



## Consumer & Small Business Benefits From Limiting Natural Gas & Oil Exports

Testimony of Tyson Slocum, Energy Program Director, Public Citizen, before the  
U.S. Senate Committee on Small Business & Entrepreneurship

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Chairman Vitter, Ranking Member Shaheen and members of the Committee: thank you for the opportunity to testify today on consumer and small business benefits from limiting natural gas exports. I am Tyson Slocum, and I direct the Energy Program at Public Citizen. Public Citizen is a national consumer advocacy organization with more than 400,000 members and supporters across the country. I also serve on the U.S. Commodity Futures Trading Commission's Energy & Environmental Markets Advisory Committee.

Less than a decade ago, natural gas prices were at record highs, and the consensus response was reflected by then-Federal Reserve Chair Alan Greenspan, who prominently made the case that the U.S. had to take steps to make Liquefied Natural Gas (LNG) *imports* easier to permit.<sup>1</sup> Fast forward to today, where fracking has resulted in booming domestic natural gas production, fueling calls to make it easier to permit LNG *exports*.

My testimony will address the reasons why promoting natural gas exports is imprudent:

- Natural gas power sector demand is projected to grow due to market and regulatory factors, a trend at odds with a push to accelerate LNG exports.
- Allowing already-authorized LNG exports will result in domestic natural gas price increases, harming many small businesses and household consumers.
- Facilitating natural gas exports forces natural gas price-sensitive industrial customers to compete with foreign markets for US produced gas, undermining their current competitive advantage.
- Federal statutes appear to be in conflict over whether natural gas should be exported.
- Legislative proposals designed to expedite LNG exports are misguided.

Public Citizen recommends the following four reforms to ensure that benefits to downstream businesses and household consumers are prioritized:

1. The U.S. Department of Commerce shall promulgate rules prohibiting the export of natural gas, exempted only by a Presidential determination that such exports are in the public interest.
2. Natural gas exports can only be in the public interest if:
  - a. Prices for American consumers will not increase.
  - b. There is no interference with non-fossil fuel commercial interests, such as natural gas-intensive industrial customers, commercial fishing or tourism.
  - c. There are no detrimental impacts on public safety, the environment or exacerbation to climate change.

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<sup>1</sup> [www.federalreserve.gov/boarddocs/testimony/2003/20030710/default.htm](http://www.federalreserve.gov/boarddocs/testimony/2003/20030710/default.htm)

3. In the event natural gas exports are determined to be in the public interest, Federal Energy Regulatory Commission (FERC) approval of a LNG export facility can be granted only with the support of the Governor of the State in which the facility would be located.
4. Congress provides appropriations to fund the Office of Public Participation at FERC, as authorized under 16 USC § 825q-1.

### **Supply/Demand Outlook: Demand Will Grow, And Production Continues to Increase Despite Lack of Operable LNG Export Capacity**

In just the last few years, American natural gas and oil production has increased dramatically, mostly due to onshore hydraulic fracturing, or fracking. Export restrictions—in the form of Short Supply regulations for oil, and limited Liquefied Natural Gas (LNG) export terminals for gas—have resulted in an oversupplied domestic market, which has generally led to more favorable prices for downstream businesses and household consumers. Efforts to alter this dynamic by facilitating the ability to export natural gas and oil threaten to raise prices for consumers. Despite limits on exports, the oil and natural gas extraction boom continues to provide generous financial returns to domestic producers.

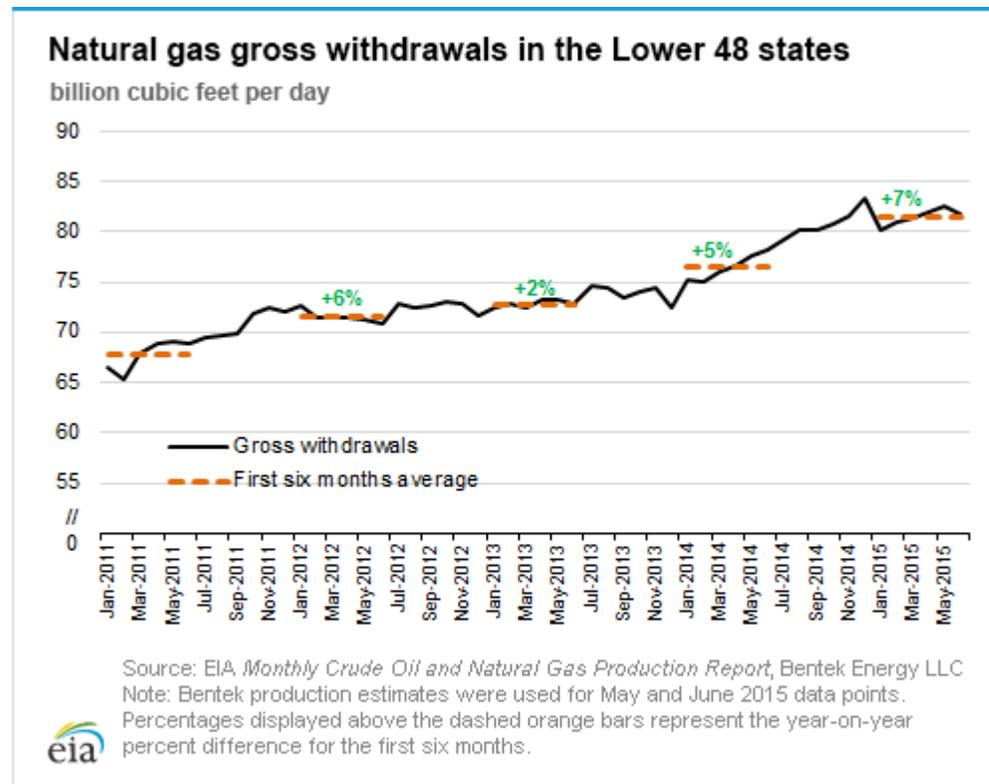
The lack of significant natural gas exports, coupled with continued strong domestic production, has kept natural gas prices low for the US economy relative to foreign, competing markets. In 2014, the U.S. exported 1.5 trillion cubic feet of natural gas, with 99.1 percent of those exports by pipeline to Canada and Mexico. Total U.S. exports were less than five percent of 2014 gross withdrawals of 32 trillion cubic feet.<sup>2</sup>

