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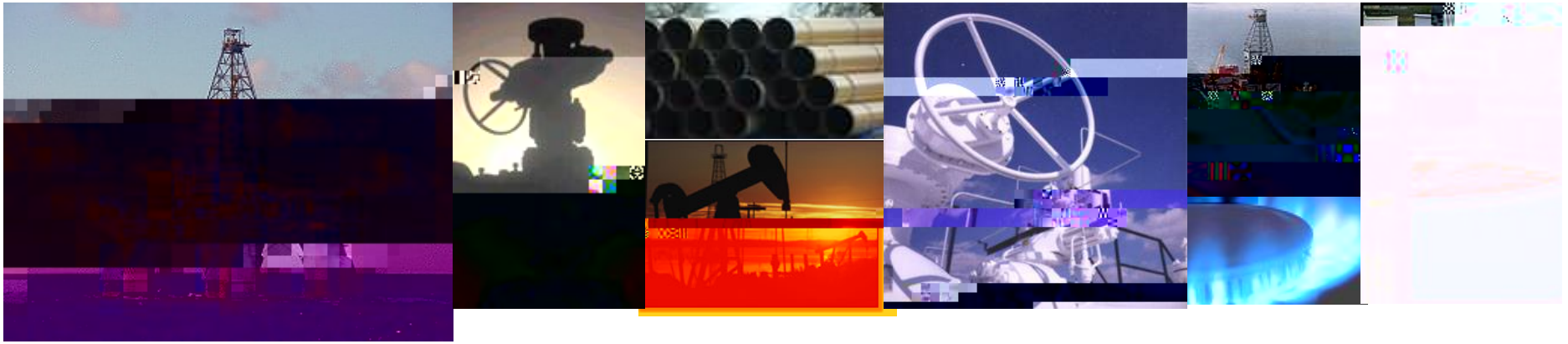

Gulf Coast Energy Outlook: Addendum.

Take-Aways

- Lower prices **reduced upstream activity**, but a slow recovery has started given the OPEC-induced price increase.
- Natural gas experience shows that

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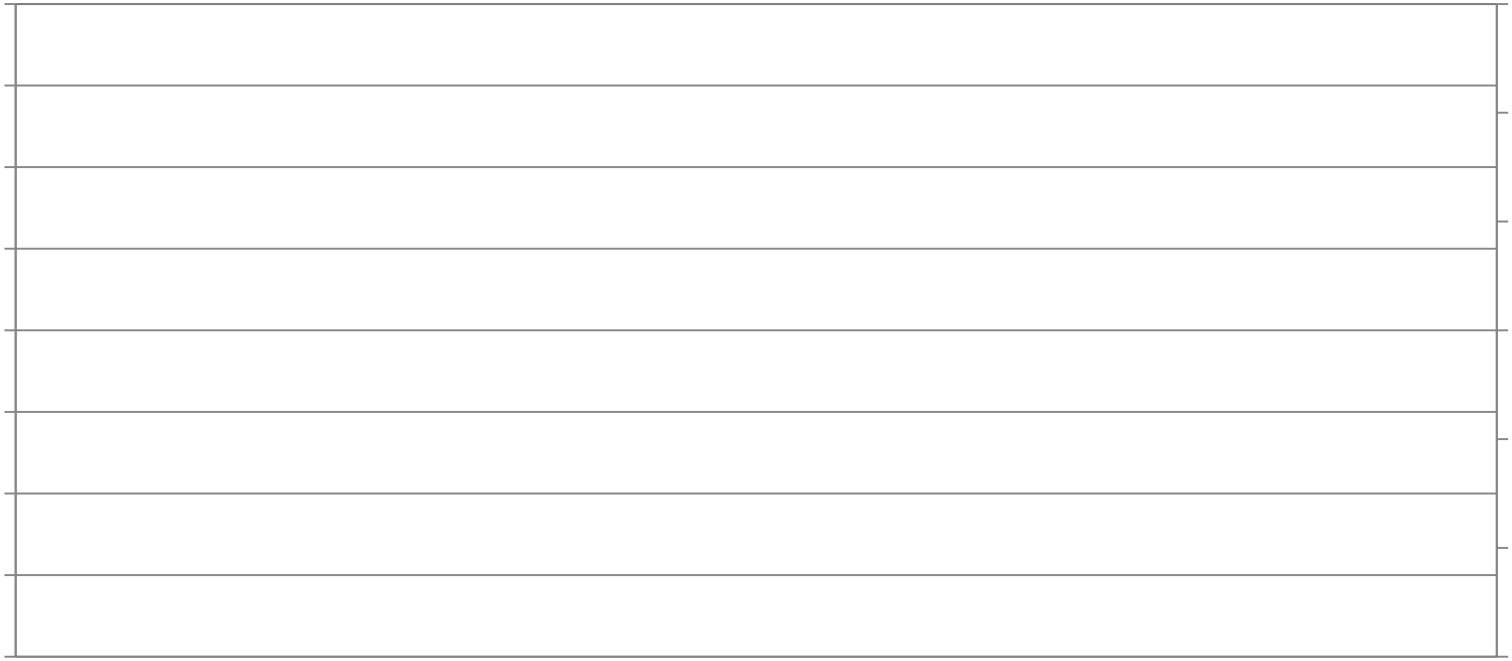

