

# Biden Climate Push Means Fossil Fuel Cos. Must Innovate

By **Stephen Boone, Cynthia Mabry and Stacey Mitchell** (September 15, 2021)

The Biden administration's governmentwide approach to addressing climate change throughout all industries puts an unprecedented degree of pressure on traditional energy sources to prioritize innovation in order to sustain long-term viability. This administration has brought an expected, but unprecedented, focus on climate change and the transition to a lower-emission future.

The oil, gas and coal sectors need to navigate this uncertain regulatory landscape with a flexible, yet strategic, approach. Prudent companies will embrace funding opportunities and partnerships focusing on new clean energy and low-emission technologies that use fewer resources, predict and minimize environmental impacts and incorporate renewable energy, all while satisfying increasing energy demands.

In April, the administration held the Leaders' Summit on Climate — a two-day gathering of heads of state and representatives from international organizations, businesses, subnational governments and indigenous communities — to discuss the need for the U.S. and other nations to fund and support energy innovation to decrease the extraction and consumption of fossil fuels.

Climate Envoy John Kerry, Secretary of Energy Jennifer Granholm and others on the U.S. side identified a number of specific technologies during the summit and its leadup, such as renewable hydrogen; carbon capture, utilization and storage, or CCUS; batteries; low-carbon industrial fuels; and offshore wind.

However, the leaders largely refrained from offering concrete plans and proposals. Instead, most participants pledged to flesh out specifics and bring them to the U.N.'s COP26 climate change conference in Glasgow, Scotland, this November.

Then, in June, President Joe Biden and the other leaders of the G-7 nations — Canada, France, Germany, Italy, Japan and the U.K. — reaffirmed the promises their countries made under the Paris Agreement. More specifically, the leaders pledged to cut greenhouse gas emissions in half and "overwhelmingly decarbonize" their power systems by 2030; conserve or protect at least 30% of land and oceans by 2030; and stop funding international coal projects that lack CCUS technology.

While the G-7 nations identified plans to provide funding to hasten the shift from fossil-based energy sources toward renewables in most key sectors — including the power, transportation, industry, construction, agriculture and forestry sectors — they did not commit to phasing out the use of oil, gas or coal by any date, or at all.

In this article, we assess the short- and medium-term future of fossil fuels in the U.S. in the wake of the Leaders' Summit on Climate and the G-7 meeting, and discuss the federal energy innovation landscape we can expect to see over the next several years.



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## **Current State of Play**

The overarching takeaway from the meetings earlier this year is that developed nations across the world continue to make comments evincing resolute commitments to transition further away from fossil fuels — with a particular focus on coal.

In April, U.N. Secretary General António Guterres called for developed countries to phase out coal by 2030, and for others to phase it out by 2040. And South Korean President Moon Jae-in said his country would end public financing for overseas coal power plants.

In late June, the U.K. expedited its deadline for phasing out coal-generated electricity in Great Britain to October 2024. And though China's coal power generation is increasing, President Xi Jinping said China was committed to begin decreasing its coal consumption by 2025.

Domestically, recent Biden administration decisions — such as the U.S. Environmental Protection Agency's decision to maintain the Trump administration's revisions to the coal combustions residuals rule, and the Bureau of Land Management's decision to reduce royalty rates for over 16 million tons of coal in Gunnison County, Colorado — signal that domestic coal production may persist for the next several years.

Still, as discussed in greater detail below, this administration is poised to attempt to use federal policy to speed up the eventual retirements of the remaining 200 coal-fired electric utility plants. In an attempt to recover some value from retiring units, many utilities and merchant coal plants are converting them to natural gas, to easily plug into existing transmission infrastructure. There also will continue to be a market for metallurgical coal as an input for steel production, both domestically and abroad, particularly in Europe.

Oil and natural gas, meanwhile, will certainly continue to play a significant role in the U.S. energy mix through at least the near term, subject to certain constraints — and potentially longer, particularly beyond the domestic U.S. market. The industry's current and projected implementation of various solutions to lower emissions and boost efficiencies, along with the improving investor sentiment associated therewith, will likely sustain the role of oil and gas further still.

For example, a recent study by the Columbia University Center on Global Energy Policy and the University of California, Davis Institute of Transportation Studies, found that certain "aspects of the COVID experience" actually increased oil consumption, leading to a projected increase in global oil demand through 2030 in three of the report's four projected scenarios, which generally aligns with forecasts from the International Energy Agency and others.

Inevitably, however, the role of oil and gas in the global market will contract. Renewables are becoming cheaper, more proven and more prevalent, and increasing shares of developed markets are moving toward lower-emission technologies — e.g., electric vehicles, urban transportation systems, buildings and appliances.

