

August 2024

FEDERAL LAND LEASING, ENERGY, AND LOCAL PUBLIC FINANCES



CLIMATE ACTION ACCELERATOR

Salata Institute for Climate and Sustainability
Harvard University



CLIMATE ACTION ACCELERATOR

Salata Institute for Climate and Sustainability
Harvard University

FEDERAL LAND LEASING, ENERGY, AND LOCAL PUBLIC FINANCES

August 2024

Ana Martinez

Pre-Doctoral Research Fellow

Dustin Tingley

Professor of Government

Thomas D. Cabot Professor of Public Policy

www.dustintingley.org

Harvard University

This paper was supported by the Harvard Salata Institute Strengthening Communities cluster. Thanks to John Sutton, Richard Lazarus, Amanda Shafer, Kara Choquette, and Joseph Aldy for feedback on earlier drafts.

Executive Summary

Current legislation allocating revenue from fossil fuel energy projects on federal land to states and local communities contrasts with renewable energy projects, where revenue is predominantly retained by the federal government. This discrepancy represents a missed opportunity to support local economies through renewable energy revenue. The exclusion of wind and solar energy revenue from state and community benefits constitutes a political oversight. Our objective is to highlight this missed opportunity to let states and local communities further benefit from energy production activities in their region.

Revenue from energy production on federal lands, governed primarily by the Bureau of Land Management, is derived from rents, royalties, bid bonuses, and other fees. While offshore wind and geothermal projects have revenue-sharing mechanisms benefitting local jurisdictions, onshore wind and solar projects do not (*Public Land Renewable Energy Development Act 2023*; Comay, 2019). This contrasts with fossil fuel revenues, where states typically receive half of all bid bonuses, rents, and royalties, fostering local support and financial reliance on such development. In 2023 the U.S. Treasury received over \$7 billion and states and counties received over \$4 billion from the Federal government due to payments for fossil fuel extraction on Federal land (ONRR, 2023). The lack of a revenue dispersal mechanism for wind and solar energy impedes the transition to a clean energy economy, as revenues accrue solely to the federal government and local communities do not directly benefit (*Public Land Renewable Energy Development Act 2023*; Comay, 2019; Gazmararian & Tingley, 2023). This discrepancy in revenue allocation can affect support for renewable energy projects on federal lands, given the absence of direct financial incentives for states. We report new nationally representative survey data showing substantial bipartisan support for reforming current policy.

We focus on three acts recently introduced to Congress that seek to divert a portion of revenue from renewable energy projects on federal land back to states and local counties. The Public Lands Renewable Energy Development Act (PLREDA) proposes a revenue-sharing mechanism of four equal parts wherein 25% of revenues would be allocated to the state, applicable counties, the Renewable Energy Resource Conservation Fund, and federal agencies to aid in the processing of renewable energy permits (PLREDA 2024) or, to the US Treasury (PLREDA 2023). Various versions of PLREDA have previously been introduced to Congress. Most recently, the House Natural Resources Subcommittee on Energy and Mineral Resources held a hearing for the 2024 Act, which is now awaiting further consideration (*Public Land Renewable Energy Development Act 2024*). Passage of PLREDA would constitute significant progress toward putting the revenue allocation scheme for renewables on equal footing with fossils. Despite this, forgone government income is one of the primary obstacles to passing the Act, given Congressional Budget Office

scoring rules. Regardless, bipartisan support has been shown for this Act, and a range of notable organizations have declared their support for a revenue-sharing mechanism for renewables, including the Western Governors' Association, the Energy Council, and the National Association of Counties.¹

The Budgeting for Renewable Electrical Energy Zone Earnings Act (BREEZE) and the Reinvesting In Shoreline Economies and Ecosystems Act (RISEE) are pending proposals targeting *offshore* oil, gas, and wind energy projects. Both Acts move to broaden the geographic boundary that limits how far from state waters an offshore project can be in order to divert revenue back to coastal states. Additionally, BREEZE proposes decreasing the share of revenue deposited in the U.S. Treasury from leases in the Outer Continental Shelf (OCS) by 60.5% and in the Gulf of Mexico by 12.5%, reallocating larger shares to states (*Budgeting for Renewable Electrical Energy Zone Earnings Act 2022*). RISEE seeks to decrease the share of revenue deposited in the Treasury from offshore leases in the OCS by a more moderate amount, 23% (*Reinvesting in Shoreline Economies and Ecosystems Act, 2023*). RISEE is the only active proposal of the two and is currently awaiting further consideration by the Subcommittee on Energy and Mineral Resources.

There is no economic, political, or other justification for treating renewable energy on federal land differently from other energy sources. However, current legislation channels all revenue from onshore wind and solar projects on public lands to the U.S. Treasury while severely limiting disbursements to states from offshore wind projects. Fossil fuel revenue has traditionally funded essential local public services, and prohibiting renewables' ability to contribute similarly presents a substantial missed opportunity.

¹ [The Western Governors' Association](#) consists of governors from all Western states ([See WGA 2023 policy resolution here](#)). [The Energy Council](#) is a non-partisan legislative organization whose member states include: Alabama, Alaska, Arkansas, Colorado, Kansas, Louisiana, Mississippi, Montana, New Mexico, North Dakota, Oklahoma, Texas, West Virginia, and Wyoming (the Council unanimously passed a policy statement to develop a revenue sharing program for wind and solar projects at their meeting in San Antonio on Sept. 17-18, 2022), and [NACo](#) members consist of 2,625 of 3,069 U.S. counties (See [here](#) for NACo support).

Introduction

The U.S. federal government has jurisdiction over approximately 27% of the nation's total land mass (Lang, 2020). This equates to nearly 615 million acres, the majority of which is concentrated in the Western region of the U.S. (Vincent et al., 2020). Federal jurisdiction extends beyond the land to encompass the oceans surrounding the country in what is known as the U.S. Exclusive Economic Zone (EEZ) (DOS, 2023). Authority begins at the coastal line and extends out to 200 nautical miles (nm) from shore. However, coastal states maintain authority over the first 3 nm from the shoreline (*Submerged Lands Act* 2002), with the exception of Texas and the Gulf Coast of Florida, which maintain jurisdiction over the first 9 nautical miles from shore (*Gulf of Mexico Energy Security Act*, 2006). The Continental Shelf and Outer Continental Shelf (OCS) also provide means of revenue production by exploiting mineral resources. The Continental Shelf is the submarine extension of a coastal state's landmass, and coastal states retain exclusive jurisdiction over the seabed and its resources. The OCS consists of all submerged lands lying seaward of state-submerged lands and waters, which generally fall within 3-200 nm and is subject to management by the federal government (BOEM, n.d.).

Economic activity on Federal lands is extensive and includes a variety of sources (BLM, 2023). For example, between 2005 and 2019, federal lands and waters accounted for just a quarter of U.S. fossil fuel production (Ratledge et al., 2022), yet generated over \$160 billion in revenue during those fifteen years (ONRR, 2019-2023). Other sources include timber and recreation.

Federal Laws in the United States governing natural resource extraction are primarily tied to land ownership. In contrast to other countries where governments own subsurface mineral rights, in the U.S., private individuals, corporations, and federal, state, or local governments can own the resources beneath the land they own (*Ownership: How Revenue Works* n.d.). The most predominant commodities include oil, natural gas, and coal. In the U.S., the Office of Natural Resources Revenue (ONRR), situated within the Department of Interior, collects revenues for leases, sales, and production on federal land. These revenue streams may come in the form of royalties, bonuses, rent, inspection fees, or other revenues not tied to a commodity or lease (DOI, n.d.). As discussed below, some money sent to the federal government is returned to state and local governments.

Under current law, revenue from fossil fuel energy projects on federal land is partially returned to states and local communities. In contrast, the federal government almost always keeps revenue from most renewable energy projects, such as wind and solar energy. This difference in law is a missed opportunity to let local communities and states benefit from renewable energy revenue.

The ongoing energy transition in the United States carries profound implications, particularly

considering the pivotal role that revenue from fossil fuels plays in funding essential public services in many states. In addition to the revenue generated from federal land leases, many states employ severance taxes to capture funds when fossil fuels are extracted. These proceeds become a crucial source of financial support. The impact reverberates widely, as these funds are often funneled into critical domains such as K–12 education and other public goods. For example, in FY 2023, federal fossil fuel disbursements returned a total of \$2.9 billion to New Mexico, which is 31.7% federal land (ONRR, 2023). Of the \$2.93 billion, approximately \$13,000 was returned to 2 different NM counties. Indeed, a number of state budgets are heavily reliant on these sources of revenue (Raimi et al., 2024; Raimi et al., 2023). In the 2020 FY, states spent 80% of their federal fossil fuel disbursements on state expenditures (Smith et al., 2021).

As the energy landscape transforms, reevaluating funding sources for public services becomes imperative, necessitating a strategic and diversified approach to ensure the continued provision of vital community resources (Clarke et al., 2024). Further, support for new forms of energy production, such as with renewables, increases when communities benefit from them (Gazmararian & Tingley, 2023), just as has happened for fossil energy sources over decades of extraction.² Conversely, surveys of industry professionals show that community opposition is a top reason that projects are canceled or delayed (Bauer et al., 2024). Excluding revenue generated by wind and solar energy on federal land from making its way back to states and communities surrounding this land is bad politics as it inadvertently neglects communities most impacted by energy development. If a policy goal is to diversify energy production, and this is facilitated by local support, then it is also bad policy design.

In what follows, we document revenue from fossil and renewable sources, as well as the laws governing their collection and distribution. We then discuss several recent legislative efforts that try to change the discrepancy between fossil and renewable sources on federal land. Finally, we report new nationally representative public opinion data showing substantial bipartisan support for diverting revenue from the federal government to state and local communities.