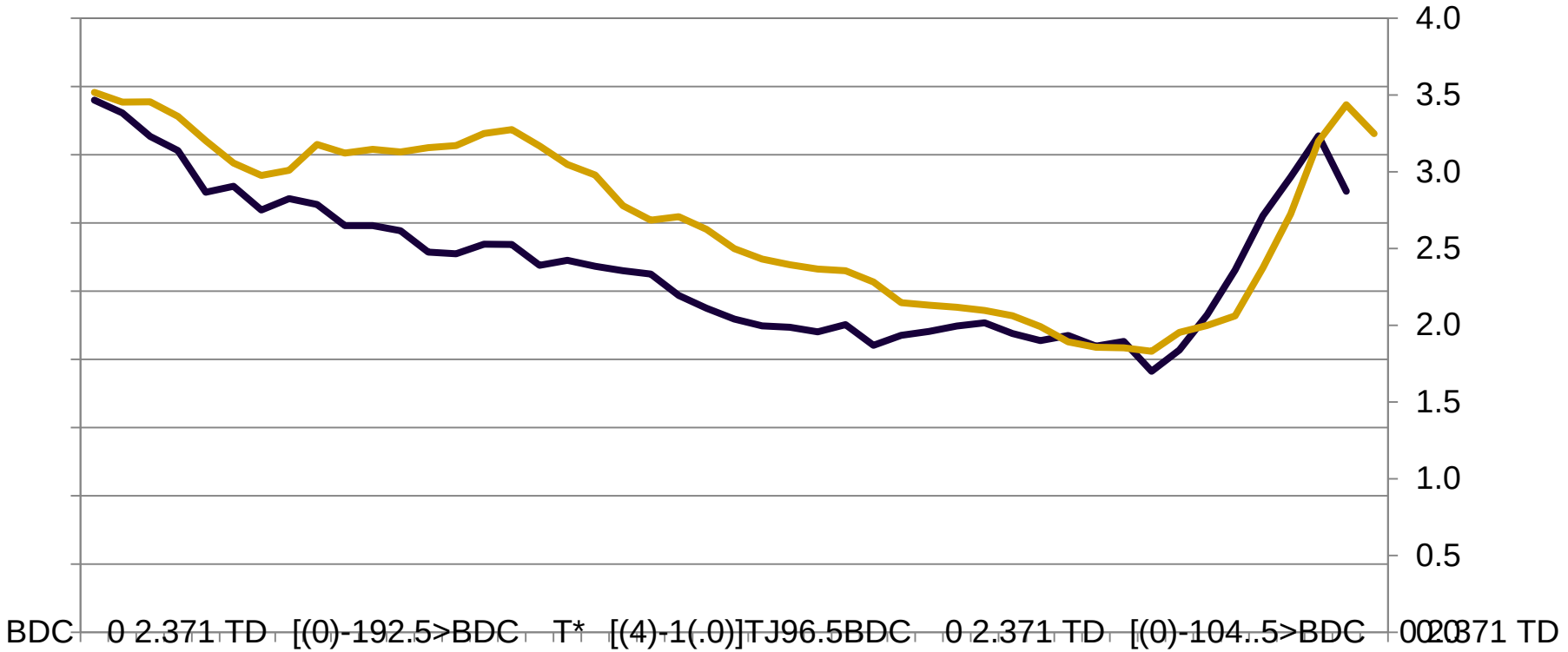
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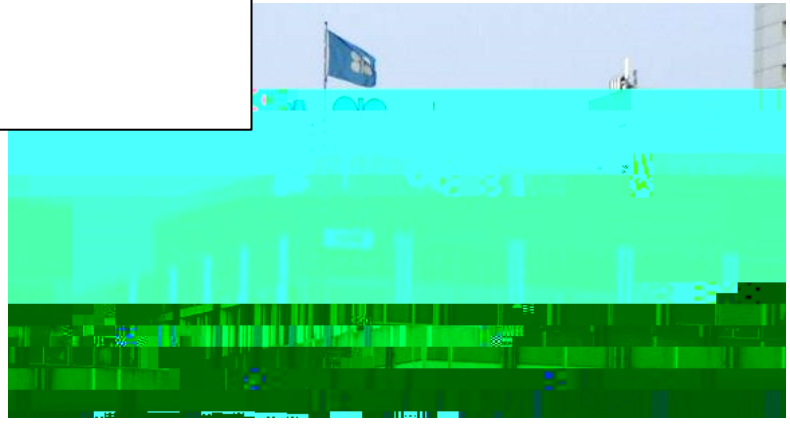
Recent energy market drivers/changes.

Recent market changes:

- Non-OPEC production surge.
- OPEC floods market with



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OPEC crude oil production agreements.

The recent OPEC agreements have had the largest most recent impact on supply and prices

Note: *Indonesia has suspended its OPEC membership. Non-OPEC countries include Azerbaijan, Kingdom of Bahrain, Brunei Darussalam, Equatorial Guinea, Kazakhstan, Malaysia, Mexico, Sultanate of Oman, the Russian Federation, Republic of Sudan, and Republic of South Sudan
Source: http://www.opec.org/opec_web/static_files_project/media/downloads/press_room/OPEC%20agreement.pdf

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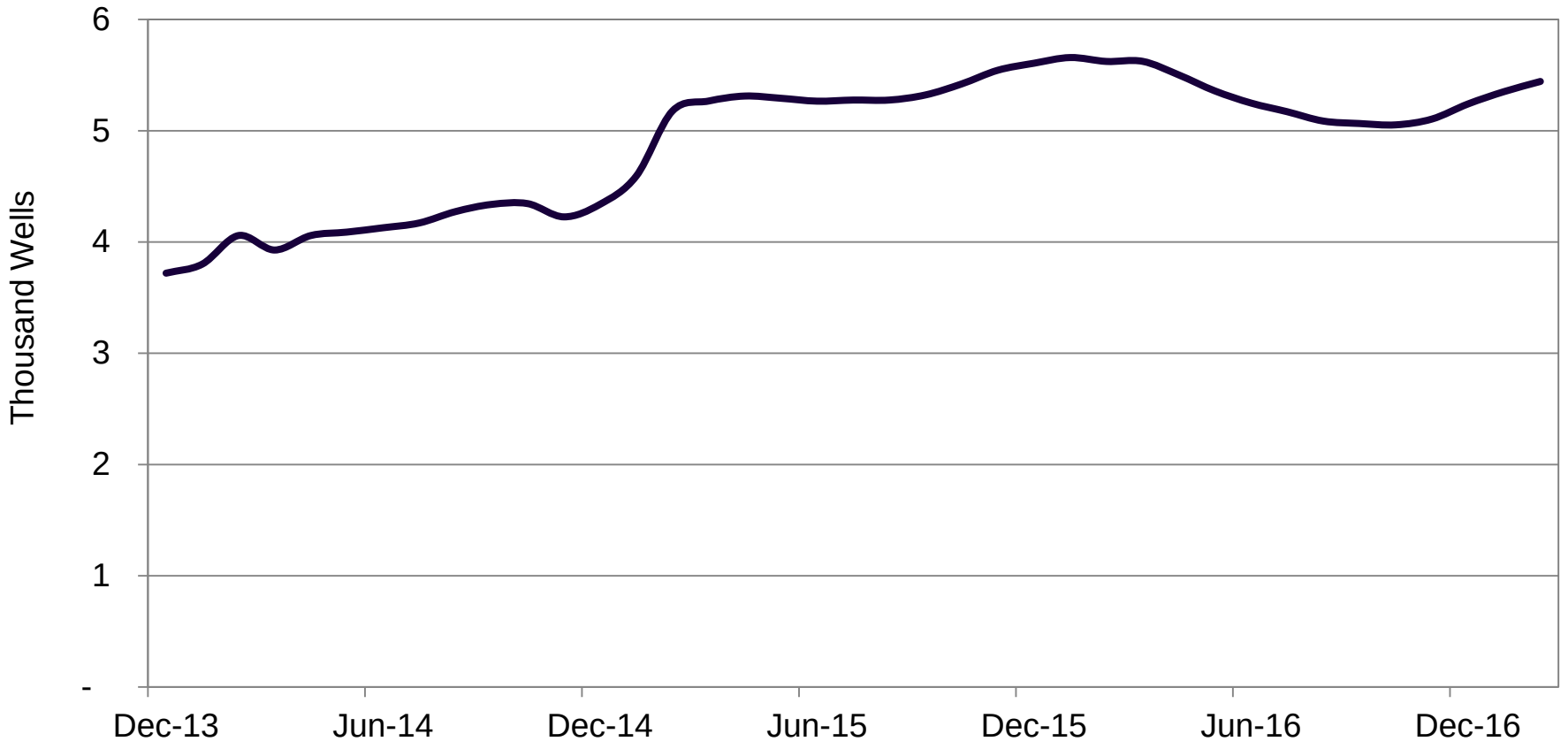
U.S. crude oil stocks.

U.S. natural gas storage.

Monthly drilled but uncompleted wells.



Crude oil price outlook.

Most crude oil price projections for 2017 are around $55 per barrel. Prices are

Source: Energy Information Administration, U.S. Department of Energy.

