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Testimony
U.S. House Committee on Natural Resources
Subcommittee on Energy & Mineral Resources
Hearing: Increasing Access to Offshore Oil and Natural Gas Resources
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API has more than 625 member companies and represents all sectors of America's oil and natural gas industry. Our industry supports 10.3 million American jobs and nearly 8 percent of the U.S. economy. It also provides most of the energy we need to power our economy and daily life and delivers tens of millions of dollars a day in revenue to the federal government. On the upstream side of the industry, we have successfully developed and advanced technologies to safely and responsibly explore for and produce the oil and natural gas, both onshore and offshore, that are vital to every aspect of our economy. In fact, because of American ingenuity and engineering prowess, the U.S. is now firmly established as a global energy superpower.

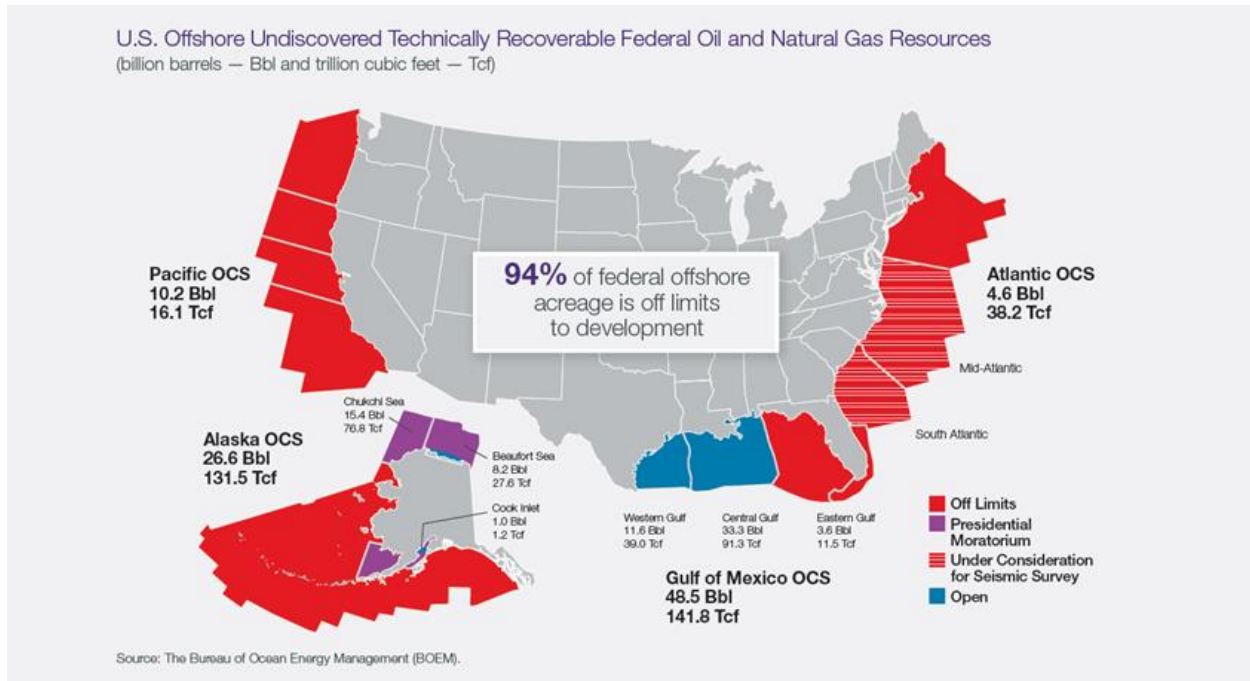
As both the U.S. and global economies grow, the U.S. – with its abundant oil and natural gas supplies – can effectively provide economic and energy stability to markets at home and abroad through continued and expanded oil and natural gas development. That's why promoting opportunities for investment in U.S. offshore oil and natural gas projects is critically important, the introduction of the "Accessing Strategic Resources Offshore Act" outlines a legislative package that should be seriously considered as we look for constructive ways to secure our future energy.

While U.S. onshore makes up the bulk of domestic production, U.S. offshore has accounted for more than a million barrels of oil per day for the last 20 years. Overall, more than 50,000 wells have been drilled and more than 20 billion barrels of oil and 170 trillion cubic feet of natural gas have been produced in U.S. federal offshore waters, which are generally those areas that are more than three miles from the coastline of the adjacent state (exceptions include Texas and the west coast of Florida, where federal ownership begins at nine nautical miles).

