Testimony of Cynthia Sarthou, Executive Director, Healthy Gulf Hearing before the House Energy and Mineral Resources Subcommittee May 13, 2021

Members of the House Energy and Mineral Resources Subcommittee:

I am Cynthia Sarthou, Executive Director of Healthy Gulf. Healthy Gulf is a nonprofit organization that has been working with communities on threats to the Gulf of Mexico's natural resources since 1995. Our mission is to collaborate with and serve communities who love the Gulf of Mexico by providing the research, communications and coalition-building tools needed to reverse the long-pattern of over exploitation of the Gulf's natural resources. We are headquartered in New Orleans, but also have staff in Mississippi and Florida. Our work spans all five Gulf States.

My testimony is focused on the impacts and challenges posed by federal fossil fuel development on the nation's Outer Continental Shelf in the Gulf of Mexico region. Although some of the challenges discussed are historic, far too many continue today and should be considered by any region that is the focus of efforts to develop offshore oil and gas.¹

The Gulf of Mexico is an extraordinary aesthetic, economic, and environmental resource to the nation, supporting some of the nation's most productive and biodiverse tropical and temperate ecosystems. The Gulf's wetlands, seagrass beds, and mangroves provide a home for thousands of marine and coastal species (both abundant and imperiled), including invertebrates, corals, fish, marine mammals like the endangered Rice's whale, shore and coastal bird species, and five of the world's seven species of sea turtles. The Gulf's abundant resources also support a robust economy. Millions of people who live in the area depend on its productive marine environment to support coastal fisheries, tourism, and recreation. The region produces more than one-third of the nation's domestic seafood supply and supports a popular and lucrative recreational fishing industry.²

The Western and Central Gulf of Mexico also accounts for the vast majority (98%) of offshore oil and gas production in the OCS.³ In fact, nowhere in the U.S. is there more offshore oil and gas development or more industry infrastructure than in the Western and Central Gulf of Mexico. For example, as of April 2021, the Bureau of Ocean Energy Management (BOEM) manages about 2,300 active leases offshore that cover about 12.1 million acres,⁴ although only 949 of those leases encompassing 2.5 million acress are now producing – leaving 1,700 leases or over 9 million acres available for future development. Since the 1940s, the offshore industry has installed approximately 40,000 miles of oil and gas pipelines in federal offshore waters, primarily in the Gulf of Mexico.⁵

¹ My testimony relies upon research completed by Earthjustice Legal Defense in preparation of "Recommendations for Scope and Criteria for Review of the Federal Fossil Fuel Programs in the Offshore Gulf of Mexico" submitted to the Secretary of Interior, April 15, 2021.

² Nat'l Comm'n on the BP Deepwater Horizon Oil Spill and Offshore Drilling, *Deep Water: The Gulf Oil Disaster* and the Future of Offshore Drilling, Report to the President 186–87 (2011).

³ Congressional Research Service, Gulf of Mexico Energy Security Act (GOMESA): Background, Status, and Issues 2 (Jan. 31, 2020).

⁴ Combined Leasing Report. Active leases are leases that have been executed with an effective date that has not been relinquished, expired or terminated. Some active leases have more than one lease block. *Id*.

⁵ GAO, Offshore Oil and Gas Resources: "Updated Regulations Needed to Improve Pipeline Oversight and Decommissioning" 1 (2021), https://www.gao.gov/products/gao-21-293.pdf.

Approximately 8,600 miles of those offshore oil and gas pipelines are active,⁶ over 44 percent (about 3,780 of the 8,600 miles) of active pipelines were installed prior to 2000.⁷



2016 Active Offshore Platforms and Pipelines, Gulf of Mexico, Created by SkyTruth

Offshore oil and gas operations also require numerous transport vessels, storage facilities, and onshore terminals; continuing surveys with seismic air guns; drilling wells; installing pipelines and other structures on and under the seafloor and through coastal wetlands; pumping of oil and gas to the surface; fracking of wells with associated toxic chemicals; and loading and transporting oil, gas, and cargo on ships. All of this activity carries with it incredible risk and the potential for broad impacts for the residents and the wildlife of the Gulf.

