

ISSUE BRIEF

# THE CASE AGAINST NEW OFFSHORE OIL AND GAS LEASING ON THE OUTER CONTINENTAL SHELF

With the current five-year program for federal offshore oil and gas leasing expiring on June 30, the secretary of the interior faces a significant decision about the composition of the upcoming five-year program (2022–2027). Under the Outer Continental Shelf Lands Act, she must prepare and maintain a program that she determines “*will best meet national energy needs.*”<sup>1</sup>

The secretary can best meet the nation’s energy needs by preparing an offshore oil and gas leasing program with no new lease sales. Such a plan is justified because:

- (1) impacts on U.S. oil and gas production would be negligible for at least the next decade (a projected reduction of only 2 percent by 2035), in large part because of the substantial reserves already under lease; and
- (2) demand for fossil fuels is anticipated to significantly decline during that time due to increasing deployment of energy-saving technologies and policies in transportation and other sectors.

New leasing would also do nothing to alleviate current high energy prices, would be inconsistent with the Biden administration’s commitment to cut carbon emissions by at least 50 percent by 2030 and incompatible with a goal of keeping global warming under 1.5 degrees Celsius.<sup>2</sup>



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## ENDING NEW OFFSHORE LEASING WOULD HAVE MINIMAL IMPACTS ON U.S. FOSSIL FUEL PRODUCTION WELL INTO THE 2030S.

Even without new leasing, there is enough oil and gas supply in existing offshore leased areas to continue producing at significant rates into the 2030s and beyond. Offshore activity accounts for 15 percent of total domestic oil production and around 3 percent of total U.S. natural gas production, a sizable but not overwhelming contribution to our current national oil and gas energy needs.<sup>3</sup> Nearly 95 percent of U.S. offshore oil production and 71 percent of offshore natural gas production takes place in the Gulf of Mexico. The Gulf thus provides a fairly comprehensive picture of offshore production from currently leased areas.<sup>4</sup> Of the 414 active

fields there, 384 were producing as of the end of 2019. These leased areas have been estimated to contain 4,652 million barrels of “proved plus probable” oil reserves, and 6,103 billion cubic feet of natural gas reserves for a combined total of 5,740 million barrels of oil equivalent, enough to fuel 215 million cars for a year.<sup>5</sup> In addition to these “proved plus probable” reserves, there are also substantially greater amounts of already discovered oil and gas resources that could become economically viable in these leased areas.<sup>6</sup>

Energy system experts at OnLocation, a leading energy analytics and consulting firm, modeled the effects of no new oil and gas leasing in the Gulf beginning in 2021.<sup>7</sup> They concluded that production would not change until 2027, with a negligible decline after that, compared with a scenario that assumed continued new leasing (the Energy Information Administration Annual Energy Outlook 2021 Reference Case). The analysts projected that, even in 2035, U.S. oil production would be 13.5 million barrels per day without new Gulf leasing, a decline of only 2.3 percent from the continued leasing scenario, as shown in Figure 1.<sup>8</sup>

Analysts at Rystad Energy, a business intelligence and research firm, have conducted studies on the production impacts of a ban on new offshore leasing in the Gulf of Mexico using their own model and reference case and found similar results.<sup>9</sup>

These projected production declines would have a negligible impact on oil prices. There would be no effect on prices until 2030 under the no new leasing scenario. In 2035, projected gasoline prices could be 2 cents per gallon higher than under the continued new leasing scenario, a hike of less

