

**EVALUATING FEDERAL OFFSHORE
OIL AND GAS DEVELOPMENT ON
THE OUTER CONTINENTAL SHELF**

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND
MINERAL RESOURCES

OF THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

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**OVERSIGHT HEARING ON EVALUATING
FEDERAL OFFSHORE OIL AND GAS DEVELOPMENT ON THE OUTER CONTINENTAL SHELF**

Wednesday, July 12, 2017

**U.S. House of Representatives
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
Washington, DC**

The Subcommittee met, pursuant to notice, at 10:02 a.m., in room 1324, Longworth House Office Building, Hon. Paul Gosar [Chairman of the Subcommittee] presiding.

Present: Representatives Gosar, Gohmert, Lamborn, Wittman, Graves, Hice; Lowenthal, Brown, Tsongas, Beyer, Soto, and Barragán.

Dr. GOSAR. The Subcommittee on Energy and Mineral Resources will come to order. I ask that there not be any kind of disruption regarding the testimony given here today. It is important that we respect the decorum and the rules of the Committee and of the House, and to allow the Members and the public to hear our proceedings.

The Subcommittee is meeting today to hear testimony on evaluating Federal offshore oil and gas development on the Outer Continental Shelf.

I ask unanimous consent that the gentleman from Alaska, Mr. Young, be allowed to sit with the Subcommittee and to participate in this hearing.

Without objection, so ordered.

Under Committee Rule 4(f), any oral opening statements at the hearings are limited to the Chairman, the Ranking Minority Member, and the Vice Chair. This will allow us to hear from our witnesses sooner, and help the Members keep to their schedules. Therefore, I ask unanimous consent that all other Members' opening statements be made part of the hearing record, if they are submitted to the Subcommittee Clerk by 5:00 p.m. today.

Without objection, so ordered.

**STATEMENT OF HON. PAUL A. GOSAR, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF ARIZONA**

Dr. GOSAR. Today, the Subcommittee will discuss Federal offshore oil and gas development on the Outer Continental Shelf, or OCS. America's offshore industry produces 20 percent of our Nation's domestic oil supply from the OCS, and directly employs 300,000 Americans. In turn, this industry supports hundreds of thousands of additional jobs through associated industries, and serves as an important facet of coastal life.

Furthermore, it is an economic boon for those states fortunate enough to enjoy offshore production. Through lease bonuses, rental payments, and production royalties, states, their coastlines, and the Federal Government are provided with billions of dollars each year.

In fact, Federal leasing revenues for 2016 totaled \$2.8 billion, with portions going to states and coastal communities. These shared revenues are used to fund schools, coastal restoration, and infrastructure projects throughout each receiving state, fortifying their economies and providing jobs across the Gulf Coast.

However, this revenue source has fallen dramatically over the past 8 years due to the prior administration's hostile position toward harnessing our offshore energy potential. In fact, at \$18 billion in 2008, the share brought into Federal coffers from offshore revenues was more than six times higher than it was in 2016, at the end of the Obama administration.

The new Administration's "America First" initiative seeks to reverse the prior administration's stunted approach to domestic energy production by requiring our government to carefully review and reconsider all of our Nation's energy resources, including coal, oil and gas, as well as renewable resources.

The review of our offshore resources is being conducted by the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE), who together administer over 1.7 billion acres of federally submerged lands and over 3,000 active leases. It is the duty of these agencies to ensure the exploration, leasing, and development of offshore hydrocarbon resources are promoted to fulfillment of the President's energy initiative.

To determine the location and schedule of Federal offshore lease sales, BOEM develops a 5-year leasing program that considers geological data, public input, and environmental impacts to determine the area and timing of offshore leasing. The basis for planning requires an accounting of what we actually have to work with.

In recent years, the advent of 3D seismic surveying and data processing has provided a more dynamic and accurate picture of geologic formations that allows policy makers, the public, scientists, and industry to make informed and safe decisions about leasing and drilling.

However, much of our Nation's offshore resources have not been evaluated in more than 30 years, inhibiting our regulators' ability to make informed leasing decisions.

In order to accurately manage our energy inventory, meet future demand, and ensure national security, it is imperative that we facilitate the seismic surveying permitting process in these offshore areas, including the Atlantic and Pacific Oceans.

Our leasing and drilling decisions should be determined by geology, not shifting partisan politics. I applaud Secretary Zinke's efforts to improve the seismic permitting process, and re-evaluate the OCS leasing schedule by requiring the issuance of a new 5-year plan that will take effect in 2019.

The new program will allow full consideration of OCS production in Alaska, the Mid and South Atlantic, and the Gulf of Mexico. Communities and states along the Atlantic Coast, in particular,

have long expressed interest in evaluating and potentially developing offshore energy resources, and will have a voice in the leasing process.

With 94 percent of the OCS precluded from responsible development under the previous plan, the new planning process will give previously excluded communities an opportunity to join the leasing conversation.

According to a recent study, offshore leasing in the Atlantic, Pacific, and Eastern Gulf of Mexico would result in the creation of 800,000 new jobs, and \$200 billion in state and Federal revenues by 2035. Furthermore, enhanced domestic production would improve our national security position by decreasing our country's reliance on foreign sources of petroleum.

For instance, in 2016, decreased production in Alaska forced California to meet its energy demand by importing over half its crude supply from foreign sources, such as Saudi Arabia.

We are grateful for the opportunity to re-evaluate the management of our Nation's offshore resources, and look forward to a strong, respectful conversation on these issues.

[The prepared statement of Dr. Gosar follows:]

PREPARED STATEMENT OF THE HON. PAUL A. GOSAR, CHAIRMAN, SUBCOMMITTEE ON
ENERGY AND MINERAL RESOURCES

Today, the Subcommittee will discuss Federal offshore oil and gas development on the Outer Continental Shelf, or "OCS." America's offshore industry produces 20 percent of our Nation's domestic oil supply from the OCS, and directly employs 300,000 Americans. In turn, this industry supports hundreds of thousands of additional jobs through associated industries, and serves as an important facet of coastal life.

Furthermore, it is an economic boon for those states fortunate enough to enjoy offshore production. Through lease bonuses, rental payments, and production royalties, states, their coastlines, and the Federal Government are provided with billions of dollars each year. In fact, Federal leasing revenues for 2016 totaled \$2.8 billion, with portions going to states and coastal communities. These shared revenues are used to fund schools, coastal restoration, and infrastructure projects throughout each receiving state, fortifying their economies and providing jobs across the Gulf Coast.

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The new Administration's "America First" initiative seeks to reverse the prior administration's stunted approach to domestic energy production by requiring our government to carefully review and reconsider all of our Nation's energy resources, including coal, oil and gas, as well as renewable sources. The review of our offshore resources is being conducted by the Bureau of Ocean Energy Management, or BOEM, and the Bureau of Safety and Environmental Enforcement, or BSEE, who together administer over 1.7 billion acres of federally submerged lands and over 3,000 active leases. It is the duty of these agencies to ensure the exploration, leasing, and development of offshore hydrocarbon resources are promoted in fulfillment of the President's energy initiative.

To determine the location and schedule of Federal offshore lease sales, BOEM develops a 5-year leasing plan that considers geologic data, public input, and environmental impacts to determine the area and timing of offshore leasing. The basis for planning requires an accounting of what we actually have to work with. In recent years, the advent of 3D seismic surveying and data processing has provided a more dynamic and accurate picture of geologic formations that allows policymakers, the public, scientists, and industry to make informed and safe decisions about leasing and drilling. However, much of our Nation's offshore resources have not been evaluated in over 30 years, inhibiting our regulators' ability to make informed leasing decisions.

In order to accurately manage our energy inventory, meet future demand, and ensure national security, it is imperative that we facilitate the seismic surveying permitting process in these offshore areas, including the Atlantic and Pacific Oceans. Our leasing and drilling decisions should be determined by geology, not shifting partisan politics, and I applaud Secretary Zinke's efforts to improve the seismic permitting process and re-evaluate the OCS leasing schedule by requiring the issuance of a new 5-year plan that will take effect in 2019.

The new program will allow for full consideration of OCS production in Alaska, the Mid and South Atlantic, and the Gulf of Mexico. Communities and states along the Atlantic Coast, in particular, have long expressed interest in evaluating and potentially developing offshore energy resources, and will have a voice in the leasing process. With 94 percent of the OCS precluded from responsible development under the previous plan, the new planning process will give previously excluded communities an opportunity to join the leasing conversation.

According to a recent study, offshore leasing in the Atlantic, Pacific, and Eastern Gulf of Mexico would result in the creation of 800,000 new jobs and \$200 billion in state and Federal revenues by 2035. Furthermore, enhanced domestic production would improve our national security position by decreasing our country's reliance on foreign sources of petroleum. For instance, in 2016, decreased production in Alaska forced California to meet its energy demand by importing over half its crude supply from foreign sources, such as Saudi Arabia.

We are grateful for the opportunity to re-evaluate the management of our Nation's offshore resources, and look forward to a strong, respectful conversation on these issues.

Dr. GOSAR. I now recognize the gentleman from California, the Ranking Member, Mr. Lowenthal, for his 5 minutes.

STATEMENT OF THE HON. ALAN S. LOWENTHAL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Dr. LOWENTHAL. Thank you, Mr. Chairman. Before getting into the offshore discussion, I would just like to touch on a few things about onshore drilling.

Just 2 weeks ago, we learned that the oil and gas companies currently hold 7,950 approved drilling permits that they have not used—that is almost 8,000. We have also learned that the so-called backlog of unprocessed drilling permits is the smallest in over a decade. It is roughly 2,800.

If we take these two facts, a record high number of permits—8,000 waiting to be used—and a historically low number of permits waiting to be approved, and combine that with the glut of domestic oil that is so huge that we are shipping it to other countries almost as fast as we can get it out of the ground, you might think that speeding up drilling permits shouldn't be a pressing issue.

But you would be wrong, because last week Secretary Zinke announced a new effort to try to approve permits even faster. In doing so, he said, "the Department of the Interior will be a better neighbor in the new Trump administration."

So, if you are the kind of person who likes to live next to oil rigs, that will undoubtedly be true, because the Department of the Interior and the Administration have made it clear they are fully devoted to giving the oil and gas industry anything that it wants.

But if you live near public lands and appreciate clean water or clean air, or the ability to hunt, fish, camp, hike, graze, or simply enjoy the scenic beauties of the land, Interior is going to become the worst neighbor imaginable.

One of these places where clean water and scenic beauty are particularly important is our beaches. According to the National Oceanic and Atmospheric Administration, tourism and recreation along our Atlantic and Pacific coasts alone employs over 1.5 million people, and creates \$71 billion in GDP. Over 1 million of those jobs are on the East Coast.

Think about that when you hear the industry-generated fantasies of 215,000 jobs if the entire Atlantic Seaboard was open to drilling rigs. Four times as many jobs would be at risk from the industrial facilities that would be built along the coast. Four times as many jobs would be at risk from the chronic pollution and pipeline spills that are widespread with offshore rigs of oil and gas. And four times as many jobs would be at risk from a catastrophic blowout like the one we saw in the Gulf of Mexico only 7 years ago.

Prior to the Deepwater Horizon, we were told time and time again that nothing like that could ever again happen in the United States. The industry was too smart, the technology was too good to let something like that happen. After all, it had been 40 years since the Santa Barbara blowout, which just showed that we were perfectly safe.

But obviously, we were not safe. We did learn a lot from the Deepwater Horizon, with hundreds upon hundreds of recommendations for improving the regulation, safety, and environmental impact of offshore drilling. Some of those recommendations were aimed at Congress. We have not acted.

But many of those recommendations were taken to heart by the Obama administration, which toughened the rules on drilling, required real safety plans from companies, and established an agency devoted to regulating safety offshore.

Now, with all that new regulation, what happened? Offshore oil production is now at an all-time high and climbing. In the first half of the year, nearly 400 offshore permits were approved, and only 23 are pending.

But now the Trump administration wants to take us backward. Currently, they are reviewing all—and I repeat, all—the new offshore policies with an eye not toward what makes us safer—that is not what they are looking at—but what makes things easier and more profitable for ExxonMobil, Shell, and BP.

And now they have decided to restart a new 5-year leasing process, throwing away 2½ years of planning and tens of millions of dollars of effort, ignoring the overwhelming bipartisan opposition from hundreds of thousands of people up and down the Atlantic and Pacific Coasts, and eliminating the protections that President Obama provided for the fragile Arctic.

Lifting regulations on the oil and gas industry, while giving them more of our oceans to play with is a dangerous combination. I fear it would just be a matter of time before we see a repeat of that horrible day 7 years ago.

Thank you, and I yield back my time.

[The prepared statement of Dr. Lowenthal follows:]

PREPARED STATEMENT OF THE HON. ALAN S. LOWENTHAL, RANKING MEMBER,
SUBCOMMITTEE ON ENERGY AND MINERAL RESOURCES

Thank you, Mr. Chairman.

Before getting into the offshore discussion, I'd like to just touch on a few things about onshore drilling.

Two weeks ago, we learned that oil and gas companies currently hold 7,950 approved drilling permits that they have not used. We also learned that the so-called "backlog" of unprocessed drilling permits is the smallest in over a decade—roughly 2,800.

Take these two facts—a record high 8,000 permits waiting to be used, and a historically low number of permits waiting to be approved—and combine that with a glut of domestic oil so huge we're shipping it to other countries almost as fast as we can get it out of the ground, and you might think that speeding up drilling permit approvals shouldn't be a pressing issue.

But you'd be wrong.

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If you're the kind of person who likes to live next to oil rigs, that will undoubtedly be true. Because the Department of the Interior and this Administration have made it clear they are fully devoted to giving the oil and gas industry anything it wants. But if you live near public lands and appreciate clean water, or clean air, or the ability to hunt, fish, camp, hike, graze, or simply enjoy the scenic beauty of those lands, Interior is going to become the worst neighbor imaginable.

One of those places where clean water and scenic beauty are particularly important is our beaches. According to the National Oceanic and Atmospheric Administration, tourism and recreation along our Atlantic and Pacific coasts alone employs over 1.5 million people and creates \$71 billion in GDP. Over 1 million of those jobs are on the East Coast. Think about that when you hear the industry-generated fantasies of 215,000 jobs if the entire Atlantic seaboard was open to drilling rigs.

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Lifting regulations on the oil and gas industry, while giving them more of our oceans to play with is a dangerous combination, and I fear it would just be a matter of time before we see a repeat of that horrible day 7 years ago.

I yield back the balance of my time.

Dr. GOSAR. I thank the gentleman. I am now going to introduce our guests.

First we have Ms. Katharine MacGregor, Acting Assistant Secretary, Land and Mineral Management, U.S. Department of the Interior—Round two, right? And Ms. Lori LeBlanc, Director, Offshore Committee, Louisiana Mid-Continent Oil and Gas Association; Ms. Margaret S. Howell, Founder, Stop Offshore Drilling in the Atlantic; Mr. Michael Whatley, Executive Vice President, Consumer Energy Alliance; and Dr. James H. Knapp, Professor, School of the Earth, Ocean, and Environment, University of South Carolina.

Let me remind the witnesses that under our Committee Rules, they must limit their oral statements to 5 minutes, but their entire statement will appear in the hearing record.

Our microphones are not automatic. Once you start, you have to push the little button to make sure you are speaking. You are going to see a little flag up in front of you. For the first 4 minutes it is going to be green. Then it will turn to yellow. When you see the red, I am going to start cutting you off, so wrap it up.

I am going to now start with Ms. MacGregor.

Thanks for coming back. You are recognized.

STATEMENT OF KATHARINE MACGREGOR, ACTING ASSISTANT SECRETARY, LAND AND MINERALS MANAGEMENT, U.S. DEPARTMENT OF THE INTERIOR, WASHINGTON, DC

Ms. MACGREGOR. Chairman Gosar, Ranking Member Lowenthal, and members of the Subcommittee, thank you for, once again, the opportunity to appear before you today to discuss the Department of the Interior's offshore oil and gas programs. My name is Kate MacGregor, and I am currently serving as the Acting Assistant Secretary for Land and Minerals Management.

The Department, through the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) plays a central role in advancing the Administration's America First energy agenda and Secretary Zinke's goal of achieving American energy dominance.

BOEM manages the Nation's energy and mineral resources on 1.7 billion acres of the Outer Continental Shelf. BSEE is charged with regulatory oversight and enforcement to ensure safe and responsible exploration, development, and production.

The Administration's America First energy agenda aims to safely harness all of our Nation's energy resources, including oil and gas, coal, and renewable energy. Offshore energy production is vital to this strategy, and currently accounts for 18 percent of our domestic oil production, 4 percent of our domestic natural gas production, billions of dollars in revenue for the Treasury, states, and conservation programs, and it supports over 300,000 jobs nationwide. Over 85 oil and gas companies operate today on the OCS, and in 2016 alone, production from offshore leases generated \$2.8 billion. In short, the OCS is a critical economic driver for our Nation.

Last month marked the end of the 2012–2017 5-year OCS oil and gas leasing program, comprised of 13 lease sales. Lease sale 244, the final sale in the program, was conducted last month in Alaska's Cook Inlet. That sale received bids on 14 tracks for a total of more

than \$3 million. This is the first time in 20 years that Federal leases in the Cook Inlet have received bids. We are now operating under the 2017–2022 5-year offshore oil and gas leasing program. This program consists of 11 lease sales, nearly all of which are in the Gulf of Mexico, with the exception of one in the Cook Inlet.

Since the start of this Administration, several ongoing efforts have been underway to ensure that OCS oil and gas resources are made available to help meet our Nation’s energy needs. I want to touch on just a few examples of the work the Department and its bureaus are doing to advance this agenda under Secretary Zinke’s leadership.

First, in March, Secretary Zinke signed an order implementing the review of agency actions directed by the President’s Executive Order entitled, “Promoting Energy Independence and Economic Growth.” This order directed agencies to review all actions that potentially burden domestic energy production. BSEE and BOEM are undertaking a thorough review of their rulemakings in accordance with this directive.

Second, in May, Secretary Zinke signed Secretarial Order 3350, which implements the President’s America First offshore energy Executive Order. This order enhances opportunities for energy exploration, leasing, and development; directs a review of specific regulatory actions; and promotes collaboration with other Federal agencies whose actions may impact offshore energy development.

Chief among the action items called for in this order is the development of a new 5-year program with full consideration given to areas omitted in the current program. This includes areas in Alaska and the Mid and South Atlantic.

The leasing program is critical to future development because the life cycle of an offshore well can span several years. In many cases, production today is the result of leases issued decades ago. By opening the planning process for a new 5-year program, we will examine long-term opportunities to enhance responsible offshore energy development in the United States. We will ensure public input throughout the process, and maintain our ultimate commitment to safety.

Dominance is defined as exerting authority or commanding from a superior position. Dominance does not stem from eliminating areas from future production. Instead, the United States can maintain its position as a global energy leader by harnessing energy resources on public lands, and doing so safely and responsibly. Under this Administration, offshore energy production will continue to support our Nation’s position of energy superiority to meet national need, promote job growth, and keep energy prices low for American families and businesses.

As we carry out the Administration’s goal of energy dominance, we look forward to working with you and members of this Committee in our efforts. Thank you for the opportunity to testify today, and I will be happy to answer any questions.

[The prepared statement of Ms. MacGregor follows:]

PREPARED STATEMENT OF KATHARINE S. MACGREGOR, ACTING ASSISTANT SECRETARY, LAND AND MINERALS MANAGEMENT, U.S. DEPARTMENT OF THE INTERIOR

Chairman Gosar, Ranking Member Lowenthal, and members of the Subcommittee, I am pleased to join you today to discuss the Department of the

Interior's (Department) offshore programs carried out by the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE), and our efforts to advance these programs to help secure American energy dominance, create jobs, lower costs for working Americans and build a strong economy, freeing us from dependence on foreign oil. Through these programs, the Department is providing access to our energy resources offshore, while adhering to all safety and environmental laws and regulations.

The Outer Continental Shelf (OCS) is a vital component of our Nation's energy economy. It accounts for 18 percent of domestic oil production, 4 percent of domestic natural gas production, billions of dollars in annual revenue for the Treasury, states, and conservation programs, and supports more than 300,000 jobs. OCS activities are a key aspect of the Trump administration's America First Energy Agenda and Secretary Zinke's goal of maintaining our Nation's energy dominance by advancing domestic energy production, generating revenue, and creating and sustaining jobs throughout our country.

BACKGROUND

The Department manages and regulates the development of America's natural resources, including oil, gas, mineral, and renewable energy sources offshore. American energy resources create hundreds of thousands of jobs and generate significant revenue both to the U.S. Treasury and states. Through natural resource policies designed to foster growth and facilitate local input, the Department provides opportunities for new jobs and revenue for Federal, state and local governments.

BOEM manages the Nation's energy and mineral resources on 1.7 billion acres of Federal submerged lands known as the Outer Continental Shelf (OCS). BOEM is responsible for managing development of these resources through offshore leasing, resource evaluation, review and administration of oil and gas exploration and development plans, renewable energy development, economic analysis, National Environmental Policy Act analysis, and environmental studies. BOEM promotes energy security, environmental protection and economic development through responsible, science-informed management of offshore conventional and renewable energy and mineral resources. BOEM carries out these responsibilities while ensuring that American taxpayers receive fair market value from OCS leases, balancing the energy and mineral needs of the Nation with the protection of the human, marine, and coastal environments.

BSEE was established to protect life, property, and the environment by ensuring the safe and responsible exploration, development, and production of the Nation's offshore energy resources. BSEE fulfills this mission through integrated preparedness, prevention, and compliance activities. The Bureau's diverse team includes highly skilled engineers, geoscientists, geologists, environmental specialists, inspectors, and preparedness analysts. As the Administration works to support and promote domestic energy production, BSEE is taking the necessary steps to provide effective oversight of oil and natural gas development on the OCS, which reflects a careful balance among resource development, production goals, worker safety, and environmental protection. BSEE also consults with BOEM on these issues with respect to renewable energy.

BSEE actively works to promote the efficient and responsible production of America's offshore energy resources, pursuing this objective through a comprehensive program of permitting, regulations, compliance monitoring and enforcement, technical assessments, inspections, and incident investigations. As a steward of the Nation's OCS oil, gas, and mineral resources, BSEE protects Federal royalty interests as well as energy users by ensuring that oil and gas production methods maximize recovery from underground reservoirs.

The Administration's America First Energy Plan is an "all-of-the-above" plan that includes oil and gas, coal, and renewable resources and the OCS is integral to the development of important energy resources. A key principle of this plan is that America's free markets will help determine where and when energy development on the OCS is feasible. To begin implementing this strategy, the President signed an Executive Order on April 28, 2017 which directs the Secretary to take regulatory steps to encourage energy exploration and production. In furtherance of this directive and in order to respond to our Nation's energy needs, the Department is engaged in a variety of ongoing efforts to support domestic offshore production while meeting our stewardship and environmental responsibilities. These efforts include predictable leasing; reducing barriers to accessing energy resources on the OCS; reviewing and streamlining leasing and permitting processes to serve its customers and the public more efficiently and effectively; regulatory reform; and improving

coordination among key stakeholders, including state and local governments, other Federal agencies, and the public.

OUTER CONTINENTAL SHELF CONTRIBUTION TO ENERGY INDEPENDENCE

Oil and gas production from the OCS is a significant part of the America First Energy Plan and is a critical component in the Nation's energy supply. As of July 2017, there were more than 3,000 active oil and gas leases on more than 16 million OCS acres. In 2016, OCS leases provided 582 million barrels of oil, which accounted for 72 percent of all oil production from Federal lands, and 18 percent of total U.S. production of oil. During that same period, 1.3 trillion cubic feet of natural gas was produced in Federal waters, representing 27 percent of all natural gas produced on Federal lands and 4 percent of total U.S. natural gas production.

The OCS is also a key revenue source for the Federal Government, providing a significant non-tax source of funding to Federal as well as state treasuries, which serves as an important economic driver for local communities across the country. More than 85 oil and gas companies operate on Federal submerged lands. There are more than 2,100 offshore production platforms and approximately 26,800 miles of pipelines transporting oil and gas to shore. In Fiscal Year 2016, BOEM and BSEE offshore oil and gas activities supported a total of more than 300,000 jobs across the country, and billions in value added economic output. In 2016 alone, production from leases on the Federal OCS generated \$2.8 billion dollars in leasing revenue.

I would now like to provide you with information on the most recent activities in these programs.

THE 2012–2017 AND 2017–2022 OCS OIL AND GAS LEASING PROGRAMS

Last month marked the end of the 2012–2017 Five-Year OCS Oil and Gas Leasing Program. During that period, BOEM held 13 lease sales. Not including Lease Sale 244, BOEM awarded leases on over 1,350 tracts for a total of over \$3.3 billion in bonus bids. Lease Sale 244, the final sale in the program, was conducted on June 21 in the Cook Inlet Planning Area in Alaska. That sale received bids on 14 tracts for a total of \$3,034,815 in high bids and the bid evaluation process is currently being conducted. This is the first time in 20 years that OCS tracts in the Cook Inlet have received bids.

Last month also marked the beginning of the 2017–2022 Five-Year Offshore Oil and Gas Leasing Program. The Program schedules 10 region-wide sales comprised of unleased acreage in the Western, Central, and Eastern Gulf, not subject to moratoria or otherwise unavailable. This includes one sale during 2017 and 2022 and two sales during 2018, 2019, 2020, and 2021. This region-wide sale approach provides greater flexibility for industry to respond to changing market conditions, including Mexican energy reforms. The first lease sale in this program is scheduled for August 2017 in the Gulf of Mexico and will offer approximately 13,725 tracts covering about 73 million acres. The Program also offers one sale off the coast of Alaska in Cook Inlet.

LEASE CONTINUATION THROUGH OPERATIONS RULE

On June 9, 2017, BSEE issued a final rule entitled, "Oil and Gas and Sulphur Operations on the Outer Continental Shelf—Lease Continuation Through Operations," which amended sections 250.171 and 250.180 of title 30 of the Code of Federal Regulations. This rule, issued in response to provisions of the Consolidated Appropriations Act of 2017 (P.L. 115–31), extends from 180 days to 1 year the time a lease in its extended term is allowed to continue between periods of production, drilling or well-reworking operations on that lease, before the lease would expire. These additional months mean companies doing business on the OCS will have more planning flexibility, which will help them be more cost efficient, create more jobs, and maximize the economic benefit for the entire nation.

SECRETARY'S ORDER 3349

On March 29, 2017, Secretary Zinke signed Secretary's Order 3349, which implements the review of agency actions directed by an Executive Order signed by the President on March 28, 2017, and entitled "Promoting Energy Independence and Economic Growth." It also directs a re-examination of the mitigation policies and practices across the Department of the Interior in order to better balance conservation strategies and policies with the equally legitimate need to create jobs for hard-working American families.

BSEE and BOEM are undertaking a thorough review of their rulemakings in accordance with this directive. In addition, on June 22, 2017, the Secretary

requested public input on how the Department of the Interior can improve implementation of regulatory reform initiatives and policies and identify regulations for repeal, replacement, or modification. (82 Federal Register 28429; <https://www.Federalregister.gov/documents/2017/06/22/2017-13062/regulatory-reform>) The Secretary's request also provides an overview of the Department's approach for implementing the regulatory reform initiative to alleviate unnecessary burdens placed on the American people, which was established by President Trump in Executive Order (E.O.) 13777, "Enforcing the Regulatory Reform Agenda."

SECRETARY'S ORDER 3350

On May 1, 2017, Secretary Zinke signed Secretary's Order 3350, which implements the President's Executive Order 13795 entitled, "Implementing an America-First Offshore Energy Strategy" (Executive Order). Secretary's Order 3350 enhances opportunities for energy exploration, leasing, and development on the OCS; establishes regulatory certainty for OCS activities; and enhances conservation stewardship, providing jobs, energy security, and revenue for the American people. BOEM and BSEE were tasked, as discussed more fully below, with the following action items:

Initiation of the National Program Process

This action item calls for the development of a new Five-Year Outer Continental Shelf Oil and Gas Leasing Program, with full consideration given to leasing the OCS offshore Alaska, Mid-Atlantic, South Atlantic, and the Gulf of Mexico, in accordance with the provisions of the Outer Continental Shelf Lands Act (OCSLA) as directed by the Executive Order. On July 3, BOEM initiated development by publishing in the Federal Register a Request for Information (RFI) seeking comments from a multitude of stakeholders, including states, local and tribal governments, Federal agencies, energy and non-energy industries, public interest groups, and the general public. The information will be used in the analyses that the Secretary must consider in making his first of three decisions on potential sales, the Draft Proposed Program. Under the last administration, 94 percent of the OCS was off-limits to responsible development, despite interest from state and local governments and industry leaders. The Trump administration is dedicated to promoting access to our offshore energy resources in order to promote energy dominance, create more job opportunities, and keep energy prices low for American families and businesses. By opening the planning process for a new Five-Year Program, we will achieve these goals while also ensuring the public has a say in how our natural resources are used.