Despite low prices (much of 2015 has seen sub-\$3 per million British Thermal Unit) and a lack of completed LNG export terminals, natural gas production continues robust growth, with lower 48 production up 7 percent in 2015 vs. 2014, led by the Marcellus shale region in Pennsylvania and West Virginia. Domestic demand remains strong, growing 4.6 percent over the last year, paced by 11.6 percent growth in the electric power sector.<sup>3</sup>

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<sup>2</sup> [www.eia.gov/naturalgas/](http://www.eia.gov/naturalgas/)

<sup>3</sup> [www.eia.gov/naturalgas/weekly/archive/2015/07\\_02/index.cfm](http://www.eia.gov/naturalgas/weekly/archive/2015/07_02/index.cfm)



Market and regulatory trends project increased natural gas consumption in the years ahead, particularly as fuel for electric power production. Natural gas' cost competitiveness relative to coal, combined with current and future regulations that will likely

restrict coal combustion in the power sector means that natural gas demand will increase. Some analysts predict roughly 5 billion cubic feet per day increase in demand by 2020 stemming from Environmental Protection Agency proposals to regulate greenhouse gas emissions from existing power plants, which will curtail coal generation in favor of gas, a 22 percent growth over actual 2014 natural gas power plant demand levels.<sup>4</sup> Even absent the looming EPA rule, natural gas demand in the power sector has more than doubled since 1997, from 4 trillion cubic feet to 8.2 trillion cubic feet in 2014.<sup>5</sup> Natural gas has now replaced coal as the largest fuel source for power plants.<sup>6</sup>

### Allowing LNG Exports Will Raise Domestic Prices

Increasing exports, by either LNG or pipeline, has a similar impact on prices as an increase in consumption, and will, in effect, place U.S. industrial, commercial and household consumers in competition with international consumers.

In October 2014, the U.S. Energy Information Administration released a comprehensive report: *Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets*.<sup>7</sup>

<sup>4</sup> Bill Holland, "US gas demand could increase by 3-10 Bcf/d under EPA GHG rule: analysts," May 30, 2014, *Platts*, [www.platts.com/latest-news/natural-gas/washington/us-gas-demand-could-increase-by-3-10-bcf-d-under-21698884](http://www.platts.com/latest-news/natural-gas/washington/us-gas-demand-could-increase-by-3-10-bcf-d-under-21698884)

<sup>5</sup> [www.eia.gov/dnav/ng/hist/n3045us2a.htm](http://www.eia.gov/dnav/ng/hist/n3045us2a.htm)

<sup>6</sup> <http://abcnews.go.com/Business/wireStory/natural-gas-surpasses-coal-biggest-us-electricity-source-32413857>

<sup>7</sup> [www.eia.gov/analysis/requests/fe/pdf/lng.pdf](http://www.eia.gov/analysis/requests/fe/pdf/lng.pdf)

The study concludes that LNG exports will lead to higher domestic natural gas prices, with larger LNG export volumes leading to larger domestic price increases. The EIA study calculates a number of different scenarios (high/low domestic gas production, etc), assuming three different export volume levels (12, 16 and 20 Bcfd). The study finds that rapid increases in export volumes lead to large initial price increases, moderating after a few years. On average, gas bills for residential, commercial and industrial consumers will increase between three and nine percent compared to a no-export baseline.

In 2012, the Department of Energy hired NERA Consulting to conduct a macroeconomic evaluation of LNG exports.<sup>8</sup> The report found that, since U.S. natural gas wellhead prices are significantly lower than prices in export destination countries, domestic gas prices will rise with increased levels of LNG exports. The price rise is limited to maintaining some level of price advantage, however, since a prohibitive increase in domestic wellhead prices would negate the price advantage to be sold abroad. Since significant LNG export capacity is not yet online, there are constraints to moving American-produced gas offshore. As a result, June 2015 LNG prices range from a low of \$2.35/MMBtu at Cove Point, Maryland to \$7.75 in Japan and Korea, \$7.60 in China and India, and \$6.85 in Spain.<sup>9</sup>

### **Current Committed Exports Have Already Exceeded the High Range of the EIA Study**

The 2014 EIA study examined a high reference case of a 20 billion cubic feet/day export scenario (with a low of 12/Bcfd and a medium of 16/Bcfd).

The Department of Energy has already approved applications to export more than 40 Bcfd to countries with which we have Free Trade Agreements, and an additional 25 Bcfd to countries without FTAs.<sup>10</sup> FERC has provided approval for six under its siting authority.<sup>11</sup>

While it may be likely that not every LNG export facility receiving approval from both DOE and FERC will actually get built, if just a simple majority of the licensed terminals exports the volumes of natural gas of which they are authorized, such exports will likely overwhelm domestic supply/demand capacity.

