



Will OPEC Or The US Be The World's Marginal Crude Supplier?

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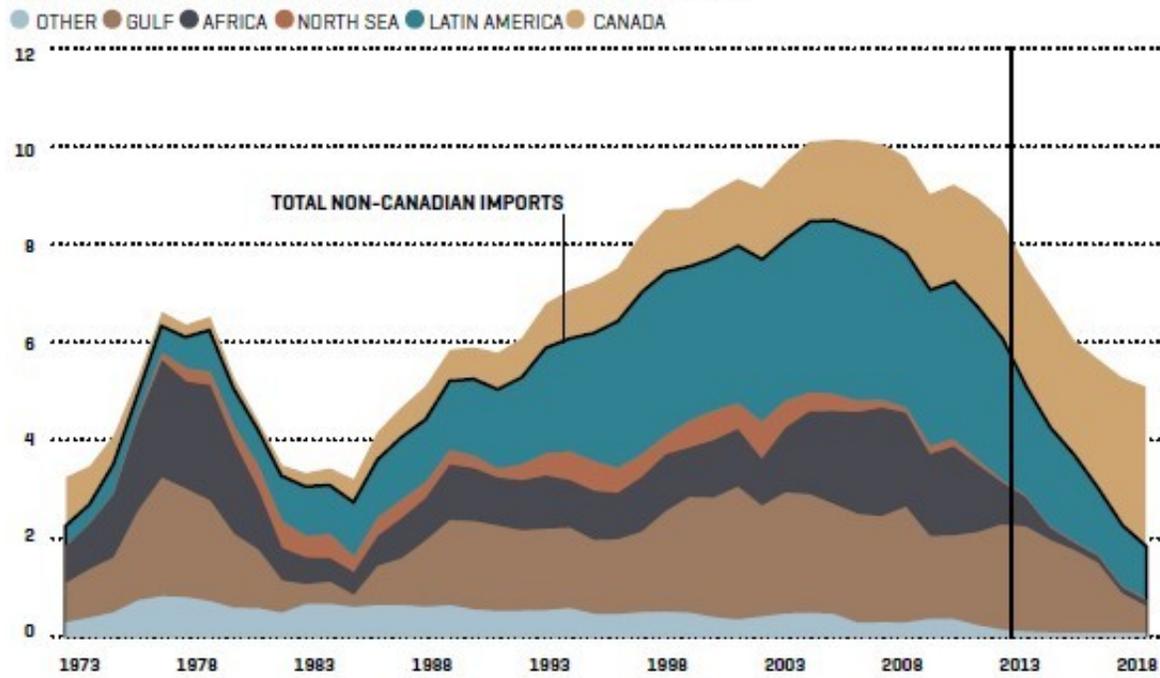
By - Sarah A. Emerson*

There is a major gap between the reference and high resource case projections of US crude oil production contained in the US Energy Information Administration's (EIA's) 2013 Annual Energy Outlook. This gap is indicative of the uncertainty surrounding the "tight oil boom" enabled by the application of horizontal drilling and hydraulic fracturing in liquid-rich shale reservoirs.

The reference case has crude oil production peaking near 7.5mn b/d around 2020 and then declining to 6mn b/d by 2040, whereas the high resource case has crude oil production rising to 10.0mn b/d by 2025 and remaining at that level if not higher through 2040. The high resource case illustrates the remarkable potential of tight oil growth, and the reference case assures us that at least some of that potential will be realized. The EIA is not alone. Many forecasts, especially those made by producing companies and their investors are optimistic about the potential of tight oil growth.

Our work at ESAI Energy projects growth greater than the EIA's reference case, but below the high resource case. Our view is based on what we can learn about the shale reservoirs, the technology employed and the sheer number of wells that can be drilled and completed, but more importantly it is based on an assessment of the market for this oil. Supply and demand do balance over time and tight oil will only grow if there is enough demand. So, the outlook for tight oil production in the US depends on whether OPEC continues to behave as marginal supplier, and that is not a foregone conclusion.

