Before the Committee on Energy and Natural Resources
United States Senate
Hearing on U.S. Crude Oil Export Policy
Testimony of Ryan Lance
Chairman and Chief Executive Officer

March 19, 2015

Madam Chairman Murkowski, Ranking Member Cantwell and members of the Committee, my name is Ryan Lance and I am chairman and chief executive officer of ConocoPhillips. Thank you for the opportunity to appear before the committee today. It is an honor to be here.

I am speaking to you today on behalf of ConocoPhillips. Just shy of three years ago, our company became engaged solely in the upstream oil and gas business after spinning out our refining and chemicals businesses. We are now one of several hundred companies in the United States that make up a vital industry of independent exploration and production (E&P) companies. While you probably know the name ConocoPhillips, the vast majority of independent E&P companies are not widely known. Yet, these companies, as well as related service, supply and support businesses, play an important role in our nation. ConocoPhillips alone employs more than 19,000 people worldwide, with the majority here at home. Last year, we invested more than $7.5 billion in the United States. As big as these numbers sound, they are but a fraction of the total employment and investment impact our industry provides across our nation.

The reason I am here is to offer my perspective on our nation's crude oil export policy. And the reason we are all here is because this topic is at the center of a unique and historic set of circumstances that – if embraced – have the potential to transform our nation's energy outlook. Consider this: 1) in just a few short years, U.S. ingenuity and technical prowess have unlocked a vast, sustainable resource base of crude oil and natural gas; 2) we have in place a vibrant producer industry that provides significant economic stimulus to our nation; 3) we have a resurgence of U.S. manufacturing interests across our country based on access to affordable energy, and; 4) we have a fragile geopolitical climate that threatens U.S. interests globally. These are the current realities. Yet, the potential of our nation to capture the benefit of these realities is undermined by a policy that was enacted for a far different reality more than 40 years ago. That policy is the ban on crude oil exports.

Forty years ago, our policymakers were prudent, swift and deliberate about addressing the reality of that time by putting several measures in place to protect U.S. consumers. Now, we have an opportunity to be equally prudent, swift and deliberate about addressing the reality of today, which calls for a clear and urgent need to remove the ban on crude oil exports. It is time to let American oil trade freely on the global market, just as other U.S. energy commodities are traded in the global economy. Our industry has transformed the domestic energy business in less than a generation. We now have a compelling opportunity to change policy to benefit future generations.

I commend this committee and Madam Chairman Murkowski for your commitment to exploring the implications of such a policy change. I believe the analyses and the facts show that lifting the ban on crude oil exports will benefit our economy, American consumers and domestic production. I am pleased that lifting the export ban has received support in both parties, from all regions of the United States, and has been endorsed by virtually all the independent economic studies that have been conducted. Again, I want to thank all of you for your time and interest today.

The New Energy Era

I started in this industry 35 years ago working on drilling rigs and in production operations to put myself through college in Montana and earn my petroleum engineering degree. I have since had the opportunity to work on projects throughout the United States and around the world. Like many of my colleagues in our industry, young and old, I have weathered industry upturns and downturns, and seen energy shortages as well as surpluses. But I have never witnessed anything more remarkable than what is occurring today with domestic oil and natural gas supply in the United States.

The terms “game-changer,” “revolution,” “renaissance,” “transformational” and “generational opportunity” are commonly used to describe the emergence of our nation’s vast unconventional resources as a viable, durable and abundant supply source. Every one of these terms is an accurate way to describe the situation that is underway in our nation today. Over the past few years, the U.S. oil industry has succeeded in shifting the energy market's center of gravity away from unstable areas of the world, toward North America. And by the way, the independent companies (not “big oil”) inspired and drove this renaissance.

By any measure, our nation has been on a transformational journey – one that must continue if America is to fully realize our energy potential. The task ahead is to fully understand today’s realities and to make the appropriate policy decisions for these realities. In doing so, we can all play a part in sustaining this energy transformation, enhancing our energy security, and spurring economic benefit for our nation and for the American consumer.

The Crude Oil Export Ban Should be Repealed

As you would expect, oil producers have analyzed the implications of lifting the ban on crude oil exports. More importantly, a number of other nonpartisan, agency and think tank organizations

have also studied this issue and the potential impacts on American consumers. It is clear that exporting "made in the USA" oil will benefit consumers. There is compelling evidence that lifting the ban will help reduce gasoline prices, while also protecting and creating jobs, and spurring economic stimulus across our nation. And, the studies also note that lifting the ban will provide our government with significant revenue.

It is time to lift the export ban.

Key Points Supporting Repeal

There are several key points that are central to the case for lifting the ban on crude oil exports:

- A new era of U.S. energy abundance – There is no longer any question about whether or not the United States has enough oil and natural gas to meet domestic needs. The unconventional resources are real, they are abundant and they are here for the long term. Our long-held fear of impending energy shortages or concerns that future generations won't have enough energy is a holdover from a bygone era. A decade ago, when natural gas prices were above $10 per thousand standard cubic feet, we could not conceive of a day when we might be exporting natural gas. Now that day is here and natural gas prices are less than $3 per thousand standard cubic feet. This is because of actions industry took to develop our abundant natural gas resources. These actions have benefitted consumers and our nation. The same can be true for crude oil.
- Exports would help consumers save at the gasoline pump – Studies by the Brookings Institute, IHS Inc., Columbia University, Rice University, ICF, Resources for the Future and the Federal Reserve Bank of Dallas have all found that exporting American crude oil will increase global oil supply and lower gasoline prices. This seems counterintuitive, but here's the crux of the issue: U.S. gasoline prices, excluding taxes, are determined by global gasoline prices, which in turn track the global crude oil pricing trends. The entry of new oil supplies into the global market, such as from U.S. exports, would likely put downward pressure on gasoline prices. These points have been confirmed in recent studies by the Energy Information Administration (EIA), the Government Accountability Office (GAO) and the Congressional Budget Office (CBO). The IHS study shows that lower fuel prices would result in $265 billion in U.S. consumer savings annually between 2016 and 2030.
- Jobs would be protected and created – Repealing the crude oil export ban is vital to the health of the domestic E&P business and will incentivize ongoing investment by industry. By removing obstacles to investment, we can help protect jobs in this current low-price environment and create significant numbers of new jobs in the future. Another recent IHS study shows that 394,000 – 859,000 additional jobs could be created annually between 2016 and 2030 in the national economy as a result of the repeal. Importantly, as much as 24 percent of the new jobs would be in states with no oil production.
- Crude oil exports would grow the U.S. economy – Export sales of crude oil would stimulate demand for domestic production, thus increasing the economic contributions accruing to the United States from the energy renaissance. Studies show that U.S. GDP could increase on

average by $86 to $170 billion annually between 2016 and 2030 and government revenue could increase by $1.3 trillion annually.

