

CLOSUP Working Paper Series
Number 61

December 2023

State of Washington Renewable Energy Policy Analysis Report

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This paper is available online at <http://closup.umich.edu>

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ABSTRACT

With historically strong governmental support in its climate goals, Washington looks to continue to be a leader in renewable energy policy and deployment. While the state could have rested on its nation leading hydroelectric generation, Washington continues to push for increased electrification, streamlined development, and state subsidies for renewables. As the state moves closer to its 100% Clean Energy Standard, lawmakers and government officials are looking for ways to uplift communities most affected by climate change as well as better integrate rural communities into the energy transition, and cite this as the largest challenge at present.

1 | STATE BACKGROUND

The 18th largest state by land area in the U.S., WA has a population of around 7.8 million¹ and is among the fastest growing states.² Located in the Western Interconnection, Washington generates 111 TWh a year from its 31.5 GW of installed capacity. The state retains a regulated energy market, with three investor-owned utilities (IOUs) and a handful of PUDs (people’s utility districts) and cooperatives that serve rural communities.^{3,4}

1.1-1.2 | WASHINGTON’S ELECTRICITY MIX AND RENEWABLE ENERGY POTENTIAL

WA’s electric utilities have “historically...relied heavily on a bilateral market in which individual utilities, power plant operators and brokers contract for power at the mid-Columbia delivery point on the transmission system.”⁵ Since 2014 this market has been tied to a central entity known as the Western Energy Imbalance Market (WEIM) which helps to “identify cost-minimizing power trades” and has brought down electricity costs.⁶

Electricity in Washington was the cheapest in the nation for residential customers this past summer.^{7,a} Residential customers account for ¼ of total electricity demand, with industrial demand commanding another ¼, transportation accounting for ~⅓, and commercial ~⅕. This breakdown is largely due to Washington’s advanced electrification efforts, with electric residential heating being almost 17% above the national average, and overall electric vehicle registration fourth in the nation behind California, Texas, and Florida (all states that have significantly greater populations).^{8,9}

Although the WEIM helps identify cost-effective trades, the low cost of electricity is mainly due to Washington’s investment in renewables (81.2% of generation through June 2023)¹⁰ more specifically hydropower,¹¹ which has low operational cost and upfront capital costs invested more than half a century ago.

It is impossible to overstate the importance of hydropower to Washington. In 2021, 64.42% of WA’s electricity came from hydropower, and in 2022 became the first in the U.S. Hydropower to reach 68%. As of 2022, there are 71 operational hydroelectric projects in the state, ranging from smaller river hydro to large-scale concrete gravity dams.¹² With a nameplate capacity of 6,809 MW, Grand Coulee supplies about 21 terawatt hours of electricity to Washington, states along the Western Interconnection, and Western Canada.¹³ The hydroelectric power produced in Washington in 2022 accounted for 31% of all US utility scale hydropower that year, making Washington a large net exporter of electricity (on the scale of 188 trillion BTU in net outflows in 2021).¹⁴ Such a large exporting profile commands the attention of multiple regulatory bodies across the region, including the Public Utility Commissions of Idaho, Oregon, and California, as well as WECC, the NWPCC (a four-state compact centered around the

^a 11.21 c/kWh for residential, 9.86 c/kWh for commercial, and 6.07 c/kWh for industrial customers as of June 2023

Columbia Basin), the Western Interstate Energy Board, and various Utility Commissions across British Columbia.¹⁵

However, many dams that were built in the early years of the US Army Corps of Engineers' hydropower heyday are reaching the end of their design lives. Washington is beginning to retire and replace energy generated from dams like the lower Snake River dams with alternative forms of energy;¹⁶ Indigenous water use rights and salmon reproductive ecology have also spurred this plant's retirement. NOAA has recommended \$30 million in funding in WA to remove dams that prevent fish from swimming out to sea.^{17,18} As of 2023 there seem to be no concrete plans to add more hydro.

While hydro has been the focus of electricity generation for decades, wind power is slowly gaining a larger share of the market. From 2001-2022, Washington has developed 23 wind projects¹⁹ and has ~3,400 MW of installed wind capacity as of the end of 2022 with 600 MW in additional capacity under construction through 2023.^{20,21} Most of these sites are in south-central and southeastern Washington where there is the greatest potential for wind energy according to the National Renewable Energy Laboratory (see Figure 1).^{22,23} As of 2022, wind accounted for 8.39% of Washington's electricity, fourth behind hydro, natural gas, and nuclear (see Figure 2).²⁴ According to the Department of Energy's WindExchange Resource Map, offshore wind has significantly higher resource potential than on-shore for the state.²⁵ In October of 2023, Governor Inslee put forth a proposal to make Washington a leader in offshore wind manufacturing, potentially making the ability to develop offshore wind along the coast much easier.²⁶ Currently, there is a push to invest in offshore wind on a national scale; in fact, both California and Oregon are working with the Bureau of Ocean Energy Management (BOEM) to plan for offshore wind energy leasing.²⁷ BOEM received two unsolicited lease requests from offshore wind developers for projects off the coast of Washington, which BOEM is reviewing. However, at this point, BOEM does not have plans to lease land for offshore wind in Washington.^{28,29}

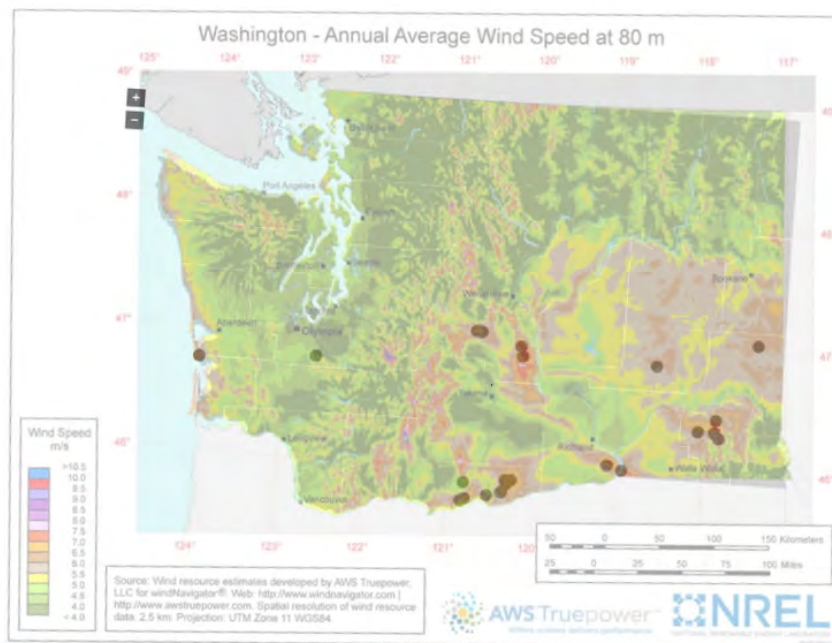


Figure 1. An overlay of all current sites of generation and wind potential in the state of Washington^{30,31}

Solar has stayed relatively stagnant in development since the beginning of the 21st century, with small-scale solar PV accounting for about 81% of all solar generation in the state, down from 97% in 2014, when solar was first being seriously developed in WA.³² Despite such low generation overall, the Solar Energy Industries Association (SEIA) projects a growth of 1,758 MW of installed capacity

(ranking 27th in the nation), based on a large uptick in installed utility scale capacity in 2022.^{33,b} Still, the state's insolation is the main limiting factor, with western WA having the lowest average solar irradiance in the continental US. Eastern WA, however, has potential for 4-4.5 kWh/m²/day, leaving optimism for further development.^{34,35}

The other two largest shares of generation in 2022 (see figure 2) came from natural gas (11.83%) and nuclear (8.35%).³⁶ Washington consumes significantly less natural gas for electricity than the rest of the US, however, generation from natural gas increased by 57.5% since 2001.³⁷ This increase coincided with a 61% decrease in coal consumption over the same period; total generation capacity from these two sources grew by only 5.73% combined, while overall electricity generation grew by 44.12%, suggesting that natural gas did not displace renewables during the last 20 years (Figure 2). Coal is projected to continue declining, as almost all utility scale electricity generated by coal comes from the TransAlta Centralia plant in southwest Washington, which has already retired one of their two units in 2020, and the other is set to be retired in 2025.³⁸

Nuclear power generation grew by 19% since 2001, however, the fact that Columbia Generating Station has remained Washington's only nuclear plant suggests that nuclear is declining in its overall power share.³⁹

