

**CRUDE INTENTIONS: THE UNTOLD STORY OF
THE BAN, THE OIL INDUSTRY, AND AMERICA'S
SMALL BUSINESSES**

HEARING
BEFORE THE
COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

HEARING HELD
JUNE 17, 2015



Small Business Committee Document Number 114-016
Available via the GPO Website: www.fdsys.gov

U.S. GOVERNMENT PUBLISHING OFFICE

95-078

WASHINGTON : 2015

For sale by the Superintendent of Documents, U.S. Government Publishing Office
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CONTENTS

OPENING STATEMENTS

	Page
Hon. Steve Chabot	1
Hon. Nydia Velázquez	2

WITNESSES

Dr. Kenneth B. Medlock III, James A. Baker, III, and Susan G. Baker, Fellow in Energy and Resource Economics, Senior Director, Center for Energy Studies, Rice University's Baker Institute for Public Policy, Hous- ton, TX	4
Mr. Dale Leppo, Chairman, Leppo Group, Tallmadge, OH, testifying on behalf of the Energy Equipment and Infrastructure Alliance	6
Mr. Rory McMinn, President and Managing Director, Read & Stevens, Inc., Roswell, NM	7
Mr. Tyson Slocum, Energy Program Director, Public Citizen, Washington, DC	9

APPENDIX

Prepared Statements:	
Dr. Kenneth B. Medlock III, James A. Baker, III, and Susan G. Baker, Fellow in Energy and Resource Economics, Senior Director, Center for Energy Studies, Rice University's Baker Institute for Public Policy, Houston, TX	29
Mr. Dale Leppo, Chairman, Leppo Group, Tallmadge, OH, testifying on behalf of the Energy Equipment and Infrastructure Alliance	36
Mr. Rory McMinn, President and Managing Director, Read & Stevens, Inc., Roswell, NM	42
Mr. Tyson Slocum, Energy Program Director, Public Citizen, Washington, DC	48
Questions for the Record: None.	
Answers for the Record: None.	
Additional Material for the Record:	
Energy Equipment and Infrastructure Alliance	58
Opening Statement of Hon. Radewagen	63

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WEDNESDAY, JUNE 17, 2015

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to call, at 11:00 a.m., in Room 2360, Rayburn House Office Building. Hon. Steve Chabot [chairman of the Committee] presiding.

Present: Representatives Chabot, King, Luetkemeyer, Hanna, Huelskamp, Rice, Gibson, Brat, Radewagen, Knight, Curbelo, Bost, Hardy, Kelly, Velázquez, Chu, Hahn, Payne, Meng, Lawrence, Clarke, Adams, and Moulton.

Chairman CHABOT. The Committee will come to order. Before we get started, I wanted to thank Congressman Joe Barton for stopping in from Texas earlier. They certainly have an interest in oil. He was pleased we were holding this hearing today. I just wanted to acknowledge that and thank him.

We want to thank everyone for joining us today in this very important discussion. There is no disputing it, America has entered into a new energy era. After years of decline, the United States is now the largest producer of oil and gas in the world.

Over the last year alone, U.S. oil production has expanded by 1.6 million barrels a day. This production, which comes primarily from unconventional fields, is expected to increase by an average rate of 234,000 barrels per day, topping 10.6 million barrels per day by 2020.

What does all this mean to American families? What does it mean to American workers? What does it mean to those still looking for work?

Increased American energy production means more jobs and a stronger economy. It is that simple. The only problem with increased production is that we cannot keep up with it. Our increase in production has not been met with an increase in capacity to refine this oil, which creates a bottleneck that forces producers to slow or halt production. When this happens, it does not hurt the big guys, it hurts the small producers and their tertiary partners most of all. That is why allowing the export of this resource is so important. It is the only realistic solution to the situation.

Most of our recent conversations about energy have focused on the Keystone Pipeline. That is one project that would create roughly 40,000 American jobs. Lifting the decades-old ban on oil exports

would create hundreds of thousands more. In fact, a recent study found that lifting the ban would help one million Americans find work by 2020, one million people finding jobs by 2020. It would also increase GDP, narrow the trade deficit, attract new capital to the United States, and diversify and stabilize the global energy supply, which in turn protects the price of oil from major fluctuations.

Some may falsely charge that this hearing and this policy are about big oil. They are not. This Committee is concerned with small businesses and the people they employ. The untold story about this export ban is the negative impact that it has on the American people and small businesses. Our witnesses today are testament to that, and I look forward to hearing from them.

Those of us who lived through the 1970s know there are not many useful things from that decade still around today, so why are some clinging white knuckled to a 1970s energy policy? Just like bellbottoms, some things are better left in the past.

If America is going to continue to lead the world in energy production in the 21st Century, let's not keep one hand tied behind our back. Let's replace outdated energy policies with ones that are forward thinking and realistic, ones that will produce economic growth, and most importantly, create new jobs.

The American workforce stands ready. Washington must stop standing in their way.

I want to thank the witnesses for joining us here this morning, and I will now yield to the ranking member.

Ms. VELAZQUEZ. Thank you, Mr. Chairman. Any decision to modify or repeal the long-standing ban on U.S. oil exports will profoundly affect our nation. More than 35 percent of small businesses say energy costs account for one of their top three expenses, and a range of sectors, from construction to agriculture to trucking to manufacturing, are sensitive to energy price changes, and would therefore be significantly affected should the U.S. begin exporting abroad.

Small businesses are impacted by energy supply and price issues in a second way. The price of petroleum, gasoline, and home heating oil affect the expendable income of American households. When fuel prices drop, we usually see a concurrent rise in consumer spending and confidence.

Reinforcing this point, it has been estimated that a sustained \$30 decline in the price of a barrel of oil translates into more than \$200 billion a year in savings for U.S. consumers. These resources can be spent on items sold by small business retailers and made by small manufacturers.

With the latest data showing a surge in retail sales during May, it is clear that falling energy prices are contributing to consumer spending. This raises an important question about what effect lifting the export ban will have on small firms and the economy overall.

At best, the available research seems mixed on whether such a move would reduce prices. The most empirical evidence suggests that sending the majority of U.S. produced fuel domestically helps keep gasoline prices low. Proponents made the claim that energy

exploration efforts and technology have advanced to a point where the ban no longer makes sense.

However, several analyses suggest that much of the recent rise in oil production may be temporary as oil reserves exist. Through fracking technology, I expect that to quickly level off.

Moreover, although the U.S. has seen a dramatic production increase, we are far from achieving energy independence. Today, we import roughly the same percentage of oil from foreign sources as we did in 1975, when the export ban passed.

It seems hasty to suggest this new found capacity justifies abandoning a 40 year old policy that has helped insulate our economy against dramatic changes in international energy markets.

Mr. Chairman, just a few short years ago, this committee was holding hearings on how rising energy prices were inhibiting growth and harming our small businesses. None of us want to return to those old days. The recent increase in domestic oil production and the steady drop in oil and energy prices has been welcomed news for small businesses and American consumers.

As Congress and the administration move forward with future changes to energy policy, it is vital they take into account small company needs and how entrepreneurs are affected by these changes.

On that note, I thank the witnesses for testifying, and I yield back the balance of my time.

Chairman CHABOT. Thank you very much. The gentlelady yields back. If Committee members have opening statements, we ask they submit them for the record.

I will now take just a moment to explain our five minute rule here. Each of you get five minutes to testify. There is a lighting system to kind of help you in that effort.

The green light will remain on for four minutes. The yellow light will let you know you have a minute to wrap up. When the red light comes up, we would ask you to complete your testimony as close to that as possible.

We will let you go over a little bit but not too long. We restrict ourselves to that same five minute rule when we are asking questions.

I would now like to introduce our very distinguished panel here this morning. Our first witness is Ken Medlock. He is the James A. Baker, III and Susan G. Baker Fellow in Energy and Resources Studies, as well as an adjunct professor and lecturer in the Department of Economics, and adjunct assistant professor of civil and environmental engineering at Rice University.

In this role, Dr. Medlock teaches courses in energy economics and conducts research on a number of energy industry topics. Dr. Medlock received his Ph.D. in economics from Rice University. We appreciate you being here, Doctor.

Our second witness is Dale Leppo, chairman of the Leppo Group in Tallmadge, Ohio. The Leppo Group is a full service power equipment sales and rental company operating two companies, Leppo Rents and Razor Rents. Razor Rents supplies equipment to operators in the energy industry.

Mr. Leppo received his undergraduate degree in chemistry from Kent State University. He is testifying today on behalf of the En-

ergy Equipment and Infrastructure Alliance. We also welcome you this morning.

Our third witness today is Rory McMinn, president and managing director of Read and Stevens, Inc. He has created and operated a pipeline services company, an energy consulting company, an oil and gas production company, and has owned, drilled and operated oil wells.

He received his undergraduate degree from West Texas A&M University, and we welcome you here as well.

I would now like to yield to our ranking member for introducing our next witness.

Ms. VELAZQUEZ. Thank you, Mr. Chairman. It is my pleasure to introduce to the committee Mr. Tyson Slocum. He is the Energy Program Director at Public Citizen, covering climate change, coal, oil, fracking, nuclear energy, renewables and commodity market oversight.

Public Citizen seeks to represent the general public on policy matters and does not endorse any candidates for elected office, and does not accept any government or corporate money.

Mr. Slocum also serves on the Commodity Futures Trading Commission's Energy and Environmental Markets Advisory Committee and has authored numerous reports on energy matters.

He appears regularly on television and radio shows, including PBS Newshour, The Colbert Report, MSNBC, Fox News, and CNBC.

Welcome.

Chairman CHABOT. Thank you very much. We will now turn to Dr. Medlock. You are recognized for five minutes.

STATEMENTS OF KENNETH B. MEDLOCK, III, SENIOR DIRECTOR, CENTER FOR ENERGY STUDIES, JAMES A. BAKER, III AND SUSAN G. BAKER, FELLOW IN ENERGY AND RESOURCE ECONOMICS; DALE LEPO, CHAIRMAN, LEPO GROUP; RORY MCMINN, PRESIDENT AND MANAGING DIRECTOR, READ AND STEVENS, INC.; TYSON SLOCUM, ENERGY PROGRAM DIRECTOR, PUBLIC CITIZEN

STATEMENT OF KENNETH B. MEDLOCK

Mr. MEDLOCK. Thank you, Chairman Chabot. Thank you, Ranking Member Velázquez and the rest of the Committee.

I want to in my brief time focus my remarks on a couple of things that were mentioned in the opening comments, in particular, with regard to what we generally classify as energy security.

Generally when we talk about energy security, we are really concerned with avoiding any economic malaise associated with the sudden increase in the price of energy or an increase in the volatility of the price of energy.

Historically, we have tended to focus on oil. That is largely because there is a strong empirical relationship between the price of oil and macroeconomic performance in the United States.

What we have done as a nation in terms of enacting policy to try to achieve energy security has been widely varied, and by some accounts, inaccurate. That is actually one of the things we try to ad-

dress in a study that we released, "To Lift or Not to Lift" earlier this year.

In particular, if you look at the global oil market from 2008 to 2013 and you focus on the countries where production actually declined during that time and ultimately led to an increasing tightness in the market which drove price up north of \$100 a barrel, you see that the majority of the decline are countries that were largely affected by internal strives for civil strives, the so-called "Arab Spring," those nations, plus sanctions on countries such as Iran, accounted for roughly 3.5 million barrels a day of oil going off line from 2008 to 2013.

To flip the ledger, when you sort of look to north of that to see where production increased, the U.S. led the charge. From 2008 to 2013, we actually saw increases in production close to three million barrels a day, but that was not the only place where production increased.

This was very much a price driven phenomenon, higher prices brought a lot more interest in activity in places that we had not really drilled before.

When you start to look at what that means going forward, you realize very quickly the U.S. first of all has really pushed out a lot of the lighter crude oils that we used to import. We have by nature of substitution substituted away from importing the lighter crudes and we are starting to move in the margins where the light crudes that are being produced domestically are pushing out medium grade and heavier crudes that we normally would import.

That sounds on its face like a laudable thing to have happen. The trouble with it is for the domestic crudes that are lighter and sweeter typically to compete into the domestic refining space, and in particular, you actually see they have to be discounted.

This is another thing we focused on, that discount. In particular, when you look at places like the Eagle Ford Shale, you can see discounts even in the \$60 price environment that are north of \$6 a barrel. That is actually quite substantial particularly given how much margins have been compressed in the upstream.

When we start talking about the health of the upstream industry, and I think it is fairly well recognized that the job creation that has been fueled by this over the last decade has been quite substantial. As a matter of fact, there are a number of studies on this issue in terms of job creation, the upstream sector was for several years post-2008 the only sector that was providing any upward movement in terms of employment.

When you look at that and you start to see these compressed margins plus the discounts that are being forced by current policy on the upstream could compromise that growth. That then begs the question what is the policy actually doing.

In effect what it is doing is hindering the furtherance of what we have already seen, namely U.S. production providing stability to the global oil market.

If the ban were to be lifted, that oil could actually flow into the international market. That would definitely lift the crude price domestically, but that does not translate into prices that are higher at the pump. This is a critical point.

When we get back to the point of energy security and what small businesses and consumers actually purchase, what do we buy? We buy gasoline. We buy heating oil. We do not buy crude oil.

When you look at the price of petroleum products in particular, those are unimpeded, that price is actually set in the international market. Petroleum product exports are unimpeded by policies. As a matter of fact, we export north of three million barrels a day of products today.

The lack of a ban on petroleum exports, quite frankly, has actually lifted the refining sector quite substantially.

When we look at what policy direction we ought to be thinking about, we ought to be thinking about how do we actually provide stability to the petroleum product price. Going back to energy security, it really is about stability at a reasonable level.

One of the ways we can achieve that is by adding a stable source of supply to the global energy market which would help stabilize petroleum product prices, which is where the energy security benefit is actually conveyed to small businesses and consumers in North America.

Thank you.

Chairman CHABOT. Thank you very much. Mr. Leppo, you are recognized for five minutes.

STATEMENT OF DALE LEPPA

Mr. LEPPA. Thank you, Chairman Chabot, Ranking Member Velázquez, and Small Business Committee members for inviting me to testify about the impact of lifting the ban on crude oil exports on our small family owned business, which employs 127 people in Ohio and was founded by my grandparents in 1945.

Leppo Group rents and sells construction equipment at seven locations throughout Northeast and East Central Ohio. In 2013, we opened Razor Rents in Carrollton to serve the needs of the emerging Utica shale energy play. Fifteen percent of our employees are involved in some way in supporting our energy related business.

In the second half of 2014, Razor Rents' business doubled versus the first half of that year as the Utica shale activity ramped up. At one point, Ohio had 48 drill rigs operating by the end of 2014. We added 14 new jobs, many of which went into supporting our energy sector, our Razor Rents' fleet grew by 130 percent, from 154 to 355 units, creating jobs for our suppliers.

For example, last year we purchased 45 new pieces of equipment from JLG Industries, almost all of which are manufactured either in Ohio or Pennsylvania. Each machine represents an investment of between \$80,000 and \$140,000.

We also created three internships for students from Ohio State University ATI, who then joined us full time after they graduated.

When the price of oil and natural gas fell, so did that increased activity. The number of drill rigs working Ohio has fallen from 48 to 22. The number of machines that we have on rent in the energy sector has fallen by 42 percent since the peak in late 2014.

As a result, in 2015, we have put an aggressive hiring plan on hold. We have transferred some of our co-workers from the energy sector back to our normal construction and industrial activities.

That means the six positions we had planned to fill this year are going to remain open.

We have ordered minimum new equipment for our energy markets, and we currently have two interns from Ohio State ATI but only time will tell if we are able to bring them on full time after they graduate.