- Crude oil exports would strengthen the U.S. standing in the world – U.S. crude oil would find a ready market among purchasers seeking reliable supplies and enable our overseas allies to diversify their energy supplies, thereby strengthening U.S. commercial and geopolitical influence.
- Advanced technology and innovation are key drivers – The U.S. energy renaissance is a result of leading-edge technology that was originated, tested and perfected here at home, largely by the independent E&P companies. And the technology and expertise we have developed here for hydraulic fracturing and horizontal drilling are now being used worldwide.
- Not all oil is the same – The light oil we are producing today from unconventional resources is very different from other types of oil. It is lighter in gravity, contains a different mix of hydrocarbon compounds and yields a different mix of products. Thus, it requires different refining processes and equipment than many of our U.S. refineries are currently equipped to handle. Because of this, the U.S. needs to export light oil and continue importing heavier oil that those refineries are built to process.
- Rising U.S. crude oil production exceeds our domestic refining capacity – The rapid growth of U.S. crude oil production, particularly light oil from unconventional resources, has overwhelmed the current refining capacity for this crude type. In order to process it, many refineries either need to run inefficiently and require a steep price discount to do so or they need to make significant investments in new equipment. Neither of these options is feasible. In the absence of a market, U.S. light crude will be trapped, will decline in value and the economic merits for investment will also diminish.
- American crude oil sells for less than global crude oil – The crude oil export ban, combined with the previously described mismatch of light oil with the needs of refineries, is discounting the value of an American product. American oil currently sells for $5 to $10 per barrel less than global oil. Every dollar subtracted from the price of American crude oil compared to the global price is a dollar that isn't reinvested in our country. More importantly, this discount is a particular threat in today's low-price environment. At current global prices of $50 per barrel, a $3 change can have the same impact as a $10 change in a $100 per barrel price. A wide discount between U.S. light crude prices and global crude prices has a disproportionately negative impact on U.S. producers. We are already seeing this in the market today. Projects are not economic, producers are cutting back dramatically on spending, and we are experiencing a significant negative impact on jobs, as well as local and state economies.
- Removing the crude oil export ban would resolve the refining bottleneck – The easiest, most efficient and immediate solution to the refining challenge would be to allow producers to sell their crude oil into the export market, as can currently be done with other energy commodities such as refined petroleum products, natural gas and natural gas condensates.
- Alaskan North Slope (ANS) oil represents the appropriate approach to crude oil export policy – In assessing the need for U.S. crude oil exports, policymakers need only look to the example of oil produced on Alaska's North Slope. Typically sent to market on the West Coast, ANS was exempted from the export ban in 1996, allowing exports to Asia. The Government

Accountability Office found no resulting increases in gasoline prices for West Coast consumers.

- In lifting the ban, the federal government would still retain the discretion to reverse policy at any time. This point needs no further explanation.

The points described above, taken individually and in their entirety, make a compelling case for removing the ban on crude oil exports. The restrictions imposed by the Energy Policy and Conservation Act of 1975 are no longer good policy for our nation in this new era of domestic oil abundance and geopolitical uncertainty. I strongly advocate for removing the restriction.

A New Era of U.S. Energy Abundance

Many of you may remember how different the energy situation was in the 1970s when the crude oil export ban was enacted. We had supply shortages, a crippling oil embargo and long lines for gasoline. In some areas, factories and schools closed on cold days due to a lack of energy to heat their buildings. Remember odd-even license plates?

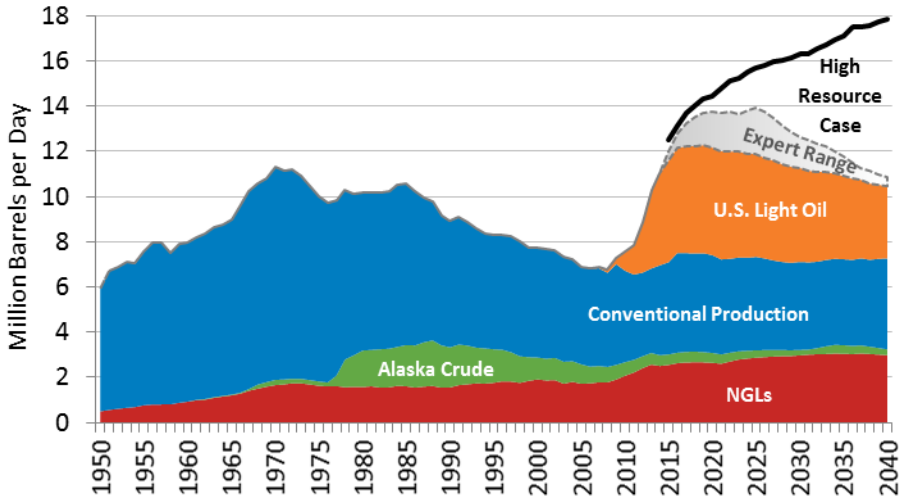
As a nation, we watched, seemingly helpless, as our dependence on imported energy increased. Government responded with prudent policies intended to protect consumers. These policies sought to keep our resources "at home," create a mechanism for stockpiling reserves for national security and enact fuel standards that would reduce our dependency on refined products over time. Many of these policies were and still are appropriate. For example, gasoline consumption is down and we have a robust Strategic Petroleum Reserve infrastructure system. Yet, as time passed, our production of oil and gas declined – until recently. Of all the policies enacted in response to the 1970s oil crisis, the crude oil export ban stands in stark contrast to today's reality. We do not have a supply shortage here at home. We should not be compelled to protect a resource that is abundant, especially when in doing so we disadvantage our domestic industry and our nation.