Abandoned Infrastructure

Industry drilled around 53,000 wells in the Gulf from 1947 through 2014 and have either temporarily or permanently abandoned 50% or about 26,000 of those wells.⁸ Industry is required to plug wells before decommissioning and abandoning them, but BOEM and the Bureau of Safety and Environmental Enforcement (BSEE) do not regularly monitor the state of the wells. Many abandoned wells leak oil as well as harmful gases, including methane, benzene, nitrogen oxides, and carbon dioxide.⁹

Since the 1960s, BSEE has authorized industry to leave, rather than require removal, of over 97 percent of almost 18,000 miles of inactive pipelines on the seafloor of the Gulf. There are growing concerns about the integrity of these older pipelines as they are more susceptible to damage from

⁹ Torbjørn Vrålstad et al., *Plug & abandonment of offshore wells: Ensuring long-term integrity and cost-efficiency*, 173 J. PET. SCI. & ENG'G 478 (Feb. 2019).

⁶ Id at 5.

⁷ Id at 10.

⁸ GAO, Offshore Oil and Gas Resources: Information on Infrastructure Decommissioning and Federal Financial Risk 6 (2017), https://www.gao.gov/assets/gao-17-642t.pdf.

corrosion, mudslides, and snagging from fishing trawlers, which can result in leakage of oil and gas. 10

Spills and Accidents

Oil and gas operations in the Gulf of Mexico regularly experience accidents and spill oil. Between 2006 and 2015, BSEE recorded 334 oil spills (>1 barrel) from offshore oil platforms causing a total of 10,951 bbl. of oil to enter Gulf waters.¹¹ This total does not include;

- the Deepwater Horizon spill (that released close to 5 million barrels of oil); or
- 2004 Taylor Energy spill (that has leaked 249–697 bbl. of oil a day for over 15 years,¹² the longest recorded oil spill in U.S. history.¹³

This amounts to, on average, at least 37 smaller oil spills annually from platforms in the Gulf, with approximately 1,200 bbl. (or 50,400 gallons) of oil entering the waters of the Gulf and impairing the marine environment. In addition to these spills offshore, the Coast Guard reported nearly 5,000 oil spill events between 2002 and 2015 in state waters from barges and pipelines.¹⁴ And these are only the reported spills— many more go unreported or undetected.

Impacts of oil exposure include behavioral alteration, suppressed growth, reduced immunity to disease and parasites, and histopathological lesions,¹⁵ or even more insidious, lingering effects. Four years after *Deepwater Horizon*, for example, bottlenose dolphins and sea turtles continued to die in record numbers – a die-off attributed to the oil spill.¹⁶ Numerous recent studies have revealed the massive scale and extent of *Deepwater Horizon* spill impacts:

• Abnormalities observed in a sample of over 300 live, oiled sea turtles revealed various metabolic and osmoregulatory abnormalities.¹⁷

¹⁰ AO, Offshore Oil and Gas Resources: "Updated Regulations Needed to Improve Pipeline Oversight and Decommissioning" at 1.

¹¹ ABS Consulting Inc., 2016 Update of Occurrence Rates for Offshore Oil Spills 14, 16 tbl.5 (2016), https://www.bsee.gov/sites/bsee.gov/files/osrr-oil-spill-response-research//1086aa.pdf.

¹² Expert Report of Oscar Pineda-Garcia, Ph.D. at 87, *Taylor Energy Company LLC v. United States*, No. 16-12C (Fed. Cl. Sept. 14, 2018).

¹³ ABS Consulting at 16 tbl 5.