Based on ESAI Energy's forthcoming five-year forecast, which has US crude oil production rising steadily (to a peak of about 9.6mn b/d near the end of the current decade), and combining that analysis with the growth (or decline) in production in other non-OPEC countries, especially Canada, Brazil, the former Soviet Union (FSU) and the North Sea, the increase in non-OPEC production over the next several years is substantial, rising by an average of 1.2mn b/d over the period 2014-18.

US CRUDE IMPORTS BY SOURCE WITH FORECAST TO 2018 ('000 B/D)

The spoiler is demand growth. With the OECD showing signs of long term decline, and non-OECD demand relying heavily on uncertain Chinese growth, even if demand gets a lift from lower oil prices, global oil demand growth will still be moderate, only able to absorb non-OPEC supply growth. ESI Energy has global oil demand rising by an average of 1.3mn b/d per year over the period 2014-18.

OPEC As Marginal Supplier?

By 2015, the call on OPEC crude will fall below 30mn b/d (MEES, 12 July). OPEC will need to cut output, and hold production under 30mn b/d for three or four years. That may not seem like a tall order with Iran hobbled by sanctions and Iraqi production growth continuing to disappoint (MEES, 26 July), but if these impediments are alleviated, keeping production below 30mn b/d will be far more difficult. Furthermore, restraining production may be harder than ever before, given the poor fiscal health of many member countries. Which leads one to the logical question: should OPEC implicitly surrender market share to Non-OPEC producers rerouting their exports (see map) due to higher North American supply, and defend \$100/B? Or, should OPEC maintain production, allow prices to fall and slow the development of the more costly tight oil and oil sands production?

Conventional wisdom parrots the OPEC ministers who suggest that \$100/B oil is the optimal price, but the combination of tight oil and oil sands growth is changing the US crude import landscape so quickly and profoundly, that global oil prices will fall. The oft-stated point that only oil prices in the US will fall because the US is disconnected from the global market by the prohibition on crude exports is a fallacy. The spread between WTI and Brent may not close completely, suggesting a US market discount that may periodically exceed transport, but the idea that reductions in the foreign imports of the largest consumer will not weaken Brent significantly is absurd (see the magnitude of non-Canadian import decline in the chart below).

Furthermore, when Canadian crude arrives on the US Gulf Coast, where will Mexican and Venezuelan crude go? Even if Canada is allowed to export its non-commingled crude, do the Canadian producers really believe they will walk into China uncontested by Gulf, Latin American and FSU producers increasing their sales to China?

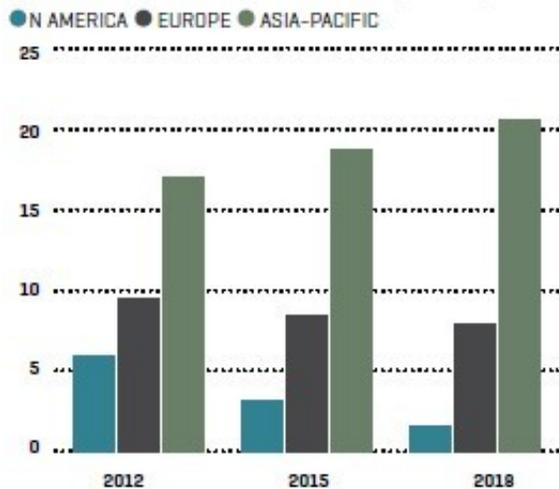
Meanwhile, as China realizes it is far more dependent on Gulf oil than the US and Europe, China's energy security priority will only intensify, encouraging greater efficiency, domestic shale and continued diversification of China's energy portfolio. All of which hint at lower demand and lower prices.

