

HEARING OF THE HOUSE NATURAL RESOURCES COMMITTEE "UNLEASING AMERICA'S ENERGY AND MINERAL POTENTIAL" TESTIMONY OF ERIK MILITO PRESIDENT, NATIONAL OCEAN INDUSTRIES ASSOCIATION FEBRUARY 8, 2023

For the past 50 years, the National Ocean Industries Association ("NOIA") has represented the interests of all segments of the offshore energy industry, including offshore oil and gas, offshore wind, offshore minerals, and offshore carbon sequestration. Our membership includes energy project leaseholders and developers and the entire supply chain of companies that make up an innovative energy system contributing to the safe and responsible exploration, development, and production of energy for the American people.

The offshore energy sector is a proven leader in solving energy challenges and delivering diverse sources of energy to the global economy. The offshore industry brings together the companies that produce foundational energy sources such as oil and gas, while leading innovation and investment in energy sources and technologies that will drive decarbonization efforts well into the future. The offshore energy sector has unparalleled expertise and experience deploying and scaling technologies at levels necessary to achieve decarbonization objectives. Companies throughout the offshore industry continue to lead the way in innovating low emission solutions that include offshore wind, carbon capture and storage, hydrogen, and geothermal, among others.

For the foreseeable future, the offshore industry will play an integral role in shaping an energy system that promotes the provision of affordable and reliable energy while continuing to reduce environmental impacts, including emissions. Importantly, for the coming decades, oil and gas supplies will remain a vital energy source for Americans and our allies around the globe, while we simultaneously integrate and add low carbon sources into the mix.

ENERGY REALITIES

Energy lifts society. A system of reliable, abundant, and affordable energy is essential for meeting basic societal needs, including healthy living conditions, health care, education, and mobility, economic or otherwise.

Oil and gas fill the fuel tanks of passenger vehicles and airplanes. They are transformed into the essential building blocks of smartphones, clothing, and medical equipment. They are in so many products we use every day that they underpin the conveniences of modern life.

Natural gas is recognized as a key energy source for providing electricity, heating, cooling, and clean cooking. More than 750 million people around the globe do not have access to electricity, which leaves entire communities at a severe and fundamental disadvantage. According to the World Health Organization (WHO), "Access to energy is critical when it comes

to the functionality of health-care facilities and the quality, accessibility and reliability of health services delivered. Electricity is necessary for the operation of critically needed medical devices such as vaccine refrigeration, surgical emergency, laboratory and diagnostic equipment, as well as for the operation of basic amenities such as lighting, cooling, ventilation and communications."¹

Globally, 2.6 billion people do not have the means for clean cooking and must use solid fuels such as wood, crop wastes, charcoal, and dung in open fires and inefficient stoves. The WHO attributes 3.8 million premature deaths each year to indoor air pollution caused by the fumes and soot generated by inefficient and dirty cooking.

The tragic impacts of energy insecurity are not only experienced abroad; 44 percent of low-income American households experience energy insecurity, spending 10 percent to 20 percent of their income on energy expenses². Energy insecurity has adverse consequences on both physical and mental health. Millions of Americans are faced with the "heat or eat" dilemma, regularly having to choose between paying utility bills and paying for food³.

Energy production in the U.S. Gulf of Mexico demonstrates that it is possible to develop offshore resources while adhering to the highest safety and environmental standards. A multitude of companies involved in offshore energy development are working collaboratively to shrink an already small carbon footprint. From electrifying operations to deploying innovative solutions that reduce the size, weight, and part count of offshore infrastructure – thus increasing safety and decreasing emissions – the U.S. Gulf of Mexico hosts a high-tech revolution.

Currently, global oil consumption is approximately 100 million barrels per day. Various scenarios forecast global oil consumption volumes through 2050 and beyond, and nearly all of them predict substantial oil production will be necessary through at least 2050. The facts, data, and our experience make clear that we should focus on the U.S. offshore region, and the Gulf of Mexico in particular, for securing those vital resources.