Cooperation with the National Marine Fisheries Service on Seismic Survey Permitting Oversight

S.O. 3350 directs BOEM, in cooperation with the National Marine Fisheries Service (NMFS), to establish a plan to expedite consideration of Incidental Take Authorization requests, including Incidental Harassment Authorizations (IHA) and Letters of Authorization, that may be needed for seismic survey permits and other OCS activities; and to develop and implement a streamlined permitting approach for privately-funded seismic data research and collection aimed at expeditiously determining the offshore energy resource potential of the United States.

On May 11, 2017, Departmental leadership met with their National Oceanic and Atmospheric Administration (NOAA)/NMFS counterparts to begin to establish a plan to expedite consideration of Marine Mammal Protection Act authorization requests, as well as associated Endangered Species Act requests, and to develop and implement a streamlined permitting approach for privately funded seismic surveys. All parties agreed that NMFS and the Department, through the U.S. Fish and Wildlife Service, would convene an interagency working group to carry out these tasks. BOEM remains steadfast in its goals to implement its legal requirements expeditiously and effectively. BOEM will participate in the interagency working group as soon as it is established, identifying issues and potential solutions that would most help to streamline the permitting process for seismic surveys.

Consideration of Atlantic Seismic Permitting Applications

This directive calls for the expedited consideration of appealed, new, or resubmitted seismic permitting applications for the Atlantic. As we begin the important job of deciding which areas will be offered for exploration and development in a new Five-Year Program, information on what resources are potentially available is critical. For this reason, we are moving forward with evaluation of the seismic permit applications for the Mid- and South Atlantic. The current data for these areas was collected 30 to 40 years ago. There have been many advances in technology since

then, and we need to have a better understanding of the resources we manage for the Nation.

Following the previous administration's January 2017 denials of six pending G&G permit applications, and the subsequent Notices of Appeal by the applicants, BOEM's Acting Director issued a memorandum on May 10, 2017, seeking a remand by the Interior Board of Appeals of the January 2017 denials so that the applications could be processed. Upon request by BOEM, the Interior Board of Land Appeals remanded the appealed denials to BOEM on May 15, 2017, and BOEM notified the companies that the denials had been rescinded.

BOEM has resumed its evaluation of the previously denied applications. The NMFS Draft Proposed IHAs were published in the Federal Register on June 6, 2017, initiating a 30-day public comment period that has since been extended by NOAA to July 21, 2017. The draft IHAs will be updated to reflect any new information resulting from the public review. BOEM will then coordinate with NMFS on mitigation issues.

Review of Notice to Lessees (NTL) No. 2016-N01

The order directs BOEM to promptly complete the previously announced review of NTL No. 2016-N01 and to produce a report describing the review and options for revising or rescinding the NTL. This NTL modified BOEM's financial assurance program, which is designed to ensure that OCS lessees are able to meet all of their obligations. Currently, the timeline for implementation of the NTL has been extended pending completion of the review by the Department. However, BOEM has the authority to issue sole liability orders if it determines there is a substantial risk of nonperformance of the interest holder's decommissioning liabilities.

BOEM is finalizing its review of NTL 2016-N01, and has obtained significant industry feedback, principally from the Outer Continental Shelf Advisory Board, the Offshore Operators Committee, and the Pipeline Coalition. Final program recommendations from BOEM to senior management are forthcoming. Consistent with Secretary's Order 3350, BOEM does not intend to implement the NTL prior to completing its review.

Re-Examination of the "Offshore Air Quality Control, Reporting, And Compliance" Proposed Rule

This action item requires that BOEM immediately cease all activities to promulgate the "Offshore Air Quality Control, Reporting, and Compliance" Proposed Rule published in the Federal Register on April 5, 2016, and all other rules and guidance published pursuant thereto. BOEM is reviewing options for revising or withdrawing the proposed rule.

Review of the Well Control and Blowout Preventer Rule (BOP)

This action item directs BSEE to "Promptly review the final rule on 'Oil and Gas and Sulfur Operations in the Outer Continental Shelf—Blowout Preventer Systems and Well Control' for consistency with the policy set forth in section 2 of the Executive Order as well as all policies, rules, guidance, instructions, notices, or other implementing actions that have been adopted or are in the process of being developed relating thereto."

The final Well Control Rule (WCR) was issued more than 12 months ago and is being implemented by industry while some provisions of the rule have staggered implementation dates. Based on feedback from industry and other parties since the final rule was issued, BSEE has identified potential modifications to the rule and subsequent related rulemakings. While internal review of this regulation is ongoing, any change would require adherence to the rulemaking process, which would provide opportunities for public comment on any proposed changes.

Review of Final Rule on Exploratory Drilling in the Arctic

This action item calls for the prompt review by both BOEM and BSEE of the final rule entitled "Oil and Gas and Sulfur Operations on the Outer Continental Shelf—Requirements for Exploratory Drilling on the Arctic Outer Continental Shelf," published in the Federal Register on July 15, 2016. In accordance with Section 4c of Secretary's Order 3350, the President's Executive Order on Promoting Energy Independence and Economic Growth, signed on March 28, 2017, as well as OMB guidance on Regulatory Review, internal review of this regulation is ongoing. Any change would require adherence to the rulemaking process, which would provide opportunities for public comment on any proposed changes.

BOEM and BSEE are currently on track to comply with all action items tasked to them by Secretary's Order 3350.

RENEWABLE ENERGY PROGRAM

BOEM has 13 commercial offshore wind energy leases in Federal waters, totaling over 1.2 million acres on the OCS. In fact, BOEM's Offshore Renewables Program now has wind energy leases off every state from Massachusetts to North Carolina, forming the foundation for an offshore wind industry in the Atlantic.

In the Atlantic, BOEM has held seven competitive offshore wind lease sales, generating \$67.9 million in high bids. In December 2016, after soliciting input from all stakeholders, particularly the fishing community, BOEM conducted an auction for 79,350 acres offshore New York, resulting in a winning bid of \$42,469,725 for the lease area. This auction, which yielded the highest revenue of any domestic offshore renewable energy auction to date, underscores the growing market demand for renewable energy among our coastal communities. In March 2017, BOEM auctioned 122,405 acres offshore Kitty Hawk, North Carolina. The provisional winner of the lease sale is Avangrid Renewables, LLC, with a bid of over \$9 million.

In the Pacific, BOEM continues to work closely with states and other stakeholders to facilitate offshore renewable energy development on the OCS off California, Oregon, and Hawaii. In the Gulf of Mexico, we are seeing interest by some oil companies to possibly use renewable energy resources to provide or supplement power for offshore operations, as well as interest from oil and gas-related manufacturing, fabrication and service industries to expand into the renewable energy sector.

MARINE MINERALS PROGRAM

BOEM is the only Federal agency authorized under the OCSLA to convey OCS sand resources for shore protection, beach, or wetland restoration projects undertaken by a Federal, state or local government. In exercising this authority, BOEM may issue a negotiated non-competitive lease for the use of OCS sand to a qualifying entity in response to a request.

BOEM has invested more than \$40 million over the past 20 years to identify non-energy resources on the OCS, conduct world-class scientific research, and lease OCS resources to coastal communities and other Federal agencies in need. Information from environmental research and resource identification has informed environmental assessment and leasing decisions concerning the use of OCS sand resources in beach nourishment and coastal restoration. To date, BOEM has authorized the conveyance of over 139 million cubic yards of sand in eight states resulting in the restoration of 303 miles of coastline. Notable projects include significant beach restoration in Brevard, Duval, and Pinellas Counties in Florida, and coastal restoration along the coasts of New Jersey and New York in the aftermath of Hurricane Sandy. Major restoration efforts have also occurred along the coastline of Louisiana.

CONCLUSION

Mr. Chairman, thank you again for the opportunity to be here today to discuss the Department, BOEM and BSEE's efforts to execute our missions to safely and responsibly reduce our dependence on foreign oil and create jobs through the development of these important energy resources.

I will be glad to answer any questions that you or members of the Subcommittee may have.

QUESTIONS SUBMITTED FOR THE RECORD TO MS. KATHARINE MACGREGOR, ACTING ASSISTANT SECRETARY, LAND AND MINERALS MANAGEMENT, U.S. DEPARTMENT OF THE INTERIOR

Ms. MacGregor did not submit responses to the Committee by the appropriate deadline for inclusion in the printed record.

Questions Submitted by Rep. Gosar

Question 1. Does BOEM consider impacts to microorganisms (or plankton) when completing Programmatic Environmental Impact Statements for OCS G&G activities?

Question 2. What is BOEM's process for considering and assessing new scientific studies and how does BOEM incorporate new scientific findings into its decision-making process?

Question 3. What improvements have been made since the Deepwater Horizon spill to prevent future spills?

Questions Submitted by Rep. Lowenthal

Question 1. Please provide the full analysis performed by BOEM to support the reduction of royalty rates for shallow-water leases in Gulf of Mexico Lease Sale 249.

Question 2. Please explain the specific way that the Department of the Interior is calculating benefits for regulations and policies being reviewed for their potential burden on the development of energy resources.

Question 3. Both you and the Secretary have said that the Department is fully committed to all energy sources, and does not favor oil and gas over renewables. However, the proposed FY 2018 budget for renewables is cut in both BOEM and BLM while oil, gas, and coal programs would receive budget increases. When asked about the cut to the BOEM renewable energy program during the FY 2018 budget hearing, Secretary Zinke said, "With regard to wind, the budget matches the anticipated demand."

3a. Please provide the analysis showing the expected drop in offshore wind demand that justifies the proposed cut to the BOEM renewable energy program.

3b. Please provide any analysis that was done to show the expected increase in demand in Federal coal leasing that justifies the proposed 80 percent increase in the FY 2018 BLM coal program budget.

3c. The FY 2018 BOEM Budget Justification indicates that the cut to the BOEM renewable energy program would significantly hurt the program, and drive a decrease in demand for offshore wind. It reads that the cut will, "slow the advancement of offshore renewable energy commercial leasing activities on both the Atlantic and Pacific coasts," and that, "although stakeholder meetings will still occur, BOEM may not be able to provide a trained facilitator at all of these meetings, which could impact their effectiveness." How are these statements consistent with the idea that the renewable budget is being cut due to an expected decrease in demand that is separate from the impact of the budget cut itself?

3d. The Secretary also indicated his desire to hold better stakeholder outreach regarding offshore wind, particularly with fishermen. Given that the proposed BOEM FY 2018 budget would, according to BOEM, make stakeholder outreach meetings less effective, how is the proposed cut consistent with Secretary Zinke's stated desire to improve outreach to fishermen?

Question 4. Please identify each remaining deepwater lease issued inclusively between 1996 and 2000 under the provisions of the OCS Deep Water Royalty Relief Act for which royalties were not paid in FY 2016, the volumes of royalty-free deepwater (>200m) oil and gas produced in FY 2016 broken down by the amount of production of oil and gas attributable to each company that owns all or part of each royalty-free deepwater lease, and the amount of royalty-free volumes of oil and gas remaining to be produced from each of the remaining leases. What is the total amount of royalties that have been foregone under the terms of the OCS Deep Water Royalty Relief Act?

Dr. GOSAR. Thank you. The Chair now recognizes Ms. LeBlanc for her 5 minutes.

STATEMENT OF LORI LEBLANC, DIRECTOR, OFFSHORE COMMITTEE, LOUISIANA MID-CONTINENT OIL AND GAS ASSOCIATION, BATON ROUGE, LOUISIANA

Ms. LEBLANC. Good morning, Mr. Chairman, Ranking Member Lowenthal, and members of the Committee. I appreciate the opportunity to participate in today's hearing on oil and gas development opportunities of the OCS. My name is Lori LeBlanc. I currently serve as the Director of the Offshore Committee for the Louisiana Mid-Continent Oil and Gas Association (LMCOGA), and I live and work in Lafourche Parish, Louisiana.

LMCOGA is Louisiana's longest-standing trade association, exclusively representing all aspects of the oil and gas industry onshore and offshore. First, I would like to take a moment to recognize Majority Whip Scalise, who has been a champion for Louisiana's offshore energy industry, and we continue to keep him in our prayers as he is going through this recovery process. I also thank Congressman Graves for his leadership on our offshore energy issues.

As the Committee looks at opportunities for increasing offshore access for oil and gas development, I urge you to look to Louisiana and our long history in successfully producing America's energy.

I want to make two primary points in today's testimony.

First, Louisiana is a leader in producing American energy, and we do it in such a way that we balance energy production with environmental stewardship. Louisiana has demonstrated that not only are we an energy state, but we are also the sportsman's paradise.

My second point is that the OCS revenue sharing is critical to Louisiana's environmental stewardship, and it should be preserved, enhanced, and included in any future proposals for OCS energy development activities.

To best understand the potential of our Nation's offshore energy development, it is useful to take a look at the scope of energy production that takes place in the Gulf. Since the first offshore well was drilled 70 years ago, the Gulf has produced 90 percent of domestic U.S. crude oil from all OCS territories, with approximately 20 percent of our Nation's oil and gas currently coming from the Gulf.

Louisiana has a long and distinguished history of producing the energy to fuel America. In 2016, about 18 percent of our crude oil and 4.5 percent of our natural gas production occurred in Federal waters off of our coast. Louisiana is first in revenues generated offshore, with an estimated \$5 to \$14 billion going to the Federal Treasury each year.

In 2014, in fact, Federal revenues from energy production in the Gulf were \$7.4 billion. This revenue stream is one of the largest sources of annual deposits to the national Treasury.

The total economic impact of Gulf energy is immense. It creates jobs in every state in the United States, with more than 650,000 jobs nationwide estimated to be linked to Gulf energy activity. We are an example of how a robust offshore oil and gas industry can provide significant benefits to our local state and national economies. A 2014 economic study indicates the offshore industry has a \$4 billion annual impact to Louisiana.

A robust offshore oil and gas industry also results in a boom of many other industries. In fact, Louisiana has one of the top port systems in the country: 5 of the top 15 largest ports in the United States are located in Louisiana, with Port Fourchon considered to be our Nation's energy port.

The state of Louisiana does all this while also boasting some of America's most precious landscapes and habitats. Louisiana has demonstrated firsthand how to balance the development of our Nation's oil and gas resources off our coast and still maintain a

robust hunting, fishing, and wildlife industry, and a world-renowned tourist destination.

In Louisiana, our commercial fishing represents nearly 30 percent of the commercial fishing landings of the Continental United States. Our wetlands provide habitat for over 5 million migratory water fowl, and wildlife recreation has amounted to a \$3 billion industry supporting over 25,000 jobs.

In fact, in 2016, Louisiana experienced a record-breaking year for tourism, with 46.7 million visitors and spending of nearly \$17 billion.

Energy production in the Gulf is also critical to restoring Louisiana's coast and protecting our coastal communities. As a result of the 2006 Gulf of Mexico Energy Security Act, investments by Louisiana's oil and gas industry in the Gulf will soon fund coastal restoration and protection projects.

In Louisiana, revenue-sharing is dedicated for funding the state's coastal restoration and protection initiatives. In fact, in 2006, Louisiana voters passed a constitutional amendment to dedicate 100 percent of our GOMESA revenues to the restoring and protecting of Louisiana's coast. Our coastal land loss is a crisis, and the state has a \$50 billion master plan over a 50-year period to restore our coast. GOMESA funding is critical to those efforts. And I will add primary responsibility of our coastal land loss is due to the fact that we put levees on the Mississippi River, and that sediment is no longer replenishing our coastal wetlands.

Finally, I just want to tell you that I live in south Louisiana. It is a place where we live, where we work, and where we play. It is a working coast where we feed and fuel America. I am proud to call it my home, and we are proud to produce America's energy.

Thank you.

[The prepared statement of Ms. LeBlanc follows:]

PREPARED STATEMENT OF LORI LEBLANC, DIRECTOR, OFFSHORE COMMITTEE,
LOUISIANA MID-CONTINENT OIL AND GAS ASSOCIATION

Good morning Chairman Gosar, Ranking Member Lowenthal and members of the Committee. I appreciate the opportunity to participate in today's hearing on oil and gas development opportunities on the Outer Continental Shelf (OCS). My name is Lori LeBlanc, I am the Director of the Offshore Committee for the Louisiana Mid-Continent Oil and Gas Association (LMOGA). In addition to serving as the Director of LMOGA's Offshore Committee, I also serve as the Executive Director of the Gulf Economic Survival Team and previously served as the Deputy Secretary of Louisiana Department of Natural Resources as well as the Executive Director of a non-profit coastal restoration organization, Restore or Retreat.

LMOGA is Louisiana's longest standing trade association, exclusively representing all aspects of the oil and gas industry onshore and offshore, including exploration, production, mid-stream activities, pipeline, refining and marketing.

I would like to start off by saluting the Administration and the Department of the Interior for taking a hard and thorough look at the abundance of opportunities that comprise our country's very promising energy future.

I want to make two primary points in today's testimony. First, Louisiana is a leader in producing American Energy and we do it in such a way that we balance energy production with environmental stewardship. Because of our responsible management of our abundant natural resources, Louisiana has demonstrated that we are an Energy State as well as the Sportsman's Paradise. Louisiana's success in effectively achieving that balance is a shining example of what the United States can achieve in other Federal offshore areas. My second point is that OCS revenue sharing is critical to Louisiana's environmental stewardship and it should be preserved, enhanced and included in any future proposals for OCS energy development activities.

To best understand the potential of our Nation's offshore energy development, it is useful to take a look at the scope of energy production that takes place in the Gulf of Mexico and recognize that a successful OCS industry requires a blend of major integrated oil companies and smaller independents working both competitively and cooperatively where the market forces determine what works best. A successful OCS industry also requires a Federal regulatory regime in which operators are provided a high degree of clarity, predictability and certainty as they invest hundreds of millions of dollars in developing and producing our Nation's energy.

Since the first offshore well was drilled 70 years ago, the Gulf has produced 90 percent of domestic U.S. crude oil from all of the OCS territories, with approximately 20 percent of our Nation's oil and gas currently coming from the Gulf of Mexico. In 2016, offshore production of crude oil in Federal waters totaled more than 594 million barrels, which represented over 18 percent of total U.S. crude oil production, according to the Energy Information Administration (EIA). In 2016, EIA data shows that there was 1.2 trillion cubic feet of offshore natural gas production or a little less than 4.5 percent of total marketed domestic gas production.

U.S. crude oil production in the Federal Gulf of Mexico (GOM) set an annual high of 1.6 million barrels per day (b/d) in 2016, surpassing the previous high set in 2009 by 44,000 b/d. In January 2017, GOM crude oil production increased for the fourth consecutive month, reaching 1.7 million b/d. On an annual basis, oil production in the GOM is expected to continue increasing through 2018, based on forecasts in EIA's latest *Short-Term Energy Outlook*.

The total economic impact of Gulf energy is immense. It creates jobs in every state in the United States, with more than 650,000 jobs nationwide estimated to be linked to Gulf energy activity, along with tens of thousands here in Louisiana alone. In fact, the Department of the Interior has cited that over \$1 trillion in net economic value is associated with the development of the Gulf of Mexico over the past 20 years and the Federal Government has collected over \$150 billion in revenues during that time. In 2014, for example, Federal revenues from energy production in the Gulf of Mexico were \$7.4 billion. This revenue stream is one of the largest sources of annual deposits to the national Treasury.

As the Committee explores opportunities for increasing offshore access for oil and gas development and expanding the tremendous economic benefits of offshore production, I urge you to look to Louisiana and our long, distinguished history of successfully producing the Energy to fuel America.

The first land-based oil well was drilled in Louisiana in 1858, the first "offshore" well was drilled in state inland waters in 1911, and the first successful well drilled out of sight of land was in 1947, bringing with it a whole new era of oil and gas exploration and production for Louisiana and our Nation. Deepwater Gulf of Mexico operations now account for 80 percent of all Gulf oil produced.

Louisiana proudly serves as the gateway to the Gulf, the front door to the boundless energy potential just miles off our coast and thousands of feet under the water's surface. It is a job that Louisianans have done proudly and it has become a significant part of our livelihood and our culture, just as much as our bountiful hunting and fishing, our wildlife watching, our ecotourism, and our unique food and music.

The state of Louisiana is first in OCS oil production and second in OCS natural gas production. Louisiana is first in revenues generated offshore with an estimated \$5-\$14 billion deposited into the Federal Treasury each year from activity off of the Louisiana coast.

Louisiana is an example of how a robust offshore oil and gas industry can provide significant benefits to our local, state and national economies. A 2014 study by economist Dr. Loren C. Scott, indicates the offshore industry has a \$44 billion annual impact to Louisiana and a \$70 billion annual impact when you factor in the related pipeline and refining activities.

In 2013, energy jobs and earnings existed in all 64 Louisiana parishes with 17 parishes employing more than 1,000 workers in the energy industry. In Lafayette Parish alone, the energy sector accounted for more than 16,000 direct jobs and more than \$1 billion in salaries. Where I live in Lafourche Parish, Louisiana, it is very common to have at least one energy worker in your family or several others living in your neighborhood—it's a way of life.

A robust offshore oil and gas industry results in a boom of many other industries from ports, to pipelines, to refineries, to shipbuilding to platform fabrication, to offshore transportation, to drilling services, to catering services, to numerous specialty and service supply companies. As stated in BOEM's Five Year Plan 2017-2022, "An OCS oil and gas project requires equipment and supplies for exploration, development, platform fabrication, pipeline construction, air and water transportation, and other activities. Not only does the industry purchase goods and services from vendors and suppliers across the country, but its work schedules (usually a week or

more offshore, followed by the same period off duty) allow offshore workers to commute even from thousands of miles away.”

Louisiana has one of the top port systems in the country and 5 of the top 15 largest ports in the United States are located in Louisiana with Port Fourchon considered to be our Nation’s Energy Port. Port Fourchon is an intermodal and supply port located on the Gulf of Mexico near the mouth of Bayou Lafourche and is the only Louisiana port directly on the Gulf of Mexico. More than 250 companies utilize Port Fourchon in servicing offshore rigs in the Gulf of Mexico, carrying equipment, supplies and personnel to offshore locations. In terms of service, Port Fourchon’s tenants provide services to more than 90 percent of all deepwater rigs in the Gulf of Mexico, and roughly 45 percent of all shallow water rigs in the Gulf. Eighty percent of all Gulf oil now comes from deepwater Gulf of Mexico operations. In total, Port Fourchon plays a key role in providing nearly 20 percent of the Nation’s oil supply—or one in every five barrels of oil in the country.

The state of Louisiana does all of this while also boasting some of America’s most precious landscapes and habitats. Truly, Louisiana has demonstrated firsthand how to balance the development of our Nation’s oil and gas resources off its coast and still maintain a robust hunting, fishing, and wildlife industry as well as world-renowned tourist destination. In Louisiana:

- Our commercial fishermen harvest over 2 billion pounds of fish and shellfish annually, representing nearly 30 percent of the commercial fishing landings of the continental United States.
- Our wetlands provide habitat for over 5 million migratory waterfowl.
- Wildlife recreation, which includes hunting, fishing and wildlife watching has amounted to a \$3 billion industry, supporting over 25,000 jobs.
- In 2016, Louisiana experienced a record-breaking year for tourism with 46.7 million visitors and spending \$16.8 billion. In fact, tourism increased approximately 65 percent from 2013 to 2016.

For those of us who live in Louisiana, oil and gas is a way of life that is intertwined with our love for hunting and fishing. The oil and gas industry is part of our geography, our society, our economy, our culture. The Louisiana energy industry has been a responsible community partner for more than a century, creating more jobs than any other industry in Louisiana, raising the standard of living and quality of life all across Louisiana. At the same time, the industry has invested hundreds of millions of dollars and forged partnerships with the best scientists to develop cutting-edge efforts to protect and restore our coastal wetlands and communities.

The people who really understand American energy are those who live it. I’m talking about those folks on the front lines of producing American Energy in small towns across the Gulf Coast—from Gulf Port, to Galliano to Galveston. Nowhere else in America would you find an annual festival called the Shrimp & Petroleum Festival, but here in Louisiana, we celebrate these two bountiful resources each Labor Day weekend.

Additionally, nowhere else in America is safe offshore energy development as important as it is in Louisiana. This is a place where we live, work and play. Every day our family, friends, and neighbors go off to work in their hard hats and steel toe boots and we want them to come home safely. Increased activity in the Gulf of Mexico has rested on the implementation of strict safety and environmental standards.

Since the 2010 Deepwater Horizon incident, the oil and gas industry has demonstrated its commitment to ensure that people and the environment are protected during all phases of energy exploration, development and production. A robust collaborative effort among industry has resulted in the development of new technology and standards for prevention, intervention and response. Industry established the Center for Offshore Safety (COS) to foster safety culture and share lessons learned across industry, and the Marine Well Containment Company (MWCC) and the Helix Well Containment Group (HWCG) to provide containment technology and response capabilities.

The reality is that not a single industry has a zero risk; however, the industry has taken extensive measures to reduce risk. According to the Bureau of Labor Statistics for 2015, the total recordable incident rate for private industry was 3.0; whereas the total recordable incident rate for support activities for oil and gas operations was 1.2. The industry is committed to a goal of zero fatalities, zero injuries and zero incidents.

Louisiana’s oil and gas industry provides significant benefits to our Nation’s energy supply, American jobs and local economies, but energy production in the Gulf of Mexico is also critical to saving Louisiana’s coast and our coastal communities.

This brings me to my second point—how revenue sharing can help preserve Louisiana's ability to continue to provide energy security for our Nation.

As a result of the 2006 Gulf of Mexico Energy Security Act (GOMESA), investments by Louisiana's oil and gas industry in the Gulf will soon fuel coastal restoration and protection projects, with hundreds of millions of dollars from offshore drilling revenue coming to Louisiana and three other Gulf states. It's another example of the powerful positive impacts of offshore energy development.

GOMESA officially recognizes the efforts and contributions of states like Louisiana in supporting America's energy supply and generating Federal revenue. Each year, the Federal Government collects on average between \$5 billion–\$14 billion in offshore royalty revenue, much of it from right here in the Gulf of Mexico.

For the first time in our Nation's history, GOMESA provides a way to compensate Gulf states and coastal communities with a much deserved and long overdue portion of royalty revenue collected from the OCS in the Gulf. GOMESA represents our fair share for supporting offshore oil and gas activity, just as non-coastal states share in royalty revenues for activity on Federal lands, although at a much higher rate.

GOMESA was designed to ensure that states have adequate resources for coastal restoration, conservation, and hurricane protection projects. In Louisiana, revenue sharing is dedicated for funding the state's coastal restoration and protection initiatives as well as protecting critical energy infrastructure such as Louisiana Hwy 1, which is the only highway to Port Fourchon, America's energy port. In fact, in 2006 Louisiana voters passed a constitutional amendment to dedicate 100 percent of all GOMESA revenues to the restoring and protecting of Louisiana's coast. Large-scale restoration of coastal Louisiana is critical to protecting existing infrastructure and an industry of national importance.

GOMESA funding is a reinvestment in America's wetlands and our critical energy infrastructure. GOMESA represents Louisiana's fair share of offshore royalty revenues and this funding is critical for restoring Louisiana's vanishing coastline as well as protecting the coastal communities and businesses who support our offshore oil and gas industry. It is imperative that this reinvestment in America's coastal communities that give so much be sustained.

In closing, Louisiana has proven firsthand that we can successfully produce American energy while at the same time protecting our environment. As Congress and the Administration considers opportunities to expand oil and gas development and production in the OCS, look no further than Louisiana for an example of the tremendous benefits such robust activity can offer while also protecting precious coastal environments, wildlife and fisheries. Consider Louisiana as well, when you consider the impact that GOMESA funds can make in preserving this economic engine and environmental treasure for decades to come.