Our goal is to put a spotlight on this opportunity to let states and local communities further benefit from energy production activities in their region. In many places there has been opposition to renewable energy installations from local communities. This backlash stems from a variety of sources, including claims about environmental and wildlife impacts, aesthetic impacts, public health impacts, as well as more ideological sources of opposition. Regardless of the specific arguments, local energy production has long produced resources for the communities it is sourced from, and there is no economic, political, or other reason renewable energy on federal

² Community support for new forms or the expansion of energy on Indigenous land may differ as support for renewable energy is informed by Indigenous peoples experience with the Federal development of fossil fuels in which institutional constraints were placed on tribal fossil fuel development. Institutional constraints, such as trusteeship, land ownership fractionation, and unclear legal and jurisdictional rules that slowed tribal fossil fuel development have also been shown to slow the development of renewable energy on tribal land despite the opportunity for extreme poverty reduction among the poorest reservations, no systematic tribal aversion to renewables, and some tribes' explicit desire to launch utility-scale renewable energy projects. (See Parker, D., Johnston, S., Leonard, B., & Winikoff, J. B. (2023). <https://doi.org/10.21203/rs.3.rs-3367220/v1>).

land should be treated differently from other energy sources.

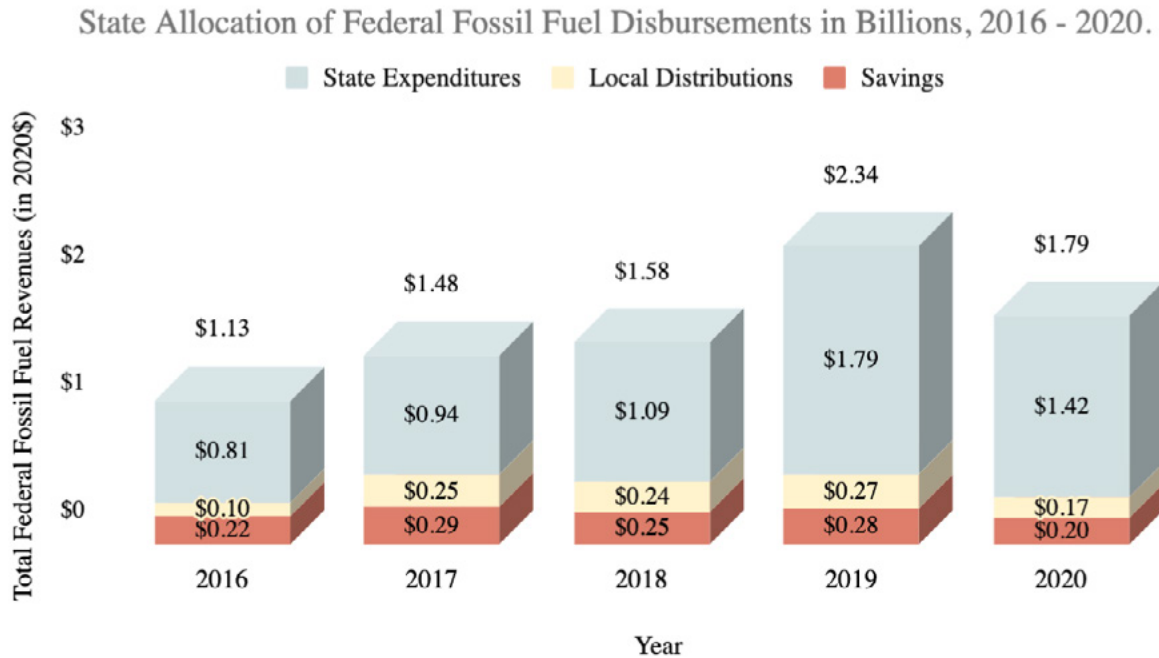
Revenue from oil/gas/coal

Revenue generated from the production of energy on federal territory comes through rents, royalties, bonuses from bidding processes, and other fees. However, the allocation of revenue depends on the geographic source of the revenue. Various articles of legislation govern these revenue streams. For example, the Mineral Leasing Act (MLA) of 1920 governs the leasing of public lands and establishes a minimum royalty rate of 12.5%, with 40% of revenues deposited into the Reclamation Fund for oil and gas leasing in states other than Alaska. Further, states, excluding Alaska, receive 50% of revenues from extraction operations, with Alaska receiving 90%. Disbursements to states incur a 2% administration fee, with the fee deposited into the U.S. Treasury (U.S. Department of the Interior, 2022). Relatedly, the Outer Continental Shelf Lands Act (OCSLA) provides the federal government with sole leasing authority of offshore mineral resources lying outside of state waters, which is returned to the states at a rate of 27% (*43 USC CHAPTER 29, SUBCHAPTER III*). Under the Gulf of Mexico Energy Security Act (GOMESA), a greater share, 37.5%, of revenue flows to Alabama, Louisiana, Texas, and Mississippi for all qualifying revenues emanating from a broad region of the Gulf of Mexico, with an additional 12.5% allocated to the Land and Water Conservation Fund (LWCF) (*Gulf of Mexico Energy Security Act, 2006*).

Several key insights underscore state dependence on revenue derived from fossil fuels. In a recent Resources for the Future study of ten leading energy-producing states, 82% of energy-related local government revenue is obtained from oil and gas, compared to 2% derived from wind and solar (Raimi et al., 2024),³ revealing a substantial reliance on conventional energy sources. However, the fraction of total local government revenue these energy sources represent varies by state and year. For example, fossil fuel-related revenues represent 59% of state and local tax revenue in Wyoming but only 4.1% in Colorado, on average, over the 2015-2019 period (Raimi et al., 2023). The significance of state reliance on conventional energy sources is further emphasized by the annual injection of \$2 billion into state and local governments from the leasing and production of minerals and energy on federal territories (Smith et al., 2021). Most commonly, states elect to spend (or have balanced budget requirements that require spending) rather than save the disbursements they receive, as illustrated in [Figure 1](#) (Smith et al., 2021).

3 This study, while not comprehensive, represents the most extensive effort to document how a wide range of energy technologies contribute to local public services. Data was gathered over a two-year period from various sources, including federal, state, and local documents, datasets, and direct communication with government officials. The researchers obtained energy-related revenue data at local levels and estimated distributions when detailed information was unavailable. The analysis encompassed revenues from land leases, severance taxes, property taxes, electric generation taxes, and payments in lieu of taxes while excluding income taxes, sales taxes, and other less relevant sources. The complete dataset includes ~40,000 observations across 79 counties in 10 states (Alaska, California, Colorado, Montana, North Dakota, New Mexico, Ohio, Texas, West Virginia, and Wyoming), chosen due to their leading status in energy production across a wide range of technologies.

Figure 1: State allocation of federal fossil fuel disbursements to savings, local government distributions, and state expenditures. Data provided by [Headwaters Economics](#).⁴



It is important to note that Congress retains the authority to revise the provisions outlined in any of the mentioned Acts (MLA, OCSLA, GOMESA) to reflect its current priorities. For example, in August 2022, H.R. 5376, An Act to Provide for Reconciliation Pursuant to Title II of S. Con. Res. 14, was signed into law. H.R. 5376 amends section 8(a)(1) of OCSLA by increasing the minimum royalty rate for bidding on offshore oil and gas from no less than 12.5% to no less than 16.66% and no more than 18.75% (Sec. 50261). The Act also amended section 17 of the MLA by increasing rental rates and minimum bidding standards for onshore oil and gas. Rental rates increased from \$1.50 per acre to \$3 per acre per year during the first two years following the date of enactment and to \$5 per acre per year for the six years following the initial two-year period. Minimum bidding standards increased from \$2 per acre for the initial two years following the lease start date to \$10 per acre during the ten-year period beginning on the date of enactment (Sec. 50262). The Act also imposed an “Expression of Interest” fee to be paid by the party interested in leasing land for the purposes of oil or gas exploration or development; the rate stands at \$5 per acre of the applicable area (Sec. 50262). Further, the Act stipulates that royalties be paid on all methane gas extracted from federal land and on the OCS (Sec. 50263) (*136 STAT. 1818 PUBLIC LAW 117–169 2022*). This legislative flexibility allows Congress to adapt to changing circumstances, such as advancements in energy technologies, science development on the effects of such technologies, or shifts in energy policies. By exercising this legislative power, Congress can ensure that these laws reflect the nation’s evolving energy needs.

⁴ See p. 11.

Revenue from renewables

Overview

As of April 2024, permitted renewable energy on public lands includes 41 wind, 53 solar, and 67 geothermal projects, with a combined total of 17.3 GW of renewable energy (*Programs: Renewable energy* 2024). While not all of these projects are yet operational, currently there is 1,538 MW of operating wind energy (*Wind Energy ROW on Public Lands* 2021), 3,729 MW of operating solar energy (BLM National NEPA Register 2024), and 2,602 MW of operating geothermal energy on federal land (*Geothermal Project Information* 2023). Renewable energy projects sited on federal land maintain three primary modes of collecting fees, including per-acre land rentals, megawatt capacity fees or royalties, and bonus bids during the competitive leasing process. However, for renewable energy developed on federal land, only offshore wind and geothermal projects possess revenue-sharing mechanisms that benefit the states and counties where the projects are sited, and the revenue returned to states is highly volatile (*ONRR Renewables Fact Sheet* 2021, 2023).⁵

The vast majority of Federal land energy projects are on Bureau of Land Management (BLM) land. As discussed below, existing law keeps revenue from these projects within the federal government. Projects on Forest Service (FS) land are managed separately (Legal Information Institute, n.d.),⁶ but the suitability for wind and solar projects on this land is much lower (Hunt, 2024).⁷ Estimates for wind and solar build-out on BLM lands stand at 33% and 48%, respectively (Hunt, 2024).⁸

Given the lack of revenue-sharing provisions for other renewable sources, government reports often only distinguish between revenues collected from offshore renewables (i.e., offshore wind) and geothermal. Rents and bonuses from other renewable sources, such as onshore wind and solar, tend to be lumped together in a broad category of “renewable energy.”⁹

5 In the 2023 FY, only 3% of offshore and geothermal renewable disbursements went to states and counties. The remaining 97% of the \$6.2 million generated was deposited in the Treasury. However, in FY 2021, 58% of offshore and geothermal disbursements went to states, and 42% was deposited in the Treasury. See [FY 2023](#) and [FY 2021](#).