Oil produced from the U.S. Gulf of Mexico has a carbon intensity one-half that of other producing regions.⁴ The technologies used in deepwater production – which represents 92 percent of the oil produced in the U.S. Gulf of Mexico – place this region among the lowest carbon intensity oil-producing regions in the world⁵. Policies that restrict domestic offshore development require imports to make up the shortfall, and that supplemental production comes from higher-emitting operations in other countries. Foreign providers generally employ less environmentally conscientious production methods, which when combined with the added emissions from transporting oil over great distances by tanker, increases the amount of carbon released into the atmosphere rather than decreasing it.

¹ <u>https://www.who.int/activities/accelerating-access-to-electricy-in-health-care-facilities</u>

² <u>http://large.stanford.edu/courses/2020/ph240/radzyminski2/</u>

³ S. Jessel, S. Sawyer, and D. Hernández, "Energy, Poverty, and Health in Climate Change: A Comprehensive Review of an Emerging Literature," Front. Public Health 7, 357 (2019).

⁴ Motiwala, and Ismail, "Statistical Study of Carbon Intensities in the GOM and PB," ChemRxiv, April 13, 2020.

⁵ https://www.woodmac.com/news/the-challenge-of-negative-emissions/

Emissions reduction is a global challenge. As analysts at Wood Mackenzie explain, "Removing or handicapping a low emitter hurts the collective global average."⁶ Removing a proven, stable supplier such as the U.S. Gulf of Mexico would be a poor choice with devasting consequences. The better choice is to institute government policies that promote cleaner and safer domestic production, less reliance on higher-emitting foreign suppliers like Russia and China, and the preservation of hundreds of thousands of American jobs.

Efforts to restrict U.S. energy development could eventually lead to Americans of every walk of life having to contend with the issues Europe has been experiencing as a result of disrupted supply from Russia, including potential industrial curtailment and families having to make difficult choices between heat and food. Our energy reality makes it clear that U.S. energy policy should support U.S. energy production of all types, including offshore oil and gas and wind. Government policies play a substantial role in the ability to develop energy in the U.S., whether onshore or offshore, and whether the energy source is oil and gas, wind, hydrogen, or another resource. Obstructive government policies inevitably lead to adverse consequences for our energy security, national security, economic security, and decarbonization efforts.

OFFSHORE ENERGY DEVELOPMENT ENHANCES ENERGY SECURITY

Oil and Natural Gas Will Be Crucial Energy Sources for Decades to Come

Oil and natural gas touch every part of our daily lives. Fundamentally, "Everything that is fabricated, grown, operated or moved is made possible by hydrocarbons."⁷ The U.S. Department of Energy states:

Oil and natural gas play an essential role in powering America's vibrant economy and fueling a remarkable quality of life in the United States. Together, oil and natural gas provide more than two-thirds of the energy Americans consume daily, and we will continue to rely on them in the future. In addition to meeting our energy needs, oil and natural gas are integral to our standard of living in ways that are often not apparent. Several key advances in technology enabled a dramatic increase in domestic oil and natural gas production over the past 20 years. This increased production provides energy security and economic benefits to the entire country, and ongoing technology advances will help us to enjoy those benefits into the future.

Oil and natural gas are used in many ways that are familiar to consumers. Petroleum products power transportation, providing fuel for cars, trucks, marine vessels, locomotives, and airplanes. Natural gas generates more than one-third of the electricity needed for dependable heating, air conditioning, lighting, industrial production, refrigeration, and other essential services, and tens of millions of Americans rely on oil and natural gas to heat their homes directly and on clean burning natural gas to cook their food. But petroleum products do so much more than fuel our cars and power our homes and businesses.

⁶ <u>https://www.woodmac.com/news/opinion/could-restricting-oil-production-in-the-us-gulf-of-mexico-lead-to-carbon-leakage/</u>

⁷ Mark Mills, Wall Street Journal, January 8, 2019

While perhaps less recognized, oil and natural gas also play critical roles in supplying essential products and materials, increasing agricultural productivity, and supporting the expansion of new energy sources.

