

# Economic Effects of Pausing Oil and Gas Leasing on Federal Lands



# Executive Summary

**A**fter President Biden issued a temporary pause in federal oil and gas leasing in January, industry representatives and their trade groups declared that the sky was falling and that their workers and the economy were doomed. That dire claim—repeated in scores of news articles—is false. In this report, we present economic research on a federal oil and gas leasing pause from section (208) of the Executive Order on Tackling the Climate Crisis at Home and Abroad, focusing on the onshore portion of the federal oil and gas program. We examine changes in industry output and employment that may occur from a federal leasing pause, looking at national and regional economic impacts.

For regional economic impacts, we focus on five Intermountain West states that dominate federal production of onshore oil and gas (Colorado, Montana, New Mexico, Utah, and Wyoming). We detail the stockpiled leases and permits in these states and estimate years of future drilling opportunities based on current stockpiled non-producing acres that are available for development. We also provide an overview of national benefits and costs of the leasing pause along with a longer-term economic perspective on how rural Western communities and the U.S. Department of Interior (DOI) can facilitate an economic and energy transition that supports broader economic diversification, with a focus on benefitting workers and communities dependent on oil and gas activity.

Upon a thorough economic investigation of a pause in federal oil and gas leasing, **we have found national economic impacts to be negligible**, as federal domestic production of oil and gas, and associated employment, will not be materially affected by a federal leasing pause in the short-term (i.e., lasting up to one year). **Nationally**, we find that:

- Federal onshore oil and gas production constitutes a minor component of total domestic production—6% and 8%, respectively. Notably, a

federal leasing pause does not curtail drilling or production on federal lands, nor does it have any effect on Tribal, state, or private leasing.

- There is no correlation between federally leased acres and oil and gas employment.
- Onshore federal oil and gas leases issued have been steadily declining for the last 20 years, under different Administrations, indicating declining economic demand for federal leases and that remaining unleased public lands are less desirable for oil and gas development.
- There are greater than 14 million acres of non-producing leases on federal lands, or more than 50% of all onshore leased federal land. Assuming productivity similar to producing federal leases and accounting for lease expirations, non-producing leases can theoretically support 75 years of future drilling opportunities on all U.S. federal lands.
- If a federal leasing pause is extended and federal production eventually becomes constrained, we anticipate that a portion of regional oil and gas investments will be shifted to private and state lands.

**For regional economic effects in the Intermountain West, we have found impacts to be minimal in the short-term**, as the most resource reliant states have ample stockpiles of leases and permits to easily continue the status quo in terms of new drilling on federal lands. **Regionally**, we find that:



- Only 15 out of 205 Intermountain West counties had greater than 100 federal oil and gas lease sales from 2016-2020. More than half these counties (9) were in Wyoming.
- The bulk of federal onshore oil and gas production happens in five Intermountain West states: Colorado, Montana, New Mexico, Utah, and Wyoming; 86% of federal onshore oil and 95% of federal onshore natural gas was produced in these five states during 2019.
- Oil and gas producers located in Wyoming are the most dependent on federal oil and gas resources; during 2019 nearly 50% of all oil and more than 80% of all gas produced in Wyoming was extracted from federal lands.
- However, Wyoming has ample stockpiled non-producing acres and permits and an estimated 67 years of drilling opportunities on federal lands, at historical levels of regional oil and gas development, facilitated by this stockpile.
- Oil and gas producers located in New Mexico are also substantially dependent on federal oil and gas resources; between 50 and 55% of both oil and gas produced during 2019 was from federal lands, although the federal lands share of leasing is decreasing.
- New Mexico has fewer non-producing acres than all other Intermountain West states, but has stockpiled numerous recent leases, permits, and lease acreage, resulting in at least 11 years of drilling opportunities on federal lands at historical levels of regional oil and gas development.

In terms of national economic efficiency analysis and cost-benefit analysis, we found that the benefits of a federal leasing pause outweigh the costs by at least a ratio of 40:1. Our **economic efficiency analysis** finds that:



Photo: Wild Earth Guardians

- Benefits of a federal leasing pause include conservation opportunities, data collection opportunities, a window for reforming federal oil and gas policies, and catalyzing a national course correction on energy production.
- A federal leasing pause of up to one year, would save approximately 1.4 million acres of public lands from being leased and developed for oil and gas extraction (likely even after leasing resumes), resulting in substantial public conservation values that could be collected by the federal government. The resulting improvement in societal welfare, or public willingness-to-pay for conservation, if 1.4 million acres of public lands remained un-leased for oil and gas in the future, is estimated to be at least \$3 billion using benefit transfer methods.
- The costs of a federal leasing pause are represented, almost exclusively, by presumed lost lease sale revenue.

- If we assume a similar amount of total receipts from competitive federal oil and gas sales as generated in FY 2020, a total of \$78 million may be lost in the first year of a federal leasing pause. This represents a tiny fraction of the benefits that could accrue if federal lands that would have otherwise been leased for oil and gas, without the leasing pause, were instead protected from extractive development (\$3 billion).

Taking a long-term perspective, **we find evidence of previous rural economic restructuring and multiple future transition opportunities** for rural regions with large portions of federal lands. Specifically, we find that:

- Most rural areas in the Intermountain West have already undergone economic restructuring from extractive industries and primary manufacturing to service-oriented economies over the last 40 years, with no leasing pause in place.
- In the rural West, oil and gas dependent counties were negatively associated with migration rates from 1980-2010 while counties with public lands with greater protection were positively associated with greater migration rates. Conservation attracts people and businesses; intensive oil and gas development repels people and businesses over the long run.
- Less than 2.5% of all employment in the five Intermountain West states comes from mining (as defined by the Bureau of Labor Statistics), which includes oil and gas sectors. On the other hand, over 50% of all employment in these states comes from service industries.
- The COVID-19 pandemic has intensified the shift from primary extraction and manufacturing to service industries and amenity development in the rural West.

- Energy sector-specific transition jobs would help dampen any future job displacement from future limitations on oil and gas development. Jobs that focus on cleaning legacy and existing wells, by incorporating comparable skills as those found in oil and gas work, will represent win-win scenarios.
- A stimulus program to plug the approximately 2.3 million unplugged abandoned oil and gas wells in the U.S. could produce between 55,000 and 85,000 direct annual jobs for ten years in duration and would result in the elimination of 251,749 metric tons of annual methane emissions.
- Reducing methane waste from existing oil and gas production facilities, through Leak Detection and Repair (LDAR) and limiting venting and flaring, offers additional opportunities for creating jobs, reducing emissions, and limiting waste of public resources.
- Finally, responsibly siting renewable energy projects on and near federal lands can offer clean energy production and good-paying jobs in affected regions, as most oil and gas dependent regions are good candidates for wind and solar energy production.

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**Our Mission is ... To apply economics to the sustainable management of our natural resources, the development of healthy communities, and the conservation of nature.**