It is important to note that the vast majority of successful LNG export applications feature long-term authorizations from DOE. These facilities, in turn, have already signed various 20-year supply agreements with foreign buyers. Such 20-year and other long-term purchase agreements are necessary to demonstrate to Wall Street and other financial backers that the export facility will have steady cash flow and guaranteed sales needed to

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<sup>8</sup> [http://energy.gov/sites/prod/files/2013/04/f0/nera\\_lng\\_report.pdf](http://energy.gov/sites/prod/files/2013/04/f0/nera_lng_report.pdf)

<sup>9</sup> [www.ferc.gov/market-oversight/mkt-gas/overview/ngas-ovr-lng-wld-pr-est.pdf](http://www.ferc.gov/market-oversight/mkt-gas/overview/ngas-ovr-lng-wld-pr-est.pdf)

<sup>10</sup> <http://energy.gov/fe/downloads/summary-lng-export-applications-lower-48-states>

<sup>11</sup> [www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf](http://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf)

provide returns on such capital-intensive projects. But these long-term guaranteed sales deals, if multiplied by a dozen or more operable LNG export terminals, could lock the U.S. into expensive contracts forcing the sale of natural gas abroad when it may be needed domestically.

The fact that both DOE and FERC are approving a record number of LNG export facilities makes recent Congressional proposals to expedite this review and approval process unnecessary and harmful. For example, S.33 would force the DOE to issue a license to facility exporting LNG to a non-FTA nation 45 days after FERC's NEPA review.<sup>12</sup> This constrains the DOE's ability to make a full public interest determination, and threatens adverse market and price impacts on American consumers as a result.

### **Conflicting Legal Standards Require Resolution**

Two federal agencies—FERC and DOE—are responsible for approving onshore LNG exports.<sup>13</sup> The Department of Energy has responsibility under the Natural Gas Act of 1938 to regulate the import and export of natural gas, and determines public interest. Amendments in Section 201 of the Energy Policy Act of 1992 (PL 102-486) directed that the “importation of such natural gas [from countries with Free Trade Agreements with the U.S.] shall be deemed to be consistent with the public interest,” but there was no language on *exports*. The Energy Policy Act of 2005 (PL 109-58) added Section 311 applying the entire chapter “to the importation or exportation of natural gas in foreign commerce.”<sup>14</sup> Public interest determinations on exports to non-FTA countries are made by the DOE on a case-by-case basis.

The following countries have FTAs requiring national treatment for trade in natural gas with the U.S.: Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Korea and Singapore.<sup>15</sup>

Section 311 of the Energy Policy Act of 2005 dictates that FERC “shall have the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal.”<sup>16</sup> The language was aimed at killing a July 2004 lawsuit filed by the State of California claiming that FERC illegally ruled in March 2004<sup>17</sup> that states have limited jurisdiction over the permitting and siting of LNG facilities inside their borders.

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<sup>12</sup> [www.congress.gov/bill/114th-congress/senate-bill/33](http://www.congress.gov/bill/114th-congress/senate-bill/33)

<sup>13</sup> A third agency, the U.S. Maritime Agency, has jurisdiction over offshore LNG.

<sup>14</sup> [www.congress.gov/109/plaws/publ58/PLAW-109publ58.pdf](http://www.congress.gov/109/plaws/publ58/PLAW-109publ58.pdf)

<sup>15</sup> [www.energy.gov/fe/services/natural-gas-regulation/how-obtain-authorization-import-and-or-export-natural-gas-and-Ing](http://www.energy.gov/fe/services/natural-gas-regulation/how-obtain-authorization-import-and-or-export-natural-gas-and-Ing)

<sup>16</sup> PL 109-58.

<sup>17</sup> FERC Docket No. CP04-58, <http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=10099827>

FERC also is responsible for issuing certificates of public convenience and necessity for LNG facilities,<sup>18</sup> and is required by the National Environmental Policy Act to determine environmental impact statements for LNG facilities.

But both DOE's authority (as reflected in the 1992 and 2005 amendments) and FERC's (2005 amendments) appear to conflict with a 1975 statute. That year, Congress passed The Energy Policy and Conservation Act, which, among other things, orders that "The President shall...promulgate a rule **prohibiting the export** of crude oil and **natural gas** produced in the United States, except that the President may...exempt from such prohibition such crude oil or natural gas exports which he determines to be consistent with the national interest" [emphasis added].<sup>19</sup> The export of U.S. produced oil has since been significantly restricted with the resulting Short Supply Control Regulations adopted by the US Department of Commerce Bureau of Industry and Security.<sup>20</sup> The Department of Commerce never promulgated rules to comply with the law's mandate to also prohibit the export of natural gas.

In order to rectify this discrepancy, Congress must order the U.S. Department of Commerce to promulgate rules prohibiting the export of natural gas—allowing for public interest exemptions, as determined by the President—as required by the 1975 Energy Policy and Conservation Act. Most likely such rules will allow exports to FTA nations, since the 1992 statute appears to provide a public interest determination.

DOEs current case-by-case public interest determination is based on three broad factors: a) the domestic need for natural gas, b) whether the proposed export threatens the security of domestic natural gas supplies, and c) environmental concerns.<sup>21</sup>

For proposed LNG exports to non-FTA nations, Congress should clarify the case-by-case public interest determination used by the DOE to include:

- Approval for an LNG export terminal cannot be in the public interest if analyses show that it will result in natural gas price increases for American industrial, commercial or residential consumers.
- No interference with non-fossil fuel commercial interests, such as natural gas-intensive industrial customers, commercial fishing or tourism.
- Given the environmental and climate change impacts of fracking, a public interest determination should more explicitly address whether an export facility's approval

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<sup>18</sup> Section 7 of the Natural Gas Act.

<sup>19</sup> 42 USC § 6212(b)(1)

<sup>20</sup> 15 CFR § 754.2

<sup>21</sup> See Sabine Pass Liquefaction LLC, FE Docket No. 10-111-LNG, DOE/FE Order No. 2961, p. 27-29; May 20, 2011

will have detrimental impacts on public safety, the environment or exacerbate climate change.