The vibrant offshore oil and gas industry in the Gulf of Mexico has proven to provide long-lasting and undisputable economic and energy security benefits not only to Louisiana, but also to the entire Nation. These are direct benefits that states across our country could experience with the opening of additional OCS territories for energy development. The OCS has significant reserves of oil and natural gas that could help reduce our dependence on foreign energy sources, expand employment opportunities, improve the stability of our economy, and reduce the burden on consumer's pocketbooks. It's time to look at all of these options as we forge America's energy future.

Dr. GOSAR. I thank the gentlelady.

The Chair will now recognize Ms. Howell for her 5 minutes.

STATEMENT OF MARGARET S. HOWELL, FOUNDER, STOP OFFSHORE DRILLING IN THE ATLANTIC, PAWLEYS ISLAND, SOUTH CAROLINA

Ms. HOWELL. Thank you. Chairman Gosar, Ranking Member Lowenthal, and honorable Subcommittee members, good morning. My name is Peg Howell. Thank you for inviting me to testify before the Committee today. I would like to submit my written testimony for the record.

I especially want to thank you for inviting a citizen who lives on the beautiful South Atlantic coast. The binders in front of me hold

resolutions and letters from just some of the people I am representing today who opposed seismic testing and drilling.

There are over 126 East Coast municipalities, more than 1,200 local state and Federal elected officials, an alliance representing over 41,000 businesses, and half-a-million fishing families. There are fishing management councils, restaurant and hotel associations, numerous chambers of commerce, tourism boards, and homeowners represented in these binders. All of these people are Republicans and Democrats. For us, protecting their Atlantic Coast is not a partisan issue.

My comments today are informed by my firsthand experience as an offshore drilling engineer and business owner, and especially as a mother who is committed to leaving this world a better place for my son and for generations to come.

I was the first female company man—which is the oil field’s term for a drilling rig supervisor—in the Gulf of Mexico. I have worked for Mobil, Marathon, and Chevron Oil companies in the U.S. Gulf and in the North Sea. I later earned an MBA from Harvard and have run my own consulting business for 23 years.

On behalf of the coastal businesses and residents, I want to emphasize four important points today.

First, the Atlantic Coast economy, nearly 1.4 million jobs and over \$95 billion in GDP annually from our fishing, tourism, and recreation industries, rely on a healthy ocean ecosystem and an unsoiled coast. Offshore exploration and production and the dirty onshore infrastructure that support it represent too great a risk to our current and future livelihood and quality of life. To expose the Atlantic to offshore drilling is, as my state of South Carolina’s Governor McMaster says, “killing the goose that laid the golden egg.”

The Gulf Coast’s economy grew up with the oil business. The people of the Atlantic Coast have protected it from misuse and exploitation for hundreds of years. To now bring the pipelines, vessel traffic, storage tanks, and refineries to the Atlantic Coast not only guarantees destruction of our coastal economy, it also puts at risk human health and quality of life.

Onshore infrastructure like that at Port Fourchon, Louisiana are pollution threats to water and air quality, especially when hurricanes strike. Remember the Deepwater Horizon catastrophe? Visitor spending in Louisiana alone in 2010 dropped by \$247 million. The total impact of that disaster on fisheries could total \$8.7 billion by 2020.

Two, there is no reason to drill in the Atlantic to enhance our energy independence or security. The United States is already the dominant producer of oil and gas in the world. Because we have an abundant supply, in December of 2015, Congress allowed oil companies to start exporting our crude oil for the first time since the oil embargoes in the 1970s. We are now exporting more than a million barrels of our oil a day to foreign countries like China.

Congress and the Administration acknowledge that our supply is so secure that they will be selling off half of our strategic petroleum reserve. Our global security comes from moving away from oil and gas toward cleaner energy sources.

Three, contrary to claims made by oil and gas industry associations, seismic airgun blasting is not harmless, and drilling is not safer or environmentally friendly.

Let's start with seismic surveys. Seismic airgun blasts, one of the loudest man-made noises in the ocean, are discharged every 10 to 12 seconds, 24 hours a day, for months at a time. The noise can be heard more than 2,500 miles from the source, approximately the distance from New York to Las Vegas.

Five seismic companies are currently applying for permits to blast an unprecedented amount of noise into the ocean. There is nowhere for the impacted mammals like whales, dolphins, and sea turtles to escape the noise, which seriously affects their ability to communicate, navigate, feed, and mate. Numerous studies show the detrimental impact of seismic airguns on our fisheries and on zooplankton, the foundation of our marine food web.

If seismic testing had definitively found oil and gas, then Royal Dutch Shell would not have spent \$7 billion in the Arctic 2 years ago to drill a dry hole. In order to find oil and gas, you have to drill.

Now, let's talk about drilling. It is not safer. In fact, the safeguards put in place after Deepwater Horizon are being rolled back by this Administration. But the Deepwater Horizon blowout did not happen because of failed technology. It happened because of a bad decision. Technology may improve, but decisions are still made by people, and people make mistakes.

Four, when the oil and gas business comes to town, they are here to stay. Some people in our government think that somehow oil rigs just come, drill holes, and then they go away. They don't know that if commercial quantities of oil and gas are found, as Kate mentioned earlier, the lease entitles the oil company to produce there forever. This is the sad reality of the West Coast, where Californians have been trying to stop offshore drilling for nearly 50 years. In some foreign countries there are precious reserves; the oil companies pocket the profits, and those of us along the coast take all the risks.

[The prepared statement of Ms. Howell follows:]

PREPARED STATEMENT OF MARGARET S. HOWELL, FOUNDER, STOP OFFSHORE
DRILLING IN THE ATLANTIC

Chairman Gosar, Ranking Member Lowenthal and Honorable Committee Members: Good morning. My name is Peg Howell. Thank you for inviting me to testify before the Committee today. I look forward to a robust conversation about the impacts that the proposed offshore drilling and seismic testing in the Atlantic will have on coastal economies and the people who live and visit here. I would like to submit my written testimony for the record.

I especially want to thank you for inviting a citizen who lives on the beautiful Atlantic coast. We are the ones who will be most impacted if the Atlantic is opened to offshore exploration and drilling. It is a daunting task to represent the millions of residents, tens of thousands of business owners, and the marine and wild life that grace our coast—all of which will be harmed in some way by offshore drilling, seismic testing, and the onshore infrastructure that supports it.

The opposition to seismic airgun blasting and offshore drilling in the Atlantic is enormous and continues to grow [Fig. 1]. We have resolutions and letters opposing seismic testing and drilling from:

- 126 East Coast municipalities
- Over 1,200 local, state and Federal elected officials

- An alliance representing over 41,000 businesses and 500,000 fishing families from Florida to Maine
- New England, South and Mid-Atlantic Fishery Management Councils
- Other commercial and recreational fishing interests, such as the Fisheries Survival Fund, Southern Shrimp Alliance, Billfish Foundation and International Game Fish Association
- Numerous chambers of commerce, tourism boards, and homeowners, restaurant and hotel associations from New Jersey to Florida

In addition, NASA, the Department of Defense, and the Florida Defense Support Task Force have also expressed concern with offshore oil and gas development threatening their ability to perform critical activities.

In my own state of South Carolina, *every* mayor in every coastal city and town as well as our Governor oppose seismic testing and drilling. They are Republican and Democrat alike; protecting our coast is not a partisan issue.

My comments today are informed by my firsthand experience as an offshore drilling engineer, business owner, educator and especially as a mother who is committed to leaving this world better than I found it—for my son and for generations to come.

I was the first female petroleum engineer to graduate from Marietta College, where I earned my B.S. in Petroleum Engineering, cum laude. I was also the first female “company man”—which is the oilfield’s term for drilling rig supervisor—in the Gulf of Mexico [Fig. 2]. I have worked for Chevron, Mobil, and Marathon oil companies in the United States and in the North Sea. I later earned an MBA from Harvard Business School and have run my own consulting business for 23 years. My work has been focused on developing leaders, primarily senior executives in Fortune 50 companies.

A little over 8 years ago, my husband and I semi-retired to a piece of heaven on earth called Pawleys Island, South Carolina. Pawleys Island is one of the oldest seaside resorts in the country, established in the early 1700s by plantation owners who came to the beach in the summertime to escape the mosquitoes and the malaria in the rice fields. Pawleys is a place where people deeply love their land, the rivers, the salt marshes and the beaches. We are proud, as one neighbor said, of the “generations of concerned, responsible people, along with county, state and federal governments, that have worked for more than a century to protect hundreds of miles of the Atlantic Coast from abuse, misuse and exploitation. As a result, [our] coast contains some of the most pristine waters, beaches and salt marshes (a vital nursery for sea life) in the world.”¹ We are also proud of the science that is done in those untouched inlets and coastal forests by universities across the state and the country—science that helps us understand the interconnectedness of all life.

In that context, you can imagine my shock and dismay in the fall of 2013 when I started noticing articles and op-eds in our local newspaper written by our County Councilman and State Representative supporting oil and gas exploration in the Atlantic^{2 3} [Figs. 3, 4]. Why would these men put our precious coast and economy at risk?

Those articles set in motion a series of events that culminated in a small group of individuals in Pawleys Island forming an organization called “SODA-Stop Offshore Drilling in the Atlantic” in February 2015. SODA is an all volunteer, non-partisan, grassroots organization formed because of our desire to protect and preserve the health and economy of the Atlantic coast, our home. Our sole mission is to prevent offshore seismic testing and drilling for oil and gas in the Atlantic. We have an extremely dedicated and talented core team that has been meeting at least twice a month since our founding, and are joined by approximately 2,000 active members engaged in educating the citizens and elected officials of South Carolina about offshore issues, and advocating for our coast at the Federal, state and local levels.

Since March 2015, we have been researching and sharing with literally thousands of people the facts about why offshore oil and gas drilling and seismic airgun surveys are not good for South Carolina. One of the most important contributions SODA has made to the effort is a study called *Tourism vs. Oil* (TVO), written by three SODA team experts [Fig. 5]. This analysis compared the financial trade-offs

¹ http://www.postandcourier.com/opinion/letters_to_editor/letter-seismic-testing/article_alfa5e44-5299-11e7-a1a5-4be4ae320b7d.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share.

² *Coastal Observer*, “House District 108: Questions for Stephen Goldfinch,” October 30, 2014.

³ *Coastal Observer*, “Offshore Drilling, An Opportunity for Economic Growth” by Bob Anderson, former Georgetown County Councilmember, District 6, October 24, 2013.

of the proposed venture to drill for oil in the Atlantic Ocean off the South Atlantic states with the projected value of South Carolina's tourism-based economy, based on the study prepared for the American Petroleum Institute and the National Ocean Industries Association, titled, *The Economic Benefits of Increasing U.S. Access to Offshore Oil and Natural Gas Resources in the Atlantic*, authored by Quest Offshore Resources (the Quest Report). The TVO analysis concludes that the overly optimistic projections for state revenues included in the Quest Report are only 1/27th of the conservative estimates of South Carolina's tourism economy over the same time period. In other words, the TVO analysis shows, in indelibly stark numbers, that it is not in the economic interest of the state of South Carolina or its residents to support drilling in the Atlantic.⁴

Looking at the entire Atlantic coast economy, nearly 1.4 million jobs and over \$95 billion in gross domestic product rely on a healthy coast and ocean ecosystems, mainly through fishing, tourism and recreation. To expose the Atlantic to offshore drilling and seismic testing is, as South Carolina Governor McMaster says, "killing the goose that laid the golden egg."

As you know, offshore oil and gas exploration and development begins with seismic airgun surveys, an extremely loud and dangerous process used to search for potential oil and gas deposits deep below the seafloor. The airgun blasts—one of the loudest man-made noises in the ocean—are discharged every 10–12 seconds, 24 hrs/day for months at a time. The noise can be heard more than 2,500 miles from the source, approximately the distance from New York to Las Vegas. Five companies, some of which are internationally based, are currently applying for Incidental Harassment Authorizations (IHAs) from NOAA [Fig. 6]. The standard they must meet to obtain the IHA is that the number of takings would:

- be of small numbers,
- have no more than a "negligible impact" on those marine mammal species or stocks, and
- not have an "unmitigable adverse impact" on the availability of the species or stock or "subsistence" uses.

The seismic companies will be running over 90,000 miles of seismic lines across all the Mid- and South Atlantic Planning Areas, roughly 170 million acres. Combined, they will run a total of 906 days of seismic within a 1-year permit period. This is an unprecedented amount of noise. When comparing this amount of seismic to all the seismic run from 1968 through 1997, there is no other year in any Federal OCS area that ran this much seismic.⁵

The five companies collectively have requested over 435,000 individual Level B harassments, and the proposed mitigation only compresses the time frame during which the airgun blasts occur. There is nothing "small" or "negligible" about that impact, given that the airgun sound travels thousands of miles. There is nowhere for the impacted mammals like whales, dolphins and sea turtles to escape the noise, and we know the noise negatively affects mammals' ability to communicate, navigate, feed and mate. For small populations of mammals, such as the fewer than 500 North Atlantic Right Whales, this amount of noise will certainly cause population-level adverse impact.

It is important to note that one of the companies seeking a permit to conduct seismic airgun blasting, CGG, is a French-based company that is relying on selling the data from this permit to avoid bankruptcy. The U.S. Federal Government is literally putting the interest of French oil companies over its own coastal economies and residents.⁶

Numerous studies show the detrimental impact seismic airguns have on fisheries and marine mammals, thereby affecting the catch that anglers bring dockside and the revenues generated by associated businesses. A 2014 study conducted off North Carolina's coast by the University of North Carolina Chapel Hill, Duke University and NOAA, found that during seismic surveying the abundance of reef-fish declined by 78 percent. Just last month, a new study published in *Nature Ecology and Evolution* found that noise from seismic airguns can also kill zooplankton from a distance of almost three-quarters of a mile away, further than previously thought.⁷

⁴ <http://www.drilldownsc.com/#!tvo/c1sav>.

⁵ Geological & Geophysical Data Acquisition, Outer Continental Shelf Through 1997, George Dellagiarino, Patricia Fulton, Keith Meekins and David Zinzer, U.S. DOI MMS, OCS Statistical Report MMS 98-0027.

⁶ <https://www.reuters.com/article/france-cgg-idUSL8N1JB6H8>.

⁷ <https://www.nature.com/articles/s41559-017-0195>.

Zooplankton is the foundation of our marine food web. The resultant effects of this impact also damage commercial fishing, restaurants and the recreational fishing businesses in our coastal communities. This is why every major commercial fishing association has opposed seismic surveys and offshore drilling.

Some in government are saying, “We should know what’s out there. Let’s at least run the seismic.” But we are now acutely aware of the damage airgun blasts wreak on our marine life—from our largest marine mammals down to the tiniest zooplankton. And it is very important to note that seismic surveys alone do NOT definitively tell us what is out there. Five applications for permits are currently under review to run 2D seismic in the Atlantic. Historically, 2D seismic alone is only successful in finding oil and gas approximately 20–25 percent of the time. After the requested 2D surveys, seismic companies will be back here asking for permits to run 3D seismic, a second blast of non-stop airgun noise in our ocean. And 3D seismic only increases the odds of finding oil and gas to 40–50 percent of the time, in true “wildcat” exploration. If seismic surveys were able to definitively find oil and gas, Royal Dutch Shell would not have spent \$7 billion on a dry hole in the Arctic 2 years ago. In order to find oil and gas, you will not “know what’s out there” until you drill.

Some proponents of opening drilling in the Atlantic make the argument that seismic airgun surveys for oil and gas deposits would allow local communities to learn more about what resources might be available. The reality is that, by law, the seismic surveys are proprietary for 25 years and only available to BOEM and to the oil and gas companies which purchase them. The public, local government officials and even Members of Congress would not have access to the survey data. This inability to access information leaves coastal communities without the opportunity to perform substantive cost-benefit analyses for extracting oil and gas reserves off their coasts. Local stakeholders would be left taking on significant risk without being involved in future development decisions.

The dangers of offshore drilling, its associated onshore infrastructure and the transportation of crude oil, liquefied natural gas (LNG) and refined products are well known. The BP Deepwater Horizon catastrophe should inform our decisions about the Atlantic. DWH was an exploratory well in the Gulf of Mexico, located just 41 miles off the coast. That blowout killed 11 men, pumped 210 million gallons of oil into the waters off Louisiana, Mississippi, Alabama and Florida, and contaminated over 1,100 miles of coastal marshes and beaches [Fig. 7]. It took months to regain well control. The impact of that disaster on fisheries could total \$8.7 billion by 2020, with the loss of 22,000 jobs and 10 million user-days of beach, fishing and boating activity. Leisure-visitor spending in Louisiana alone in 2010 dropped by \$247 million.⁸

While that blowout was extraordinary, at least monthly we hear news of a spill from offshore drilling, transporting, storing or refining oil and natural gas. According to the Bureau of Ocean Energy Management, there were 232 oil spills in the Gulf of Mexico between 1964 and 2012 resulting in a total of 223,332,900 gallons of oil dumped into the Gulf.⁹ In 2016 alone, 497 accidents (damages, injuries and spills) involving offshore oil rigs were reported.^{10 11}

We know from industry reports that oil companies are particularly interested in drilling in deep (>1,000 ft.) and ultra-deep (>5,000 ft) water depths, along the escarpment of the outer continental shelf¹² [Fig. 8]. Deep water exploration is the most dangerous type of drilling. Not only does it require more sophisticated and oftentimes new and untested technology, it is often located farther away from the coast, hence farther away from emergency support services in the case of a blowout. Note that while the Deepwater Horizon was located only 41 miles from shore, it was drilled in a water depth of 5,000 ft, which made it much more difficult to cap, ultimately allowing the well to blow out for 87 days while a relief well was drilled. The Atlantic seismic permit applications request survey lines run in over 16,000 ft of water. The deepest water depth a well has been drilled to date is 11,156 ft.¹³ This

⁸ http://usa.oceana.org/sites/default/files/deepwater_horizon_anniversary_report_updated_4-28.pdf.

⁹ <https://www.bsee.gov/sites/bsee.gov/files/reports/incident-and-investigations/spills-greater-than-50-barrels1964-2012-as-of-august-3-2012.pdf>.

¹⁰ https://www.doi.gov/sites/doi.gov/files/migrated/budget/appropriations/2016/upload/FY2016_NRDA_Greenbook.pdf.

¹¹ <https://www.fastcompany.com/40406093/how-satellite-data-caught-gulf-oil-companies-hiding-enormous-oil-spills>.

¹² The Economic Benefits of Increasing U.S. Access to Offshore Oil and Natural Gas Resources in the Atlantic, authored by Quest Offshore Resources, December 2013.

¹³ <http://gcaptain.com/maersk-venturer-begins-drilling-worlds-deepest-well/>.

raises another concern that oil companies may want to explore for the first time at record water depths.

Every U.S. coast where offshore oil and gas is produced and transported has suffered multiple massive spills and billions of dollars in damages—most notably oil spills off the Santa Barbara coast, the Exxon Valdez, near-daily spills in Galveston Bay, and spills and ongoing leaks caused by hurricane damage to hundreds of offshore platforms and thousands of miles of pipelines in the Gulf of Mexico [Fig. 9]. The Atlantic coast will be no different.

Those of us who live near or visit the Atlantic wonder, “Why would anyone want to put at risk this ocean, our jobs, our property, our favorite vacation spots and our way of life?” Opening the Atlantic to seismic testing and drilling jeopardizes our coastal businesses, fishing communities, tourism and our national defense. It opens the door to even greater risks from offshore oil and gas production down the road. Do we need to drill in the Atlantic to be “energy independent,” or as Interior Secretary Zinke likes to say, “energy dominant?” The answer is “no.” Because of the “shale revolution,” the United States is already the world’s leader in oil and gas production. The United States has been first in the world in natural gas production since 2009, when American output surpassed Russia. U.S. production of petroleum hydrocarbons exceeded that of Saudi Arabia in 2013¹⁴ [Fig. 10].

So why is there is a desire to drill in the Atlantic?

In my work with CEOs across many industries, I have seen how the constant need to increase stock price drives a lot of bad decisions. Wall Street’s need to see increasing growth and ever higher returns pushes companies to only think of consistently delivering the bottom line. In an extraction industry like oil and gas, where the resource is finite, non-renewable and depleting, you have to continuously find new oil and gas reserves to ‘feed the beast’ and seek new markets around the world to export those newly developed quantities of oil and gas.

Oil companies want to drill in the Atlantic to be able to export even more U.S. oil and gas overseas. Since December 2015, when Congress allowed oil companies to export our crude oil for the first time since the Arab oil embargoes of the 1970s, we have been steadily increasing our crude exports and are now sending more than a million barrels a day to countries like China¹⁵ [Figs. 11 and 12]. We are also now exporting over 187 billion cubic feet of liquefied natural gas (LNG) a year^{16 17 18} [Fig. 13]. In addition, Congress and the Administration have proposed selling off half of our Strategic Petroleum Reserve because, according to OMB Director Mulvaney, “We think it’s the responsible thing to do.” Mr. Mulvaney told the press, “I don’t need to take this much of your money to bury it in the ground out in West Texas someplace for domestic security and national security reasons when we have domestic supplies like we do.”¹⁹

If the Administration believes that our energy supply is secure enough to sell off 50 percent of our strategic reserve, then why would it risk the \$95 billion in annual GDP from the Atlantic region and instead take on the significant economic, health and environmental risks associated with exploration and development of the Atlantic?

While oil companies’ stock prices may benefit from these export sales, U.S. consumers lose. When demand (domestic plus export) exceeds supply, prices go up. According to the Energy Information Agency (EIA)’s latest Short-Term Energy Outlook (STEO), “New natural gas export capabilities and growing domestic natural gas consumption contribute to the natural gas spot price rising from an average of \$3.16/MMBtu in 2017 to \$3.41/MMBtu in 2018.”²⁰

The Atlantic coast developed differently than the Gulf coast. Offshore oil and gas has been part of the Gulf’s economy since the 1930s. The offshore waters and marshlands of south Louisiana were carved by canals dug through them to position rigs and gather production. “Going to the beach” means something very different in south Louisiana than it does along the mid and south Atlantic. To now bring to the Atlantic region the onshore infrastructure, pipelines, vessel traffic and pollution that accompanies offshore drilling guarantees destruction of the beautiful beaches, healthy marshes and rivers—as well as the economy—of our coast.

¹⁴ <https://www.oilandgas360.com/despite-oil-downturn-u-s-ranks-no-1/>.

¹⁵ <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCREXUS1&f=M>.

¹⁶ https://www.eia.gov/dnav/pet/move_expc_dc_NUS-Z00_mbl1_m.htm.

¹⁷ <https://www.oilandgas360.com/despite-oil-downturn-u-s-ranks-no-1/>.

¹⁸ <https://www.eia.gov/todayinenergy/detail.php?id=31532>.

¹⁹ http://thehill.com/policy/energy-environment/334811-budgets-oil-provisions-divide-congress-white-house?utm_source=&utm_medium=email&utm_campaign=8890.

²⁰ <https://www.eia.gov/outlooks/steo/report/natgas.cfm>.

Our health and quality of life are also at risk. Onshore infrastructure, including oil and gas storage, refineries and gas liquefaction plants, and the diesel and chemicals stored there for use in drilling, are a necessary part of the drilling and production support bases. Bases like Port Fourchon, Louisiana are pollution threats to water and air quality, especially when hurricanes strike [Fig. 14]. This type of infrastructure and the petrochemical industry that frequently locates nearby is not only incompatible with our tourism and recreation-based economies; it is also inconsistent with the healthful environment people seek when they move here.

We must also consider the impact of the oil and gas industry on our children. The Annie E. Casey Foundation has published the “Kids Count Data Book” for nearly three decades which tracks the well-being of the nation’s children, state by state, using a comprehensive index, including indicators across four domains: Economic Well-Being, Education, Health, and Family & Community. The overall ranking of the four Gulf states were some of the lowest in the Nation (TX 41st, AL 44th, LA 48th, and MS 50th). The overall ranking of the mid and south Atlantic states were higher (VA 10th, MD 16th, NC 33rd, SC 39th, FL 40th, GA 42nd)²¹ [Fig. 15]. While this doesn’t prove that states that don’t have oil and gas industry revenues have better child well-being, it certainly raises the question: why do states that are heavily dependent on oil and gas revenues rank so low?

Some people who live here, including many of our government officials, were initially under the impression that because you can’t see the rigs from the beaches (assuming the 50 mile buffer will be included in the new proposed plan), that there will be no harm to our coast. They think that somehow the rigs just come, drill, and then go away, without considering the deleterious effect of oil and gas production on the local economy and environment.

We have found it helpful to share with them the history of Southern California’s experience with the oil and gas industry:

In California, the first Federal OCS lease sale was held in 1963. Six years later the first Santa Barbara spill occurred which caused such an uproar against drilling that the U.S. Secretary of the Interior removed Federal tracts near Santa Barbara from oil and gas leasing. However, the Federal Government quickly resumed offshore leasing and continued to hold sales through 1982, when the U.S. Congress directed that no Federal funds be used to lease additional Federal tracts off the coast of California. No Federal lease sales have been proposed for offshore California since then—until President Trump’s Executive Order was signed this April which will require California to once again be considered.

During this same time, the California State Lands Commission, which owns and controls the mineral resources within 3 nautical miles of the coast, had not permitted leasing of state offshore tracts since the Santa Barbara oil spill in 1969.

In 1996, Chevron removed four of its oil and gas platforms off the Santa Barbara and Ventura coast which led to Federal plans for the decommissioning of the remaining offshore California structures. At that time, there were a total of 27 oil and gas platforms and approximately 200 miles of associated pipelines located off the coast of Southern California. All of this oil infrastructure was installed as a result of the initial lease sales, but remained even after the 1982 ban on further lease sales.

A second large Santa Barbara oil spill happened just before Memorial Day weekend 2015, when an underground pipeline that transports oil from an offshore platform to refineries ruptured, spilling 142,000 gallons of crude oil into a coastal state park. The spill, caused by corrosion in a pipeline that did not have automatic shutoff valves, closed nearby beaches for 2 months, killed hundreds of animals, including birds, sea lions, and dolphins, and cost \$96 million to clean up.

By law, as long as Federal OCS wells are producing commercial quantities of petroleum, oil companies may continue to produce from those leases, drill more wells, or sell the property to another operator. In the California OCS waters, oil companies have produced from some of these OCS leases for over 50 years—more than 40 years after the Santa Barbara spill.^{22,23}

Despite the long-term bans on new leasing in California state waters (since 1969) and Federal waters (since 1982), drilling and production have continued on these leases. The point of reviewing this history is to educate Atlantic coast residents and

²¹ <http://www.aecf.org/resources/2017-kids-count-data-book/?gclid=CPzat7Wm-tQCFcLLDQoduaQGcw>.

²² <http://www.ogj.com/articles/2017/06/boem-to-identify-california-offshore-platform-decommissioning-issues.html>.

²³ <http://www.mercurynews.com/2017/04/17/first-california-offshore-oil-platform-to-be-removed-in-20-years/>.

elected officials that when the oil business comes to town, it is very slow to leave, if ever.

Some of the same people who thought the rigs would just come, drill, and then go away, have also heard that drilling technology has improved, and it's safer since the Deepwater Horizon disaster. Although the Department of the Interior adopted many of the safety recommendations from the National Commission on the BP Deepwater Horizon Oil Spill, President Trump's April 28 Executive Order on offshore energy threatens to abolish these safety improvements. Bob Graham, a former Florida Governor and U.S. Senator, and William K. Reilly, a former administrator of the Environmental Protection Agency, were co-chairmen of the commission. They, along with the other commission members are unanimous in their view that the actions proposed in the President's Executive Order are unwise.²⁴

"I don't have any doubt it's safer than before, but you can't eliminate risks in operations like this," says Michael Bromwich, who led the Interior Department's newly created agency to regulate the industry after the Gulf spill. "Anytime you go deeper, the technological risks increase." Deepwater drilling still relies on the same underlying technology and a skilled workforce, says Paul Bommer, who holds the Chevron lectureship in petroleum engineering at the University of Texas at Austin. "It's still a people business," Bommer says.²⁵

And people make mistakes.