¹⁴ BOEM, *Gulf of Mexico Final Multisale EIS*, at 3-106–3-109 (March 2017). Cited in EJD Recommendations

¹⁵ S.F. Moore & R.L. Dwyer, *Effects of oil on marine organisms: a critical assessment of published data*, 8 WATER RESEARCH 819 (1974); J.M. Neff & J.W. Anderson, *Response of marine animals to petroleum and specific petroleum hydrocarbons* (1981); Douglas A. Holdway, *The acute and chronic effects of wastes associated with offshore oil and gas production on temperate and tropical marine ecological processes*, 44 MARINE POLLUTION BULL. 185 (2002); Joseph R. Geraci & David J. St. Aubin, *Sea mammals and oil: confronting the risks* (2012); Rodrigo Almeda et. al, *Toxicity of dispersant Corexit 9500A and crude oil to marine microzooplankton*, 106 ECOTOXICOLOGY & ENV'T SAFETY 76 (2014).

¹⁶ Christine Dell'Amore, Gulf Oil Spill 'Not Over': Dolphins, Turtles Dying in Record Numbers, NAT'L GEOGRAPHIC (Apr. 9, 2014), https://www.nationalgeographic.com/news/2014/4/140408-gulf-oil-spill- animalsanniversary-science-deepwater-horizon-science/

¹⁷ Nicole Indra Stacy et al., *Clinicopathological findings in sea turtles assessed during the Deepwater Horizon oil spill response*, 33 ENDANGERED SPECIES RSCH. 25 (2017); Jaymie L Reneker et al., NOAA, *Summary of sea turtle strandings, incidental captures and related survey effort in Mississippi during 2017* (2018).

- Skin levels of chromium in Gulf whales were 1.4 times higher than the global average (12.8 ppm vs. 9.3 ppm), and likewise were highest in resident whales.¹⁸
- Nearly 100 percent of the red snapper sampled in the Gulf of Mexico over a six-year period showed evidence of liver damage.¹⁹

Eight years after the oil spill, 11 to 30 percent of the spilled oil—approximately 550,000 to 1.5 million barrels— remained unaccounted for and may have been deposited on the seafloor, coastal beaches, and marshes,²² thereby continuing to threaten marine resources.

Although in the aftermath of the disaster, industry attempted to paint BP as an outlying bad actor, the safety records at BSEE's predecessor, the Mineral Management Service (MMS), did not support that finding. Our research at the time of the BP disaster, revealed that many of the oil companies drilling in the Gulf had poor safety records. There had been 283 safety violations related to off-shore activities for which fines were levied between 2000 and 2010. Chevron and Exxon were in the top ten companies for the number of safety violations and Chevron ranked first in amount of monetary fines paid, with over \$1,244,000 in fines during that period.²⁰

And the potential for catastrophic spills continue to exist, although "near misses" are not always reported in the media. One of the most recent near misses occurred in October 2020 on the Transocean Deepwater Asgard, an ultra-deepwater rig. As hurricane Zeta approached, an oil well being drilled more than a mile below the water's surface experienced a kick — an eruption of oil, gas, or other fluids from deep underground that if not properly controlled can sometimes lead to a blowout. Despite this incident, continuing problems and the impending hurricane, the shore-side offices of the Transocean and Beacon directed the Deepwater Asgard to stay latched to the well and continue operations. Luckily, a disaster was avoided. The worst-case scenario disaster, for the well that the Asgard was drilling was capable of spilling 313,100 barrels of oil per day for 99 days – an oil spill that would have been far greater than the BP disaster.²¹

Impacts from Noise and Vessel Traffic

In addition, energy companies cause environmental and noise pollution through surveying, exploratory drilling, vessel traffic, and other activities undertaken in preparation for resource

¹⁸ John Pierce Wise, Jr. et al., *Concentrations of the genotoxic metals, chromium and nickel, in whales, tar balls, oil slicks, and released oil from the Gulf of Mexico in the immediate aftermath of the Deepwater Horizon oil crisis: is genotoxic metal exposure part of the Deepwater Horizon legacy?*, 48 ENV'T SCI. & TECH. 2997 (2014).

¹⁹ Erin L. Pulster, Susan Fogelson, Brigid E. Carr, Justin Mrowicki, Steven A. Murawski. Hepatobiliary PAHs and prevalence of pathological changes in Red Snapper. *Aquatic Toxicology*, 2021; 230: 105714 DOI: 10.1016/j.aquatox.2020.105714

²⁰ Mineral Management Service, safety and enforcement database, <u>www.mms.gov</u> (2011); currently Bureau of Safety and Environmental Enforcement, https://www.bsee.gov > what-we-do > safety-enforcement.