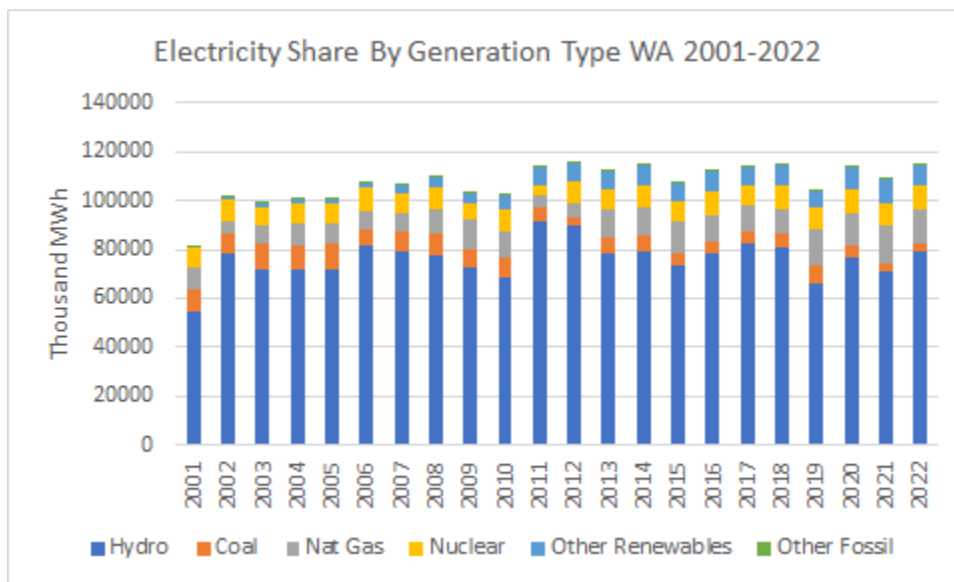


Figure 2. Generation shares for Washington State electricity 2001-2022. Other renewables include wind and solar while other fossil includes fuel oil and petroleum gases.⁴⁰

Looking ahead, Washington has the potential to create a high percentage of clean energy in the short term, but the transition will require massive amounts of transmission between Eastern and Western WA.⁴¹ The Washington Department of Commerce has estimated that 36% of Washington's clean energy will be imported from Montana and Wyoming in 2050 due to the 97% increase in power consumption from electrification.⁴² The report also identified the need for better long distance transmission to access energy from solar in the southwest and wind from the Mountain West regions.⁴³

1.3 | LOCAL NARRATIVES OF RENEWABLE ENERGY

^b This projection is more than double the estimate SEIA gave Washington in 2020, when they predicted a five-year installed capacity growth of 823.66 MW.

State and local narratives on the deployment of renewable energy (RE) in Washington share a common theme of economic development. However, *the Seattle Times* (the *Times*) indexes heavily on climate change benefits too, while local newspapers convey ambivalence towards having nearby projects. The more *tangible* the development proposal, the more the narratives diverge.

The greatest degree of similarity between state and local narratives occurs in regions that are transitioning from fossil fuels to RE, and where RE (and transmission)⁴⁴ development is in its infancy. Centralia, home to the TransAlta coal plant, is described by state and local outlets to be cautiously open to change. The *Times* describes the transition in statewide terms: “a step in Washington’s move to a fully green electricity grid.” The *Times* interviews former coal workers, showcasing their ambivalence: Warnken, who worked at the mine for years, said “if the mine would open back up, all those guys...would’ve gone back [with] open arms.” However, the local workforce development organization sees RE as a “unique opportunity.”⁴⁵ Overall, the *Times* sees this transition as two positive changes: the closing of the fossil facilities, *and* the promise of RE. The local papers see only the latter as promising. Centralia’s *Daily Chronicle* interviews the head of the Economic Alliance of Lewis County, who says that the new opportunities including clean hydrogen will create opportunity.⁴⁶ Another local paper also shows cautious optimism.⁴⁷

Even though BOEM is not currently leasing to offshore wind off the Washington coast, the unsolicited lease requests it received has sparked a discussion among coastal communities. Narratives about offshore wind differ more strongly between state and local perspectives, with the *Times* saying offshore wind “promises to reduce our dependence on fossil fuels and create stable, living-wage careers.”^{48,49} In contrast, the Aberdeen *Daily World* interviews both Seattle-based proponents of offshore wind as well as local experts who argue that “improperly sited” offshore wind “threatens the ability of both tribal and non-tribal fishermen to...provide for their families.” A core local critique of offshore wind is that BOEM “leases first and asks questions later,” highlighting frustration around local autonomy. The emphasis on local perspectives culminates in the anecdote that in 2021, the Quinault Tribal Council rejected a wind agreement because of risk to fisheries.⁵⁰

Finally, *onshore* wind and solar – and *projects further along in development* – highlight the greatest gap between state and local portrayals. The *Times* describes opposition to South Central WA’s prospective “Horse Heaven Project,” pictured in Figure 3, in loaded terms, calling the area a “Republican stronghold where many remain skeptical over...climate change” and their feedback on the project “somewhat chaotic” “attacks” fueled by “misinformation.” The article reports that all three county commissioners declared their opposition to the project.⁵¹ In contrast, the local *Tri-City Herald* dove into how the project lies within Yakama Nation Treaty Territory and recognized both tribal leaders’ opposition to the project as well as the local opposition group Tri-Cities CARES.⁵² Overall, these two reports have little in common, with the local community seeing the project as unwanted, and the state seeing it as essential.

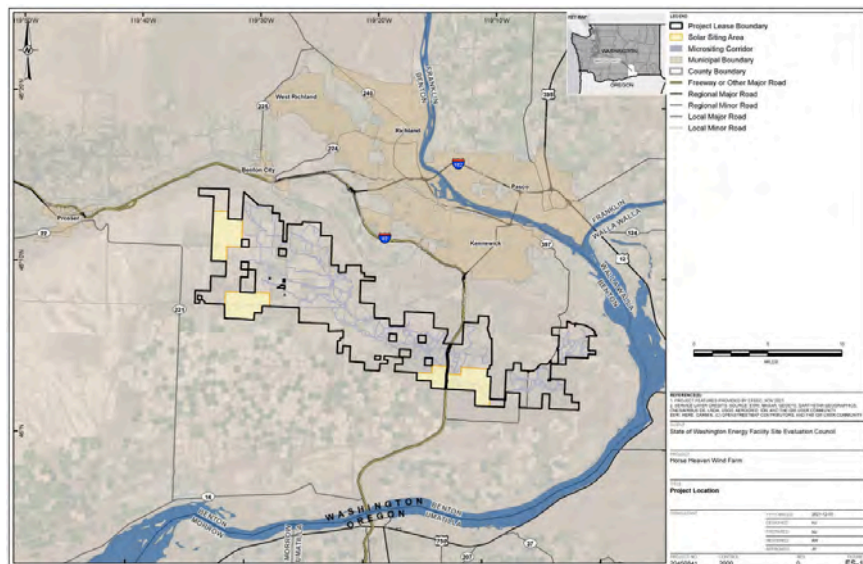


Figure 3. Outline of proposed Horse Heaven Project⁵³

1.4 | EXISTING ENERGY POLICY RESEARCH

Academic Journals

Academic research on WA renewable policy focuses mostly on national and regional adoption. Abotah and Daim (2017) found that across the Pacific Northwest, market-based policies, such as green pricing, net metering and interconnection standards for renewables, had the largest impact on adoption of renewables.⁵⁴ Zhou and Solomon (2020) found that states with low renewable potential and stricter RPS led to more Renewable Energy Credit purchasing than new project development^{55,c} and that electricity rate competitiveness heavily influenced renewable deployment. Marmion (2018) found that subsidies expanding access beyond the middle and upper classes have a significant impact on EV adoption rates across the state.⁵⁶ Additionally Moschel (2021) found that community solar incentives could expand residential solar deployment to lower income WA communities.^{57,d} Beyond affordability, Steel et al. (2015) found that state culture surrounding environmental welfare has increased adoption of researched and established renewables like wind and solar.⁵⁸ In multiple papers, education rates were found to be a large marker of whether stakeholders support renewable energy technology development.^{59,60,61} Overall, acceptance of renewables is high in Washington, but there is room to grow in terms of expanding deployment outside the wealthiest communities.

DOE National Labs and State Universities

Even more than writing reports on how policy is impacting RE deployment, Pacific Northwest National Laboratory (PNNL), University of Washington (UW), and Washington State University (WSU) are the conduits through which state and federal policy increase renewable energy deployment – whether it be through funding or program authorization.

Governor Jay Inslee has proposed to give \$10 Million of state funding to WSU Tri-Cities to build out its Institute for Northwest Energy Futures and kick-start clean energy initiatives, specifically the mid-Columbia region, which is rich in renewable resources.”⁶²

^c As a result, Washington is one of the largest purchasers of RECs as they move toward one of the strictest RPS goals in the nation.

^d Currently, Washington has a spatial disparity in the adoption of rooftop solar and EVs, leading researchers to believe that housing specific policy and subsidy may be helpful for large scale deployment of both technologies.