6 Title V of the Federal Land Policy and Management Act (FLPMA) 1976 governs the development of solar and wind energy on BLM and FS lands. However, the 193 million acres of FS lands are managed by the Secretary of Agriculture as opposed to the the Secretary of the Interior, who manages the 246 million acres of BLM lands. Charges for wind development on FS land include land use rental fees and processing and monitoring fees for wind energy projects. Processing and monitoring fees are retained by the FS. Land use rental fees are disbursed to the Treasury and counties containing the lands according to the following provision: 25% of the average gross revenue generated over the previous 6 fiscal years is allocated to one or more counties and the remaining 75% is deposited in the U.S. Treasury. The FS does not provide guidance specific to solar energy projects.

7 Upper bound estimates of total suitable acres technical potential for wind and solar projects deployment as percentages of total on FS lands are 8% and <1%, respectively.

8 The disparity in land use estimates may reflect land-use conflicts of building out renewable energy, specifically solar, on forestland.

9 See Table 5 (ELR-10) and 6 (ELR-11) of the 2025 Budget Justification: Department-Wide Programs for an

Virtually all revenue generated from onshore wind and solar projects developed on federal land is currently retained by the federal government (*BLM Final Rule* 2016; Comay, 2019). This allocation scheme stands in contrast to the distribution of revenues from oil, gas, coal, and other leasable minerals, where states typically receive approximately half of all bonus bids, rents, and royalties, creating local backing and financial reliance on such development. The neglect to enact a dispersal mechanism for revenues derived from wind and solar energy obstructs the United States' ability to transition to a clean energy economy, as such revenues continue to flow exclusively to the federal government (*Public Land Renewable Development Act* 2019). Rather, most states benefit from the development of these projects through property taxes (Raimi et al., 2024). This discrepancy in revenue allocation can influence the level of support for renewable energy projects on federal lands, as states do not have a direct financial stake in their development.

While there are mechanisms in place to direct revenue streams back to state and local governments for a range of energy sources, funds flowing from renewable energy projects to local public infrastructure do not compare to those flowing from fossil fuel projects. In addition to having fewer revenue-sharing provisions in place, the geographically scattered nature of wind and solar energy production compared to the scale and energy density of fossil fuel production necessitates the allocation of a disproportionately large amount of land for wind and solar revenue to substitute revenue from fossil fuels (Raimi et al., 2024). The DOI projects that for FY 2024, renewable energy rents and bonuses will return just over \$250 million (*Budget Justification: Department-Wide Programs* 2025, ELR-10).

Solar Energy

The statutory framework stipulating the development of solar energy on federal lands is provided in the Federal Land Policy and Management Act of 1976 (FLPMA; 43 U.S.C. §§1701 et seq.), and it provides that solar energy projects are authorized as rights-of-way (ROW) (Comay, 2019). Per BLM regulations, agencies may identify Designated Leasing Areas (DLA) for their projects; these areas are parcels of land that have undergone review and were chosen as low-resource conflict areas, specifically reserved for solar or onshore wind projects (Comay, 2019).¹⁰ Under the FLPMA, BLM is required to receive fair market value for the use of federal lands. As such, there has historically been a \$15 per acre application filing fee for projects proposed outside of a DLA, with solar megawatt capacity fees ranging from \$2,863 to \$4,294 based on technology; rent is determined by varying factors (*Revenues: How revenue works*, n.d.-b). In FY 2022, federal solar lease revenues totaled \$2.3 million. In FY 2021, federal solar lease revenues totaled \$2.3 million. In FY 2021, such revenues totaled \$12.5 million, and in FY 2020, \$30.6 million (U.S. Bureau of Land Management).¹¹

example.

10 See the Biden-Harris Administrations January 2024 roadmap for solar energy development. The "[Western Solar Plan](#)" identifies 22 million acres in the Western U.S. that are best suited for solar development and could help facilitate faster permitting in designated priority areas.

11 Solar revenue is as reported in the BLM Land and Mineral System Reports (LR2000 system: all admin states;

In April 2024, the BLM passed a final rule that will reduce the MW capacity fees by 80% for the lifetime of a grant for projects permitted by 2035 in an attempt to promote solar and wind development on Federal land. The 80% reduction will decrease by 20% for each year following 2035 until 2038, in which the MWh rate for new authorizations will remain at 20% (BLM Final Rule, 2024).¹² Additionally, the new rule provides that right-of-way holders are subject to pay BLM only the greater of the two: acreage rents or capacity fees. Energy developers generally would like to pay less for the land they use. This trade-off consequently generates lower revenues, a portion of which could be redistributed to states pending Congressional action. However, this redistribution would provide less revenue to address select states' concerns regarding the potential negative impact of the clean energy transition on their established funding models for essential public services, such as public K-12 education. The new rule does not reorient how revenue from such projects is distributed. Only Congress has the authority to provide for revenue sharing (*BLM Final Renewable Energy Rule FAQ 2024*), and currently, all revenue generated from the development of onshore solar projects on federal land is deposited in the Treasury.

Onshore Wind Energy

Of all utility-scale wind energy capacity in the U.S., roughly 5% is generated on federal lands. Similar to solar energy projects, onshore wind projects developed on federal land require a ROW grant, as stipulated by the FLPMA (Comay, 2019). Historically, onshore wind maintained the same \$15 per acre application filing fee, and megawatt capacity fees stood at \$5,010. In FY 2022, federal onshore wind lease revenues totaled \$1.7 million, \$7.3 million in 2021, and \$14.3 in 2020 (U.S. Bureau of Land Management).¹³ However, like solar MW capacity fees, MW capacity fees for wind will be cut by 80% in an attempt to incentivize renewable energy development (*BLM Final Rule, 2024*). Still, the U.S. Treasury retains all acreage rents, MW capacity fees, and application filing fees (Comay, 2019).

Offshore Wind Energy

Offshore wind energy leases are managed by the Bureau of Ocean Energy Management. In FY 2022, BOEM held the largest offshore wind lease sale in the United States which lasted three

Case Type Codes 283101 through 283104 for solar) and includes both development revenue and test revenue. (Action Codes 111 – Rental Received, 765 – Acreage Rent Received, and 766 – Capacity Fee Received; and disposition dates from October 1, 2017 through September 30, 2022).

- 12 In addition to reducing capacity fees by 80%, the new rule also provides that Right-of-Way holders may benefit from two additional reductions to solar and wind MW capacity fees: a 20% Domestic Content reduction and a 20% Project Labor Agreements reduction.
- 13 Wind revenue is as reported in the BLM Land and Mineral System Reports (LR2000 system: all admin states; Case Type Codes 283001 through 283003 for wind) and includes both development revenue and test revenue (Note on Action Codes 111 – Rental Received, 765 – Acreage Rent Received, and 766 – Capacity Fee Received; and disposition dates from October 1, 2017 through September 30, 2022).

days and concluded after 64 rounds of bidding (Mayer Brown, 2022). Resultantly, offshore wind revenue generated from BOEM lease sales was more than \$4.6 billion, an unusually large amount that rivaled the revenue generated from oil and gas leasing during the same year (approximately \$6.5 billion) (Comay & Clark, 2023). These unusually large sums generated from offshore projects are attributed to inordinately high bonus bids, and the DOI does not expect such returns from offshore wind energy to be replicated in the coming years. For instance, for the 2024 FY- 2028 FY period, the DOI estimates annual receipts for offshore wind projects to range anywhere from \$35 million to \$490 million (*Budget Justification: Department-Wide Programs 2025*, ELR-18).¹⁴ The DOI's expectation is further substantiated by the BLM's April 2024 final rule to reduce acreage rental rates and capacity fees for new or existing solar and wind installations (*BLM Final Rule*, 2024), a tradeoff that will enable a faster transition to renewable energy while generating lower overall revenues.

Under the Outer Continental Shelf Lands Act (OCSLA), wind energy projects developed within 3 nm of state waters are subject to state revenue-sharing provisions at a rate of 27% (*43 USC CHAPTER 29, SUBCHAPTER III*). To date, most offshore wind energy projects do not fall within the 3 nm that would mandate a percentage share with adjacent coastal states (Comay & Clark, 2023), meaning all revenue is deposited in the U.S. Treasury as miscellaneous receipts. In fact, as of September 2023, Massachusetts and Rhode Island are the only states to have benefitted from the OCSLA provision, with disbursements amounts never exceeding \$25,000 in one year (Comay & Clark, 2023).

Under GOMESA, oil and gas leases developed in state waters provide a 37.5% revenue share with the four states lining the coast. Additionally, for Texas and the Gulf Coast of Florida, state waters encompass the first 9 nm from shore.¹⁵ Within this Act lie two discrepancies when compared to the provisions outlined for renewable energy. First, offshore wind energy developed in the Gulf of Mexico only returns a share of revenue to states if it lies within the 3 nm of state waters as provided by OCSLA (i.e., if the lease lies within the first 6 nm from the coast). Wind projects developed off the coast of Texas or the Gulf Coast of Florida do not return revenue to states if the lease tract lies between 6 nm and 9 nm from shore. Oil and gas projects lying between 6 nm and 9 nm off the coast of Texas and the Gulf Coast of Florida do return revenue to states. Second, the share of revenue remains set at 27% for all offshore wind projects in the Gulf of Mexico as opposed to the 37.5% share provided by GOMESA for offshore oil and gas projects developed in a broad region of the Gulf of Mexico (*Gulf of Mexico Energy Security Act (GOMESA): How revenue works*, n.d.; Comay & Clark, 2023). For the 2023 FY, GOMESA's 37.5% stipulation resulted in more than \$353 million across the four states lining the Gulf of

¹⁴ See Table 8.