²¹Sharon Kelly, Exclusive: 2020's Hurricane Zeta Nearly Caused 'Another Deepwater Horizon Catastrophe' in Gulf of Mexico (The near-miss raises questions of corporate management in a battered oil industry, how drillers will handle increasingly volatile hurricanes, and federal oversight of the offshore drilling industry nearly 11 years after the Gulf of Mexico was coated in oil) (April 2021) https://www.desmog.com/2021/04/05/hurricane-zeta-deepwater-horizonasgard-transocean/

extraction. In order to search for oil and gas reserves, operators use loud blasts to survey the underwater geography that send noise miles into the surrounding environment. During exploration and drilling for oil, operators also use explosives to create holes to find minerals and drill test wells, disturbing land and marine ecosystems.²² It is well established that the high-intensity pulses produced by air guns can cause a range of impacts on marine mammals, fish, and other marine life, including broad habitat displacement, disruption of vital behaviors essential to foraging and breeding, loss of biological diversity, and, in some circumstances, injuries and mortalities.²³

Oil and gas production also increases vessel traffic, which increases the risk of collision resulting in oil spills or marine life mortality. For example, ship traffic, vessel strikes, and activity has resulted in mortality of endangered sea turtles and critically endangered Rice's whales.²⁴

Impacts from Air Emissions

Offshore facilities release large quantities of dangerous chemicals that volatilize from crude oil, including benzene, toluene, ethylbenzene, and xylenes. These chemicals also dissolve readily in water and "can have acutely toxic effects."²⁵ Offshore oil and gas activity along with transport operations, refineries and other upstream facilities also result in the emission of harmful volatile organic compounds (VOCs) and other hazardous air pollutants. VOCs also react with nitrogen oxides (NOx) and sunlight to form ozone.²⁶ And, 111 of 410 of Louisiana's top carbon dioxide emitters are OCS platforms, according to Environmental Protection Agency data²⁷.

²² Oil and Petroleum Products Explained, U.S. ENERGY INFO. ADMIN.,

https://www.eia.gov/energyexplained/oil-and-petroleum-products/oil-and-the-environment.php (last visited Mar 11, 2021); Craig Freudenrich & Jonathan Strickland, *How Oil Drilling Works, Locating Oil, HOWSTUFFWORKS*, https://science.howstuffworks.com/environmental/energy/oil-drilling2.htm (last visited Mar. 12, 2021).

²³ See, e.g., Hildebrand, J.A., Impacts of anthropogenic sound, *in* Reynolds, J.E. III, Perrin, W.F., Reeves, R.R., Montgomery, S., and Ragen, T.J. (eds.), *Marine Mammal Research: Conservation beyond Crisis* (2006); Weilgart, L., The impacts of anthropogenic ocean noise on cetaceans and implications for management, *Canadian Journal of Zoology* 85: 1091-1116 (2007).

²⁴ Julia Hazel & Emma Gyuris, Vessel-related mortality of sea turtles in Queensland, Australia, 33 WILDLIFE RSCH. 149 (2006); Kristen M. Hart et al., Marine threats overlap key foraging habitat for two imperiled sea turtle species in the Gulf of Mexico, 5 FRONT. MAR. SCI. 336 (2018); Endangered and Threatened Wildlife and Plants: Notice of 12-Month Finding on a Petition to List the Gulf of Mexico Bryde's Whale as Endangered Under the Endangered Species Act (ESA), 81 Fed Reg. 88639, 88648 (Dec. 8, 2016) (codified at 50 C.F.R. 224).

²⁵ BOEM, Catastrophic Spill Event Analysis: High-Volume, Extended-Duration Oil Spill Resulting from Loss of Well Control on the Gulf Of Mexico Outer Continental Shelf 30 (2017), https://www.boem.gov/Catastrophic-Spill-Event-Analysis.