What can Congress do to help our small business create jobs both in our company and for our customers and suppliers? Congress can help increase markets for American produced crude oil by lifting the ban on crude oil exports. Why would that help? IHS Economics estimates that lifting the ban would increase U.S. crude oil production by up to 2.3 million barrels per day average between 2016 and 2030.

This would create up to 440,000 new supply chain jobs nationally and up to 13,600 in Ohio alone by 2018. These export dependent jobs and GDP growth are widely spread throughout the American economy and exists in all 50 states.

The Energy Equipment and Infrastructure Alliance, of which my company is a member, estimates there are currently 120,000 supply chain businesses supporting American oil and natural gas production, of which at least 100,000 are small businesses.

The U.S. energy sector has been a leader in developing new technologies for energy exploration and extraction. Lifting the ban would give the U.S. energy industry incentives to innovate and become even better at finding and extracting oil and natural gas in an efficient and safe manner.

During the energy boom in Ohio, we have seen significantly increased activity in the energy supply chain, such as the manufacturing of steel pipe, the manufacturing, distribution and support of equipment used in energy markets such as forklifts, man lifts, pumps, compressors, generators, and earth moving equipment.

Investment in infrastructure to get oil and gas to the market, such as well site production, pipelines, separation plants, rail lines, roads, and bridges.

We have also seen investment in gas fired electric generation plants to replace older, less efficient coal fired plants. We have seen investment for energy sector workers to sleep, eat, and shop, places like hotels, restaurants, et cetera.

At a time when the United States continues to see sluggish growth in the kind of good jobs the energy sector provides, lifting the ban on crude oil exports is a step that could yield almost immediate results.

I hope we can move forward on expanding the markets for U.S. exports of energy that I believe will be a good source of jobs for Ohio and much of the rest of the country.

Thank you again, Mr. Chairman, for inviting me to address your Committee.

Chairman CHABOT. Thank you very much. Mr. McMinn, you are recognized for five minutes.

STATEMENT OF RORY McMINN

Mr. MCMINN. Thank you, Mr. Chairman. Mr. Chairman and members of the Committee, my name is Rory McMinn and I am the president and managing director of a small family owned oil

and gas operating company based in Roswell, New Mexico by the name of Read and Stevens, Inc.

I am pleased to testify today in regards to the adverse effect that the depressed oil price market is having on small oil companies such as Read and Stevens, and to convey to you the enormous value to small operators such as ourselves, our employees, and our communities which would be attainable from lifting the antiquated and destructive 1970s ban on the export of domestic crude oil.

The issue of eliminating the ban on crude oil exports is important to the livelihood of thousands of people in my state and hundreds of thousands of people throughout the United States that do not live in the oil patch area, but whose work and family welfare depends on making the goods and providing the services used by the oil production industry.

Read and Stevens was founded in 1972 and has drilled for and produced oil and natural gas within New Mexico and West Texas since that time. We operate approximately 150 wells ourselves, and we have interest in an equal number of wells that are operated by other companies.

Many of our wells in our inventory are considered strippers. Stripper wells are wells that have 15 barrels of oil per day or equivalent or less. Like other small producers, the Read family finances its operation through cash flow and bank debt. We have no access to selling shares of stock. We have no access to private equity.

Any constriction on our cash flow or any devaluation of our oil reserves that we are experiencing now with the depressed price affects our bank credit line and affects our ability to move forward.

We had a 26 well drilling program that we had designed on some Legacy property within Southeastern New Mexico Delaware Basin in 2014. We have 24 wells remaining to be drilled. We have lost revenue as a result of having to cancel that drilling program, and in fact, if we had not already signed the contracts on the two wells we have drilled, we would have cancelled those.

The 2014 estimated well cost is \$6.325 million per well. The current 2015 estimated well cost is \$4.5 million per well. That is an one-third reduction in cost made possible simply by the fact that our vendors, who are facing a steep decline in the demand for their goods and services in the reduction of new drilling, are eliminating jobs, they are mothballing equipment, they are deferring maintenance, they are eliminating advertising, they are cutting offices, and they are cutting back their support for a wide range of civic and public organizations in a desperate attempt on their part to maintain their businesses rather than have their contracts simply cancelled. I would emphasize that a lot of those vendor contracts have indeed simply already been cancelled.

While that one-third drop in well costs in and of itself would be enough incentive to drill, the simultaneous 50 percent drop in oil commodity prices causes this to still be a negative marketplace for us.

With small operators and our vendors and suppliers all cutting back on our activity, the collective adverse impact on those small businesses, their employees and their communities, is widespread

and immense. Every community where small producers operate has felt the drilling down turn by the loss of economic activity.

Our offices are flooded with applicants, people from the very unskilled workers to the most highly skilled. The operators that have reported to me are receiving resumes from newly graduated petroleum engineers that are requesting jobs that are on the lowest level within the industry, and merely to get into the industry.

New Mexico is on the list of the poorest recovering states as a result of the recent severe recession. The only bright spot within our state has been the oil and gas industry, which is the largest private employer in the state, and one of the few that was growing jobs until the last six months.

In the first quarter of 2015 alone, we lost 2,000 jobs. Now our industry is continuing to lay off people and more and more folks are losing their jobs.

One New Mexico state agency has stated that in addition to the 2,000 jobs that were lost, we have lost \$220 million in revenue for the state. That particular loss of revenue affects hospitals, schools, and communities.

In closing, I would strongly urge the Committee to lift the oil export ban, thereby sending the signal that Congress cares about the smaller producers, and I appreciate being able to speak to you today.

Committee.

Chairman CHABOT. Thank you very much. Mr. Slocum, you are recognized for five minutes.

STATEMENT OF TYSON SLOCUM

Mr. SLOCUM. Mr. Chairman, Ranking Member Velázquez, members of the Committee, thank you so much for having me here today. It is an honor to be part of such an esteemed panel.

At core, the debate around whether or not to lift the oil export ban pits two big industries against each other, those that are directly producing oil and the associated small businesses that support them in those communities and elsewhere, and the oil refining industry that is taking that crude oil and turning it into useful end products like gasoline, diesel, and so forth, and the associated small businesses that support the refining industry and the communities where those refineries are located.

What is clear is the oil export ban limits the ability of U.S. oil producers to sell that oil outside of the United States, and a direct result of that is they have to sell to U.S. refiners, and what we have seen is that stockpiles of crude oil in the United States are at record highs.

Anyone who knows supply/demand fundamentals understands that when supplies are very high, that is going to have a downward pressure on prices, and as Dr. Medlock testified, that results in a significant price discount for U.S. refiners to buy crude oil.

The question is what are U.S. refiners doing with that discount. Are they pocketing it to their shareholders or are they sharing it with end users of the products that they are refining.

The data clearly shows that U.S. consumers and small businesses and anyone else that purchases gasoline or refined products

has enjoyed significant savings at the pump as a result of lower gasoline prices.

An analysis by Deutsche Bank not based on speculation of what lifting the ban would do but on actual comparative gasoline price data in the United States versus the Brent benchmark gasoline price in Europe shows that we have seen significant reductions in gasoline prices available to the U.S. economy. The prices from 2008 to 2010, U.S. gasoline prices were about \$4.73 a barrel higher than the European benchmark. By the 2011 to 2014 time period, that had reduced to \$1.62, and in 2014 alone, it was down to \$1.20.

What we have seen since the 2008 to 2010 time period is U.S. gasoline prices have reduced \$3.50 per barrel compared to the key European benchmark. That translated to \$11.4 billion in lower gasoline prices for U.S. consumers in 2014.

The oil industry has funded a number of studies, and there have been a number of other independent studies as well that speculates that removing the crude oil export ban will allow a tide of U.S. crude oil exports that will influence the price and push that price down.

The problem with that theory is that it runs into the hard realities of the inherent volatility of global oil prices and the sheer number of variables that influence crude oil prices.

The United States' ability to unilaterally influence a global benchmark price like Brent is going to be countered potentially with moves by other oil producing nations, say the OPEC member nations cartel, or Russia, who could do unilateral actions to try to offset the increase of U.S. crude supplies.

There are other variables that could not be political or intentional in nature. There are always fluctuations in demand. There could be supply or other types of disruptions due to natural disasters or conflict.

The fact of the matter is anyone who studies the crude oil markets and who pretends to think they can safely predict what one variable is going to influence a complicated thing like global oil markets, they are not going to be able to accurately do that.

I think for the purposes of this Committee, it is very important to understand that the 40 year old ban on crude oil exports has actually delivered value and benefits to the U.S. consumer, to small businesses, and the economy.

Thank you very much.

Chairman CHABOT. Thank you. I appreciate all the witnesses staying within, for the most part, the five minute rule as well.

Dr. Medlock, I will begin with you, if I can. I will recognize myself for five minutes. You heard Mr. Slocum's testimony relative to what lifting the export ban potentially could do to oil prices. Could you respond to that and give us your point of view?

Mr. MEDLOCK. Sure. Thank you. The first thing I will note, and we actually note this in our study that was released in March, it is difficult at best to try to predict what lifting the export ban would do to the benchmark global crude price. As a matter of fact, we shy away from doing that because if you look at the studies that have been done that make those predictions, they largely hold OPEC market response fixed or assume something without really

modeling what cartel behavior would mean in a different sort of market environment. No argument there.

However, the comment that domestic gasoline prices have been lower because of the export ban, I will take issue with. A simple sort of casual analysis, if you will, of the data, can lead one to that conclusion.

Here is the trouble. The biggest driver of the reduction in gasoline price relative to global benchmarks in the United States has been the reduction in demand in the United States that we have seen 2008. As a matter of fact, back in 2006, end of 2006 plus the recession in the U.S. really beginning, that is where you begin to see imports of petroleum products in the U.S. begin to turn around, begin to decline.

Then we became a net exporter of petroleum products around the end of 2010. This is important because what that does is it actually shifts the arbitrage point between domestically produced petroleum products and international petroleum products offshore.

Think about it this way, if the point where the trade is actually occurring is say in Europe, then you actually have to net back the transportation costs to the U.S. Gulf Coast, which means the U.S. price will be less than the European price by at least that amount. That has nothing to do with the export ban. Nothing. It has to do with domestic demand for petroleum products, and it is very important that one disentangle those two things because if you do not, you can get to an erroneous place, quite frankly.

I think we are going to see this, we are going to see a summer driving season in the United States. We have not had one since 2006. You are going to see the inventory situation that Mr. Slocum referred to again correct itself, and you are going to see some upward lift in terms of domestic petroleum product prices because quite frankly we will be exporting less because domestic demand will be higher.

There is a really critical point to reconcile with or differentiate from the effect of lifting the export ban.

Chairman CHABOT. Thank you. Just to clarify, you disagree with Mr. Slocum's point that in his opinion, if we lifted the ban, it would cause gasoline prices at the pump to go up?

Mr. MEDLOCK. Absolutely. As a matter of fact, in the study that we published we actually discuss the relationship between Brent and domestic market crude. We used WTI because it is a broadly accepted domestic marker, in the Gulf Coast wholesale gasoline price.

You actually see the kind of relationships that Mr. Slocum refers to with regard to Brent and the domestic wholesale gasoline price, but you also have to take a step back and understand how that relationship actually changed between domestic wholesale gasoline and WTI. It has been dramatic.

To claim that discount has been passed through to consumers, it does not hold up against data, it just does not.

Chairman CHABOT. Thank you. Mr. Leppo, let me turn to you. What impact has the crude oil export ban had on small businesses in the oil and gas industry, and in particular, on the U.S. economy overall?

Mr. LEPPA. In our business in particular, it has led to the non-hiring of six people. We had job descriptions. We had them lined up ready to hire. That lack of demand for the output from the oil and gas producers in Ohio has led us to move people out of our energy sector business back into the other portion of our business that rents equipment to construction and industrial companies.

As I mentioned we have two interns that we have on board this summer. We may or may not be able to offer them employment at the end of their internship. Basically, it kills jobs.

Chairman CHABOT. Thank you. Mr. McMinn, let me turn to you now, and I only have a short period of time left. You stated that although small producers such as yourself will probably never contract with international buyers, producers that do engage in international transactions will have a favorable impact for all United States producers. Would you expound upon that a bit?

Mr. MCMINN. Yes, sir. Mr. Chairman and members, what I was referring to was the fact that we are land locked, and our production is within the Southeastern part of New Mexico. What we are looking for with the lifting of the export ban is the allowance of export trade on crude oil because that improves the marketplace.

Ours will fill the empty void that is left in the domestic area when those larger companies that contract directly with international companies or international marketplaces are allowed to export their crude.

Our refiners are within 40 miles of where we produce or 100 miles or where we produce typically, and we do not expect to ever deal in the international market. We would just like to see the marketplace open up to allow others to do that so we can fill the void.

Chairman CHABOT. Thank you very much. My time has expired. The ranking member is recognized for five minutes.

Ms. VELAZQUEZ. Thank you, Mr. Chairman. Mr. Slocum, I would like to hear your reaction to the statement made by Dr. Medlock.

Mr. SLOCUM. Sure. I think what is interesting here and as Dr. Medlock pointed out, we are now exporting over three million barrels of refined petroleum product every day, 75 percent of that out of the Gulf Coast. That is because what the refining industry has done, which is a major center of manufacturing in the United States, is take these crude oil supplies and turn it into products that are important and necessary for the American economy.

As Dr. Medlock said, consumers cannot use raw crude oil that is pulled out of the Bakken or Eagle Ford. We can only use those products that have been refined.

Essentially what we are presented with is a decision, do we want to change a 40 year old statute to allow the U.S. oil industry to bypass the U.S. refining industry and export raw materials directly out of the United States, and therefore export that discount, that U.S. crude oil discount overseas to foreign markets, or do we retain that discount for domestic purposes.

We are using about nine million barrels of gasoline every day. The industry is exporting about three million. The U.S. consumers are benefitting from that discount that refiners are currently getting from producers. That, I think, is the big issue here, does that

discount remain in the United States' economy or is it exported out in the form of the discounted raw crude oil to be processed in foreign markets for foreign consumption.

I would like that discount to remain within the United States' economy.

Ms. VELÁZQUEZ. As you discussed, given the fact there are many calls to lift the ban on exports, you just said we import nine million barrels of oil a day. That might not always be the case given threats such as Isis that currently exist in the Middle East. What would happen if the ban was lifted but we experienced a disruption in our oil supply?

Mr. SLOCUM. What we have seen is that a result of the crude oil ban has been that we have replaced certain imports with U.S. production. For example, in the summer of 2010, we were importing 1.1 million barrels of oil every day from Nigeria. In March 2015, the latest import numbers show we are importing 98,000 barrels of oil a day from Nigeria. That is a million barrel of oil a day decline that we are not getting from a country that has significant political and economic turmoil. There is a lot of connections to terrorism in that part of Africa. That has been replaced with U.S. produced oil.

Any time that you are going to expedite the export of U.S. crude oil at a time when our economy still is not energy independent, we still require millions and millions of barrels of foreign oil to be imported to meet U.S. domestic demand, I would rather that demand be met with crude oil pulled out by U.S. workers in the Bakken and Eagle Ford than in countries with unstable political situations and unknown how they spend their money on crude oil.

Ms. VELAZQUEZ. Thank you. Dr. Medlock, to what degree do you think market speculation is responsible for spiking or lowering gas prices?

Mr. MEDLOCK. We actually did a study on this issue that we released in the summer of 2010. At that time, there was a lot of concern that speculation really had a big influence on commodity price formation.

The core finding in that analysis was that speculative pressures can lead to short term pressures on price but not long term pressures because inventories adjust and ultimately the physical market will be self correcting.

When you start to think about the role that speculation can play, it begs the question of if it can influence things in the short run, how severe can the spikes be and what might that mean. Those are very, very good questions.

