America's Crude Exports: Challenge and Opportunity

David Blackmon The Energy Summit October 24, 2018



Why Policy Matters

- 1977 President Jimmy Carter declares a national emergency over the fact that the U.S. is importing 33% of its daily crude oil needs
- 1977 President Carter signs a law banning the export of U.S. crude the law allows for limited exports as permitted by Dept. of Commerce
- 2013 Total U.S. crude exports amount to 43.8 million barrels about 8,300 per day
- 2015 An omnibus energy package titled the Energy & Conservation Act is signed law by President Barack Obama

Why Policy Matters, Cont.

Weekly U.S. Exports of Crude Oil



eia Source: U.S. Energy Information Administration

Why Does The U.S. Need to Export?

U.S. Imports of Crude Oil and Petroleum Products



Key Fact: U.S. crude imports have not fallen as exports have increased since 2015.



A 10-Year Walk Through History

October, 2008 – Petrohawk Announces First Successful Eagle Ford Well



Key Fact: The first Eagle Ford well was a wet gas producer, but it set off the biggest oil boom in U.S. history.

2009-2014 – Eagle Ford Shale Boom



2009 – 2014 – Bakken Shale Booms



2010 – 2014 – Permian Basin Booms



November 2018 – EIA projects total U.S. Shale Production at 7.71mmbopd



Key Fact: U.S. shale production alone now exceeds total oil produced by every nation other than Saudi Arabia and Russia.

Question: What do all these basins have in common?

Answer: They all produce "light, sweet crude."



Problem: Most U.S. refining capacity is designed to process heavy crude

Early 2015 – The Looming Bottleneck



What happens when oil production can't find a home?

The Opportunity

U.S. crude oil exports are expected to more than double by 2020, and unlike the pipeline constraints hampering the booming Permian Basin oil field, the Texas Gulf Coast will be ready to ship the larger volumes to the world, according to two studies released this week. - San Antonio Express News, October 9, 2018



Currently: Most crude exports leave the U.S. via Texas Ports

More than half depart from Port of Corpus Christi

Crude oil imports and exports through the port district of Houston-Galveston, Texas million barrels per day 1.6 ______ Dec 2015: crude oil export



The Big Drivers: Permian Basin, Eagle Ford Shale



Key Fact: Without new refinery capacity, every incremental barrel of Permian/Eagle Ford production must be exported.

Problem: Port of Corpus Christi cannot fully load VLCCs

Port must be widened, deepened.



Key Fact: Port CC has committed to fund 2/3rds of Army Corps of Engineers cost, but is having difficulty securing the remaining funds from congress.

Possible Interim Solution: Satellite port at Harbor Island

Federal Ship Channel deep enough to load VLCCs



Key Fact: Port Aransas citizens groups are opposed to this project.

The Competition: Offshore facility proposed by Trafigura



Key Facts:

- Opposed by Port CC.
- Permit has yet to be issued.
- Would be able to load/unload VLCCs.

Brownsville Exports: Jupiter Pipeline, LLC secures project funding

Could bring up to 1,000,000 bopd from Permian to Brownsville



Key Fact: Jupiter plan includes large tank farm/export facility.

The LOOP: Louisiana Offshore Oil Platform

Began loading tankers for export in February, 2018.



Key Fact: "The new onloading configuration was accomplished with only minor modifications to existing facilities and is scalable to meet the changing needs of the industry," - Tom Shaw, LOOP President.

The LOOP: Louisiana Offshore Oil Platform

<u>PAA's Permian Basin Crude Oil System</u>: Unmatched Interconnectivity Providing Access To Multiple Markets

All amounts approximate.



Key Fact: Outflows from the Permian also feed Louisiana ports through Cushing and Houston.

EIA Projection: U.S. to add another 1 million bopd by Q4 2019

Could reach 14 million bopd by 2022



Key Fact: Vast majority of incremental production will have to be exported absent added refinery capacity.

Potential Limiters

Limited overall market: Obviously, the market for crude exports is not unlimited

Demand for light, sweet crude: There will be limits here as well

Competition from other nations

Possible economic downturns

Trade Wars - China halted imports of U.S. crude beginning August 1

Bottom line: As with any other business, this one has complexities and potential pitfalls that must be dealt with.

The future is bright – for now.



Questions?



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