²⁶ Volatile Organic Compounds, AM. LUNG ASS'N, https://www.lung.org/clean-air/at-home/indoor-air-pollutants/volatile-organic-compounds.

²⁷ Data Extracted from EPA's FLIGHT Tool (<u>http://ghgdata.epa.gov/ghgp</u>)

Coastal Wetland Impacts

Louisiana's remaining coastal wetlands are particularly important in the face of our climate crisis as they provide vital protection to coastal communities from storm surges, as well as providing important wildlife and fish habitat. Sadly, from 1932 to 2010, coastal Louisiana has lost about 1.2 million acres, equating to coastal wetlands disappearing at a rate of about a football field per hour.²⁸ The oil and gas industry admits that it is responsible for at least 36 percent of the total loss of these wetlands, though the Department of the Interior has stated that the industry could be responsible for as much as 56 percent of the loss.²⁹ Industry related causes of wetland loss include oil exploration, site preparation, site access, drilling, production, pipeline installation, spill control and cleanup, and site closure." ³⁰ In addition to direct impacts, construction of canals for drilling, navigation and pipelines permit saltwater to flow into the wetlands, weakening and killing the plants that hold the marsh together.³¹ According to Tyler Priest and Jason P. Theriot, "It is estimated that three miles of wetlands can absorb one foot of storm surge, and the loss of a one-mile strip of wetlands can increase average annual property damage by about \$200,000 per acre of wetland lost."³² Healthy Gulf continues to monitor industry's impacts and advocate against destruction of hundreds of acres of marsh associated with industry's cutting and dredging of hundreds of miles of canals through Louisiana's coastal wetlands to install infrastructure required for export and storage facilities, pipelines, and other associated facilities.

Louisiana, and other Gulf states, are suffering as a result of this continuing land loss and coastal erosion. Communities in Gulf states, such as the tribal community of Isle de Jean Charles in Louisiana, are facing serious decisions about whether to relocate because of severe land loss, sea level rise, and coastal flooding. Scientists say that at current rates, coastal erosion and sea level rise will lead to nearly all of Southeast Louisiana to be underwater by 2100.³³

Upstream Impacts and Environmental Justice Communities

²⁸ In fact, from 1932 to 2010, coastal Louisiana has lost about 1.2 million acres, equating to coastal wetlands disappearing at a rate of about a football field per hour.⁶¹ The oil and gas industry admits that it is responsible for at least 36 percent of the total loss of this area, though the Department of the Interior has stated that the industry could be responsible for as much as 56 percent of the loss.⁶²

²⁹ Id.

³⁰ Jae-Young Ko et al., *Impacts of Oil and Gas Activities on Coastal Wetland Loss in the Mississippi Delta*, 47 OCEAN & COASTAL MGMT. 597, 609 (Jan. 2004), https://www.harte.org/sites/default/files/inline-files/33.pdf.

³¹ John Carey, *Louisiana Wetlands Tattered by Industrial Canals, Not Just River Levees*, SCI. AMERICAN (Dec. 1, 2013), https://www.scientificamerican.com/article/carey-louisiana-wetlands-tattered-by- industrial-canals/.

³² Tyler Priest & Jason P. Theriot, *Who Destroyed the Marsh? Oil Field Canals, Coastal Ecology, and the Debate over Louisiana's Shrinking Wetlands* 77, JAHRBUCH FÜR WIRTSCHAFTSGESCHICHTE / ECONOMIC HISTORY YEARBOOK (2009).

³³ Bob Marshall, *Losing Ground: Southeast Louisiana Is Disappearing, Quickly*, SCI. AMERICAN (Aug. 28, 2014), https://www.scientificamerican.com/article/losing-ground-southeast-louisiana-is-disappearing- quickly/.