UW's Clean Energy Institute is home to scholars who advocate for even more ambitious climate policy in order to meet the state's renewable energy goals. UW professors argue that WA is a national leader in RE due to legislation such as CETA and the Climate Commitment Act (CCA), which set decarbonization mandates and created a temporary Clean Energy Fund (CEF) to enable quick progress.⁶³ They argue that the CEF should become a fixture in the biennial budget to "unlock the state's full potential." They highlight how CEF spurred projects on grid transformation, batteries, and more at WSU and UW and through a marquee partnership between WSU and PNNL.

Additionally, researchers at WSU/PNNL have used Justice40 funding to create an equitable clean energy job training program.⁶⁴ WSU has already implemented a Renewable Energy System Incentive Program, which is now fully subscribed,⁶⁵ and is currently implementing the Community Solar Expansion Program, a \$100 Million incentive program, based on HB1814.⁶⁶ The latter program is new but has already approved four projects.⁶⁷

Non-Profits

Several non-profits focused on clean energy policy in the Pacific Northwest (PNW) have put out reports about regional decarbonization, providing region-focused energy policy to guide the transition. The Clean Energy Institute (CEI) has authored reports focused on decarbonization pathways to net-zero, as well as narrower research about Tribal and rural communities in the energy transition.⁶⁸ Their research reinforces common clean energy themes: siting and permitting will shape the PNW's energy future and engaging communities authentically is critical to an equitable transition.⁶⁹ In particular, CEI emphasizes the threat that local siting dynamics pose to a cost-effective transition and the potential resulting permitting burdens on local communities.⁷⁰ Renewable Northwest is another prominent non-profit conducting clean energy policy analysis. In a recent report, they analyzed *Least-Conflict Solar Siting on the Columbia Plateau*, creating several maps to help guide siting plans for the rural WA region.⁷¹

1.5 | DEMOGRAPHIC, ECONOMIC, AND POLITICAL FACTORS

Demographics

According to the 2020 Census, the majority (80%) of Washingtonians reside on the Western side of the Cascade Range. On its own, King County, where Seattle is located, holds just over 29% of the population.⁷² Eastern Washington – the area east of the Cascades – has two times more land area compared to the "Westside," but only one-fifth of the State's population.⁷³ The State's urban/rural population density gap is only widening: while Washington is the 8th fastest growing state in the U.S., this growth is disproportionately occurring in the Seattle area – furthering the region's economic and political power.⁷⁴

The state is around 60% white, with the largest BIPOC population in King County. Rural counties tend to be whiter, though there is a relatively large agricultural Latinx population (~20%) in several agricultural counties.⁷⁵ There are 29 federally recognized tribes in the state.⁷⁶ The Yakama and Confederate Colville Tribes own the most land area with reservations located in Eastern Washington.⁷⁷ Figure 4 shows tribal reservations, as well as the counties classified as rural and urban.

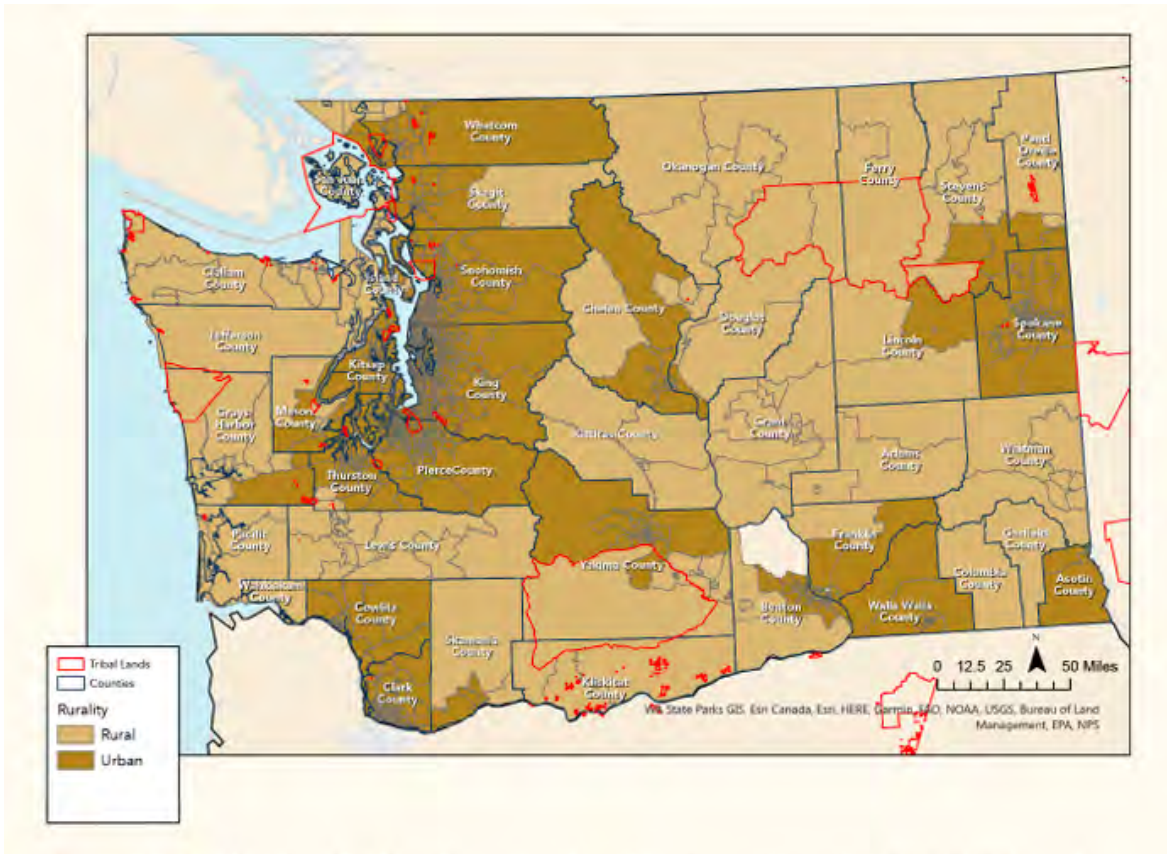


Figure 4. Washington State counties classified as urban versus rural using USDA RUCA codes, plus tribal reservation boundaries in red.⁷⁸

Economic Context

The west side of the state is also its economic center. The Seattle-based Information/Technology sector dominates Washington’s economy, with “Software Publishing” bringing in \$64.4 billion in 2022.⁷⁹ Other top industries include real estate and healthcare.⁸⁰ While relatively small when compared to these booming urban industries, agriculture and forestry are critical economic drivers in rural areas. Eastern Washington is the top producer of apples, blueberries, hops, and pears in the U.S., and the second largest producer of wine.⁸¹ Washington is also the nation’s 2nd largest lumber producer, with over 1,700 forest product businesses. Unlike Eastern WA agricultural products, 85% of the wood comes from Western WA.⁸² Around 43% of state land is federally owned; 76% of which is managed by the United States Forest Service.⁸³ Figure 5 shows public land ownership across the state.

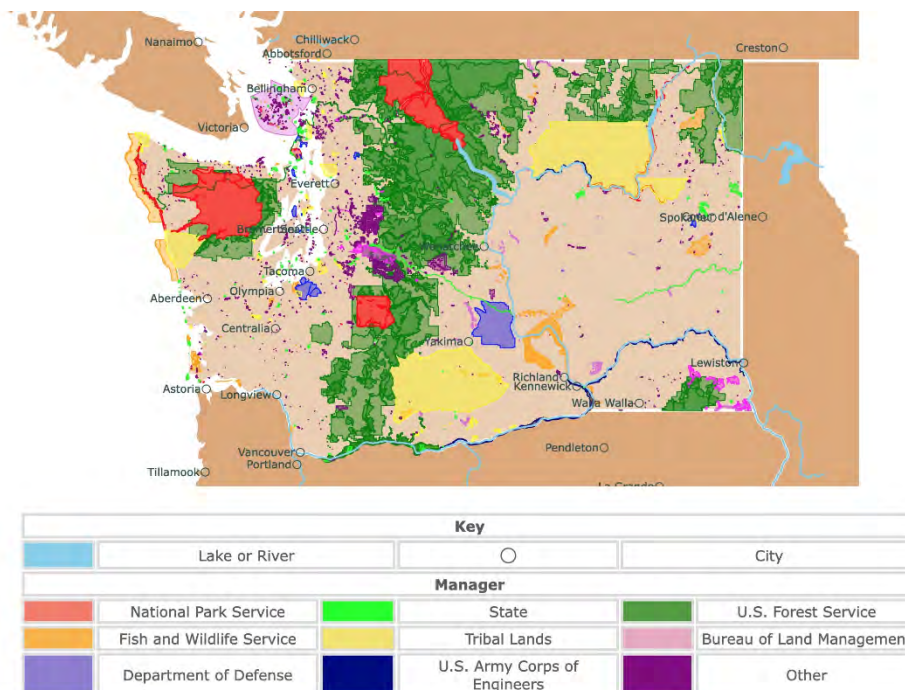


Figure 5. Washington State public lands⁸⁴

Political Dynamics

The East/West, rural/urban divide also drives Washington’s political dynamics. While the State reliably votes “blue” in federal elections,⁸⁵ Democratic Governor Inslee won only eight of the state’s 39 counties in his first election campaign in 2012 and nine when he ran again four years later. As shown in Figure 6, on his third race in 2020 he secured victory with only the same nine counties.⁸⁶ Unsurprisingly, the Republican counties are concentrated in Eastern WA, with a handful of rural, conservative areas in Western WA. Despite the quantity of conservative counties, as of October 2023, Democrats control both houses of the Washington State Legislature and the offices of the secretary of state, attorney general and the governor.⁸⁷ As Republican Party State Chairman Caleb Heimlich said after Gov. Inslee’s third win in 2020: “We just can’t be competitive statewide with that margin in King County.”⁸⁸