As a result of bonus bid, rental, and royalty payments, offshore production has been responsible for the generation of billions of dollars flowing to the federal treasury and the creation of thousands upon thousands of jobs throughout the Gulf coast as well as in states far removed from production activities. Since 1953, the federal government has collected more than \$300 billion in offshore oil and natural gas related revenues, with collections averaging about \$7 billion per year in recent years.

Today U.S. offshore production is about 1.7 million barrels a day. This accounts for 18 percent of domestic oil production, and a level of production that can effectively provide a stabilization mechanism for disruptions in global oil supplies that often arise due to political unrest. This is more than double the respective production levels of Libya and the United Kingdom, and it rivals the oil production of Algeria, Qatar and Norway. Almost exclusively in the Gulf of Mexico, this oil production provides a vital feedstock to our refineries along the Gulf Coast and beyond that manufacture the fuels we rely upon on a daily basis.

The U.S. Outer Continental Shelf (OCS) is estimated to contain some of the greatest quantities of undiscovered oil and natural gas resources. The Bureau of Ocean Energy Management, the federal agency responsible for managing the leasing of federal oil and natural gas resources, estimates that 89.9 billion barrels of oil and 327.49 trillion cubic feet of natural gas have yet to be discovered on the U.S. OCS. Past estimates of offshore oil and natural gas resources have fallen well below what has ultimately been discovered by the industry. Unfortunately, the federal government has placed most of the OCS – approximately 94 percent of it – off-limits to oil and natural gas development.



The U.S. has kept areas like the Atlantic off-limits while our neighbors continue to move forward in an effort to develop oil and natural gas off their shores. Just to the North, Canada has secured tremendous economic and energy security advantages by developing oil and natural gas off the coasts of Nova Scotia, Newfoundland and Labrador, effectively reviving seaports that were considered “near-extinct,” like the town of St. Johns. Also, Cuba and the Bahamas have both moved forward with exploratory drilling or development planning. And the rest of the Atlantic continues to seize this opportunity, including Norway, the United Kingdom, Venezuela, Brazil and Nigeria.

Our nation should produce more of the oil and natural gas Americans need here at home. And it can. This would strengthen our energy security and help put downward pressure on prices while also providing many thousands of new jobs for Americans and billions of dollars in additional revenue for our government. According to the Energy Information Administration (EIA), we produced about 5 million barrels of oil a day in 2008, and now we’re producing about 9 million barrels per day. At the same time, we’ve reduced the amount of oil we’re importing. Still, we can and should do more.

As we have seen throughout this current energy resurgence, increased production of U.S. oil and natural gas drives many benefits for the country, including billions of dollars in capital investments, the creation of thousands upon thousands of well-paying jobs, continued improvement in our balance of trade, and increased energy security for the U.S. and our allies abroad. Unplanned supply disruptions in the global crude oil market have grown in recent years, peaking at 3.6 million barrels per day in May 2016 after previously reaching a high of 3.3 million barrels a day in September 2013 and again in May 2014. According to EIA, this is the highest level of supply disruption since the Iraq-Kuwait War (1990-91), when prices spiked to new highs. By April 2017, the amount taken off the market had fallen to less than 2 million barrels per day.

The growth of U.S. production has made all the difference. It has largely offset the loss from unplanned production outages around the world and put downward pressure on prices to the great benefit of American consumers and businesses.

Fundamentals of economics are quite evident in oil and natural gas markets. The Henry Hub price of natural gas has remained at \$6 per mmBtu or less since December 2008, with the average price ranging from \$2 to \$4 most months. Since then, abundant supplies of natural gas in the U.S. and the ability of U.S. producers to efficiently produce these resources has led the EIA and other analysts to predict that natural gas prices will remain relatively low for many years. In 2015, energy savings from throughout the economy from the production of unconventional natural gas helped increase average household disposable income by \$1,337, according to one study.

Similarly, the price of crude oil has come down significantly. The spot price for West Texas Intermediate (WTI) crude oil averaged \$95 per barrel in January 2014, and today oil prices have been in the \$40 - \$50 range for WTI for the past several months. According to AAA, in 2015 drivers saved an average of \$550 in fuel costs. Affordable energy helps drive the economy, and

affordability comes with increased production from increased access to U.S. oil and natural gas supplies.