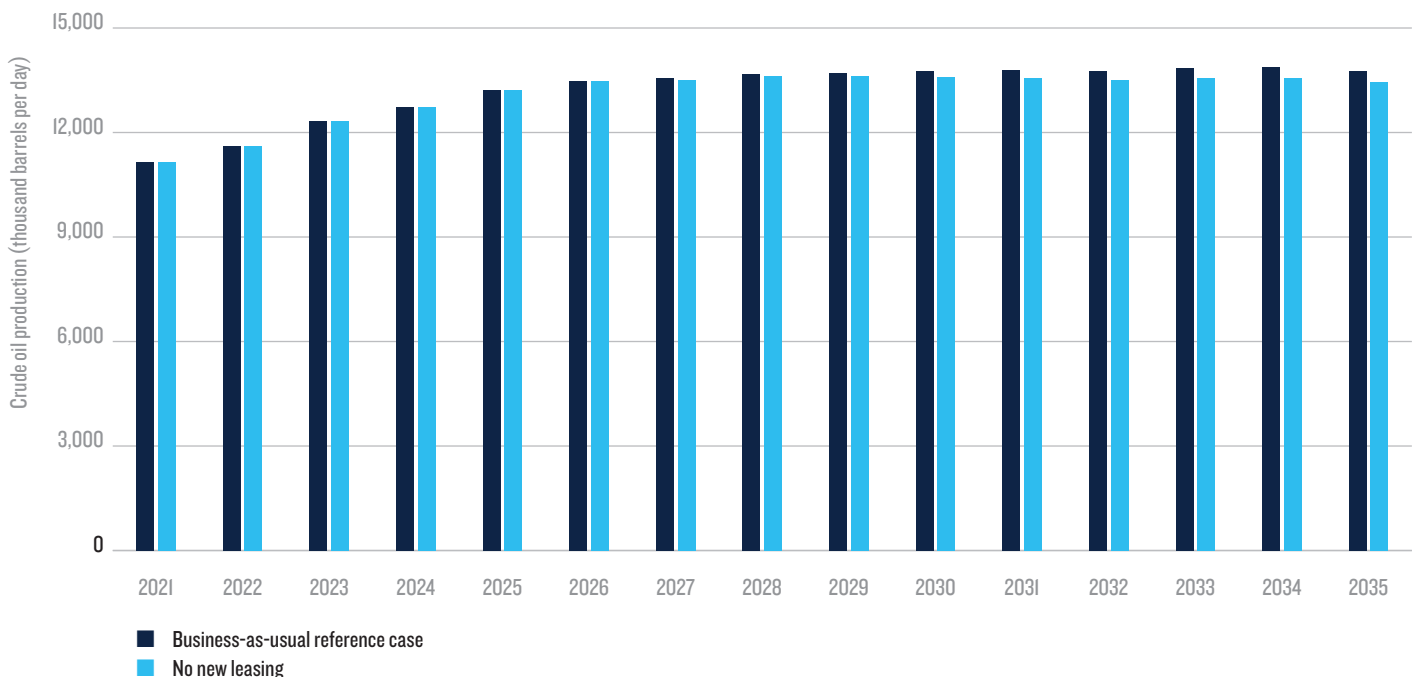
than 1 percent.<sup>10</sup> This assumes moderate demand. If demand is actually lower due to more rapid deployment of cleaner technologies, there may well be no price increase. In all, this analysis reinforces that new offshore leasing will have no effect on current high energy prices. Resources in newly leased areas take about five years to come online. As a result, rather than being part of a short term solution, new leasing will only lock the nation into future decades of pollution and climate warming and hinder the nation’s move into a clean energy future.

### DEMAND FOR FUEL IS DECREASING, IN PART DUE TO STATE AND FEDERAL TRANSPORTATION POLICIES.

Continued industry access to existing leases would leave ample time for the nation to transition to a cleaner energy future that includes renewable energy and more efficient and electric vehicles. This transition is already underway and is expected to accelerate.<sup>11</sup> In fact, a decline in offshore oil and gas production with no new leasing would be more than offset by an anticipated drop in fuel consumption. Rhodium Group, a leading independent energy research firm, forecast the effects of federal and state vehicle and utility sector policies that were on the books as of May 2021. Analysts found that by 2027, demand for transportation fuels (which accounts for about 70 percent of U.S. petroleum consumption) will be 8 to 12 percent below 2019 levels, and that by 2030, demand will be 10 to 15 percent below 2019 levels.<sup>12</sup>

In comparison, the 2030 impact OnLocation projects in a no-new-leasing scenario amounts to only around a 1.3 percent reduction in total U.S. oil production, an amount dwarfed by projected demand reductions.<sup>13</sup>

**FIGURE 1: UNITED STATES CRUDE OIL PRODUCTION UNDER BUSINESS-AS-USUAL OFFSHORE LEASING VERSUS NO OFFSHORE NEW LEASING**



Source: OnLocation, NEMS Analysis of a Moratorium on New Offshore Leasing in the Gulf of Mexico, January 2022.