At the end of the day, it really boils down to how tight the market is. If the market is tight, speculative pressures matter.

Ms. VELAZQUEZ. How much market regulation is necessary to prevent companies from manipulating commodities prices?

Mr. MEDLOCK. The ultimate corrector is our open markets. Fungibility is ultimately what will eliminate any single entity from manipulating the markets. The more fungible the market is, the more movement there is by multiple different trading entities to come into the market.

Ms. VELAZQUEZ. Mr. Slocum, how much is speculation playing a role when we discuss what will happen if the export ban is lifted?

Chairman CHABOT. The gentlelady's time has expired but you can answer the question.

Mr. SLOCUM. Thank you, Mr. Chairman. I cannot predict what level of speculation is going to be involved if we lift the export ban, but there has been a number of academic studies, some of them by some of the big banks that are involved in these markets, like Goldman Sachs and Citi and others, that have shown that when oil prices are around \$100 a barrel, that speculators play a significant role influencing the price of oil by as much as \$20.

Like I said, I serve on an advisory committee to the Commodity Futures Trading Commission, and the former chairman, Gary Gensler, had testified about how a decade ago 15 percent of the crude oil market participants were speculators, and today it is 85 percent. You have seen a huge transition where speculators are often driving the volume in markets like crude oil.

Chairman CHABOT. The gentlelady's time has expired. The gentleman from Nevada, Mr. Hardy, who is chairman of the Subcommittee on Investigations, Oversight, and Regulations, will be recognized for five minutes.

Mr. HARDY. Thank you, Mr. Chairman. Dr. Medlock, while I support lifting the export ban, it was discussed here about refineries and the lack of ability to refine light crude.

I guess my question first of all is why would we not domestically be trying to increase or build new refineries that would help create jobs in this country, help support and sustain and probably better economic viability? Do you agree or disagree with that at all?

Mr. MEDLOCK. No, it is a great question. It is one that often comes up in the context of this issue. When you see the discounts that have emerged, and there have been a couple of studies looking at what the domestic refining industry can do, and in fact, it can handle the volumes that are being produced, it is just an issue about what price.

Take the existing refining infrastructure. If I built something back in the mid-1990s that was really built to process heavier to medium grade crudes, then I have already sunk capital so I can access that crude oil from the international market, which is typically sold at a lower price.

In order for me to be incentivized to buy the lighter, sweeter crudes and effectively idle portions of my facility, what I am going to have to do is actually see that price discounted to a level where it is competitive with my alternative, which is the heavier grade of crude that sells internationally.

This is precisely what is driving the discounts that we have actually seen for domestic crudes. Some of the work we did actually indicates that Louisiana light sweet is really the crude that sits right at the margin at the moment, so this has sort of stimulated a lot of interest in understanding if domestic production were to continue to increase, what would happen to LLS. It would likely see sustained discounts.

We have actually seen periodic discounts, for example, during periods of refinery turn around for LLS, and that is because there just was no capacity to handle all the light sweet we were producing domestically.

Mr. HARDY. Thank you. I owned a construction company for years, over 20 years, 350 employees at our peak with the three businesses I held. Over that time, I have always found that when I did larger projects, higher volume, that the price was always more effective for the end user that was purchasing, whether it be asphalt paving.

It was amazing. The bigger the project, percentages began to come down, and sometimes as low as seven percent.

Is this not the same thing we are talking about here, it actually creates more jobs, leaves more money to do other projects when you can decrease the cost of the materials, is this not the same thing we are talking about here? Mr. McMinn or Mr. Leppo?

Mr. MCMINN. I agree. It is exactly what we are talking about here. Mr. Leppo has 100 plus employees and you were just talking about 350. Read and Stevens has 25. We are a small business. We are clearly defined as a small business.

Your premise is exactly what we are looking for, that opportunity to have that price set, and even though it may be a discounted price, as you just described, it is a stable playing field. It gives us the opportunity to have long term ability to contract for our crude oil and that is the point we are not at right now.

Mr. LEPPA. The only thing I would add is oil is, as mentioned a couple of times, a global market. If the United States can produce more oil, we are going to get some of those efficiencies we are talking about.

One example is how long it takes to drill a well in our area, it has dropped from seven to eight days to five days, just by the drilling crews getting more efficient at what they are doing. Those efficiencies lead to some of the effects you are talking about, where you would increase jobs, increase the amount of output by American oil and gas producers.

Mr. HARDY. There is a belief out there that some of these restrictions, some of the reasons that people do not want more crude coming from the United States—we are being held up on permits all over lands out in the west that we know have crude oil but you cannot get the permit because they are public lands, so to speak.

With that being said, the discussion has always been what makes a happy person or happy individual, and studies have shown it is faith, family, friends, and work, and work leads to the first three.

By creating jobs, do we not create a better environment here in the United States for economic stability, a better environment for unemployment, people that are unemployed to have that quality of life that we all are here for?

Mr. Slocum, do you want to address that?

Mr. SLOCUM. Absolutely. I think an economy that works for as many different kinds of people is the kind of dynamic economy we want.

The question is do we want to have an economy that is reliant upon, as has been stated here on this panel, globally priced commodities. Anyone that puts too much of their chips in the commodity basket is going to suffer through the volatility that produces.

When I look at the American economy, the value of the American economy is not pulling a raw material out of the ground and selling it on a global market. That is the Nigerian model of economic growth.

What I see in the United States is the dynamic value added of manufacturing of products. I think that is the key to a robust economic future.

Chairman CHABOT. The gentleman's time has expired. The gentlelady from North Carolina, Ms. Adams, who is the ranking member of the Investigations, Oversight, and Regulations Subcommittee, is recognized for five minutes.

Ms. ADAMS. Thank you, Mr. Chair, and thank you gentlemen for your testimony. As we explore the current ban on crude oil exports, we must take a full 360 view of this topic and the implications on policy and geopolitical matters.

Mr. Slocum, it can be reasonably believed that if the U.S. were to start exporting our crude oil again there would be additional drilling and production activities in states that are endowed with tight oil resources, such as Texas, Oklahoma, and North Dakota. What impact will an increase in crude oil production have on the environment in areas where there is a natural resource, particularly with regard to water contamination and transportation related spills, and also what regulatory options exist or could be made available to potentially mitigate these risks?

Mr. SLOCUM. Thank you. The bulk of growth of oil production in the United States has been through hydraulic fracturing or fracking, particularly in the Bakken shale, which is largely in North Dakota, and Eagle Ford in Texas.

There is no such thing as benign oil production. There are always going to be risks associated with the water resources required, with risks of drilling, of whether or not the well is cased properly. There have been instances of water contamination in wells from fracking in both natural gas and oil.

There are more than 100,000 or so fracked wells across the United States, so it is clear that fracking does not automatically lead to contamination, but neither is fracking an entirely sustainable activity.

One thing to keep in mind is that as amazing and robust as the U.S. fracking boom has been, it has a relatively short shelf life. Rex Tillerson, the CEO of Exxon Mobil, gave an interview in March this year where he said the window on fracking is about a decade, and we are going to start to see production decline.

We are already seeing in most fracked wells production declines after the first year of between 40 and 70 percent. That is because this tight oil is not located in a big easy to get at reservoir, it is dispersed throughout the formation, so you see extremely sharp production declines.

We have been able to maintain steady rates of production because the fields are very large. As we drill in these fields, the production is going to drop off.

I think it is erroneous to base a short term production phenomenon to make a long term decision about nixing the ban on oil exports.

Ms. ADAMS. Thank you. The European Union trade negotiators released a paper last year on the ongoing transatlantic trade and investment partnership negotiation, better known as TTIP, stipulating their desire to access U.S. crude oil exports.

Dr. Medlock, Congress is involved in a heated discussion of whether or not to allow for fast track negotiations of the TTIP. Can you speak to both the positive and the negative impact that importing crude oil will have on future trade pacts, including TTIP?

Mr. MEDLOCK. I am assuming you meant exporting crude oil from the U.S.

Ms. ADAMS. Yes.

Mr. MEDLOCK. I just wanted to make sure I got that right. I will actually address that by touching on two points, and I think it is important to touch on the first one because it relates directly to your question.

The comment was just made about production decline and wells that are drilled in the United States, in particular, shale wells. Individual well decline is very steep. There are a couple of things that are very important to reconcile.

First of all, you cannot actually translate individual well decline into field level well decline. They are two different things. They are entirely different. I am sure Mr. McMinn can talk about this. Entirely different sort of phenomenon.

Secondly, if your concern is that the resource will decline as it is produced is what is driving your resistance to argue to lift the export ban, there is a fallacy in the argument because if the production declines, we would not be exporting anyway. It is sort of like a non-starter in terms of the discussion.

As this relates to the TTIP negotiations, I think the inability to export crude oil from the United States, in particular, Asian complexes, the refineries in that part of the world are really well suited to handle the kind of stuff that is coming out of the light type oil wells in the United States. That is going to become a contentious point.

At some point, those refiners would like to have access to the production that is coming out of the ground in the United States, and if we simply say no, you cannot have it, then that begs the question what is the next sticking point in the negotiations. I think it does have a bearing.

Ms. ADAMS. Thank you. I am out of time. Thank you, Mr. Chair.

Chairman CHABOT. Thank you. The gentlelady's time has expired. The gentleman from Illinois, Mr. Bost, is recognized for five minutes.

Mr. BOST. Thank you, Mr. Chairman. Thank you to the panel. U.S. Steel works in my District, produces steel that is rolled and used for oil exploration and everything like that. They threatened to idle about 2,100 jobs just this last year because of that. Now things have kind of changed around since.

I need to know what else can be done in this process, besides releasing and freeing up and allowing us to sell our crude, that will make it to where we can still sell the product and still make things affordable. Do you understand the question?

Mr. MEDLOCK. I think so. I think basically what you are asking is how can we be sure if we lift the export ban we do not have an

adverse effect on commodity prices that hampers activity. A very good question.

As was pointed out, oil is a global commodity. Its price will be determined by a host of things that are outside the control of anything we do in the United States.

Importantly, lifting the export ban actually allows transmission of that global price back to the well head, which will stimulate—we pointed this out in our report and I think IHS actually did some work that points this out as well—allowing that price to transmit back to the well head will actually stimulate a lot of investment in the development of pipeline infrastructure and the build out of various ports.

A great example would be what could happen particularly at the Port of Corpus Christi, which is in Texas. This is a port, I think it was B&SF that has a rail yard, an unit train yard they just built, you are talking about a lot of small business enterprises that are engaged in that value chain.

Turn that around, if you lift the export ban, that actually incentivizes the development of pipeline infrastructure to the coast, but it also stimulates more delivery of frack sands, so you have something that is going in both directions.

All that said, there is no guarantee that the price of oil will not spike. Heaven forbid something were to happen to the Kingdom of Saudi Arabia, that would have dramatic implications for the United States as well as every other country in the world that consumes oil, much less imports or exports it.

There are a lot of things that are frankly out of our control and the export ban does nothing to convey a benefit in that regard.

Mr. BOST. My next question, Mr. Slocum, when you say it is very short lived on the fracking, I would agree with you if there was only one shale play. I know for a fact in my state, because I worked on the language for fracking in the State of Illinois, I was one of the specific co-sponsors back when I was a member of the Illinois General Assembly, that New Albany play has not even been touched.

The long term production and the ability to export and actually put ourselves basically in the controlling seat that many other countries around this world have been in, do you not see that as an opportunity for us to become a controlling market?

Mr. SLOCUM. You are absolutely correct that there are a number of untapped plays, and in that interview that Rex Tillerson, the CEO of Exxon Mobil, gave, he cited as an example the Arctic. He said here is a massive area with huge reserves that we need to tap into.

The question continues to be in search of acquiring adequate petroleum supplies for our economy, for our domestic needs, we will have to continue drilling in new areas. That is definitely a path in the short and medium term that we have to take.

Another alternative is is there a way to detach our economy from—as President George W. Bush said in his 2006 State of the Union Address, America is addicted to oil and we have to move towards alternatives to oil. I agree with President Bush on that bold statement.

We can continue turning over every rock and every shale play and every Arctic area and every offshore area. I do not think we can ever become energy independent as long as we continue using 19 million barrels of oil a day.

Mr.BOST. I do not disagree with that, that we should not do the research that is necessary. That being said, we are in a situation right now where this is what is available and what we have to use.

My other thought, and I am down to my last moments here, and maybe Dr. Medlock can answer this, is it possible, in your study of the economics of this, that once we start to export to this level, all refineries would all of a sudden see an advantage and all of a sudden change our refineries to handle sweet instead?

Chairman CHABOT. The gentleman's time has expired, but you can answer the question.

Mr. MEDLOCK. Thank you. I would say no. You need the margin for the refineries to cover the upfront fixed costs for investment. We will still displace all the light sweet crude. That will definitely happen because there is a competitive advantage in doing so. What we would effectively be doing is exporting the light sweet, which is a higher valued product, and importing the medium and heavier grades.

It is effectively a swap that is actually creating value in terms of balance of trade.

It also is important to point out that domestic refiners, where their margins would be squeezed a little bit, they are not going to be put at a competitive disadvantage relative to the European counterparts, for example. There are newer refineries that are actually much better equipped to produce the types of petroleum products that are needed globally, and one of the things that we often forget, the refining sector has benefitted tremendously from very low natural gas prices as well in the United States.

Chairman CHABOT. The gentleman's time has expired. The gentlelady from New York, Ms. Clarke, is recognized for five minutes.

Ms. CLARKE. Thank you, Mr. Chairman. I thank the ranking member. I thank our witnesses here today.

My first question goes to Mr. Slocum. In your testimony you indicated that the United States is not close to breaching our storage capacity for refined and crude oil. Do you expect to see a point in the future where we actually exceed our oil storage capacity, and if so, when might that occur and what would that mean for the U.S. oil market?

Mr. SLOCUM. Thank you, ma'am. I do not see any concern about the United States breaching its domestic storage capacity. There were some articles written several months ago that we are looking at what appeared to be some bad data including that we are at the brim of storage capacity and this is a crisis.

When better data was examined, the consensus now is we have plenty storage capacity yet to be filled. The issue is the refiners are running at very high rates of utilization, meaning they are almost at capacity processing crude oil. We are exporting record amounts of refined products out of the United States.

What we are seeing is domestic demand for oil, as I noted in my written testimony, is picking up. The EIA noted that U.S. gasoline

demand is projected to go up more than four percent this year. Vehicle miles traveled, which is a key indicator of how much Americans are driving, is on the increase after going down after the economic crisis.

We are seeing sales of less fuel efficiency like trucks and SUVs grow very quickly while sales of more fuel efficient cars are actually in decline. That paints a picture in the next few years anyway of steady increases in demand.

As Dr. Medlock said, this summer we might see a driving season for the first time since 2006. That is more demand and that again relieves a lot of pressure on storage levels.

Ms. CLARKE. You also concluded your testimony by saying the oil industry is sponsoring studies based on dubious calculations that Americans will be better off by lifting the crude oil export ban. Can you elaborate on how the oil industry might specifically gain from lifting this ban and in your opinion, how lifting the ban might actually impact small businesses and the end consumer?

Mr. SLOCUM. Right. Like I began my testimony, ma'am, at its core, the issue is that the ban limits the ability of U.S. producers to sell their oil overseas, and as Dr. Medlock explained, the light oil coming out of the shale formations is more valuable. As a result, U.S. refiners are having access to that valuable crude oil at a discount relative to what it is selling internationally.

If you are an oil producer, you do not want to sell your oil at a discount to some U.S. refiner. You want to have the freedom to sell that valuable oil overseas at a higher price so your shareholders or owners can enjoy a bigger return.

I understand the oil industry's desire to do that, but if we allow that, it will come at the expense of U.S. refiners having access to that discounted crude, and I believe the data show that the refiners have been sharing that discount with consumers in the form of lower gasoline prices.