The U.S. energy boom has also been a catalyst to resurgent manufacturing and petrochemical sectors, which rely on low-cost energy to fuel operations and on natural gas and natural gas liquids as feedstock for production. For example, the American Chemistry Council (ACC) identified 310 chemical industry investment projects valued at \$185 billion that have been announced as of July 2017. According to ACC, during peak investment years, these projects could support 464,000 jobs, \$310 billion in new economic output and \$26 billion in new tax revenue by 2025.

To maintain these benefits, we must plan for the future, and that means pursuing safe and responsible energy development here at home. Given expected global economic and population growth, more total energy will be needed both in the U.S. and across the globe. The EIA forecasts that U.S. energy demand will grow by 11 percent between 2016 and 2050, with more than 66 percent of the energy demand expected to be met by oil and natural gas.

Globally, the change in energy demand is much greater, and when it comes to liquid petroleum products, the U.S. competes on a global basis for these resources. Recent forecasts by the EIA estimate that sustaining a 2.8 percent annual growth in the global economy from 2015 to 2050 will require an expansion of about 25 million barrels per day in global oil supplies. The growth in demand for natural gas worldwide is expected to be even larger, increasing by 69 percent from 2015 to 2050. Despite significant growth of renewable energy and improvements in energy efficiency, more than half the world's energy demand in 2050 will be met by oil and natural gas.

The "Accessing Strategic Resources Offshore Act" provides a robust framework for advancing our long-term energy security. This proposal promotes key concepts of certainty and predictability that are critical for encouraging and maintaining the tremendous investment that is required for the development of U.S. offshore resources. The revenue sharing provisions in

Sections 2 and 3 help ensure the equitable distribution of revenues for those coastal states that support offshore energy development. These monies provide coastal states with the resources to support a healthy coast and to develop the infrastructure required for a strong coastal economy. Section 4 provides much needed changes to executive branch authority to withdraw offshore areas from oil and natural gas leasing. This will help instill certainty for domestic energy projects and will help ensure that such decisions to withdraw areas benefit from the input of Congress and state level governments. Furthermore, the current process for developing an Outer Continental Shelf leasing program provides significant flexibility for the executive branch to determine which areas will and will not be included for offshore oil and gas leasing opportunities. Also, as discussed in Section 7, efficiency in government operations should be a key objective for any agency. To that end, it is now timely to consider the respective efficiencies and inefficiencies of the Bureau of Ocean Energy Management and the Bureau of Safety Environmental Enforcement, now that the two agencies have been operating independently for several years. Finally, the BSEE-BOEM Arctic rules adopted in 2016 impose prescriptive requirements which presume that one set of assumptions will universally apply to any given location. Performance-based rules, on the other hand, would allow an operator to minimize risks by designing a well program specific to the landscape, ecosystem, ice conditions, water depths and weather of that particular well. The repeal of the Arctic rules package as contemplated in Section 8 will allow the Department of the Interior to work with industry and other stakeholders to develop science-based and cost-effective new regulations that will guide environmentally responsible and safe development of strategically important oil and gas resources in the Arctic.

We have a tremendous resource base with which to meet our growing energy needs. Based on conservative estimates, we have enough oil and natural gas to fuel 171 million cars for 50 years and heat 68 million households for more than three centuries. And it's likely there is much more oil and natural gas than was previously known in areas where the industry has been unable to explore. But we must institute effective policies to promote exploration for and production of resources in new areas, so that we are able to secure the oil and natural gas

resources required to fuel our economy and to meet the demands of consumers for affordable energy supplies. New technologies allow us to explore for and access resources that once were thought unreachable, particularly in offshore oil and natural gas development.

From a safety and environmental responsibility standpoint, America's offshore oil and natural gas industry is characterized by the continued advancement of technology and systems integrity, the application of extensive industry technical standards, and a robust regulatory regime. The industry continues to develop and improve upon technologies designed to ensure that an environmental incident never occurs, and this includes everything from the materials used in offshore operations, the development of software and control systems to manage operations, the development, production and deployment of modern drillships and production facilities to bring energy to market, and the design and manufacturer of blowout prevention equipment systems, subsea safety valves and other equipment.