Oil, natural gas, and natural gas liquids are building blocks for a range of modern materials used to produce life-changing prosthetics, energy-efficient homes, safer cars that go farther on a gallon of gasoline, and hundreds more consumer products that Americans use every day. Plastics and chemicals derived from oil and natural gas make our food safer, our clothing more comfortable, our homes easier to care for, and our daily lives more convenient.

Natural gas is also a key ingredient for chemical fertilizers, helping increase crop production and yield per acre planted, and powering many important operations on the farm like crop drying.⁸

According to the United Nations, access to affordable, reliable, and sustainable energy is critical to achieving many international development goals, specifically, the eradication of poverty through continued improvements in education, health, and access to water.⁹ Oil and natural gas play a central role in eliminating poverty and raising the standard of living for millions by serving as a key form of abundant and affordable energy.

The nascent offshore wind sector will be part of the energy transformation and will serve to boost our nation's energy security. Through research, development, demonstration, and deployment ("RDDD"), technology advancements will enable wind and other renewable energy sources to eventually provide pathways for overcoming global energy challenges. While inevitable progress will be made in the coming decades, oil and natural gas will continue to account for a majority of our energy portfolio.

OFFSHORE ENERGY DEVELOPMENT IMPROVES ENERGY AFFORDABILITY

The cost of energy is fundamentally driven by supply and demand and, recently, global markets have been disrupted by a supply crunch in both the oil and natural gas markets. The energy paradigm has shifted over the past decade, with the United States rising to a position of energy power and emerging as the leading producer of both oil and natural gas in the world.

Vice Chairman of IHS Markit Daniel Yergin explains how things have changed:

According to the old script, United States oil production was too marginal to affect world oil prices. But the gap today between demand and available supply on the world market is narrow. The additional oil Saudi Arabia is putting into the market will help replace Iranian exports as they are increasingly squeezed out of the market by sanctions.... But if America's increase ... [in oil production] ... had not occurred, then the world oil market

⁸ U.S. OIL AND NATURAL GAS: Providing Energy Security and Supporting Our Quality of Life, U.S. Department of Energy, September 2020, p. 4.

⁹ https://unstats.un.org/sdgs/report/2016/goal-07/

would be even tighter. We would be looking at much higher prices – and voters would be even angrier.¹⁰

Mr. Yergin made this point in 2012 at the outset of the shale revolution, but the significance of U.S. production for global energy markets is as important as ever today. In fact, Mr. Yergin reiterated this very point in February 2022 in the aptly title op-ed in the *Wall Street Journal*, "America Takes Pole Position on Oil and Gas."

Analysts recognize that the downturn in the oil and natural gas industry from 2014-2020, combined with ill-conceived policies and investment approaches, led to significant underinvestment in oil and natural gas exploration and infrastructure. According to Simon Flower, Chairman, Chief Analyst at Wood Mackenzie and author of a weekly column called The Edge, in 2021, "Underinvestment in oil supply will lead to a tight oil market later this decade. It's a narrative that's gained increasing traction as capital expenditure on upstream oil and gas has shrunk. Spend in 2021 is half the peak of 2014 after slumping to new depths in [2021's] crisis."¹¹

Mr. Flowers poses the question, "How much *new* oil supply does the world need?" His answer is, "A lot - we reckon about 20 million b/d from 2022 to 2030." According to Flowers, "This is the 'supply gap', the difference between our estimate of demand in 2030 and the volumes we forecast existing fields already onstream or under development can deliver."¹² If his numbers are correct, a huge amount of new oil is needed to close the expected gap between the supply and demand and help bring stability and affordability to oil and petroleum product prices.