U.S. crude oil and associated liquids production, after peaking in 1970 at about 11 million barrels per day (MMBD), fell for more than 30 years, bottoming at 7 MMBD in 2008. But in the few short years since, driven principally by production from unconventional resources, U.S. liquids production has rebounded above 11 MMBD – and continues to grow.[1] The EIA predicts that by 2020, U.S. production could reach 12 MMBD, and by 2040 in their high-resource scenario it could reach 18 MMBD, as the chart on the top of page 6 illustrates.[2]

[1] U.S. Energy Information Administration (history from Monthly Energy Review, February 2015, Table 3.1, p.45 at http://www.eia.gov/totalenergy/data/monthly/pdf/mer.pdf.

[2] *Id*.; Forecast from Annual Energy Outlook 2014, (Reference and High Resource Case). Expert Range from various industry analysts.

U.S. Crude, Condensate and Natural Gas Liquids Production
U.S. Department of Energy Forecast



Domestic crude oil reserves have increased nearly 75 percent since 2008 to nearly 33.4 billion barrels in 2013,[3] according to the U.S. Energy Information Administration (EIA), and are approaching an all-time record. Further, EIA recently reported that U.S. crude oil inventories are at levels not seen in 80 years.[4] Imports of crude oil and refined products, after peaking in 2005, had declined 28 percent by 2013,[5] with the decline continuing today.

Additionally, the United States now has nearly a century's supply of natural gas.[6] Marketed production during 2014 was a record 27.3 trillion cubic feet, up 44 percent since 2005.[7] Imports of liquefied natural gas (LNG) have almost ended, and major exports will begin next year. However, nearly 20 percent of U.S. natural gas production is "associated gas" produced by oil

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[3] U.S. Energy Information Administration, *Crude Oil Proved Reserves, Reserve Changes, & Production* (Dec. 4, 2014) at http://www.eia.gov/dnav/pet/pet_crd_pres_dcu_NUS_a.htm (last visited Mar. 16, 2015).

[4] U.S. Energy Information Administration, *Weekly Petroleum Status Report,* (Feb. 27, 2015) – "At 448.9 million barrels, U.S. crude oil inventories are at the highest level for this time of year in at least the last 80 years," at http://www.eia.gov/petroleum/supply/weekly/pdf/highlights.pdf (last visited Mar. 16, 2015).

[5] U.S. Energy Information Administration, *U.S. Imports of Crude Oil and Petroleum Productions,* (Feb. 27, 2015) at http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mttimus1&f=a (last visited Mar. 16, 2015).

[6] U.S. Energy Information Administration, Table 2. *Technically recoverable shale oil and shale gas unproved resources in the context of total world resources* (June 2013) at http://www.eia.gov/analysis/studies/worldshalegas/ (last visited Mar. 16, 2015), Total US Wet Natural Gas resource of 2,431 TCF. Table 5a : *U.S. Natural Gas Supply, Consumption, and Inventories* (Mar. 10, 2015) at http://www.eia.gov/forecasts/steo/tables/?tableNumber=15# (last visited Mar. 16, 2015), 2012 Total Marketed Production equals 69.08 billion cubic feet per day or 25.2 TCF/yr. Years of supply = Technically recoverable Resource of 2431 TCF/Annual production of 25.2 TCF = 96.5 years. 2012 is chosen to approximately match the date of the resource assessment.

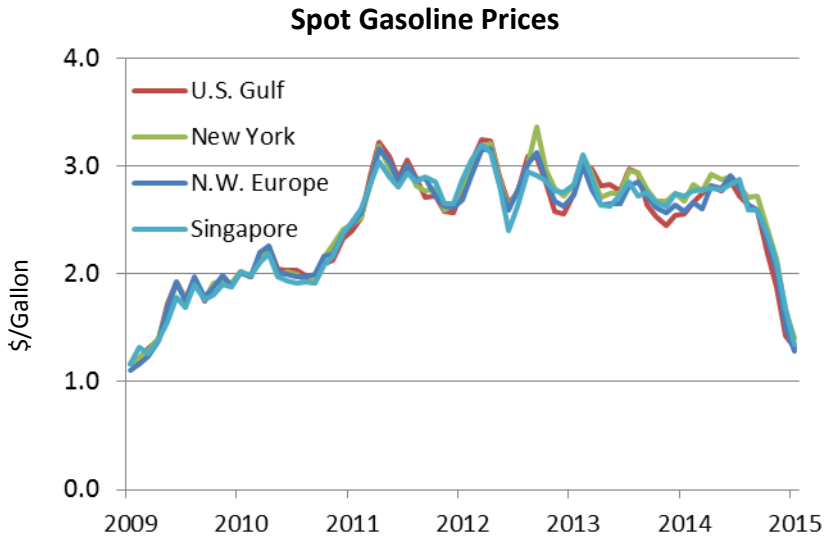
[7] U.S. Energy Information Administration, Table 5a: U.S. *Natural Gas Supply, Consumption, and Inventories* (Mar. 10, 2015) at http://www.eia.gov/forecasts/steo/tables/?tableNumber=15# (last visited Mar. 16, 2015). For 2014, Total Marketed Production equals 74.68 billion cubic feet per day or 27.3 TCF/yr. (Convert bcfd to TCF - multiply by 365 and divide by 1000).

wells.[8] As the export ban reduces oil drilling and production, it will also reduce natural gas production.