¹⁵ Note that the BLM does not lease OCS lands in the Eastern Gulf of Mexico for oil and gas development. I.e., Florida does not have claim to oil and gas revenues because of the political deal to keep oil and gas development away from key FL beaches for tourism reasons. See [Areas Under Restriction | Bureau of Ocean Energy Management](#).

Mexico (*Gulf of Mexico Energy Security Act (GOMESA): How revenue works*, n.d.).

Geothermal Energy

The structure employed for the disbursement of revenue from geothermal projects on federal territories was updated with the passage of the 2005 Energy Policy Act. Note that this was only for geothermal energy, not for other types of renewable energy. The Act provides that revenue from geothermal projects is distributed to federal, state, and county governments at a rate of 25%, 50%, and 25%, respectively (*Energy Act Policy* 2005). Importantly, for our purposes, as geothermal energy gets built out, sources on federal land will generate revenue for surrounding communities. This will help provide political support for policy that diversifies the country's energy sources.

Nevertheless, there are opportunities for improving geothermal opportunities. To date, geothermal energy has played a relatively small role in US energy production. As of 2022, 0.4% of utility-scale electricity generation has come from geothermal power plants (Geothermal Explained 2023). Expanded geothermal production will be important because decarbonizing the US electricity sector will necessitate a diversified portfolio of renewables. In particular, high-capacity factor resources, like geothermal, will be especially important in the later stages of decarbonization as the capacity contribution of weather-dependent, variable resources, such as wind and solar, diminishes with increased prevalence in the market (Bolinger et al., 2023).

Discussion

While our focus is on federal land policy, revenue from renewable energy on non-BLM land still plays a role in local and state finances through charges administered by state governments (Raimi et al., 2024; Gazmararian & Tingley, 2023). These funds can have an impact. For example, one study documented how local school districts have been found to experience an increase in revenue by \$1,000 per pupil in the first two to three years after wind installation (Brunner et al., 2022). An open area of active research is on these state-level policies. This includes issues around balancing incentives for development, which can take the form of tax incentives against the importance of local public finance contributions (Clarke et al., 2024; Gazmararian et al.; Godby et al., 2018; Tingley, n.d.). Further, the revenue generated from renewable energy projects on non-federal lands illustrates the potentially significant positive impact of redirecting Federal land royalties and lease bids to state and local counties.

Proposals for Federal Policy Change

Public Land Renewable Energy Development Act (PLREDA)

States and counties entrenched in heavy reliance on fossil fuels as a primary source of revenue for financing public infrastructure face imminent risk with the transition to renewable energy underway. As revenue streams from oil, gas, and coal begin to dwindle with the phasing out of fossil fuels, these communities will confront financial instability without proactive strategies to ameliorate the impact. Proposed legislative changes, such as the Public Land Renewable Energy Development Act, continue to emerge as sustainable interventions. The most recent version of the Act, proposed by Paul Gosar (AZ-R), proposes a revenue-sharing provision of four equal parts. Gosar's 2024 PLREDA (H.R. 8954) proposal stipulates that 25% be distributed to the state where the development is sited, 25% to one or more counties within the bounds of the development site, 25% to the Renewable Energy Resource Conservation Fund (established by PLREDA to facilitate conservation, habitat restoration, and outdoor access), and 25% to aid federal agencies in the processing of renewable energy permits on federal lands (*Public Land Renewable Development Act 2024*).

While strikingly similar, Gosar's 2024 revenue-distribution proposal differs from the 2023 version proposed by Mike Levin (CA-D). Levin's 2023 proposal (H.R. 178) also proposes a revenue-sharing provision of four equal parts, with 25% going to the state, one or more counties, and the Renewable Energy Resource Conservation Fund. However, in Levin's proposal, the last quarter of funds available would be retained by the U.S. Treasury.¹⁶ Other key provisions of the 2023 bill, already passed, include the designation of priority areas by the DOI for renewable energy projects, consistent with the principles of multiple use and renewable energy permitting goals. Further, under the Act, renewable energy projects residing in designated areas receive the highest priority for incentivizing deployment (*Public Land Renewable Development Act 2023*).

The Public Land Renewable Energy Development Act has a long history. Arizona Representative Paul Gosar first proposed it in the House in July 2019 of the 116th Congress (H.R. 3794; S. 2666) (*Public Land Renewable Development Act 2019*). The Act sought to promote and expedite renewable energy projects on federal lands by codifying the "smart from the start" approach to renewable energy development. The efficiency of such an approach was demonstrated in 2014 when it effectively cut the review and approval process time in half for three projects in a designated priority area (*Public Land Renewable Development Act 2019*). Smart from the start

¹⁶ The Renewable Energy Resource Conservation Fund would be administered by the Secretary of the Interior, in consultation with the Secretary of Agriculture. Revenue deposited in the Fund could be made available to Federal, State, local, and Tribal agencies to be distributed in regions in which renewable energy projects are located on Federal land. Amounts may be used to restore and protect wildlife and their habitats or to improve recreational access to Federal land and water in affected regions. See [HR 178](#).

encourages development in pre-screened areas (“priority areas”) that have fewer conflicts with ongoing processes and environmental considerations on public lands. This approach differs from the pre-2017 approval process, which typically involved the BLM approving right-of-way applications from developers on a first-come, first-serve basis. Under the National Environmental Policy Act (NEPA), projects developed in priority areas receive expedited permitting and pay lower fees. While the Public Land Renewable Energy Development Act of 2019 was not passed, key provisions were passed by Congress and signed into law as part of the Energy Act of 2020 (*Public Land Renewable Development Act 2021*). Two such provisions include the Secretary of the Interior authorizing the production of at least 25 gigawatts of electricity from wind, solar, and geothermal projects by 2025 and allowing noncompetitive leasing for geothermal projects on federal land (*Public Land Renewable Development Act 2021*, p.2; *Public Land Renewable Development Act 2019*).

In the 117th Congress, California representative Mike Levin reintroduced the proposal as the Public Land Renewable Energy Development Act of 2021 (H.R. 3326). One notable revision is an adjustment to the proposed distribution of revenues. The 2019 Act provided that the revenue from wind and solar projects be distributed at a rate of 25% to states, 25% to counties, 25% to a Renewable Energy Resource Conservation Fund, 15% to BLM, and 10% to the Treasury (*Public Land Renewable Development Act 2019*). Conversely, Levin’s 2021 proposal stipulates that 25% of revenues be distributed to each of the following: the state, applicable counties, the Renewable Energy Resource Conservation Fund, and the Treasury (*Public Land Renewable Development Act 2021*). This allocation scheme is in line with Levin’s 2023 proposition but differs slightly from Gosar’s 2024 proposal (*Public Land Renewable Development Act 2023*; *Public Land Renewable Development Act 2024*). The 2021 Act was referred to several committees and subcommittees but ultimately did not receive a vote. The proposal does not attempt to change any existing revenue-sharing provisions for fossil fuels or geothermal energy projects (*Public Land Renewable Development Act 2021*).

The bill was reintroduced to the house on January 9th, 2023, but has since been referred to the Subcommittee on Energy and Mineral Resources and is awaiting further consideration (*Public Land Renewable Development Act 2023*). Most recently, PLREDA was introduced on July 9th, 2024. The proposal was referred to the Subcommittee on Energy and Mineral Resources, and subcommittee hearings were held on July 23rd, 2024. The bill now awaits further action. Difficulty in passing PLREDA stems, in part, from the score it received from the Congressional Budget Office. The CBO found that forgone government income was one of the primary drivers of budget effects and determined that the 2019 version of the bill would result in a \$300 million deficit over ten years (*H.R. 3794, Cost Estimate 2020*). While two of the three reconstructed versions of the Act (PLREDA 2021 and 2023) propose an increased share of revenue deposited in the Treasury (from 10% to 25%), it still contends with the forgone government income. BLM’s Congressional testimony in 2021 regarding the 2021 Act specifically denotes the reduction in

revenue that the Treasury would experience should PLREDA be passed (*Pending Legislation 2021*).¹⁷ Note that money from fossil fuel projects flowing back to states and counties also constitutes forgone government income that would otherwise be deposited in the Treasury. As discussed earlier, PLREDA 2024 provides that no money be retained by the Treasury. While the 2024 proposal has not yet been scored, the decision to keep the Treasury out of the revenue-sharing proposal will likely result in a similar score from the CBO. It's worth noting that the logic behind diverting a quarter of revenues to the federal agencies that process renewable energy permits on federal lands stems from developers' tendency to avoid public lands due to lengthier timelines and costly permitting delays compared to developing on private land. Thus, providing additional resources to federal agencies for faster processing is crucial for incentivizing developers to reconsider development on federal land (JC Sandberg, 2024).