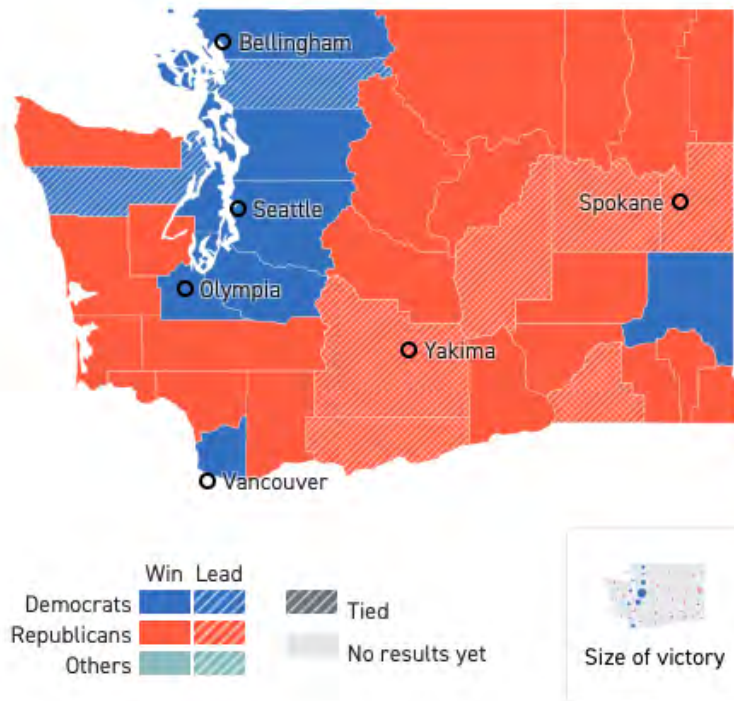


Figure 6. Washington State 2020 gubernatorial race results⁸⁹

Because Democrats have a strong political base in the populous urban areas, campaigns often focus on more “middle ground” issues to draw support from moderate Democrats and Republicans, keeping renewable energy out of the spotlight. For example, though incumbent Gov. Inslee is known for his focus on climate change and has pushed climate policy in Washington and nationally,⁹⁰ his 2020 gubernatorial campaign focused on COVID-19.⁹¹ After his current term, Inslee is stepping down; thus far, the 2024 candidates have barely mentioned climate change.⁹² Even State Attorney General Bob Ferguson, Inslee’s nominee, makes no mention of climate change or renewables on his webpage.⁹³

Nonetheless, the Democratic-controlled state legislature is expanding climate policy and renewable energy in the state. In 2021, the House passed the Climate Commitment Act (CCA), a bill that caps carbon emissions while “investing in green infrastructure, multimodal transportation, and environmental justice.”⁹⁴ Rep. Beth Doglio, representative of the urban 22nd district and Chair of the House Environment and Energy Committee, advocates for achieving carbon free power no later than 2035 and lays out a (albeit vague) plan to do so that involves renewable energy.⁹⁵ However, Republican representatives in the state remain seemingly opposed to climate and clean energy policies – only one of 60 Republicans in the legislature voted in favor of the CCA.⁹⁶

Rep. Doglio and the Environment and Energy Committee see engaging the state’s tribes and other WA BIPOC communities as critical to an equitable equity transition. On her website, Rep. Doglio describes bringing together “labor, environmentalists, communities of color, Tribal communities, and many other stakeholders” to pass Washington’s 100% clean electricity policy⁹⁷ and in the 2023 interim session, the Environment and Energy Committee is focused on community solar and net metering policies, as well as equity in the clean energy transition.⁹⁸ Tribes have a particular stake in the energy transition – having lost valuable cultural and economic resources when dams were built to harness hydroelectric power in the 1940s.⁹⁹

2 | POLICY LANDSCAPE ANALYSIS

2.1 | CLIMATE POLICY

Washington state has been one of the most aggressive at pursuing its climate goals since it enacted its first renewable portfolio standard (RPS) in 2006,^{100,101} as it is currently one of only 15 states to have a 100% clean energy requirement between 2030 and 2050.¹⁰² The initial target set by the Washington Energy Independence Act (I-937) was for utilities to have 15% of their customer load serviced by non-hydro renewable energy by 2020.^{103,104,105,106,e} In May of 2019, Governor Inslee signed the Clean Energy Transformation Act (SB 5116), which extended the initial RPS and changed it to a clean energy standard mandating 100% clean energy by 2045.¹⁰⁷ The benchmarks included in SB-5116 are: eliminating coal use in the electricity sector by 2025, a greenhouse gas (GHG) neutrality standard by 2030, and a 100% clean energy with “no provisions for offsets” by 2045.¹⁰⁸ Included in the bill is an energy justice initiative that requires equity considerations for traditionally high impact communities and vulnerable populations in utility planning.¹⁰⁹

As mentioned in the previous section, the state legislature passed the Climate Commitment Act (CCA) in 2021, mandating a 95% reduction in GHG emissions by 2050 across the state, further supporting the RPS goals and extending them beyond the electricity sector. The law leverages a market based solution to climate change from a cap-and-invest program, with revenue from state permit auctions going toward supporting environmental justice initiatives highlighted in the Washington HEAL Act (2021) and innovating clean transportation and resilience projects.^{110,111,f} Additionally, the Clean Energy Fund (CEF--started by the state government in 2013), has been managing a \$150 million portfolio of assets to support research and development of renewable technology and deployment for the private sector and includes tax incentives for clean energy technology companies.¹¹² In order to accelerate the energy transition and assist the investment efforts of the Clean Energy Fund, a pair of house bills passed more than a decade apart that would allow for streamlined siting and identification of “projects of statewide significance” to receive funding within host communities.^{113,114}

Response to the current climate legislation has been overwhelmingly positive across the state, with a majority of voters expressing support for state led climate initiatives.^{115,116} According to research from the Rocky Mountain Institute (RMI), Washington is the only state that is currently on pace to reach its 2030 targets.^{117,118} However, Washington is not devoid of pushback on its suite of climate legislation, with the majority of the opposition directed toward the CCA. Out-of-state utilities and independent power generators have argued discrimination because they do not qualify for some consumer rate reduction allowances the state has offered for in-state utilities who serve customers.¹¹⁹ Invenenergy (which owns the Grays Harbor natural gas plant) is currently suing the state for potential lost revenue.¹²⁰ Additionally, republican lawmakers in the state opposed the CCA when it was a bill due to claims that it would raise energy rates for consumers and “put undue stress on working class families.”¹²¹ Conversely, the bill has garnered support from environmentalists, tribal governments, and even major energy companies like BP (who fought a carbon tax law in 2018), and Puget Sound Energy who see this as a positive for the local environment and a potential for economic gain.¹²²

Before being passed, counter-proposals to the CCA had come from republican representatives who argued for some of the revenue generated by the cap-and-invest program to be used to ease the burdens felt by farmers and other businesses that need to truck goods across the state.¹²³ Other bills like

^e The restrictions put in place were that hydroelectric would need to be owned by the utility and other renewables (purchased or built) would need to be located in the Pacific Northwest. This stipulation was put in because Washington already has a lot of hydroelectric capacity, but much of it isn't owned by the utilities, making this necessary to push utilities to decarbonize and grow the state energy economy.