Exports Would Help Consumers Save at the Gasoline Pump

Nearly a dozen economic studies by experts at Brookings Institution, IHS Inc., Columbia University, Rice University, ICF, Resources for the Future and the Federal Reserve Bank of Dallas have concluded that fuel prices at the pump would decrease if crude oil exports are permitted. These conclusions have been affirmed by analysis conducted by the GAO and CBO.

The EIA has confirmed that U.S. gasoline prices, excluding taxes, are determined by global gasoline prices, which tend to rise or fall depending on the global crude oil price.[9] The current discounted U.S. oil price does not translate to lower prices at the gasoline pump. This is reflected in the chart below that shows wholesale gasoline prices in various regions around the world. They all move together. This is true even in the United States despite our discounted crude price.



EIA pointed out that Brent crude prices are more important than WTI crude prices as a determinant of U.S. gasoline prices.[10] The following chart shows that Gulf Coast and New York gasoline prices track the global Brent crude price – not the U.S WTI price. In effect, U.S. refiners are able to buy American crude oil at a discount price, and then sell refined products at prices commensurate with the higher global oil price.[11]

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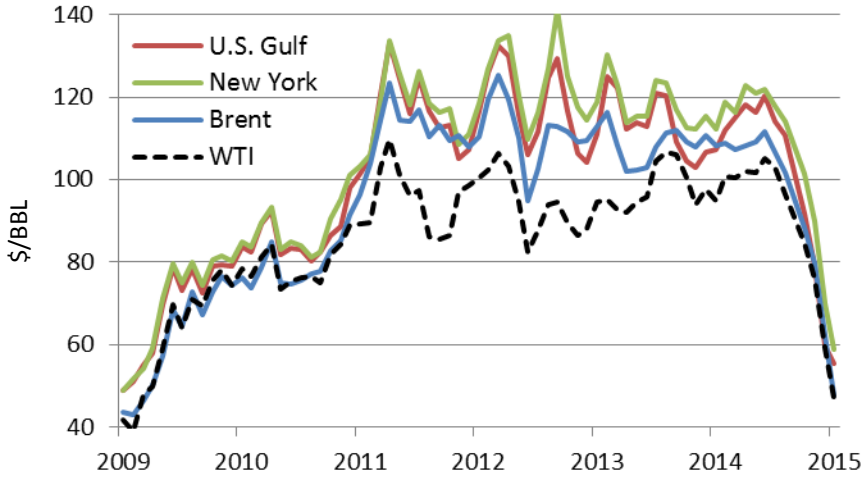
[8] U.S. Energy Information Administration, *Natural Gas Gross Withdrawals and Production* (Feb. 27, 2015), at http://www.eia.gov/dnav/ng/NG_PROD_SUM_DCU_NUS_A.htm (last visited Mar. 16, 2015). For 2013, Gross Withdrawals From Oil Wells / Gross Withdrawals = 18%.

[9] U.S. Energy Information Administration, What Drives U.S. Gasoline Prices, p.3 (Oct.2014) at http://www.eia.gov/analysis/studies/gasoline/pdf/gasolinepricestudy.pdf (last visited Mar. 16, 2015).

[10] *Id.*

[11] Bloomberg Professional Data.

U.S. Gasoline Prices vs. International & Domestics Crude Prices



Adding new crude oil supplies to the global market – through exports – would put corresponding downward pressure on world prices for gasoline and other refined products, and in turn on U.S. fuel prices. [12]

For example, IHS estimated U.S. consumer savings on gasoline would amount to $265 billion over the 2016-2030 period, with estimated savings of 8 cents-per-gallon at the pump annually.[13]

Lifting the Crude Oil Exports Ban is Good for Protecting and Creating Jobs

Allowing crude oil exports would protect jobs when oil prices are low and strengthen U.S. job creation over time. The energy renaissance has already created hundreds of thousands of new jobs, not only in the oil and natural gas industry, but across the country in service, supply and support industries. Our industry now supports 9.8 million U.S. jobs and contributes 8 percent of our gross domestic product.[14]

Job creation has also been outside the traditional producing areas, and in other industries. For example, energy-intensive industries are benefitting from the affordability and abundance of American energy, and are building new manufacturing facilities and attracting investment from overseas – all of which prompt job creation.

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[12] IHS Inc.,U.S. Crude Oil Export Decision: Assessing the Impact of the Export Ban & Free Trade on the U.S. Economy, in IHS ENERGY/ECONOMIC REPORT, pp.1-8, (2014) at https://www.ihs.com/info/0514/crude-oil.html (last visited Mar.16, 2015)[hereinafter *IHS study*]; Michael D. Plante, Economic Letter: *Crude Oil Export Ban Benefits Some..but not all*, DALLASFED, (July 2014) at https://www.dallasfed.org/assets/documents/research/eclett/2014/el1407.pdf (last visited Mar.16, 2015).

[13] IHS Inc.,U.S. Crude Oil Export Decision:Assessing the Impact of the Export Ban & Free Trade on the U.S. Economy, in IHS ENERGY/ECONOMIC REPORT, KF-1 (2014) at https://www.ihs.com/info/0514/crude-oil.html (last visited Mar.16, 2015)[hereinafter IHS study].

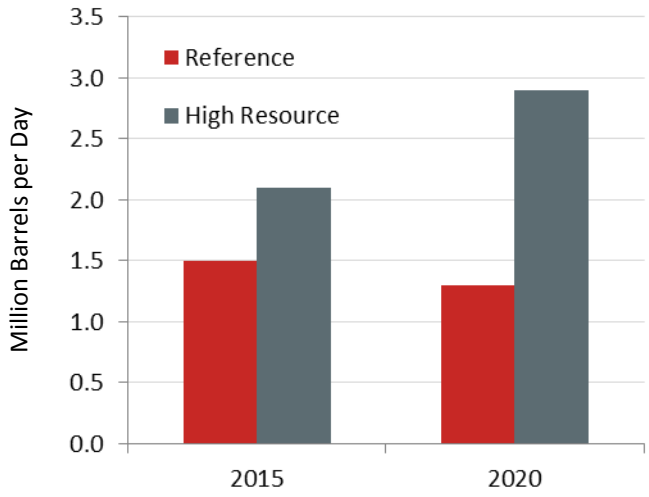
[14] Price Waterhouse Cooper, Economic Impacts of the Oil & Natural Gas Industry on the U.S. Economy in 2011, pp.6-7, (2013) at http://www.api.org/~/media/Files/Policy/Jobs/Economic_impacts_Ong_2011.pdf.