Additional vehicle policies currently under consideration at the state and federal levels, if implemented, will further decrease oil demand. For example, Rhodium Group analysts looked at the potential demand impact of anticipated future federal policies, such as electric vehicle tax incentives and public charging grants as well as more stringent Environmental Protection Agency (EPA) emissions standards. They found that federal incentives for electric vehicles and charging infrastructure (such as those included in recent legislative proposals) would cut gasoline and diesel demand by about another 4 percent by 2030. A strengthened emissions standard for light-duty vehicles could cut demand by an additional 7 percent.<sup>14</sup>

Policy trends point to an even greater decrease in domestic oil demand beyond the levels anticipated by Rhodium Group. At the national level, President Biden has already set a goal of having zero-emission vehicles (ZEVs) account for 50 percent of all new vehicle sales by 2030, and there is growing support for a more ambitious federal goal of 100 percent ZEV sales by 2035.<sup>15</sup> At the state level, California is leading the way with a commitment to 100 percent ZEV sales by 2035 and its requirement that all new medium- and heavy-duty truck sales be zero-emission by 2045. Other states are expected to follow suit.<sup>16</sup>

## **WE NEED TO SHARPLY CURB OIL PRODUCTION AND CONSUMPTION TO STAY UNDER 1.5 °C OF WARMING.**

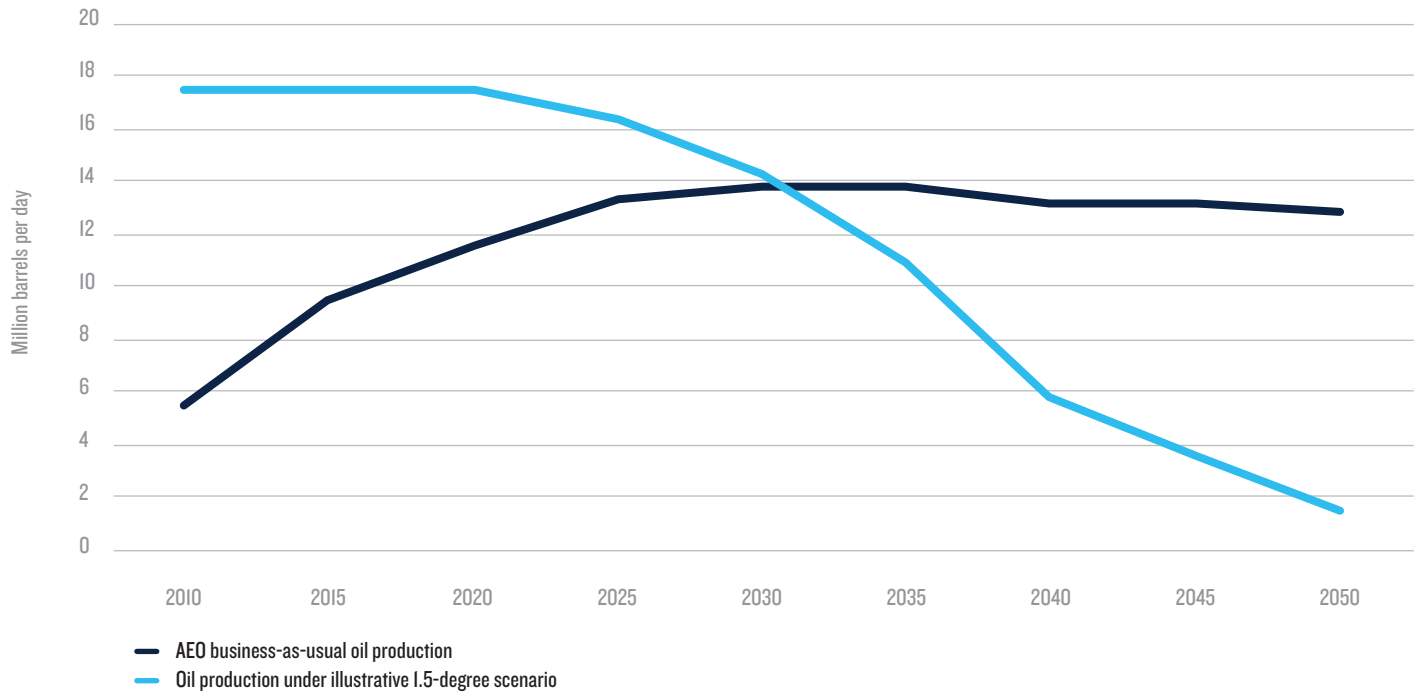
New offshore oil and gas leasing would make it even more challenging to keep global warming below 1.5 degrees Celsius by the end of this century, which is what scientists have determined is necessary to prevent catastrophic climate change impacts.<sup>17</sup> It is a figure the Biden administration has committed (and recommitted) to working toward. Staying below this limit will require quick and aggressive action to reduce global dependency on fossil fuels and invest in new, clean energy technologies and options. A policy of no new offshore oil and gas leasing would do exactly that.<sup>18</sup>

