North Dakota make their way into the region (see our January 2019 note, "[Shale Crude Heading East as Louisiana Market Opens Up](#)"). Growing production of medium sour offshore Gulf of Mexico crude has also helped reduced local refiner's reliance on imports and is increasingly being exported (see our November 2017 note, "[Can Gulf of Mexico Exports Keep Growing?](#)"). We've also detailed developments in the Louisiana refining market and the crude trading hub at St. James (see our April 2018 note, "[Empty Capline Signals Changing Louisiana Crude Flows](#)"). During the four years since the federal crude export ban was lifted most overseas shipments have been from Texas ports, but as Louisiana's domestic supply increases, we expect exports to follow suit.

Imports Falling

Overall U.S. crude imports have declined in the shale era — down 16% from an annual average 11.8 mmb/d in 2010 to 9.9 mmb/d in 2018, according to EIA — as shale pushes out light crude imports. That's

actually a modest import decline given domestic output doubled from an average 5.5 mmb/d in 2010 to 11 mmb/d in 2018 because U.S. refineries are generally configured to process heavier crude and continue to import those supplies—in particular from Canada into the Midwest. In contrast, crude imports into LOOP have declined far more rapidly in the shale era, down 72% from 960 mb/d in 2010 to 273 mb/d in 2018. The primary reason why LOOP in particular and Louisiana refiners in general have successfully reduced reliance on imports is their ready access to growing offshore Gulf of Mexico crude production. Mars and Thunder Horse, two of the largest offshore streams, flow directly by pipeline to the LOOP terminal. Medium heavy offshore GOM crude has replaced similar grades imported from the Middle East. Exhibit 1 shows U.S. Census data for LOOP crude imports (blue bars) and EIA data for GOM production (red bars) on an annual average basis from 2010 to 2018 as well as between January and August this year. GOM production now exceeds regional demand, and exports of these heavier barrels have joined the swelling volumes of U.S. crude being shipped overseas.

Exhibit 1 LOOP Imports and Gulf of Mexico Production



Source: U.S. Census, EIA, Morningstar

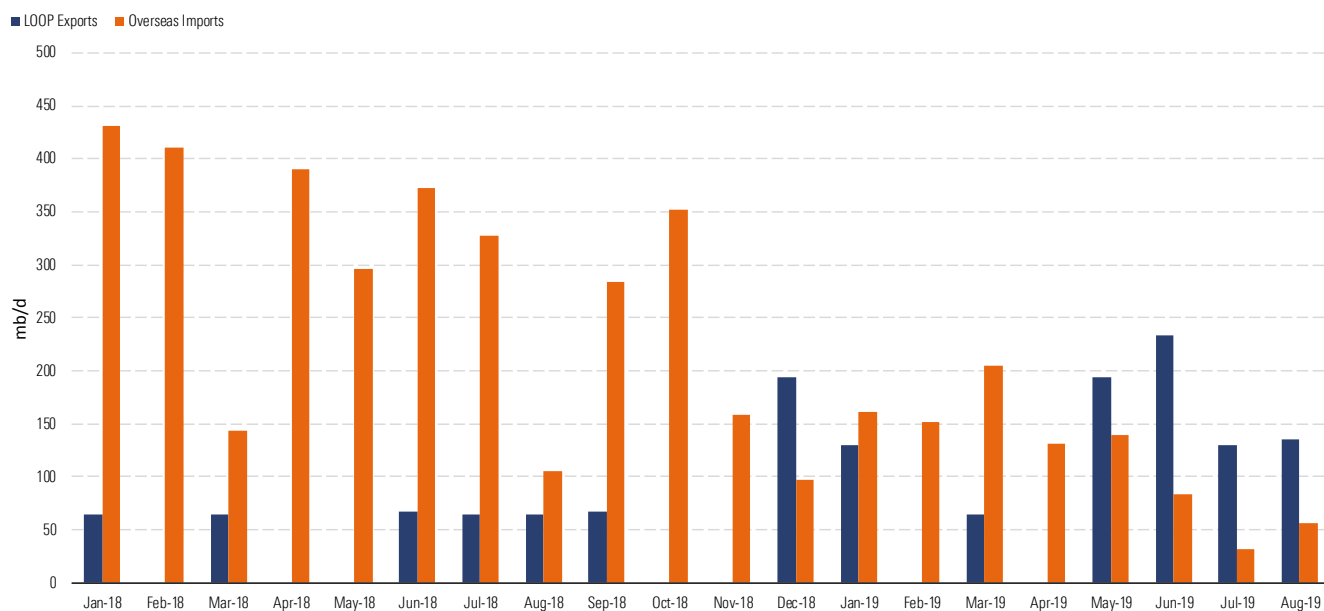
Export Operations

In February 2018, the LOOP terminal began exporting crude from one of its three marine buoys that can load onto 2 million barrel very large crude carriers. Given the terminal was built explicitly for imports, the export process is convoluted when it follows an import to the same buoy. In that case, the export shipper needs to clear line fill crude from the pipeline between the onshore storage and the marine buoy. According to LOOP's operating procedures, the 535 thousand barrel line fill has to be either stored in a separate compartment in the export vessel for discharge after loading or loaded onto a separate ship. The line fill complication adds about three days loading time, meaning the first VLCC tanker takes five days. However, once one VLCC is loaded with a particular crude, subsequent vessels loading the same

grade can do so in just two days. So one LOOP buoy can load several vessels rapidly when required. Overcoming the line fill stumbling block requires LOOP to add a parallel pipeline to make it truly bidirectional—a \$200 million investment that the terminal hasn’t decided to make yet.

The reason LOOP is dragging its feet on investing in true bidirectional capacity relates to the continued decline in import volumes to LOOP at the same time as exports grow. Exhibit 2 shows monthly import volumes to the LOOP terminal between January 2018 and August 2019 based on U.S. Census data (red bars) as well as monthly exports (blue bars) according to RBN Energy’s Crude Voyager report. The trend shows imports falling off sharply this year (averaging 118 mb/d between January and August) versus an average 273 mb/d in 2018, while exports increased 77% from an average 84 mb/d in 2018 to 147 mb/d between January and August 2019. In delaying investment in bidirectional infrastructure, LOOP is gambling that future exports will exceed imports rapidly enough to negate the need. In effect LOOP is rapidly becoming an export major with imports playing a minor role.

Exhibit 2 LOOP Imports and Exports



Source: RBN Energy, U.S. Census, Morningstar.

Popular Grades

There’s good reason to expect LOOP export volumes to increase in coming years. In the first instance this reflects rising GOM production and strong world demand for these barrels. Although the medium sour crudes typically produced from the GOM are desirable to Louisiana refineries, they are just as popular, if not more so, with overseas buyers. As we explained in a November 2017 note (see “[Can Gulf of Mexico Exports Keep Growing?](#)”) the production limits imposed since 2017 by OPEC and Russia created a shortage of medium and heavy sour crudes in Asia that opened an export window for GOM crude from

Louisiana. That export window remained open following the imposition of sanctions on Iran at the end of 2018 and on Venezuela in 2019, as both actions pared world supplies of sour crude.

More to Come

Aside from close by GOM production, recently online and announced plans to change Louisiana pipeline infrastructure also favor increased crude flows to LOOP. These plans, that we'll update in an upcoming note, will allow more crude to reach LOOP from Texas and North Dakota as well as from the Midwest Cushing, Oklahoma hub, and Western Canada. The majority of these barrels will be surplus to local requirements and headed onto the water—helping complete LOOP's transformation from an '80s import center to a major Gulf Coast export hub in the 2020s. ■■■

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