Rystad Energy echoes the concern about the supply gap and the huge amount of investment needed to close it. According to Rystad, more exploration for oil and gas is needed to supply the volumes needed worldwide by 2050.¹³ In fact, it will take massive investment just to keep pace with growing demand. Rystad suggests capital expenditures of at least \$3 trillion will be required to replenish declining production from currently producing assets around the world to meet expected global demand in 2050.

Saudi Aramco CEO Amin H. Nasser identified the crux of the energy crisis in his remarks during the Schlumberger Digital Forum, on September 20, 2022:

Unfortunately, the response so far betrays a deep misunderstanding of how we got here in the first place, and therefore little hope of ending the crisis anytime soon. So this morning I would like to focus on the real causes as they shine a bright light on a much more credible way forward.

When historians reflect on this crisis, they will see that the warning signs in global energy policies were flashing red for almost a decade. Many of us have been insisting for years

¹⁰ Daniel Yergin, "America's New Energy Reality," *The New York Times*, June 9, 2012

¹¹ <u>https://www.woodmac.com/news/the-edge/is-the-world-sleepwalking-into-an-oil-supply-crunch/</u>

¹² https://www.woodmac.com/news/the-edge/is-the-world-sleepwalking-into-an-oil-supply-crunch/

¹³ <u>https://www.offshore-mag.com/drilling-completion/article/14188804/exploration-overdrive-urgently-required-rystad-energy-report-claims</u>

that if investments in oil and gas continued to fall, global supply growth would lag behind demand, impacting markets, the global economy, and people's lives.

In fact, oil and gas investments crashed by more than 50% between 2014 and last year, from \$700 billion to a little over \$300 billion. The increases this year are too little, too late, too short-term.

Meanwhile, the energy transition plan has been undermined by unrealistic scenarios and flawed assumptions because they have been mistakenly perceived as facts. For example, one scenario led many to assume that major oil use sectors would switch to alternatives almost overnight, and therefore oil demand would never return to pre-Covid levels.

In reality, once the global economy started to emerge from lockdowns, oil demand came surging back, and so did gas.¹⁴

Mr. Nasser's remarks about the challenges ahead are similarly profound, "Oil inventories are low, and effective global spare capacity is now about one and a half percent of global demand. Equally concerning is that oil fields around the world are declining on average at about 6% each year, and more than 20% in some older fields last year. At these levels, simply keeping production steady needs a lot of capital in its own right, while increasing capacity requires a lot more."¹⁵

We are fortunate in the United States that our Gulf of Mexico region is up to the task of delivering the oil and gas the economy needs. Production numbers from the U.S. Gulf of Mexico place it in the company of some of the largest oil producing countries. If the Gulf of Mexico were its own country, it would be one of the top eleven oil producing countries:

Country	Country Barrels of oil per day		
United States		the second se	<u>per uay</u>
		10,111,830	
Saudi Arabia (OPEC)		9,313,145	
		4,459,455	
Iraq (OPEC)			
China		3,987,677	
Iran (OPEC)			
United Arab Emirates (OPEC)		3,091,481	
Brazil	۲	2,905,121	U.S. GULF OF
Kuwait (OPEC)		2,527,106	
U.S. Gulf of Mexico (pre-pandemic peak)		2,044,000	MEXICO:
U.S. Gulf of Mexico (current levels)	#	1,791,000*	A STRATEGIC
		1,775,813	
Kazakhstan			ASSET
	State of the local division of the local div	1,734,495	
The Aleo		*as of June 2022	
	X	A DEN	

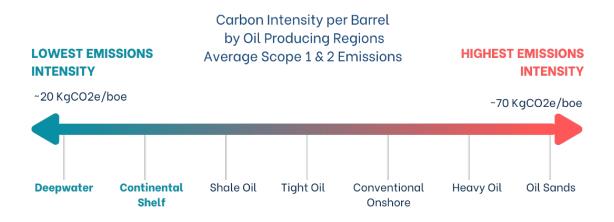
Source: U.S. Energy Information Administration.