Ms. CLARKE. Very well. Dr. Medlock, it is my understanding that the Baker Institute receives corporate funding and even solicits corporate support on its website. In fact, both Chevron and Shell have sponsored lecture series at the Baker Institute.

My question is how could you be free and unbiased in your opinion to lifting the export ban, given the Institute's relationship to big oil?

Mr. MEDLOCK. To be clear, the Institute through our corporate affiliates program has relationships to big oil, to small oil, to mid-stream operators, to EDP Renewables, which is a wind company. It is across the spectrum. That is the first point I will raise.

The second point I would raise is the study that I am mentioning, as a matter of fact, the last two major studies we have released, one was funded by the Alfred P. Sloan Foundation, the other one was funded by endowment funding, which has nothing to do with oil.

We actually do this by design. The critical thing that we get from our corporate relationships is we will host workshops during the course of studies, and the workshops actually allow us to engage with a variety of individuals and corporations on either side of the discussion, any discussion actually. It keeps us grounded. The last thing you want to do sitting in a think tank that is academically

oriented is become an ivory tower institution. You want to stay grounded. You want to stay in touch. That is what we use it for.

Chairman CHABOT. The gentlelady's time has expired.

Ms. CLARKE. Thank you, Mr. Chairman. I yield back.

Chairman CHABOT. Thank you. The gentleman from Missouri, Mr. Luetkemeyer, who is the vice chairman of the full committee, is recognized for five minutes.

Mr. LUETKEMEYER. Thank you, Mr. Chairman, and thank the panelists for being here.

The last thing I am is an expert on oil. This is an interesting discussion to me today. The only thing I know is I stick it in my car and farm equipment to make sure it all works properly.

I hear the discussion going back and forth on the different kinds of oil that we have. Let's start first with the amount of oil, known reserves. Somebody told me one time we have 800 years worth of known oil reserves. Is that figure accurate? Dr. Medlock?

Mr. MEDLOCK. There is a definitional issue here. Reserves are something that are actually readily producible in a reasonable amount of time. It is really an accounting definition more than anything else.

Where you get sort of beyond that, and this is from people who sort of get into resource assessment methodologies, you get into what are called "commercially recoverable resources," which are things that can be produced given today's technologies and today's prices and costs, and then you get to technically recoverable resources, which are things that can be produced with today's technologies, using today's technologies, regardless of the costs.

That number is obviously a lot larger than commercially recoverable in even proven reserves. Then there is something we call "resource in place," which is just all the oil that is down there. That number is by far much larger than even today what is technically and commercially recoverable in light tight oil formations.

For example, when you drill into the Eagle Ford or Bakken or even the Permian, which was another sort of shale oriented play, Utica, in the liquids bearing portions of those plays, what you are actually getting is on the order of about 10 percent of what is down there.

That should tell you two things. (a) we are not really just barely scratching the surface in terms of the volume that is underneath our feet, but (b) it tells you there is a lot of room for technology to run. This is an area where upstream enterprises are constantly engaged in trying to improve rates of recovery.

Mr. LUETKEMEYER. My point is we do not have to worry, we have been fracking for over 50 years, I believe.

Mr. MEDLOCK. There has been over a million wells fracked in the United States.

Mr. LUETKEMEYER. We probably have a few more we can drill to be able to go out and find some more oil. Then we come to the point where what are we doing with oil that we have. You are saying there are three different kinds, heavy, medium, and light crude.

Mr. MEDLOCK. That is a rough characterization.

Mr. LUETKEMEYER. Keeping it basic. Bear with me. The light crude, it is difficult for us to be able—we do not have really a good

market for it or refiners are not able to refine it in a way that is profitable for them at this point so they have been using mostly heavy and medium crude.

Mr. MEDLOCK. It was actually explained to me once, every refinery has the kit to process light crude. It is not an issue of whether or not we can handle it. It is an issue of whether or not the refineries that were built in the 1990s to handle the heavy Venezuelan crudes or the heavy Mexican crudes, which is where largely our crude oil was coming from, but want to handle it.

Mr. LUETKEMEYER. Basically, we have plenty of oil for the refineries to take care of our needs here. We have this light crude that they have to make a financial decision whether to refine or not, and if this is the kind they really want to export. Is that a fair assessment?

Mr. MEDLOCK. The refiners will only be willing to take that light crude if it is competitive with the crude they could otherwise buy, which is a heavier grade.

Mr. LUETKEMEYER. Okay. We have plenty of resource. We have to make a financial decision on whether or not it is a good deal to refine some of it or not. The question then becomes if we can reach a point where we are refining enough to meet our needs, to me it would seem there would have to be a financial benefit for them to go out and build another refinery, otherwise it is probably cheaper to just export the oil.

Mr. MEDLOCK. I realized I did not get to completely answer the question asked earlier. That would beg the question why are we not building more refineries. Today, siting is a big issue. This is an issue that has come up over the last three decades, to be honest with you, related to siting.

The expansion we have seen since the early 1990s have not been green field expansions.

Mr. LUETKEMEYER. I have one more comment to make, one more question. It would get down also to the distribution system. We do not have enough oil tankers. We do not have enough trucks. We do not have enough ships to be able to get all this out. I come from Missouri. We are competing with our greens for train cars and barges up and down the rivers with your oil products.

I am just saying this is a problem if we want to export, it is going to be a bottleneck for this whole situation.

Mr. MEDLOCK. Absolutely.

Mr. LUETKEMEYER. It has to be worked out at some point. This is not a panacea that everybody talks about here, but it is an opportunity, I think, that we need to take a look at. Thank you for your comments.

Chairman CHABOT. The gentleman's time has expired, but if you want to answer.

Mr. MEDLOCK. This is actually an issue we raised in the lift or not to lift study and some research I am currently engaged in, and it goes back to some work I did on biofuels policy, to be honest with you. It has to do with what is the appropriate mode of transportation given the size of the market outlets.

I think there has to be a hard look done internally within the United States to understand why there is so much crude being transported by rail and by barge now. It has to do quite frankly

with the fact that all the stuff that is coming on line, you cannot capture the economies of scale by building pipeline infrastructure to get to the coast because you cannot sell it to the international market.

That means you do things in a piecemeal way, and you end up with the kind of competitive pressures that you are talking about.

These are very real issues that I think if the ban is lifted, it is not going to completely address, because the capital has been sunk to move things by rail and barge. If production were to continue to grow, you would actually see those competitive pressures relieved because it would incentivize pipeline development, which will result in the lease rates on the barges and on the tank cars on rails—the competitive pressure would be to lower those lease rates.

Mr. LUETKEMEYER. Yes, that is where I was headed.

Chairman CHABOT. Thank you. The gentleman's time has expired. The gentlelady from Michigan, Ms. Lawrence, is recognized for five minutes.

Ms. LAWRENCE. Thank you so much, Mr. Chairman. Dr. Medlock, if we lift the ban on crude oil exports today, do we not lose our ability to offer lower energy prices all through the supply chain for industries and small businesses? Do you agree with that statement or disagree?

Mr. MEDLOCK. I disagree with that statement. When you get to the products that are actually sold to petrochemical producers, those products are actually at a competitive level internationally because there is no restraint on exports of those products.

The only thing there is a constraint on is the export of raw crude. That is actually where the discount accumulates. It does not actually pass downstream. Why would it? If I am a refiner and I can produce a distillate, why would I sell it at a discount domestically when there is an international buyer that will pay a competitive price for it.

Ms. LAWRENCE. Would there be a risk to our economy in America today or benefit to some big energy companies, because if I can buy competitively, and we are talking about small businesses, so look at our larger oil industry and the smaller dispenser industries, would that be a risk, a benefit to the large ones and not for the small?

Mr. MEDLOCK. Let me make sure I am interpreting your question correctly. I think you are asking me if the ban were lifted, would it represent risks to small business enterprises.

Ms. LAWRENCE. To the benefit of larger.

Mr. MEDLOCK. I think there is an important thing that needs to be put on the table here. The shale revolution, as it has been called, it is not a big oil story. It has actually been driven by small independent producers and mid-cap sized producers.

Ms. LAWRENCE. This would have a direct impact?

Mr. MEDLOCK. Absolutely, it does.

Ms. LAWRENCE. Proponents for the crude oil export state the benefits for exporting crude oil to our allies abroad. You touched on the issue during your testimony. A May 2015 CRS report found that U.S. oil exports would do little to help Eastern Europe countries decrease their reliance on Russian energy.

I have concerns about the fact that are we overstating the geopolitical benefits of lifting the ban on crude oil to raise the profits of a small group in a short term at the expense of the long term picture.

Mr. MEDLOCK. I think it is fair to say that if there is a perceived benefit, people will run with that benefit to try to make a point and will inflate it. The issue with Eastern Europe really is a natural gas issue much more than a crude oil issue.

A lot of the discussion and really I think the focal report of that CRS report was related to LNG exports specifically. As you know, there has been a lot of rhetoric on Capitol Hill, we should be exporting gas to the Ukraine and these sorts of things.

There would be a long lead time for that to happen, first of all. It's not even clear U.S. sourced energy, oil or gas, would be competitive with the alternative, particularly when a country like Russia can consistently undercut because their cost of production is lower.

The energy security benefits that could be conveyed more broadly to Eastern European countries, you can get that mixed up with stability in price at a reasonable level and source of supply. At the end of the day, if the U.S. were to allow more exports of both natural gas and crude oil, that introduces a competitive threat to Russian dominance in the region, and it does not necessarily mean that U.S. energy has to flow there, that the competitive threat itself would actually yield a difference in the pricing strategies of Russians to maintain that market share.

I think that is what the Eastern Europeans would want, low cost energy at a reasonable price.

Ms. LAWRENCE. Mr. Leppo, could you respond to that as well, please?

Mr. LEPPA. We are one of those small businesses, and we are a support company into the industry. For us, the increased demand there would be for American produced oil and gas by lifting the ban on crude oil exports would create jobs for our company.

It would not show up in any big reports anywhere because we are relatively small, but we are seeing the impact both on our business and businesses in our area where because of the lack of demand right now, job creation has disappeared in the oil patch in Ohio.

Chairman CHABOT. The gentlelady's time has expired.

Ms. LAWRENCE. I yield back. Thank you.

Chairman CHABOT. The gentleman from Kansas, Mr. Huelskamp, is recognized for five minutes.

Mr. HUELSKAMP. Thank you, Mr. Chairman. I appreciate the hearing today. This is a pretty important topic in my District, given we produce plenty of the sweet crude that is discounted because of years and years of policy. I am trying to figure out how we move forward.

In doing research in preparing for this hearing, I found out there are not many things that we prohibit exports of in this country, plenty of those that deal with national security issues, nuclear materials, and such, but much of what we produce in Kansas ends up not only outside our state but outside this country.

I want to ask Mr. Slocum a few more questions to try to understand the position of Public Citizen, the group you work for. You are opposed to lifting the ban on crude oil exports; is that correct?

Mr. SLOCUM. Yes, sir.

Mr. HUELSKAMP. Natural gas exports, you are opposed to exporting those as well?

Mr. SLOCUM. I have concerns that exporting significant amounts of natural gas would end up raising prices for domestic consumption of natural gas.

Mr. HUELSKAMP. I understand that. Do you support or oppose that ban?

Mr. SLOCUM. There is no current ban on natural gas exports, but I do believe we need to be very careful about allowing—

Mr. HUELSKAMP. That was part of the 1975 ban; correct?

Mr. SLOCUM. It is. The Department of Commerce never put together rules to enforce that aspect of the statute. I do think it is worth taking a look at.

Mr. HUELSKAMP. That is maybe. What about the import of oil products, are you opposed to imports of oil products? Your association has concerns about global climate change and has taken positions that would suggest you do not want the use of these products. Do you oppose the import of these products into America?

Mr. SLOCUM. I think there have been problems posed on the national security basis of the United States relying on imports of oil from nations that do not share some of our geopolitical goals. I think that is a problem.

Mr. HUELSKAMP. I think that is fair. You do still oppose imports along the Keystone Pipeline if it would be completed?

Mr. SLOCUM. The Keystone Pipeline we opposed because it is designed to facilitate the export of Canadian land locked crude, but not for domestic consumption.

Mr. HUELSKAMP. We cannot export the crude currently.

Mr. SLOCUM. No, we cannot export U.S. produced crude. The Keystone Pipeline is designed to accommodate the export of refined products out of the Gulf Coast. We are getting a million barrels of Canadian crude every day.

Mr. HUELSKAMP. You are not opposed to that?

Mr. SLOCUM. It is part of the mix. The issue with the Keystone Pipeline is proponents were selling it as a way to lower gasoline prices, and that is not what it is designed to accomplish.

Mr. HUELSKAMP. If we would prohibit the export of wheat, which is a main product in Kansas, would that reduce the price to consumers in America?

Mr. SLOCUM. I am an energy policy guy.

Mr. HUELSKAMP. It is supply and demand. If you are not allowed to export a product, it can only be used exclusively in the United States, almost in every case that would reduce the price of that product; is that correct?

Mr. SLOCUM. Yes, especially like an issue like oil where—

Mr. HUELSKAMP. I was asking about wheat.

Mr. SLOCUM. I understand that.

Mr. HUELSKAMP. Most folks I talk to would say food is probably more important than oil and the cost to consumers is pretty critical. If you take your logic that we want to limit the exports and

reduce prices, I think Public Citizen probably should apply that to any exports, because it is so critical.

You do or do not support limits on——

Mr. SLOCUM. I do not know what our current rates of domestic consumption of wheat are compared to our domestic production of wheat. I know what that ratio is for oil consumption. We use far more oil than we domestically produce.

I think facilitating the export of that product does have negative consequences for the U.S. economy. I do not know what that demand situation is for wheat.

Mr. HUELSKAMP. You have identified the negative aspects for consumers in your mind but not for producers. You would agree lifting the export ban would help oil producers in America?

Mr. SLOCUM. Absolutely, it would allow them to sell their oil at a higher price.

Mr. HUELSKAMP. You are opposed to that higher price for oil producers?

Mr. SLOCUM. If it comes at the expense of higher prices for the American consumer and small business, absolutely.

Mr. HUELSKAMP. There is no question it will come at the expense of those that are paying for it, the same thing for any ban on any product.

As we talk about trade, Mr. Chairman, and this is a very critical issue, there are folks like we see here today, Mr. Slocum, that frankly do not believe in trade. We cannot live in a vacuum any more. It is not 1975, sir. For Kansas wheat producers, 50 percent of our product goes overseas, and you say hey, we are going to continue to ban oil exports from Kansas and elsewhere, but wheat producers are going to live in this vacuum.

We have to recognize we are in a global economy, and we simply cannot rely on policies from the Ford/Nixon era. I yield back, Mr. Chairman.

Chairman CHABOT. The gentleman's time has expired. The gentlelady from American Samoa, Ms. Radewagen, who is the chairman on the Health and Technology Subcommittee, is recognized for five minutes.

Ms. RADEWAGEN. Thank you, Mr. Chairman. My question is for Dr. Medlock. Recognizing the economic and geographic isolation of the home district I represent, American Samoa, and considering that energy consumption in island states and U.S. territories is almost entirely based on imported petroleum, what benefits do you foresee reaching the U.S. territories should the export ban be lifted?

Mr. MEDLOCK. Good question. This gets into a logistical issue, right, in terms of thinking about where the products that are coming into American Samoa are sourced. They are not generally sourced from the United States. They are generally sourced from the Pacific Rim.

When you start talking about the imports of the liquids, the petroleum products, Hawaii is the same thing, why not export products from California, for example, to Hawaii, well, that gets into a Jones Act issue, separate sort of issue, right?

A lot of the products that come into Hawaii are actually coming from Singapore and Asia Pacific markets.