IHS estimates that exports would create additional jobs ranging from 394,000 to 859,000 per year, on average, between 2016 and 2030.[15] Additionally, oil industry jobs tend to provide mean annual wages twice the private-sector average,[16] and offer employee benefits with 50 percent greater value than the *Fortune* 500 average.[17]

Crude Exports Would Grow the U.S. Economy

The economic benefits of repealing the 40-year-old EPCA policy would be far-reaching and significant. On the global market, light oil sells at a premium to heavy oil. So, the U.S. would gain economically by exporting light oil, while continuing to import from neighboring Canada and Mexico, traditional allies and trading partners, the less-expensive heavy oil that our refineries are built to handle.

Incremental U.S. Crude Production from Lifting Export Ban in 2015



In the graph above, the Brookings Institution predicts that ending the oil export ban would encourage an increase in domestic production by up to 3 MMBD.[18] This added production would create jobs throughout the extended oil field supply chain all over America, and yield associated economic stimulation.

IHS found that the benefits to the U.S. economy of increased oil production would far exceed benefits to the industry itself. Every new oil industry production job creates three jobs in the

[15] IHS Inc., Unleashing the Supply Chain, 9 chart(March 2015) www.ihs.com/crudeoilsupplychain [hereinafter *IHS supply chain study*]

[16] *Id.,*at p.5.

[17] TowersWatson BENVAL, independent survey,(2014). BenVal analysis for 2014 reflects data from EBSG membership. Data for the 2014 study is based on 2013 active census data from ESBG members (17 companies, primarily oil and gas).

[18] Brookings Institution, Economic Benefits of Lifting the Crude Oil Export Ban, (2014) at http://www.nera.com/content/dam/nera/publications/2014/NERA_Crude_Oil_Export_Study_Sept_2014_FINAL.pdf (last visited Mar.16,2015).

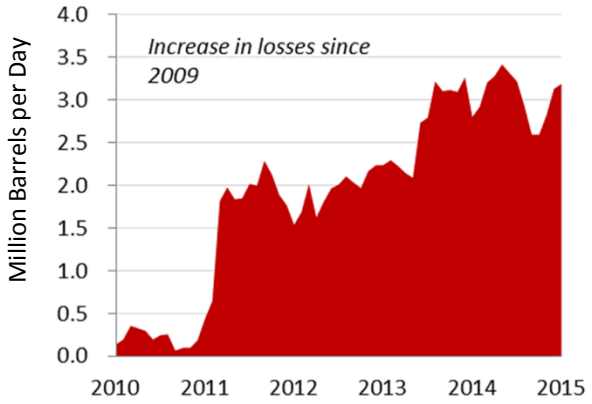
supply chain and another six jobs in the broader economy.[19] Contributions to gross domestic product (GDP) also multiply. Every dollar created in the oil sector generates two dollars in the supply chain. Consequently, IHS projects the following benefits from repealing the crude oil export ban:[20]

- As a result of increased production, the annual GDP gain would be $86 billion to $170 billion;
- Average household labor income would grow;
- The industry's capital investments would rise by $750 billion through 2030;
- The trade balance would improve by $67 billion annually;
- Through 2030, federal, state and local government would gain $1.3 trillion in additional tax and royalty revenue; and
- Since most unconventional shale development has occurred on privately owned land, landowners would gain royalty and leasing income, and local communities would benefit from the resulting economic stimulation.

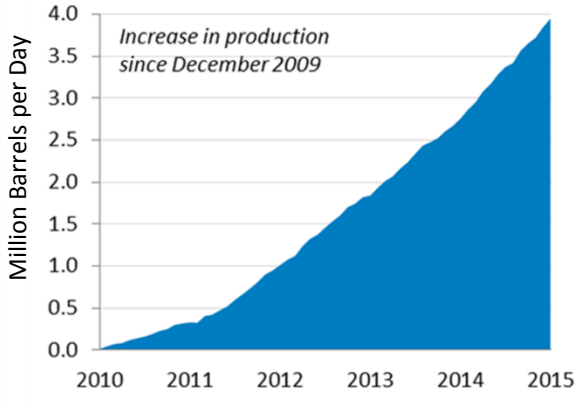
Crude Exports Would Strengthen the U.S. Geopolitically

Repealing the U.S. crude oil export policy would yield significant geopolitical benefits. U.S. light oil growth has already helped stabilize the global oil market. The chart below on the left shows global supply disruptions since 2009. Most were in the Middle East and North Africa. The chart below on the right shows U.S. light oil production growth. We have basically offset the disruptions. The market has been balanced by backing out 3 MMBD of U.S. imports and American consumers have been protected from price volatility.[21]