In addition, Congress should initiate two reforms regarding the FERC review and approval process. First, Congress should grant states the same legal rights that were provided to the Department of Defense in the Energy Policy Act of 2005. Section 311 of the Energy Policy Act of 2005 directs that FERC “shall obtain the concurrence of the Secretary of Defense before authorizing the siting, construction, expansion, or operation of liquefied natural gas facilities affecting the training or activities of an active military installation.”

A model would be Senator Dianne Feinstein’s Amendment No. 841 to the Energy Policy Act of 2005, which would prohibit FERC from approving an LNG terminal application “without the approval of the Governor of the State in which the facility would be located.”<sup>22</sup> If we can require “concurrence” approval by the Secretary of Defense for LNG terminal approval, then we should grant the same rights to Governors of states impacted by such facilities.

The second FERC-related reform is to have Congress provide appropriations to fund the Office of Public Participation at FERC, as authorized under 16 USC § 825q-1. The office was authorized as part of the 1978 Public Utility Regulatory Policies Act, but Congress never appropriated it. By creating this Office, Congress recognized that members of the public require assistance intervening before a complex, quasi-legal agency like FERC. Among the Office’s responsibilities: “coordinate assistance to the public,” and the office may “provide compensation for reasonable attorney’s fees, expert witness fees, and other costs of intervening” for the public.<sup>23</sup> The 1981 suggested appropriations for the Office was \$2.4 million, which is \$6.25 million adjusted for inflation to 2015.

## Conclusion

Recent innovations in exacting natural gas through fracking has lowered prices for consumers, but also spurred calls to expedite the export of gas. However, LNG exports will result in higher prices for America’s industrial, commercial and residential customers. The domestic natural gas market outlook forecasts higher demand here at home, forcing U.S. consumers to compete with exports. Statutory discrepancies require the attention of both the executive and legislative branches, to add natural gas to the Department of Commerce’s list of restricted exports, to better define public interest to take into account consumers, non-fossil businesses and the environment, and improve the ability of states and the public to have a say during FERC proceedings.

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<sup>22</sup> [www.senate.gov/legislative/LIS/roll\\_call\\_lists/roll\\_call\\_vote\\_cfm.cfm?congress=109&session=1&vote=00146](http://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=109&session=1&vote=00146)

<sup>23</sup> [www.law.cornell.edu/uscode/text/16/825q-1](http://www.law.cornell.edu/uscode/text/16/825q-1)

**Addendum: Testimony of Tyson Slocum before the U.S. House Small Business Committee on Crude Oil Exports on June 17, 2015:**

Few questioned the long-standing limit on exporting domestically-produced crude oil until a June 2013 memo by the American Petroleum Institute surfaced in a November 2013 Bloomberg News article describing the lobbying group's intention to "highlight potential violations of the World Trade Organization rules against [oil] export restrictions."<sup>24</sup> Since then, an oil-producer led coalition has launched an expensive media and lobbying campaign to convince lawmakers to repeal or modify this 40-year old consumer protection statute.

Their reason for seeking the law's repeal is simple: the ban limits oil producers' ability to sell their product for higher prices to foreign markets. End the export ban, and companies producing oil in the United States can make more money selling U.S. oil abroad. But that would come at the expense of higher prices for household consumers and small businesses, as the data shows that U.S. refiners are sharing their domestic oil price discount with consumers.

Of course, oil producers can't convince the public to revoke a consumer protection law on the grounds that it's keeping them from bigger profits. Instead, proponents of weakening or rescinding the oil export ban rely on three broad arguments. First, that current oil market dynamics have changed significantly from 40 years ago, rendering the law antiquated. Second, repealing the export ban will actually lower gasoline prices for households and small businesses. And third, allowing crude oil exports will strengthen US national security by adding oil diplomacy to our portfolio of tools to enhance US geopolitical interests.

All three reasons are flawed for the reasons I discuss in my testimony.

**Changing rules to facilitate oil exports is inopportune, as U.S. oil demand is increasing at the same time that onshore fracking production is set to peak and then decline**

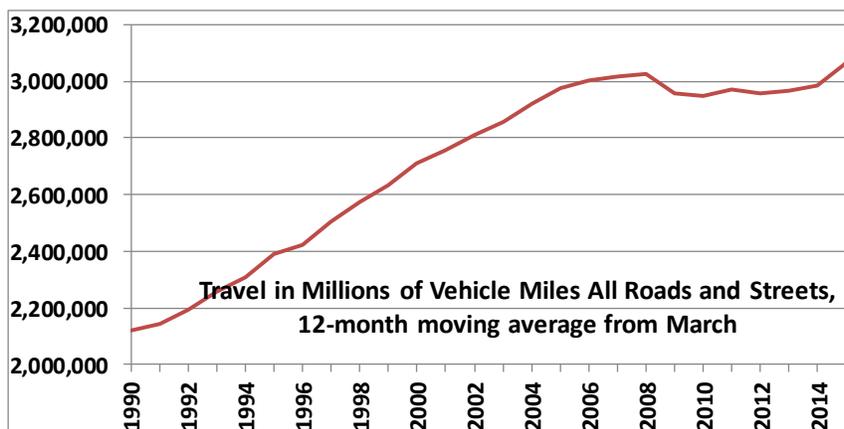
While our supply-demand imbalance has improved significantly from just several years ago, our economy remains stubbornly addicted to oil imports. Worse, the tremendous production growth from onshore fracking will peak in less than a decade. Allowing crude oil exports at a time when U.S. oil demand is rising and U.S. oil production is set to decline is bad policy, and will leave the American economy vulnerable to increased reliance on imports, exacerbating exposure of families and small businesses to higher prices.