As an engineer, I was taught to identify the problem and solve it. While earning an MBA, my problem-solving and decision-making horizon expanded. I learned that effective leaders consider both the short-term and long-term aspects of a problem. While Wall St. demands short-term results, responsible leadership requires making decisions that are consistent with our values and goals as a society.

Whether or not to drill in the Atlantic is a leadership challenge which requires considering all the issues, then thinking about our values and the impact on our children and their futures. If the Atlantic is opened to offshore drilling and seismic testing, will Winyah Bay near my home still host those beautiful redfish? Will North Inlet's salt marshes still be a pristine nursery for crabs, shrimp and oysters? Will the snowy egrets and blue herons still vie for the best places to roost while keeping an eye on the alligators at Huntington Beach State Park? Will my son's children and their children still remember the beautiful beach where Grandma and Grandpa took them to look for sea turtle tracks in the morning and watch for dolphins on the horizon at day's end?

I don't expect that I—or most of you for that matter—will still be here in 40 years when we will know the consequences of these decisions about seismic blasting and drilling in the Atlantic. I want to believe that the Atlantic Ocean and our coast will still be as magnificent as they are today and future generations will be inspired by our legacy, because this is a FOREVER decision.

I look forward to answering any questions you may have today. Thank you.

The following document was submitted as a supplement to Ms. Howell's testimony. This document is part of the hearing record and is being retained in the Committee's official files:

—APPENDIX, containing Figures 1–15.

Dr. GOSAR. I thank the gentlewoman.

Ms. HOWELL. Interested in taking your questions later.

Dr. GOSAR. The Chair now recognizes Mr. Whatley for his testimony.

²⁴ <https://www.nytimes.com/2017/07/05/opinion/trump-oil-drilling-energy-gulf.html?smid=fb-share>.

²⁵ <http://news.nationalgeographic.com/2015/04/150420-bp-gulf-oil-spill-safety-five-years-later/>.

STATEMENT OF MICHAEL WHATLEY, EXECUTIVE VICE PRESIDENT, CONSUMER ENERGY ALLIANCE, CHARLOTTE, NORTH CAROLINA

Mr. WHATLEY. Thank you, Mr. Chairman, Ranking Member Lowenthal, and members of the Subcommittee. It is an honor to be here today on behalf of Consumer Energy Alliance (CEA) to testify on the important need for expanded oil and natural gas leasing on the Outer Continental Shelf.

Consumer Energy Alliance is a national, non-profit, non-partisan trade association with more than 280 affiliate members which represent truckers, manufacturers, farmers, and nearly every sector of the U.S. economy, along with 450,000 individuals across the country who are dedicated to developing and implementing energy policies which will promote affordable and reliable energy.

CEA strongly supports expanded offshore energy development as a critical component of a rational, balanced, all-of-the-above energy policy, and we applaud the decision by the Trump administration to develop a new 2019–2024 offshore energy leasing program.

With 94 percent of the Federal waters currently closed to leasing, the development of a new 5-year plan will provide an important opportunity for the Interior Department to reassess and revise existing restrictions and expand leasing in the Arctic, Gulf of Mexico, and the Atlantic.

As a resident of North Carolina, the benefits of potential Atlantic development are important to me. According to a recent study conducted by Quest Offshore Resources, Atlantic energy development could create more than 55,000 jobs, add more than \$4 billion annually to the state's economy, and generate nearly \$4 billion in new state revenues in North Carolina alone.

More broadly, Atlantic development could generate almost 280,000 jobs, nearly \$200 billion in increased economic activity, and \$51 billion in new public revenues, regionally.

Furthermore, Atlantic development could generate an additional 1.3 million barrels of oil equivalent per date. This is enough to replace nearly two-thirds of the crude oil and petroleum products that we import daily from the Persian Gulf.

Expanded access in the Atlantic, Gulf of Mexico, Pacific, and Alaska could provide significant benefits for the entire Nation. Access to the 404 trillion cubic feet of natural gas and 90 billion barrels of oil projected to sit in the Outer Continental Shelf would create more than 840,000 jobs, \$550 billion in increased economic activity nationwide, and more than \$395 billion in increased government revenues, as well as keep prices of gasoline, diesel, and jet fuel affordable, which is critical for every segment of the U.S. economy.

In terms of American energy security, it is important to note the U.S. military. The single largest energy user in the world relies heavily on oil, bunker fuel, and jet fuel to protect U.S. interests around the world. In Fiscal Year 2014, the Department of Defense used over 87 million barrels of fuel at a cost of nearly \$14 billion. With oil roughly \$100 per barrel cheaper than it was in 2008, we are now saving \$8.7 billion per year in fuel, money that could be spent on body armor, new weapon systems, or other critical programs.

Increased domestic production can also provide U.S. allies with energy supplies, in turn reducing their dependence on hostile regimes in opening global markets.

It is very important that the offshore energy development is safe, and that it gets safer every day. Growing up, I spent a lot of time with my family on beaches at Nags Head, Kitty Hawk, and Topsail Island, North Carolina. Now I take my children to the beach every year for vacation. It is important to me, just like it is for all of the residents and vacationers who visit America's beaches every year, that the industry and the Federal Government work together to ensure that any exploration and development of offshore energy resources is done without harm to these national treasures.

Both the Federal Government and the offshore energy industry have made great strides improving every aspect of offshore energy production. Among these changes are the creation of new, collaborative containment companies that stand ready to deploy state-of-the-art containment technologies at the first sign of any wellhead spill; the development of more than 600 industry standards and 100 Federal standards covering all aspects of energy production; and the creation of the Center for Offshore Safety, which works with independent third-party auditors and government regulators to create an industry-wide culture of ongoing safety improvement.

More than 40,000 wells have been safely drilled in the Gulf of Mexico, and more than 700 are operating at depths of more than 5,000 feet today. This record, and the fact that 99.999 percent of all oil produced, transported, and refined in the United States reaches its destination safely are important points for Congress and the Trump administration to consider when anti-development activists claim that the industry cannot operate safely, or that a major spill is inevitable.

There is strong support across the country for opening up new areas in the Arctic, Gulf of Mexico, and the Atlantic. In addition to my full written testimony, I would ask to submit for the record several letters from stakeholders and state legislators in Virginia, North Carolina, South Carolina, Georgia, and Florida, expressing strong support for the Administration's decision to move forward with this new plan, and asking for expanded OCS leasing, which will put Americans to work, boost the economy, provide significant revenues to help fund the government, and reduce our alliance on overseas imports.

Thank you again for the opportunity to testify today.

[The prepared statement of Mr. Whatley follows:]

PREPARED STATEMENT OF MICHAEL WHATLEY, EXECUTIVE VICE PRESIDENT,
CONSUMER ENERGY ALLIANCE

Chairman Gosar, Ranking Member Lowenthal, and members of the Subcommittee, it is an honor to be here today on behalf of Consumer Energy Alliance to testify on developments surrounding offshore oil and natural gas development in America's Federal waters.

Consumer Energy Alliance (CEA) is a nationwide non-profit, non-partisan trade association which represents families and businesses in advocating for balanced policies that support access to affordable, reliable energy. CEA's membership includes over 275 affiliate members that represent nearly every sector of the U.S. economy and more than 450,000 individuals across the country dedicated to developing and implementing energy policies which will promote affordable and reliable energy.

THE NEED FOR EXPANDED OCS LEASING

The Federal Government forecasts that energy consumption will continue to rise in the coming decades, with petroleum and natural gas comprising more of the Nation's energy consumption portfolio in 2040 than it did in 2016,¹ making it vital for the Federal Government to promote opportunities to develop America's natural resources in order to secure long-term affordable, reliable energy.

CEA strongly supports expanded offshore energy development as a critical component of a rational, balanced all-of-the-above energy policy. Along with a robust pipeline network which can move offshore energy to refineries, natural gas processing facilities and—ultimately—to energy consumers, offshore energy production is essential to meeting our national energy needs.

In addition to providing tens of thousands of high-paying jobs and adding billions of dollars to the American economy, domestic offshore oil and natural gas production has helped keep gasoline, diesel and jet fuel prices affordable and greatly enhanced our national energy security. Over the past 10 years, CEA has worked with the Bush and Obama administrations, as well as dozens of governors, hundreds of state legislators and stakeholders and hundreds of thousands of individual energy consumers to support expanded leasing in the Gulf of Mexico, Alaska and Atlantic OCS regions.

Consumer Energy Alliance applauds the decision by the Trump administration to develop a new offshore energy leasing program and urges the Department of the Interior to expand leasing in the Arctic, Gulf of Mexico and the Atlantic. With 94 percent of Federal waters currently closed to leasing, the development of a new program will provide an important opportunity to reassess and reverse existing restrictions in areas including the Arctic, Gulf of Mexico and the Atlantic. Expanding leasing into these areas will generate significant economic benefits for the entire United States and can be done safely.

ATLANTIC BENEFITS

As a resident of North Carolina, the benefits of potential Atlantic development are important to me. According to a recent Quest Offshore Resources study, for North Carolina alone, Atlantic energy development could create more than 55,000 jobs, add more than \$4 billion annually to the state's economy, and cumulatively generate over \$26 billion in spending and nearly \$4 billion in new state revenue.²

This would provide a much needed boost at a time when North Carolina's middle class is struggling. A North Carolina State University economist reported just last week that North Carolina middle-class jobs fell 5 percent from 2001 to 2015, while the national average rose 6 percent, leading one professor at the University of North Carolina to note that "We are effectively seeing indications of the disappearance of the middle class."³

Underscoring the need for an adequate supply of affordable energy, Inside Energy notes that while economists consider "affordable" energy to equate to 6 percent of income, households in North Carolina, South Carolina, and Georgia with incomes below 50 percent of the Federal poverty level spend about 30–40 percent of their income on energy, while such households in Virginia spend roughly 40–50 percent of their income on energy.⁴

More broadly, Atlantic development could generate almost 280,000 jobs, nearly \$200 billion in Gross Domestic Product, and over \$194 billion in capital investment and spending and \$51 billion in new public revenue. For the Atlantic Coast region only, that includes more than 215,000 jobs and over \$130 billion in Gross Domestic Product, \$109 billion in capital investment and spending, and \$19 billion in new state revenue.

Furthermore, the study found that Atlantic development could generate an additional 1.3 million barrels of oil equivalent per day. That is enough to replace nearly two-thirds of the 2.1 million barrels of crude oil and petroleum products that we import daily from the Persian Gulf.⁵

Public polling in Atlantic coastal states underscores the support that exists for offshore development in the region. A recent poll commissioned by Consumer Energy Alliance found continued majority support for expanded drilling in Virginia and

¹ [https://www.eia.gov/outlooks/aeo/pdf/0383\(2017\).pdf](https://www.eia.gov/outlooks/aeo/pdf/0383(2017).pdf).

² <http://www.noia.org/wp-content/uploads/2013/12/The-Economic-Benefits-of-Increasing-US-Access-to-Offshore-Oil-and-Natura....pdf>.

³ <http://www.citizen-times.com/story/news/2017/07/06/economist-middle-class-wage-crunch-worse-north-carolina/103462192/>.

⁴ <http://insideenergy.org/2016/05/08/high-utility-costs-force-hard-decisions-for-the-poor/>.

⁵ https://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbldpd_m.htm.

North Carolina,⁶ while Harris Polls establish similar majority support for offshore development in South Carolina⁷ and Georgia.⁸

NATIONAL BENEFITS

Nationally, expanded access to the Atlantic, Gulf of Mexico, Pacific, and Alaska will provide significant benefits including the creation of more than 893,000 jobs, \$450 billion in new private sector spending, \$550 billion in increased economic activity nationwide and more than \$395 billion in increased government revenues.⁹

Access to the 404 trillion cubic feet of natural gas and 90 billion barrels of oil projected to sit in the Outer Continental Shelf will ensure a stable, steady supply of energy for American energy consumers with reduced reliance on imports from hostile overseas regimes. It will also keep prices of gasoline, diesel and jet fuel affordable—which is critical to every segment of the U.S. economy.

In terms of American energy security, it is important to note that the U.S. military—the single largest energy user in the world—heavily relies on oil, bunker fuel and jet fuel to protect our interests around the world. In Fiscal Year 2014, the Department of Defense used over 87 million barrels of fuel, at a cost of nearly \$14 billion.¹⁰ With oil hovering around \$100 per barrel less than 2008 prices, we are saving around \$8.7 billion per year in fuel costs—which can now be spent on body armor, new weapons systems or other critical programs. Increased domestic production can also provide U.S. allies with energy supplies, in turn reducing their dependence on hostile regimes.

SAFETY

It is very important that offshore energy development is safe—and is getting safer every day. Growing up, I spent a lot of time with my family on the beaches of Nags Head, Kitty Hawk, and Topsail Island, NC. Now, I take my children on vacations to the beach every year. It is important to me—as it is to all of the residents and vacationers who visit the Atlantic beaches every year—that the industry and the Federal Government will work together to ensure that any exploration and development of offshore energy resources is done without harming these national treasures.

Both the Federal Government and the offshore energy industry have made great strides in improving all aspects of offshore energy production. Among these changes are the creation of new collaborative containment companies which stand ready to deploy state-of-the-art containment technology at the first sign of any wellhead spill, the development of more than 600 industry standards covering all aspects of production and the creation of the Center for Offshore Safety, which works with independent third-party auditors and government regulators to create an industry-wide culture of continuous safety improvement.

More than 40,000 wells have been safely drilled in the Gulf of Mexico and more than 700 are operating at depths of more than 5,000 feet. This record and the fact that 99.999 percent of all oil produced, transported and refined in the United States reaches its destination safely are important points for Congress and the Trump administration to consider when anti-development activists claim that the industry cannot operate safely or that a major spill is inevitable.

Moreover, these accomplishments have occurred while the country has been making environmental strides, with net U.S. greenhouse gas emissions in 2015 being 11.5 percent lower than they were in 2005,¹¹ and as President Obama noted last year, at a time when the country has “reduced the pace at which we are emitting carbon dioxide into the atmosphere faster than any other advanced nation.”¹² This

⁶ <https://consumerenergyalliance.org/2017/05/poll-finds-virginia-west-virginia-north-carolina-voters-support-atlantic-coast-pipeline-energy-development-infrastructure/>.

⁷ <http://www.api.org/?media/Files/News/2016/16-February/What-America-Is-Thinking-South-Carolina-Feb-2016-Questionnaire.pdf>.

⁸ <http://www.api.org/?media/files/news/2015/15-january/what-america-is-thinking-offshore-drilling-ga-january-2015.pdf>.

⁹ <http://www.noia.org/wp-content/uploads/2013/12/The-Economic-Benefits-of-Increasing-US-Access-to-Offshore-Oil-and-Natural-Gas-Resources-in-the-Eastern-GOM.pdf>; <http://www.noia.org/wp-content/uploads/2014/11/The-Economic-Benefits-of-Increasing-US-Access-to-Offshore-Oil-and-Natural-Gas-Resources-in-the-Pacific.pdf>; and <http://artcienenergycenter.com/wp-content/uploads/2015/08/National-Effects-Report-FINAL.pdf>.

¹⁰ http://www.acq.osd.mil/eie/OE/OE_index.html.

¹¹ https://www.epa.gov/sites/production/files/2017-02/documents/2017_complete_report.pdf.

¹² <https://obamawhitehouse.archives.gov/the-press-office/2016/10/03/remarks-president-south-south-lawn-panel-discussion-climate-change>.

underscores the fact that American energy development and a healthy environment go hand-in-hand.

CONCLUSION

The development of a new leasing program for 2019–2024 presents an opportunity to expand OCS leasing in the Arctic, the Gulf of Mexico and the Atlantic. To be sure, this is a long process. Assuming that these areas are ultimately included in the new program, additional environmental and public reviews, Federal approvals, and business determinations will have to occur before any actual on-the-water activity takes place. Given the long lead-times associated with development in new OCS regions, actual production would be unlikely to take place before the mid-2030s.

This important and comprehensive process provides ample opportunity to ensure that all issues and concerns are fully coordinated and addressed. At the same time, the fact that the process takes such a long time underscores why it is imperative for the Department of the Interior to take steps *today* to make sure that ample opportunities are available to meet our energy needs well into the future.

The following documents were submitted for the record as supplements to Mr. Whatley's testimony.

ATTACHMENTS

ASSOCIATED INDUSTRIES OF FLORIDA,
TALLAHASSEE, FLORIDA

July 10, 2017

Hon. PAUL GOSAR, *Chairman*,
Hon. ALAN LOWENTHAL, *Ranking Member*,
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Ranking Member Lowenthal:

On behalf of Associated Industries of Florida (AIF), a state trade association representing a broad spectrum of industry, I write today regarding your July 12, 2017 oversight hearing on "Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf," I write to convey my strong support for including the Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

While energy development may not be occurring directly off the Florida Atlantic coast, businesses throughout Florida will benefit in servicing the operations while creating jobs for Florida's residents. In addition to helping to secure access to affordable, reliable energy for the state's residents and businesses, exploration and production leads to good-paying jobs and generate substantial economic activity.

In addition, to ensure that Florida is adequately positioned to bear costs related to development in adjacent waters and has access to the same benefits as other states with offshore oil and gas activity, I fully support the expansion of revenue-sharing to states beyond the Gulf of Mexico, including Florida.

I appreciate your interest in this important subject and urge your support for expanding the nation's leasing program to include the Atlantic and expanding revenue-sharing to all states including Florida with adjacent offshore oil and gas activity.

Sincerely,

BREWSTER B. BEVIS,
Senior Vice President,
State and Federal Affairs.

FLORIDA HOUSE OF REPRESENTATIVES,
TALLAHASSEE, FLORIDA

Hon. PAUL GOSAR, *Chairman*,
Hon. ALAN LOWENTHAL, *Ranking Member*,
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Ranking Member Lowenthal:

In connection with your July 12, 2017 oversight hearing on “Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf,” I write to convey my strong support for including the Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

The State of Florida is positioned to realize significant benefits from future Atlantic oil and natural gas development. While energy development may not be occurring directly off the Florida Atlantic coast, Florida’s businesses up and down the coast will benefit in servicing the operations while creating jobs for Florida’s residents. In addition to helping to secure access to affordable, reliable energy for the state’s residents and businesses, exploration and production leads to good-paying jobs and generate substantial economic activity.

Furthermore, I support the prompt approval of pending applications to conduct Atlantic oil and gas seismic exploration and issue the permits and necessary approvals. Obtaining an updated oil and gas resource estimate is critical to ensuring informed decisions related to possible future Atlantic oil and gas development. With existing estimates based on decades-old technology, it is vital that new exploration using modern techniques be applied to ensure economically and environmentally-efficient activity should development ultimately take place.

Finally, to ensure that Florida is adequately positioned to bear costs related to development in adjacent waters and has access to the same benefits as other states with offshore oil and gas activity, I fully support the expansion of revenue-sharing to states beyond the Gulf of Mexico, including Florida.

I appreciate your interest in this important subject and urge your support for expanding the nation’s leasing program to include the Atlantic and expanding revenue-sharing to all states with adjacent offshore oil and gas activity.

Sincerely,

JASON FISCHER,
Representative, District 16.

GEORGIA HOUSE OF REPRESENTATIVES,
ATLANTA, GEORGIA

July 11, 2017

Hon. PAUL GOSAR, *Chairman*,
Hon. ALAN LOWENTHAL, *Ranking Member*,
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Ranking Member Lowenthal:

In connection with your July 12, 2017 oversight hearing on “Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf,” I write to convey my strong support for including the Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

The State of Georgia is positioned to reap significant benefits from future Atlantic oil and natural gas development even though we have a small coastline. Future oil and gas exploration activities could generate 5,000 jobs and over \$2.1 billion in cumulative spending and over \$700 million in new revenue for our state—based on estimates by Quest Analytics. This would create significant economic activity at our ports and help improve the quality of life with new opportunities across the state.

In addition, I also support the swift approval of pending applications to conduct Atlantic oil and gas seismic exploration and issue the permits and necessary approvals. It’s critical that we have updated oil and gas resource information using the latest technology to ensure informed decision-making is being made about resource estimates in our federal waters in the Atlantic. With existing estimates based on decades-old technology, it is vital that new exploration using modern techniques be

applied to ensure economically and environmentally-efficient activity should development ultimately take place.

Finally, to ensure that Georgia is adequately positioned to bear costs related to development in adjacent waters and has access to the same benefits that other states enjoy under federal with offshore oil and gas activity, I fully support the expansion of revenue-sharing to states beyond the Gulf of Mexico, including my home state.

I appreciate your interest in this important subject and urge your support for expanding the nation's leasing program to include the Atlantic and expanding revenue-sharing to all states with adjacent offshore oil and gas activity.

Sincerely,

CHARLES E. "CHUCK" MARTIN, JR.
Representative, District 49.

THE JAMES MADISON INSTITUTE,
TALLAHASSEE, FLORIDA

July 11, 2017

Hon. PAUL GOSAR, *Chairman,*
Hon. ALAN LOWENTHAL, *Ranking Member,*
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Ranking Member Lowenthal:

As the President and CEO of The James Madison Institute, Florida's oldest and largest policy think tank, our commitment to free market principles extends to all areas of economic prosperity. It is within this context that I write to you today.

In connection with your July 12, 2017 hearing on "Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf," I wish to convey JMI's support for North American energy by including the Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

Florida's economy will benefit from working to support the energy sector while ensuring that we maintain low energy costs which help our state especially in the tourism and transportation industries.

Furthermore, JMI supports the prompt approval of pending applications to conduct Atlantic oil and gas seismic exploration and issue the permits and necessary approvals. Obtaining an updated oil and gas resource estimate is critical to ensuring informed decisions related to possible future Atlantic oil and gas development. With existing estimates based on decades-old technology, it is vital that new exploration using modern techniques be applied to ensure economically and environmentally-efficient activity should development ultimately take place.

Sincerely,

J. ROBERT MCCLURE, PH.D.,
President and CEO.

NORTH CAROLINA FARM BUREAU FEDERATION, INC.,
RALEIGH, NORTH CAROLINA

July 10, 2017

Hon. PAUL GOSAR, *Chairman,*
Hon. ALAN LOWENTHAL, *Ranking Member,*
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Ranking Member Lowenthal:

In connection with your July 12, 2017 oversight hearing on "Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf," North Carolina Farm Bureau conveys its strong support for including the Mid- and South Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

Agriculture is North Carolina's number one industry generating more than \$84 billion annual economic activity and accounting for almost one fifth of our State's jobs. Our agriculture economy is heavily dependent on energy. Farmers depend on oil and natural gas for growing crops, hauling them to market, food processing, crop drying and curing, crop protection chemicals and fertilizer production.

Based on federal estimates, the Atlantic is home to significant resources that could provide a stable and secure source for domestically produced energy. In addition, one study found that Atlantic development could bring more than 55,000 jobs to North Carolina, grow the state's economy by \$31 billion, and generate \$4 billion in new state revenue. Many of these benefits will promote needed economic development in our rural, eastern counties.

Importantly, Atlantic resource estimates are based on decades-old seismic data and are likely to increase following new seismic surveys using modern technology. Incentives to update the data by conducting new studies will be limited to non-existent without the likelihood or at least the possibility of lease sales. Including the Atlantic in the Draft Proposed Program is critical to maintaining industry interest in conducting new studies that ultimately enable more economically and environmentally effective exploration.

North Carolina Farm Bureau strongly supports inclusion of the Atlantic and urges your support as well.

Sincerely,

LARRY B. WOOTEN,
President.

NORTH CAROLINA GENERAL ASSEMBLY,
HOUSE OF REPRESENTATIVES,
RALEIGH, NORTH CAROLINA

July 10, 2017

Hon. PAUL GOSAR, *Chairman*,
Hon. ALAN LOWENTHAL, *Ranking Member*,
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Ranking Member Lowenthal:

In connection with your July 12, 2017 oversight hearing on "Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf," I write to convey my strong support for including the Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

The State of North Carolina is positioned to realize significant benefits from future Atlantic oil and natural gas development. In addition to helping secure access to affordable and reliable energy for the state's residents and businesses, exploration and production of oil and natural gas offshore of our state will lead to increased employment opportunities and substantial economic activity. In turn, such economic activity would also provide the state and local governments with much-needed revenue to fund public infrastructure projects that can contribute to further economic prosperity for our citizens.

Furthermore, I support the prompt approval of pending applications to conduct Atlantic oil and gas seismic exploration. Obtaining an updated oil and gas resource estimate is critical to ensuring informed decisions related to possible future Atlantic oil and gas development. With existing estimates based on decades-old technology, it is vital that new exploration using modern techniques be applied to ensure economically and environmentally prudent decisions are made.

Finally, to ensure that North Carolina is adequately positioned to bear costs related to development in adjacent waters, and has access to the same benefits as other states with offshore oil and gas activity, I fully support the expansion of revenue-sharing to states beyond the Gulf of Mexico, including North Carolina.

I appreciate your interest in this important subject and urge your support for expanding the nation's leasing program to include the Atlantic and expanding revenue-sharing to all states with adjacent offshore oil and gas activity.

Sincerely,

REPRESENTATIVE CHRIS MILLIS,
16th District.

PALMETTO PROMISE INSTITUTE,
SOUTH CAROLINA

July 11, 2017

Hon. PAUL GOSAR, *Chairman,*
Hon. ALAN LOWENTHAL, *Ranking Member,*
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Representative Lowenthal:

In connection with your July 12, 2017 oversight hearing on "Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf," I write to convey my strong support for including the Atlantic in the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program.

The State of South Carolina is positioned to realize significant benefits from future Atlantic oil and natural gas development. In addition to securing a new source of affordable, reliable energy for the state's residents and businesses, offshore exploration could bring billions of dollars of fresh investment, create tens of thousands of jobs, generate up to several billion dollars in new tax revenue and lease payments, and bring all manner of new industries to the Palmetto State.

Furthermore, I support the prompt approval of pending applications to conduct environmentally safe seismic exploration in the Atlantic and issue the permits and necessary approvals. Obtaining an updated oil and gas resource estimate is critical to ensuring informed decisions related to possible future Atlantic oil and gas development. With existing estimates based on decades-old technology, it is vital that new exploration using modern techniques be applied to ensure economically and environmentally-efficient activity should development ultimately take place.

Finally, to ensure that South Carolina is treated fairly and has access to the same benefits as other states with offshore oil and gas activity, I fully support the expansion of revenue-sharing to states beyond the Gulf of Mexico, including South Carolina.

With industry advances in technology and safety, I believe our state's cherished natural beauty and robust tourism industry can exist in harmony with offshore energy exploration. Guided by informed decision-making made possible by new seismic maps and expanded revenue-sharing for Atlantic states, we could be facing a generational opportunity for the people of South Carolina.

I appreciate your interest in this important subject and urge your support for expanding the nation's leasing program to include the Atlantic and expanding revenue-sharing to all states with adjacent offshore oil and gas activity. Thank you for your consideration.

Sincerely,

ELLEN E. WEAVER,
President.

VIRGINIA MANUFACTURERS ASSOCIATION,
RICHMOND, VIRGINIA

July 11, 2017

Hon. PAUL GOSAR, *Chairman*,
Hon. ALAN LOWENTHAL, *Ranking Member*,
House Subcommittee on Energy and Mineral Resources,
Washington, DC 20515.

Dear Chairman Gosar and Congressman Lowenthal:

As you explore the state of offshore oil and natural gas development in Federal waters at your July 12, 2017 oversight hearing, the Virginia Manufacturers Association (VMA) offers its strong support for expanded leasing opportunities, including in the Atlantic.

The Virginia Manufacturers Association has been a leader on Atlantic access, going back to the 2006 legislation that created the Virginia Energy Plan which first prioritized offshore energy exploration 50 miles off our shores and overwhelmingly passed the General Assembly 70–20 and Virginia Senate 37–0. Again, in 2010 the VMA championed the legislation to prioritize exploration and production of offshore energy while also considering the impact on affected localities, the armed forces, and the Mid-Atlantic regional spaceport, which again sailed through the General Assembly (69–28) and Senate (32–8) by wide margins. This consideration included dedicating potential offshore lease royalty revenue to the VA Transportation Trust Fund, the VA Coastal Energy Research Consortium and local government infrastructure. Finally, in 2014, the VMA supported amendments to the VA Energy Plan to dedicate offshore lease royalties to the Virginia Offshore Energy Emergency Response Fund. All the while, we have advocated for Federal offshore lease royalty revenue sharing with Virginia.