Despite repeated attempts to enact a mechanism for the dispersal of revenues from solar and wind energy projects, amounts collected from such projects in the form of bonus bids, rentals, fees, or other payments under a right-of-way, permit, or leases are still obtained by the Treasury. Thus, if the 2024 or 2023 Act becomes law, it would provide significant additional fiscal revenue to states.¹⁸ One study calculated the hypothetical return under this proposal for an average wind project (500 MW) sited in Wyoming and found that once operational, such a project would have an expected return of more than \$260,000 in federal royalties to the state and an additional \$260,000 to local communities.¹⁹ The study further predicts that over the estimated 20-year lifespan of the project, it would return more than \$5 million to the state of Wyoming and local communities each (Khalaf, 2022, pp. 24-25).²⁰

Geothermal Energy Optimization Act (GEO)

The recent introduction of the Geothermal Energy Optimization Act (GEO) could change this. Introduced by Utah representative Mike Lee and other members of the Senate's Energy and Natural Resources Committee, the GEO Act would amend the 1970 Geothermal Steam Act by accelerating the adoption of geothermal energy across the US via streamlining the permitting and review process (*Geothermal Energy Optimization Act 2024*). In 2005, Congress authorized

17 See subsection "Revenue Distribution" (Section 6).

18 Organizations that have declared their support for a federal revenue sharing mechanism for renewable energy fees generated on public lands include: the [Western Governors' Association](#) (WGA consists of governors from all Western states) (See [WGA 2023 policy resolution here](#)), the [Energy Council](#) (a non-partisan legislative organization whose member states include: Alabama, Alaska, Arkansas, Colorado, Kansas, Louisiana, Mississippi, Montana, New Mexico, North Dakota, Oklahoma, Texas, West Virginia, and Wyoming) (the Council unanimously passed a policy statement to develop a revenue sharing program for wind and solar projects at their meeting in San Antonio on Sept. 17-18, 2022), and the [National Association of Counties](#) (NACo members consists of 2,625/3,069 counties) (See [here](#) for NACo support).

19 Calculated using BLM's 2022 per acre rental rate for wind energy authorization.

20 Gas was WY's top revenue producing commodity on federal land in FY 2023, responsible for \$706.99 million in revenue. Total disbursements to WY from all commodities during the same year equaled \$832.86 million. However, we were unable to identify how much revenue an average oil or gas project on federal land in WY returns to the state to use as a comparison for the hypothetical return provided in Khalaf, 2022.

the BLM to streamline the permitting processes for specific oil and gas exploration projects, an authorization that geothermal exploration was excluded from benefiting. By extending the streamlined environmental review process to geothermal energy, the GEO Act would aid in mitigating the additional 7-10 years' worth of permitting hurdles unique to this renewable energy source (Young et al., 2014). Further, if passed, the Act would set new lease targets for geothermal development on federal lands, requiring BLM auctions to be held more frequently than every two years. Ultimately, the GEO Act would launch significant progress in putting the energy source on equal footing with fossil fuel projects developed on federal lands (*Geothermal Energy Optimization Act 2024*).

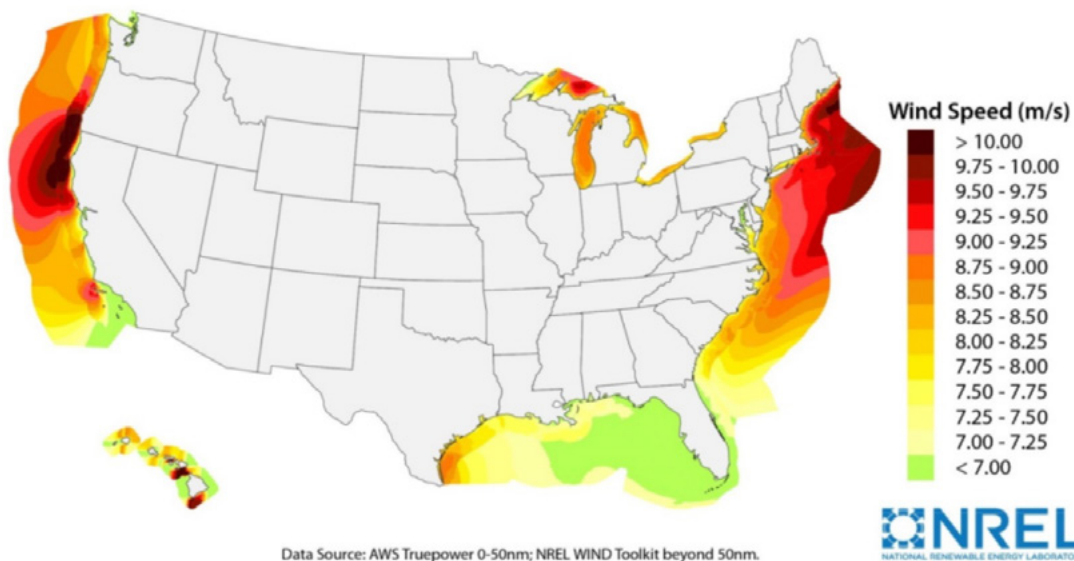
Proposed changes for offshore wind energy

There are also pending proposals targeting offshore oil, gas, and wind energy projects that, if passed, would amend provisions outlined in GOMESA and OCSLA. These pieces of legislation include the Budgeting for Renewable Electrical Energy Zone Earnings Act (BREEZE) and the Reinvesting in Shoreline Economies and Ecosystems Act (RISEE). Introduced to the House in July 2022, BREEZE aims to increase the share of revenue from wind, oil, and gas projects distributed to eligible states. The proposal moves to require that states located within 75 miles, as opposed to 15, of the geographic center of a lease tract benefit (*Budgeting for Renewable Electrical Energy Zone Earnings Act 2022*). Additionally, BREEZE proposed amending the Outer Continental Shelf Lands Act (OCSLA) revenue-sharing provisions according to the following criteria: allocating 12.5% to the U.S. Treasury, depositing 37.5% in the North American Wetlands Conservation Fund, and distributing the remaining 50% among the eligible coastal states. This proposed amendment stands in contrast to the current revenue-sharing scheme provided by OCSLA, which states that 73% of revenues be distributed to the U.S. Treasury and 27% be distributed to the applicable state. Had the Act been enacted, it also would have amended the revenue-sharing percentages provided in GOMESA, which state that 50% of revenues be deposited in the Treasury, 12.5% in the National Oceans and Coastal Security Fund, and 37.5% to the state. Under BREEZE, 37.5% of eligible revenues would be deposited in the Treasury, and 50% would go to the state; no change would be made to the Coastal Security Fund (*Budgeting for Renewable Electrical Energy Zone Earnings Act 2022*).

RISEE, introduced to the House in February 2023, similarly moves to increase revenue streams to states for offshore wind, oil, and gas leases and maintains the same 75-mile eligibility provision. However, RISEE provides that qualified OCSLA revenue be dispersed to the Treasury, the National Oceans and Coastal Security Fund, and adjacent coastal states at a rate of 50%, 12.5%, and 37.5%, respectively (*Reinvesting in Shoreline Economies and Ecosystems Act 2023*). Further, RISEE proposed changing how long the annual cap on distributed OCS revenues lasts. As provided by GOMESA, the total amount of eligible OCS revenues is not to exceed \$500 million per fiscal year for the years 2016-2055. Under RISEE, the \$500 million cap would have expired in 2019, and a new cap of \$650 million would be instituted for the years 2020-2022 (*Reinvesting in Shoreline Economies and Ecosystems Act 2023*, p. 19).

The geography of high-quality wind and solar resources significantly influences developer siting decisions.²¹ Generally, electricity generated from wind turbines is maximized with faster wind speed, greater air density, and a larger swept area (i.e., the area that the blades of the turbine rotate through) (Comay & Clark, 2023). The Atlantic Ocean, particularly in the Northeast, has been found to have strong average wind speeds, much stronger, on average, than in the Gulf of Mexico (See [Figure 2](#)) (Musial et al., 2016 p. 9). Additionally, the depth of the ocean floor in many parts of the Northeast Atlantic region tends to be suitable for turbines with fixed-bottom foundations. This is incongruous with the depth of the ocean on the West Coast of California, where water depths fall dramatically (Comay & Clark, 2023). As a result, offshore wind development in the Pacific region will likely require floating wind turbines, which have yet to be deployed in the U.S. and are more expensive than offshore wind developments with fixed-bottoms (Comay & Clark, 2023). Thus, despite the similar average wind speeds found in the Pacific and Atlantic regions (Musial et al., 2016 p. 9), offshore wind development off the Coast of California is likely to pose unattractive hurdles to deployment. Pertinently, despite the appealing shallow waters and practicality of the existing pipeline system found in the Gulf of Mexico, the comparatively low wind speeds, soft sea floor, and frequency of tropical storms that pass through the area heighten the uncertainty surrounding the region's desirability and potential revenue return for offshore wind development (Barnes et al., 2023).

Figure 2: Offshore wind resource data (100 m) from the 2016 wind resource assessment. Map provided by NREL, AWS Truepower, and Vaisala/3TIER.



21 Local ordinances also affect the ease with which communities can adopt renewable energy projects. See the [“Communities Left Behind”](#) map from the Center for Progressive Reform.

The desirability of the Atlantic coast for offshore wind development is evident in the fact that, as of September 2023, 10 out of the 12 offshore wind lease auctions held by BOEM have taken place in this region (Comay & Clark, 2023). [Figure 2](#) illustrates wind speed (m/s) for 0 to 200 nm from shore; the figure further depicts that within the Northeast Atlantic region, distances further from shore are where the greatest wind speeds are found. While some studies have shown that offshore wind development located more than 6 nm from the coastline can reduce opposition based on aesthetic concerns (Lilley et al., 2010), this distance exceeds the legal requirement for revenue allocation to states and counties. Thus, the attractive average wind speeds in the Northeast Atlantic region must contend with current law, which states that offshore wind development must be situated within 3 nm of the state waters to generate revenue that comes back to states and local communities. In contrast, the Gulf of Mexico, where nearly all offshore oil and gas leasing and development occurs (*Oil and petroleum products explained 2024*), is the only region within the U.S. EEZ in which revenue-sharing provisions are extended to encompass a broader region of state waters than is outlined in the OCSLA. This begs the question of why a similar provision would not follow in the region where disproportionate offshore wind development is likely to occur.