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<sup>24</sup> [www.bloomberg.com/news/articles/2013-11-06/oil-industry-may-invoke-trade-law-to-challenge-export-ban](http://www.bloomberg.com/news/articles/2013-11-06/oil-industry-may-invoke-trade-law-to-challenge-export-ban)

Only a few years ago, America's oil policy was defined by scarcity and high prices, with the consensus solution characterized by President George W. Bush's 2006 State of the Union remarks that "America is addicted to oil," where the former Texas oil man laid out a blueprint to replace petroleum with alternatives.<sup>25</sup> At the time we were producing 5 million barrels of oil a day. But the experts and even the industry itself were blindsided by the turnaround in just a few years: improvements in fracking technology, coupled with key exemptions from federal clean water laws and rising commodity prices (until the summer of 2014, at least), resulted in a pendulum swing to 9.1 million barrels a day in the 4<sup>th</sup> quarter of 2014.<sup>26</sup>

Of course, despite this production boom we remain the world's largest importer of petroleum and petroleum products, with 9.3 million barrels per day in the 3<sup>rd</sup> quarter of 2014.<sup>27</sup> That's because the United States now holds oil's Triple Crown: we are the largest



global oil producer, the world's largest oil importer, and the world's largest oil consumer. Our voracious consumption, requiring significant imports, sets us apart from many other large oil exporting nations, most of which feature minimal oil imports (Russia, for

example, imports only 87,000 barrels of petroleum and petroleum products a day). Absent fundamental changes to consumption, it is impossible for the United States to become self-sufficient anytime soon.

U.S. oil consumption peaked at around 21 million barrels of oil per day from the 3<sup>rd</sup> quarter of 2004 through the end of 2007. American drivers and other petroleum users took 2.6 million barrels of oil off our oil balance sheet by the 1<sup>st</sup> quarter of 2012 in response to, first, high oil prices, and, second, the US economic crisis during the end of the Bush Administration in 2008. Since then however, the American economy has picked up, as we're now consuming 800,000 barrels of oil more per day as of the 3<sup>rd</sup> quarter of 2014 compared to the 1<sup>st</sup> quarter of 2012. As a result, we're using more than 19 million barrels of oil every day.

<sup>25</sup> <http://georgewbush-whitehouse.archives.gov/news/releases/2006/01/20060131-10.html>

<sup>26</sup> eia.gov

<sup>27</sup> eia.gov

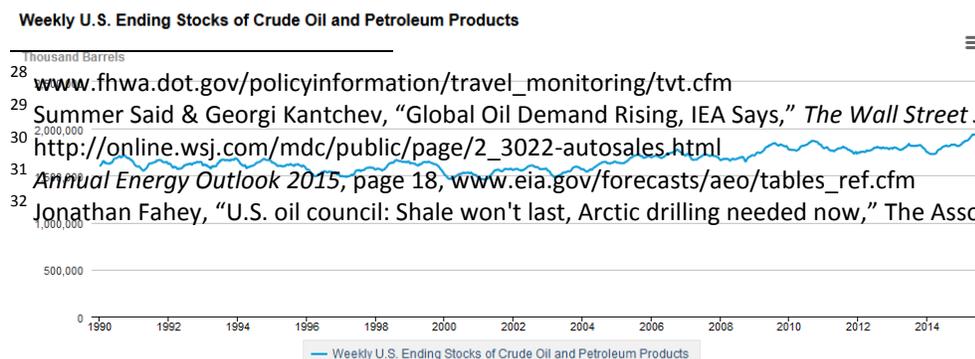
America's vehicle miles traveled has been increasing since 2012,<sup>28</sup> with the International Energy Agency concluding that there has been an "increased willingness of U.S. drivers to put additional 'miles on the clock,'" with American vehicle miles traveled up 3.9 percent in the first quarter of 2015, a record high. The IEA predicts that 2015 global oil demand will increase by 1.4 million barrels a day (to total global consumption of 94 million barrels of oil day), with the growth driven in part by an increase in U.S. gasoline demand of 4.2 percent<sup>29</sup> (U.S. gasoline consumption is roughly 9 million barrels per day). U.S. sales of light trucks and SUVs are the only class of automobiles with sales growth, with pick-up truck sales up 6.8 percent from May 2014 to May 2015, and cross-over sales up 14.2 percent, while sales of more fuel-efficient cars are down 3.7 percent<sup>30</sup>—meaning that more new cars hitting the road are less fuel efficient, likely leading to higher domestic gasoline demand growth in the years to come.

At the same time that domestic oil demand is picking up, the U.S. Energy Information Administration is predicting in its reference case that domestic oil production will peak at 10.6 million barrels of oil per day in 2020, and begin to decline after that.<sup>31</sup> This is because onshore fracking, which represents much of America's oil production growth, features production decline rates fundamentally different from conventional oil. Unlike a conventional oil field, where the oil is typically easily accessed in large, central reservoir, shale (or "tight") oil features hydrocarbons that are unevenly distributed throughout the shale. While advancements in the last decade with hydrofracturing, or "fracking" (particularly horizontal drilling) have made accessible vast amounts of oil in the Bakken and Eagle Ford, these basins typically feature between 40 to 70 percent production declines after the first year—figures far, far greater than what is experienced in conventional fields. As a result, the fracking boom is a relatively short-term phenomenon, as the productivity of the fields falls off dramatically.

That is why ExxonMobil's CEO, Rex Tillerson, said in an interview in March 2015 that oil exploration in the Arctic is needed to replace the production that will be lost as America's onshore fracking production declines in the next decade.<sup>32</sup>

## Nixing the crude oil ban will raise gasoline prices for families and small businesses

Because the oil export ban limits producers' oil sales to the domestic market, the United States has record



levels of oil in storage. Despite these strong storage levels, U.S. refinery and tank farm storage utilization is at a very manageable 63 percent for the first quarter of 2015, and only 74 percent and 57 percent for Petroleum Administration for Defense Districts (PADD) 2 (Midwest) & PADD 3 (Gulf Coast), respectively, indicating that worries earlier in the year that the US was close to breaching its storage capacity were unfounded.