The reasons for the strong history of support by VMA and members of both parties in the Commonwealth are simple. The economic benefits and energy independence that offshore energy, including wind energy, can bring to Virginia, the Mid-Atlantic and Southeast U.S. are badly needed. One study found that for Virginia alone, Atlantic-wide oil and natural gas development could generate nearly 25,000 jobs, \$16.9 billion in economic activity, and nearly \$2 billion in new state revenue. The industry has also made incredible technological advances to improve environmental safety. Simply put, we disagree with the false narrative that you cannot develop offshore energy safely. Virginia can put the best minds and technology to work for our economy and our environment, and develop our offshore energy without harming the environment.

For Virginia's 5,000+ manufacturers, the development of these resources could mean new orders and long-term affordable energy prices for an industry that contributes \$43 billion to the gross state product and accounts for over 84 percent of the state's manufactured goods exported to the global economy. More stable and affordable energy supplies also mean lower overhead, more capital available to hire Virginians, and manufactured products that are made in Virginia.

Moreover, with the domestic energy renaissance, foreign energy imports still account for over half of our nation's total daily supply. Yet, the untapped Atlantic may hold enough resources to reduce our imports from the Persian Gulf by more than 60 percent, which could significantly move the needle toward greater U.S. energy self-sufficiency.

Opening up the Atlantic not only makes sense from an economic and national security perspective, it also makes sense for our environment. As the Obama administration itself noted in 2016, in addition to losing out on as much as \$37 billion in incremental net benefits, foregoing the previously proposed Mid- and South Atlantic lease sale could cause between \$1.6 billion and \$2.9 billion in negative incremental environmental and social costs, primarily due to greater reliance on other sources for energy.

These are just a few of the reasons why leaders of both parties helped make it the official policy of the Commonwealth to support the exploration and development of offshore energy. VMA appreciates the opportunity to provide input as you engage in this important issue, and urges your support for expanding leasing access to the Atlantic.

Sincerely,

BRETT A. VASSEY,
President & CEO.

Dr. GOSAR. Thank you for your testimony.
The Chair now recognizes Dr. Knapp for his testimony.

STATEMENT OF JAMES H. KNAPP, PH.D., PROFESSOR, SCHOOL OF THE EARTH, OCEAN, AND ENVIRONMENT, UNIVERSITY OF SOUTH CAROLINA, COLUMBIA, SOUTH CAROLINA

Dr. KNAPP. Good morning, Chairman Gosar, Ranking Member Lowenthal, and distinguished members of the House Subcommittee on Energy and Mineral Resources. It is a pleasure and an honor to appear again before this Committee, and I applaud you for holding this hearing today.

For the record, I am James H. Knapp, a Professor in the School of the Earth, Ocean, and Environment at the University of South Carolina in the Great Palmetto State. My comments today represent my own views, and should not be construed to reflect those of my institution or entities that support our research.

I will summarize my written testimony in these opening comments, which I submit for the record. And today I would like to emphasize three points.

The premise that offshore development is inconsistent with other uses and activities in the near and offshore is a demonstrably false one, as Ms. LeBlanc has eloquently pointed out.

Secondly, even with modern technology, discovery of new energy resources remains a challenging and expensive proposition, as it has from its earliest days.

And third, informed decisions about offshore development potential can only be made with new state-of-the-art data.

By way of background, I am an environmentalist through my upbringing in California during the 1960s and 1970s. I was in Southern California when the Santa Barbara spill occurred. I am an earth scientist through my academic training at Stanford and MIT, and for most of the past decade, I have been a vocal advocate for the acquisition of new seismic data on the Atlantic OCS.

I believe an all-of-the-above strategy is the only sensible and responsible approach to meeting the energy demands of a vibrant U.S. and world economy, going forward.

In the spirit of full disclosure, we currently receive Federal grant support from both the Bureau of Ocean Energy Management, or BOEM, and the National Energy Technology Laboratory of the U.S. Department of Energy. Our BOEM funding supports evaluation of the sea bed and subsurface of offshore areas of South Carolina for establishing wind energy infrastructure.

Through funding from the Department of Energy, we, along with colleagues from a number of organizations, are evaluating the offshore geologic storage potential of CO₂ as a means of mitigating future fossil fuel carbon emissions. The Atlantic OCS, in particular, appears to offer significant potential for CO₂ storage, in part because previous exploratory drilling has not compromised potential reservoirs suitable for storage.

At the request of the former Minerals Management Service, and subsequently BOEM, the Department of Defense prepared an evaluation of compatibility of offshore oil and gas development with DoD activities. The 2010 analysis concluded that no more than 1 percent of the entire Federal OCS was unsuitable for oil and gas

development, and an additional 2 percent was unsuitable for permanent oil and gas surface structures.

The 2015 study arrived at similar numbers for areas included within the 2015 draft proposed plan, concluding that more than 96 percent of the OCS was either unrestricted or had site-specific restrictions.

Even with modern technology, the discovery of subsurface energy reserves remains challenging. By way of example, I can cite the history of petroleum exploration in Florida, which began with the first well in Escambia County in 1900. It was more than 50 years and hundreds of exploration wells later that the first discovery of oil was made in southern Florida. By 1970, when the Jay Field was discovered in the Florida Panhandle, it was the largest domestic discovery in the United States since the giant Prudhoe Bay discovery in the 1960s.

As is typically the case with such petroleum data, these Florida wells played a significant role in establishing the scientific basis for plate tectonic theory during the 1960s, documenting based on the rocks discovered at depth that North America and Africa were once connected, and the Atlantic Ocean had subsequently opened where the continents split.

While new seismic methods have evolved particularly for the offshore, the challenge to identify new energy reserves remains a proposition with, at best, a 70 percent success rate. Obviously, neither seismic surveying nor offshore exploration are new to the Atlantic OCS. More than 240,000 line miles of 2D seismic reflection were acquired off the shores of the U.S. Atlantic between the late 1960s and late 1980s, in support of an earlier phase of petroleum exploration.

In preparation for these activities, extensive environmental impact studies were carried out by Federal agencies, much as they are today, evaluating the potential impacts of seismic surveying and offshore drilling on tourism, commercial and recreational fishing, marine shipping, and commerce. These other uses of the marine and near-shore environment have continued apace over the last 50 years, despite the previous efforts for offshore energy development, belying the claim that such activities are mutually exclusive.

In conclusion, I am encouraged that the new Administration appears poised to reinstate an opportunity for market forces to determine whether offshore development of the Atlantic OCS is warranted. Those decisions can only be made in an informed way on the basis of new, state-of-the-art seismic surveys, such that the Federal Government may fairly execute its statutory obligation to adequately evaluate the resource potential. I will yield back my time.

[The prepared statement of Dr. Knapp follows:]

PREPARED STATEMENT OF JAMES H. KNAPP, PH.D., PROFESSOR IN THE SCHOOL OF
THE EARTH, OCEAN, AND ENVIRONMENT AT THE UNIVERSITY OF SOUTH CAROLINA

INTRODUCTION

Good morning, Chairman Gosar, Chairman Bishop, Ranking Member Lowenthal, and honorable members of the House Subcommittee on Energy and Mineral Resources. It is a pleasure and honor to appear again before this Committee, and I applaud you for holding this hearing today. For the record, I am James H. Knapp, Professor in the School of the Earth, Ocean, and Environment at the University of South Carolina, in the great Palmetto State. My comments today represent my own views, and should not be construed to reflect those of my institution or entities that support our research. I will summarize my written testimony in these opening comments, which I submit for the record.

Today I would like to emphasize three points:

- The premise that offshore development is inconsistent with other uses and activities in the near and offshore is a demonstrably false one;
- Even with modern technology, discovery of new energy resources remains a challenging and expensive proposition, as it has from its earliest days; and
- Informed decisions about offshore development potential can only be made with new state-of-the-art data.

BACKGROUND

By way of background, I am an environmentalist through my upbringing in California during the 1960s and 1970s, an Earth scientist through my academic training at Stanford and M.I.T., and for most of the past decade, a vocal advocate for the acquisition of new seismic data on the Atlantic OCS. I believe an all-of-the-above strategy is the only sensible and responsible approach to meeting the energy demands of a vibrant U.S. and World economy going forward.

COMPATIBLE USES OF OCS

In the spirit of full disclosure, we currently receive Federal grant support from both the Bureau of Ocean Energy Management (BOEM) and the National Energy Technology Laboratory of the U.S. Department of Energy (DoE). Our BOEM funding supports evaluation of the seabed and subsurface of offshore areas of South Carolina for establishing wind energy infrastructure (Figure 1). Through funding from DoE, we along with colleagues from a number of organizations are evaluating the offshore geologic storage potential of CO₂ as a means of mitigating future fossil fuel carbon emissions (Figure 2). The Atlantic OCS in particular appears to offer significant potential for CO₂ storage, in part because previous exploratory drilling has not compromised potential reservoirs suitable for storage.

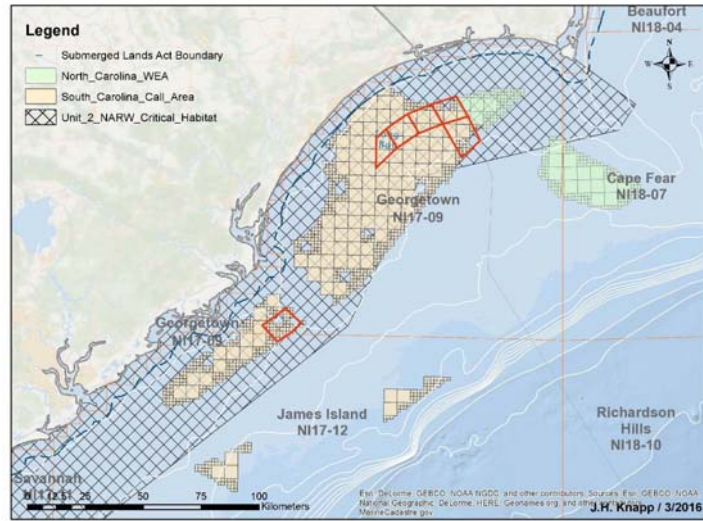


Figure 1. Map of offshore wind energy study area (red boxes) funded by the Bureau of Ocean Energy Management, offshore South Carolina. Marine geophysical methods are used to characterize the seabed and subsurface for suitability of offshore wind energy installations. Study is a collaboration between Coastal Carolina University and the University of South Carolina.

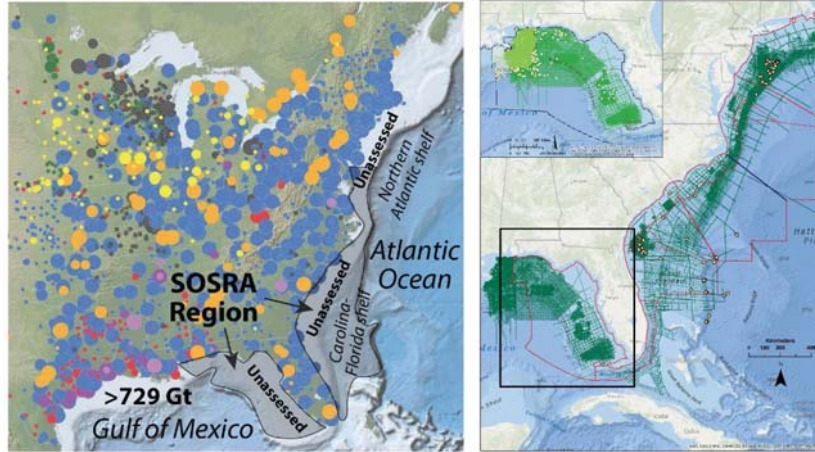


Figure 2. Location map of the Southeast Offshore Storage Resource Assessment (SOSRA) study, funded by the National Energy Technology Laboratory (NETL) of the U.S. Department of Energy, showing (A) map of point sources of CO₂ in the eastern United States (NATCARB database) and (B) location of legacy marine seismic reflection and well data used to characterize reservoir storage potential in the offshore. Study area extends from offshore Delaware to offshore Louisiana, and includes collaborators from Virginia Polytechnic Institute, Virginia Department of Mines, Mining, and Energy, Oklahoma State University, the South Carolina Geological Survey, the Alabama Geological Survey, and coordinated by the Southern States Energy Board.

At the request of the former Minerals Management Service (MMS) and subsequently BOEM, the Department of Defense prepared an evaluation of compatibility of offshore oil and gas development with DoD activities (Figure 3). The 2010 analysis concluded that no more than 1 percent of the entire Federal OCS was unsuitable for oil and gas development, and an additional 2 percent was unsuitable for permanent oil and gas surface structures. The 2015 study arrived at similar numbers for areas included within the 2015 Draft Proposed Plan, concluding that more than 96 percent of the OCS was either unrestricted (67.2 percent) or had site-specific restrictions (29.5 percent).

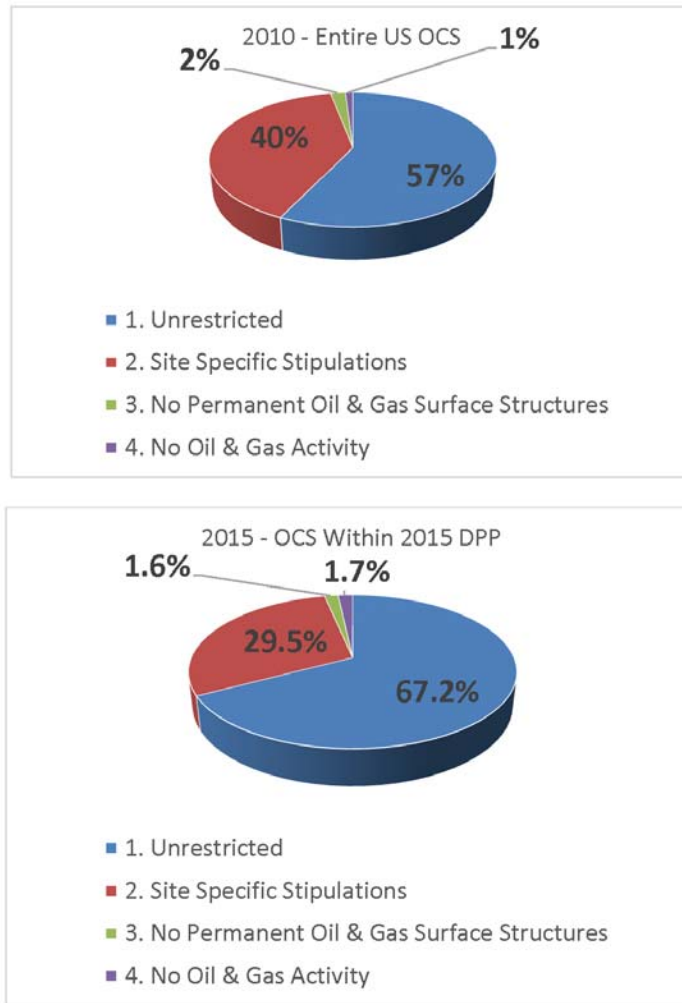


Figure 3. Data from (1) Report on the compatibility of Department of Defense (DoD) activities with oil and gas resource development on the Outer Continental Shelf (OCS) (2010); and (2) DoD Mission Compatibility Planning Assessment: BOEM 2017-2022 Outer Continental Shelf (OCS) Oil and Gas Leasing Draft Proposed Program (2015).

CHALLENGE OF EXPLORATION

Even with modern technology, the discovery of subsurface energy reserves remains challenging. By way of example, I can cite the history of petroleum exploration in Florida, which began with the first well in Escambia County in 1900. It was more than 50 years and hundreds of exploration wells later that the first discovery of oil was made in southern Florida, in the Sunniland trend. In 1970, when the Jay field was discovered in the Florida panhandle, it was the largest domestic discovery in the United States since the giant Prudhoe Bay discovery in the 1960s. As is typically the case with such petroleum data, these Florida wells played a significant role in establishing the scientific basis for plate tectonic theory during the 1960s, documenting based on the rocks discovered at depth that North America and Africa were once connected, and the Atlantic Ocean had subsequently opened where the continents split. While new seismic methods have evolved, particularly for the offshore, the challenge to identify new energy reserves remains a proposition with at best a 70 percent success rate.

MODERN SEISMIC SURVEYING

Obviously, neither seismic surveying nor offshore exploration are new to the Atlantic OCS. More than 240,000 line miles (385,000 line km) of 2-D seismic reflection data were acquired off the shores of the U.S. Atlantic between the late 1960s and late 1980s (Figure 4), in support of an earlier phase of petroleum exploration. In preparation for these activities, extensive environmental impact studies were carried out by Federal agencies, much as they are today, evaluating the potential impacts of seismic surveying and offshore drilling on tourism, commercial and recreational fishing, and marine shipping and commerce. These other uses of the marine and near-shore environment have continued apace over the last 50 years, despite the previous efforts for offshore energy development, belying the claim that such activities are mutually exclusive.

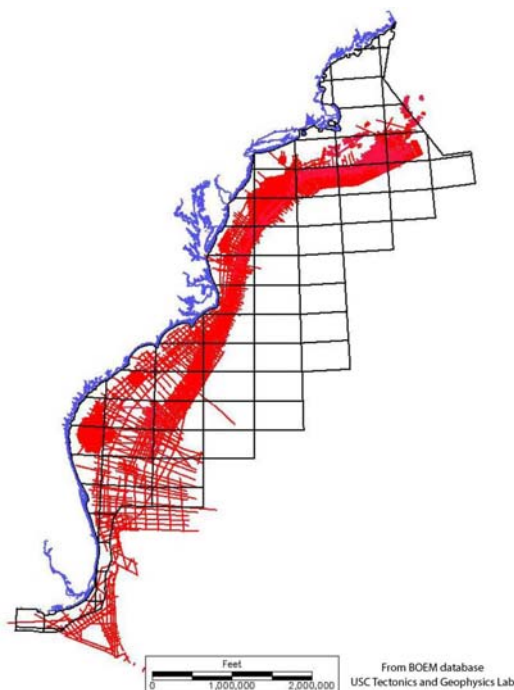


Figure 4. Map of legacy 2-D seismic data on the Atlantic OCS (courtesy of BOEM.) Approximately 380,000 line km (240,000 line miles) of 2-D seismic data were collected in the Atlantic OCS between 1966 and 1988.

Despite the enormous scientific value of these legacy seismic data, fully 80 percent of the territory that was originally included in the draft 2017–2022 5-year plan has never been evaluated with commercial seismic surveys (Figure 5). Furthermore, modern seismic surveys, driven globally by exploration activities over the last two decades (Figure 6), have ushered in fundamentally new models for how continents break and continental margins evolve.

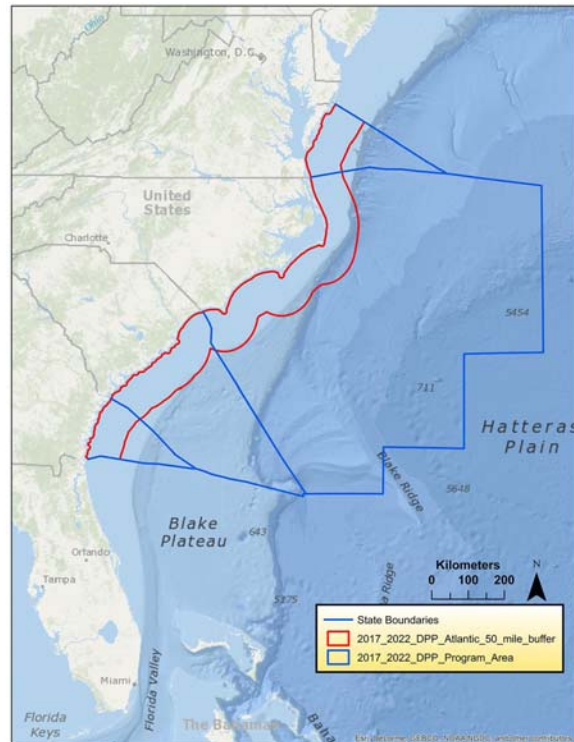


Figure 5. Area within Mid- and South Atlantic OCS Planning Areas originally included in the BOEM Draft Proposed Plan for 2017–2022. Red boundary represents 50 mile buffer zone from state waters. Fully 80 percent of area which was under consideration for exploration leases has never been the subject of commercial seismic surveys. (Produced at the Tectonics and Geophysics Lab at USC with information from BOEM.)



Figure 6. Map showing current offshore exploration efforts in the Atlantic Basin. Conspicuously absent are the Atlantic continental margin and Eastern Gulf of Mexico of the United States. (Courtesy of G. Steffens, Shell Oil Co.)

CONCLUSION

In conclusion, I am encouraged that the new administration appears poised to restate an opportunity for market forces to determine whether offshore development on the Atlantic OCS is warranted. Those decisions can only be made in an informed way on the basis of new, state-of-the-art seismic surveys, such that the Federal Government might fairly execute its statutory obligation to adequately evaluate the resource potential of this essentially frontier petroleum province, and the private sector might pursue environmentally responsible energy development in the national interest.

QUESTIONS SUBMITTED FOR THE RECORD BY REP. GOSAR TO DR. JAMES KNAPP, PROFESSOR, UNIVERSITY OF SOUTH CAROLINA

I thank the Hon. Chairman Gosar for the questions, and the opportunity to register these responses on the record. At the risk of sacrificing brevity for clarity, I will endeavor to support my responses with some appropriate background and references.

Question 1. What is the difference between large air-gun seismic surveys being proposed for the Atlantic versus seismic surveys in other regions of the U.S. OCS?

Answer. The short answer is, the design of the proposed seismic surveys for the Atlantic Outer Continental Shelf (OCS) (1) does not differ significantly from those previously carried out in other regions of the U.S. OCS, and (2) is appropriate, including the size of the airgun source, for the objective of resource potential evaluation.

Broadly speaking, geophysical surveying can be thought of as the process of remotely sensing those parts of the Earth (generally the subsurface, which is not readily observable directly), based on their physical properties (composition, density, rigidity, shear strength, porosity, fluid composition, magnetic susceptibility, etc.) and variables of state (temperature and pressure). Accordingly, the design of any geophysical survey is typically based on a combination of (a) the scale or size of the inferred target, (b) the anticipated depth of the target, and (c) the physical properties of interest. Seismic surveying is only one, but arguably the most powerful,

erties of interest. Seismic surveying is only one, but arguably the most powerful, geophysical surveying technique, providing quantitative information on the rocks, sediments, and fluids in the subsurface on a regionally significant spatial scale.

“Seismic surveying” in the context of the U.S. OCS refers typically to the method of “seismic reflection surveying,” wherein acoustic energy (sound) is introduced to the subsurface, and is recorded at or near the surface as it is “reflected” off boundaries in the subsurface between bodies with differing physical properties. While the technique has evolved considerably since the earliest pioneering marine seismic surveys at the mouth of Chesapeake Bay (e.g., Ewing et al, 1937), the theoretical basis of the approach remains unchanged. In particular, seismic reflection surveying has become the essential tool for the evaluation of subsurface resource potential, as it provides not only a graphic image of the features in the subsurface and their geometric relationships, but also a quantitative measure of the physical properties thereof.

Extensive marine seismic reflection surveys were carried out over the past half century within the U.S. Exclusive Economic Zone (EEZ) (Figure 1; Triezenberg et al, 2016), as well as globally (e.g. Figure 2, for northwestern Europe). The primary technological innovation since commercial seismic reflection surveys were last recorded on the Atlantic OCS during the 1970s and 1980s is the evolution from 2-D to 3-D surveys. Whereas 2-D surveys provide a vertical cross-section through the subsurface, 3-D surveys provide a volumetric image, much as modern medical tomographic imaging does with the human body. While marine 3-D seismic surveys are now commonplace worldwide, (1) only one small commercial 3-D survey was ever collected on the Atlantic OCS before moratoria were implemented, and (2) both survey designs have relevance in evaluating resource potential on and exploring for petroleum deposits within the essentially frontier province of the Atlantic OCS.



Figure 1. Map of 2-D and 3-D marine seismic reflection surveys in U.S. waters (pink lines), acquired by or contributed to U.S. Department of the Interior agencies, downloaded on 26 July 2017 from the National Archive of Marine Seismic Surveys, Pacific Coastal and Marine Science Center of the U.S. Geological Survey (<https://walrus.wr.usgs.gov/namss/search/>). 3-D seismic surveys (150) cover >121,000 km², and 2-D seismic surveys (~32,400 tracklines) cover >2,282,490 line km (Triezenberg et al, 2016). Included are surveys in the Atlantic Ocean, Pacific Ocean, Gulf of Mexico, and territorial waters of Alaska and Hawaii, spanning more than six decades.

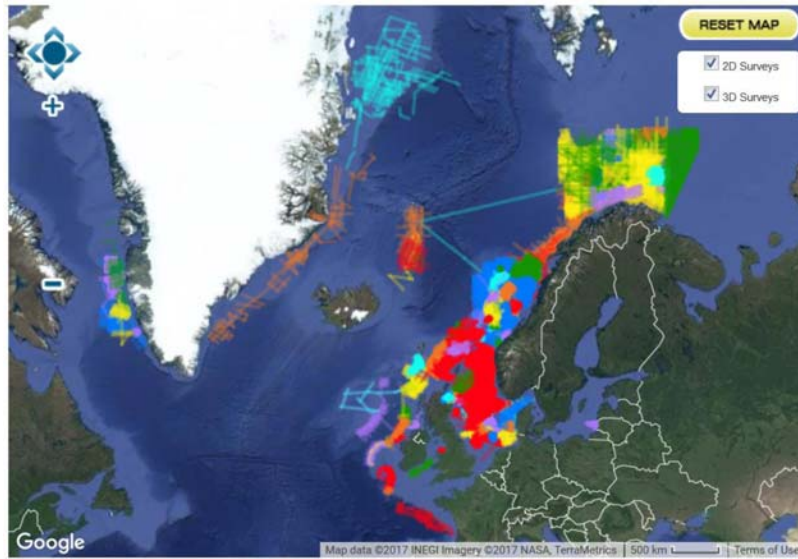


Figure 2. Map of proprietary 2-D and 3-D marine seismic reflection surveys in NW Europe, available from Spectrum Geo Ltd., downloaded on 26 July 2017 from their online interactive seismic data library (<http://www.spectrumgeo.com/seismic-data-library/multi-client-library/interactive-map>). Each color in a given area represents a different marine seismic reflection survey.

Despite the acquisition of more than 385,000 line km of marine seismic reflection data in the Atlantic OCS during the late 1960s to the late 1980s (Post et al, 2012), this province is still considered a frontier basin. Thousands of exploration wells have been drilled onshore along the Atlantic margin of the United States, but only ~60 such wells have been drilled in the Atlantic OCS. Moreover, as much as 80 percent of the Atlantic OCS territory that was under consideration for leasing in the 2017–2022 Draft Proposed Plan (Figure 3) has never been the subject of commercial seismic surveying. It is therefore difficult to understand how (1) the Federal Government could be fulfilling its statutory obligation to evaluate fairly the resource potential of, or (2) industry could realistically assess the viability of exploration of the Atlantic OCS in the absence of new, state-of-the-art seismic reflection surveys. While this region may yet prove to be unprospective for commercial resource development, such a determination could only be informed by new data and analyses.

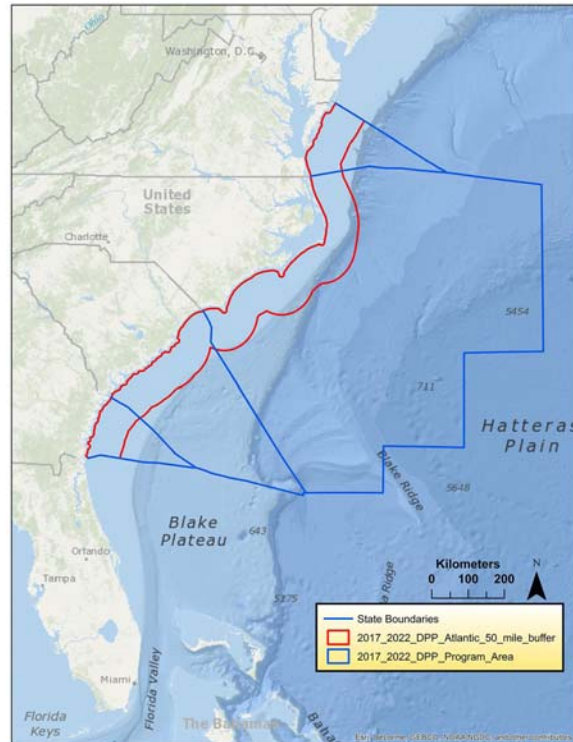


Figure 3. Area within Mid- and South Atlantic OCS Planning Areas originally included (and later removed) in the Bureau of Ocean Energy Management (BOEM) Draft Proposed Plan for 2017–2022. Red boundary represents 50-mile buffer zone from state waters. Fully 80 percent of the area which was under consideration for exploration leases has never been the subject of commercial seismic surveys. (Produced at the Tectonics and Geophysics Lab at UofSC with information from BOEM.)