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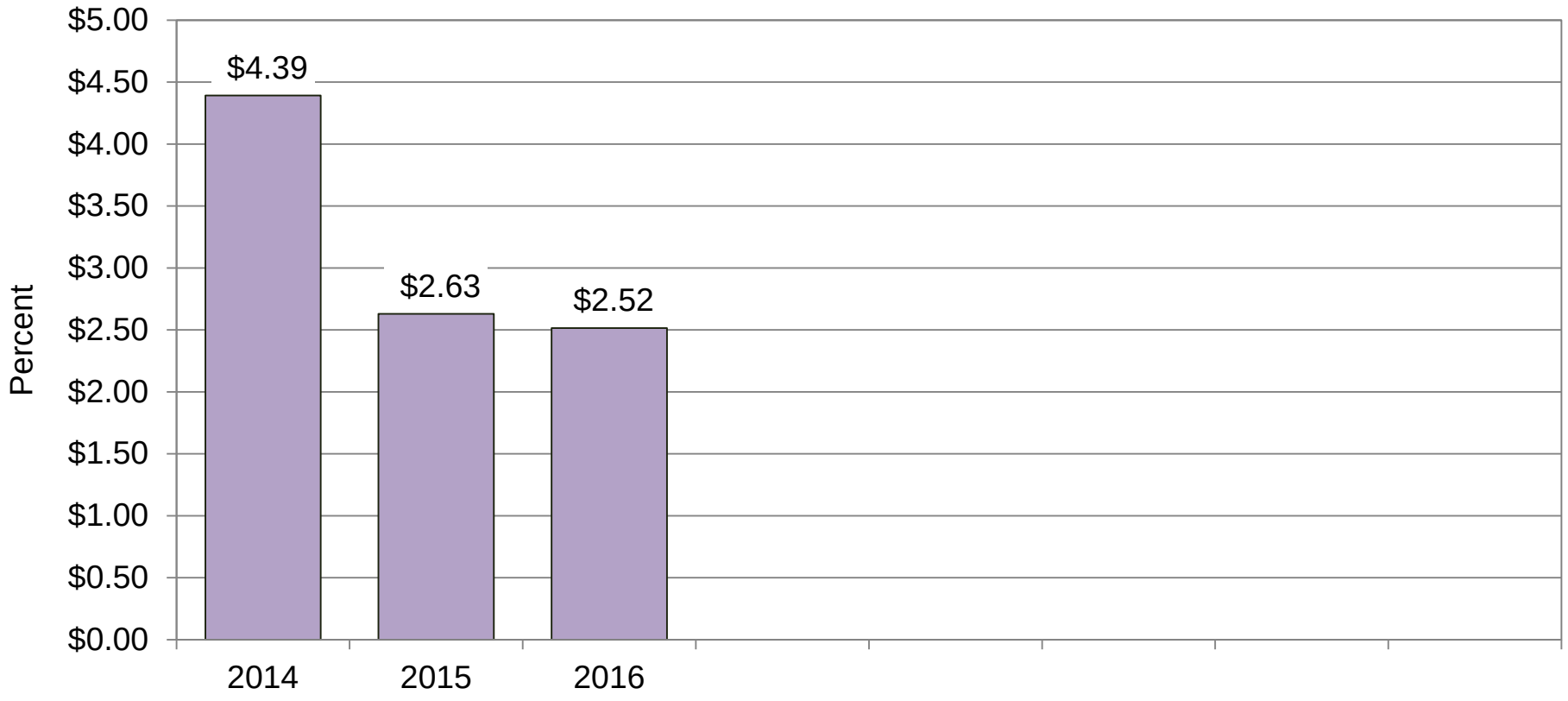
Natural gas price outlook.

Natural gas prices are expected to stay below $3.55 per MMBtu in 2017 and under $3.75 in 2018.



Source: Energy Information Administration, U.S. Department of Energy.

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U.S. natural gas production trends and forecast.