Growth in Global Supply Disruptions



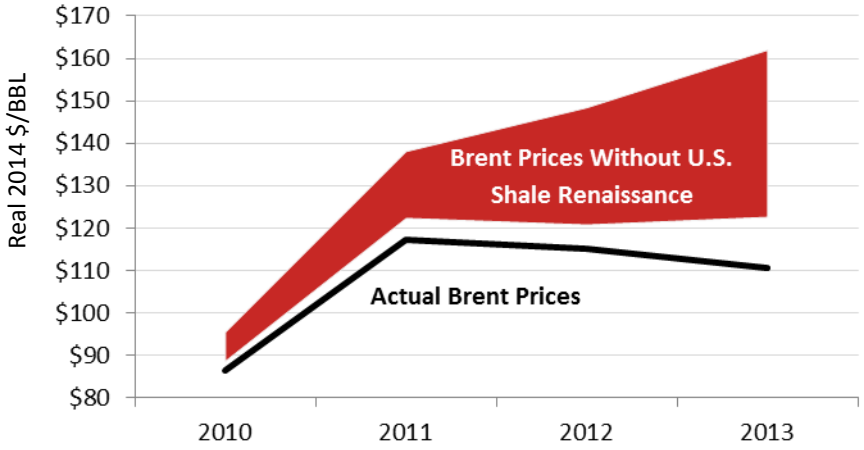
Growth in U.S. Light Oil Production



[19] IHS supply chain study, *supra* note 13, p.5.
[20] *Id.* at App B,p.1; IHS study, *supra* note 10 at KF-2.
[21] U.S. Energy Information Administration, U.S. Imports by Country of Origin (annual),(Feb. 27, 2015) at http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_epc0_im0_mbblpd_a.htm;U.S. Energy Information Administration, U.S. Imports by Country of Origin (monthly),(Feb.27, 2016) at http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_epc0_im0_mbblpd_m.htm (last visited Mar.16, 2015).

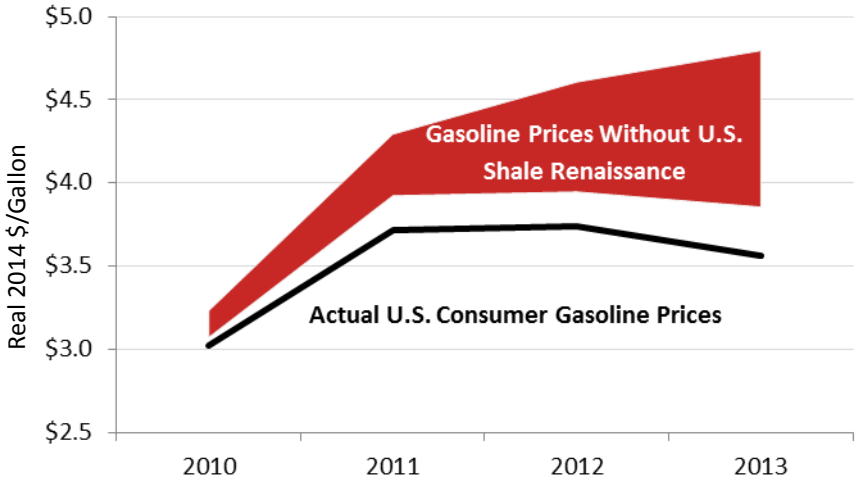
All else being equal, without the U.S. production increase, world oil prices could have been $12 to $40 per barrel higher post-recession, according to ICF International, shown below.[22]

Brent Crude Oil Prices Would Have Been $12 to $40 per Barrel Higher in 2013



Those higher per barrel global crude oil costs would have translated to higher U.S consumer gasoline prices from $0.30 to $0.94 per gallon in 2013, as shown below.

U.S. Consumer Gasoline Prices Would Have Been $0.30 to $0.94 per Gallon Higher in 2013



[22] Institute for Energy Research, *Hydraulic Fracturing Saved Consumers Up to $28 Billion Last Year* (Nov.6,2014), at http://instituteforenergyresearch.org/analysis/hydraulic-fracturing-saved-consumers-248-billion-last-year/ (last visited Mar. 16, 2015).

The ability of rising U.S. production to serve as a stabilizing force in the world market will decline in the future, as U.S. oil imports decline, unless we choose to allow crude oil exports. Such exports could, by making up for production losses elsewhere, help reduce market volatility. Additionally, by helping continue the U.S. production renaissance through creation of new markets, exports would serve to strengthen the economic power that underlies U.S. global influence, while the exports themselves could serve to diversify energy supplies for countries that now rely on less-secure sources.

U.S. producers would continue providing domestic refiners with all the crude oil they are configured to process. Additionally, U.S. refiners would continue enjoying a built-in cost advantage versus their overseas competitors due to the $2 to $6 per barrel shipping cost that overseas refiners would have to pay for U.S. crude oil.

Advanced Technology and Innovation Are Key Drivers of Unconventional Resource Success

The energy renaissance was made possible by a combination of technology and innovation that was developed in the United States, in many cases by smaller independent companies, not "big oil." In fact, the oil and natural gas business is nothing short of a high-tech industry. We use some of the world's most powerful computers to analyze seismic data. We can recover oil and natural gas from virtually any type of rock in any setting. We can steer drill bits down through miles of rock, then extend them horizontally with near-pinpoint accuracy to find oil and natural gas resources. We are an industry of scientists and engineers focused on finding solutions to very complex challenges, while emphasizing safety and environmental protection.

The oil industry and the U.S. government have long known that our nation possessed abundant hydrocarbons in unconventional reservoirs – after all, these were the source rocks for much of our nation's conventional onshore oil and natural gas deposits. But until recently, production from these deposits was rare – the rock wouldn't yield commercial volumes.