Question 2. Does seismic harm marine mammals?

Answer. As a Professor of geology and geophysics, and a former employee in the petroleum industry, I have familiarity with a number of aspects of marine seismic acquisition and offshore oil and gas exploration and development. I cannot claim, however, to be an authority on marine biology or marine mammal behavior. Having said that, I am familiar with some of the peer-reviewed scientific literature on the interaction of marine life with marine seismic operations. Gordon and others (2004) provided a useful summary of observations of behavioral change in various marine mammal species in response to airguns and seismic surveys (Figure 4). While acknowledging effects such as changes in vocalization, these authors concluded that avoidance was the primary response documented across a variety of species and in a geographic area of global extent where the studies were conducted (Gordon et al, 2004).

TABLE 2
Summary of observations of behavioural change in marine mammals in response to air guns and seismic surveys

Species	Location	Observation	Source	Received level	Range	Behaviour	Water depth	Prog. Model	Reference
Common dolphin	Irish Sea	Operating seismic	20 Seismic 2,120 cu. in.		>1 km	Reduced vocalisation rate within vocal range and/or exclusion within 1 km.	90-100 m		Goold (1996)
Bottlenose dolphin	Captivity		1 sec 20 kHz pulse	-178 (75 kHz)		Behavioural avoidance responses at 178 dB			Ridgway et al. (1996)
Sperm whales	Southern Ocean	Opportunistic	Seismic 8x16 (253 dB re. 1 µPa -m)	-112 dB	>300 km	Cessation of vocalisation in response to some instances of air gun activity	>600 m		Bowles et al. (1994)
Gray whales	California	Experimental playback	Seismic array	-180 dB -170 dB -164 dB	1.2 km 2.5 km c.3.6 km	90% avoidance 50% avoidance 10% avoidance by migrating whales	90-100 m		Malmé et al. (1983, 1984)
Gray whales	Bering Sea	Experimental playback	Seismic array 1.64, 226 dB	-173 dB		50% avoidance			Malmé et al. (1986, 1988)
Gray whales (western)	Sakhalin Island, Russia	Operating seismic		-163db		10% avoidance by summering whales			Johnson (2002)
Bowhead whale	Beaufort Sea	Operating seismic	Seismic array	-142-157	8.2 km	Whales abandoned foraging site close to survey area and moved to main foraging area			Various studies in Richardson et al. (1996)
Bowhead whale	Beaufort Sea	Operating seismic		-152-178		Behavioural changes. Changes in blow rates and dive patterns.			
Bowhead whale	Beaufort Sea	Operating seismic		-125-133 dB	54-73 km	Active avoidance. Swimming away from the guns and behaviour disrupted for 1-2 hrs.	30-60 m		
Bowhead whale	Beaufort Sea	Operating seismic		-120-130db	29-30km	No avoidance behaviour but significantly shorter dives and surfacing periods.			
Humpback whale	S.E. Alaska	Experimental playback	Seismic gun 1.64, (226 dB)	-150-169	<3.2 km	Avoidance			
Humpback whale	North West Cape, W. Australia	Operating seismic	Seismic array 44 (258 dB re. 1 µPa ² -m p-p)	-170 dB P-P -162 dB P-P -157 dB P-P	3-4 km 5 km 8 km	Short-term startle response. No clear avoidance at levels up to 172 dB re. 1m Pa effective pulse pressure level.	100-120 m	25 logR	Mccauley et al. (1998)
Humpback whale	Emuoth Cuff, W. Australia	Experimental playback	Seismic gun 0.33L, (227 dB re. 1 µPa ² -m p-p)	-158 dB P-P -159 dB P-P	1 km	Avoidance manoeuvres	10-20 m		Mccauley et al. (1998)
Blue whale	North Pacific Ocean	Operating seismic	Seismic source 1,600 cu. in. (215 dB re. 1 µPa 1-m p-p)	-143 dB P-P	10 km	General avoidance			
Blue whale	North Pacific Ocean	Operating seismic	Seismic source 1,600 cu. in. (215 dB re. 1 µPa 1-m p-p)	-143 dB P-P	10 km	Course alterations begin Closest approach 10 km? Cessation of vocalisations for c.1 hr. Resumption of vocalisations and movement away from source.	2,400 m		Macedonald et al. (1990)
Grey seal	Scotland and Sweden	Experimental playback 1 hr exposure	Single gun or small array (215-224 dB re. 1µPa-1 m)			Avoidance. Change from feeding to transiting behaviour. Haulout. Apparent recovery c 20 mins after trial.	20-100 m		Thompson et al. (1998)
Common seal	Scotland and Norway	Experimental playback 1 hr exposure	Single gun or small array (215-224 dB re. 1 µPa-1 m)			Initial fright reaction. Bradycardia. Strong avoidance behaviour Cessation of feeding	20-100 m		Thompson et al. (1998)
Ringed Seal	Prudhoe Bay, Alaska	Operating Seismic	Array 21.5L (226 dB re. 1µ Pa 1 m p-p/horizontal)	200 dB rms 190 dB rms 180 dB rms 160 dB rms	.03 km 2.4 km .96 km 3.6 km	Partial avoidance at <150m More seals seen swimming away while guns firing	3-17m		Harris et al. (2001)

Figure 4. Summary of studies from the scientific literature of observed effects of marine seismic operations on various marine mammal species (Gordon et al, 2004).

Perhaps some of the most compelling data on the putative adverse effect of acoustic energy on marine mammals comes from the Federal Government. Established in 1991, The Working Group on Marine Mammal Unusual Mortality Events (UME) under the aegis of the Office of Protected Resources with the National Oceanic and Atmospheric Administration (NOAA) has formally identified 63 marine mammal UME in U.S. waters over the last 26 years (Figure 5). In most cases where a cause has been determined (32), infections and/or biotoxins were indicated; of the 63 UME, not even one has been attributed to marine seismic operations.

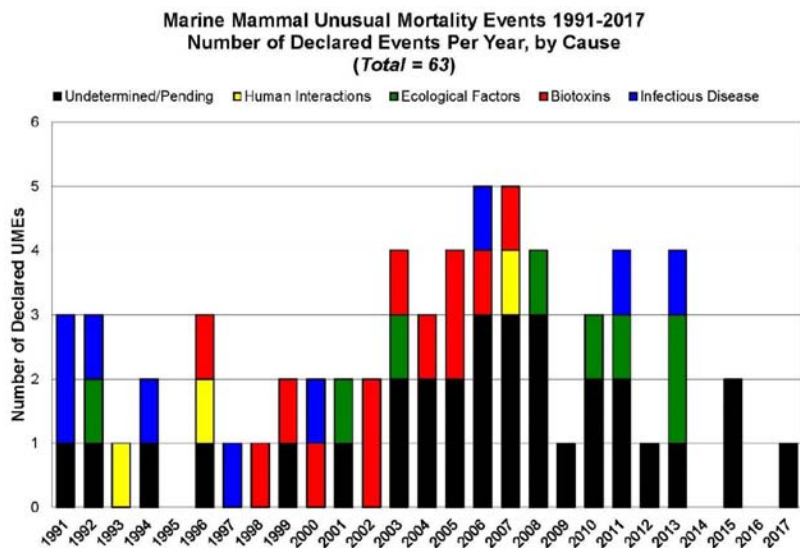


Figure 5. Cause of reported Unusual Mortality Events (UME) in U.S. waters (63 total) between 1991 and 2017 (NOAA Fisheries Office of Protected Resources; downloaded on 26 July 2017 from <http://www.nmfs.noaa.gov/pr/health/mmume/>). While the cause of a significant number (31) of UME remains “undetermined/pending,” only three have been attributed to “human interactions,” and in no instance has a UME been attributed to marine seismic operations.

A graph of the incidence of UME by geographic region is similarly instructive (Figure 6). Of the total 63 events documented for the period 1991–2017, the majority are nominally equally distributed between the Atlantic, Pacific, and Gulf of Mexico, during a period when extensive commercial seismic surveys have been conducted in the GOM, but not on the Atlantic and Pacific margins. One might reasonably expect a spatial and temporal correlation of UME with marine seismic operations were there a causal relationship. These data suggest the contention that marine seismic surveys result in mass mortality events of marine mammals is likely a chimera.

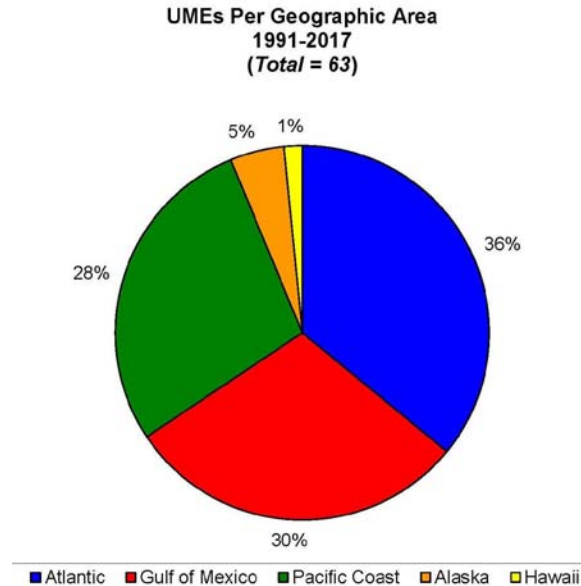


Figure 6. Percentage of reported Unusual Mortality Events (UME) in U.S. waters (63 total) by geographic area between 1991 and 2017 (NOAA Fisheries Office of Protected Resources; downloaded on 26 July 2017 from <http://www.nmfs.noaa.gov/pr/health/mmume/>). During the observation period, extensive commercial seismic surveys have been conducted in the Gulf of Mexico, but not in the Atlantic or Pacific OCS.

While not from the peer-reviewed literature, BOEM Chief Environmental Officer William Brown was categorical in his statement on the issue: “To date, there has been no documented scientific evidence of noise from airguns used in geological and geophysical (G&G) seismic activities adversely affecting marine animal populations or coastal communities. This technology has been used for more than 30 years around the world. It is still used in U.S. waters off of the Gulf of Mexico with no known detrimental impact to marine animal populations or to commercial fishing” (Brown, 2014). Brown continued in a follow-on statement (Brown, 2015) that the lack of evidence for adverse population-level effects on marine mammals does not conclusively prove they do not occur, but “since 1998, BOEM has invested over \$50 million on protected species and noise-related research, including marine mammals.” Given the historic level of marine seismic acquisition, both in U.S. waters and globally, one might reasonably be led to the conclusion that the preponderance of data suggests there is no definitive correlation between marine seismic activities and detrimental impacts to marine mammal populations.

Question 3. Does seismic harm fish?

Answer. As with the preceding question concerning marine mammals, I cannot claim to be an authority on marine biology. Unlike many who would claim to be authorities on marine acoustics and geophysical methods, apparently without credential, I would not presume to have a comprehensive knowledge of this subject. I would say I am unaware of a credible body of scientific literature demonstrating a clear causal relationship between marine seismic operations and detrimental impacts on fish populations. Brown (2014) included “marine animal populations” in his statement on the lack of documented scientific evidence for such a relationship, which would include fish.

As was mentioned during the hearing, a recent study by McCauley et al (2017) suggests there is a direct and mortal effect of seismic airgun sources on zooplankton. Upon closer inspection, this study appears flawed on a number of levels, even without knowledge of the biology of zooplankton. Statistical analysis on an insufficient data sample, inconsistencies between the raw and filtered data presented, and unexplained variations in sample size between exposed and control populations raise serious questions about the scientific methodology of this study. Were

these results robust, one might reasonably expect that the oceans would now be devoid of life after many decades of marine seismic operations worldwide.

Cited References/Sources:

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Dr. GOSAR. I thank the gentleman. I thank the panel for their testimony. Reminding the Members that the Committee Rule 3(d) imposes a 5-minute limit on questions, the Chairman will now recognize Members for questions they may wish to ask the witnesses.

I will recognize myself.

Ms. MacGregor, the Mid and South Atlantic OCS planning areas were not included in the previous 2017–2022 5-year plan. The Beaufort and Chukchi Seas off of northern Alaska were also not included. Why has the new Administration chosen to reconsider these areas at this time?

Ms. MACGREGOR. Thank you for the question. Just to clarify, when it comes to initiating the new 5-year plan, we are at the very early stages of a very long process that is outlined in the Outer Continental Shelf Lands Act. So, for those who have mentioned this earlier in their testimony, we are starting in the same place that all administrations have always started, which is all 26 planning areas are on the table, and will be further evaluated thoroughly.

The Arctic and Mid-Atlantic planning areas are areas that in the past have enjoyed wide bipartisan support, and I believe that is one of the reasons why those have been selected for further review.

Dr. GOSAR. How would they be considered differently?

Ms. MACGREGOR. They will be considered equally among all 26 planning areas.

Dr. GOSAR. When developing a new OCS leasing plan, how does BOEM engage with state leaders, coastal communities, and other stakeholders?

Ms. MACGREGOR. BOEM and the Department are very, very engaged with all stakeholders, especially governors and local and public leaders. It is actually written into Federal law that BOEM work and receive feedback from governors. We have already sent out our initial letters requesting feedback on that, and we will be working with the public every step of the way.

The process has 255 days of statute-required public comment, as well.

Dr. GOSAR. So, plenty of access to have opportunity to voice your opinion?

Ms. MACGREGOR. Absolutely. We welcome everyone's input.

Dr. GOSAR. Mr. Whatley, should the Mid and South Atlantic planning regions be leased and developed, and how are the Atlantic coastal states and communities prepared to handle the offshore infrastructure?

Mr. WHATLEY. Well, the first part of the work that would be done, in terms of once leasing blocks are put out there, would be evaluations of the area. Those will be run mostly out of the ports, such as Norfolk in Virginia; Charleston in South Carolina; Savannah; Wilmington. And those states will have time.

It is important to note what Kate mentioned with the timelines in the plan, because once the leasing is done, there is a 7- to 10-year time period where they evaluate the lease blocks, where they do exploratory drilling. And then, ultimately, you would get to a production point. The states would know that this is coming and have the opportunities to develop the infrastructure that they need in those areas.

Dr. GOSAR. How would the states benefit from the leasing and production?

Mr. WHATLEY. The jobs and the economic impacts that would take place for exploration and production are very significant. As I have mentioned in my testimony, the numbers that we have seen in the Atlantic are that it would contribute, overall, about 840,000 jobs, \$550 billion in increased economic activity, and \$395 billion in increased government revenues.

And those would be, obviously, enhanced if revenue share was put into place. But we think that the economic drivers for the activity that would take place in the ports and in the states is significant.

Dr. GOSAR. Mr. Whatley, you work with many business associations and State Congress folks throughout the Atlantic states who have expressed interest in exploration and development off their coasts. What value do these groups see in the OCS development off the Atlantic?

Mr. WHATLEY. I think the primary benefits that they see are two-fold. First, there are the jobs that are going to be created, the increased spending that would be done in the state, and the government revenues that would flow from that. But also, it is very important in terms of the economic benefits of lower fuel prices.

So, when you talk about gasoline and diesel prices being significantly lower because of American production, when you talk about manufacturing that is coming back to the United States because of lower natural gas and electricity prices, those have long-term benefits for it.

We understand that energy prices are low today, and that is great. But the offshore opportunity gives us a long-term planning horizon for these companies to understand that the energy prices will continue to be low, going forward.

Dr. GOSAR. I appreciate it.

Ms. LeBlanc, Louisiana is the Number one state for OCS production, and is home to an advanced energy industry. But Louisiana is also known as a sportsman's paradise. How does a state reconcile a robust offshore oil and gas industry and environmental stewardship? I mean, I want my cake and eat it, too. I like clean air, I like clean water, but I also like to do my hunting and fishing, and like to have my fuels to get me there.

Ms. LEBLANC. Thank you, Chairman, for the question. I think in south Louisiana, we are very blessed with an abundance of natural resources, and that includes our offshore oil and gas production, as well as the hunting, the fishing, and the wildlife watching. And we have taken tremendous strides to protect our environment and to allow it so that we can have multiple stakeholders and multi-use of our environment in south Louisiana.

We have done a tremendous effort of balancing those two. We have a very strong coastal restoration program right now, and it is just really about balancing energy production and coastal stewardship, environmental stewardship in order to be the sportsman's paradise capital of the world.

Dr. GOSAR. So, it is not mutually exclusive to have both?

Ms. LEBLANC. No, absolutely not. We are not an either-or state, and we do not have to sacrifice our environment for offshore production. I think that some of the statistics I provided in my testimony demonstrate that.

I know a lot of folks are very concerned about tourism. And, you know, Louisiana is a very, very strong tourist state, as are the other Gulf Coast states that support oil and gas.

Dr. GOSAR. Thanks, Ms. LeBlanc. I now recognize the Ranking Member for his questions.

Dr. LOWENTHAL. Thank you. I just want to frame it, just try to understand if I am clear, as I ask my questions.

The 2017–2022 Federal offshore oil and gas development on the Outer Continental Shelf, that plan, as I understand, was just completed in January of this year, 2017, the plan that we are now about starting the process to undo. It did not go into effect until last month.

It talked about prohibiting oil and gas development on the Atlantic, Pacific, and Arctic, except for one area, I believe, on Cook Island, and it promoted oil and gas development in the Gulf, by saying that the plan would have a more strategic and sustainable place where we would have our oil and gas development. It was not one-sided, it was really thoughtful.

So, now we are going to undo that. I really want to know what is the basis for that. My first question is to Ms. MacGregor.

The amount of oil produced offshore in 2016 was 17 percent higher than in 2008. In fact, production hit a record high amount in January of this year, and is still rising. So, the question is, are all these offshore oil companies currently complying with the safety regulations and policies that were put into place after Deepwater Horizon?

Ms. MACGREGOR. Sir, all of the regulations that are on the books that have been enacted are being adhered to and being inspected to, specifically.

As for your figures, yes, Fiscal Year 2016 we had significant oil production. Fiscal Year 2009 was actually higher.

Dr. LOWENTHAL. That is true. But we know that was the highest year. Then last year was the second highest, so we are talking about still very high oil and gas production. Is that not true?

Ms. MACGREGOR. That is true. Production is increasing, and I think that is such an important point, because—

Dr. LOWENTHAL. Under the existing planning process, and the new planning that we have in place, production is increasing.

Ms. MACGREGOR. Actually, you struck that point exactly. It is under existing leases, and most of the production that came on-line, some of the big projects, such as Stones in 2016 that came on-line, it was leased in 1996, and that is why leasing is so incredibly important.

Dr. LOWENTHAL. And we still have large numbers of leases. But I guess we talked about earlier on the onshore that have been permitted, and have been approved but not implemented.

Ms. MACGREGOR. Right. When we lease, whether it is the BLM—we provide a 10-year lease term offshore. The lease terms are 5, 7, and 10 year terms, and companies who bid and acquire that lease are able to develop on it. But—

Dr. LOWENTHAL. I appreciate it, and I am going to interrupt—

Ms. MACGREGOR. Oh, sorry.

Dr. LOWENTHAL. I apologize. But my question really is not about the leasing.

My question, as I asked you about complying with the safety regulations under Deepwater Horizon, you said yes, they are. But now Interior is currently reviewing or has recently reviewed those regulations and policies to determine if they, and let me quote, “potentially burden the development of energy resources.” Is that correct?

Ms. MACGREGOR. It is correct. BOEM, BSEE, and Department-wide, we are reviewing all of our regulations.

Dr. LOWENTHAL. So, you are reviewing those, and given that oil production is at a high and has been increasing, and companies are meeting all—as you pointed out—the new safety regulations and policies, it does not appear that these policies are burdening energy development. Is that not true?

Ms. MACGREGOR. Actually, we are still in the process of evaluating all of these policies.

Dr. LOWENTHAL. But if you look at the data, and you get back, there does not seem to be any reduction. Or we have not seen these new policies that have had a negative impact—

Ms. MACGREGOR. Well, frankly, several of the policies, such as the Arctic Rule or Well Control Rule—for instance, in the Arctic

Rule there is no Federal offshore production in the Arctic. So, we don't know how that is actually working.

Dr. LOWENTHAL. Got it.

Ms. MACGREGOR. Well control is the same way. It was just put into place last year, there is somewhat of a lag between implementing policies on safety, and actually seeing how they—

Dr. LOWENTHAL. How are you going to measure benefits? How will you be measuring the benefits?

Ms. MACGREGOR. Well, the Executive Order by the President put forward some pretty straightforward requirements when it comes to evaluating the regulations. When it came to benefits, it simply says we are going to evaluate based on imposed costs that may or may not exceed benefits.

But I guess, at the end of the day, we will adhere to all requirements by the government agencies.

Dr. LOWENTHAL. Will you be making them public before you make any regulatory changes?

Ms. MACGREGOR. When we make regulatory changes, whether it is a rescission, revision, or anything to regulations, we will be adhering to the APA process, which requires—

Dr. LOWENTHAL. So, you will be providing the public with a cost benefit analysis publicly before you make any—

Ms. MACGREGOR. Yes, it is part of the Administrative Procedure Act. We have to not only provide an RIA, but also look at providing notice and comment, which I know that in the past was a big concern for several folks raising regulations that were finalized in the last administration that in some cases did not provide the ability to have notice and comment.

So, we will absolutely be ensuring that there is comment on those.

Dr. LOWENTHAL. Thank you. Thank you for your testimony, and I yield back.

Dr. GOSAR. I thank the gentleman. The gentleman from Colorado, Mr. Lamborn, is recognized for his 5 minutes.

Mr. LAMBORN. Thank you, Mr. Chairman, and thanks for having this hearing.

Ms. MacGregor, thanks for coming back to the Committee. I have a question I would like to ask you, and then turn to Dr. Knapp on the same question.

There are concerns over the ecological impact of seismic testing. How are seismic surveys required to mitigate potential environmental effects of seismic testing?

Ms. MACGREGOR. Thank you for that question. Seismic is, of course, the scientific endeavor of using acoustic sound to determine what is occurring below the sea bed, and it is used for a multitude of purposes. Aside from just determining where hydrocarbons are, it also is used for aiding and siting renewable energy projects offshore, locating potential sand and gravel resources that we utilize in areas like Florida to help in coastal restoration, and identifying geological hazards.

Right now, there are a multitude of mitigation techniques that are employed to make sure that we are working to be respectful of the marine mammals that are also in that environment. Many companies, I believe, are required to have marine mammal

observers on board to simply point out when there is some sort of occurrence of a marine mammal.

You have to go through a very thorough permitting process through the Department, and also through partner agencies like the Department of Commerce, that has to issue an incidental harassment authorization. But there are very many mitigation techniques that are used right now.

Mr. LAMBORN. Dr. Knapp, can you add to that?

Dr. KNAPP. Thank you for the question, former Chairman Lamborn. I will not reiterate what Ms. MacGregor has already said, but I would add to that, as I tried to bring out in my testimony, seismic studies are the first, foremost, and fundamental way that we understand what is beneath the ground, short of actually putting a hole in the ground and recovering material.

But it is used for any number of purposes. For those of us in the scientific community, especially geophysicists, as we call ourselves, it is something that is fundamental to our ability to understand image, as essentially a doctor would a human: a three-dimensional picture of what is beneath the surface.

Mr. LAMBORN. Can it be done in an environmentally safe and responsible manner?

Dr. KNAPP. Absolutely, it can. It has been done for decades, globally, in many sensitive areas. And the data clearly show that there is yet to be any scientific data that show significant effects on marine mammal populations, despite even recent studies that are somehow suggesting that marine seismic surveys are detrimental even to the micro-organisms in the ocean. I think that there is yet to be conclusive evidence coming forward that there is demonstrable damage to any of those communities on a long-term basis.

Mr. LAMBORN. Would it be fair to conclude, at least as some people have, that those arguments are more emotional than scientific?

Dr. KNAPP. Well, I think that there is probably that element of it. Again, as a scientist, I can tell you that science is not some rigid body of facts. We, as scientists, never actually prove something. We are constantly disproving things.

So, I would say that the body of evidence so far indicates that there is no evidence to support the idea that there is long-term damage to any of those marine communities.

Mr. LAMBORN. Shifting gears, can seismic testing be compatible with Department of Defense needs and uses of the offshore areas?

Dr. KNAPP. Right, and that is what I tried to bring out in my testimony, because I have heard that put forward as a reason to limit offshore activities. Understandably, defense of the Nation is first and foremost, and I think that there are few people that would argue that. But by their own analysis, the Department of Defense has come forward and said that, in terms of oil and gas activities in the Outer Continental Shelf, 3 percent or less of that area is off limits, based on their needs for carrying out their mission. So, essentially, 97 percent is either unrestricted—the vast majority of it—or might have some conditions that are site-specific, but even those, I think, are more in terms of timing and coordination.

Mr. LAMBORN. Thank you.

Mr. Whatley, I would like to ask you a question. What is the difference in depth between the deep water of the Gulf of Mexico and

the Outer Continental Shelf off the Atlantic? And then I have a followup.

Mr. WHATLEY. Sure. And I will defer to Dr. Knapp on this, but the Outer Continental Shelf, where the resource base is that folks are looking at, is going to be anywhere from 70 to 150 miles offshore, so we are not talking about—

Mr. LAMBORN. No, no. Depth, depth.

Mr. WHATLEY. Yes, and out there you are talking about deep water. You are talking 5,000-plus feet that are going to be out there, very similar to the deep water in the Gulf.

Mr. LAMBORN. But on the shelf, itself.

Mr. WHATLEY. Yes. It is going to be deep water, in terms of where the exploration and productions are going to play.

Dr. KNAPP. I will just say, from a geologic definition, the continental shelf ends at 200 meters water depth. So, essentially, 700 feet, but there are certainly areas that are prospective and of interest to the industry that are in deeper water, though.

Mr. LAMBORN. OK, thank you. I yield back.

Dr. GOSAR. I thank the gentleman. The gentlewoman from Massachusetts, Ms. Tsongas, is recognized for her 5 minutes.

Ms. TSONGAS. Thank you, Mr. Chairman. As I said during our hearing last week—and I want to reiterate again here today—I believe our Nation is in the midst of a clean energy revolution. More and more of our electricity is being produced from renewable resources. According to the Bureau of Labor Statistics, the Nation's fastest-growing occupation is a wind turbine technician, a good-paying job available to those coming right out of high school.

It is also worth noting that the states with the highest average salary for a wind turbine technician are Pennsylvania, Iowa, North Dakota, South Dakota, and Oregon.

Instead of expanding investments in fossil fuel development, especially in places like the Atlantic Ocean where there is no existing infrastructure, we should be looking to the future, and investing in renewable energy resources.

Massachusetts was proud to be among the first states to participate in Federal offshore wind development lease sales. Just last September, Secretaries Jewell and Moniz held a press conference announcing the national offshore wind strategy in Massachusetts at the Wind Technology Testing Center, a state-of-the-art blade testing facility in Boston that is helping to develop the next generation of both land-based and offshore wind turbine technologies.

Massachusetts is also working with our electric utility companies to reach our state-mandated offshore wind goals over the next decade, goals that were signed into law by our Republican Governor.

While the Administration claims to support all-of-the-above energy production, clean energy is not prioritized in policy proposals and Executive Orders, nor is it adequately funded in its Fiscal Year 2018 budget request. It is not surprising that the Administration recently announced, and we are discussing here, how it will be fast-tracking approvals of fossil fuel permits on public lands, but made no mention of similarly improving development of clean energy resources.

Clean energy on public lands and waters offers tremendous opportunities for job creation and home-grown energy production. I believe the Trump administration needs a thoughtful, aggressive plan to promote these jobs, if it really wants to claim that it is supporting all-of-the-above energy development. We need action, not words.