These high levels of storage provide a discount for U.S. refineries, which in turn are sharing that savings with U.S. consumers, including small businesses.

As the U.S. Energy Information Administration has pointed out, U.S. gasoline prices are influenced more by the European-based Brent oil benchmark than the U.S.-based West Texas Intermediate (WTI) benchmark.<sup>33</sup>

But as storage levels have increased in the United States, American motorists and small businesses have seen a reduction in gasoline prices compared to Northwest Europe. In an analysis by Barclays Capital, the bank found that:

*Between 2008 and 2010, we estimate U.S. average gasoline prices were approximately \$4.73 a barrel higher than Northwest European premium gasoline prices. In comparison, between 2011 and 2014, the U.S. average price was approximately \$1.62 a barrel higher than Northwest Europe, while last year [2014] the U.S. price was just \$1.20 a barrel higher. **This implies U.S. consumers compared to their European counterparts have received a partial dividend for the crude export ban of an average of \$3.11 a barrel in discounted gasoline prices since 2011 and a discount of \$3.53 a barrel in 2014.** We estimate U.S. gasoline consumption at 8.92 million barrels/day (mmb/d) in 2014 and 9.03 mmb/d in 2015, **which translates to actual savings of \$11.4 billion last year and potential savings of \$10.2 billion this year.** [emphasis added]<sup>34</sup>*

Barclays Capital found the data for diesel initially

*seems to play out in the opposite fashion with diesel. In 2008-10, the average price of Northwest Europe diesel was \$1.55 a barrel cheaper compared to the average U.S. diesel price during the same time period. In 2011-14, Northwest Europe diesel averaged \$2.66 a barrel cheaper than the U.S. average price. However, we think the presence of such a swing has more to do with the strength of industrial production in the U.S. It is our opinion that if refiners were not producing diesel at maximum utilization rates with discounted crudes, actual domestic diesel prices would likely be much higher due to the industrial demand seen today.<sup>35</sup>*

<sup>33</sup> "U.S. gasoline prices move with Brent rather than WTI crude oil," November 3, 2014, [www.eia.gov/todayinenergy/detail.cfm?id=18651](http://www.eia.gov/todayinenergy/detail.cfm?id=18651)

<sup>34</sup> Paul Y. Cheng, "Crude Export Ban: Impact on Gasoline Prices, 2015 Edition," May 13, 2015.

<sup>35</sup> Paul Y. Cheng, "Crude Export Ban: Impact on Gasoline Prices, 2015 Edition," May 13, 2015.

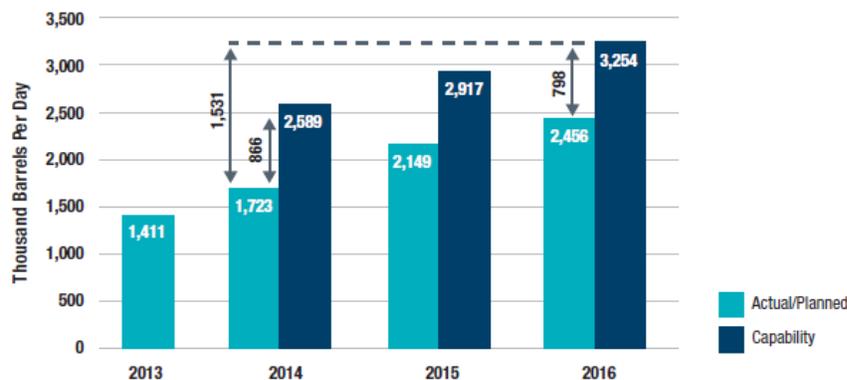
Indeed, EIA data shows that low natural gas and oil prices have helped spur the industrial sector, which has experienced significant recent growth, and the agency predicts +0.7 percent annual growth in the sector through 2040.<sup>36</sup>

The Barclays Capital research undercuts one of the primary arguments of the five leading studies that conclude ending the export ban would actually *lower* gasoline prices, as the Barclays analysis—using actual data, rather than theoretical—demonstrates the value that the export ban has in providing surplus oil at a price discount for American consumers. Contrary to many of the studies that claim that US refiners are pocketing the difference between the higher Brent benchmark and the discounted WTI, that actually some of the savings is in fact being passed to U.S. households and small businesses.

### U.S Refiners Can Process Fracked Light Crude

Some proponents of lifting the export ban claim that it's necessary because U.S. refiners—retooled over the years to process heavy, sour crude—cannot handle the new volumes of

Planned Use of Super Light Crude Oil vs. Capability to Use



domestic light crude coming from the Bakken and Eagle Ford. But a September 2014 survey of the U.S. refining industry reveals that we have domestic capacity capable of handling fracked oil.<sup>37</sup> The market has responded by substituting domestic

light oil for imported light oil, primarily Nigerian: that nation's imports fell from 1.1 million barrels of oil a day in July 2010 to just 98,000 in March 2015.<sup>38</sup> U.S. light oil has replaced Nigerian oil in American refineries. In addition, U.S. refiners have responded by investing in refinery modifications to handle more U.S. light oil. According to the survey of companies controlling 61 percent of U.S. refining capacity, refineries will be able to handle more than 3.2 million barrels of oil a day of super light crude in 2016, more than the projected 2.5 million daily barrels of production forecast for that year.

### Countering Reports Claiming Lifting the Export Ban Will Benefit Consumers

<sup>36</sup> "U.S. energy demand slows except for industrial, commercial sectors," April 29, 2015, [www.eia.gov/todayinenergy/detail.cfm?id=21012](http://www.eia.gov/todayinenergy/detail.cfm?id=21012)

<sup>37</sup> *An Analysis of U.S. Light Tight Oil Absorption Capacity*, Baker & O'Brien Inc.

