

LIFTING THE BAN, COOKING THE CLIMATE

THE CLIMATE IMPACT OF ENDING THE U.S. CRUDE OIL EXPORT BAN

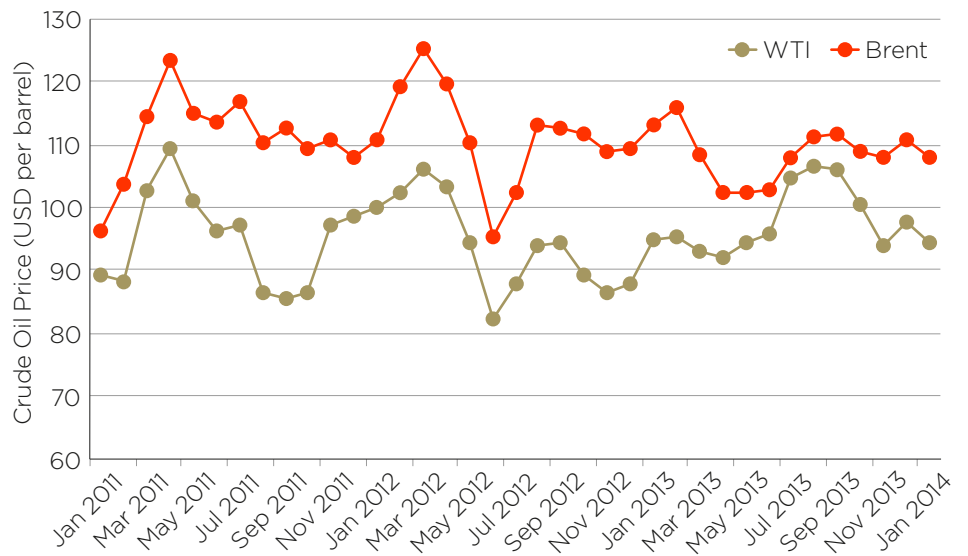
The U.S. oil industry's biggest players, including ExxonMobil and the American Petroleum Institute, are calling for an end to the U.S. ban on crude oil exports that has been in place for more than four decades since the 1973 Arab oil embargo. Their reasons are clear, as lifting the ban would boost profits by enabling companies to sell American oil at higher global market prices.

What few have considered, however, are the climate impacts that would result from ending the ban. Allowing U.S. crude oil exports will result in increased profits that will in turn result in increased oil production. While the exact amount of increased production is dependent on a variety of factors in the oil market, this analysis demonstrates that the average projected increase in oil production caused by removing the export ban would release the equivalent of the lifetime CO₂ emissions from 42 coal plants.

HOW WOULD LIFTING THE CRUDE EXPORT BAN IMPACT U.S. OIL PRICES?

Since 2011, the benchmark price for U.S. light oil, West Texas Intermediate (WTI), has been sold at a cheaper level (discount) compared to Brent, the international benchmark oil price - in January 2014 Brent was traded at \$13.50 more per barrel than WTI (see Figure 1). As Oil Change International detailed in a 2013 report, lifting the ban on crude oil exports would raise the price of U.S. oil, including light oil produced from major fracking areas in Texas and North Dakota, to international levels. Because the price for Canadian tar sands is based on WTI, ending the export ban would also benefit tar sands producers.

Figure 1. WTI vs. Brent Crude Oil Prices, January 2011 - January 2014



Source: U.S. Energy Information Administration

Leaving the export ban in place could cause U.S. oil prices (WTI) to fall even further below international (Brent) prices, widening the gap from around \$10 to \$30 or even more. Lifting the ban on crude exports would likely close this price gap, thereby raising U.S. oil prices by \$10 per barrel or more.

In addition to oil industry pressure, researchers at some think tanks have also called for an end to the ban, citing concerns that continued limitations on crude oil exports could slow down the U.S. oil drilling boom. A memorandum from the [Council on Foreign Relations](#) warns that current “export restrictions run the risk of dampening U.S. crude oil production over time by forcing down prices at the wellhead in some parts of the country,” and suggests that lifting the ban would encourage investment in oil exploration and production. Similarly, the [Brookings Institute](#) stipulates that “if crude oil exports are not allowed, domestic prices could fall, which would make new investment in tight oil and shale oil production less attractive”.