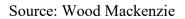
¹⁴ https://www.aramco.com/en/news-media/speeches/2022/remarks-by-amin-h-nasser-at-schlumberger-digitalforum#

¹⁵ <u>https://www.aramco.com/en/news-media/speeches/2022/remarks-by-amin-h-nasser-at-schlumberger-digital-forum#</u>

OFFSHORE LEASING PROVIDES AMONG THE LOWEST CARBON BARRELS IN THE WORLD

The U.S. offshore operates under one of the strongest regulatory and oversight regimes in the world, which means production here in the United States is more environmentally friendly than operations in many producing regions in the world. The carbon intensity of the Gulf of Mexico is 50 percent of that of other producing regions¹⁶. Part of the reason is that U.S. Gulf of Mexico facilities deliver high volumes of oil and gas with a far smaller physical footprint. In 2019, 18 offshore facilities (with a combined surface area equal to about nine city blocks) produced 75 percent of offshore production¹⁷.





Management practices and related regulations for venting and flaring of methane in the offshore have helped to dramatically reduce the practice in the Gulf of Mexico. The U.S. Gulf of Mexico accounted for 15% of U.S. oil production in 2019, yet EIA data shows venting and flaring emissions from offshore oil and gas operations accounted for a mere 2.6% percent of nationwide energy production venting and flaring emissions in 2019.¹⁸ EPA data also shows methane emissions from offshore oil and gas production accounted for less than one percent of total nationwide methane emissions in 2019.¹⁹

In short, the U.S. and world depend upon reliable supplies of oil and natural gas for a high quality of life and to lift people out of poverty, and U.S. offshore production should be the basin of choice for producing that energy because of demonstrably lower GHG and environmental impacts for an energy source we will continue to need for years to come.

 ¹⁶ Motiwala, and Ismail, "Statistical Study of Carbon Intensities in the GOM and PB," ChemRxiv, April 13, 2020.
¹⁷ Director Scott Angelle, BSEE Director, BSEE Presentation to the Deepwater Technical Symposium, November 13, 2020.

¹⁸ https://www.eia.gov/dnav/ng/ng prod sum a EPG0 VGV mmcf a.htm

¹⁹ Draft 2021 Greenhouse Gas Inventory

In fact, a 2016 report at the end of the Obama Administration—issued under then-Secretary Sally Jewell—stated, "U.S. GHG emissions would be higher if BOEM were to have no lease sales.... Emissions from substitutions are higher due to exploration, development, production, and transportation of oil from international sources being more carbon intensive."²⁰

Recent research from multiple sources continues to validate the low carbon benefits of U.S. Gulf of Mexico oil leasing and production²¹:

The Breakthrough Institute:

The Breakthrough Institute, a global research center that identifies and promotes technological solutions to environmental and human development challenges, recently examined the need for continued investment in greenfield oil and gas projects in the United States even in the context of aggressive decarbonization scenarios that aim to meet ambitious climate objectives.

In the report, "Oil and Gas Assets at Risk, *How will clean energy's rise impact oil and gas communities in the United States amidst shrinking fossil fuel demand?*",²² authored by Rystad Energy, Dr. Zeke Hausfather, Mark Boling, and Peter Liu, the Institute finds "Despite potentially significant declines in global oil and gas demand across the climate scenarios by 2050, our findings clearly indicate that investment in new oil and gas fields may still be necessary to meet future demand for oil and gas in all three of the climate change mitigation scenarios."

Wood Mackenzie:

According to Wood Mackenzie, reducing oil production from the U.S. Gulf of Mexico would increase the average emissions rate for global oil production:

Using our recently updated <u>Emissions Benchmarking Tool</u>, which profiles emissions for more than 2,800 oil and gas assets around the world, [researchers] Oberstoetter and Usoro were able to compare the carbon intensity of the principal sources of crude used in

²⁰ https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Leasing/Five-Year-Program/2017-2022/OCS-Report-BOEM-2016-065---OCS-Oil-and-Natural-Gas---Potential-Lifecycle-GHG-Emissions-and-Social-Cost-of-Carbon.pdf. Although court decisions have questioned components of the methodology the Obama

Administration used in this report, the fundamental proposition remains – a "no leasing" scenario must consider the impacts of fuel-switching, which, as shown by the outside experts discussed below, will lead to higher GHG emissions because of the unusually low GOM carbon intensity.