Industrial outlook

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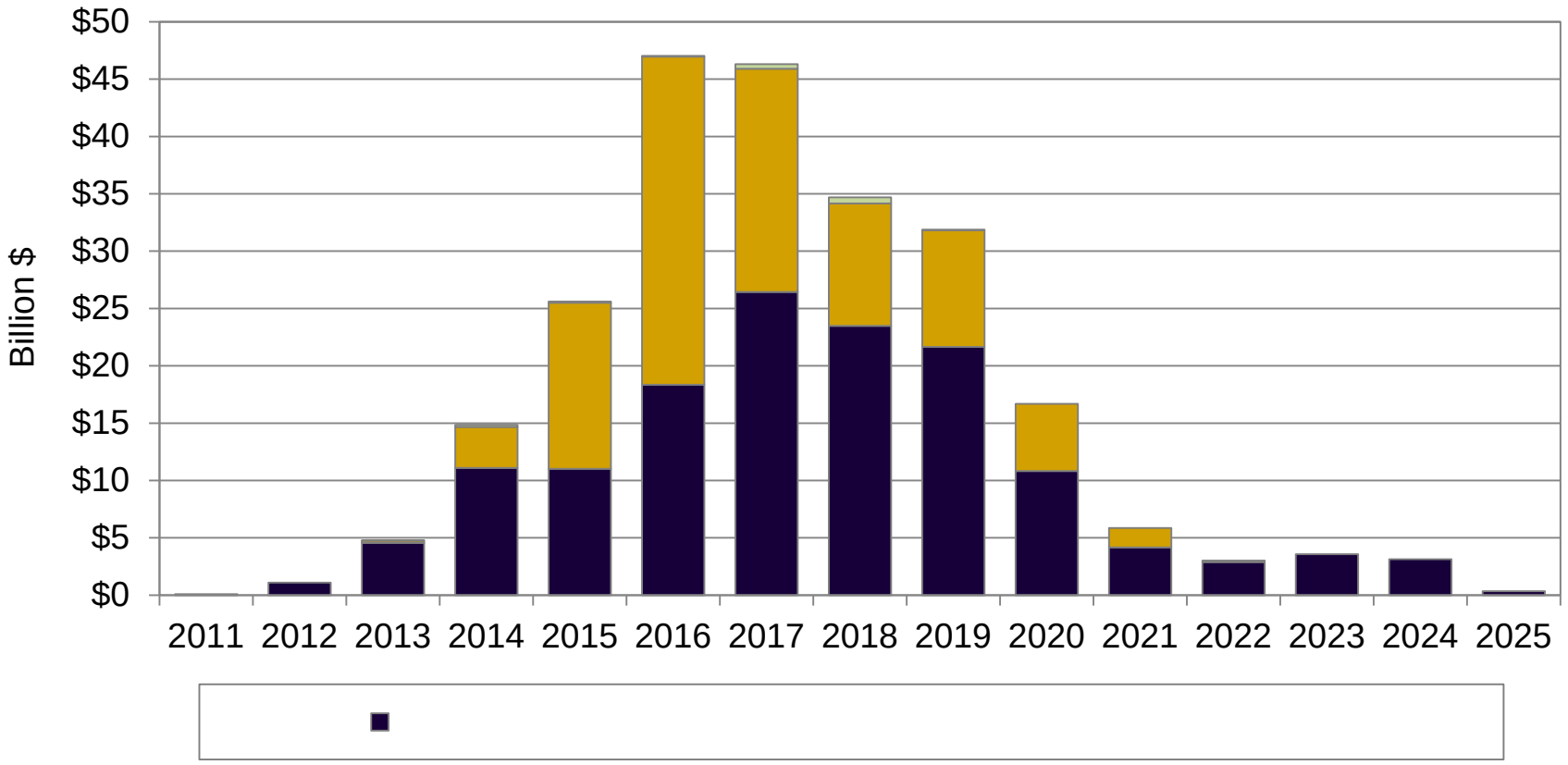
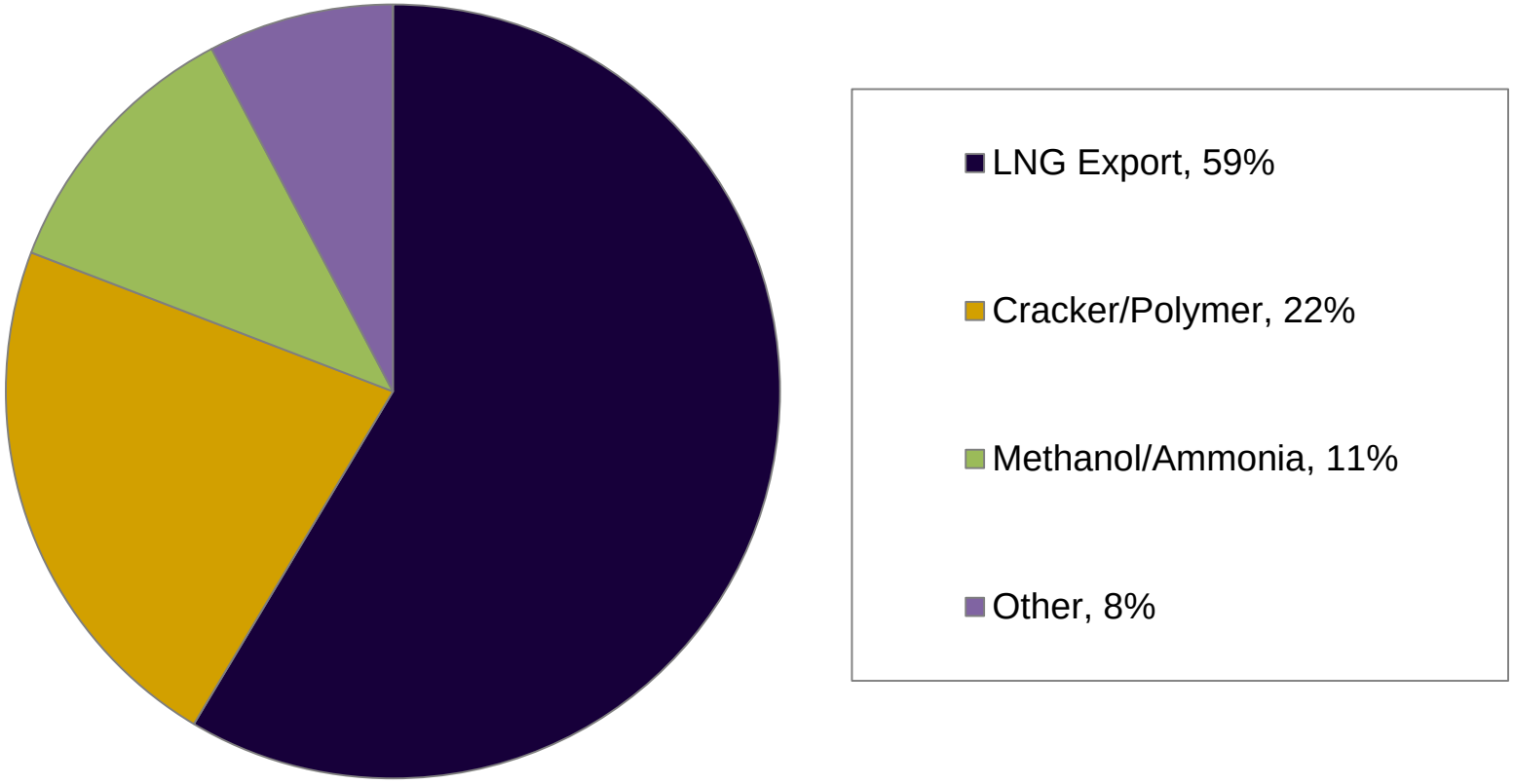
Natural gas pricing trends and volatility.

An estimated $240 billion in new energy-based manufacturing development is expected, most of which should occur between 2015 and 2019.



Of the proposed facility expansions in the Gulf of Mexico region, LNG export facilities comprise the majority of proposed capital spending.



Source: Louisiana State University, Center for Energy Studies.

Louisiana energy manufacturing total capital expenditures by sector.

The continued low natural gas price outlook has facilitated considerable development of over $142 billion: $46 billion already completed, $96 billion remaining, but heavily concentrated in LNG export facilities.