Furthermore, the continued development and improvement of industry standards serves to promote reliability and safety in offshore operations through the use of proven engineering practices. The American Petroleum Institute (API) publishes industry technical standards under a process accredited by the American National Standards Institute (ANSI), which is the standards authority here in the United States and accredits similar programs at several national laboratories. As part of API's accredited process, API standards are reviewed on a regular basis to ensure they remain current. As such, API standards are developed in an open and transparent process which includes subject matter experts from academia, government and industry and they are the most widely cited oil industry standards by federal, state and international regulators. API has more than 200 exploration and production standards that address offshore operations, covering everything from subsea safety valves to comprehensive guidelines for offshore safety programs, and more than 100 such documents have been incorporated into federal regulations. From the government's standpoint, oil and gas operators on the U.S. Outer Continental Shelf (OCS) are subject to a large number of regulatory requirements, and this includes more than two dozen statutory authorities and more than 80

Code of Federal Regulation parts implemented pursuant to those statutes. In addition, more than two dozen significant approvals and permits are applicable to OCS operations.

In the immediate aftermath of the 2010 Gulf spill, the U.S. oil and natural gas industry launched a comprehensive review of offshore safety to identify potential improvements in spill prevention, intervention and response capabilities. Four joint industry task forces were created to focus on critical safety areas of offshore operations, including equipment, procedures, well control and containment, and spill preparedness and response. The task forces brought together industry experts to focus on the areas of concern raised in the aftermath of the spill and identify best practices in offshore drilling operations and oil spill response, with the definitive objective of enhancing safety and environmental protection. The task forces have issued various reports over the past seven years that include recommendations for improving industry standards, best practices and overall operations in the areas of prevention, containment and response. From the outset, the task forces worked closely with government regulators and all sectors of the offshore oil and natural gas industry and the recommendations of the task forces have been heavily relied upon to enhance industry standards and best practices and to improve the government's regulatory framework.

A groundbreaking achievement of the industry was the creation of the Center for Offshore Safety (COS) in 2011, which has played a central role in both advancing a culture of safety in offshore operations and providing important interface with government regulators for advancing offshore safety programs. The COS is an industry-led initiative with the mission of promoting continuous safety improvement for offshore drilling, completions and operations through effective leadership, communication, teamwork, disciplined management systems and independent third-party auditing and certification. The COS draws on expertise and input from the U.S. oil and natural gas offshore industry and the regulator community.

Through the COS, industry members are committed to improving SEMS performance by subscribing to the following principles: (1) Industry leaders will demonstrate a visible

commitment to safety; (2) Operators, contractors and suppliers will work together to create a culture of safety; (3) Decision making at all levels will not compromise safety. Safety processes, equipment, training and technology will undergo continuous examination and improvement; and (4) Members will share learnings and apply industry standards, good practices and promote continual improvement.

The foundation of the COS is based on API RP 75, *API Recommended Practice for Development of a Safety and Environmental Management (SEMS) Program for Offshore Operations and Facilities*. API RP 75 was incorporated into federal regulations by the Bureau of Safety and Environmental Enforcement (BSEE), an agency within the U.S. Department of the Interior. API RP 75 directs companies to view their operations through a systems-based approach to safety. API RP 75 outlines the various key elements for inclusion in an effective SEMS program, such as the completion of a thorough hazards analysis and the implementation of effective management of change procedures.

The COS has also created a process for accrediting independent third parties to provide audits of individual company SEMS. Members of the COS are required to undergo SEMS audits, and BSEE has now implemented a regulatory requirement for all offshore operators – whether they are members of the COS or not - to complete SEMS audits by accredited, independent third parties, also known as audit service providers or “ASPs”. Additionally, BSEE has incorporated by reference into its SEMS regulations various guidance documents that have been published by the COS to ensure the qualifications and competencies of audit teams that review the SEMS programs of offshore operators, building in a further layer of quality assurance. The COS is truly the focal point for offshore safety and its programs are effectively advancing a culture of safety in U.S. offshore operations and providing an important bridge between industry and the regulator.