To help stay below the 1.5 °C limit, the Biden administration has committed to a 50 percent reduction in U.S. emissions by 2030 and net-zero emissions by 2050.<sup>19</sup> According to NRDC's models, the United States will need to reduce transportation emissions by 40 percent below 2005 levels by 2030 in order to achieve the 2050 goal.<sup>20</sup> However, as shown in Figure 2, business-as-usual oil production projections are wildly out of step with meeting these climate commitments and much steeper oil production declines will be necessary to achieve this goal.<sup>21</sup>

If the administration is serious about being a leader on climate action, meeting its international agreement obligations, and accelerating the transition to a clean energy economy, it should not schedule new offshore oil and gas lease sales in the next five-year OCS leasing program.



**FIGURE 2: HOW BUSINESS-AS-USUAL FOSSIL FUEL PRODUCTION IS INCONSISTENT WITH CLIMATE ACTION**



Source: Rachel Fakhry and Starla Yeh, “The Biden Administration Must Swiftly Commit to Cutting Climate Pollution at Least 50 Percent by 2030,” NRDC, March 2021, <https://www.nrdc.org/sites/default/files/2030-biden-climate-pollution-ib.pdf> and EIA, Annual Energy Outlook 2021, Appendix D, “Crude Oil Production,” February 3, 2021, <https://www.eia.gov/outlooks/aeo/pdf/appd.pdf>.<sup>22</sup>

## CONCLUSION

The secretary of the interior should propose no new leasing in the upcoming five-year program for offshore oil and gas leasing. Given the substantial reserves already under lease, stopping new leasing would have minimal projected impacts on U.S. fossil fuel production through at least 2035. These negligible impacts will be more than made up by the country’s anticipated energy conservation gains. Indeed, just the federal and state-level efficiency policies that are currently

in place will produce energy savings that dwarf the projected production reduction from no new leasing.

To meet our climate commitments, the United States must significantly reduce its current level of fossil fuel exploitation and not develop fossil fuel reserves in new areas. The secretary of the interior should use her discretion to propose a step in the right direction: no new offshore leasing.