Figure 3: Summary of Recent Legislative Proposals

Proposal	Description	Key Provisions
Public Lands Renewable Development Act 2024 (PLREDA 2024, H.R. 8954)	Sets forth provisions regarding the development of geothermal, solar, or wind energy on public lands.	<ol style="list-style-type: none"> 1. The bill provides for the disposition of revenues from the development of wind or solar energy according to the following distribution scheme: 25% to the state, 25% to local counties, 25% to the Renewable Energy Resource Conservation Fund, and 25% to aid agencies in the processing of renewable energy permits on federal lands. 2. The bill establishes the Renewable Energy Resource Conservation Fund to make funds available to federal, state, and tribal agencies for distribution in regions in which renewable energy projects are located on federal land for (A) restoring and protecting natural water bodies and fish and wildlife habitat and corridors, and (B) preserving and improving recreational access to federal land and water in an affected region
Public Lands Renewable Development Act 2023 (PLREDA 2023, H.R. 178)	Sets forth provisions regarding the development of geothermal, solar, or wind energy on public lands.	<ol style="list-style-type: none"> 1. The bill provides for the disposition of revenues from the development of wind or solar energy according to the following distribution scheme: 25% to the state, 25% to local counties, 25% to the Renewable Energy Resource Conservation Fund, and 25% to the US Treasury, 2. The bill establishes the Renewable Energy Resource Conservation Fund to make funds available to federal, state, and tribal agencies for distribution in regions in which renewable energy projects are located on federal land for (A) restoring and protecting natural water bodies and fish and wildlife habitat and corridors, and (B) preserving and improving recreational access to federal land and water in an affected region.

Proposal	Description	Key Provisions
Geothermal Energy Optimization Act 2024 (GEO)	Seeks to amend the Geothermal Steam Act of 1970 to promote timely exploration for geothermal resources under geothermal leases	<ol style="list-style-type: none"> 1. Introduces a categorical exclusion for geothermal exploration drilling and well-field development, putting it on equal footing with oil and gas in terms of permitting and reducing the additional 7-10 years' worth of permitting hurdles that are unique to geothermal energy. 2. Directs the BLM to hold geothermal lease sales more frequently (from every 2 years to every year) and expedite the leasing process.
Budgeting for Renewable Electrical Energy Zone Earnings Act 2022 (BREEZE)	This bill makes various changes to the allocation of revenues from offshore oil, gas, and wind projects on the Outer Continental Shelf in the Gulf of Mexico, including increasing the share of revenues paid to states.	<p>Regarding OCSLA:</p> <ol style="list-style-type: none"> 1. Sought to increase states eligible for offshore wind revenue return by providing that coastal states within 75 miles of the geographic center of the development tract shall benefit (as opposed to the established 15 miles). 2. Proposed a revenue-sharing scheme according to the following: 50% to the state, 12.5% to the Treasury, and 37.5% to the North American Wetlands Conservation Fund (as opposed to 27% to the state and 73% to the Treasury). <p>Regarding GOMESA:</p> <ol style="list-style-type: none"> 1. Proposed a revenue-sharing scheme according to the following: 50% to the eligible state, 37.5% to the Treasury, 12.5% to the National Oceans and Coastal Security Fund (As opposed to 37.5% to the state, 50% to the treasury, and 12.5% to the National Oceans and Coastal Security Fund)

Proposal	Description	Key Provisions
Reinvesting In Shoreline Economies and Ecosystems Act 2023 (RISEE)	<p>This bill increases revenue streams provided to states from offshore wind projects, offshore oil and gas leases, and onshore energy and mineral resources. States must use the revenue for specified purposes, such as coastal restoration or infrastructure.</p>	<p>Regarding OCSLA:</p> <ol style="list-style-type: none"> 1. Sought to increase states eligible for offshore wind revenue return by providing that coastal states within 75 miles of the geographic center of the development tract shall benefit (as opposed to the established 15 miles). 2. Proposes a revenue-sharing scheme according to the following: 37.5% to the eligible state, 50% to the Treasury, 12.5% to the North American Wetlands Conservation Fund (as opposed to 27% to the state and 73% to the Treasury). <p>Regarding GOMESA:</p> <ol style="list-style-type: none"> 3. Proposes a change to how long the annual cap on distributed OCS revenues lasts. GOMESA provides that the total amount of eligible OCS revenues is not to exceed \$500 million per fiscal year for the years 2016-2055. RISEE provides that the \$500 million cap would have expired in 2019, and a new cap of \$650 million would be instituted for the FY years 2020-2022.

Public Opinion

What do American voters think? We recently distributed a number of survey questions regarding energy production on Federal land to gauge public opinion on the matter.²² The first question was designed to simply see how people would allocate money raised from fossil fuel extraction on Federal land. Respondents were provided no background information other than an understanding that energy companies are required to pay the Federal government money in the form of leases and royalties. As such, our first question provides a clean slate perspective on public opinion.

Consider an oil or gas project on Federal land. If you could direct the money, how would you spend it? Using the categories below, choose the percent that goes to each, making sure that the total adds up to 100.

1. The state government in which the project was developed
2. The local governments closest to where the project is sited
3. Kept by the Federal government to spend on standard programs (U.S. military, healthcare, education, etc.)
4. A fund to help restore and protect fish and wildlife habitats on Federal lands

For fossil fuel projects, respondents demonstrated a preference for distributing revenues fairly evenly across the four categories: ecological restoration (30%), retained by the Federal government (27%), revenues to the state where the project is sited (22%), revenues to the local governments where the project is sited (21%).²³ Next we asked the same question, but instead had respondents consider wind and solar projects. Participants generally exhibited similar allocation patterns for renewables as they did for fossil fuels. For renewable energy projects, participants directed an average of 22% to the state where the project was sited, 21% to local governments, 27% to the Federal government, and 30% to an ecological restoration fund.²⁴

22 A quota sampling U.S. adult nationally representative design was used and implemented through the survey firm Qualtrics between May 20th, 2024 and June 7th, 2024 yielding a sample size of 2000. Quotas included age, gender, region, race, income, and education. Earlier in the survey we asked respondents to self-select what political party they most align with (Democratic/ Republican/ Independent/ Other), enabling us to gauge areas of consensus and differences. 38% of respondents identified as Democrats, 29% as Republicans, 28% as Independent, and 5% as Other.

23 On average, Democrats allocated 21% to the State government, 20% to the local government, 27% to the Federal government, and 31% to the ecological restoration fund. Republicans allocated an average of 24% to the State, 22% to local governments, and 27% to both the Federal government and ecological restoration fund. Independents allocated 21% to the State, 20% to local governments, 27% to the Federal government, and 32% to the ecological restoration fund.

24 On average, Democrats allocated 22% to the State, 21% to local governments, 27% to the Federal government and 30% to the ecological restoration fund. Republicans allocated an average of 23% to both the State and

Next, we asked a high-level question to tap support for changing Federal law when it comes to the distribution of money from onshore wind and solar.

Current law in the United States requires that money from fossil fuel projects like oil and gas and coal mining on Federal land gets split between the Federal government and the state where the project is located.

However, for renewable energy projects like wind and solar energy, all of the money stays with the Federal government. There is a proposal in Congress to have money from renewable energy projects on Federal land be split, just like from fossil fuel projects. Do you support this proposal?

1. Strongly support
2. Somewhat support
3. Somewhat oppose
4. Strongly oppose

The survey results reveal an overwhelming level of support for a revenue-sharing mechanism for renewable energy projects on federal lands that mirrors the current distribution scheme in place for fossil fuels. 89% of respondents expressed either strong or moderate support for revenue sharing for renewables, reflecting a broad consensus on the issue.

Overall, 91% of self-identified Democrats recorded support for such a proposal, along with 87% self-identified Republicans, 87% of respondents who identify with the Independent party, and 88% who identify as ‘Other.’ This convergence of public opinion is further reinforced by the bipartisan backing observed in Congress, states, counties, and industry for a revenue-sharing mechanism for renewable projects on federal lands.²⁵ These findings highlight a unique opportunity for policymakers to advance initiatives aimed at fostering a more just and sustainable energy landscape.

Further, the minimal level of strong opposition to the proposed revenue-sharing mechanism (less than 4%) suggests that public opinion may be overwhelmingly in favor of policies that promote greater equity in the distribution of revenues derived from energy development on federal lands.

local governments and 27% to both the Federal government and the ecological restoration fund. Independents distributed an average of 21% to both the State and local governments, 27% to the Federal government, and 31% to the ecological restoration fund.

25 Most notably, the [Western Governors’ Association](#) (consists of governors from all Western states) (See [WGA 2023 policy resolution here](#)), the [Energy Council](#) (a non-partisan legislative organization whose member states include: Alabama, Alaska, Arkansas, Colorado, Kansas, Louisiana, Mississippi, Montana, New Mexico, North Dakota, Oklahoma, Texas, West Virginia, and Wyoming) (the Council unanimously passed a policy statement to develop a revenue sharing program for wind and solar projects at their meeting in San Antonio on Sept. 17-18, 2022), and the [National Association of Counties](#) (consists of 2,625/3,069 counties) have voiced their support for a revenue-sharing mechanism for renewable projects on federal lands (See here).

This carries significant implications for policymakers, as it demonstrates a potentially receptive context for policies that seek to redress imbalances in the current framework.

We then asked respondents about how restricted energy development on Federal land should be.

Some argue that Federal land should be preserved and not used to develop and produce energy. Others argue this land is an important resource for our economy and should be used. Should energy projects on Federal land be restricted to preserve the land and the nature in it or not restricted? On a scale of 1 to 10, with 1 completely restricted and 10 completely used, what is your opinion? (Sliding scale).