As oil prices trend lower, OPEC will have to work hard to defend prices, trimming production and bearing the impact of lower prices as well as lower output. For those countries with precarious fiscal positions and demanding populations, this will be untenable. The pressure to keep producing to shore up revenues will be unbearable in some member countries. The urge to become free riders on Saudi discipline will cause some member countries to ignore collective production decisions. As a result, OPEC is likely to back into the decision to maintain market share and let prices go. From OPEC's perspective, this may be the best outcome. Even though lower prices reduce revenues, they will also bring about OPEC's underlying strategic objective of keeping oil in the global energy mix, as demand will recover in countries with the weakest alternative energy and conservation policies.

The linchpin is, of course, Saudi Arabia. The Saudi Oil Minister 'Ali Naimi has publicly supported \$100/B oil and welcomed alternative fuels and unconventional oil production, implying more than adequate demand for all liquids. Again, demand is the spoiler. Demand growth will not support current OPEC production as well as the expected non-OPEC growth, and will be especially inadequate if Iranian sanctions are lifted or Iraq's output grows. With higher Iranian and/or Iraqi output, Saudi Arabia will be faced with a more explicit role as swing producer.

NET CRUDE OIL TRADE FLOWS BY REGION (MN B/D)

	2012	2015	2018
From the Middle East			
to Asia-Pacific	12.65	13.10	14.00
to N America	2.30	1.30	0.40
to Europe	1.95	1.55	1.60
From Africa			
to Asia-Pacific	2.20	2.50	2.80
to N America	1.00	0.15	0.13
to Europe	2.70	2.15	1.55
From the FSU			
to Asia-Pacific	1.10	1.65	1.85
to Europe	4.40	4.20	4.30
From Latin America			
to Asia-Pacific	1.10	1.50	1.95
to N America	2.70	1.75	1.05
to Europe	0.50	0.50	0.50

NET CRUDE OIL IMPORTS BY REGION (MN B/D)**Or, Us As Marginal Supplier?**

If and when OPEC intentionally or unintentionally decides to preserve its market share, the weakness in oil prices will become more profound, and US tight oil producers will ironically become the marginal supplier due to the prohibition on US exports. Absent a “buy American” requirement or import quota, US refiners will purchase crude oil from a wide range of foreign and domestic suppliers, honoring long-term contracts or vertically integrated ownership, and picking and choosing the crudes that optimize their refining kit and profitability. To stay competitive, US oil producers will have to discount their oil to keep it attractive to coastal refiners facing a weaker global price. Production costs will work against them. Some producers can bear lower prices, but not all. If domestic oil prices fall sustainably below \$80/B, tight oil production growth will falter as some producers elect not to expand capacity. The situation for Canadian producers is similar but different. When and if pipeline capacity to the east and west coasts of Canada and the US Gulf coast is developed, Canada will be able to sell to both the US and global market, giving Canadian producers an outlet not available to US producers. This lifeline will support some producers in Canada, but Canada’s exports outside of North America will still face heavy competition.

As long as the US continues to import some crude oil, it will remain fully integrated with the global market, and subject to supply and demand developments that will weaken prices in the global market. Meanwhile, the general prohibition on crude exports, unless perforated by more permissive licensing, will hamper US producers that are trying to expand their productive capacity, and will push them increasingly into a marginal supplier role for coastal refiners. Tight oil growth will moderate from exuberant expectations. More broadly, oil demand will grow faster in countries without strong alternative energy policies, and perhaps even slower in countries which embrace renewable energy. Countries that depend on oil revenues for political stability will struggle until oil prices rise in response to lower output.

In sum, the tight oil boom in the US is akin to the peak oil argument. Both are useful portrayals of the technical information at hand, but both also suggest a future that ignores the market as the organizing principal of the vast and complex energy sector. Just as higher oil prices suspended the peak oil lament, lower prices will temper tight oil growth. In the next few years, Saudi policy on production and pricing, Iraq’s ability to expand output, Iran’s nuclear strategy, Canada’s decisions regarding export pipelines, and China’s efforts to temper oil use will all shape supply and demand in the global oil market and, in the process, determine tight oil production in the US.

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