[www.bakerobrien.com/news/Consumers\\_and\\_Refiners\\_United\\_for\\_Domestic\\_Energy\\_Releases\\_Results\\_of\\_Baker\\_and\\_O'Brien\\_Analysis/](http://www.bakerobrien.com/news/Consumers_and_Refiners_United_for_Domestic_Energy_Releases_Results_of_Baker_and_O'Brien_Analysis/)

<sup>38</sup> [www.eia.gov/dnav/pet/pet\\_move\\_impqus\\_a2\\_nus\\_ep00\\_im0\\_mbb1\\_m.htm](http://www.eia.gov/dnav/pet/pet_move_impqus_a2_nus_ep00_im0_mbb1_m.htm)

Below is a summary of the five leading studies purporting to show consumer benefits from lifting the export ban:

- In September 2014, NERA Consulting performed a study for the Brookings Institute that concluded that “2015 gasoline prices decline by \$0.09/gallon if the ban on crude oil is lifted entirely in 2015, while we see no impact on gasoline prices from 2025 through the model horizon of 2035.”<sup>39</sup> I am not aware of who funded this specific study, but research by the Washington Post shows that Brookings received contributions in 2013 in excess of \$100,000 from Chevron, Shell and Statoil, and contributions in excess of \$250,000 from ExxonMobil.<sup>40</sup> The study claims that US producers will be able to sell their oil for higher prices, providing an economic benefit; that refiners currently processing oil will be able to deploy capital associated with their refinery operations elsewhere in the economy, and that US exports will lower the price of Brent, thereby lowering US gasoline prices.
- In May 2014 ICF International was hired by the American Petroleum Institute to produce a report on the impacts of lifting the oil export ban, finding that the Brent price will drop with the resulting flood of U.S. exports.<sup>41</sup>
- IHS was hired by ConocoPhillips, ExxonMobil, Halliburton, Baker Hughes and Noble Energy, and their report also concludes that ending the ban will boost global supplies and “will result in lower global oil prices,” including in the United States.<sup>42</sup>
- Rice University’s Baker Institute for Public Policy found that US refiners will continue to process imported oil no matter how much additional domestic crude production occurs, because they are tooled to process more sour blends found in certain imports.<sup>43</sup>
- Resources for the Future finds that “assuming no OPEC response,” the resulting flood of US exports following the lifting of the ban would lower oil and gasoline prices.<sup>44</sup>

Outside of the Barclays Capital data that undercuts the theoretical arguments that US refiners don’t share discounts with US consumers, there is a major flaw in the assumptions of all these studies: they assume that some measure of U.S. exports in a sea of global demand of 94 million barrels of oil a day will not be offset by the multitude of variables that impact global supply and demand.

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<sup>39</sup> [www.nera.com/content/dam/nera/publications/2014/NERA\\_Crude\\_Oil\\_Export\\_Study\\_Sept\\_2014\\_FINAL.pdf](http://www.nera.com/content/dam/nera/publications/2014/NERA_Crude_Oil_Export_Study_Sept_2014_FINAL.pdf)

<sup>40</sup> [www.washingtonpost.com/wp-srv/special/politics/brookings-institution-2014/](http://www.washingtonpost.com/wp-srv/special/politics/brookings-institution-2014/)

<sup>41</sup> [www.icfi.com/insights/projects/energy/us-crude-oil-exports](http://www.icfi.com/insights/projects/energy/us-crude-oil-exports)

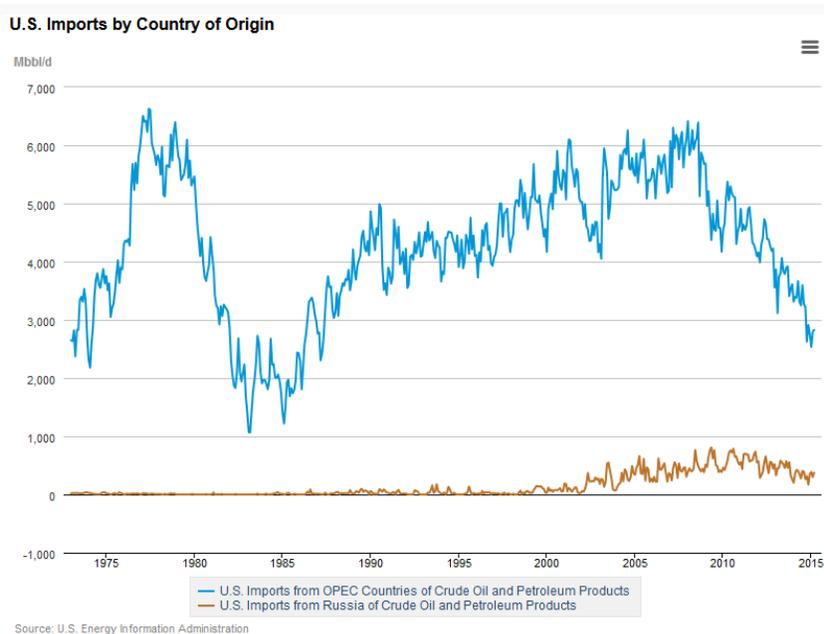
<sup>42</sup> [www.ihs.com/Info/0514/crude-oil.html](http://www.ihs.com/Info/0514/crude-oil.html)

<sup>43</sup> <http://bakerinstitute.org/research/lift-or-not-lift-us-crude-oil-export-ban-implications-price-and-energy-security/>

<sup>44</sup> [www.rff.org/RFF/Documents/RFF-IB-14-03-REV.pdf](http://www.rff.org/RFF/Documents/RFF-IB-14-03-REV.pdf)

For example, an increase in U.S. oil exports could be matched by a production cut by OPEC or Russia. A supply disruption in the Middle East or Venezuela could occur, offsetting the U.S. increase. Demand growth could accelerate in the U.S. or Asia or Europe, displacing the new U.S. supply. The point is that commodity markets, and crude oil in particular, are notoriously fickle, volatile and unpredictable, so the confidence that so many consultants have in their predictive models seems more than a little overstated. And, of course, if ExxonMobil's CEO is correct that the window of opportunity of America's fracking boom is closing because of declining productivity rates, than the ability of U.S. producers to maintain effective levels of exports is compromised after 2020.