It is not clear to me, to be honest with you, there would be any real direct benefit, but indirectly benefits would accrue to the extent that petroleum product prices are affected in terms of stabilization, or affected lower by allowing more light crude from the United States—I am sorry.

Chairman CHABOT. We have more water coming.

Mr. MEDLOCK. Thank you. Can you come back to me on that one? Sorry about that.

Ms. RADEWAGEN. You want me to give you the question again?

Mr. MEDLOCK. Sure.

Ms. RADEWAGEN. Recognizing the economic and geographic isolation of the islands I represent, American Samoa, and considering energy consumption in island states and U.S. territories is almost entirely based on imported petroleum, what benefits do you foresee reaching the U.S. territories should the export ban be lifted? By the way, some of our oil does come from the United States.

Mr. MEDLOCK. Of course, it does. Lifting the export ban will have a bigger effect to global markets. That is what I was trying to convey in terms of the direct benefit. It is not clear to me there is a massive direct benefit. It is more clear to me there is probably an indirect benefit that would accumulate to American Samoa as a result of the lifting of the export ban.

As has been identified by a lot of studies, a lot of the oil exports that would come from the United States would actually end up in the Asian Pacific market, and that would have an impact on the flow of all products as well as raw crudes in the Asia Pacific market, which would convey a benefit to American Samoa directly.

My point is it is more of an indirect benefit because it has a market reorienting effect, and actually it has an impact on logistically what happens with petroleum products and raw crude in the international marketplace.

Ms. RADEWAGEN. Thank you. Mr. Leppo, do you have any thoughts on this?

Mr. LEPPPO. Yes, I was very happy you originally directed that to Dr. Medlock.

I am not an economist, so understanding what the impact would be on American Samoa is outside my realm of expertise.

Ms. RADEWAGEN. Thank you, Mr. Chairman. I yield back.

Chairman CHABOT. Thank you very much. Thank you. I would ask unanimous consent that members have five legislative days to submit statements and supporting materials for the record.

I want to thank our very distinguished panel here this morning and this afternoon as well for their great testimony. Things were going great, Dr. Medlock, until it sort of went south there at the end. That just shows you how tough this Committee can be on witnesses.

Whatever the point of view was, I think everyone did a very commendable job, and I think it was very persuasive. We had a lot of members here that I think learned a lot, and that is one of the more important things.

This is a key issue. You all helped shed some light on it. Thank you very much for that.

If there is no further business to come before the Committee, we are adjourned. Thank you very much.

[Whereupon, at 12:32 p.m., the Committee was adjourned.]

APPENDIX



JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY
RICE UNIVERSITY

Testimony of

Kenneth B. Medlock III, PhD
James A. Baker, III, and Susan G. Baker Fellow in Energy and Resource Economics, and
Senior Director, Center for Energy Studies
James A. Baker III Institute for Public Policy
Rice University

to the

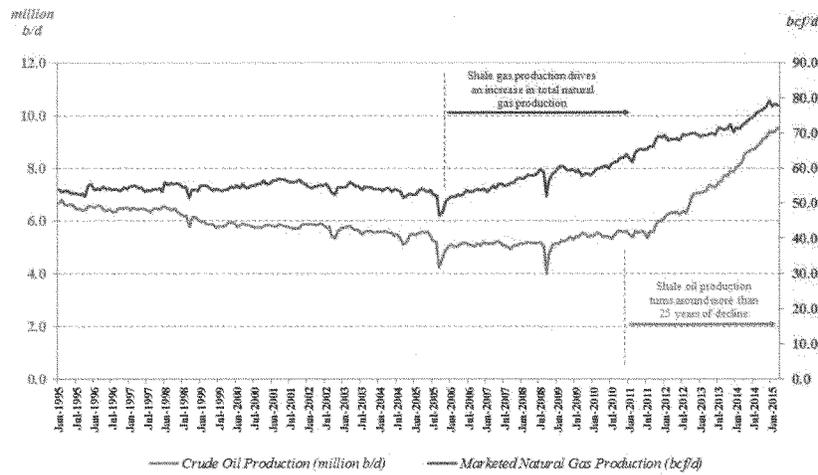
Committee on Small Business
U.S. House of Representatives
Washington, D.C.

June 17, 2015

During the past decade, innovative new techniques involving the use of horizontal drilling with hydraulic fracturing have resulted in the rapid growth in production of crude oil and natural gas from shale formations in the United States. Figure 1 illustrates monthly production of both crude oil and natural gas in the US for the last 20 years. The dramatic increases in production witnessed over the last decade have transformed the energy picture in the US, and around the world. Indeed, a number of industry analysts and commentators have proclaimed that the shale revolution has positioned the US to be energy independent and will, by extension, transform how the US approaches a variety of economic and foreign policy issues. Indeed, the notion of energy independence has been in the minds of policy-makers for years, but whether or not it is actually attainable is irrelevant, as the impact that shale has had on the US is both tangible and undeniable in multiple dimensions. Therefore, central to the oil export debate is whether or not lifting the ban would help or hinder furtherance of what has already transpired.

For the purposes of this exposition, the upstream renaissance has significantly impacted the domestic crude oil market, and contributed to US domestic crude oil prices becoming substantially discounted to global benchmark crudes. West Texas Intermediate (WTI) is the most oft cited example of this phenomenon, but, as discussed in depth in the recently released Center for Energy Studies (CES) research publication “To Lift or Not to Lift? The U.S. Crude Oil Ban: Implications for Price and Energy Security,” the discounts to domestic crude oils are steeper for lighter, higher quality varieties.¹ This testimony draws heavily from that study, which is much more detailed and in depth in its treatment of the issues addressed herein.

Figure 1. US Crude Oil and Natural Gas Production (Monthly, Jan1995 – Mar2015)



Source: US Energy Information Administration

Indeed, the primary conclusions of the study, which contributes a new perspective to a growing recent literature examining US oil export policy, are that lifting the 40-year-old US crude oil export ban would raise US crude oil prices back toward parity with prices for internationally traded crude oils of similar quality, increase upstream and midstream investment, and improve US energy security. Moreover, this would be accomplished without raising domestic gasoline prices. Importantly, the study exercises a different approach to characterizing and analyzing oil

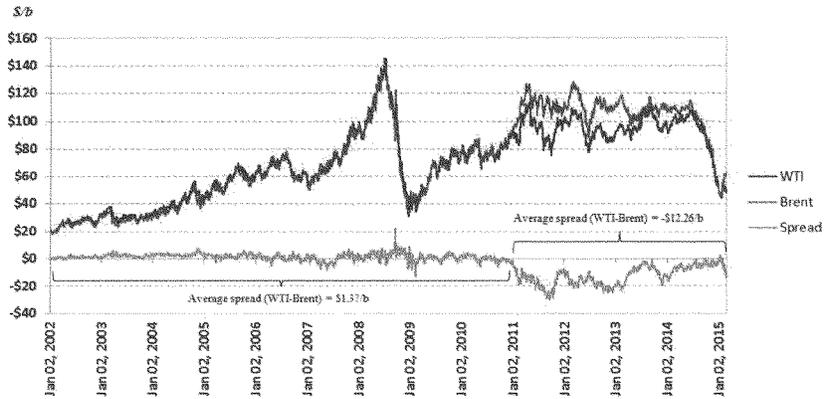
¹ The CES is at Rice University’s Baker Institute, and in 2015 it was ranked 4th globally among all energy and natural resource think tanks by the Think Tanks and Civil Society Program at the University of Pennsylvania. See <http://bakerinstitute.org/research/impact-analysis-us-crude-exports/> for the full study and other related research.

export policy as it is rooted in analysis of data for 30 different internationally traded crude oils. Moreover, since the research was completed after the recent collapse in oil prices, it evaluates the issue over a much wider range of potential global oil price environments, from \$30 to \$150 per barrel. In doing so it provides a robust view of the implications of current export policy and the impact that lifting the ban would have.

To begin, the crude oil being produced in the US from unconventional plays such as the Bakken and Eagle Ford is generally very light and of high quality. Absent the ban on exports, these crudes would compete with crudes of similar quality in the international market and would be accordingly priced. However, the export ban presents a constraint that ultimately drives the price of these domestic crude oils to be discounted. Moreover, these discounts can be expected to persist into the future as long as crude oil exports are banned. This occurs because the supply of domestic light crude oil exceeds the light crude oil processing capacity of US refiners who are backing out heavier, lower quality oils to run domestically produced light crude oils.

Most studies have almost exclusively focused on how West Texas Intermediate (WTI) has moved relative to the international marker crude, Brent. WTI, the US crude oil benchmark, priced slightly above Brent prior to 2011, but the ramp up of US and Canadian unconventional oil production and the resultant influx of crude oil to Cushing, Oklahoma has resulted in WTI being discounted relative to Brent in recent years (see Figure 2), which represents a structural shift in the pricing relationship that existed prior to 2011

Figure 2. Brent versus WTI (Daily, Jan2002 – Mar2015)



Source: US Energy Information Administration

Rather than focus exclusively on the WTI-Brent relationship, the CES study evaluates a much broader set of crude oils to better understand where domestic crude oils would price absent the export ban. To this end, the study employs a hedonic pricing method to evaluate how differences in crude oil qualities translate to pricing for 30 internationally traded crude oils. The analysis reveals that gravity (API) and sulfur content are critical determinants of a crude oil's price relative to Brent. Since data on the price of domestic light crude oils from shale is not available prior to their production, the hedonic pricing method allows the assessment of where these crude oils would price in an international market setting unconstrained by the US export ban. The analysis indicates that the export ban is already binding, thus resulting in domestic crude oil prices seeing, in some cases, fairly significant discounts, even in a low international price environment.

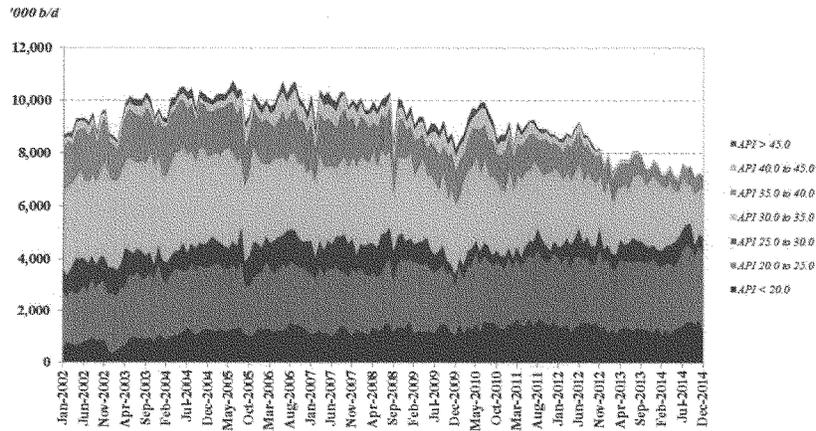
The study also explains why we should continue to expect US refineries to process substantial volumes of imported crudes, even with growing domestic production. Crude oil is not a homogenous commodity, and different crude oils are not perfect substitutes for one another. Most light crude oil being produced from shale has a higher gravity than WTI, Brent, and other international crudes and contains less sulfur than the heavier, primarily imported, crudes that US refineries have been geared to process. Due to the logistics of where crude oil has historically been sourced, US refiners have invested billions of dollars to be able to adequately handle heavy, sour crude oils rather than the more expensive light, sweet crude oils. Heavy, sour crude oils require more expensive and intensive processing to yield highly valued refined products, such as gasoline and diesel. When a refinery sinks capital into developing this capability, it has technical capability to process these heavier, lower priced crude oils. In order to provide the incentive to refine lighter crude oils, which are typically higher priced, those barrels must be discounted so that their pricing is more in line with the heavy, less expensive crude oil the refiner would otherwise purchase. Because of this dynamic, domestic refiners at the heavier end of the spectrum will continue to import heavy crude oils. Moreover, if price discounts on the domestically produced light barrels are persistent, investment in lighter processing capability will be forthcoming. In either case, the US refining sector will continue to import heavy barrels in line with its capabilities, only substituting with light domestic crudes if the price discount is sufficient to justify it.

The study provides a simple graphical explanation of what it would mean for domestic light crude oil prices if US refineries were to use additional domestically produced light crude oils to back out imports of heavy, sour crude oils. Prior to the US shale revolution, the supply of light oil to domestic refiners originated from both domestic and imported sources, and the price of US light crude was at parity with imported crude oils of similar quality. However, the rapidly growing domestic supply of light crude oil has backed out imports of light crude oil and exceeded US refinery capacity for processing light crude oil. Since the excess light crude cannot be exported, producers are faced with either shutting in some light oil production or discounting the price of their output to encourage refineries to reduce their runs of medium crude oils, instead

running additional light oil. Thus, the price of domestic light crude oil drops to parity with the lower quality oil it is replacing in refineries. As heavier and heavier crude oils are backed out by domestic production, the discount relative to the international price for light crude oil will grow in order to provide the price incentive for US refiners to substitute the light crude oil for the heavier crudes that the refineries were designed to process.

Data on crude oil imports reveal that domestic production has already backed out imported crudes of similar gravity and is now backing out heavier crudes (see Figure 3). Using the hedonic pricing method, the study assesses the resultant discount at different international oil price (\$30 to \$150 per barrel) environments, given the range of API gravity and sulfur contents of the heavy crude that domestic light crude oil is replacing. The analysis reveals that discounts of up to \$7 per barrel are felt for some of the lighter Eagle Ford crudes even in a \$60 global price environment, with the discount growing to in excess of \$10 per barrel in an \$80 price environment. Importantly, this result is contingent on the quantity of domestic production. Given current production levels, the crude oil at the margin appears to be Louisiana Light Sweet (LLS), meaning that price sets a virtual ceiling for domestic crude oil prices – anything of higher quality must be discounted to compete.

Figure 3. US Crude Oil Imports by Gravity (Monthly, Jan2002 – Dec2014)



Source: US Energy Information Administration

The study also assesses the impact on US gasoline prices of an end to the oil export ban. In particular, it addresses the question, “Would higher prices for domestic crude oils translate into

higher prices at the pump?” Similarly to other studies, the analysis dispels this notion. Since refined products can be traded freely on the international market, the discounted prices of US crude have not translated into discounted prices of refined products. Instead, US refiners are able to buy domestic light crude oils at a discount to the international price, then sell refined products at international prices. The lack of a restriction on trade of refined products allows domestic and international wholesale prices harmonize, meaning domestic refiners are able to retain the domestic crude oil price discount as additional margin, a point the study highlights as a “no-cost call option” that refiners hold on domestic crude oil purchases. It also notes that not all domestic refiners see this benefit, a result owing to the different configurations, and hence crude qualities, each processes. Data supports this notion. In particular, beginning in 2011, the price of WTI started diverging on a lower path relative to both Brent crude oil and US Gulf Coast (USGC) gasoline prices. Statistical analysis indicates that after 2010, WTI has been on average \$10 per barrel lower relative to USGC gasoline, while the price of Brent has been about \$3 per barrel higher relative to gasoline. As the US has been a net exporter of refined products since 2011, the arbitrage point for international gasoline has moved away from the Gulf Coast. The shift in the relative price relationship between international crude oils and US-produced gasoline reflects the cost to transport the gasoline to a new point of arbitrage offshore. Moreover, this transition has been driven primarily by the sharp reduction in US demand that has left the US with more than enough refining capacity to meet its domestic needs, and could easily reverse course should US demand recover significantly. The large discount of WTI relative to gasoline and Brent, however, reflects the shifting refinery dynamics driven by growth in domestic production discussed above.