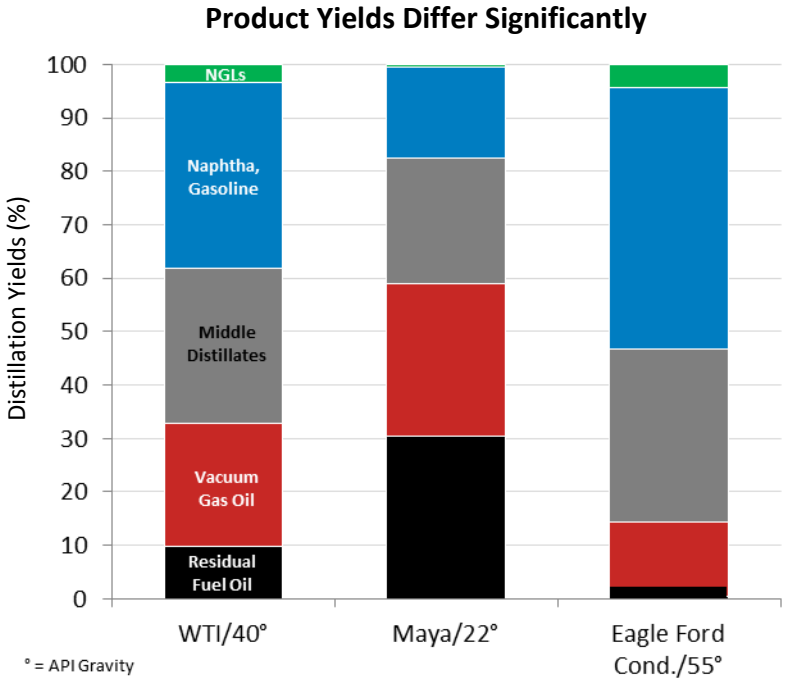
As recently as 10 years ago, you would have been hard pressed to find a story about successful horizontal drilling or hydraulic fracturing, although these technologies were well known to the industry and the Department of Energy (DOE) – having been used safely for decades. It wasn't until the two technologies were used in tandem on an experimental basis during the 1990s that commercial volumes of production were achieved from unconventional reservoirs. By the mid-2000s production of natural gas and later oil from these reservoirs began rising dramatically.

U.S. ingenuity and prowess made this success possible. Our homegrown industry has changed the fortunes of our nation.

Not All Oil is the Same

There are many different varieties and qualities of crude oil. In fact, the oil from any particular field is different from oil from any other field. Refineries are generally configured to process a particular variety or "slate" of crude oils. They do not operate as efficiently when required to run crude oils outside their design parameters.

Oil from unconventional reservoirs is typically known as "light oil." This generally means it is higher in gravity, contains a different mix of hydrocarbon compounds, yields more naphtha and gasoline than heavier oil, and contains less residual oil. Thus, light oils require different refining processes and equipment than heavier crude slates. The chart below indicates the product yields from oil ranging from light (Eagle Ford Condensate) to heavy (Maya).



One of the more compelling reasons to repeal the ban on crude oil exports is because our domestic refineries are currently constrained on the level of U.S. light crude they can efficiently process, as described in the next point.

Rising U.S. Crude Oil Production Exceeds Our Domestic Refining Capacity

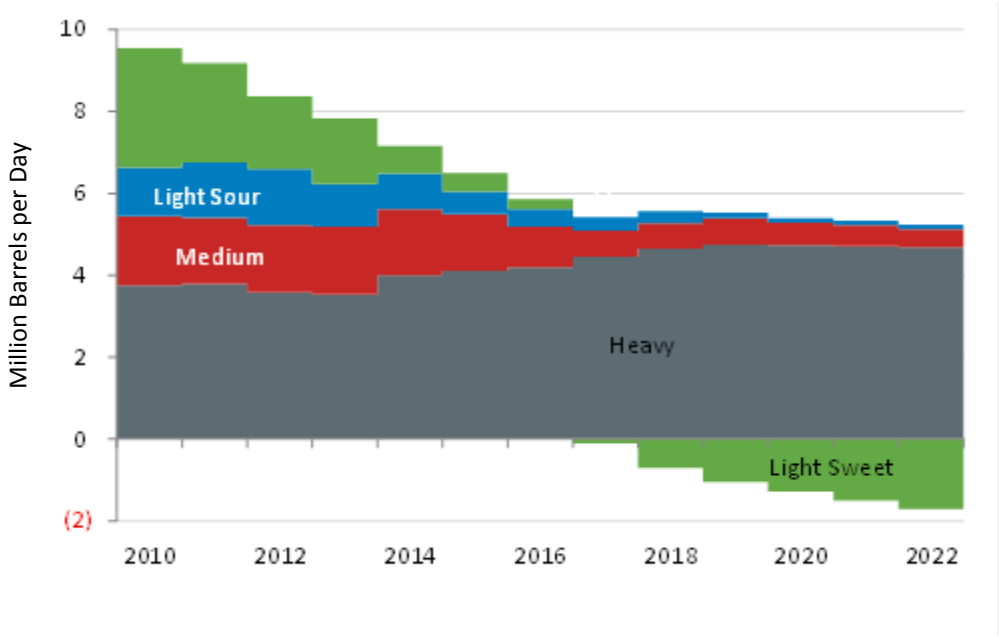
Processing additional volumes of light oil within the current refining configuration would require a steep domestic crude price discount to compensate the refinery for operating in an inefficient manner. That discount would deter investment in new light oil supply. The condensate and light oil recovered from unconventional reservoirs is generally not a good match for U.S. Gulf Coast refineries that were designed and equipped years ago to run heavy oil from Venezuela and Mexico, or Midwest refineries configured for heavy oil from Canada. In fact, the U.S. refining industry possesses 62% of the world's coking capacity – the process used to refine heavy oil.[23]

[23] Bloomberg Professional Service, Global Refinery Data.

U.S. refiners could accommodate more U.S. light oil by making major investments in new equipment. However, that would cost an estimated $400 million per facility,[24] at a time when refiners are already making major investments to meet more stringent gasoline specifications. Additionally, obtaining air permits for new refining units would add time and cost to the process, and opposition could come from environmental groups and local communities. Therefore, notwithstanding our strong support for refinery capacity expansions, refiners may not be able to make the investments to modify crude slates to the extent needed. Importantly, despite a significant crude oil price differential between light and heavy crude slates over the past five years – at times at a much wider spread than we see today – refiners have not made the investments needed to significantly expand their capacity to refine light oil.

U.S. light oil production already exceeds refining capacity during seasonal maintenance turnarounds, with resulting surpluses growing.[25] The current record amounts of oil in storage reflect this structural inability to process all the domestic production that is available. It is estimated that the mismatch between potential production and refining capacity could reach 1.5 to 2 million barrels per day in the foreseeable future.[26]

U.S. Crude Oil Imports



As the chart above illustrates, light oil imports and oil imports overall continue to decline, while imports of heavy oil continue to grow in the future. The heavy oil better matches the U.S. refining configuration.