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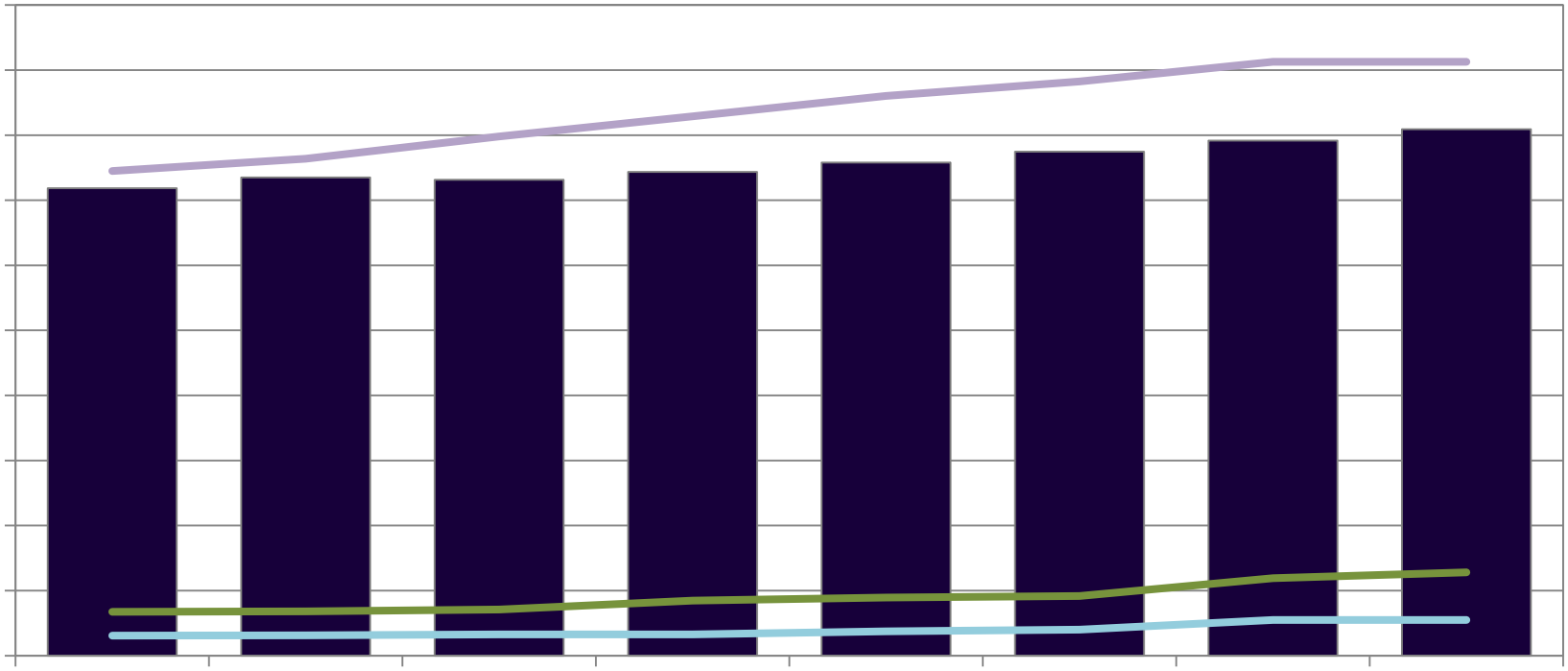
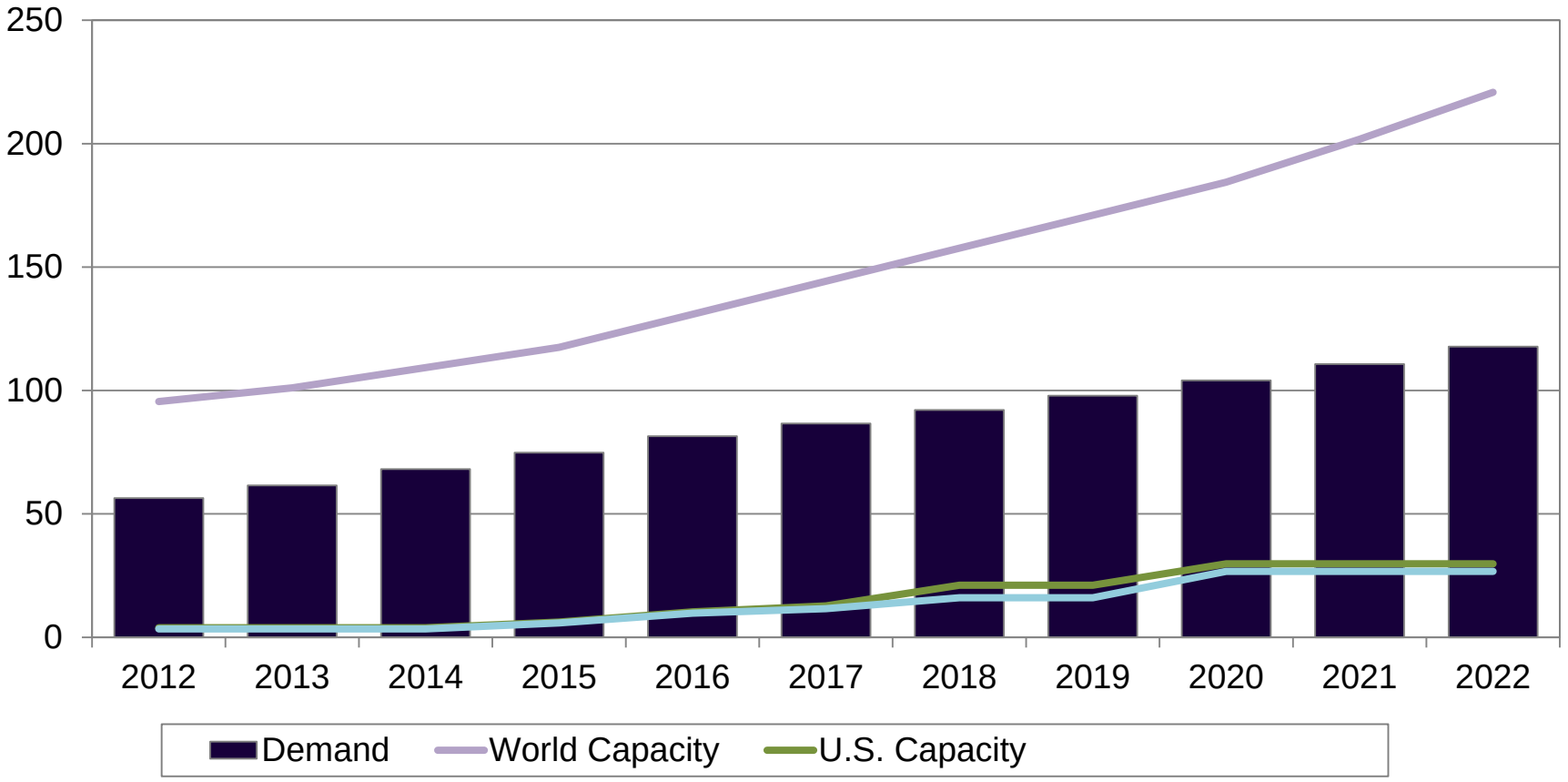
Ammonia demand and capacity outlook.

Excess global supply may start to build through 2020. The degree to which the market potentially becomes over-supplied will be function of project cancellations (if any) and continued growth.



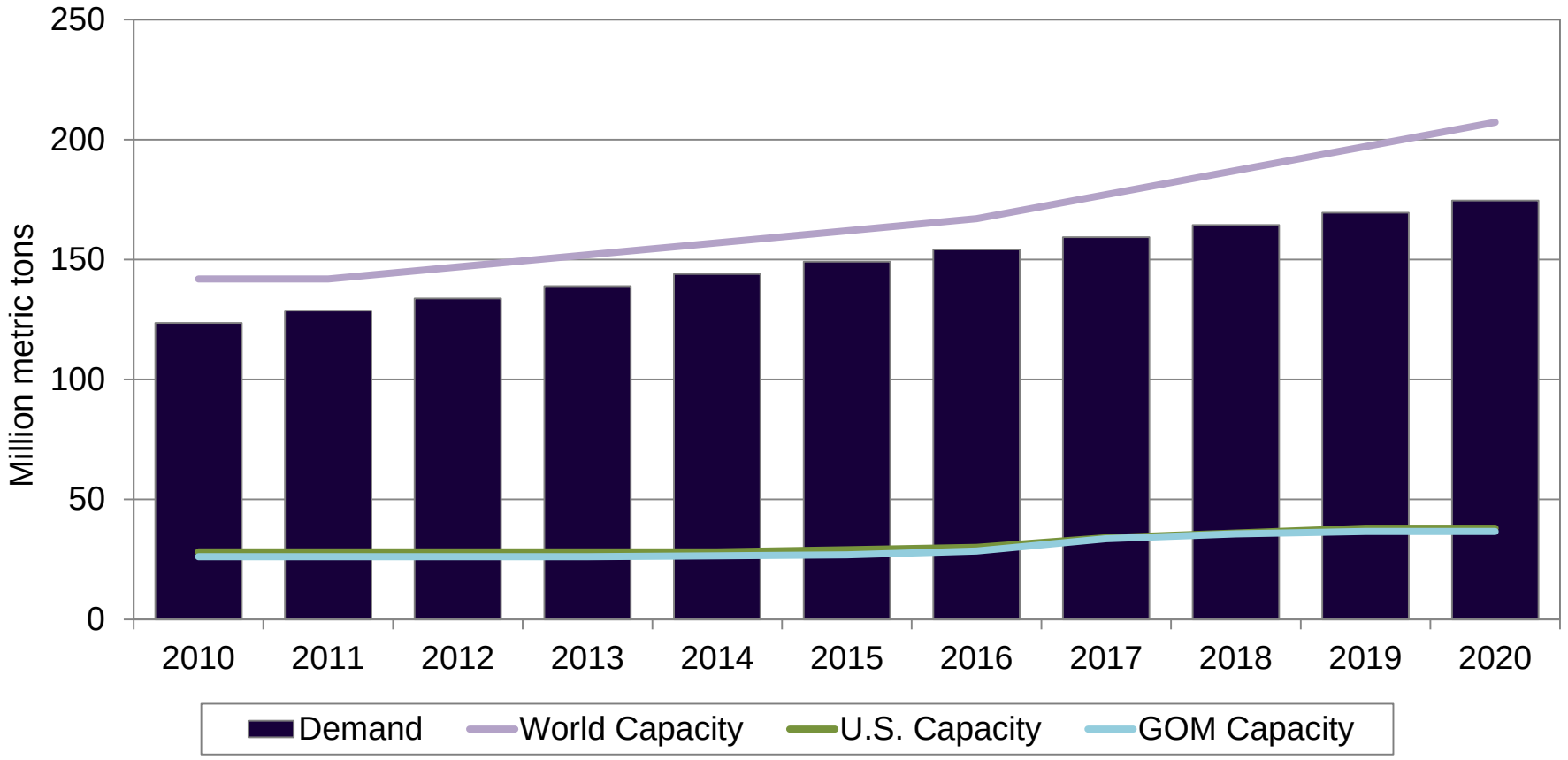
Methanol demand and capacity outlook.