The study also notes that although eliminating the export ban would compress profit margins to some (but not all) US refiners, it would be transformative for US crude oil producers (assuming that the shale resource base has a long productive life). Significant capital would flow into the upstream as well as into pipeline and other infrastructure development, which would ultimately drive a dissipation of the discount on US light oil as greater trade is facilitated. Regarding refiners, even with unrestricted oil exports, low US natural gas prices still bode well for their international competitiveness. Moreover, light crude oil imports would still be substituted by domestic production, and domestic refineries would be optimized as they would import and process the heavier, lower quality crude oils for which they were designed.

Lastly, the study reveals that removing the oil export ban would generate distinct energy security benefits for the US, a result that is counterintuitive to some. Following the voluminous literature on the subject, energy security generally refers to the concept of ensuring an adequate supply of oil at a *stable* and *reasonable* price. This goal is sought because there is a strong empirical correlation between macroeconomic malaise and unexpected and extreme movements in the price of oil. Diversification of oil supply options, especially by adding supply from stable producing countries, is one means of mitigating the risk of an oil market disruption. To this end, the US shale oil boom has already provided significant energy security benefits. Over the period

from 2008 to 2013, increased oil output from the US has offset the production declines in countries such as Libya, Algeria, Syria, and Iran that were due to local strife or sanctions. In the absence of US shale oil output, prices would have been much higher and much more volatile. However, the lack of ability for US oil producers to export is capping the extension of this benefit by leaving some domestic investment unrealized, and ultimately limiting the amount of low-risk oil supply that can reach the international market. Since oil prices transmit to consumers through the price of refined products, by not allowing US oil production to have a larger impact on global oil prices, and hence petroleum product prices, current policy is actually compromising domestic energy security. In effect, the oil export ban does nothing to insulate US consumers from unexpected movements in the international price of refined products, so it does not provide any broad energy security benefit.

The study highlights that the importance of the US as a potential source of incremental supply over the longer term cannot be overstated. However, the role of the US as a stable supplier to global markets is conditional on the ability of US production volumes to access the global market. The US could take a leadership role in transforming global trade in crude oil that would carry significant geopolitical benefits and, more generally, establish the US as a trusted partner in discussions focused on expanding international trade.

Crude Intentions: The Untold Story of the Ban, the Oil Industry, and America's Small Businesses

Statement of Dale Leppo, Chairman, Leppo Group Inc., Tallmadge, OH

Before the Committee on Small Business, U.S. House of Representatives

June 17, 2015

Thank you, Chairman Chabot, Ranking Member Velazquez, and Small Business Committee members for inviting me to testify about the impact of lifting the ban on crude oil exports on our small, family-owned business which employs 127 people in Ohio and has been in business since 1945.

Leppo Group rents and sells construction equipment at seven locations throughout Northeast and East Central Ohio. In 2013 we opened "Razor Rents" in Carrollton, Ohio to serve the needs of the emerging Utica Shale energy play. Fifteen percent of our employees are involved in some way in supporting our energy-related operations.

In the SECOND half of 2014, Razor Rents business DOUBLED vs. the first half of 2014 as the Utica Shale activity ramped up. Ohio had 48 drill rigs operating by the end of 2014. As a result of that activity we added inventory and we hired staff to meet that demand. In 2014 we:

- Added 14 new jobs, many of which went into the support of the energy sector
- Our Razor Rents rental fleet grew by 130% (from 154 to 355 units) which also created jobs for our manufacturing partners
- In 2014 we purchased 45 new pieces of equipment from JLG Industries, almost all of which are manufactured either in Ohio or Pennsylvania. Each machine represents an investment of \$80,000 to \$140,000.
- We created 3 internships for students from Ohio State University Agricultural Technical Institute, who then joined us full time upon their graduation.

When the prices of oil and natural gas fell, so did that increased activity.

- The number of drill rigs working in Ohio has fallen from 48 to 22.
- The number of machines that we have on rent in the energy sector has fallen by 42% since the peak in late 2014.

As a result, in 2015 we have:

- Put an aggressive 2015 hiring plan "on hold" until our future activity level becomes clearer.

- Transferred some of our co-workers from the energy sector back to our “normal” construction and industrial equipment activities
- That means that 6 positions we had planned to fill this year will remain open until it becomes clearer that we do (or don’t) need the additional capacity.
- Significantly reduced our rental fleet growth. For instance, so far in 2015 we have ordered minimal new equipment for our energy markets—nine small units at last count
- We currently have two interns from Ohio State University Agricultural Technical Institute, but time will tell if we have the level of activity needed for us to bring them on full-time after they graduate.

So what can Congress do to help our small business create jobs, both in our company and for our customers and our suppliers?

Congress can help INCREASE MARKETS for American-produced crude oil by lifting the ban on crude oil exports!

Why would that help? I think there are several reasons:

- 1) Crude oil moves around the world in what is a global energy market. By banning the export of crude oil we artificially put the U.S. energy sector at a competitive disadvantage by removing exports as a potential market at a time when I believe the US is in a world-wide battle for energy market share. IHS Economics estimates that lifting the ban would increase US crude oil production by up to 2.3 million barrels per day average between 2016 and 2030.¹
- 2) This new production will drive substantial additional investment in products and services from the crude oil supply chain, generating up to \$63 billion of supply chain economic output nationally, and up to \$1.8 billion in Ohio.²
- 3) This investment would create up to 440,000 new supply chain jobs nationally, and up to 13,600 in Ohio alone by 2018.²
- 4) These export-dependent jobs and GDP growth are widely spread throughout the American economy. They will exist in all 50 states and throughout 60 different industry sectors. Of the national supply chain job gains, 10 of the top 15 states gaining jobs are non-producing states. By GDP growth, 11 of the top 15 states are non-producing states.²
- 5) The Energy Equipment and Infrastructure Alliance, of which my company is a member, estimates that there are at least 120,000 supply chain businesses supporting American oil and natural gas production, of which at least 100,000 are small businesses.³
- 6) The U.S. energy sector has been a leader in developing new technologies for energy exploration and extraction. Taking advantage of those technological advances before competitors

¹ IHS Economics (2014). US Crude Oil Export Decision: Assessing the impact of the export ban and free trade on the US economy

² IHS Economics (2015), Unleashing the Supply Chain: Assessing the economic impact of a US crude oil free trade policy

³ Statement of Toby Mack, President, Energy Equipment and Infrastructure Alliance, to the House Small Business Committee staff briefing, May 27, 2015

do would continue to give the U.S. energy industry incentives to innovate and become even better at finding and extracting oil and natural gas in an efficient and safe manner.

During the energy boom in Ohio we have seen significantly increased activity in the energy supply chain:

- The manufacturing of steel pipe
- The manufacturing, distribution and support of equipment used in energy markets such as forklifts, man lifts, pumps, compressors, generators and earthmoving equipment
- Investment in infrastructure to produce and get oil and natural gas to market (well-site preparation, pipelines, separation plants, rail lines, roads and bridges)
- Investment in gas fired electric generation plants to replace older and less efficient coal-fired generating plants
- Investment in places for energy sector workers to sleep, eat and ship, including hotels, restaurants, car dealerships, etc.

At a time when the United States continues to see sluggish growth in the kind of good jobs that the energy sector provides, lifting the ban on crude oil exports is a step that could yield almost immediate results.

I hope we can move forward on expanding the markets for US exports of energy that I believe will be a source of good jobs for Ohio and much of the rest of the country.

Thank you again, Mr. Chairman for inviting me to address your committee.

State of Ohio
If the Crude Oil Export Ban Is Lifted
Additional Employment, Labor Income and Value Added in the Energy Supply Chain

EMPLOYMENT	2016	2017	2018	2019	2020
Construction and Well Services	1,861	4,009	4,505	4,022	3,675
Information Technology	395	880	1,134	1,091	967
Logistics	289	612	691	611	544
Machinery and Equipment	722	1,416	1,432	1,141	1,001
Materials	899	1,803	1,904	1,572	1,346
Professional, financial, and other services	1,507	3,275	3,935	3,644	3,246
TOTAL EMPLOYMENT	5,673	11,996	13,601	12,081	10,778

LABOR INCOME	2016	2017	2018	2019	2020
Construction and Well Services	\$182,706,266	\$379,567,310	\$367,370,771	\$313,011,335	\$316,020,154
Information Technology	\$52,489,762	\$112,911,250	\$125,171,408	\$114,880,700	\$112,547,256
Logistics	\$29,087,029	\$59,530,334	\$58,384,187	\$49,514,963	\$48,581,504
Machinery and Equipment	\$99,948,182	\$189,262,148	\$164,744,417	\$125,286,822	\$121,603,719
Materials	\$110,211,586	\$213,075,393	\$193,533,441	\$152,213,157	\$143,723,609
Professional, financial, and other services	\$168,089,169	\$352,785,997	\$365,495,890	\$323,318,527	\$318,485,464
TOTAL LABOR INCOME	\$642,531,994	\$1,307,132,431	\$1,274,700,115	\$1,078,225,505	\$1,060,961,707
AVERAGE INCOME PER WORKER	\$113,260	\$108,967	\$93,721	\$89,251	\$98,437

VALUE ADDED (GDP OUTPUT)	2016	2017	2018	2019	2020
Construction and Well Services	\$283,447,810	\$485,398,723	\$471,045,522	\$401,912,376	\$406,633,253
Information Technology	\$73,274,405	\$130,074,522	\$145,708,490	\$134,682,431	\$132,005,939
Logistics	\$50,637,181	\$85,744,222	\$85,632,207	\$73,506,804	\$72,071,034
Machinery and Equipment	\$176,785,051	\$277,443,989	\$246,159,450	\$190,105,279	\$184,847,478
Materials	\$213,377,394	\$341,773,786	\$316,099,990	\$252,043,880	\$238,558,377
Professional, financial, and other services	\$331,355,924	\$574,201,918	\$600,404,049	\$534,244,954	\$526,772,065
TOTAL VALUE ADDED	\$1,128,877,765	\$1,894,637,159	\$1,865,049,709	\$1,586,495,725	\$1,560,888,146

Source: IHS Economics (2015). *Unleashing the Supply Chain: Assessing the economic impact of a US crude oil free trade policy (potential production case)*

Total United States
If the Crude Oil Export Ban Is Lifted
Additional Employment, Labor Income and Value Added in the Energy Supply Chain

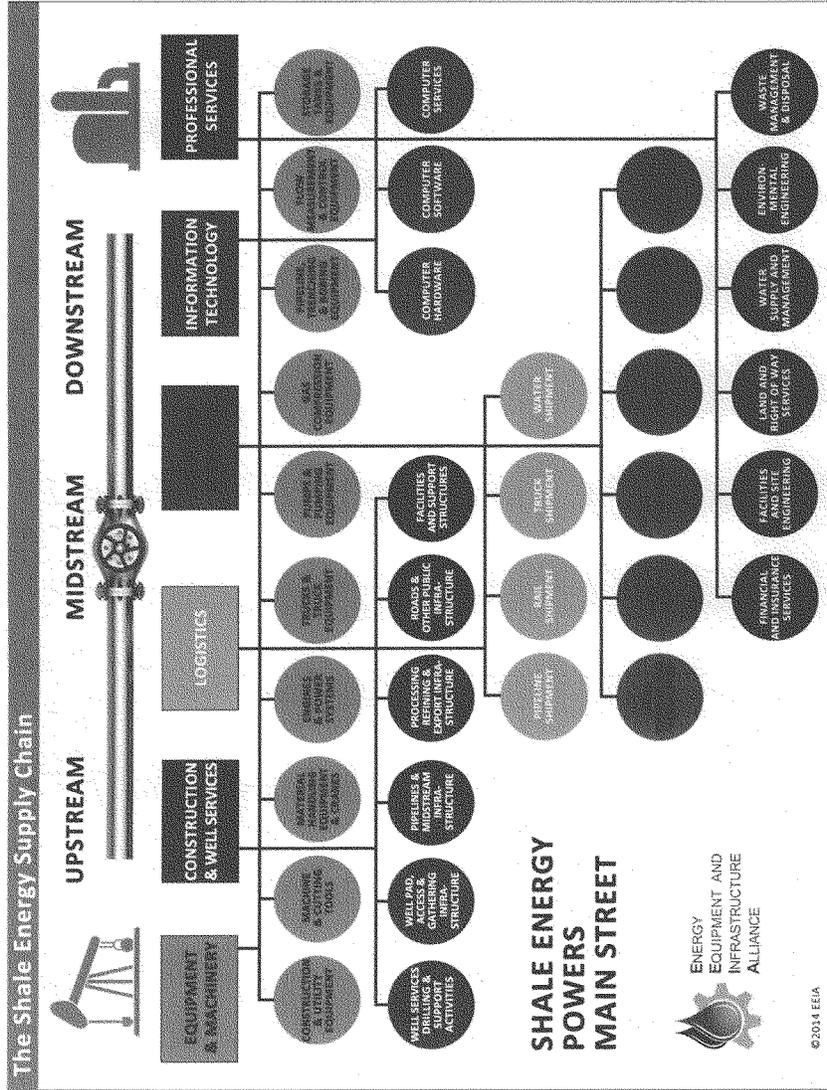
EMPLOYMENT	2016	2017	2018	2019	2020
Construction and Well Services	31,877	75,591	90,302	80,831	71,092
Information Technology	10,156	24,703	32,291	31,700	28,918
Logistics	5,832	13,592	17,012	15,909	14,247
Machinery and Equipment	38,186	91,051	116,812	112,711	102,908
Materials	31,689	72,058	90,499	85,911	77,316
Professional, financial, and other services	31,782	74,678	92,661	87,136	76,721
TOTAL EMPLOYMENT	149,521	351,675	439,578	414,198	371,202

LABOR INCOME	2016	2017	2018	2019	2020
Construction and Well Services	\$3,926,900,195	\$9,275,311,991	\$10,196,883,386	\$8,944,433,046	\$8,462,442,074
Information Technology	\$1,582,129,810	\$3,805,922,907	\$4,360,692,870	\$4,096,322,255	\$4,041,738,398
Logistics	\$680,482,192	\$1,561,406,238	\$1,764,484,859	\$1,615,323,070	\$1,552,740,029
Machinery and Equipment	\$5,534,021,153	\$13,210,185,333	\$14,910,560,962	\$13,750,299,693	\$13,573,927,988
Materials	\$4,371,052,520	\$9,928,581,000	\$11,031,334,989	\$10,099,865,347	\$9,842,171,682
Professional, financial, and other services	\$4,113,565,000	\$9,558,764,543	\$10,610,199,890	\$9,600,922,408	\$9,105,369,363
TOTAL LABOR INCOME	\$20,208,150,871	\$47,340,172,013	\$52,874,156,956	\$48,107,165,818	\$46,578,389,533
AVERAGE INCOME PER WORKER	\$135,153	\$134,614	\$120,284	\$116,145	\$125,480

VALUE ADDED (GDP OUTPUT)	2016	2017	2018	2019	2020
Construction and Well Services	\$4,333,568,962	\$8,705,474,630	\$9,506,214,391	\$8,077,756,416	\$7,684,323,960
Information Technology	\$2,033,669,178	\$3,910,982,948	\$4,485,914,022	\$4,178,980,071	\$4,137,125,711
Logistics	\$857,434,713	\$1,625,274,781	\$1,818,186,120	\$1,631,652,978	\$1,577,527,946
Machinery and Equipment	\$9,532,406,541	\$18,321,592,302	\$20,678,179,853	\$18,910,293,498	\$18,604,653,106
Materials	\$6,997,781,201	\$12,969,787,427	\$14,350,045,027	\$13,003,299,471	\$12,693,373,159
Professional, financial, and other services	\$6,007,948,915	\$11,433,674,934	\$12,664,193,725	\$11,336,059,970	\$10,817,696,738
TOTAL VALUE ADDED	\$29,762,809,510	\$56,966,787,022	\$63,502,733,137	\$57,138,042,404	\$55,514,700,620

Source: IHS Economics (2015). Unleashing the Supply Chain: Assessing the economic impact of a US crude oil free trade policy (potential production case)

Schematic of the Sectors and Industries of the Crude Oil Supply Chain



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Testimony of Rory McMinn

President and Managing Director of Read & Stevens, Inc.