^f The ‘cap and invest program’ is just another term for cap and trade

STRONG (SB 5373) have come from environmental groups who believe carbon pricing for the state's largest polluters would be more effective at reducing emissions than the CCA's approach.¹²⁴ However, SB 5373 died in committee in 2022.¹²⁵

2.2 | INFRASTRUCTURE INVESTMENT

The framework for investment in infrastructure in the state of Washington was developed hand in hand with the climate legislation mentioned above. Upon the establishment of the Clean Energy Fund in 2013, the state outlined an Economic Sector Development Strategy to clearly “define state support for the clean technology industry including the use of third-party partnerships.”¹²⁶ By setting this framework early in the timeline of the state's first RPS, they have been able to make use of federal funds on top of smaller state assisted programs. The priorities stated by the Department of Commerce are to expand the economy while prioritizing tribal communities, rural communities, and vulnerable populations that have been historically impacted or underserved.¹²⁷ With these goals in mind, Washington has recently been able to tap into the National Oceanic and Atmospheric Administration's (NOAA) Inflation Reduction Act (IRA) based funding programs for climate resilience in frontline communities to the tune of nearly \$400 million.¹²⁸

The arm of the Clean Energy Fund extends to the electrification of buildings and transportation systems, grants to nonprofit organizations, grid modernization, rural clean energy innovation, solar deployment, as well as clean energy research and development.¹²⁹ Most recently, \$1 million in funding was allocated to seven rural counties and four tribal communities for electric vehicle charging infrastructure as the state looks to move toward its goal of 100% electric cars and light duty vehicles sold on the market by 2030.^{130,131}

One of the managing directors of the Clean Energy Fund described it as a helpful tool for advancing research and development that has been tested at the federal level through partnerships with national labs.¹³² While earlier uses of the Clean Energy Fund were for larger scope R&D pilot projects, aid is currently being distributed more toward projects looking to integrate into local communities. Equity implications of the increasingly local scale of the fund can be felt through federal fund matching, specifically in tribal communities who are looking to move toward energy sovereignty.¹³³ However, one drawback of the wide scope of the Clean Energy Fund is that the investments are not matching the scale of project needs. One potential cause of this issue stems from the technology silos currently in place through the different arms of the fund. Department of Commerce energy policy experts identified that if the boundaries were not so sharply drawn, projects like community solar, which overlap some of these investment buckets, could be more easily funded from the larger investment pool.³⁵ Similarly, projects like biowaste natural gas production can be moved to a different funding agency like the Department of Agriculture, as new innovations are not currently being sought after in the state, and would not normally meet the criteria of a Clean Energy Fund project.³⁵

Despite being bullish on many projects in the overall generation portfolio, riskier investments like small modular reactors, which have a significantly longer development time are not currently within the scope of the fund. The fund itself is on a two-year budget plan, meaning the timeline of approvals play a major role in this position, as well as their position with other more costly long-term projects.³⁵

On top of the Clean Energy Fund, the state has rolled out aid programs to directly subsidize energy efficiency retrofits in homes, solar and storage project development, rural home rehabilitation, and biomass based forestry projects.¹³⁴ Most of this aid has been taken advantage of near urban centers in the western part of the state (Figure 7), with a majority of the projects falling under the energy efficiency category.¹³⁵ These funds help make use of federal aid from the IRA to further assist in local energy efficiency and resilience.¹³⁶ One of the biggest challenges the state has seen from its building

decarbonization wing has been through implementation and behavior. While the state has been keen on a widespread rollout of heat pumps, getting consumers to use technologies in the most efficient way is going to be a challenge moving forward.³⁵ One main reason is that utilities need to take the steps to educate consumers, and secondly, the large base of hydropower in the state makes the need for demand response or alternative rate structures somewhat obsolete.³⁵

From a funding perspective, Washington's Low-Income Home Energy Assistance Program (LIHEAP), and the US Department of Energy's Weatherization Assistance Program (WAP) can provide funding for low income households across the state.^{137,138} However, the Department of Commerce policy experts noted a potential source of friction in uptake--that assistance or compensation may disqualify low income individuals from other income dependent programs like food stamps if they were to get rebates for improvements.³⁵ On top of efficiency improvements on an aging housing stock, Washington is committing to updating building codes to improve energy efficiency in new construction.³⁵

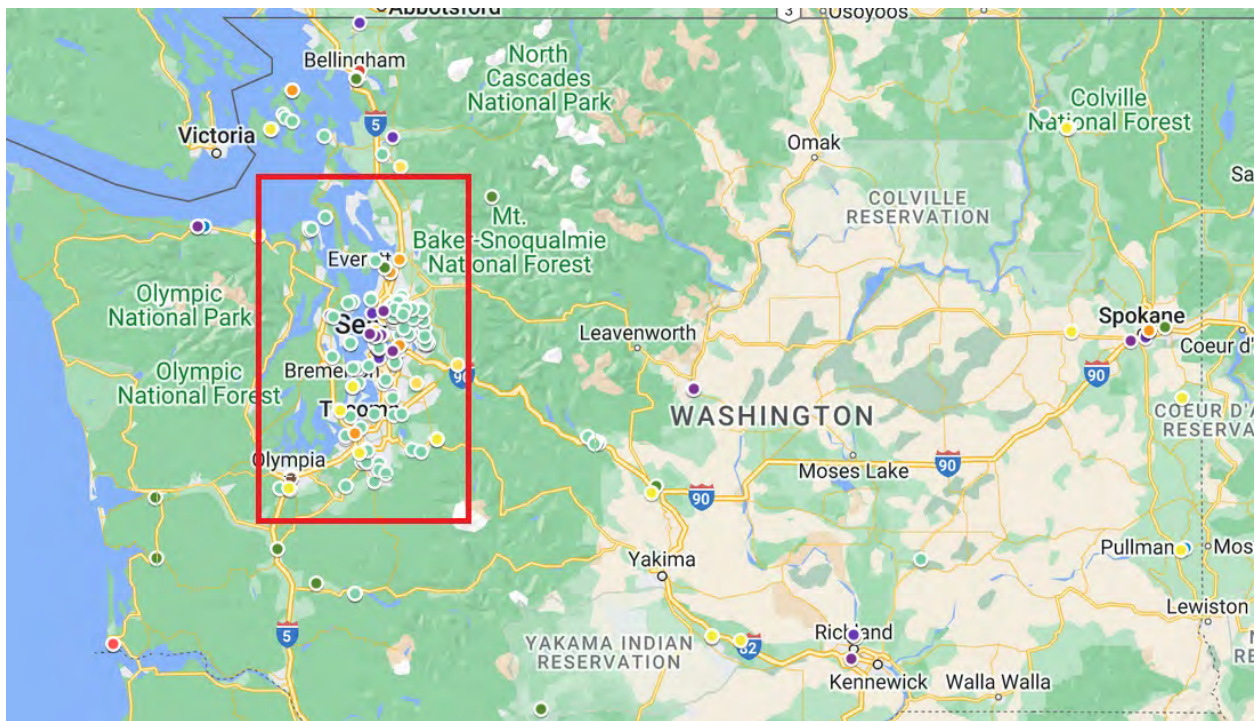


Figure 7. Washington State Clean Energy Contracts from CEF Oct. 2023¹⁴⁰

The state is also looking toward the future of renewable energy, with 386 MW of clean energy capacity planned to go along with the 3.6 GW already in place.¹³⁹ Washington has made use of Department of Energy federal funds for developing manufacturing supply chains in the domestic renewables sector, which includes hundreds of millions to help private companies develop battery manufacturing facilities located in the eastern part of the state, as well as \$110 million for new solar manufacturing.^{140,141} As of 2023, Washington seems to be well positioned to expand its green economy.

Washington has also tried to break into more experimental projects like small modular reactors (SMR), offshore wind, and pumped hydro markets with outside developers.^{142,143,144} While proposals for the first two types of projects have been met with generally positive reviews, hydroelectric power remains a contentious issue for the state. With the most installed hydropower capacity of any state, Washington is looking to breach some of its dams to aid salmon runs and tribal fisheries. However, in 2023 House Republicans have introduced legislation to save the dams.^{145,146,147} Recently, pumped hydro projects have been proposed along the Columbia River that would take over the sacred ceremonial land

of the Yakama Nation and create bottlenecks for salmon in an area populated with predators, drawing even more criticism from environmentalists and tribal communities.¹⁴⁸ However, from the legislation proposed in the CETA and CCA, Washington appears to be moving more in the direction of non-hydro solutions, as those are the most heavily subsidized, along with the acknowledgement that new and existing hydro projects have been met with just criticism.

2.3 | TAX POLICY

Overall, Washington’s tax policies provide a favorable landscape for renewable energy developers.

Property Taxation

Special treatment for wind and solar via property taxation is quite new in Washington state. Before 2022, there was no legislation to address this, and so wind¹⁴⁹ and solar¹⁵⁰ were entirely subject to ad valorem valuation by local property assessors and unidentified taxation methods. This valuation method may have hindered development due to its discretionary nature. Developers prefer to have advance information (and consistency) around financial assumptions for renewable energy projects, so an ad hoc method of property taxation where that depends on local jurisdictions is not preferred.¹⁵¹ However, having the ability to exercise discretion at the local level can be advantageous to local governments who likely have preferences on how to structure the tax and how to use the revenue.