Excess global supply may start to build through 2020. The degree to which the market potentially becomes over-supplied will be function of project cancellations (if any) and continued growth.

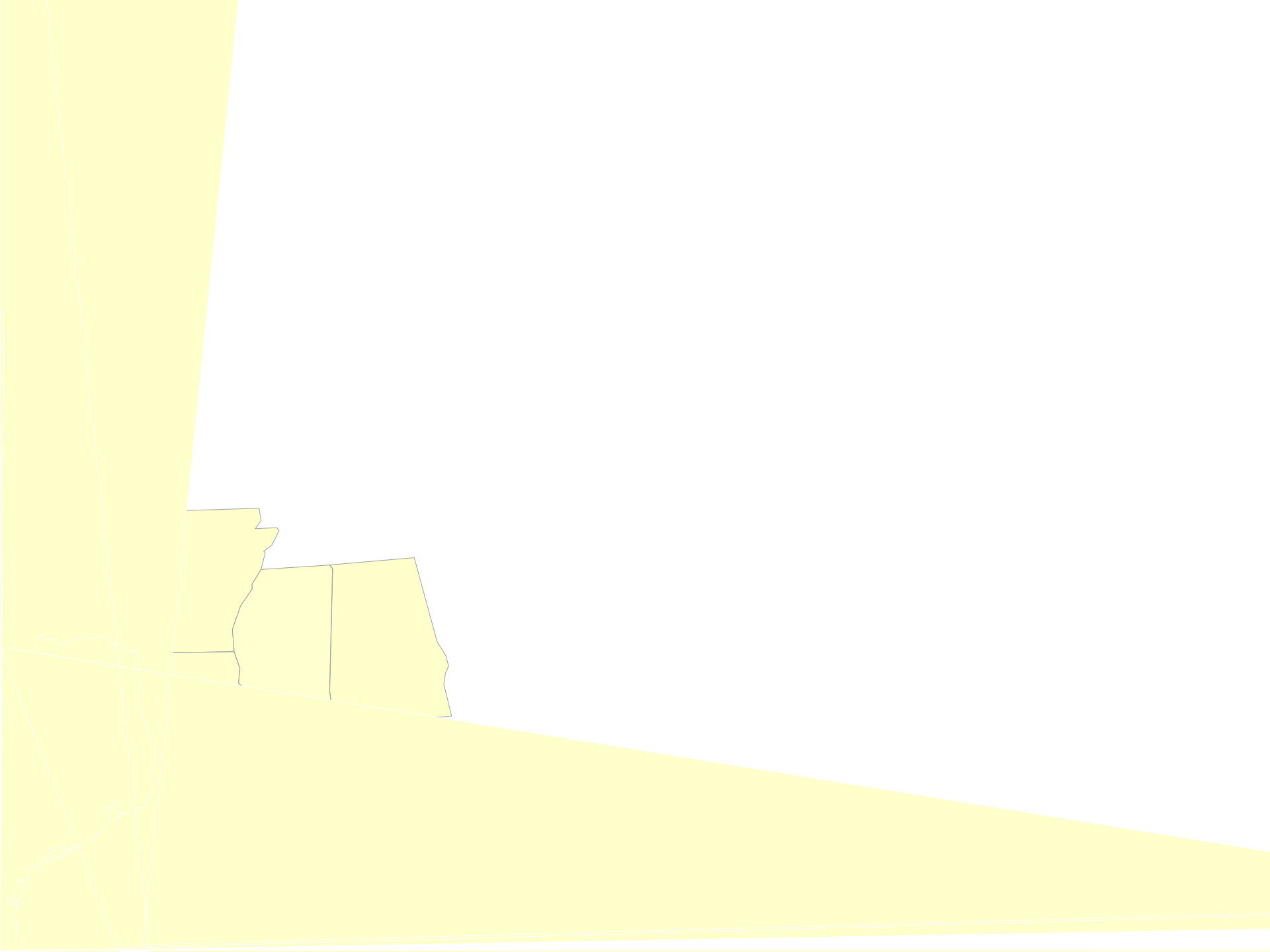


Ethylene demand and capacity outlook.

Excess global supply may start to build through 2020. The degree to which the market potentially becomes over-supplied will be function of project cancellations (if any) and continued growth.