Importantly, our sample is nationally representative rather than reflecting the beliefs of individuals and communities in and around Federal lands. The national public, on average, favored slightly more unrestricted preservation of Federal land, with an average of 6.12. This indicates a general inclination towards balancing the preservation of federal lands and utilizing them for energy development purposes. The ratio of respondents who believe that energy projects on Federal land should be completely restricted compared to those who believe it should be completely unrestricted was 1 to 2.02. Such results may indicate that the public recognizes the importance of federal lands as a valuable resource for energy production. By revealing a preference for a slightly more unrestricted preservation approach, these findings can aid in informing federal land management discussions and policies regarding energy development.

Next, we asked respondents about the extent to which they believe renewable energy has the potential to contribute to the United States' energy needs.

Do you believe that renewable energy projects (wind, solar, geothermal) on federal lands have the potential to contribute significantly to US energy needs?

1. Contribute greatly
2. Contribute somewhat
3. Contribute a little
4. Contribute barely

The survey results reveal a positive outlook on the potential of renewable energy projects on federal lands, with a substantial 83% of respondents indicating that they believe renewables on Federal lands have the potential to contribute to U.S. energy needs either greatly or somewhat. This overall optimism transcends political affiliations, as demonstrated by the majority of respondents from each political party holding a favorable view of renewable energy's potential contributions. Of those who recorded a belief of somewhat or great contribution, 93% identified as Democrat, 72% as Republican, 82% as Independent, and 78% as 'Other.'

Finally, we asked participants about their opinions on the role that communities most affected by

energy development should play in determining how revenue should be distributed.

Generally speaking, should local communities affected by energy development on federal lands have a say in how revenue from these projects is allocated?

1. Yes
2. No
3. Unsure

The overwhelming majority (73%) of respondents expressed the belief that local communities impacted by energy development on public lands should have a voice in determining how revenue from such projects should be allocated. This strong consensus indicates an inclination toward more participatory and inclusive decision-making processes regarding the distribution of financial benefits stemming from energy development. Such a perspective aligns with policies that emphasize the importance of community involvement in addressing the social and economic consequences of energy projects. By integrating the perspectives of the most affected communities into policymaking, policymakers may be able to promote greater social acceptance of energy projects while advancing a diversified energy strategy for the United States. Moreover, the high level of agreement among our survey participants underscores the potential for building public support for policy measures that seek to empower local communities in decision-making processes related to energy development. As policymakers consider strategies for fostering a more equitable and sustainable energy landscape, it is crucial to consider mechanisms that enable meaningful community engagement.

The bipartisan nature of the survey responses signifies a rare point of consensus among individuals with diverse political ideologies. This presents a unique opportunity for cooperation and collaboration across party lines in support of renewable energy development, transcending the political polarization that often characterizes energy issues. By capitalizing on this public support, policymakers can work to advance renewable energy projects while simultaneously ensuring that communities most affected by energy development retain financial benefits no matter the source of energy.

Conclusion

Executive Order 14008 underscores the Biden-Harris administration's commitment to leveraging federal lands in the fight against the climate crisis (Sec. 204 and 207).²⁶ However, under current law, on-shore wind and solar energy projects developed on these lands do not return any revenue to states or local communities; instead, all revenues are deposited in the U.S. Treasury (Comay, 2019, p. 7). Notably, the National Renewable Energy Laboratory's (NREL) 2050 mid-case scenario for technology with the largest modeled share of generation per MWh across the United States predicts that over two-thirds of all states will rely primarily on on-shore wind or solar energy sources by 2050 (National Renewable Energy Laboratory, n.d.).²⁷ In alignment with Executive Order 14008, the BLM has committed to permitting a minimum of 25 GW of solar, wind, and geothermal energy production on public lands by 2025 (The BLM National Renewable Energy Strategy n.d.). However, among these renewable energy projects, only geothermal projects are legally required to disperse revenue to states and local communities—a relatively insignificant stipulation as geothermal energy is not being deployed at nearly the same rate as on-shore wind and solar. Despite the current administration's commitment to expand renewable energy deployment and address the needs of historically underserved communities (The U.S. Government, 2022), the absence of a revenue-sharing mechanism for wind and solar projects developed on public lands persists. Consequently, such absence ensures that the most affected populations will fail to receive federal revenue from new forms of energy production. Broad, bipartisan support, amongst American voters supports changing these policies, as do a broad cross-section of local and state leaders.

26 Sec 204, affirms the Biden-Harris Administrations commitment to using public lands and waters to support climate action. Sec. 207 specifically outlines the Administrations commitment to increasing renewable energy production on public lands and waters via streamlining the permitting and review processes. Section 207 also states the Administrations goal of doubling offshore wind by 2030. (See Exec. Order No. 14008. (2021). <https://www.govinfo.gov/content/pkg/FR-2021-02-01/pdf/2021-02177.pdf>).

27 An estimation of the share of renewable energy buildout expected to occur on federal land was not available via public data. However, the overlap between maps illustrating all [federally owned land in the U.S.](#) and maps [depicting renewable energy buildout by 2050](#) compounded with the Biden-Harris Administrations commitment to using public lands for such buildout, increases the likelihood that the US will see an increase in development of onshore wind and solar projects on federally owned land.

References

- 43 USC CHAPTER 29, SUBCHAPTER III: Outer Continental Shelf Lands. Office of the Law Revision Counsel United States Code. <https://uscode.house.gov/view.xhtml?req=granuleid%3AUSC-prelim-title43-chapter29-subchapter3&edition=prelim>
- 136 STAT. 1818 PUBLIC LAW 117–169. Congress.gov. (2022). <https://www.congress.gov/117/plaws/publ169/PLAW-117publ169.pdf>.
- Barnes, S., Holland, M., Laurenzano, C., Osland, A., & Shao, C. (2023). (rep.). *Offshore Wind in the Gulf of Mexico: Natural Resource Revenue Potential*. Lafayette, LA: Kathleen Babineaux Blanco Public Policy Center.
- Bauer, L., Edelberg, W., Greene, C., Howard, O., & Zou, L. (2024). (rep.). *Eight facts about permitting and the clean energy transition*. Retrieved 2024, from <https://www.hamiltonproject.org/publication/economic-fact/eight-facts-permitting-clean-energy-transition/>.
- BLM. (2023). *Valuing america's public lands 2023*. Socioeconomic Data | Bureau of Land Management. <https://www.blm.gov/about/data/socioeconomic-impact-report-2023>.
- BLM Final Renewable Energy Rule FAQ. Bureau of Land Management. (2024). <https://www.blm.gov/sites/default/files/docs/2024-04/BLM-Final-Renewable-Energy-Rule-FAQs.pdf>.
- BLM Final Rule. *Rights-of-Way, Leasing, and Operations for Renewable Energy*. The Federal Register. (2024 July, 01). [Federal Register :: Rights-of-Way, Leasing, and Operations for Renewable Energy](https://www.federalregister.gov/documents/2024/07/01/2024-13111-rights-of-way-leasing-and-operations-for-renewable-energy).
- BLM Final Rule. *Competitive Processes, Terms, and Conditions for Leasing Public Lands for Solar and Wind Energy Development and Technical Changes and Corrections*. The Federal Register. (2016, December 19). <https://www.federalregister.gov/documents/2016/12/19/2016-27551/competitive-processes-terms-and-conditions-for-leasing-public-lands-for-solar-and-wind-energy>.
- BLM National NEPA Register. Bureau of Land Management. (2024, March 15). <https://eplanning.blm.gov/eplanning-ui/project/2022371/570>.
- The BLM National Renewable Energy Strategy*. Bureau of Land Management. (n.d.). <https://www.blm.gov/programs/energy-and-minerals/renewable-energy/strategy>.
- BOEM. (n.d.). *Outer Continental Shelf*. BOEM.gov. <https://www.boem.gov/oil-gas-energy/leasing/outer-continental-shelf>.

- Bolinger, M., Millstein, D., Gorman, W., Dobson, P., & Jeong, S. (2023). Mind the gap: Comparing the net value of geothermal, wind, solar, and solar+storage in the Western United States. *Renewable Energy*, 205, 999–1009. <https://doi.org/10.1016/j.renene.2023.02.023>.
- Brunner, E., Hoen, B., & Hyman, J. (2022). School district revenue shocks, resource allocations, and student achievement: Evidence from the universe of U.S. wind energy installations. *Journal of Public Economics*, 206, 104586. <https://doi.org/10.1016/j.jpubeco.2021.104586>.
- Budget Justification: Department-Wide Programs*. (2025). Department of Interior. <https://www.doi.gov/media/document/fy-2025-office-secretary-department-wide-programs-greenbook>.
- Budgeting for Renewable Electrical Energy Zone Earnings Act*. Congress.gov. (2022). <https://www.congress.gov/bill/117th-congress/house-bill/8437?q=%7B%22search%22%3A%22BREEZE%22%7D&rs=4&r=1>.
- Clarke, L., Curtis, M., Eisenberg, A., Grubert, E., Haggerty, J., James, A., Jensen, N., Kaufman, N., Krause, E., Raimi, D., Tingley, D., & Weber, J. (2024). (rep.). *A Research Agenda for Economic Resilience in Fossil Fuel–Dependent Communities*. Retrieved 2023, from [https://assets-global.website-files.com/65f9f863036e7bbd0fc012f9/660db49cd623bfc6cc593245_REE%20Report%2024-1%20\(Final\).pdf](https://assets-global.website-files.com/65f9f863036e7bbd0fc012f9/660db49cd623bfc6cc593245_REE%20Report%2024-1%20(Final).pdf).
- Comay, L. (2019, November 7). *Issues and legislation related to energy development on Federal Land*. EveryCRSReport.com. <https://www.everycrsreport.com/reports/TE10043.html>.
- Comay, L., & Clark, C. (2023, September 13). *U.S. Offshore Wind Energy Development: Overview and Issues for the 118th Congress*. Congressional Research Service. <https://crsreports.congress.gov/product/pdf/R/R46970>.
- DOI. (n.d.). How revenue works. Department of the Interior | Natural Resources Revenue Data. <https://revenue.data.doi.gov/how-revenue-works/#who-owns-natural-resources-in-the-us>.
- DOS. (2023, December 19). *Announcement of U.S. Extended Continental Shelf Outer Limits*. U.S. Department of State. <https://www.state.gov/announcement-of-u-s-extended-continental-shelf-outer-limits-2/>.
- Energy policy act of 2005*. Congress.gov. (2005). <https://www.congress.gov/109/plaws/publ58/PLAW-109publ58.pdf>.
- Exec. Order No. 14008. (2021). <https://www.govinfo.gov/content/pkg/FR-2021-02-01/pdf/2021-02177.pdf>
- Gazmararian, A., Jensen, N., and Tingley, D. “Navigating the Green Transition: What Policymakers, Business Leaders, and Citizens Need to Know.”