Halliburton's CEO explained recently that when oil exceeds \$100/barrel, oil companies are "printing money like crazy," and falling prices simply force companies to become more efficient.<sup>45</sup> Discarding the export ban would prop prices up and dull the incentive to innovate. Shale frackers will continue to return value to shareholders with the export ban in place.



Oil-exports-as-an-economic policy sounds a lot like a Nigerian model of growth, a one-trick pony latching the US to the perils of volatily-priced finite natural resources. Look to North Dakota's<sup>46</sup> and Texas'<sup>47</sup> current budget woes to see how tethering growth to fickle commodity prices produces a boom and bust economy. What sets America apart is not our aptitude at pulling Dinosaur

remnants out of the ground, but the value-added of our manufacturing and high tech innovation—competing sectors threatened by the higher petroleum product prices that will result from exporting. Oil is literally a fuel for economic activity. To increase the cost of that feedstock would benefit oil extractors at the expense of everyone else.

<sup>45</sup> [www.bloomberg.com/news/articles/2014-10-28/crude-at-80-a-barrel-no-sweat-say-oil-producer-ceos](http://www.bloomberg.com/news/articles/2014-10-28/crude-at-80-a-barrel-no-sweat-say-oil-producer-ceos)

<sup>46</sup> Jennifer Brooks, "Plummeting oil prices cut North Dakota revenue forecast in half," *StarTribune*, January 30, 2015, [www.startribune.com/plummeting-oil-prices-cut-north-dakota-revenue-forecast/290274701/](http://www.startribune.com/plummeting-oil-prices-cut-north-dakota-revenue-forecast/290274701/)

<sup>47</sup> Manny Fernandez & Jeremy Alford, "Some States See Budgets at Risk as Oil Price Falls," *The New York Times*, December 26, 2014, [www.nytimes.com/2014/12/27/us/falling-oil-prices-have-ripple-effect-in-texas-louisiana-oklahoma.html](http://www.nytimes.com/2014/12/27/us/falling-oil-prices-have-ripple-effect-in-texas-louisiana-oklahoma.html)

## **Foreign policy benefits of exporting US oil are limited or nonexistent, and will only encourage expanded oil imports**

A third argument made by proponents seeking to repeal the oil export ban is that U.S. exports can serve as a lever to increase American influence for geopolitical ills. Such “Commodity Diplomacy” is unlikely to succeed, first, because the United States remains dependent upon many of the countries (OPEC, Russia) identified as targets of US exports. For example, a bipartisan group of members of congress have endorsed legislation to allow certain U.S. allies to receive crude oil shipments from the U.S. upon request. The primary targets of such a policy appear to be countries currently dependent on Russian oil.

US oil exports can’t undercut countries like Russia and elements of the Middle East without significant impacts to supplying the US market—remember, America still imports 9 million barrels of petroleum and petroleum products every day. Booming domestic production hasn’t brought us anywhere near oil independence. We remain vulnerable to international supply shocks and punishing price swings.

And we remain a significant importer of petroleum and petroleum products from OPEC nations and Russia—we import more than 3 million barrels of oil a day from these countries, including nearly 400,000 barrels of oil a day from Russia. Before we rush to use oil as a geopolitical weapon, we should probably ensure that we are not buying oil from the countries we’re seeking to counter. Indeed, increased U.S. exports for geopolitical purposes will require additional levels of import to meet our growing domestic demand.

In addition, the Congressional Research Service found that markets—and not political criteria such as legislation giving certain nations Most Favored Status for our oil—were the only effective determination for potential oil export destinations.<sup>48</sup>

## **Conclusion**

Proponents of repealing the 40-year old ban on crude oil exports make claims that doing so is necessary because oil market dynamics have changed since the law was adopted; that allowing exports will lower gasoline prices for Americans; and that exports can provide geopolitical benefits for American national security and our economy. Unfortunately, oil exports can successfully fulfill none of these goals.

Instead, lifting the export ban will erode surplus domestic stockpiles, and allow domestic oil producers to sell oil overseas for higher prices than what they are able to charge domestically. This will result in higher gasoline prices for U.S. motorists and small businesses. Furthermore, U.S. oil markets will likely experience increased demand and

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<sup>48</sup> Phillip Brown & Robert Pirog, “Potential Market Effects of Removing Crude Oil Export Restrictions: Eastern Europe,” May 29, 2015.

restricted supply in the next decade, compromising the ability to utilize U.S. oil for export. And use of exports to enhance U.S. geopolitical aims is limited due to the ability of outside supply/demand variables to undercut strategic goals.

One segment of the economy—the oil industry—is waging a campaign to convince a skeptical public that an economic protection statute is no longer needed, sponsoring studies employing dubious calculations that Americans will be better off shipping our crude directly to China. We must learn from Nigeria, Russia and Venezuela that an economy that prioritizes raw natural resource exports fails to properly develop the true engines of prosperity. Any informed observer of energy markets today recognizes that the real revolution is in clean tech technology. Solar power will be cheaper than fossil fuels in 47 states by 2016. Tesla is building a battery factory that will deliver energy storage at rates lower than the current grid. Exporting oil is great for stagnating states but terrible for success.