The processing, transport, refining, and combustion of fossil fuels extracted offshore generate toxic air and water pollution as well as greenhouse gasses throughout the Gulf Region. A recent Greenpeace report shows that petroleum refineries and petrochemical manufacturing are some of the most polluting industries in the nation.³⁴ In Louisiana, an 85-mile stretch along the Mississippi River, from Baton Rouge to New Orleans, known as "Cancer Alley," is dotted with hundreds of chemical plants that release dangerous and toxic chemicals into the area. The Gulf Coast of Texas is also home to hundreds of facilities, including oil refineries, plastic manufacturing plants, other chemical facilities and liquid natural gas ("LNG") facilities. Currently there are numerous oil and liquefied natural export facilities proposed in both Louisiana and Texas, which will supply resources to foreign, not domestic markets.

Toxic pollution from refineries and petrochemical facilities disproportionately affects environmental justice communities located near these facilities along the Texas and Louisiana Gulf Coast. For example, facilities in "Cancer Alley" have created cancer hotspots in high-risk communities that already suffer from a deluge of environmental burdens. Brazoria County, in Texas, has 40 industrial facilities monitored by the Toxics Release Inventory, which, combined, release over 25 million pounds of land, air, and water pollution annually.³⁵

Lessons Learned

The conclusions I hope you draw from my testimony are twofold: First, the impact of the oil and gas industry in the Western and Central Gulf serve as a cautionary tale for other regions that are being targeted for new oil and gas development. Offshore oil and gas development does not just involve a few relatively benign platforms or rigs outside of the coastal view shed. It brings offshore and onshore pipelines, and other infrastructure, increased boat/barge, truck and/or train traffic, continuous small oil spills and the risk of a catastrophic spill, air and water pollution, and other negative impacts to coastal communities, tourism economies and the environment.

Second, and most important to those of us who live in the Gulf, the coastal communities of the Gulf region have borne a significant burden so that the U.S. could meet its energy needs. It is time that the country repay them by devising a road map for transitioning away from oil and gas development in the region. Although it will be challenging, it is time to begin the transition.

We need to invest in cleaner ways to provide energy, while divesting from oil and gas production and industrial expansion. Advocates for a just transition are cognizant of the fact that currently many Gulf residents are employed in the oil and gas industry. However, the oil and gas industry has already abandoned thousands of local Gulf workers in response to the recent economic crises.³⁶ And, they will continue to lose jobs if, as projected, the demand for oil and gas decline.

³⁴ Greenpeace, *Fossil Fuel Racism: How Phasing out Oil, Gas, and Coal Can Protect Communities* 20 (Apr. 13, 2021) www.greenpeace.org/usa/fossil-fuel-racism.

³⁵ EPA, 2019 TRI Factsheet: County – Brazoria, TX,

https://enviro.epa.gov/triexplorer/tri_factsheet.factsheet?pYear=2019&pstate=TX&pcounty=Brazoria&pP arent=NAT.

³⁶ Matt Egan, *The pandemic made 107,000 oil and gas jobs disappear*. *Most aren't coming back anytime soon*, CNN BUSINESS (Oct. 8, 2020), https://www.cnn.com/2020/10/08/business/oil-gas-jobs/index.html.

Demand for oil and gas is dropping and production has fallen due, in part, to the COVID-19 pandemic, but also because of lower prices and slowing economic growth. Economic indicators show that demand for fossil fuels is waning and investment in oil and gas is no longer in the national interest. The U.S. Energy Information Administration ("EIA") recently determined that U.S. crude oil production fell 8 percent from 12.2 million b/d in 2019 to 11.3 million b/d in 2020—the largest annual decline on record.³⁷ This includes a 13 percent drop in production in the Gulf of Mexico.³⁸ More recently, EIA estimated that U.S. crude oil production will not return to pre-pandemic levels even by the end of 2022,³⁹ and projected that federal offshore oil production will *decrease* over the next few decades, so that by 2050, federal offshore oil production will be just 70 percent of 2019 production levels.⁴⁰

There is growing consensus in the oil industry that the longer-term prospects for U.S. oil production are dim. In a recent survey, the Dallas Federal Reserve Bank found that nearly two-thirds of oil executives polled believe that U.S. oil production has already peaked.⁴¹ All told, as of the beginning of December 2020, Reuters reported that major oil companies had written off \$80 billion in assets based on lower forecasted oil prices.⁴² In short, the writing is on the wall—oil demand will decrease significantly over the coming decades. The current and predicted future state of the oil market, and the urgent need to address climate change, make this the right time to start the transition away from our dependence on oil and gas – ensuring that we are far along the path to achieving our climate commitments.