Roswell, New Mexico

Before the House Small Business Committee

Hearing re: Impact on Small Business from Allowing Crude Oil Exports

June 17, 2015

Mr. Chairman and Members of the Committee, my name is Rory McMinn and I am President and Managing Director of Read & Stevens, Inc., a small, privately held oil and gas production company headquartered in Roswell, New Mexico. I have served as a member of the New Mexico Public Service Commission and as a County Commissioner of Chaves County, New Mexico, and my wife currently serves as a County Commissioner in Lincoln County, New Mexico. I am pleased to have been invited to testify to the adverse impact that the current depressed oil price market has had on small companies such as Read & Stevens, and to convey to you the enormous value to small operators such as ourselves, our employees and our communities attainable from lifting the antiquated and destructive 1970s-era ban on the export of domestic crude oil.

My trip to our Nation's Capital to speak to you today would be considered unnecessary spending if not for the fact that my shareholders so urgently want you to be aware of our situation. If not for their encouragement, I would not have spent what amounts to one half of a pumper's monthly salary to be here. The issue of eliminating the ban on crude oil exports is important to the livelihoods of thousands of people in New Mexico and the other producing states, as well as those many hundreds of thousands of people all over America who do not live in "oil patch states" but whose work and family welfare depends on making the goods and providing the services used by the oil production industry. Therefore, having the chance to have a seat at this table was incentive enough for my shareholders to want to be heard.

Read & Stevens, Inc. was founded in 1972 and has drilled for and produced oil and natural gas within New Mexico and West Texas as a family owned small business ever since. Due to our firm's longevity, we have mineral leases in some of the prime target rich areas of the Delaware formation of the Permian Basin. We provide the livelihoods for 25 much valued full-time employees, of which two have 32 years and one has 21 years of employment with us. Our patriarch is Charles B. Read, who at age 93 continues to be active in our operations.

Small Producers Are Being Severely Impacted:

Read & Stevens operates 150 wells and has an equal number of wells where we own an interest, but are operated by other companies. Many of the wells in our inventory meet the threshold of being considered "stripper" production with output of fifteen or fewer barrels per day. While we have up to 70 other cost-sharing working interest owners in many of our wells, as is very common for small producers in the oil business, the Read family finances its portion of the operations with cash flow and bank debt.

Like many other small producers, there is no public funding of our stock and we have no access to private equity capital which finances operations by larger companies in the oil business. Therefore, anything that causes a constriction in our cash flow or devalues the oil and gas reserves that stand behind our bank debt causes great problems for us. Consequently, I want to make it very clear that the current depressed oil price market, and the associ-

ated cut back in drilling new wells which would create new revenue for us, has had a very strong adverse impact on our financial situation, a most unfortunate problem shared by other small oil and gas operators all across the nation.

Our 26-well drilling program that was started in 2014, with 24 wells remaining to be drilled, has been cancelled. In fact, if we had not already signed contracts for drilling those first two wells, we would not have done so. The 2014 estimated well costs were \$6.75 million each and are now projected to cost \$4.5 million each. The approximately one-third reduction in costs is made possible by our vendors who, facing a steep decline in demands for their goods and services from the reduction in new drilling, are eliminating jobs, mothballing equipment, deferring maintenance, eliminating advertising, closing offices, and cutting back their support for a wide range of civic and community organizations in a desperate effort to maintain their businesses rather than have their contracts simply cancelled—and I would emphasize that a lot of those vendor contracts have simply been cancelled already. Despite the one-third drop in well costs, the simultaneous 50% drop in the crude oil price, with its continuing inherent uncertainties, causes the economics to be negative.

Just like our own vendors and suppliers, we operators are adjusting in a similar manner, only spending capital to maintain our existing production levels and eliminating all unnecessary spending. I can tell you in Roswell there are at least six other companies of approximately equal to Read & Stevens that have had similar experiences. All have cancelled drilling new wells and are only spending money as necessary to keep their current production pumping. My discussions with other small operators in Farmington, in the Four Corners area of Northeastern New Mexico, echo what we have been experiencing in Roswell.

With small operators and their vendors and suppliers all cutting back on their activity, the Committee can see that the collective adverse impact on those small businesses, their employees, and their communities is widespread and immense.

Read & Stevens is fortunate in that our mineral leases are long lived and are not in jeopardy of expiring because they are “held by production,” therefore we do not have to drill new wells to save leases as many operators are forced to do. If not for the need to drill to save their leases, most of the operators would be deferring drilling as we are. Oil and gas reserves are similar to a savings account, as you take oil out and thereby reduce the reserves you must constantly look to replace that amount either by new drilling, by finding additional heretofore untapped reserves in existing wells, or by acquiring reserves from others. We constantly have to balance our efforts based upon the production of a diminishing resource. Our preferred and best opportunity to replace our reserves is to drill new wells. But due to the current marketplace, our only practical alternative is to find additional reserves behind existing pipe, hence the cancellation of our 26-well drilling program after only two wells and foregoing all the economic activity and jobs that would have been generated by drilling the other 24 wells.

While Roswell, the community where our headquarters is based, has felt the drilling downturn by the loss of retail sales, the other larger Southeastern New Mexico communities where services are based such as Hobbs, Carlsbad and Lovington have endured a drastic decline in every level of wholesale and retail business, from drops in rental property values to steep declines in the volumes of sales of produce to the restaurants. The Red Wing boot shop in Hobbs now has enough steel-toed boot inventory to last several years because of the lack of demand. Our office is flooded with applications from people—from very unskilled workers to the most highly skilled and experienced field personnel. We have had other operators, especially those in the Midland/Odessa, Texas area, tell of receiving resumes of newly graduated petroleum engineers desiring a position at the lowest level. We have been in these boom and bust cycles before, but never have I previously experienced a bust during a period, as now, when due to American technological leadership that allows us to produce at world class levels, US oil producers are capable of competing with OPEC directly. But our ability to compete on the world market is frustrated by the export ban that prevents us from accessing that market with our oil.

Broader Adverse Impacts on our State and Communities:

Revenues from the oil and gas industry are the economic backbone of the state of New Mexico. New Mexico has been at the bottom of the list for recovering from the recent severe recession. The only bright light was the oil and gas industry, which is the largest private employer in the state and one of the few that was growing jobs until the last six months. Now our industry is laying people off. One New Mexico state agency says more than 2,000 jobs were lost in the first quarter of 2015 in this industry.

The adverse impact of the downturn in crude oil prices is not limited to the private sector alone. The State of New Mexico's revenues are down by \$220 million dollars due to the crude oil price drop which affects public school funding projects. Lease bonus payments at monthly state land auctions have gone from record highs of more than \$60 million to amounts less than \$5 million. Revenues from the oil and gas industry accounted for 31.5% of the state of New Mexico's general fund in 2013 and nearly 35% in 2014. In the most recent budget preparation cycle, New Mexico's budgeting officials decreased their revenue estimates for the FY 16 fiscal year at least twice as the price of oil declined. This meant far less money was available for all state programs and operations. Preliminary figures for January 2015 revenues showed an average price of \$42.70 per barrel which was down from an average price the year before of nearly \$90 per barrel. The state economists are forecasting an average price for FY 15 of \$56 per barrel, still well before the \$90 figure from the previous year.

In addition to their contribution to New Mexico's general fund, revenues from oil and gas support the fund used for the state's capital construction projects, including roads, college and school buildings, museums, senior citizen facilities, and much more. The severance tax collections supporting these projects decrease as the oil prices drop because they are based on a percentage of the sale of

oil and gas. Oil and gas support nearly 86% of this capital outlay fund.

Further, oil and gas revenues support over 95% of the permanent fund that serves as an endowment fund for New Mexico's public schools. The interest from the fund and a small percentage of the corpus fund school operations every year.

Finally, oil and gas royalties from state lands are collected for other direct beneficiaries of development of New Mexico's state lands. These beneficiaries include hospitals and colleges.

These severe reductions in state and local government revenues materially impact every small business and every person in New Mexico. Reductions in jobs and in funding for state and local social programs, hospitals, roads, and education all mean bad news for everyone—and it is all attributable to the reduction in the price of oil and the consequent reduction in new drilling for oil. It is not a winning situation for small business in New Mexico, and I would conclude it is not a winning situation for small business—whether they are directly in the oil production business or in the supply chain that provides goods and services to the oil production business—anywhere in the country.

We Need to Change America's Oil Export Policy:

Based on my 43 years of experience in the oil and gas business, I am convinced that the prohibition on the exportation of US oil is having a serious adverse impact on small production companies such as us. All the research I have seen convinces me that allowing US oil producers to compete for additional customers on the world market—just as we encourage producers of almost every other kind of product and service in this country to sell to foreign customers—will enable US producers to secure a more fair price for our oil set by the market rather than artificially constrained by an outdated oil export ban policy whose time has long passed. Read and Stevens, and other small producers such as us, will never contract with international buyers for our oil. But we don't have to do so in order to benefit from lifting the crude oil ban. As other elements of the US oil industry with the capability to conduct those international transactions do so, the domestic price of crude oil will be favorably impacted for all US producers, including small producers like us. Moreover, that better price will provide the economic incentive for us to increase our drilling in the same manner as larger producers—we all will benefit and so will our communities.

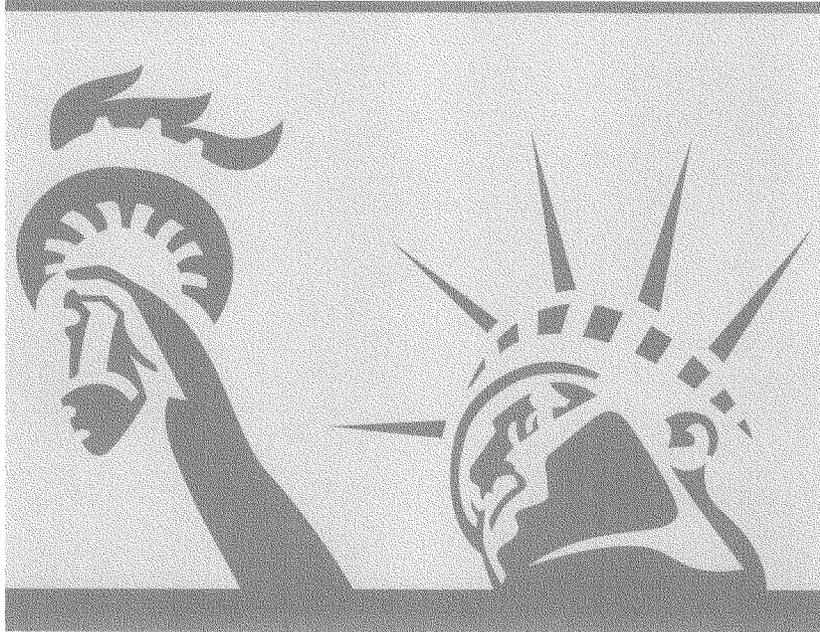
It makes no sense to me that as the world's greatest international trading nation, we allow the export of refined petroleum products but not the export of crude oil. Our market for customers ends at the coast, trapping our oil here in record surplus volumes, and creating a heavily discounted price for our domestic crude oil compared to the world price enjoyed by producers outside the United States. It is time to rationalize our crude oil market so that American producers can compete for foreign customers on a level playing field. We will get a higher price than the artificially discounted price we get today, but in accord with the laws of supply and demand the increased supply of crude oil from the US will

lower the world oil price and in so doing put downward pressure on the prices of refined petroleum products which are set by the international price of oil—in my view a win-win situation for US oil producers and US gasoline consumers.

Conclusion:

In closing, I would say that the small producers in this country are critical elements of the social and economic fabric of the communities in which we operate and employ people. It is very difficult for small producers to stay abreast of regulatory developments adversely impacting the cost of doing business in our industry. I cannot understate how difficult it is for small producers like us to understand and comply with the numerous regulatory changes being imposed on us, such as the BLM's hydro-fracking rule, the increasing of federal royalty rates, and the endangered species costs, just to mention a few. All these regulatory burdens can overwhelm a company of our size and their debilitating impact increases exponentially when we are faced with the depressed prices and limitation on our ability to find customers caused by the oil export ban. I would urge you to consider that the least Congress could do is allow us to secure the best price for our product, and lifting the crude oil export ban would be a very significant and welcome signal that Congress cares about the small oil producers in this country. I urge you to do all you can to allow US oil producers to find customers abroad by eliminating this impediment to free trade that is now very clearly hurting small producers and the communities they serve.

Thank you for allowing me to present my views.



Consumer & Small Business Benefits From Preserving Oil Export Ban

Testimony of Tyson Slocum, Energy Program Director, Public Citizen, before the US House of Representatives Small Business Committee, June 17, 2015

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Mr. Chairman, thank you for the opportunity to testify today on consumer and small business benefits from keeping the oil export ban in place. 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.

In 1975, 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.”¹ 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.² The Department of Commerce has never promulgated rules to comply with the law’s mandate to also prohibit the export of natural gas.

Very few questioned this long-standing policy 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.”³

Since then, an oil-industry led coalition has launched an expensive media and lobbying campaign to convince lawmakers to repeal or modify this 40-year old consumer protection statute.

Those seeking to weaken or repeal 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, that 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 sharply at the same time that onshore fracking production is set to peak and then decline

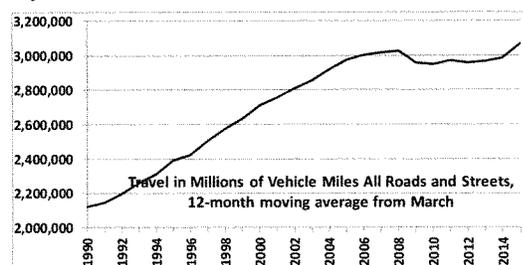
¹ 42 USC § 6212(b)(1)

² 15 CFR § 754.2

³ 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.⁴ 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 4th quarter of 2014.⁵

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 3rd quarter of 2014.⁶ 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. It is our continued voracious consumption growth that sets us apart from many other large oil exporting nations, most of which feature minimal oil imports. Absent fundamental changes to consumption, it is impossible for the United States to become self-sufficient anytime soon.



While America's oil consumption peaked at around 21 million barrels of oil per day from the 3rd 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 1st quarter of 2012 in response to, first, high oil prices, and, second, the implosion of 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 more than 800,000 barrels of oil more per day as of the 3rd quarter of 2014 compared to the 1st quarter of 2012.

⁴ <http://georgewbush-whitehouse.archives.gov/news/releases/2006/01/20060131-10.html>

⁵ eia.gov

⁶ eia.gov

A key indicator has been that America's vehicle miles traveled has been increasing since 2012,⁷ 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, to set a new record high. The IEA predicts that 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 U.S. gasoline demand of 4.2 percent.⁸ U.S. gasoline consumption is roughly 9 million barrels per day. U.S. sales of light trucks and SUVs continue to skyrocket, 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 percent⁹—meaning that more new cars hitting the road are less fuel efficient, likely leading to higher domestic gasoline demand growth.

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.¹⁰ This is because onshore fracking, which represents much of America's oil production growth, is fundamentally different from conventional oil. Unlike a conventional oil field, where the oil is typically easily accessed in large, central reservoir, shale oil (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.

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.¹¹

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.

⁷ www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm

⁸ Summer Said & Georgi Kantchev, "Global Oil Demand Rising, IEA Says," *The Wall Street Journal*, June 12, 2015.