Ms. Howell, I am just one of many East Coast Members of Congress from both sides of the aisle who are opposed to offshore drilling in the Atlantic. My constituents and residents across the state strongly believe that opening new areas to offshore drilling will undermine critical efforts to protect our oceans that we value deeply, support our recreation and tourism—I was just on Cape Cod this past week and I see how important it is to the economy of that part of the state, to support our tourism and recreation economies, and our commercial fisheries that we value quite deeply.

You spent your career working in the oil and gas industry, and yet you oppose new drilling in the Atlantic. Can you reiterate why you don't believe that offshore drilling is compatible with existing Atlantic Ocean activities?

Ms. HOWELL. Yes. Thank you very much, Congresswoman. For several reasons oil and gas are inconsistent with the East Coast economy.

To begin with, the nature of the work required to drill offshore—it is a dirty industry. It requires several different ways in which oil and gas are a threat to the coast, not only through the drilling process, but also through transportation, bringing the oil and gas to the onshore facilities, where it is refined or liquified, as liquified natural gas. There are a variety of ways in which oil and gas can enter the coastal stream, and that does not have to require a blowout.

The Gulf Coast has a history of leaks of all sorts from these types of activities. In addition, the nature of the tourist economy on the Atlantic is that we have grown up with tourism on the Atlantic, as opposed to the Gulf of Mexico, which grew up with the oil and gas business. You don't go to the beach in south Louisiana. The tourism that Ms. LeBlanc referred to, of course, is centered around New Orleans, which is 100 miles from the coast.

My son grew up going to Cape Cod in the summertime. We spent 20 years at North Eastham Beach. I know how precious that place is, as well as the coastline where I live now.

When Deepwater Horizon happened in the Gulf, the spill was of such a magnitude it cost just the state of Louisiana alone \$247 million in tourism revenue. And South Carolina benefited, unfortunately, from that spill—fortunate for us, unfortunately for Louisiana—because people left the Gulf of Mexico. They decided not to vacation there, and they came instead to the Carolinas. That is the cost. That is the real cost of tourism.

Ms. TSONGAS. Thank you. I yield back.

Dr. GOSAR. I thank the gentlewoman. The gentleman from Virginia, Mr. Wittman, is recognized for 5 minutes.

Mr. WITTMAN. Thank you, Mr. Chairman. I would like to thank our panelists today for joining us.

Ms. MacGregor, I want to start with you. In 2015, the Department of Defense conducted a pretty significant compatibility planning assessment there in the Mid-Atlantic Region. They looked at the areas that were identified in the 2017–2022 draft leasing program to look at where there would be issues, and they looked at that along a number of different continuums, and that is full exploitation there to no exploitation of the resources that are there, both oil and gas.

In looking at that evaluation, the Department of Defense came to the conclusion that only about 5 percent of the area there was not compatible with DoD needs within that area, which means 95 percent was.

Can you give me your perspective on how, as you are undertaking this look at the current proposed leasing program there for the Mid-Atlantic, how you would take into account DoD's findings? And then also how you see that compatibility with oil and gas and operational requirements for the military there, in the Mid-Atlantic?

Ms. MACGREGOR. Sir, thank you for that question. I think that is one of the most important things that we need to focus on, moving forward. As we initiate this new plan, we will be moving very closely with the Department of Defense. It is required under the Outer Continental Shelf Lands Act.

We also have a Memorandum of Agreement that has been in place since 1983 that we have been operating for decades successfully, and ensuring that not a single block is leased, not a single program is finalized, without the Department of Defense having input in this process.

I think moving forward, and how it can be done successfully, there is an interesting stat that our office provided to me, which is 36 percent of the active leases in the Central Gulf of Mexico, which is one of the most producing areas off our coasts, 36 percent of the active leases there are operating in military areas, where it is subject to coordination and evacuation site-specific stipulations in the event of need by Defense for us to ask industry to potentially shut in, and other requests.

So, I think it can be done very well as long as we continue to work together, and that relationship is extremely good right now at the Department, and we have worked closely with the Department of Defense. We will continue to do so, moving forward.

Mr. WITTMAN. I want to ask you a little bit, too, about seismic analysis there in the Mid-Atlantic. As you know, the data that we have in the Mid-Atlantic, from a seismic standpoint, is about 40 years old. We have new technology today that provides much greater insight as to what is in those geologic layers below the ocean surface, as well as doing it in a very responsible way, both environmentally and from a natural resource perspective.

Can you give me your thoughts on how you all are going to move forward with up-to-date seismic analysis there in the Mid-Atlantic as important steps toward energy development and understanding what is there?

Then also, where you see the Department moving forward in this with a time perspective on when you believe you would give the

opportunity to these companies to do the seismic analysis there, based on current evaluations.

Ms. MACGREGOR. Sure. No decisions have yet been made. As it works right now, we issue a permit, but so does the National Marine Fisheries Service at Commerce. So, they just extended their comment period a couple weeks ago, and I believe it has closed for the incidental harassment authorizations.

But the President's Executive Order was very clear. He would like our departments to work very closely together. When it comes to offshore seismic, our Chief Environmental Officer at the Bureau of Ocean Energy Management has found that there is no documented scientific evidence of seismic activities adversely affecting animal populations. We are always welcoming new scientific studies into the Department to continue to evaluate that.

A significant for the Atlantic environmental impact study was done and finalized, I believe, in 2014—that determined that seismic surveying can continue forward in the Atlantic safely, with specific mitigations to protect marine mammals.

So, we intend to be able to move this process along, and we recognize the fact that the initial EIS and scoping was done in 2009. So, whether you disagree or agree on seismic surveying being conducted, I think we can all agree that a government process that takes 8 years to get through is just not working. We are going to work together with other Federal partners to try to be more expedient.

Mr. WITTMAN. Thank you, Mr. Chairman. I yield back.

Dr. GOSAR. I thank the gentleman. The gentleman from Florida, Mr. Soto, is recognized for his 5 minutes.

Mr. SOTO. Thank you, Mr. Chairman. We are back again with another Committee meeting on 20th century jobs in the 21st century. My concern continues to be that we are propping up states that are addicted to oil jobs that have not diversified their economies like Florida has, and the whole world is barreling toward another climate change crisis.

There was a time in our country when we embraced the future, like solar and wind and hydro-electric, bio-fuels and nuclear. And right now it just feels like we are being dragged to the past again.

In Florida, we have a tourism and agriculture economy, and no one would ever confuse a Florida beach for beaches in some other states, that is for sure. Yet, we still suffered from this tragic Deepwater Horizon disaster that cost us billions and billions of dollars.

I want to compliment Secretary Zinke for agreeing in his last hearing that the 125-mile buffer around our state until 2022 is not in jeopardy.

And we just received a letter from the Department of the Air Force that said, and I quote from General David L. Goldfein, "The moratorium is essential for developing and sustaining the Air Force's future combat capabilities. Although the Gulf of Mexico Energy Security Act's moratorium does not expire until 2022, the Air Force needs the certainty of the proposed extension to guarantee long-term capability for future tests."

Ms. MacGregor, are there any additional comments, based upon the Air Force's letter supporting the moratorium in the Gulf around our state, subsequent to this letter being sent out?

Ms. MACGREGOR. Absolutely. Obviously, that moratorium was put in place by statute by the U.S. Congress under the Gulf of Mexico Energy Security Act. I believe that statute has that area expiring for a moratorium in 2022.

Mr. SOTO. But is there any additional information on consideration of extending the moratorium based upon the Air Force's letter?

Ms. MACGREGOR. Sorry. The decision to extend the moratorium will ultimately need to be approved and put into legislation by Congress.

Mr. SOTO. There was a June 30, 2017 letter that was sent by my colleague, Congressman Beyer, along with over 100 Members of Congress: 10 Republicans, 11 Democrats from my state. That is a pretty large group of Members opposing any seismic testing on the Atlantic Coast.

Ms. MacGregor, have you received any letters of support from Members of Congress to have seismic testing on the Atlantic Coast?

Ms. MACGREGOR. I am not familiar with these letters, but I am more than happy to take a look at what letters have come into the Department and get back to you on that.

Mr. SOTO. There is over \$95 billion worth of GDP on the Atlantic Coast economies, according to a letter, and 1.4 million jobs associated with it, and they would face seismic airgun blasting every 10 seconds, 24 hours a day in the areas that would be under siege under any potential opening, which could result in a 78 percent decline in reef fish, 138,000 estimated deaths of whales and dolphins.

I wanted to hear from Ms. Howell about how would it affect, do you think, the tourism fishing and beaches and other aspects, if we have that kind of decline?

Ms. HOWELL. Yes, thank you very much, Congressman. There are a couple of points about seismic that I think need to be clarified.

The first one is, as you pointed out, there have been scientific, peer-reviewed studies that have come out in recent years, demonstrating that not only is there harm—78 percent reef fish decline—as a result of seismic testing, but a very recent study that just came out that zooplankton, which is the basis of our food chain, our marine food web, is killed at a distance of almost three-quarters of a mile away, which is further than previously thought.

The reference that Ms. MacGregor made a little bit ago to the chief scientist's letter from BOEM saying that seismic was safe was issued in 2014.

Mr. SOTO. Thank you, and I appreciate it, but my time is running out. I do want to also express a great concern—we have the busiest space port in the world at the Cape in the district next to mine, and seismic testing could put this into jeopardy, as well. Those are thousands and thousands and thousands of high-tech jobs representing the future of our economy.

So, I think it is noteworthy for this Committee that over 100 Members of Congress have opposed the Atlantic seismic drilling, and we have yet to hear one support it.

Dr. GOSAR. I thank the gentleman. The gentleman from Louisiana, Mr. Graves, is recognized.

Mr. GRAVES. Thank you, Mr. Chairman. I appreciate it. I am not sure where to start in responding to all the misinformation here. Let's see.

First of all, can you put slides up, please? All right. While you are doing that, I will go ahead and jump over to fishing.

Ms. Howell, I want to thank you for being here—I just looked up fishing on NOAA's website. I think it was the Office of Science and Technology. In 2015, which is the latest year they had data, South Carolina harvested approximately 14.4 million pounds of fisheries. In the state of Louisiana, during the same year, we harvested approximately 1.07 billion pounds.

I will say it again: 14.4 million pounds in South Carolina, 1.07 billion pounds of seafood in the state of Louisiana. That is just commercial fishing. And certainly, while I would argue that our fishers are better than in South Carolina, even that factor would indicate that we have substantial ecological productivity in south Louisiana, despite the fact that we also have in some years, as Ms. LeBlanc noted, approximately 90 percent of all the offshore energy production in Federal waters in the United States.

[Slide]

Mr. GRAVES. I want to point out this slide here, which is really important, because it helps to refute a lot of the claims that folks here from other states, that I want to be clear, do not produce offshore energy have been alleging.

If you look at this slide from the Congressional Research Service from the Library of Congress, based upon data from the National Research Council—I would like to argue that this is probably pretty sound data—it shows that 62 percent of the releases of oil are from natural seeps, that 33 percent is actually from oil consumption, and that 4 percent is from the transportation of oil. There were comments made earlier about the dangerous pipelines and other transportation aspects—4 percent is spilled from that and only 1 percent is tied back to actual oil extraction.

So, let's go ahead and—

Ms. HOWELL. May I comment on that, Mr. Graves?

Mr. GRAVES. Yes, in just a minute. Next slide, please.

[Slide]

Mr. GRAVES. I also want to show here, which is another Congressional Research Service graphic that shows, dating back to 1973, Number one is the total volume of oil spilled, which are the blue bars. Number two is the number of individual spills. This clearly shows a trend where we are seeing extraordinary reductions, while at the same time we are seeing increased production of energy.

The reality is this: We have produced billions of barrels of oil in the offshore. We have produced trillions of cubic feet of natural gas. And you can see the trends that are going in the right direction. We have done so safely.

And before folks start throwing out Deepwater Horizon, I was the lead trustee for the state of Louisiana. BP can't stand me, because I fought them on everything. We reached the largest settlement in U.S. history from a single company because we continued

fighting to make sure that we did what was right. I don't need a lecture on Deepwater Horizon.

I grew up in south Louisiana. I fish there, I know the people that operate there. In 2011, 50 percent of this Nation's trade deficit was attributable to us importing energy from other places. I am glad you all came here in your solar and wind-powered airplanes, I am glad that you all walked here, and everything else. Look, the reality is it is an integral part of our economy. We are either giving other Nations billions and billions of dollars, and giving them millions of jobs, or we are going to do it here.

And when we give it to any of these other countries—we all know these countries we are talking about—Venezuela, Middle East, African nations—what do you think they do with that money? Iran, what do you think they do with it? They come and challenge our sovereignty, challenge our allies, challenge our values, way of life, and then we go and spend millions or billions more fighting it again.

Feel free to respond.

Ms. HOWELL. Wonderful. Thank you so much for the opportunity to respond. Let me begin by your last point regarding imports from hostile countries.

As you know, Congress, in December of 2012, began exporting crude oil for the first time since the oil Arab embargo in 19—yes. It was approved, as well as selling off half of our strategic petroleum reserve. If we were so desperate for oil and gas, we would definitely—

Mr. GRAVES. 2015.

Ms. HOWELL [continuing]. Not be exporting. And the imports are coming from hostile countries like Canada and Mexico. Last time I checked, most of the oil and gas that was being imported was coming from friendly countries, not hostile countries.

Mr. GRAVES. Top 10 includes Venezuela, includes, as I recall, Nigeria and other countries, including Iran.

Ms. HOWELL. Saudi Arabia. And the reason for those imports, as you know, have to do with the refineries off the Gulf of Mexico, which are designed to process heavy crudes. Heavy crudes are not what we are producing in the United States. Until we change the refinery mix in the United States, we have to continue to import, to run those refineries, or your south Louisiana friends will be out of work.

Second, with regard to natural oil seeps, you have the entire OCS mapped on there. The Atlantic Coast is not the home of natural oil seeps. I am arguing for protecting the Atlantic Coast. Those oil seeps are largely from the Gulf of Mexico and the California Coast. I think, if you do the geology associated with that graph, you would have a better understanding.

Mr. GRAVES. Thank you, Mr. Chairman.

I was hoping that I was going to be able to correct the record versus having more distortions that I need to correct again, but I am looking forward to, hopefully, a round two.

Ms. HOWELL. Half-truths are not distortions.

Dr. GOSAR. I thank the gentlewoman, I thank the gentleman. The gentleman from Maryland, Mr. Brown, is recognized.

Mr. BROWN. Thank you, Mr. Chairman. Like all coastal communities, Maryland relies heavily on the health of our waters and the accessibility of our shoreline. I certainly appreciate the testimony about the experience in Louisiana.

For us, the Chesapeake Bay is not just a source of great pride for our region, but it is also an economic driver. Our watermen, fisheries, crabbers, and tourism industry depend on the Bay and a clean coast for their livelihoods. The last thing that we should be focused on is putting the largest estuary in America and a multi-billion dollar economic catalyst that spans seven states at risk of an oil spill the same magnitude and size as the Deepwater Horizon spill.

As we saw in the Gulf, it would be the states who bear the brunt of such a disaster. More than 120 local governments have passed formal resolutions opposing oil and gas exploration and drilling in the Atlantic and Eastern Seaboard. These include numerous local chambers of commerce, tourism, restaurant associations, commercial and recreational fishing associations, and the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils.

In Maryland, Ocean City, Berlin, Baltimore, and Montgomery County have formally passed resolutions, as well as the Ocean City Chamber of Commerce, Ocean City Hotel, Motel, Restaurant Association, and the Maryland Salt Water Sport Fishing Association have weighed in, formally opposing offshore drilling and seismic airgun blasting.

At a time when renewable energy industries are exploding with respect to interest and job growth, and oil prices are at record lows, President Trump and Secretary Zinke are focused on putting our coastal communities at risk.

I appreciate the contributions to energy development and production in Louisiana, but in Maryland we want to sort of take a different approach. If we are talking about all-of-the-above, we would like to see the Eastern Seaboard used for renewable energy. Opening up the Atlantic Ocean to offshore drilling, we believe, is looking backwards and is not Maryland's energy choice.

In 2013, when I was Lieutenant Governor, the Maryland General Assembly passed legislation intended to spur the state's offshore wind industry. And just last month, Maryland's Public Service Commission approved ratepayer subsidies to support two wind farms off the coast of Ocean City. This decision is paving the way for Maryland to become home to some of the Nation's first and largest offshore wind farms.

It has been reported that these wind farms will prevent hundreds of thousands of pounds of carbon dioxide emissions, will bring in tens of millions of dollars in tax revenue, while creating nearly 10,000 jobs in the region. These wind farms are indicative of the direction not just Maryland is headed, but the country, as a whole.

Moving at a rapid speed, the Trump administration seems eager to roll back policies protecting our vulnerable coastline, and to remove all restrictions for drilling on public lands. I strongly oppose these policies, and implore the Administration not to issue any new oil and gas lease sales on the Outer Continental Shelf.

Again, I appreciate what you all are doing down in Louisiana. I am going to support all measures to protect the ecology and the economy in Louisiana, but when it comes to the Atlantic Outer Continental Shelf, we would like to go renewable, and not oil.

Thank you, Mr. Chairman. I will yield back, but for any comments or responses that any of the panel may want to offer. Thank you, Mr. Chairman.

Dr. GOSAR. I thank the gentleman, and I recognize the gentleman from Georgia, Mr. Hice, for his 5 minutes.

Dr. HICE. Thank you very much, Mr. Chairman, and I also want to say thank you to Ms. MacGregor for mentioning the role of the military.

This is more than just about energy independence, it is about national security. I think, at the end of the day, most of us understand that role.

Dr. Knapp, I appreciate you being here again, and for all that you do. I would like to engage with you on the aspect of alarmism in opposition to surveying. I would like to begin by reading a quote from Dr. William Brown, who is a Chief Environmental Officer at the DOI's Bureau of Ocean Energy Management. He gave this quote in August 2014. You may be familiar with it, but he said, "To date, there has been no documented scientific evidence of noise from airguns used in geological and geophysical seismic activities adversely affecting marine animal populations or coastal communities. This technology has been used for more than 30 years around the world. It is still used in the United States' waters off the coast of the Gulf of Mexico with no known detrimental impact to marine animal populations or to commercial fishing." Would you agree with that statement?

Dr. KNAPP. That is consistent with my knowledge of the discipline, yes.

Dr. HICE. All right. It is also my understanding that this same basic technology, the airgun that is used for oil surveys and so forth, is also used to investigate continental crust behaviors. So, how is it that some would be supportive of that technology being used in the study of continental shelf behavior, but alarmed by it being used for seismic surveying?

Dr. KNAPP. Well, I cannot claim to know all of the insights on that, but I would speculate that, as has been made public on many occasions, that seismic surveying, as it is known, is portrayed as the so-called gateway drug to oil and gas drilling, when, in fact, it has its own purpose. It is the tool by which we understand scientifically, as well as for applied purposes, what is beneath the surface.

And I would make two other comments. One was that the very birthplace of marine seismic work was here, on the Atlantic Coast, 150 miles from where we are. In those days, they dropped 100-pound dynamite charges off the back of marine vessels. And then, subsequently, during the 1970s and 1980s, there were hundreds of thousands of kilometers of seismic that were collected here on the Atlantic Coast. I do not recall a single report of a beached mammal or any other destruction that took place during those periods.

Dr. HICE. Then why are there campaigns, misinformation or whatever, against it?

Dr. KNAPP. Again, I can only speculate that those are intended to somehow stop the efforts to actually fairly evaluate the resource potential.

But it is certainly not a basis for well-informed policy decision making, and it is the antithesis of a scientific approach, where you would draw conclusions based on the collection and analysis of data, rather than predetermine what the result is before you even go collect the data.

Dr. HICE. Would you say that is a problem, the predetermined conclusions?

Dr. KNAPP. It clearly is.

Dr. HICE. Yes, as opposed to looking at scientific data.

Dr. KNAPP. Exactly. It goes counter to any scientific approach to understanding a certain problem.

Dr. HICE. And you would know.

Mr. Chairman, in closing, I would like to submit a letter for the record from the Georgia Department of Natural Resources.

Mr. GRAVES [presiding]. Without objection.

[The information follows:]

GEORGIA DEPARTMENT OF NATURAL RESOURCES,
BRUNSWICK, GEORGIA

July 6, 2017

Jolie Harrison, Chief
Permits & Conservation Division
NMFS Office of Protected Resources
1315 East-West Highway
Silver Springs, MD 20910

Re: IHA Applications Incidental to Conducting G&G Activities in the Atlantic Ocean RIN 0648-XE283

Dear Ms. Harrison:

Staff of the Georgia Coastal Management Program (GCMP), Georgia Department of Natural Resources' (GaDNR) Coastal Resources Division and GaDNR Wildlife Resources Division has reviewed the June 6, 2017 Federal Register notice (Vol. 82 No. 107) notice of National Marine Fisheries Service's (NMFS) receipt of five (5) proposed incidental harassment authorizations (IHAs) incidental to conducting geophysical surveys in the Atlantic Ocean, as well as reviewed five (5) individual applications: E14-001 TSG-NOPEC Geophysical Company, E14-003 ION GeoVentures, E14-004 WesternGeo LLC, E14-005 CGG Services, and E14-006 Spectrum Geo, Inc). They propose to shoot 145,141 km of trackline in 1,214 survey days using various airguns that will emit over 5 million shots. The vast majority of the surveying effort will occur east of the continental shelf break and only a small portion will be offshore of Georgia's coast. NMFS estimates that approximately 1,900 marine mammals will be injured and over 350,000 other marine mammals, including more than 100 Right whales, will be harassed.

One (1) company will not be surveying at all off Georgia's coast (E14-004 WesternGeo) and one (1) company will not come within 80 miles offshore of Georgia's coast (E14-005 CGC). The remaining three (3) companies (TGS, ION and SpectrumGeo) coordinated with GCMP under the federal consistency provisions of the Coastal Management Act (CZMA) and received concurrence based on their amended applications to the Bureau of Ocean and Energy Management (BOEM) for geologic and geophysical (G&G) activities that incorporated four (4) additional mitigation measures while surveying in waters adjacent to the State of Georgia:

- Notify GaDNR regarding operation of vessels in offshore water adjacent to Georgia
- Vessels will have functioning AIS (automatic identification system) onboard and operating at all times and vessel names and call signs will be provided to GaDNR

- Airguns will not be discharged within 20 nm of Georgia from April 1 to September 15
- Airguns will not be discharged within 30 nm of Georgia from November 15 to April 15

The Georgia Coastal Management Program submitted a comment letter August 19, 2015 requesting NMFS to consider incorporating these mitigation measures as conditions of the IHA permits to provide enforceability at the federal level. The Federal Register notice includes all of these mitigation measures and more, including:

- Applicants must notify NMFS when vessels are operating and provide AIS call signs
 - This addresses our 1st CZM condition
- All vessels must have functioning automatic identification systems (AIS)
 - This addresses our 2nd CZM condition
- Airguns may not be discharged within 16 nmi (30 km) of Atlantic coast year-round to protect depleted bottlenose dolphin stocks
 - This addresses our 3rd CZM condition and provides sea turtles protection between April 1st and September 15th during nesting season
- Airguns may not be discharged within Right whale Critical Habitat, shipstrike Seasonal Management Areas (SMAs) and a migratory corridor linking those areas, plus a 10 km buffer, between November 1st and April 30th
 - This addresses our 4th CZM condition
- Airguns may not be discharged within Dynamic Management Areas (DMAs), plus a 10 nm buffer, if Right whales are sighted at other times and locations
- Airguns may not be discharged within 54 nm of GA and SC coast between June 1st and August 30th to protect Atlantic spotted dolphins

We appreciate NMFS's proposal to restrict seismic surveys along the Southeast U.S. coast at times of year when North Atlantic right whales are present. Georgia's coast lies at the heart of the right whale calving grounds, and protection of Southeast U.S. waters is critical for the species' recovery. Ga DNR, NMFS and other partners are currently conducting a tagging study to investigate right whale movements in the Southeast and Mid-Atlantic U.S. Preliminary data from this study, combined with data from previous aerial survey and habitat modeling studies, suggest that the current airgun restricted area boundary is likely sufficient to protect right whales from injury. However, if future tagging data confirm that right whales use waters farther offshore, NMFS should expand the restricted area boundary for future seismic permits accordingly. We also appreciate NMFS's proposal to restrict airgun use within 16 nmi of shore to protect depleted coastal bottlenose dolphin stocks. Doing so will provide protection to threatened Florida manatees and strategic estuarine bottlenose dolphin stocks which also inhabit Georgia's nearshore ocean waters.

In summary, the seismic and vessel mitigation measures adopted by BOEM through the G&G PEIS, and being proposed by NMFS, should minimize reasonably foreseeable effects of seismic surveys on Georgia's protected marine mammal species, and will mitigate potential impacts to nesting loggerhead sea turtles and coastal fisheries as well.

NMFS acknowledges that visual and acoustic monitoring are imperfect and that marine mammals will likely go undetected by seismic vessels, especially for deep diving species that remain below the surface for long periods. As such, it is reasonable to assume that some marine mammals will be killed by airgun shots and that additional marine mammals may be injured in excess of the more than 1,900 animals that NMFS predicts. Most of these impacts will likely occur near the shelf break and beyond, due to the spatial extent of the proposed survey effort, and will therefore involve pelagic species, many of which are poorly understood. Potential effects on these species will need to be considered if seismic surveys become routine going forward.

There is increasing evidence that chronic anthropogenic noise negatively impacts marine mammals. If seismic surveys become routine sources of noise in the Southeast and Mid-Atlantic, it is critical that NMFS implement a long-term noise monitoring program to assess cumulative effects of noise on Right whales and other marine mammal species.

Sincerely,

A.G. "SPUD" WOODWARD,
Director.

Dr. HICE. Basically, what is in this letter, as probably most of you know, the coast of Georgia is known to be a calving ground for the right whale. So, the Georgia DNR is very much concerned with protecting that species.

This letter basically is affirming what we have been discussing here, that there is no evidence that these whales have been injured in any way. And if the testing is done, and the airguns are used in the manner in which they were designed, and used properly, that it is both good for the environment, the marine population and fishing community, across the board.

I am grateful that Georgia is leading by example in this regard. I think it is important that we reduce the red tape that is associated with seismic surveying. It again comes back to national security, as well as energy independence, and I think we need to keep the proper perspective. I thank each of you for being here, and I thank the Chairman.

Mr. GRAVES. The gentlewoman from California, Ms. Barragán, is recognized for 5 minutes.

Ms. BARRAGÁN. Thank you, Mr. Chairman. My colleague just mentioned that this is more than about energy independence, it is about national security. I agree with that statement, although I believe climate change is a national security issue. When we take a look at opening up coastal waters to more oil drilling, you are talking about more risk to things like climate change.

My colleague talked about things like looking at scientific data. That takes you right back to climate change, something that we do not talk about in this Committee, and it is very unfortunate. Very unfortunate.

We just had record heat in Los Angeles, and people say, "Oh, it gets hot all the time." Record heats from over decades. The scientific data is there. Climate change is real, it is happening, and we need to act now to stop it, not to go the other way and to open up our coastline.

Now, President Trump's Executive Order lays the groundwork to open up California's 840-mile coastline to dangerous offshore oil drilling.

I spent the last several years fighting an oil company who wanted to drill inland and then out into the Santa Monica Bay. The Number one reason that we heard from the oil companies on why to do it was it was going to bring in all this revenue, we are going to have all these new—a new police department, better schools. At the end of the day, the voters decided overwhelmingly, by about 80 percent, that it was not worth the risk to the economy, to the jobs that the tourism provides, to the city where I was on the Council

and served as mayor. The California economy relies so much on tourism. To put it at risk is totally unacceptable.

Now, I would argue, for climate change, we should look at these things even in places like Louisiana. If you represent Louisiana, you want to open up your coast line, you want to put it at risk, I say stay off of my California coastline.

There was an article recently, Ms. MacGregor, in the *Houston Chronicle*. It is dated July 5, and you are quoted in it. It is called "Trump Appointees Offer Muscular Support for Oil and Gas." I think you certainly have heard that there is strong opposition to new leasing off of California's coastline.

Historically, the California coastline has been off limits. In the *Houston Chronicle* article I just showed you, you recognized the coastal governors will have different views about offshore development. You will go on to indicate that the Secretary may be looking to pick a fight with my governor, Jerry Brown, and you said, and I quote, "The Secretary has had quite a few questions about California and the areas that seem to come up every time we talk about the 5-year plan."