- Gazmararian, A. F., & Tingley, D. (2023). *Uncertain futures: How to unlock the Climate Impasse*. Cambridge University Press.
- Geothermal Energy Optimization Act*. Congress.gov. (2024). <https://www.congress.gov/bill/118th-congress/senate-bill/3954/text?s=1&r=1&q=%7B%22search%22%3A%22Geothermal+Energy+Optimization+Act%22%7D>.
- Geothermal Explained*. U.S. Energy Information Administration (EIA). (2023, November). <https://www.eia.gov/energyexplained/geothermal/use-of-geothermal-energy.php>.
- Geothermal Project Information*. Bureau of Land Management. (2023). <https://www.blm.gov/programs/energy-and-minerals/renewable-energy/geothermal-energy>.
- Godby, R., Taylor, D. T., & Coupal, R. (2018). Wind development, tax policy and Economic Development Tradeoffs. *The Electricity Journal*, 31(5), 46–54. <https://doi.org/10.1016/j.tej.2018.06.001>.
- Gulf of Mexico Energy Security Act of 2006*. BOEM.gov. (2006). <https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Energy-Economics/Econ/GOMESA.pdf>.
- Gulf of Mexico Energy Security Act (GOMESA): How revenue works*. Natural Resources Revenue Data. (n.d.). <https://revenuedata.doi.gov/how-revenue-works/gomesa/>
- H.R. 3794, Cost Estimate*. Congressional Budget Office. (2020, March 4). <https://www.cbo.gov/publication/56235>.
- Hunt, K. (2024, January 25). *The technical potential for clean energy deployment on BLM and other federal lands in the lower forty-eight United States*. Clean Air Task Force. <https://www.catf.us/2024/01/clean-energy-deployment-potential-blm-federal-lands/>.
- JC Sandberg. Written Testimony of JC Sandberg, Chief Advocacy Officer, American Clean Power Association. Before the House Committee on Natural Resources. (2024, July). https://naturalresources.house.gov/uploadedfiles/testimony_sandberg72324.pdf.
- Khalaf, C. (2022). (rep.). *Measuring the Economic Impacts of Wind Projects in Wyoming*. Laramie, WY.
- Lang, H. (2020, May 15). *States with the most land owned by the Federal Government*. Stacker. <https://stacker.com/real-estate/states-most-land-owned-federal-government>.
- Legal Information Institute. (n.d.). *16 U.S. Code § 500 - Payment and evaluation of receipts to State or Territory for schools and roads; moneys received; projections of revenues and estimated payments*. Legal Information Institute. <https://www.law.cornell.edu/uscode/text/16/500>.

- Lilley, M., Firestone, J., & Kempton, W. (2010). The Effect of Wind Power Installations on Coastal Tourism. *Energies*, 3(1), 1–22. <https://doi.org/10.3390/en3010001>.
- Mayer Brown. *U.S. Boem announces provisional winners of Massive Offshore Wind Auction*. (2022, February 25). <https://www.mayerbrown.com/en/perspectives-events/publications/2022/02/us-boem-announces-provisional-winners-of-massive-offshore-wind-auction>.
- Musial, W., Heimiller, D., Beiter, P., Scott, G., & Draxl, C. (2016). (tech.). *2016 Offshore Wind Energy Resource Assessment for the United States*. Golden, CO: NREL.
- National Renewable Energy Laboratory. “Mid-Case Scenario,” *State and Local Planning for Energy*, accessed 5/24/2024, <https://maps.nrel.gov/slope>.
- Oil and petroleum products explained*. U.S. Energy Information Administration (EIA). (2024). <https://www3.eia.gov/energyexplained/oil-and-petroleum-products/offshore-oil-and-gas-in-depth.php>.
- ONRR. (2023). *Explore data*. Natural Resources Revenue Data. <https://revenuedata.doi.gov/explore/?dataType=Disbursements&location=NF%2CNA&mapLevel=State&offshoreRegions=false&period=Fiscal+Year&year=2023>.
- ONRR. (2019-2023). *Explore data*. Natural Resources Revenue Data. <https://revenuedata.doi.gov/query-data?dataType=Production#>
- Ownership: How revenue works*. Natural Resources Revenue Data. (n.d.). <https://revenuedata.doi.gov/how-revenue-works/ownership/>.
- Parker, D., Johnston, S., Leonard, B., & Winikoff, J. B. (2023). *Renewable Energy on American Indian Land*. <https://doi.org/10.21203/rs.3.rs-3367220/v1>.
- Pending legislation*. U.S. Department of the Interior. (2021, May 24). <https://www.doi.gov/ocl/pending-legislation-17>.
- Programs: Renewable energy*. Bureau of Land Management. (2024). <https://www.blm.gov/programs/energy-and-minerals/renewable-energy>.
- Public Land Renewable Development Act of 2024*. Congress.gov. (2024) <https://www.congress.gov/bill/118th-congress/house-bill/8954/text?s=1&r=1&q=%7B%22search%22%3A%22HR+8954%22%7D>.
- Public Land Renewable Development Act of 2021*. Congress.gov. (2021). <https://www.congress.gov/congressional-report/117th-congress/house-report/636>.

- Public Land Renewable Development Act of 2019*. Congress.gov. (2019). <https://www.congress.gov/116/crpt/hrpt677/CRPT-116hrpt677.pdf>.
- Raimi, D., Davert, E., Neuenfeldt, H., Van Zanen, A., & Whitlock, Z. (2024, January). *The Energy Transition and Local Government Finance: New Data and Insights from 10 US States*. Resources for the Future. https://media.rff.org/documents/WP_24-01.pdf.
- Raimi, D., Grubert, E., Higdon, J., Metcalf, G., Pesek, S., & Singh, D. (2023). The Fiscal Implications of the U.S. Transition Away from Fossil Fuels. *Review of Environmental Economics and Policy*, 17(2), 295–315. <https://doi.org/10.1086/725250>.
- Ratledge, N., Zachary, L., & Huntley, C. (2022). Emissions from fossil fuels produced on U.S. federal lands and waters present opportunities for climate mitigation. *Climatic Change*, 171(1–2). <https://doi.org/10.1007/s10584-021-03302-x>.
- Reinvesting in Shoreline Economies and Ecosystems Act*. Congress.gov. (2023). <https://www.congress.gov/bill/118th-congress/house-bill/913/text?s=1&r=1&q=%7B%-22search%22%3A%22Reinvesting+in+Shoreline+Economies+and+Ecosystems%22%7D>.
- Revenues: How revenue works*. Natural Resources Revenue Data. (n.d.-b). <https://revenue.data.doi.gov/how-revenue-works/revenues/#After-a-payment-what-happens-to-the-revenue>.
- Smith, K., Haggerty, M., & Rose, J. (2021, June). *Federal Fossil Fuel Disbursements to States: State policy and practice in allocating federal revenue*. Headwaters Economics. https://headwaterseconomics.org/wp-content/uploads/HE_Federal_Fossil_Fuel_Disbursements_Report.pdf.
- Submerged Lands Act*. BOEM.gov. (2002). https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Outer_Continental_Shelf_Lands_Act_History/submerged.pdf.
- Tingley, D., working paper, “Variation in U.S. State Renewable Energy Taxation Policies”
- U.S. Bureau of Land Management, “Land & Mineral System Reports - LR2000 System,” <https://reports.blm.gov/reports.cfm?application=LR2000>.
- U.S. Department of the Interior. (2022). *The Federal Land Policy and Management Act of 1976, as amended*. U.S. Department of the Interior, Bureau of Land Management, Office of Public Affairs, Washington, DC.

- The U.S. Government. (2022, January 12). *Fact sheet: Biden-Harris Administration races to deploy clean energy that creates jobs and lowers costs*. TheWhiteHouse.gov. <https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/12/fact-sheet-biden-harris-administration-races-to-deploy-clean-energy-that-creates-jobs-and-lowers-costs/>.
- Vincent, C., Hanson, L., & Bermejo, L. (2020, February 21). *Federal land ownership: Overview and Data*. Congressional Research Service. <https://sgp.fas.org/crs/misc/R42346.pdf>.
- Wind Energy ROW on Public Lands*. BLM.gov. (2021). https://www.blm.gov/sites/default/files/docs/2021-11/PROJECT%20LIST%20WIND_October%202021.pdf.
- Young, K., Witherbee, K., Levine, A., Keller, A., Balu, J., & Bennett, M. (2014). (rep.). *Geothermal Permitting and NEPA Timelines* (GRC Transactions, Vol. 38).



CLIMATE ACTION ACCELERATOR

Salata Institute for Climate and Sustainability
Harvard University