²¹ A recent study by researchers at the University of Arizona and elsewhere suggests that methane emissions from offshore shallow water facilities has been underestimated. However, 92 percent of offshore oil production is from deepwater, which is consistently recognized for low methane and low overall carbon emissions. The recent study analyzed just 8 percent of total shallow water facilities, with many of the facilities outside of federal jurisdiction in state waters, using a relatively new technique. Many NOIA members with facilities in federal shallow waters have focused on methane management, deploying technologies such as leak detection or electrifying activities to the extent feasible. In any event, the offshore industry will continue to review relevant data, including this recent research, as part of the ongoing process of learning and improvement.

²²https://thebreakthrough.org/articles/oil-and-gas-assets-at-risk-impacts-of-declining-fossil-production-in-climate-scenarios-in-the-us

the US. Numerous factors drive the differences in intensity: emissions in Venezuela, Colombia and Canada are driven by the more energy-intensive processes needed to produce the heavier crude qualities, while in Iraq flaring is the big problem. The overall picture is clear, however: the deep water of the Gulf of Mexico is one of the lowestcarbon sources of oil used in the US, with only Saudi Arabia coming in lower. In the light of that, Oberstoetter and Usoro argue, restrictions on US production in the Gulf could end up having a counterproductive impact on global emissions. "Removing or handicapping a low emitter hurts the collective global average."²³

McKinsey:

In the report titled "How the Gulf of Mexico can further the energy transition," McKinsey describes four key factors that give the deepwater Gulf of Mexico a "low carbon advantage":

First, in contrast to other regions where flaring natural gas without a market is more commonplace, most of the natural gas produced in the Gulf of Mexico is sold to local markets, which results in minimal routine flaring and, consequently, less GHG emissions. Second, the facilities have efficient, modern designs that minimize methane leakage. Third, wells and production facilities have a high throughput, minimizing the number of energy-intensive processes required to bring on new supply, such as drilling. And fourth, operators have made active decarbonization efforts to stay in line with environmental sustainability goals and in compliance with regulations.²⁴

McKinsey estimates production from the U.S. Gulf of Mexico could decrease by about 800,000 barrels per day by 2040 without additional projects beyond those that have already been sanctioned. In that situation, McKinsey expects lost production would be made up by substitutions from other parts of the world without much oil demand destruction. The country would be able to import sufficient oil, but it would come from higher-emitting basins, resulting in an increase in greenhouse gas emissions globally:

This supply reduction would have to be offset by alternative sources to meet global demand, which could hinder net-zero goals significantly. Because many other oil producing regions globally have total unit costs similar to those in the Gulf of Mexico, global oil price increases or substitution with other energy sources wouldn't be expected, and global demand for oil would remain unchanged. Instead, the reduced Gulf supply would be offset by production increases from other sources, such as other deepwater basins, shale, and OPEC. Based on the higher emissions per barrel of this new supply, global emissions would increase by 50 million to 100 million metric tons of CO₂e through 2040.²⁵

²³ <u>https://www.woodmac.com/news/the-challenge-of-negative-emissions/</u>

²⁴ Brown, Di Fiori, Smith, and Yanosek, "Deepwater Gulf of Mexico's role during the energy transition," McKinsey, September 2022, at pages 3-4.

²⁵ Brown, Di Fiori, Smith, and Yanosek, "Deepwater Gulf of Mexico's role during the energy transition," McKinsey, September 2022, at page 6.