Over the past seven years, the industry has actively developed and revised various industry standards to enhance offshore safety and spill prevention capabilities. The focus of the

industry efforts was to improve the overall system of safety and to address those key areas of concern that were raised by the 2010 Gulf spill. On top of the safety and environmental system approach described above, another key to the overall system of safety is the barrier philosophy, within which redundant layers of protection are put into place to effectively ensure that oil and natural gas are contained. This philosophy is reflected in both the standards developed by the industry and in the regulations promulgated by the government. In December 2010, consistent with the recommendations made by the joint industry task forces, API released Standard 65-2, *Isolating Potential Flow Zones During Well Construction (2nd Edition)*. This document contains best practices for zone isolation in wells to prevent annular pressure or flow past containment barriers that are installed and verified during well construction. This document has been incorporated by reference into BSEE's regulations for offshore operations. In November 2012, API released Standard 53, *Blowout Prevention Equipment Systems for Drilling Wells (4th Edition)*, which provides the requirements on the installation, maintenance, testing and inspection of blowout prevention equipment. As stated in the introduction of this document, the "objective of this standard and the recommendations within is to assist the oil and natural gas industry in promoting personnel safety, public safety, integrity of the drilling equipment, and preservation of the environment for land and marine drilling operations." BSEE has also incorporated this document by reference into its regulations. In March 2013, API published *RP 96, Deepwater Well Design and Construction (1st Edition)*, which provides the operation considerations to safety design and construct deepwater wells with maximum reliability and includes a barrier philosophy to ensure that redundancies are in place to effectively prevent an incident. Various other prevention-related standards have also been developed or revised by API, including documents related to quality management systems, safely operating in high-temperature/high-pressure environments, structural integrity management, specifications for subsurface safety valve equipment and others. Government referenced standards may be freely viewed online at <http://publications.api.org>.

Furthermore, the government, through BSEE and its predecessor agencies, has made significant changes to the regulatory requirements applicable to offshore oil and natural gas operations.

In addition to the requirements for SEMS as discussed above, BSEE published a final drilling safety rule on August 22, 2012 (this rule had been previously issued as an interim final rule on October 15, 2010 by the predecessor agency, the Bureau of Ocean Energy Management, Regulation and Enforcement). The BSEE regulations now have extensive requirements for well design and integrity, and blowout preventer and control systems. Under the new drilling safety provisions, BSEE requires, among other things: (1) identification of the mechanical barriers and cementing practices that will be used; (2) independent third-party verification that the blowout prevention equipment is designed for the specific equipment on the rig and for the specific well design; (3) independent third-party verification that the blowout prevention equipment will operate in the conditions in which it will be used; (4) a certification signed by a registered professional engineer that the casing and cementing design is appropriate for the purpose for which it is intended under the expected conditions; and (5) for wells that use subsea blowout prevention equipment, the inclusion of two independent barriers, including one mechanical barrier, for each annular flow path. There are also extensive requirements for the maintenance, testing and inspection of blowout prevention equipment.

Another significant achievement of the offshore oil and natural gas industry is the creation of well intervention and containment consortiums that were founded in 2010 to provide containment technology and response capabilities for the unique challenges of capping a well that is releasing oil thousands of feet below the water's surface. These companies, the Marine Well Containment Company (MWCC) and the HWCG, LLC, maintain quickly deployable systems that are designed to stem any uncontrolled flow of hydrocarbons from a subsea well and facilitate the training of their member companies on the installation and operation of these systems. BSEE requires companies to demonstrate access to equipment and staff resources in order to deploy such systems to cap a well or capture uncontrolled hydrocarbons, and companies are able to demonstrate compliance with this requirement through a contract with MWCC or HWCG. BSEE has also instituted new requirements for determining the worst case blowout discharge and the associated demonstration of capability to effectively respond to such a discharge. On its part, the industry has enhanced its ability to respond to a potential

offshore environmental incident through improved oil spill response planning, and the increased availability of spill response tools such as dispersants, in-situ burning capabilities, mechanical recovery, and shoreline protection. The industry has conducted extensive projects and research related to oil spill response and these materials are available at <http://www.oilspillprevention.org>.

In his book “The Quest,” Pulitzer-prize winning historian Daniel Yergin points out that “[p]olicies related to access to energy and its production can have major impact on the timeliness of investment and the availability of supply – and thus on energy security.” With the right policies and right leadership, we could be doing far better in developing our own energy and bolstering America’s economic and energy security.

As we urge Congress and the administration to advance energy policies that promote the development of domestic oil and natural gas resources, a key component is the long-term planning and development of our energy-rich Outer Continental Shelf. “The Accessing Strategic Resources Offshore Act” promotes constructive steps for securing our nation’s future energy, and we welcome the opportunity to work with Congress and the Administration on this bill and related efforts to advance our energy security. Eighty percent of U.S. voters support increased domestic oil and natural gas production, and projections show that increased production over the long-term is exactly what we need to meet domestic and global demand.