Thus, the sustained future of oil and gas, particularly as to natural gas-fired power plants, remains to be seen, as nations grapple with the meaningful and committed push to decarbonize our planet — while remaining mindful of the cost, environmental impact, speed of implementation and ability to scale up alternative renewable technologies to power a world needing more energy every day.

One silver lining to Biden's plans for the oil and gas sector is an immediate investment of \$16 billion to plug abandoned oil and gas wells and clean up old mines by way of his massive infrastructure plan. The primary focus of the investment is job creation — but plugging wells using federal dollars would, of course, help the bottom lines of upstream companies.

## **Regulation and Other Constraints on the Horizon**

### ***Interior Department***

In one of the Biden administration's most consequential moves upon taking office, the U.S. Department of the Interior imposed a temporary moratorium on new oil and gas leases on federal lands and offshore, citing the need for a comprehensive review of the program to assess its climate change impacts.

Following a barrage of lawsuits brought by states and industry, the U.S. District Court for the Western District of Louisiana issued a preliminary injunction in June that prevents the DOI from implementing the moratorium while litigation continues. In response, the department issued a statement announcing the resumption of on- and offshore leasing, but confirming that it is appealing the preliminary injunction to the U.S. Court of Appeals for the Fifth Circuit.

Through the statement, the DOI asserted its perceived concerns with the federal leasing program, claiming contributions to "significant greenhouse gas emissions and growing climate and community impacts," as well as other environmental and social harms. Finally, the department reiterated its plans to conduct a programmatic analysis of the federal leasing program while it continues "to exercise the authority and discretion provided under the law to conduct leasing in a manner that takes into account the program's many deficiencies."

The statement signals a potentially drastic reduction in the number of new lease sales and issuances under the Biden administration, as well as increased royalty rates and reformed lease terms that take into account the broader climate impacts of oil and gas production, and an updated view on the DOI's stewardship responsibilities.

With respect to coal production, Interior Secretary Deb Haaland issued an order in April signaling the agency's possible intention to formally reinstate a moratorium on new coal leases on federal lands. The DOI followed through on that order in August with a formal notice of intent to review the federal coal leasing program.

The department has not approved the sale of a new coal lease since the Biden administration took office. The notice points to more of the same in the near future, along with potentially increased royalty rates over a longer horizon.

The notice of intent also signals a heightened focus on climate, socioeconomic, cultural, trade and tribal considerations, all of which may influence the future of coal leasing under the Biden-Harris administration.

### ***EPA***

The EPA also plays an integral role in implementing the Biden administration's climate plans. Among other regulatory proposals currently in progress, the agency plans to propose new regulations setting standards for existing oil and gas operations that cover virtually all of the

sector's segments.

A recent Methane Detection Technology Workshop signals some of the technological advancements upon which those standards — which we expect to be more stringent than existing standards — will be based. These include satellite detection of emissions, the use of aerial and visual tools, sensors and monitors, and leak simulation technology.

### ***Taxation***

Also looming is Biden's plan to replace subsidies for fossil fuel companies with incentives for production of clean energy, as a way to pay for his infrastructure plan. The Made in America Tax Plan did not specify which tax breaks for fossil fuel companies would be targeted.

Intangible drilling costs, which allow producers to deduct most costs from drilling new wells, could be on the chopping block. According to the Joint Committee on Taxation, a nonpartisan congressional panel, eliminating the deduction could generate \$13 billion in additional tax revenue from the industry over 10 years.

### ***Enforcement***

Finally, the industry can expect heightened enforcement during the Biden administration's tenure. Early on, Biden made environmental justice a cornerstone of his environmental agenda, promising to "strengthen ... environmental justice monitoring and enforcement." Given the link some scholars have articulated between oil and gas operations and environmental justice concerns, expect the EPA to focus on these areas.

The industry also should expect increased enforcement and regulatory involvement more broadly, as evidenced by a recent report from the agency's Office of Inspector General that recommended bolstered enforcement of synthetic-minor-source air permits, and a recent guidance document promising enforcement of a number of Clean Air Act rules applicable to the industry — including, most notably, the Obama-era methane rule that Congress recently reinstated through the Congressional Review Act.

### ***Congressional Action***

All of these developments come against the backdrop of increased legislative pressure. Congressional Democrats' pending infrastructure and reconciliation packages are likely to include provisions targeting traditional energy sources. For instance, while a carbon tax currently is not in the works, some Democrats have proposed a fee on methane emissions.

At the same time, environmental groups have focused on reforms to the federal oil and gas leasing policy, urging Congress to impose and enforce conditions and cleanup requirements to apply to new fossil fuel extraction, including updating bonding standards; to reform the leasing, bidding, rent and royalty systems; and to terminate lease issuances on lands with little potential for oil and gas development.