ENDNOTES

- 1 43 U.S.C. § 1344(a).
- 2 White House, “President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies,” fact sheet, April 22, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.
- 3 U.S. Energy Information Administration (hereinafter EIA), “Energy Data, U.S. Petroleum and Other Liquids Facts for 2020,” accessed October 15, 2021, [https://www.eia.gov/special/gulf\\_of\\_mexico/data.php#petroleum\\_fuel\\_facts](https://www.eia.gov/special/gulf_of_mexico/data.php#petroleum_fuel_facts). EIA, “Natural Gas Explained,” October 8, 2021, <https://www.eia.gov/energyexplained/natural-gas/where-our-natural-gas-comes-from.php>. The 3 percent of U.S. natural gas production occurring offshore is measured as dry natural gas. EIA, “Natural Gas Summary,” accessed October 15, 2021, [https://www.eia.gov/dnav/ng/ng\\_sum\\_lsum\\_a\\_EPG0\\_FPD\\_mmcf\\_a.htm](https://www.eia.gov/dnav/ng/ng_sum_lsum_a_EPG0_FPD_mmcf_a.htm).
- 4 EIA, *Annual Energy Outlook 2021*, Table 58: “Lower 48 Crude Oil Production and Wellhead Prices by Supply Region,” February 3, 2021, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=71-AEO2021&region=0-0&cases=ref2021&start=2019&end=2050&f=A&linechart=ref2021-d113020a.4-71-AEO2021&map=&sourcekey=0>. EIA, *Annual Energy Outlook 2021*, Appendix D, “Crude Oil Production,” February 3, 2021, <https://www.eia.gov/outlooks/aeo/pdf/appd.pdf>. EIA, “Natural Gas Explained.”
- 5 Grant L. Burgess, Kellie K. Cross, and Eric G. Kazanis, *Outer Continental Shelf: Estimated Oil and Gas Reserves Gulf of Mexico OCS Region, December 31, 2019*, Bureau of Ocean Energy Management (hereinafter BOEM), Table 1, September 2021, <https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/2019-EOGR.pdf>. In this report, reserves are proved plus probable (2P) reserve estimates. BOEM defines *reserves* as “those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. *Reserves* must further satisfy four criteria: They must be discovered, recoverable, commercial, and remaining (as of a given evaluation date) based on the development project(s) applied.” BOEM, “Classification and Methodology for Reserves Calculations,” accessed September 15, 2021, <https://www.boem.gov/oil-gas-energy/resource-evaluation/classification-and-methodology-reserves-calculations>. Adam Hayes, “Barrel of Oil Equivalent,” Investopedia, updated May 20, 2021, <https://www.investopedia.com/terms/b/barrelofoilequivalent.asp>. U.S. Environmental Protection Agency, “Greenhouse Gas Emissions From a Typical Passenger Vehicle,” 2018, <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100U8YT.pdf>.
- 6 Burgess, Cross, and Kazanis, *Outer Continental Shelf*, Appendix A. This refers to discovered and contingent resources, which BOEM defines as an accumulation of hydrocarbons that has been discovered but is not yet producing and may be commercially viable only under certain scenarios.
- 7 OnLocation, *NEMS Analysis of a Moratorium on New Offshore Leasing in the Gulf of Mexico*, January 2022.
- 8 Ibid.
- 9 *Offshore*, “Biden Administration Suspends Federal Oil and Gas Leasing,” January 27, 2021, <https://www.offshore-mag.com/regional-reports/us-gulf-of-mexico/article/14196352/biden-administration-suspends-federal-oil-and-gas-leasing>. Rystad projected a production decline of 200,000 barrels of oil per day by 2030, an approximately 1.5 percent decline from base case projections.
- 10 OnLocation, *NEMS Analysis*.
- 11 International Energy Agency (hereinafter IEA), “Global EV Outlook 2021: Trends and Developments in Electric Vehicle Markets,” 2021, accessed December 16, 2021, <https://www.iea.org/reports/global-ev-outlook-2021/trends-and-developments-in-electric-vehicle-markets>. U.S. Department of Energy (hereinafter DOE), “Clean Energy,” <https://www.energy.gov/clean-energy>.