[24] Turner, Mason and Co., North American Crude Oil Supply &Demand Study: High Production Case (internally conducted for ConocoPhillips) (Nov. 2013).
[25] *Id.*
[26] *Id.*

American Crude Oil Sells for Less Than Global Crude Oil

American crude oil currently sells for $5 to $10 less per barrel in the U.S. market than oil produced elsewhere sells for in the global oil market.[27] This is despite the fact that the benchmark crude oils – West Texas Intermediate (WTI) in the United States and Brent in the global market – are both light, sweet crude oils of similar quality. This differential (or spread) emerged in 2011, as U.S. production of oil from unconventional sources soared.

The reason for the current difference in price is that U.S. refiners purchase oil at a discount to offset the cost associated with processing light oil in refineries not designed for this crude slate, as described above. The discount serves as an incentive for refiners to process more light crude oil, while adversely impacting the investment economics for producers. U.S. producers are faced with the untenable choice of adding to the growing surplus that may soon exceed storage capacity – and further reduce the domestic price – or curtailing domestic production and investments.

Exports are particularly needed in an environment of low oil prices because differences of a few dollars have substantial impact on upstream investments. For example, a $3 change in a $50 per barrel price environment has the same effect as a $10 change in a $100 price environment, according to IHS.[28]

Many unconventional resource development projects are uneconomic below $70 per barrel, and the highest quality unconventional plays are uneconomic at $40 per barrel or lower. At recent prices, drilling activity cannot be sustained, the domestic industry is dramatically reducing investment, and job losses are growing every day. Suddenly, the industry that helped lead the U.S. economic revival since 2009, generating 40 percent of U.S. GDP growth, is in sharp decline.[29] Even worse, from a competitive standpoint, the discount for U.S. light oil puts domestic producers at a disadvantage compared to producers in other countries.

Removing the Crude Oil Export Ban Would Resolve the Refinery Bottleneck

Fortunately, there is a solution – U.S. crude oil exports. Due to the Energy Policy and Conservation Act (EPCA) of 1975,[30] crude oil remains the only energy commodity subject to an export ban. Given that America's unconventional resource renaissance has fundamentally changed the global energy landscape, this policy must be repealed if the United States is to fully realize the tremendous benefits offered by this new supply source. The time is now. Even as U.S. oil production is rising, U.S. oil demand is flat as a result of mandated use of renewable fuel, and more efficient cars and trucks.

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[27] Changing Crude Oil Markets: Allowing Exports Could Reduce Consumer Fuel Prices, & the Size of the Strategic Reserves Should be Reexamined, GAO-14-807, pp.6-8 at http://oilexports.com/wp-content/uploads/2014/11/666274.pdf (last visited Mar. 16 2015).

[28] IHS supply chain study, *supra* note 13, at p.17.

[29] *Id.* at p. 4.

[30] Energy Policy Conservation Act 1975, Pub. L. No. 94-163.

There is another important factor that is critical to this conversation. As members of this committee are fully aware, there are no restrictions on the export of refined petroleum products, such as gasoline, diesel fuel and home heating oil. In fact, in 2014, as recently noted by the Commerce Department, refined petroleum products exports hit a new record, accounting for nearly 10 percent ($146 billion) of the total value of all products exported from the U.S.[31]

We recognize that exports are beneficial to the overall economy. Indeed, U.S. exports of all products and services yield approximately one-seventh of the U.S. GDP. Given the lack of refinery capacity to economically accommodate growing domestic light oil production, we believe that, from a policy standpoint, crude oil should be treated in a similar manner as the products that are made from it.

There has recently been some movement in the right direction. The Administration, through a recent Commerce Department clarification of policy, will allow exports of processed condensate. However, this only applies to a small percentage of U.S. oil production as condensate is not produced from all wells. So, it will not provide the magnitude of relief the industry needs, and condensate exports will not produce the level of national economic growth that would be realized from lifting the crude oil export ban.

Alaskan North Slope Oil Represents the Appropriate and Right Approach to Export Policy

There is also historical, empirical evidence that crude oil exports will not lead to gasoline price increases. In the mid-1990s, Congress and President Clinton ended the ban on exports of oil from the Alaska North Slope, resulting in exports to Asia. Previously, all Alaskan oil had been shipped to refiners on the West Coast.

Despite the resulting exports, a U.S. Government Accountability Office study[32] stated that, "GAO analyzed three important petroleum products used by consumers, which accounted for about 80 percent of the products produced by West Coast refiners, and found no significant increases in prices."

We Should End the Crude Oil Export Restrictions

In closing, I believe this testimony lays out a compelling case for lifting the decades-old ban on U.S. crude oil exports. The unique circumstances that exist at this time create a window of opportunity for policymakers to act prudently, swiftly and deliberately to end the ban on exports. Our nation has the resources, the industry capability and know-how and clear economic drivers to allow exports without negatively impacting consumers. Policymakers have an opportunity to be on the right side of today's industry, economic and geopolitical reality and bring greater prosperity to our nation.

[31] U.S. Commerce Department, Annual Trade Highlights,(2014) at http://www.census.gov/foreign-trade/statistics/highlights/annual.html (last visited Mar. 16, 2015).

[32] Alaskan North Slope Oil: Limited Effects of Lifting Export Ban on Oil & Shipping Industries & Consumers, GAO RCED-99-191 p.8, at http://www.gao.gov/products/GAO/RCED-99-191 (last visited Mar.16,2015).

Thank you for giving ConocoPhillips and me the opportunity to share our perspective on U.S. crude oil exports. I commend the committee for its willingness to examine this complex issue, and to judge it on its considerable merits – increased domestic production, job preservation and creation, lower gasoline prices for consumers, U.S. economic stimulation and enhanced geopolitical influence.

With the leadership of this committee, and working with the Administration, we have an opportunity to not only keep the U.S. energy renaissance momentum going, but also to help ensure that Americans can realize all the potential benefits it has to offer.

The ban on U.S. crude oil exports should be removed.

Thank you. I look forward to your questions.

END