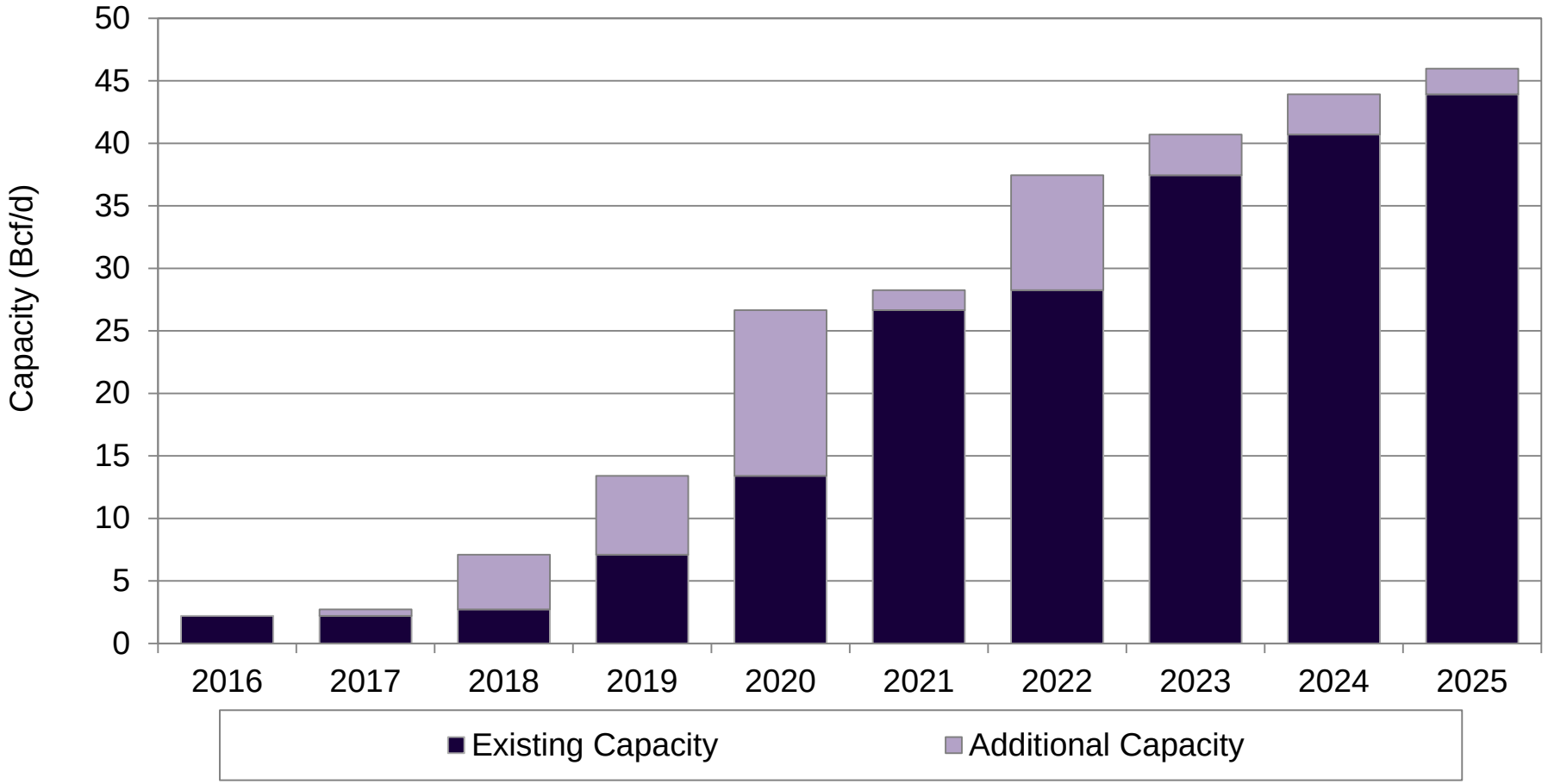


Source: Author's construct from previous slides.



GOM LNG capacity development outlook.

If all of the LNG export applications currently filed with the Department of Energy were to come online, the GOM liquefaction capacity would exceed 45 Bcf per day by 2025. Most of this capacity would come online in 2020.



Source: U.S. Department of Energy.

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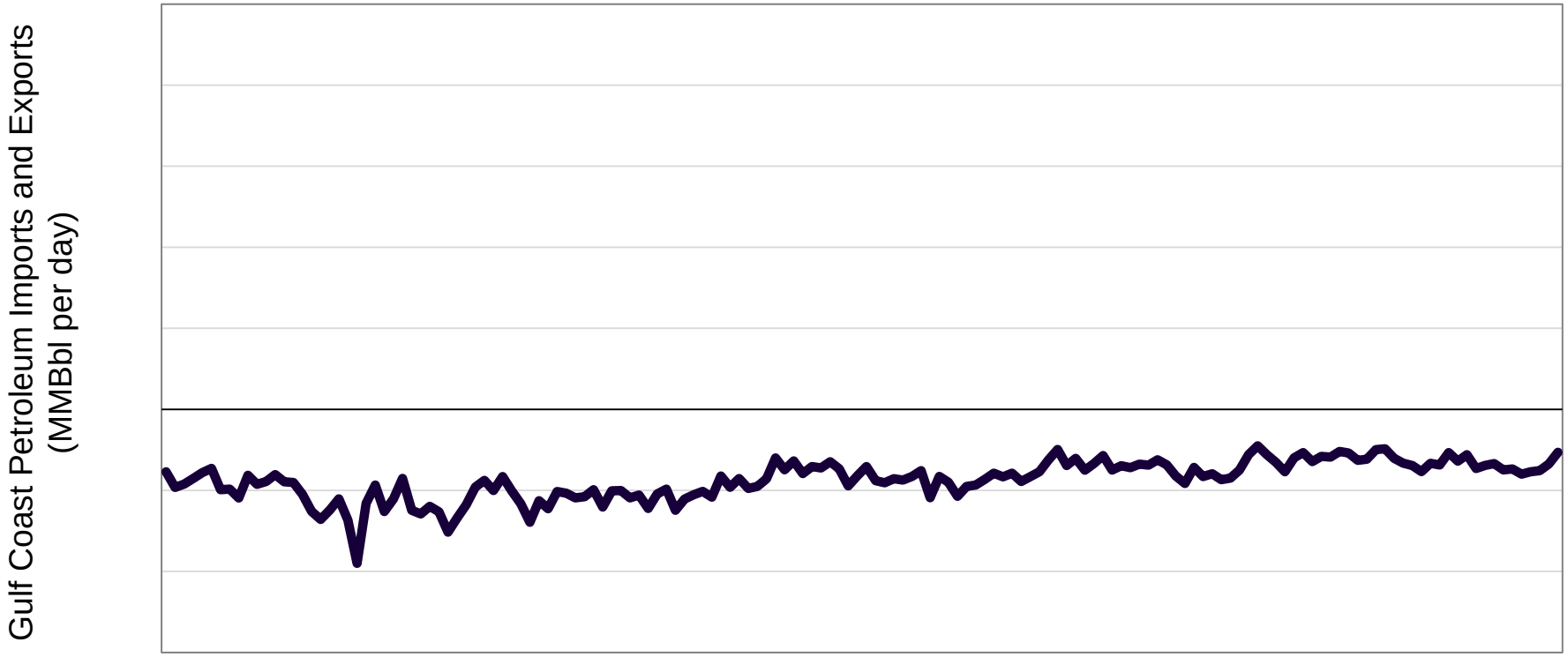
U.S. refining capacity and utilization.

Gulf Coast petroleum net exports.

The Gulf Coast region became a net exporter of petroleum products at the end of 2008. Since then net exports have increased at an average annual rate of 40 percent.



Source: Energy Information Administration, U.S. Department of Energy.

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U.S. petroleum product imports and exports.

GOM refinery capacity outlook.

GOM refinery capacity has been increasing annually at an average rate of 1.5 percent per year.

Energy Employment Outlook

Key Industries

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Relative energy sector sizes as measured by employment.

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Relative energy sector sizes as measured by GSP.

Region	Percent of State Total Employment		Percent of Industry Employment in US	
	Oil and Gas	Refining and Chemical Manufacturing	Oil and Gas	Refining and Chemical Manufacturing
Alabama	**0.5%**	**3.1%**	**0.2%**	**1.1%**
[redacted]	0.0%	0.9%	0.0%	1.4%
Louisiana	7.7%	16.7%	4.6%	7.7%
Mississippi	1.5%	3.5%	0.4%	0.7%

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Louisiana refinery and chemical sector employment forecast