In 2022, SSB 5910¹⁵² required the Washington Department of Revenue to meet with industry representatives and conduct studies for wind, solar, and storage equipment, using information provided by stakeholders to publish guidance to assessors that appraisers must consider when valuing renewable energy projects. Unsurprisingly, the data provided by industry groups demonstrated that renewables have declining replacement cost trends, which would suggest lower property taxes.^{153,154} This process highlights the significant political and technical involvement of the renewable energy industry in state policymaking.

According to 2023’s HB 1756, starting in January 2025, all existing and new wind, solar, and storage projects over 10 MW will be exempted from state property tax and will instead pay a production excise tax based on the project technology, nameplate capacity, and the number of years for which the project was given a property tax exemption (10 or 15 years). Table 1 below illustrates the cost of the new production excise tax on a per megawatt basis.

Table 1. Summary production excise tax table¹⁵⁵

Technology	Personal property tax exemption duration	Production excise tax rate
Solar	10 years	\$80/month/MW-ac
	15 years	\$75/month/MW-ac
Wind	10 years	\$150/month/MW-ac
	15 years	\$130/month/MW-ac
Storage	10 years	\$19/month/MWh
	15 years	\$14/month/MWh

The bill also creates a renewable energy local benefit account and funds it through revenues from the production excise tax.¹⁵⁶ Monies in the fund can then be used towards counties, tribes, school districts. It is important to note, however, that the amount of revenue collected by this local benefit account cannot be anticipated to be very significant. \$960/MW/year for solar is minimal compared to other project costs and compared to project revenues. Those in support of the bill cited that it would be favored by host communities because it “provides a steadier schedule of payments and directs the funds directly back to the locals.”¹⁵⁷ While this is true, the steady schedule of payments is not very substantial. Within the state legislature, the bill was sponsored by six Democrats and three Republicans.¹⁵⁸ While limited information is available to confirm how developers interpret this bill, and it is unclear how significant the excise tax is compared to the waived state property tax levy, it appears that the bill does not add significant complexity to property tax valuations neither does it make taxes high for renewable energy projects, so it would make sense for developers to approve of it. Incorporating this new taxation method into developers’ financial models would likely result in cost reductions on their projects, since these models assign value to a project by comparing the costs to develop, build, and operate it against the projected future cash flows arising from the sale of electricity. Given the new property tax legislation for renewables was favored by Democrats, supported by developers, and will predominantly affect wind development in conservative, rural areas, it seems that tension may be on the horizon as potential host communities may not reap sufficient tax benefits from the production excise tax to justify the presence of utility-scale wind farms in their areas.

Sales and Use Tax

Solar and wind have enjoyed a sales and use tax exemption in Washington state since 2009.¹⁵⁹ It has been modified and renewed, and the most recent iteration, part of the Clean Energy Transformation Act (2019), will expire in January 2030.¹⁶⁰ Sales and use tax exemptions are boons to developers, and the Washington tax is likely helping developers, since these taxes can result in significant sums over the life of a project (some states have a rate over 9%).¹⁶¹ The renewal of the exemption in Washington state is positive for developers, but could have very slight negative impacts on communities, since sales tax revenues go to the state’s General Fund. Ultimately, like the production excise tax, the sales tax policy encourages renewable energy development in Washington state and does not maximize tax revenue collected.

Business and Occupation Tax

Finally, Washington also has a business and occupation (B&O) tax abatement of 43% for Washington manufacturers of solar modules, inverters, and other components. The B&O tax is a gross receipts tax measured on the value of a business’ gross income, since Washington doesn’t have an income tax.¹⁶² This tax policy started as a modest reduction in 2005 from Senate Bill 5111 but was made more favorable to manufacturers through SB 6170 in 2009. Finally, the incentive was extended from an expiration date of 2027 to 2032 in recent SB 5849.¹⁶³ A pure discount to renewable energy developers, this tax abatement certainly has aided developers achieve lower supplier pricing. A little-known issue to residents, it is doubtful that the tax break stirred feathers in Washington communities. However, it combines with the production excise tax and the sales tax exemption to round out the portfolio of pro-development Washington’s renewable energy taxation policies.

2.4 | PUC POLICY

Washington Utilities and Transportation Commission (UTC) policy also provides a favorable environment for renewable energy development. The UTC regulates the three investor-owned utilities in Washington state: Avista Corporation, Pacific Power, and Puget Sound Energy. Washington state is one such state where there is a significant percentage of electricity provided by publicly owned utilities (around 28%), so UTC’s control is more limited than in other states.¹⁶⁴ Figure 8 below shows, for each state, the portion of investor-owned utility service territory compared to public utility service territory and coops. As you can see, Washington features all three.

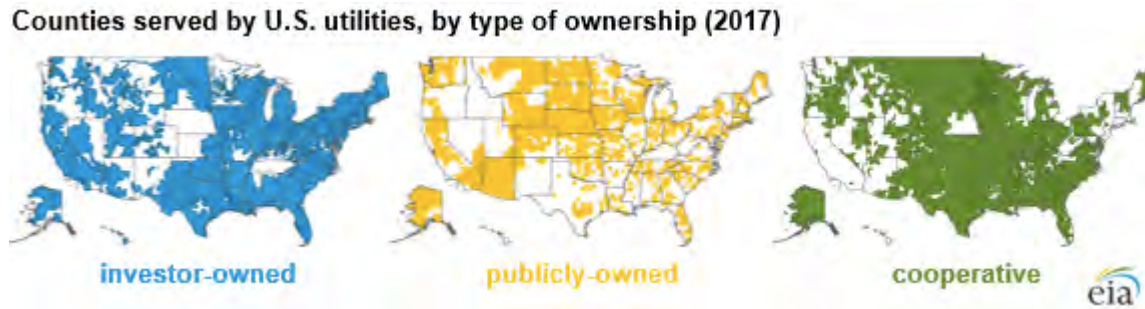


Figure 8. Counties served by utilities, by type of ownership¹⁶⁵

It is clear there are at least two ways the Washington Utilities and Transportation Commission (UTC) policy is impacting renewable energy planning and development.

PUC mandate changes

PUC policy is limited in many states (including Washington) by statutory authority, controlled by the state legislature. In 2019 through the Clean Energy Transformation Act¹⁶⁶, the Washington state legislature mandated that the UTC formally incorporate decarbonization into decision-making for the first time.¹⁶⁷ This law now means that the UTC has an expanded set of responsibilities to serve the public interest, which now includes responsibilities to improve long-term and short-term public health, create economic and environmental benefits, and retire fossil fuels. It also has more tools in its toolkit to do so, including performance-based regulation, where the UTC can incentivize utilities to act in certain ways and disincentivize other behaviors, as they pertain to the energy transition.¹⁶⁸ This policy empowers the UTC, and as a result, IOUs, to develop and/or procure more renewable energy, which is positive for developers. This new PUC mandate works in concert with Washington’s tax policies to encourage renewable energy development in a more top-down than bottom-up way.

PURPA recommendations

If the PUC mandate changes from CETA weren’t enough for developers to be excited about, in 2019, the UTC finalized rules for Public Utility Regulatory Policies Act (PURPA). This ushered in a favorable era where utilities will at times be required to purchase qualifying facilities, another word for renewable energy projects that meet certain criteria.¹⁶⁹ This means that developers get nearly guaranteed project buyers at favorable prices. To get this decision passed, IOUs, renewable energy advocates, and developers got together in 2018 in front of UTC to advocate for expanding PUPRA. Before 2018, Washington’s PURPA implementation was de minimis compared to other states, so this policy changed served as a win for the industry.¹⁷⁰

2.5 | RENEWABLE SITING POLICY

Overall, while the legislature has recently expanded the power of a state-level siting Council, community resistance to clean energy siting is a significant source of delay and growing tensions in state renewables development.

Current Clean Energy Siting Policy

Washington State has a “hybrid” renewables siting policy,¹⁷¹ for which the developer decides whether to apply to a local (city or county) siting authority or to the statewide Energy Facility Site Evaluation Council (EFSEC) for permitting approval. Created in the 1970s to streamline nuclear plant siting,¹⁷² the EFSEC is a legislatively-mandated group (RCW 80.50.040) that provides a “one-stop” siting process for major energy facilities.¹⁷³ Council members are appointed by the governor and voted on by the Senate, and must include the Directors (or designees of) the Departments of Ecology, Fish and Wildlife, and Commerce, as well as the Chair of the Utilities and Transportation Commission and the Commission of Public Lands.¹⁷⁴ Optional participants include representatives from the Departments of Agriculture, Health, and Military, and the Department of Transportation.¹⁷⁵ Additionally, a representative of every county and/or city where a project is proposed must serve as a voting member for decisions affecting that project.¹⁷⁶

The Council is responsible for evaluating technical, environmental, and cultural elements and impacts of a proposed project. The Council can consider any type of energy project, ranging from renewable energy installations to electrical transmission lines (greater than 115 kilovolts) to fossil fuel energy plants.¹⁷⁷ Applicants pay a fee of \$10,000 to request a “Potential Site Study” and, if approved, pay an additional \$50,000 to submit a formal application.¹⁷⁸ The process by which the Council evaluates projects is illustrated in Figure 9. Figure 10 shows the projects across Washington State that the Council has approved or is actively working on.