⁹ http://online.wsj.com/mdc/public/page/2_3022-autosales.html

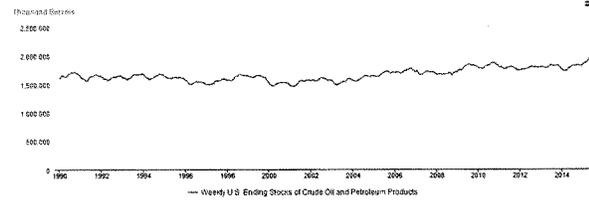
¹⁰ *Annual Energy Outlook 2015*, page 18, www.eia.gov/forecasts/aeo/tables_ref.cfm

¹¹ Jonathan Fahey, "U.S. oil council: Shale won't last, Arctic drilling needed now," *The Associated Press*.

Nixing the Crude Oil Ban Will Raise Gasoline Prices for Families and Small Businesses

Because the oil export ban forces U.S. producers to sell the oil to the domestic market, the United States has record levels of oil in storage. Despite these strong storage levels, U.S.

Weekly U.S. Ending Stocks of Crude Oil and Petroleum Products



Source: U.S. Energy Information Administration

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.¹²

But as storage levels have increased in the United States, it appears as though 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,

¹² "U.S. gasoline prices move with Brent rather than WTI crude oil," November 3, 2014, www.eia.gov/todayinenergy/detail.cfm?id=18651

which translates to actual savings of \$11.4 billion last year and potential savings of \$10.2 billion this year. [emphasis added]¹³

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.*¹⁴

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 2040.¹⁵

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.

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.”¹⁶ 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.¹⁷ The study claims that US

¹³ Paul Y. Cheng, “Crude Export Ban: Impact on Gasoline Prices, 2015 Edition,” May 13, 2015.

¹⁴ Paul Y. Cheng, “Crude Export Ban: Impact on Gasoline Prices, 2015 Edition,” May 13, 2015.

¹⁵ “U.S. energy demand slows except for industrial, commercial sectors,” April 29, 2015,

www.eia.gov/todayinenergy/detail.cfm?id=21012

¹⁶ www.nera.com/content/dam/nera/publications/2014/NERA_Crude_Oil_Export_Study_Sept_2014_FINAL.pdf

¹⁷ www.washingtonpost.com/wp-srv/special/politics/brookings-institution-2014/

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.¹⁸
- 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.¹⁹
- 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.²⁰
- 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.²¹

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.

For example, an increase in U.S. oil exports could be matched by a production cut by OPEC member nations, or Russia. Or a supply disruption in the Middle East or Venezuela could occur, offsetting the U.S. increase. Or 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.

¹⁸ www.icfi.com/insights/projects/energy/us-crude-oil-exports

¹⁹ www.ihs.com/info/0514/crude-oil.html

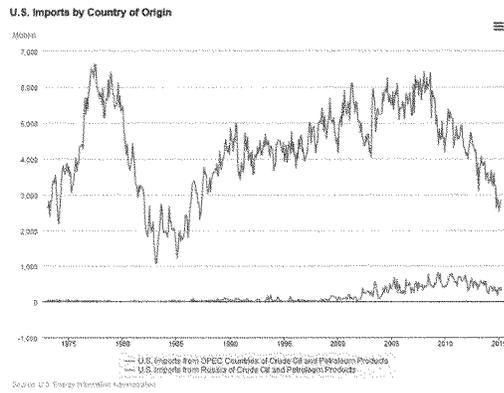
²⁰ <http://bakerinstitute.org/research/lift-or-not-lift-us-crude-oil-export-ban-implications-price-and-energy-security/>

²¹ www.rff.org/RFF/Documents/RFF-1B-14-03-REV.pdf

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.²² 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.

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

²² www.bloomberg.com/news/articles/2014-10-28/crude-at-80-a-barrel-no-sweat-say-oil-producer-ceos

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.²³

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's²⁴ and Texas'²⁵ 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.

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 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

²³ Phillip Brown & Robert Pirog, "Potential Market Effects of Removing Crude Oil Export Restrictions: Eastern Europe," May 29, 2015.

²⁴ 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/

²⁵ 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

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.

Statement of
 Energy Equipment and Infrastructure Alliance
 House Small Business Committee Staff Briefing
 May 27, 2015



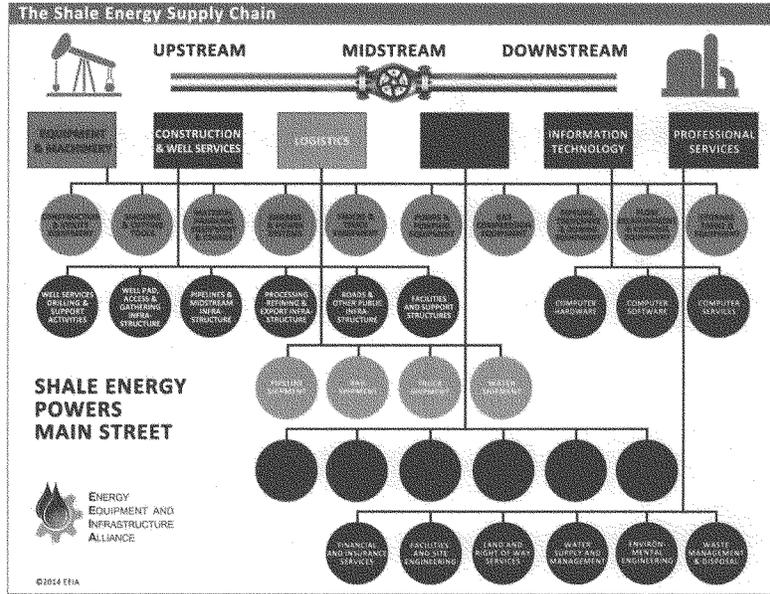
Crude Oil Exports – Impact on Small Business of Lifting the Export Ban

Good afternoon. The Energy Equipment and Infrastructure Alliance is an organization of companies, trade associations and unions that represent the businesses and workers of the shale oil and gas supply chain. Our organization strongly supports lifting the ban on export of American crude oil. Doing so will result in a great number of new jobs, and strong growth of business output, in the supply chain, and especially for its many small businesses.

Before we address the benefits of crude oil exports to small businesses in the energy supply chain, we'd like first to describe it. Much of the recent dramatic growth in US oil and gas production has come from horizontal drilling and hydraulic fracturing in America's shale formations. This is important for today's briefing because the shale energy supply chain that supports this type of energy production is remarkably large, diverse and widely distributed throughout the United States. We've noticed that while many people talk about the importance of the energy supply chain, few seem to have a solid understanding of it. Much like the "cloud" in information technology, we know it's up there, but we don't know what's in it. Here's a closer look.

Equipment, products and services provided by the supply chain in support of shale energy operations are produced by businesses and workers in all 50 states. They represent 60 different industries, which fall generally within six sectors, each of which includes a tremendous variety of businesses and occupations. Here's a summary of these sectors, also depicted graphically on the following supply chain diagram:

1. **Equipment and machinery manufacturing, distribution, rental and maintenance;** including earthmoving, material handling, drilling, pumping, power generation and distribution, and welding equipment. Also trucks, tanks, engines, compressors, and well-head equipment.
2. **Construction of production sites and facilities;** including well-site and access infrastructure, gathering systems, storage and processing facilities; also services directly supporting drilling and production activities
3. **Logistics;** including hauling of equipment, materials and supplies to and from production sites; and truck, pipeline and rail transportation of both energy products and drilling waste away from the sites
4. **Materials, supplies and components;** including steel and other metals, drilling solution, cement, concrete, industrial gasses, sand, pipe, valves, fittings, and flow control and electrical components
5. **Information technology;** including computers, software and services for exploration, process measurement and control, and data management and analysis
6. **Professional, financial and other services;** including architectural, environmental and facilities engineering; water and waste management services; financial, real estate and insurance services



The energy supply chain is remarkably broad, diverse and complex. It is important to know that almost every product or service has its own supply chain – businesses and workers that may be one or two steps removed from the production site, but are nevertheless ultimately dependent on, and contribute to, shale energy operations.

To illustrate, take the example of a piece of earthmoving machinery – let’s say a bulldozer or excavator – used to grade a drilling pad, carve out access roads, or dig foundations and trenches for oil and gas gathering and storage systems.

Think of what goes into manufacturing that big machine and putting it out on the energy production site. There’s raw steel, fabricated steel plate and forgings; the machine tools that cut, bend, machine and weld steel components; steel buckets, teeth and attachments; a high-horsepower engine and transmission with all of their components; hydraulic cylinders and components; steel sprockets and tracks or huge rubber tires; electrical and electronic controls and components; not to mention hoses, valves, filters, gaskets, lubricants, and fuel. Then there’s the preparation, maintenance and delivery of the machine to the production site by the dealer or rental company. And last but far from least, there’s a skilled operator needed to run the machine safely and efficiently and deliver the work it’s designed to produce.

Whatever the machine’s brand, the company making it has thousands of suppliers of components, materials and services that go into building it and putting it to work. And their suppliers have suppliers and so on down the supply chain line, until you get to raw material. The vast majority of these businesses are smaller local and regional firms.

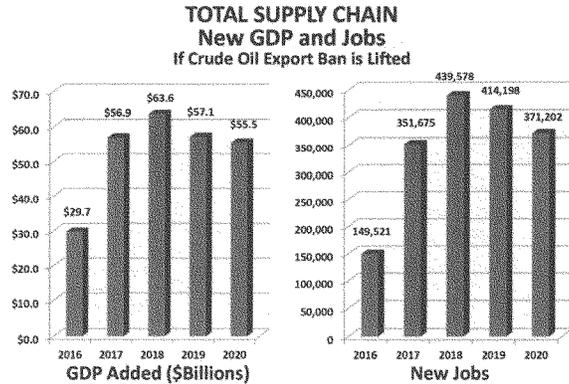
As with a real chain, each link is essential to the end result. A similar story can be told for just about every primary product or service used in energy production.

Now we'd like to turn to the shale supply chain's economic and employment dimensions. Late last year, the research firm IHS published a study reporting the extent of supply chain jobs and output generated by U.S. unconventional oil and gas operations. It reported that in 2015, the supply chain consists of 615,000 jobs, growing to 757,000 by 2025, for 23% growth. Output in 2015 is \$173 billion, growing to \$206 billion by 2025 (in constant dollars), for 20% growth. These numbers assume that current energy policies remain in effect. The study also documents that energy supply chain workers earn, on average, \$79,000 per year, versus \$68,000 for all American workers. These numbers represent just those workers, and their output, that exist because of shale energy.

IHS recently released a new study measuring the potential additional growth in the supply chain that would occur if the export ban is lifted. This was reported in terms of new jobs, labor income, GDP growth and new tax revenues. Its key findings, in summary, are:

- The export ban *reduces* US oil investment, production, supply chain activity, and job growth, but *raises* US gasoline prices.
- Each crude oil production job creates three in the supply chain and another six in the broader economy.
- Every dollar of GDP in the oil and gas sector generates two dollars in the supply chain.
- Lifting the ban would create up to 440,000 new supply chain jobs by 2018.
- Lifting the ban would add \$64 billion of supply chain output to GDP by 2018.
- Supply chain benefits reach into every state and most congressional districts.
- For example, Illinois, with little production, accounts for roughly 10% of the overall supply chain impact.

The report measures 60 supply chain industries, by state and by congressional district, annually through 2030. Here is a top-line data chart showing the total supply chain jobs and GDP impacts through 2020. Jobs and GDP peak in 2018 at 440,000 and \$64 billion, respectively.



IHS Study: Crude Oil Exports: Unleashing the Supply Chain Study (March 2015, Potential Production Case)

These numbers reflect the potential production case, which includes producing an average of 2.3 million barrels per day above current production, to supply the newly available global crude oil customer base. This case assumes additional production from known areas of existing plays, enhanced with moderate drilling performance and technology improvements.

As noted earlier, the supply chain is truly national, and not confined to crude oil and natural gas producing areas. To illustrate, this slide demonstrates the chain's geographic diversity in terms of job creation, showing both the base and the potential production cases. Of the top fifteen states by job gains if the export ban were lifted, ten are states in which very little or no crude oil is produced.

	Base	Potential
CA	43,129	57,338
TX	32,279	40,599
IL	17,644	26,909
NY	13,956	24,605
FL	12,213	22,481
OH	10,475	13,601
GA	7,520	13,271
MI	8,109	13,256
PA	7,325	13,251
WA	8,204	12,903
NC	7,085	12,664
MA	7,568	12,046
OK	7,628	11,006
WI	6,264	10,219
MD	6,238	9,911



**THE SUPPLY CHAIN:
It's Everywhere!**

**10 of the top 15 states
by job gain are
Non-producing States**

**New Supply Chain Jobs
by 2018 with the
export ban lifted**

IHS Study: Unleashing the Supply Chain (March 2015)

Similarly, GDP growth is also spread widely throughout the country. Of the top fifteen states by potential GDP growth if the export ban were lifted, eleven are states in which very little or no crude oil is produced.

State	Base	Potential
CA	\$5.8	\$7.6
TX	\$4.2	\$7.1
IL	\$3.2	\$5.2
NY	\$2.5	\$4.3
FL	\$1.8	\$3.0
WA	\$1.2	\$2.1
MA	\$1.2	\$2.0
OH	\$1.5	\$1.9
NC	\$1.0	\$1.8
SC	\$1.0	\$1.8
PA	\$1.1	\$1.7
MD	\$1.0	\$1.7
VA	\$0.9	\$1.6
GA	\$0.9	\$1.5
MI	\$0.9	\$1.5



THE SUPPLY CHAIN:
It's Everywhere!

**11 of the top 15 states
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**New Supply Chain GDP
\$billions by 2018 with the
export ban lifted**

IHS Study: Unleashing the Supply Chain (March 2015)

We estimate that there are no less than 120,000 shale energy supply chain companies in the U.S., at least 100,000 of which are small businesses. Using the Small Business Administration estimate that half of American workers are employed by small business, we project that of the major job and GDP gains forecast from lifting the export ban, small supply chain businesses would be responsible for creating at least half of them.

While some would claim that the crude oil industry is a game for big business, exactly the opposite is true. Companies in the supply chain, and the communities in which they operate, will benefit to an even greater extent than the producers themselves, as evidenced by the IHS-reported ratio of three jobs for one, and two dollars for one, in the supply chain versus at the producer level.

That's why E E I A and our member companies, unions and trade associations urge support of legislation to repeal this obsolete policy.

**Congresswoman Radewagen (AS-at-large) Opening Statement for 6/
17/15 HSBC Hearing**

**Crude Intentions: The Untold Story of the Ban, the Oil Industry,
and America's Small Businesses**

Thank you Mr. Chairman:

I want to thank Chairman Chabot and Ranking Member Velázquez for holding this hearing today to examine the impact that removing the ban on crude exports will have on our nation's small businesses. This is an important issue, which if addressed properly has the potential to significantly and positively affect our rapidly growing national deficit and provide jobs to an estimated-additional 500,000 to 1.75 million people by 2025.

To me Mr. Chairman and Members of the Committee, this is a no brainer. It is time that we lift this ban, which is the result of outdated policy set in the 1970's; a time that was the darkest for the United States in terms of energy availability and production. Those of us who are old enough to remember the long lines at gas stations and the rationing programs can attest to this.

We are now in a time of abundance. Why we are not fully embracing this god-send is beyond me. The United States continues to let nations like Russia and Saudi Arabia, who let's be honest, are not our closest of friends, continue to dominate the export market around the globe, while we tie our own hands to appease those same nations and certain domestic organizations, who are more concerned with their own agenda than that of the nation.

Mr. Chairman, it is high-time that we lift this unnecessary, outdated and misguided ban, and move the United States forward into the 21st Century as THE world leader in energy production and exports.

Thank you Mr. Chairman, I yield back.