As a first step toward transition, Congress should consider ending lease sales in the Western and Central Gulf. An end to new leasing as a step in this transition is timely, necessary to avoid continuing investments in offshore infrastructure that it is unlikely to be necessary in 2040, and to support a just and necessary transition for coastal communities to the changing clean energy economy.

Contrary to industry's dire projections, ending lease sales will have little, if any effect, on offshore oil and gas production in the short-term. Industry will not run out of leases anytime

³⁷ U.S. crude oil production fell by 8% in 2020, the largest annual decrease on record, EIA (Mar. 9, 2021), https://www.eia.gov/todayinenergy/detail.php?id=47056.

³⁸ Id.

³⁹ Short-Term Energy Outlook, EIA (Apr. 1, 2021), https://www.eia.gov/outlooks/steo/ ("forecast crude oil production will average 10.9 million b/d in the second quarter of 2021 and increase to almost 11.4 million b/d by the fourth quarter of 2021. We expect U.S. crude oil production will average 11.9 million b/d in 2022."); ⁸³ Camila Domonoske, Oil Demand Has Collapsed, And It Won't Come Back Any Time Soon, NPR (Sept. 15, 2020), https://www.npr.org/2020/09/15/913052498/oil-demand-has-collapsed-and-it-wont- come-back-any-time-soon; see also Mike Lee, Oil demand may not recover until 2022 — report, E&E NEWS (Aug. 26, 2020) https://www.eenews.net/energywire/stories/1063712483/.

⁴⁰ Annual Energy Outlook 2021, tbl.14, EIA, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=14-AEO2021&cases=ref2021&sourcekey=0 (last visited Apr. 8, 2021) (under "Crude Oil," "Production (million barrels per day)," and "Lower 48 Offshore," select "Federal." Under "Crude Oil," "Production (million barrels per day)," and "Alaska," select "Federal Offshore").

⁴¹ Erin Douglas, *Dallas Fed: Most oil executives say U.S. production has peaked*, HOUSTON CHRONICLE (Oct. 1, 2020), https://www.houstonchronicle.com/business/energy/article/Majority-of-oil-and-gas- executives-believe-U-S-15612980.php.

⁴² Ryan Buosso, *Oil majors wipe* \$80 *billion off books as epidemic, energy transition bite*, REUTERS (Dec. 1, 2020), https://uk.reuters.com/article/us-oil-writedowns-graphic/oil-majors-wipe-80-billion-off-books- as-epidemic-energy-transition-bite-idUSKBN28B59L.

soon, and halting new leasing will not affect jobs in the near-intermediate term. The EIA recently reported that the Biden Administration's current pause on leasing will have no effects this year,⁴³ and analysts highlighted that the effects of now new leasing in the Gulf "would take some time to become apparent."⁴⁴ Industry has stockpiled a large number of leases in the Gulf of Mexico.⁴⁵ Approximately 20 percent of existing leases are producing oil or gas.⁴⁶ Even at steady production rates, it would take decades to exhaust the remaining leases.

Moreover, interest in lease sales in the Western and Central Gulf has waned in recent years. Over the last four years, BOEM has held fire sales for offshore leases for all unleased areas in the Gulf of Mexico—over 77 million acres. While the number of bids received, acreage leased, and high bids have fluctuated,⁴⁷ the total number of lease tracts sold has decreased over time. Between 2000 and 2009, BOEM sold an average of 319 lease tracts at each of its sales in the Gulf of Mexico.⁴⁸ Between 2010 and 2019, the average number of lease tracts sold dropped to 157.⁴⁹ With demand for oil falling, and industry's large stockpile of undeveloped leases in the Gulf OCS, there is simply no need for additional lease sales.