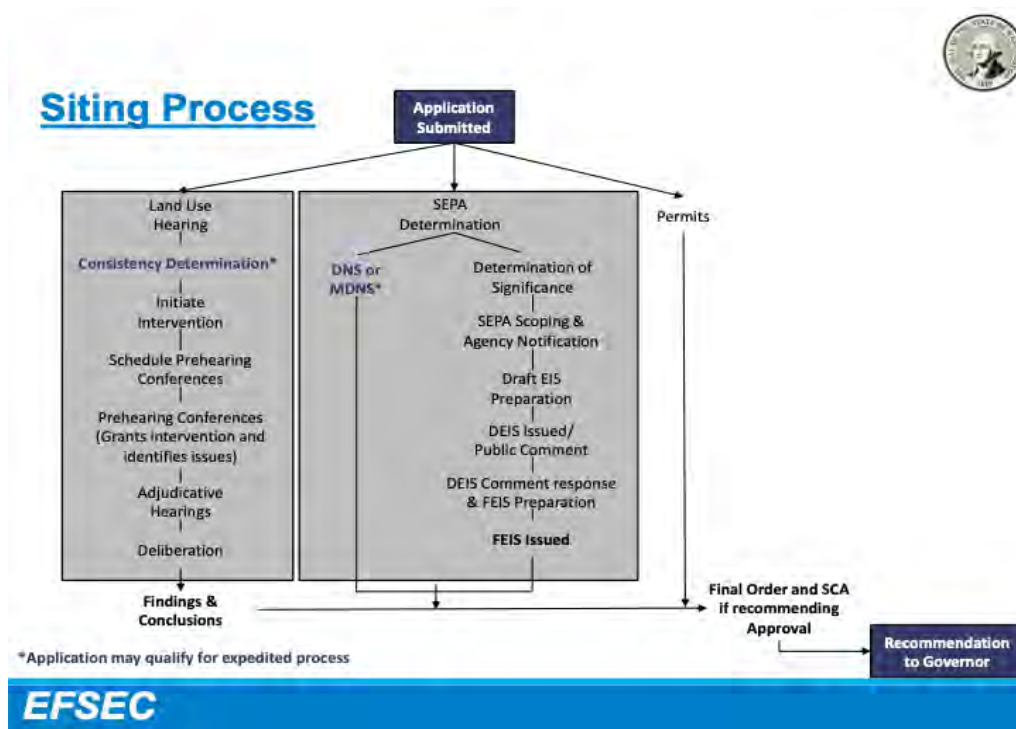


Figure 9. EFSEC Siting Process, which involves a Land Use Public Hearing and the State Environmental Policy Act (SEPA) evaluation. Note: For the “Consistency Determination” step, the Council determines whether the proposed project is “consistent with city, county, or regional land use plans or ordinances.” Source: EFSEC Council, see: <https://www.efsec.wa.gov/about-efsec/certification-process>

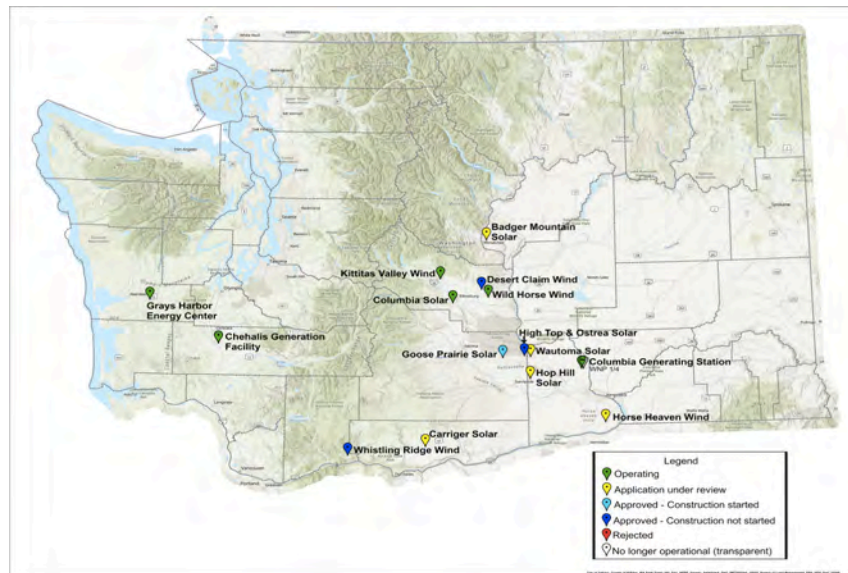


Figure 10. EFSEC projects across WA State.

Despite the Council’s power to supersede local siting authorities, developers still predominately choose to go through local channels.¹⁷⁹ State energy policy experts from the Dept. of Commerce say this is because developers want to be perceived as good neighbors.⁸ “Developers acknowledge that they’re going to be in [a given] community for the next 20 to 30 years,” said one expert, “...nobody wants their name in the press and projects that go straight to the EFSEC do not have a great reputation...states talk, and word gets around [if you] railroad a community.”¹⁸⁰ Further, because a local representative serves as a voting member in EFSEC project decisions, developers have to work with the community either way; going directly through local channels increases the popularity and, ultimately the success of, renewables projects.¹⁸¹

Recent Siting Policy Changes

To meet the goals of the Clean Energy Transformation Act (2019), the legislature has passed or updated several bills intended to increase the efficiency and effectiveness of renewable energy siting. In 2022, House Bill 1812 amended EFSEC’s role to “provide the Council with additional authority regarding the siting of clean energy... facilities, streamline application review... to meet state’s energy goals,” and increase the environmental justice lens of the EFSEC process.¹⁸² The bill includes updated and additional term definitions related to clean energy, streamlined governance processes, and more specific language around tribal consultation.¹⁸³

More recently, another bill, H.B. 1216, introduced more systemic siting policy changes in an effort to streamline renewable development. The bill 1) established the Interagency Clean Energy Siting Coordinating Council,---a group dedicated solely to clean energy project permitting---, 2) amended the State Environmental Policy Act to speed up the environmental assessment process, and 3) created a new

⁸ Experts cited examples of significant blow back against missteps by developers in WA State, such as when projects have been built in critical conservation areas for the endangered Ferruginous hawk.

Dept. of Commerce program to designate Clean Energy Projects of Statewide Significance (CEPSS),^h which expedites qualifying projects after requiring that applicants take extra steps to consider tribal and ecological impacts.¹⁸⁴

Additionally, H.B. 1216 increased public input in the WA state renewables siting process. Per the request of Governor Inslee, the bill formalized “least-conflict siting,” a multi-stakeholder process developed and tested in Washington State’s Columbia Plateau region that uses participant mapping to identify the most suitable lands for renewable development.ⁱ While the bill does not require least-conflict siting be used in all local or EFSEC siting decisions, it mandates that Washington State University (WSU) conduct further research identifying least-conflict areas for pumped storage siting.¹⁸⁵ It also requires that the Department of Commerce conduct at least three stakeholder meetings across rural Washington State to better understand “the benefits and impacts of the anticipated changes in the state’s energy system,” particularly for those projects sited under EFSEC’s jurisdiction.¹⁸⁶

Push-Back and Possible Policy Roadblocks

Despite legislative efforts to improve community and tribal participation in renewable energy siting, there is growing pushback in some rural communities as the pace of renewable development increases.¹⁸⁷ For example, in Klickitat County a group of citizens rallied in opposition to a boom in solar development that occurred after the county created “overlay zones” – areas where renewable permitting could be approved without a public hearing. The citizen group, C.E.A.S.E. – Citizens Educated About Solar Energy – ultimately pushed the Klickitat Board of Commissioners to approve a moratorium on energy development of all kinds in a 2-1 vote.¹⁸⁸

However, given that developers also have the statewide EFSEC option, local officials know that they may not have the final say on permitting decisions. “As renewable energy projects become more controversial, more developers may seek approval through the Council,” acknowledged Council Chair Kathleen Drew in 2022.¹⁸⁹ Concerns about the EFSEC work around are rising, as conservative rural counties are resistant to bearing the burden of the Westside driven clean energy transition. “I understand you want green energy by 2050. But ... you are sure not going to put it in Seattle, Olympia or Tacoma. You don’t want it in your backyard. You want it in our backyard,” said Dan Christopher – one of the County Commissioners who approved the Klickitat County moratorium.¹⁹⁰

In response to fears that developers will circumnavigate local authorities to gain approval from the EFSEC, Rep. Mark Klicker, a Republican from rural Walla Walla, WA advanced H.B. 1871 in 2022.¹⁹¹ The bill proposed a moratorium on state-approved renewable energy projects until Dec. 1, 2023, during which time a task force would study the impact of projects on rural communities. The bill did not pass,¹⁹² though similar opposition efforts at the local and state level are likely brewing.