### ***Innovation Opportunities***

It is no surprise that the path forward for traditional energy companies is through continuous innovation and strategic planning. Investor pressure and public perception has been, and will continue to be, an increasing driver, particularly for public producers, to further innovate and implement business strategies that demonstrate a commitment to being part of the global decarbonization effort.

Further, political leaders in the U.S. and worldwide are eyeing a number of policies to spur technological progress, in order to increase output and efficiency while minimizing emissions. During the Leader's Summit on Climate and the G-7 meeting, the U.S. announced several initiatives intended to support these efforts — including plans to set performance targets and collaborate with research institutions and industry to manufacture net-zero carbon technologies.

Perhaps recognizing the nature of the challenge at hand, the administration characterized its efforts as "moonshot-style ventures" intended to produce "game-changing breakthroughs." Real progress in the clean energy space will require time and money — and lots of it.

The U.S. plans to "quadruple clean energy innovation funding" during Biden's first term in office, much of which will go toward carbon dioxide removal and emissions-reducing advancements in international shipping, agriculture, food systems, energy-intensive industrial sectors and the power system. The Biden administration also envisions that nuclear energy will play a larger role, through the expanded use of small modular reactors.

Domestically, the U.S. Department of Energy will play a vital role in achieving these goals by funding relatively new — and, in some cases, untested — technology. The DOE's primary focus areas for innovation include hydrogen, carbon capture, industrial fuels and energy storage.

Granholm and others in the administration see hydrogen as playing perhaps the largest role of those four technologies, and so hope to make renewable hydrogen energy more viable by lowering its price 80% by 2030. While hydrogen costs already are dropping, expect to see federal policies that accelerate this shift, and that replace "blue" hydrogen sourced from natural gas with "green" hydrogen produced by renewable energy sources — a goal of the DOE's Hydrogen Shot initiative.

Another area in which the DOE is expected to lead, with some bipartisan support, is growth in effective CCUS. This technology actually might make blue hydrogen more attractive, thus impacting the administration's green hydrogen goals. Regardless, effective CCUS would pair nicely with other technologies to meet clean energy goals.

As with hydrogen, the main obstacle for CCUS is cost, so the DOE will likely increase funding for both atmospheric carbon capture projects and carbon capture at industrial sites. Similarly, expect to see more support for energy storage projects — even for fossil-based energy sources — as the administration has set a goal of cutting battery prices and reducing reliance on critical materials facing supply shortages.

Beyond technological advances, many fossil fuel companies will look for creative ways to partner with renewable energy sources as a means of not just lowering emissions, but also diversifying into what will be a profit driver for years to come. In addition to supporting conventional solar and wind farms, the Biden administration claims it is ready to "rock and roll" on offshore wind, planning to deploy 30 gigawatts of offshore wind energy by 2030.

Those not ready to take the plunge might look onshore for opportunities to colocate solar generation facilities at existing plants, cofire natural gas or explore opportunities to harvest geothermal power.

Others will employ consolidation strategies to capitalize on synergies with forward-thinking

firms in both the traditional and renewable energy spaces, and build more streamlined, integrated business models. And any company, no matter the size, can purchase high-quality offsets as a low-risk way to demonstrate climate commitments to stakeholders.

The coal-fired electric utility sector will need to embrace all available options, with a particular focus on CCUS and other new technologies that minimize emissions. Oil and gas companies cannot overlook innovation, but do have the benefit of more time to consider capitalizing on market trends as technology becomes cheaper over the next decade. The oil and gas sector can pivot the deployment of its significant technical expertise toward decarbonization.

Still, prudent operators throughout the energy industry will continue to look internally for operational improvements and improved technologies that will reduce environmental impacts and global emissions, such as through decreased water usage and methane leakage, including innovative methods to detect and prevent leaks before they occur; used oil recycling; the use of renewables to power drilling operations; carbon capture and removal technologies; digital optimization; and advanced energy technology systems.

Those who take the lead in developing and employing innovative technologies will be best poised to thrive deeper into, and beyond, the energy transition. And companies that lead may have the opportunity to export their technology abroad, whether by incorporating technological advances into existing foreign operations, or by licensing new technology to firms that are further behind in their sustainability journeys, to yet further reduce global emissions, particularly in developing countries.

## **Conclusion**

With the U.S. back on the international climate stage, the race is on toward COP26. The Biden administration promises to arrive at the conference ready to announce more plans that support climate innovation.

The administration also will continue to pursue international collaborations in the coming months, including the Global Power System Transformation Consortium, the U.S.-India Climate and Clean Energy Agenda 2030 Partnership, the Renewable Energy for Latin America and the Caribbean Initiative, and the Net-Zero Producers Forum with Canada, Norway, Qatar and Saudi Arabia, to name a few.

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