Offshore energy is a true story of accomplishing more with less – creating more energy with less environmental impact. Offshore production platforms are incredible edifices of continuously evolving technology that allow enormous amounts of energy to be produced through a relatively small footprint. Incredibly, 18 deepwater facilities, which equate to about the size of only nine city blocks, produce about the same amount of oil as the entire state of North Dakota.²⁶

OFFSHORE WIND

U.S. offshore wind is positioned for dramatic growth. As a leading advocate for offshore wind, NOIA continues to promote policies to enable the build-out of new offshore wind resources in federal waters. That support extends to efforts to pursue offshore wind leasing and development on the Outer Continental Shelf ("OCS") in the Gulf of Mexico. Offshore wind projects are vital to the economic growth of this country and efforts to meet climate goals for the 21st century and beyond. According to a recent report by the American Clean Power Association, expanded offshore wind development could spark \$120 billion²⁷ in investments.

NOIA and several other allied organizations commissioned a study that examined the net economic benefits of future offshore wind opportunities. That study by Wood Mackenzie found that by leasing areas in places like offshore New York, New Jersey, the Carolinas, the Northeast, and California, offshore wind development could support 80,000 jobs per year through 2035, in addition to bringing in billions of dollars to the Treasury in the form revenue generated from new lease sales.²⁸

Clearly, offshore wind development in federally managed waters offers enormous economic and environmental benefits and will help meet renewable energy goals. The Administration has set a goal of 30 GW of offshore wind power by the year 2030. The Administration continues to take important steps to accomplish that objective, including scheduling of lease sales, processing and approving construction and operations plans, and modernization the regulatory framework.

From a regulatory standpoint, federal government policy must also serve to eliminate potential roadblocks to investment in energy projects, including offshore wind. As the Administration reviews and reworks regulations, such as the National Environmental Policy Act (NEPA), it will be important to ensure changes to the regulatory framework are done in a way that enhances environmental protection and energy development. Environmental stewardship and energy/economic progress are not mutually exclusive; NOIA members have consistently been leaders in both arenas. Promulgating rules that balance the need for energy development with effective environmental stewardship will provide the certainty massive investments require.

²⁶Director Scott Angelle, BSEE Director, BSEE Presentation to the Deepwater Technical Symposium, November 13, 2020.

²⁷ See American Clean Power Association, et al., *Federal Revenue and Economic Impacts from BOEM Offshore Wind Leasing* (December 2021), <u>https://cleanpower.org/resources/federal-revenue-and-economic-impacts-from-boem-offshore-wind-leasing/</u>.

²⁸<u>https://www.noia.org/noia-reports/#flipbook-df_217504/7/</u>

Timely, transparent NEPA processes are of significant importance to project developers, investors, employees, and contractors whose jobs and livelihoods are tied to projects subject to NEPA reviews. Preconstruction delays for projects typically add costs and delay the delivery of the benefits that projects can bring. Delays and associated cost increases can even result in projects being canceled altogether. In today's globalized economy, where there is a high level of competition for the world's investment, increasing uncertainty and delays in the federal permitting process can serve to drive investments elsewhere. The United States needs these investments to remain competitive and to support long term economic growth, as well as elevate the quality of life for communities that most need these investments.

Lack of clarity in the NEPA process not only impacts the time it takes a federal agency to act, but also increases litigation risk. Because of its broad applicability across sectors and agencies, NEPA is often at the center of project opponents' litigation strategy in seeking to delay and block energy and infrastructure projects. In response to the threat of litigation, agencies prepare NEPA analyses in defense of potential litigation, attempting to anticipate every possible objection that could be raised in court, however insignificant and however detached from the intent of NEPA. The result is that over time NEPA has become less about informing agencies and the public of environmental impacts of significance, and more about agencies attempting to avoid lengthy and costly litigation. Several NEPA-related legal challenges have already been filed over the approvals of the construction and operation plans for the early-mover offshore wind projects. Congress should continue to consider permitting legislation to streamline the NEPA process and reduce investment and litigation uncertainty. From a policy standpoint, it will also be critical for the U.S. Treasury Department to implement the available tax credits for renewable projects with flexibility so that the credits can be fully realized.