Can you give me an idea of what kind of questions he is asking about?

Ms. MACGREGOR. Absolutely, and thank you for the question. We absolutely understand the needs of California and how tourism is so very much tied to a reliance on motor fuel and jet fuel. And at the end of the day, the 5-year plan gets back to our national need.

California is one of the greatest consumers of petroleum products in our entire Nation—

Ms. BARRAGÁN. Excuse me. I just want to go back to the question, because I have very limited time. My question is, you said the Secretary was asking questions about California. What kind of questions is he asking about California?

Ms. MACGREGOR. The Secretary has asked for a full brief on how the 5-year planning process works, which, as I have stated, at the beginning of the RFI process, 26 planning areas are on the table, and it starts in that way for every planning process for the 5-year plan. It started like that under the past administration when they finalized two 5-year plans, as well.

So, when it comes to informing the Secretary exactly how the 5-year plan works and what our outreach is, including the recent letters that we have sent out requesting your governor and other governors for their input—and we really welcome that input and your input, as well—those are the sort of questions that the Secretary has asked at least me to brief on.

Ms. BARRAGÁN. So, just so I am clear, you generally said he was asking questions about how the 5-year plan works.

Ms. MACGREGOR. Correct.

Ms. BARRAGÁN. And then you mentioned input from our governor and representatives. Can you just clarify what kind of questions he is asking that are specific to California and the California coastline?

Ms. MACGREGOR. Sure. I can get you a copy of the letter we sent to your governor, if that would work.

Ms. BARRAGÁN. OK, so that is what you were referring to when you said that every time we talk about the 5-year plan he is asking about California, the questions that are in that letter?

Ms. MACGREGOR. No, I am saying the questions in that letter are going to be continuously requested in the form of public input, as it relates to the 5-year planning process.

Ms. BARRAGÁN. OK, so you don't have any other topics you can share with me today that are not in that letter?

Ms. MACGREGOR. I am sorry, I am just unclear on what you are asking.

Ms. BARRAGÁN. Well, your quote to the paper was that the Secretary has quite a few questions about California every time the 5-year plan comes up. As somebody who represents a district in California, I am curious about what kind of questions the Secretary is asking.

Ms. MACGREGOR. It is simply informing the Secretary on how the 5-year planning process works. And again, I think that is important, because a lot of people ask that question: What does everything on the table mean?

Well, everything on the table means that we look at the 26 planning areas, as required by law, and then we winnow it down.

Ms. BARRAGÁN. OK, thank you. I yield back.

Mr. GRAVES. Thank you. The gentleman from Texas, Mr. Gohmert, is recognized for 5 minutes.

Mr. GOHMERT. Thank you, Mr. Chairman, and I appreciate the witnesses being here.

All too often, we have seen with the LCWF that it has, in my opinion, been abused. The Federal Government continues to buy land when we are not taking care of what we have. And we have complaints all over the country, have them in my district. The Federal Government is not taking care of its Federal land areas.

So, it has grieved me to see all this money going to buy new land when we are not taking care of what we have.

I am curious—and I will make this to Ms. MacGregor and appreciate you very much, and knowing that you are working for a former member of this Committee, a very dear friend, I do appreciate the approach he has taken. But given the significant increase expected in phase two, how can we ensure that the funds are used in the most appropriate manner that the Federal Government were to get from the offshore drilling?

Ms. MACGREGOR. When it comes to utilizing funds for Land and Water Conservation Fund?

Mr. GOHMERT. Yes.

Ms. MACGREGOR. I believe, under the current budget—and I don't have those figures with me—but for the Department of the Interior, that budget has been reduced significantly when it comes to land acquisition under the Land and Water Conservation Fund. But I would be more than happy to get you that information.

Mr. GOHMERT. OK. I also want to ask—and also for you, Ms. MacGregor—due to declining oil and gas production in Alaska, California has turned to foreign oil to meet its energy needs. Last year, over half the crude oil supplied in California refineries came from foreign sources, while 11.4 percent came from Alaska.

How can we get Alaska providing a more important role in reducing California and our country's heavy dependence on foreign crude?

Ms. MACGREGOR. Sir, thank you for that question, as well. I believe that is one of the reasons that the Arctic planning areas, when it comes to offshore planning, have been included in the President's directive when we look at our next 5-year plan and planning for that, and signaling that those areas could potentially be reopened, as they were closed by the past administration.

The Secretary was recently on the North Slope with the Senators. He toured the infrastructure that is already there from onshore production, and was able to see the Trans-Alaska Pipeline, which is one of the major infrastructure projects of the last century, I guess, when it comes to energy. He is aware of how important that is, and that most of that throughput it refined in California. So, we are taking a look at that, and we will consider that input when it comes to the 5-year plan.

Mr. GOHMERT. All right. We know NEPA-directed environmental review process is supposed to be integrated into the development of the leasing program, and then again throughout the leasing and the drill permitting process. According to BOEM, the same OCS parcel is reviewed up to four times.

In your opinion—and if you know, the opinion of the new Secretary—are all these four different reviews necessary?

Ms. MACGREGOR. Sir, when we move forward with conducting NEPA department-wide, we are taking a look at NEPA, but ultimately we will adhere to the regulations that are put forth by the Council for Environmental Quality, who essentially dictates how NEPA is to be implemented in the Department.

Mr. GOHMERT. It sounds like you are saying we need to inquire on another bureaucratic process to help the current bureaucratic process. I don't think that is going to save a lot of time and effort, when it seems to me that is a terrible waste, to have to go through that very cumbersome process over and over and over again when we are depending on foreign oil to such an extent that it is actually creating a dangerous international situation. So, I would encourage the Department to give us ways we can streamline that for you without relying on other bureaucratic processes.

And I would like to encourage my friends across the aisle that have great concerns. When I was a kid, there was all kinds of gloom and doom that if we allowed drilling in our Gulf shore it would kill off all the fish in the Gulf. Well, they did drill. And now, when anybody wants to go fishing, usually the first place they want to head is for the drilling rigs. There is a vast backlog of requests for old drilling rigs to be dumped out in the Gulf, because of the tremendous increase in fishing that it provides.

So, there is good news, even when you have a dry hole. I yield back.

Mr. GRAVES. The gentleman from Virginia, Mr. Beyer, is recognized for 5 minutes.

Mr. BEYER. Thank you, Mr. Chairman, and thank all of you for being with us all morning.

I first want to reiterate for the record that I welcome the process and the decision of the Obama administration's 5-year oil and gas

leasing plan for the Atlantic Coast, and I don't believe it needs revisiting. And I oppose the Secretary and the President's reopening of the 5-year plan.

I also wish to note that the communities and businesses up and down the Atlantic Coast oppose offshore drilling and seismic airgun use, and we should listen to the people who live there, work closest to the shore—Virginia Beach, New Jersey, Florida, many places—and strongly consider their views. And this includes many, many Republicans, including this week the Republican Governor of Maryland, Larry Hogan.

Ms. MacGregor, the Department of Commerce has recently solicited the comments for incidental harassment authorization and geophysical and geological companies to conduct seismic airgun blasting in the Atlantic. In fact, I understand there are five different surveys in an area twice the size of California right now.

These permits were denied by the Obama administration for a variety of reasons, but specifically for the potential impact on marine life, and specifically for the North Atlantic right whale, which is critically endangered. The leading North Atlantic right whale scientists issued a letter outlining the dire threat of extinction. The only known calving grounds are exclusively in the area being proposed for oil and gas exploration.

According to the scientists' letter, "The North Atlantic right whale is among the most endangered whales on the planet. Only 500 individuals remaining. Recovery of the species has been painfully slow. And worryingly, the latest data indicate that population is no longer increasing in abundance, but now may be declining in numbers. This declining growth rate is thought to be directly linked to the disproportionately high level of human activity occurring along its East Coast range. Another major stressor to the environment in the form of seismic surveys would, we believe, substantially increase the risk that the population will slip further into decline and would jeopardize its survival."

There was a study sponsored by Shell Oil Company in the Arctic on the bowhead whales. It is a sister species that shows while conducting a seismic airgun blasting in the Beaufort Seas, the whales' calling rates decreased and eventually calling fell silent between the pods, which can lead to separation of mothers and calves, and potentially the death of a calf.

Mr. Chairman, I would like to introduce the letter from the 28 North Atlantic right whale scientists, the Shell study, and a bipartisan letter led by Republican Congressman Rutherford and me, over 100 Members of Congress, on our opposition to seismic airgun blasting.

Mr. GRAVES. Without objection.

Mr. BEYER. I would also like to point out the paper last month about the high mortality rates of zooplankton from a single moderately sized airgun cannot be cavalierly dismissed. I mean all marine life is based on zooplankton, and we are about to undertake, really, a remarkable level of seismic exploration.

Ms. MacGregor, since the permits were denied in January of this year, has the status of the North Atlantic right whale improved enough that the species is no longer at risk for slipping further toward extinction?

Ms. MACGREGOR. The bureaus that are under ASLM, I don't have the recent data on North Atlantic right whale populations. I can say that there are actually 3D seismic vessels operating in the Atlantic today where Northern right whale habitat exists, it just happens to be in the Canadian OCS.

As far as the decision in the last, I think, week before the changeover in the Administration to deny those permits, we felt that that decision was contrary to the same Administration's programmatic EIS of the Atlantic that found that Atlantic G&G activity—geological and geophysical activity—could go forward.

Mr. BEYER. One of the things that confused me when Secretary Zinke was here was the proprietary nature of the seismic data. Is it true that the five companies that will get these permits will own the seismic data, and it will not be available to either scientists or to the public?

Ms. MACGREGOR. When they make the investment to conduct that seismic surveying, if they so choose, it is proprietary, but it is shared with the Department. And we utilize that seismic data to further determine fair market value when it comes to evaluating leases. Our team in the Gulf is very strong, and does that in the Gulf of Mexico.

Mr. BEYER. OK, great. Thank you, Mr. Chair. I yield back.

Mr. GRAVES. Thank you. I want to give an opportunity to clarify.

Ms. HOWELL, if I heard you correctly at the end, you said that I stated some half-truths, and I want to give you an opportunity to expand on that.

Ms. HOWELL. Thank you very much for that opportunity. The graph you were showing represented the entire OCS, and the point you were making was that most of the oil spills come from natural seeps. That is correct. That is the correct part. The part that is not correct is that it varies very much by geology. The Atlantic Coast is not burdened in the same way as the West Coast and other locations by that same degree of natural seepage. So, that is the part that I think was a bit misleading as it relates to the Atlantic Coast.

Mr. GRAVES. Are you disputing the fact that you have more oil that is spilled from transportation pipelines, from seeps and other things, than you do from actual oil exploration?

Ms. HOWELL. The oil and pipelines come from offshore drilling, so I am not quite sure what your point is. Could you reframe the question?

Mr. GRAVES. Well, that is not an accurate statement. Oil and pipelines do not come from offshore drilling. That is one of many forms of transportation, but it would come from all sorts of different needs to transport oil. It is a safer means of transportation, as compared to barges or trains or other things. It does not just come from the offshore—

Ms. HOWELL. But the material in the pipeline is oil, or some derivative of oil.

Mr. GRAVES. Sure.

Ms. HOWELL. So, if you didn't have oil drilling, you wouldn't have oil pipelines.

Mr. GRAVES. And if you didn't have oil drilling, you wouldn't be here today. You flew here I am going to assume.

Ms. HOWELL. Yes, I am not arguing against oil and gas production in the United States. I am arguing against oil and gas production on the Atlantic Coast. I just want to be clear about that.

Mr. GRAVES. OK. You made a statement about a half-truth, and I just wanted to make sure, if I said something inaccurate, that we clarified that.

Ms. HOWELL. Good, I am glad we cleared that up.

Mr. GRAVES. And I am not sure that anything happened there. But thank you.

Ms. MacGregor, can I ask you a question? There was discussion earlier about the amount of production from offshore energy under a previous administration. This Administration thinks along those lines. Approximately how long does it take from a lease sale to actual production activities?

Ms. MACGREGOR. It could be 7 to 10 years from a lease sale to reaching production-producing quantities. Oh, yes.

Mr. GRAVES. So, effectively, as we discussed at the last hearing, OCS production in 2008, as I recall, or the lease sale generated approximately \$17 billion. In the last year of the Obama administration, it was approximately 2.7 billion. The lag time, you add in 7 to 10 years for production. So, effectively, production is largely a result of the previous administration on the offshore?

Ms. MACGREGOR. That would most likely be correct. And I think it is also important to point out that in 2008 a lot of the successful revenue results that you are citing involve Chukchi Sea lease sales, which we cannot conduct under the current plan.

Mr. GRAVES. Thank you.

Ms. LeBlanc, thank you very much for being here, and I appreciate all the work that you have done in the past. As I recall, approximately 35 percent of the oil and gas workforce in the state of Louisiana has lost their job within the past 2 years.

Could you comment a little bit about just what you see, anecdotally, for example, down in Fourchon in regard to the number of boats that are tied up, and things like that, just what your view of the state of the industry is?

Ms. LEBLANC. Yes, Congressman, thank you for the opportunity to be here today. I appreciate that.

Obviously, with the decline in commodity prices, as of lately we have seen a decline in oil and gas jobs in our economy in south Louisiana. It has been a hardship to the folks in Lafourche Parish, Terrebonne Parish, throughout the state, who service offshore oil and gas.

I will also tell you that, besides just the crude oil—the market price and the commodity price, the increased regulatory regime that we are under have also hindered some of the offshore development and the investments offshore. So, it is tough times in Louisiana right now. We look forward to working with this Administration on not rolling back regulations, but reshaping regulations and re-evaluating the regulations, and some of the provisions in the regs actually may increase risk, due to their prescriptive nature.

So, a combination of decreased commodity prices as well as increased regulatory regime, but it is tough times down in Louisiana right now.

Mr. GRAVES. Ms. LeBlanc, you previously worked for Restore or Retreat, for coastal restoration and ecological restoration activities in Louisiana. Would you advocate or support anything that would result in increased oil spills in coastal Louisiana?

Ms. LEBLANC. Absolutely not. The last thing that we want in Louisiana—like I said, we live here, we work here, we play here. We do not want an oil spill. Oil spills are a tragedy on many levels, and we absolutely do not want tragedy.

I think, as you said earlier, there are so many misperceptions about the oil and gas industry, and I look forward to clarifying some of those.

Mr. GRAVES. Two quick points. One, Ms. Tsongas mentioned their offshore wind production, and I want to commend Massachusetts for doing that, the Cape Wind project. I did some work on that years ago, and I think it is great. I also recall—and this statistic is certainly dated, but years ago, I had to calculate the energy production for the state of Massachusetts compared to Louisiana. At the time, Massachusetts consumed 65 times more energy than they produced, so it is important just to note that people actually need energy. It does not just come out of the socket. There is actually a whole upstream side behind it.

Number two, I actually want to commend Mr. Brown. I thought his comments were very balanced and appropriate, and would like to associate myself with his comments. I think that we do need to continue looking across the board at all energy sources, including alternative. I think it is important to recognize that—I am going to take a wild estimation here and say, of the roughly \$200 billion produced from offshore energy revenues, the far majority of that has gone back into the general treasury to fund things like alternative energy research, climate change research, energy efficiency programs, and many, many other things across government, including the Land and Water Conservation Fund.

With that, I yield to the gentleman from California, Mr. Lowenthal.

Dr. LOWENTHAL. Thank you. Mr. Chair, will it be possible also for Mr. Beyer to ask a question?

Mr. GRAVES. Oh, I am sorry—

Dr. LOWENTHAL. No, I am going to start next.

Mr. GRAVES. Absolutely.

Dr. LOWENTHAL. I am going to start next, but thank you. The first thing is I want to ask unanimous consent to submit three letters from the Department of Defense which support the moratorium on the Eastern Gulf of Mexico into the record.

Mr. GRAVES. Without objection.

[The information follows:]

DEPARTMENT OF DEFENSE,
OFFICE OF THE UNDER SECRETARY OF DEFENSE,
WASHINGTON, DC 20301-4000

April 26, 2017

The Honorable Matt Gaetz
U.S. House of Representatives
Washington, DC 20515

Dear Representative Gaetz:

Thank you for your letter dated March 24, 2017, regarding maintaining the moratorium on oil and gas activities in the Gulf of Mexico beyond 2022. Since military readiness falls under my purview, I have been asked to respond to your letter on behalf of the Secretary of Defense. The Department of Defense (DoD) cannot overstate the vital importance of maintaining this moratorium.

National security and energy security are inextricably linked and the DoD fully supports the development of our nation's domestic energy resources in a manner that is compatible with military testing, training, and operations. As mentioned in your letter, the complex of eastern Gulf of Mexico operating areas and warning areas provides critical opportunities for advanced weapons testing and joint training exercises. The moratorium on oil and gas "leasing, pre-leasing, and other related activities" ensures that these vital military readiness activities may be conducted without interference and is critical to their continuation. Emerging technologies such as hypersonics, autonomous systems, and advanced sub-surface systems will require enlarged testing and training footprints, and increased DoD reliance on the Gulf of Mexico Energy Security Act's moratorium beyond 2022. The moratorium is essential for developing and sustaining our nation's future combat capabilities.

Since signing the 1983 "Memorandum of Agreement Between the Department of Defense and the Department of the Interior on Mutual Concerns on the Outer Continental Shelf," the two departments have worked cooperatively to ensure off-shore resource development is compatible with military readiness activities. During recent discussions between the DoD and the Department of the Interior's Bureau of Ocean Energy Management, a question arose concerning whether Congress intended the moratorium to prohibit even geological and geophysical survey activities in the eastern Gulf. We would welcome clarification from Congress concerning this matter.

On behalf of the Secretary, I appreciate your interest in sustaining our testing and training activities in the eastern Gulf of Mexico.

Sincerely,

A. M. KURTA,
*Performing the Duties of the Under Secretary of
Defense for Personnel and Readiness.*

DEPARTMENT OF DEFENSE,
DEPARTMENT OF THE AIR FORCE,
WASHINGTON, DC 20330

June 23, 2017

Hon. ROB BISHOP, *Chairman,*
House Committee on Natural Resources,
U.S. House of Representatives,
Washington, DC 20510.

Dear Mr. Chairman:

I write this letter in whole-hearted support of a proposal seeking to extend the moratorium on leasing, pre-leasing, or any other related activity in any area east of the Military Mission Line in the Gulf of Mexico. I understand you, as Chairman of the Natural Resources Committee, must grant a jurisdictional waiver for this provision to be considered for the National Defense Authorization Act for Fiscal Year 2018.

The Air Force fully supports the development of our nation's domestic energy resources in a manner that is compatible with the military testing, training, and operations. The complex of eastern Gulf of Mexico operating areas and warning

areas provides critical opportunities for advanced weapons testing and joint training exercises. The moratorium on oil and gas leasing, pre-leasing, and other related activities ensures that these vital military readiness activities may be conducted without interference and is critical to their continuation. Of course, we are always willing to work with the appropriate agencies to see if there are ways to explore for energy without hampering air operations.

The moratorium is essential for developing and sustaining the Air Force's future combat capabilities. Although the Gulf of Mexico Energy Security Act's moratorium does not expire until 2022, the Air Force needs the certainty of the proposed extension to guarantee long-term capabilities for future tests. Emerging technologies such as hypersonics, 5th generation fighters, and advanced sub-surface systems will require enlarged testing and training footprints, and increased Air Force reliance on the moratorium far beyond 2022.

Please don't hesitate to contact me if you have any questions. I look forward to continuing our work with you to ensure America's Air Force remains the very best.

Sincerely,

DAVID L. GOLDFEIN,
General, USAF
Chief of Staff

DEPARTMENT OF DEFENSE,
DEPARTMENT OF THE AIR FORCE,
WASHINGTON, DC 20330

June 27, 2017

The Honorable Bill Nelson
United States Senate
Washington, DC 20510

Dear Senator Nelson:

I write this letter in whole-hearted support of a proposal seeking to extend the moratorium on leasing, pre-leasing, or any other related activity in any area east of the Military Mission Line in the Gulf of Mexico. I understand this provision is being considered for inclusion in the National Defense Authorization Act for Fiscal Year 2018.

The Air Force fully supports the development of our nation's domestic energy resources in a manner that is compatible with the military testing, training, and operations. The complex of eastern Gulf of Mexico operating areas and warning areas provides critical opportunities for advanced weapons testing and joint training exercises. The moratorium on oil and gas leasing, pre-leasing, and other related activities ensures that these vital military readiness activities may be conducted without interference and is critical to their continuation. Of course, we are always willing to work with the appropriate agencies to see if there are ways to explore for energy without hampering air operations.

The moratorium is essential for developing and sustaining the Air Force's future combat capabilities. Although the Gulf of Mexico Energy Security Act's moratorium does not expire until 2022, the Air Force needs the certainty of the proposed extension to guarantee long-term capabilities for future tests. Emerging technologies such as hypersonics, 5th generation fighters, and advanced sub-surface systems will require enlarged testing and training footprints, and increased Air Force reliance on the moratorium far beyond 2022.

Please don't hesitate to contact me if you have any questions. I look forward to continuing our work with you to ensure America's Air Force remains the very best.

Sincerely,

DAVID L. GOLDFEIN,
General, USAF
Chief of Staff

Dr. LOWENTHAL. Thank you. These questions on royalties are again for Ms. MacGregor. I appreciate your answers and your forthrightness, and I find it very refreshing.

Last week, the Bureau of Ocean Energy Management (BOEM) announced that it was lowering the royalty rate for shallow water leases in next month's Gulf of Mexico lease sale. The announcement of this move noted that BOEM carefully considered the whole range of factors in making this decision. Will you make that analysis of BOEM available to this Committee?

Ms. MACGREGOR. I will have to go back and grab it, but we can take a look and talk to you after.

Dr. LOWENTHAL. Well, I strongly support, because we don't think that BOEM should have anything to hide. So, we would really appreciate your doing that, because the press release said that BOEM looked at market conditions.

The question is, did the Bureau consider the value of waiting until prices were higher until leasing these areas? Because it seems to me that we have a huge glut now in the oil and natural gas, and there are two ways to handle these public resources and the situation. The first way is to make them even cheaper to encourage what we believe—I would, others might not—as unnecessary drilling and fewer royalties.

Or, alternatively, keep the royalty rate where it is, and wait until the market adjusts to the point where it is actually worth drilling for those resources. Then the American public gets a fair return on the oil and gas that they own. This is a question that we have been wondering about.

Did BOEM look at that?

Ms. MACGREGOR. BOEM's economic team is absolutely stellar. They do hurdle price analysis all the time. Their economic analysis was very thorough.

Dr. LOWENTHAL. Will we get a copy of that economic analysis?

Ms. MACGREGOR. I hope to be able to share that with you.

Dr. LOWENTHAL. Because we would like to be able to say it is stellar, also, but we cannot do that unless we see it. So, thank you, I do appreciate that.

It just seems to me, from my point of view, that we should not be providing the subsidies to the companies just because oil and gas is cheap. We don't need to encourage the drilling just because we can. It should be a priority.

If BOEM's analysis shows that it is, that is one thing. But just because it is cheap should not be a reason to encourage the drilling by lowering the prices at this time to the American public.

BOEM also said it was looking at the price-based royalty system, which would provide an incentive to lease when prices are low, ensure a greater return to the American people when prices are high. As we have reached now record-high production with low oil prices, and royalty rates where they are right now, I certainly believe that royalty rates do not need to be any lower than they are right now.

Can you assure us that BOEM will not lower the prices below where they are now, as a result of this review?

Ms. MACGREGOR. By statute they cannot go below 12.5 percent.

Dr. LOWENTHAL. But they are 18.75 right now.

Ms. MACGREGOR. Currently they are 18.75 in deep water. But for the lease sale this August, we only lowered the royalty rate for very shallow water leasing, which tends to be more natural gas-prone.

Dr. LOWENTHAL. Will you give us all that data and what that analysis was, why it is only in certain particular spots and why you are justifying just doing it in particular areas?

Ms. MACGREGOR. Sir, absolutely, and I would love for you to come to a lease sale, and we could talk about this, and actually see how it works and how it is implemented.

Dr. LOWENTHAL. Because the critical question is not whether we support or don't support. I personally talked about the support of the Gulf. But we are talking about the royalty rates now, and how those rates are arrived at, and are the people getting a fair return on their money.

Ms. MACGREGOR. Absolutely, and the Secretary has made that a high priority, as well, so you two share that goal. And he recently reinstated the Royalty Policy Committee to take a look at that, as well.

Dr. LOWENTHAL. Again, the more we are a partner in that, and we see that data, the more we will be able to either oppose it or support it based upon the facts. Thank you. I yield back.

Mr. GRAVES. The gentleman from Virginia, Mr. Beyer, for 5 minutes.

Mr. BEYER. Thank you, Mr. Chairman, very much. My friend, the Chairman, Mr. Graves, had talked about the offshore wind potential in Massachusetts. In Virginia, we were very proud to be awarded the first wind energy research lease in these Atlantic Coast waters. They are highly desirable and competitive. It has been a lot slower than we predicted; we thought we were going to have the turbines in place by this year, and only this Monday, 2 days ago, did Dominion announce a deal to work with DONG Energy to put in the pilot turbines.

So, Ms. MacGregor, given the timelines we have seen, is there anything that you can do or Interior can do to ensure that the companies who win the leases actually act on them?

Ms. MACGREGOR. I would love to speak with you more about that. Again, I think that sometimes we get mischaracterized for some reason that we are not supporting all-of-the-above, and absolutely recognize that renewable energy is part of the Bureau of Ocean Energy Management's portfolio. Right now we have offshore wind lease sales off of every coast in the Atlantic, from North Carolina to Massachusetts. And we had our second-highest most successful offshore wind lease sale a few months ago, off the coast of North Carolina.

But I am aware of Dominion and DONG's project, and we are more than happy to talk to you about what the next steps are, and ways to look at our own internal regulatory processes and areas that might burden that development.

Mr. BEYER. Yes. And, Mr. Chairman, respecting that we will always be using some fossil fuels, I was very proud to note that Volvo announced in the last week to moving all-electric vehicles by 2018. As a 43-year Volvo dealer, that was a pretty cool thing.

Ms. MacGregor, by the way, thank you for coming back again and again. You are long-suffering and very patient with us.

[Laughter.]

Mr. BEYER. At our last hearing, I asked you about, as Secretary Zinke looks at the reorganization of Interior, writ large, about potentially putting BOEM and BSEE back together again. Any progress on that?

And will you ultimately be able to tell us, if that is the decision made, what the real advantages are to recombining them, and what the cost is of having split them out in the first place? You will recall at that point I mentioned that this came out of Deepwater Horizon. The concern was you would have the fox guarding the henhouse once again.

Ms. MACGREGOR. Yes, I remember that question. I don't think I am the fox guarding the henhouse in any way. But, given that, I will only ever work for the American people.

After the split-up of MMS, the agency was split into three separate bureaus. Obviously, this was done by Secretarial Order. There were different priorities, there were different reasonings behind that, and, you are right, there was an investment made by the Department to enact that. Again, no decision has been made yet. We are still evaluating our options, and looking at reorganization, department-wide. But when a decision is made, you can be sure that it will have an underpinning of analysis that will support our decision making.

Mr. BEYER. Great. And let me just make the plea, as a humble member of the Democratic Minority, that that analysis recognizes the dilemma that the agency designed to oversee safety with the agency designed to stimulate production, and how you reconcile those two, essentially, competitive functions.

Thank you, Mr. Chairman. I yield back.

Mr. GRAVES. Thank you. I want to thank all the witnesses for their testimony, and all the Members for their questions today.

Members of the Committee may have some additional questions for you, and we will ask you to respond to those in writing. Under the Committee Rule 3(o), members of the Committee must submit the witnesses' questions within 3 business days following the hearing, and the hearing record will be held open for 10 days for these responses.

If there is no further business, without objection, the Subcommittee stands adjourned.

[Whereupon, at 12:01 p.m., the Subcommittee was adjourned.]

[LIST OF DOCUMENTS SUBMITTED FOR THE RECORD RETAINED IN THE COMMITTEE'S OFFICIAL FILES]

Rep. Beyer Submissions

- Letter from Members of Congress addressed to Secretary Zinke, dated June 28, 2017
- Letter from a group of scientists addressed to the President, dated April 14, 2016