Even if you accept industry's pessimistic predictions, production would only decline by about 20–30 percent by 2040 with no new lease sales over that period.⁵⁰ And industry analysis shows that production would not begin to fall below 2018 levels for another decade. ⁵¹ While industry's analysis projects a small decrease in employment relative to today,⁵² those decreases are based on an assumption that there is no planning or policy changes to support a just transition.⁵³ Others

 $https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/oil-\ gas/Lease\% 20 stats\% 20 4-1-21.pdf.$

⁴³ Short-Term Energy Outlook 15–16 EIA (Mar. 2021)

 $https://www.eenews.net/assets/2021/03/11/document_ew_03.pdf administration-on-us-energy.$

⁴⁴ Wood Mackenzie, *Woodmac: Five Effects of a Biden Administration on US Energy*, WOOD MACKENZIE (Nov. 9, 2020), https://www.oedigital.com/news/483040-woodmac-five-effects-of-a-biden- administration-on-us-energy.

⁴⁵ See Erin Douglas, Oil Companies Snag Gulf of Mexico Waters for Offshore Drilling in Last Bid Before Biden Transition, THE TEXAS TRIBUNE (Nov. 18, 2020), https://www.texastribune.org/2020/11/18/gulf- of-mexico-offshore-oil-drilling/.As of April 2021, industry holds 2,283 leases covering 12,142,429 acres in the Gulf of Mexico. See. BOEM, Combined Leasing Report (Apr. 1, 2021),

⁴⁶ Id.

⁴⁷ See generally Philip Haile et al., *Recent U.S. Offshore Oil and Gas Lease Bidding: A Progress Report*, 28 INT'L J. OF INDUS. ORG. 390–396 (Feb. 17, 2010), http://www.econ.yale.edu/~pah29/ijio.pdf.

⁴⁸ BOEM, Table 2. Gulf of Mexico Oil & Gas Lease Offerings,

https://www.boem.gov/sites/default/files/documents/about-

boem/Table%202%20Swiler%20Table%20BOEM19Dec2019Revised.pdf. The average number of tracts sold was calculated by adding tracts leased from 2000 through 2009 and dividing by total sales

⁴⁹ Id.

⁵⁰ EIAP, *The Economic Impacts of the Gulf of Mexico Oil and Natural Gas Industry* 3, (May 2020),

https://www.noia./wp-content/uploads/2020/05/The-Economic-Impacts-of-the-Gulf-of-Mexico-Oil- and-Natural-Gas-Industry-2.pdf.

⁵¹ Id.

⁵² Compare id. at 21 (estimating 60,000 direct and 235,000 indirect jobs from the Gulf in 2020 under the "base case") with id. at 30 (estimating annual average of 56,000 direct and 212,000 indirect jobs by 2040 under the "no leasing case").

⁵³ *Id.* at 13 (recognizing that the considerable "uncertainty around how the proposed policy changes would be developed and implemented" and that the analysis in the report is "subject to significant changes based on the

have reported that an oil leasing moratorium would, in fact, create jobs, from clean energy substitutions.⁵⁴

There is simply no justification to avoid the inevitable transition that faces the economies and communities of the Gulf. To ensure a just transition for all, we must begin now. It is time for the federal government to create a plan for a just transition of Gulf communities away from an economy based on extractive industry by requiring an analysis of the extent of employment changes from phasing out offshore drilling and, and develop a broader transition strategy to keep communities whole. For example, the Department of Interior should plan for training workers to move into clean energy jobs. Additional jobs should be created around decommissioning drilling platforms, addressing abandoned wells and pipelines, and cleaning up or converting other fossil fuel infrastructure. All of these additional jobs will require skill sets held by current workers in fossil fuel-dependent jobs. Additionally, the federal government should immediately begin consulting with all affected communities to harness new opportunities and ensure an equitable transition for all impacted communities.

potential development and implementation of the proposed policy changes by Congress, the executive branch and regulators").

⁵⁴ E.g., Wes Siler, *How Biden's Oil-Lease Moratorium Will Create Jobs*, OUTSIDE MAGAZINE (Jan. 28, 2021), https://www.outsideonline.com/2420587/how-bidens-oil-lease-moratorium-will-create-jobs.