OFFSHORE CARBON CAPTURE AND STORAGE

Progress towards addressing the climate challenge will depend upon the advancement of principles of innovation, conservation, efficiency, resiliency, mitigation, and adaptation. Carbon capture and storage (CCS) is an innovative approach to mitigating greenhouse gas emissions and it will be critical for achieving the climate change ambitions and goals that have been established by diverse stakeholders around the world. U.S leadership in CCS will help ensure the availability of abundant, reliable, and affordable domestic energy, while continuously driving down emissions.

According to the International Energy Agency:

Carbon capture, utilisation and storage (CCUS) technologies offer an important opportunity to achieve deep carbon dioxide (CO₂) emissions reductions in key industrial processes and in the use of fossil fuels in the power sector. CCUS can also enable new clean energy pathways, including low-carbon hydrogen production, while providing a foundation for many carbon dioxide removal (CDR) technologies.²⁹

As it relates specifically to the offshore, the National Petroleum Council concluded that "One of the largest opportunities for saline formation storage in the United States can be found in

²⁹https://www.iea.org/reports/the-role-of-co2-storage

federal waters, particularly in the Gulf of Mexico." *Meeting the Dual Challenge*, p. 27. This is also true as it pertains to state waters along the Gulf Coast. The U.S. Gulf of Mexico offshore region provides tremendous advantages for an emerging U.S. CCS sector. The Gulf of Mexico is characterized by vast geologic prospects for CO2 storage, extensive and established energy infrastructure along the Gulf Coast and throughout the outer continental shelf, a proximity to industrial centers for capturing emissions, and an assessable engineering and energy knowledge base and workforce, along with associated RD&D capabilities. The U.S. Gulf of Mexico could very well soon be the leader in CCS. Early projections show that 50 million tons of CO2 annually could be stored beneath the Gulf of Mexico by 2030, more than all the CCS currently operating globally. The Gulf's storage capacity could double by 2040.

The build-out of the U.S. offshore carbon storage industry will depend upon certainty and predictability in the U.S. laws and regulations. The Infrastructure Investment and Jobs Act of 2021 (P.L. 117-58) included Sec. 40307, explicitly authorizing the Department of the Interior to grant leases, easements, or rights-of-way on the outer continental shelf for the purposes of long-term storage of CO'2. It also directed the Secretary to issue regulations to that effect within one year of enactment, or by November 2022. NOIA understands that Interior is in the process of developing the regulatory framework for offshore CO2 sequestration as directed by the Infrastructure Investment and Jobs Act. However, a protracted timeline for finalization of the rules and for the initiation of leasing and project development could substantially impede U.S. efforts to decarbonize through offshore CCS. It will also be important for Congress to ensure adequate funding for Interior to fulfill its responsibilities for leasing and regulating the activity. Finally, the U.S. Department of Treasury must implement the 45Q tax credit with sufficient flexibility to ensure a viable and durable U.S. offshore CCS program.

CONCLUSION

Our national energy needs require continued supplies of oil and natural gas. Continued U.S. offshore oil and gas development provides vast benefits and a sensible pathway for energy security for the next few decades. At the same time, the U.S. offshore sector is contributing to the development of low and zero carbon energy options, including offshore wind, hydrogen, and carbon removal technologies. Thank you for the opportunity to testify on behalf of the offshore energy industry. NOIA and our members stand ready to work with policy makers to advance policies to ensure that Americans can rely upon an affordable and reliable energy system built upon strong pillars of energy, economic, national, and environmental security. We are also providing with our testimony, as Attachment A, the comments that we filed on the proposed national offshore oil and gas leasing program for 2023-2028. This document discusses, in great detail, the vast benefits that flow to Americans through offshore energy development, as well as the adverse consequences that will result if unreasonable restrictions are imposed.

Very respectfully,

Ellet.

Erik Milito President, National Ocean Industries Association