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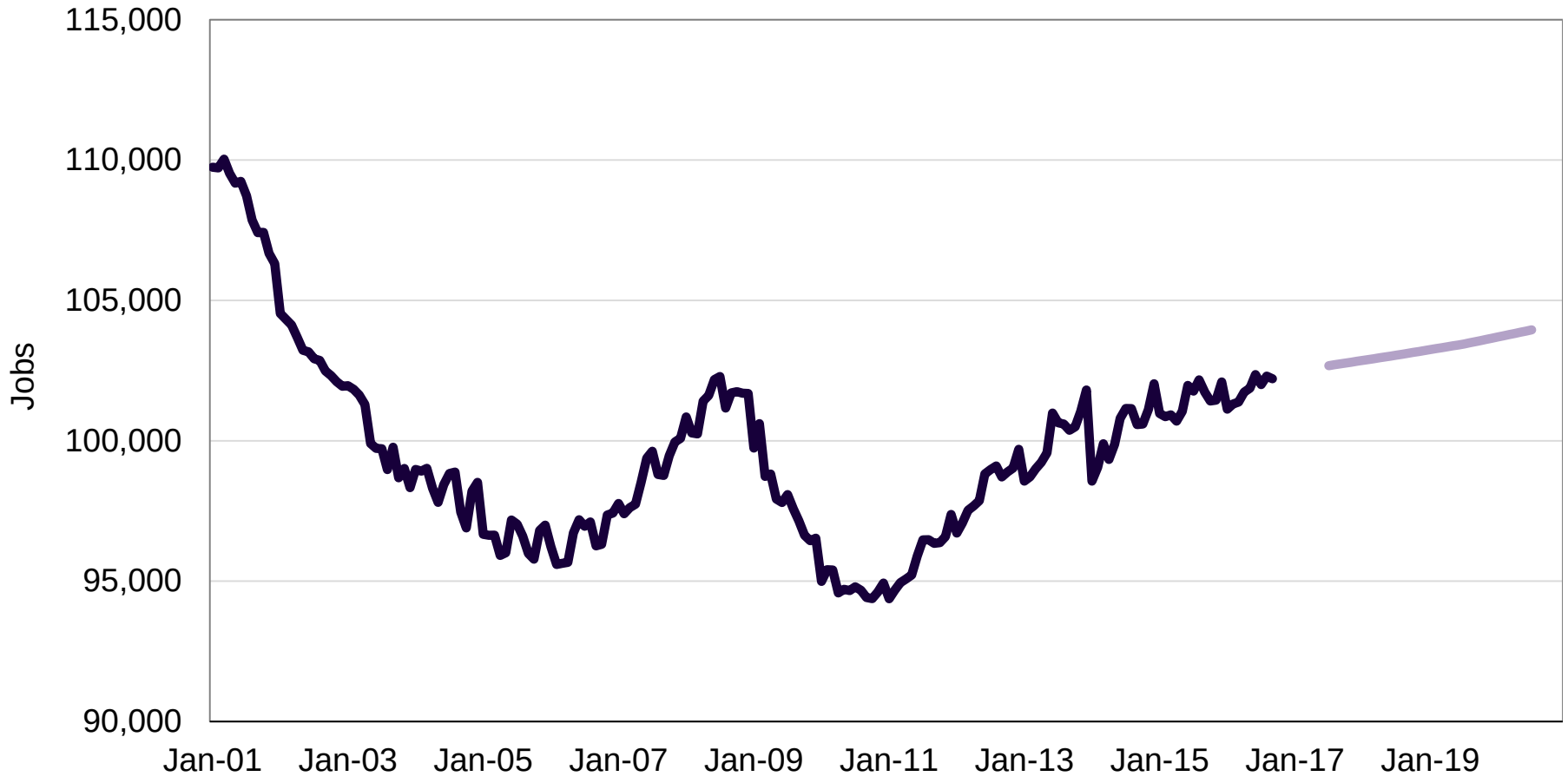
Texas refinery and chemical sector employment forecast



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Conclusions

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Conclusions

- Crude oil and natural gas **markets continue to be resilient**. Prices anticipated to remain affordable and less volatile.
- Natural gas supply growth increasingly driven by **associated gas** – a byproduct of increasing production coming from higher oil-price-driven tight oil and offshore developments

Addition Employment Forecasts

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Florida Oil and Gas Employment Forecast

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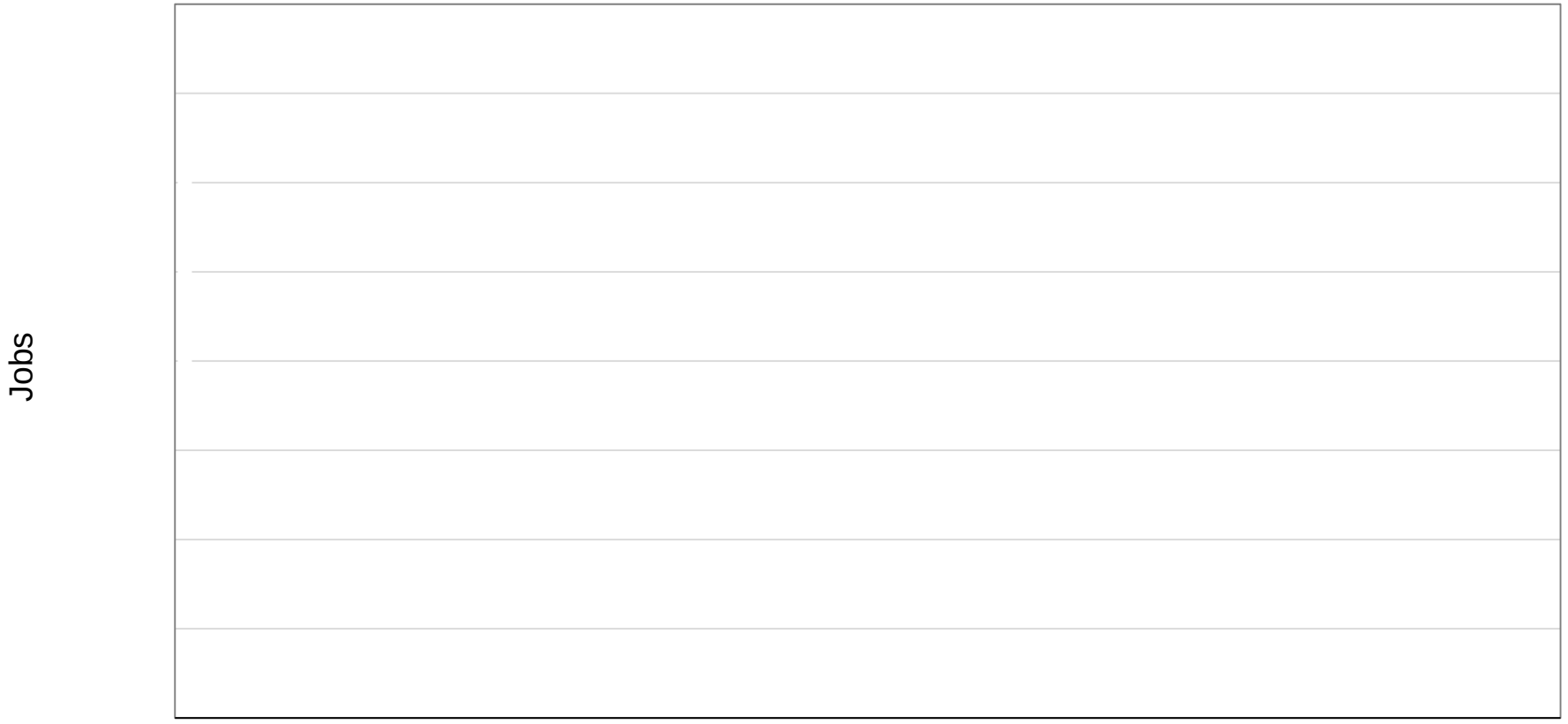
Mississippi Oil and Gas Employment Forecast



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Gulf Total Oil and Gas Employment Forecast

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Mississippi Refinery and Chemical Manufacturing Employment Forecast

Gulf Total Refinery and Chemical Manufacturing Employment Forecast

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