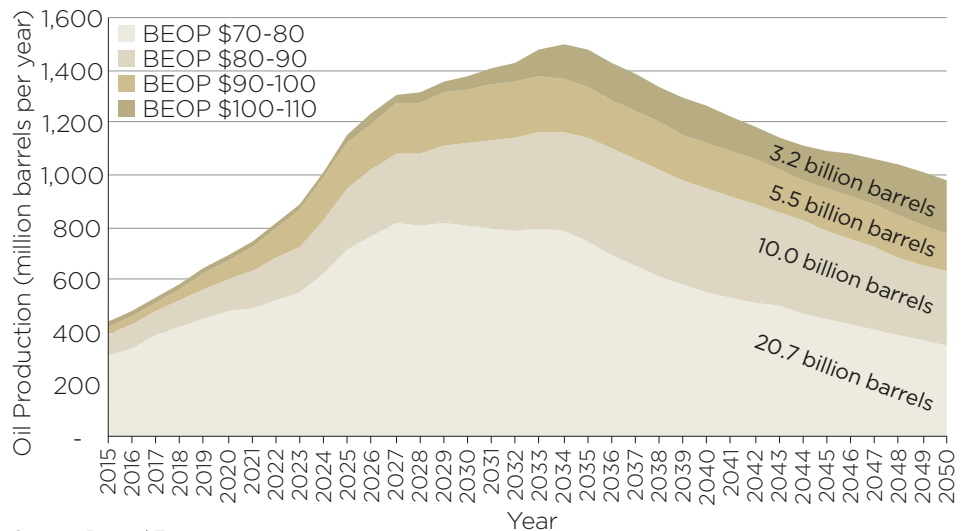
What all these statements ignore is that the slow-down in U.S. oil production that they fear is actually exactly what we need in order to avoid catastrophic climate change. The [International Energy Agency](#) has warned that “no more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to achieve the 2°C goal,” which is the conservative, globally accepted threshold of average global temperature increase for avoiding catastrophic climate change. As fossil fuel production is increasing in the U.S. and globally, [our window to meet this target is closing fast](#).

HOW WOULD HIGHER U.S. OIL PRICES AFFECT PRODUCTION?

In examining the two shale formations at the forefront of the U.S. oil boom, [analysts](#) have suggested that if U.S. crude oil prices drop below \$80 per barrel oil production from the Eagle Ford shale in Texas could be affected, and prices below \$70 per barrel would impact production from North Dakota’s Bakken shale.

To assess the potential impact of lifting the export ban, we used crude oil production projections from [Rystad Energy’s UCube database](#) to estimate how much additional U.S. oil production would be triggered from a \$10 per barrel price increase. Based on reasonable expectations of future U.S. oil prices with or without the ban, we averaged the additional oil production expected from 2015 to 2050 based on \$10 increments of breakeven oil prices (BEOP) – the price at which companies need to sell their oil in order to recover production costs – between \$70 and \$110 per barrel (see Figure 2).

Figure 2. Additional Projected U.S. Oil Production from \$10 Incremental Increases in Crude Oil Price



Source: Rystad Energy

Today, WTI is trading at around \$102 and Brent around \$110 per barrel, which might suggest that lifting the export ban would only trigger the additional 3.2 billion barrels of additional production in the \$100-110 price band (see Figure 2). However, it is very difficult to predict oil prices over a 35-year period and, as examined above, maintaining the export ban will likely widen the WTI-Brent price gap even further, possibly reducing U.S. oil prices below the \$80 breakeven price level. Rather than attempt to predict exact oil prices through 2050, we averaged the additional production triggered across four \$10 per barrel increments in breakeven oil price (from \$70 to \$110 per barrel) to give an indicative figure of how much additional U.S. oil production would be triggered by a potential \$10 per barrel increase.

On average, a \$10 increase in crude oil prices would lead to 9.9 billion barrels of additional U.S. oil production between 2015 and 2050. If maintaining the export ban causes WTI prices to fall even further below Brent as many predict, the impact of lifting the ban could be even greater.

WHAT WOULD THIS MEAN FOR THE CLIMATE?

To put this figure in a climate context, 9.9 billion barrels of oil would release more than 4.4 billion tons of CO₂ into the atmosphere when burned – the equivalent of annual emissions of 1,252 average U.S. coal power plants, or lifetime emissions from 42 coal plants.

In the midst of President Obama’s “All of the Above” energy strategy, the ban on crude oil exports is one of the few policies in place that effectively limits oil and gas extraction and protects our climate. The Obama Administration and the U.S. Congress must take a stand for the climate and resolve to leave the crude oil export ban intact.

This brief was written and researched by Shakuntala Makhijani, with support from Lorne Stockman and Stephen Kretzmann. More information is available at priceofoil.org Oil Change International March 2014