- 12 DOE Office of Energy Efficiency & Renewable Energy, “The Transportation Sector Consumes More Petroleum Than All Other Sectors Combined,” FOTW #1094, August 12, 2019, <https://www.energy.gov/eere/vehicles/articles/fotw-1094-august-12-2019-transportation-sector-consumes-more-petroleum-all>. Transportation demand projections shared with NRDC by Rhodium Group were used for the emissions numbers. Hannah Pitt et al., *Taking Stock 2021: US Emissions Outlook Under Current Policy*, Rhodium Group, July 15, 2021, <https://rhg.com/research/taking-stock-2021/>. The EIA *Annual Energy Outlook 2021* also shows a decline in gasoline demand through 2030. EIA, *Annual Energy Outlook 2021*, Table 2: “Energy Consumption by Sector and Source,” February 3, 2021, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=2-AEO2021&cases=ref2021&sourcekey=0>. However, since it models only the effects of policy on the books as of September 2020, it does not incorporate some more recent policy that Rhodium does (for example, California’s Advanced Clean Truck regulation). Thus, EIA’s transportation fuel projections show more gradual demand declines than Rhodium’s analysis. EIA, *Summary of Legislation and Regulations Included in the Annual Energy Outlook 2021*, February 2021, <https://www.eia.gov/outlooks/aeo/assumptions/pdf/summary.pdf>. EIA and Rhodium projections also differ because EIA assumes higher EV costs than Rhodium. Pitt et al., *Taking Stock 2021*, Technical Appendix, <https://rhg.com/wp-content/uploads/2021/07/Taking-Stock-2021-Technical-Appendix.pdf>. Also, EIA is usually more conservative in its assumptions on emerging technologies that may reduce fuel consumption. According to an EIA review comparing its projections with realized energy use, EIA overestimated transportation energy use in 77.6 percent of its projections between 1994 and 2019. EIA, *Annual Energy Outlook Retrospective Review*, December 29, 2020, (<https://www.eia.gov/outlooks/aeo/retrospective/>).
- 13 OnLocation, *NEMS Analysis*.
- 14 John Larsen et al., “Pathways to Build Back Better: Investing in Transportation Decarbonization,” Rhodium Group, May 13, 2021, <https://rhg.com/research/build-back-better-transportation/pathways-to-build-back-better-investing-in-transportation-decarbonization/>.
- 15 White House, “President Biden Announces Steps to Drive American Leadership Forward on Clean Cars and Trucks,” fact sheet, August 5, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/08/05/fact-sheet-president-biden-announces-steps-to-drive-american-leadership-forward-on-clean-cars-and-trucks/>. Governor Gavin Newsom et al., “Multi-State Governors ZEV Letter” to President Biden, April 2021, <https://www.gov.ca.gov/wp-content/uploads/2021/04/4.21.21-Multi-State-Governors-ZEV-Letter.pdf>.
- 16 In July 2020, a coalition comprising California, 14 other states, and Washington, D.C., signed a memorandum of understanding committing to accelerate the adoption of zero-emissions technology, with a target of 100 percent zero-emissions new medium- and heavy-duty truck sales by 2050. California Air Resources Board, “15 States and the District of Columbia Join Forces to Accelerate Bus and Truck Electrification,” July 14, 2020, <https://ww2.arb.ca.gov/news/15-states-and-district-columbia-join-forces-accelerate-bus-and-truck-electrification>. California subsequently announced a 100% ZEV sales by 2035 target. Office of Governor Gavin Newsom, “Governor Newsom Announces California Will Phase Out Gasoline-Powered Cars & Drastically Reduce Demand for Fossil Fuel in California’s Fight Against Climate Change,” September 23, 2020, <https://www.gov.ca.gov/2020/09/23/governor-newsom-announces-california-will-phase-out-gasoline-powered-cars-drastically-reduce-demand-for-fossil-fuel-in-californias-fight-against-climate-change/>.
- 17 Stéphanie Bouckaert et al., *Net Zero by 2050: A Roadmap for the Global Energy Sector*, IEA, 2021, <https://www.iea.org/reports/net-zero-by-2050>. IPCC, “Summary for Policymakers,” in *Global Warming of 1.5 °C: An IPCC Special Report on the Impacts of Global Warming of 1.5 °C Above Pre-industrial Levels*, V. Masson-Delmotte et al., eds., 2018, <https://www.ipcc.ch/sr15/chapter/spm/>.
- 18 OnLocation, *NEMS Analysis*.
- 19 White House, “President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target.”
- 20 Rachel Fakhry and Starla Yeh, “The Biden Administration Must Swiftly Commit to Cutting Climate Pollution at Least 50 Percent by 2030,” NRDC, March 2021, <https://www.nrdc.org/sites/default/files/2030-biden-climate-pollution-ib.pdf>.
- 21 EIA, *Annual Energy Outlook 2021*, Appendix D and Fakhry and Yeh, “The Biden Administration Must Swiftly Commit.”
- 22 Fakhry and Yeh, “The Biden Administration Must Swiftly Commit.”