Energy policy experts in the state are aware of the growing pushback.¹⁹³ To address resistance to renewable infrastructure projects, the Dept. of Commerce is surveying rural Washingtonian to understand perspectives on the clean energy economy and identify strategies for increasing community benefits.¹⁹⁴ The survey findings will inform policy recommendations to the legislature, ideally resulting in energy projects that are supported and even welcomed by rural communities.¹⁹⁵

^h Energy projects can be deemed as CEPSS if they “provide significant economic development to the local or state economy,” are “aligned with the state’s comprehensive plan for economic development,” and meet a handful of additional requirements for statewide significance. See *Chapter 43. 157 rcw: Projects of statewide significance*. (n.d.). Retrieved December 4, 2023, from <https://app.leg.wa.gov/rcw/default.aspx?cite=43.157&full=true>

ⁱTo address land-use conflicts arising due to the clean energy mandate, a bipartisan group of stakeholders and legislatures secured funding for Washington State University’s (WSU) “[Least-Conflict Solar Siting Project](#).” The project brought together a range of participants - ranchers, farmers, conservation specialists, tribes - to identify lands of high value. WSU used this input to generate a map of “least-conflict siting” locations for solar energy developing in the highly desirable, sunny areas of Southeastern WA State. (Full citation: *Wsu energy program > renewable energy > least conflict solar siting*. (n.d.). Retrieved October 30, 2023, from <https://www.energy.wsu.edu/RenewableEnergy/LeastConflictSolarSiting.aspx>)

Tribes remain mixed on renewable energy development, primarily because of its potential to impact culturally sensitive resources. They are happy with increased efforts to engage them during the permitting process, though somewhat skeptical that these efforts are adequate.¹⁹⁶ That said, state policy experts emphasized that several WA Tribes are leading state energy transition efforts through proactive investment in renewable technologies and exploring pathways towards energy sovereignty.¹⁹⁷

2.6 | PUBLIC LANDS

Current Public Lands Renewable Policy

Around 47% of Washington State is public land, however only a small portion of that is available for solar and wind development due to land agency policies. Over half of the public land is federally owned and managed by the United States Forest Service and the National Park Service.¹⁹⁸ While the USFS is exploring wind and solar development across the U.S., the mountainous forests they manage in WA have mainly been excluded due to inaccessibility, low solar radiation, wilderness restrictions and/or undesirable wind patterns (see Figures 11 and 12).¹⁹⁹ Meanwhile, the NPS conservation-oriented mission prohibits renewable development on their lands.²⁰⁰ The remaining federal agencies have limited land area (less than 4.5% of the State).²⁰¹ Of these agencies, the Bureau of Land Management (BLM) leases the most land for renewable development; however, they do not currently have any active projects in WA State.²⁰²

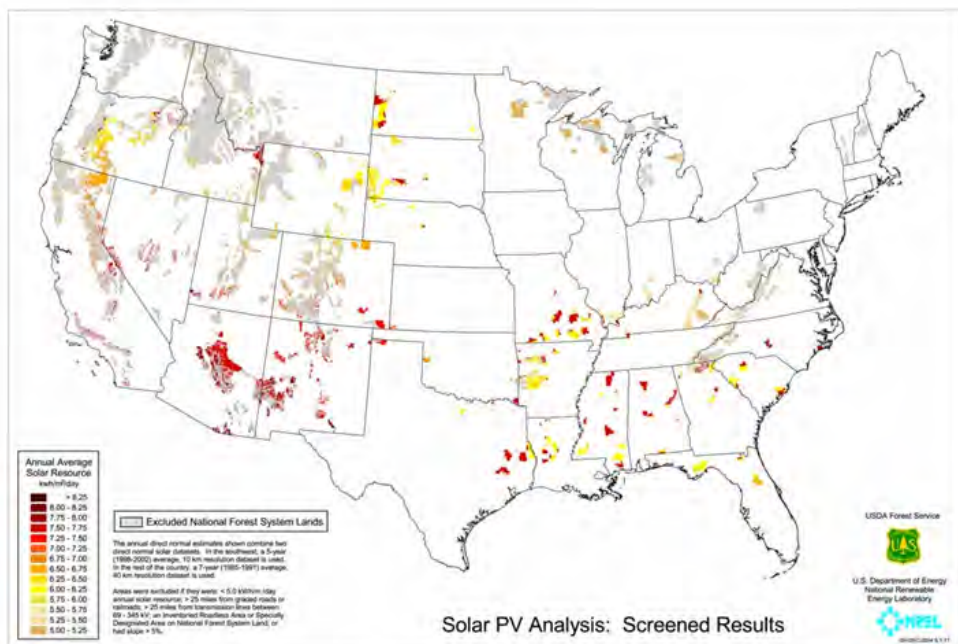


Figure 11. USFS land categorized by solar viability, based on screening analysis. Most WA State land is deemed not viable.²⁰³

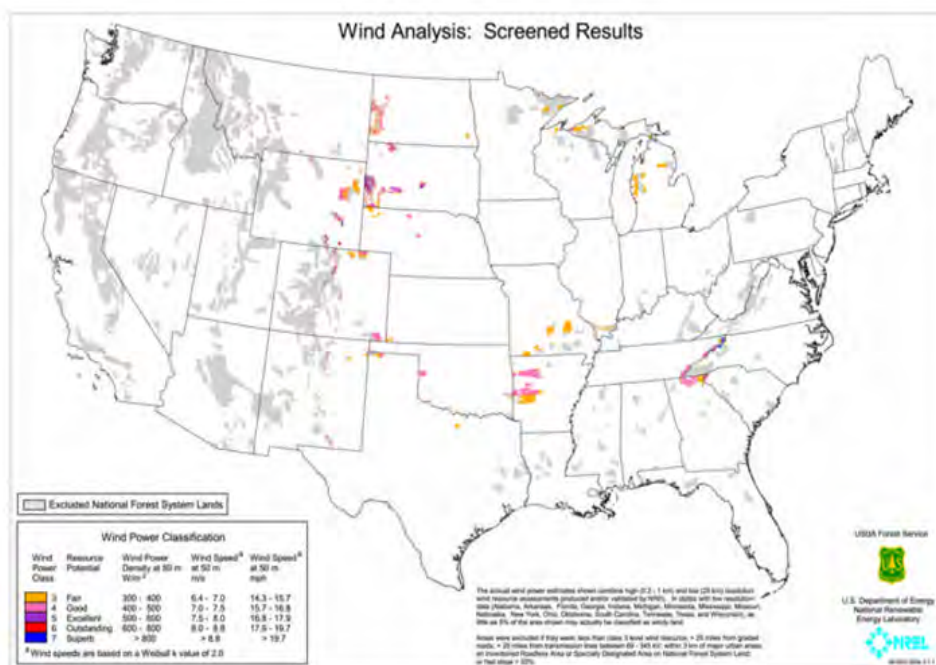


Figure 12. USFS land categorized by wind viability, based on screening analysis. Most WA State land is deemed not viable.²⁰⁴

The only federal land in WA State under consideration for renewables development is the Department of Energy’s (DOE) former Hanford nuclear site, through an effort coined “Cleanup to Clean Energy.”²⁰⁵ In Sept. 2023, DOE hosted an “Information Day” for interested parties at the site, which was historically used for nuclear testing and still holds several retired nuclear facilities.²⁰⁶ While the land has promise, developers have concerns about water availability and transmission capacity, as well as the nuclear waste cleanup that development there would entail.²⁰⁷ Nearby Tribal nations must also be considered in any Hanford development plans and requested further conversation with DOE representatives.²⁰⁸

Because most large tracts of federal land are not accessible, WA State’s Department of Natural Resources (DNR) is the largest land manager seeking to lease public land for renewable energy deployment.^j DNR owns around 8.6% of the State’s area and owns a variety of land types throughout the state, including tracts in the sunnier, windier, and flatter (and more rural) Eastern part of the State.²⁰⁹ Washington State law enables the DNR to “lease state lands for purposes it deems advisable,” including “commercial, industrial, residential, agricultural, and recreational purposes.”²¹⁰ DNR currently has around 1,300 acres already in solar.²¹¹ However, DNR is *not* a regulatory agency that can block or allow renewable development and must follow the Washington State permitting and siting process outlined above.²¹²

Recent Public Lands Policy Changes

DNR is relatively eager to lease their lands for renewable energy and has set a goal of 500 megawatts of solar energy development on DNR land by 2025 (around 5,000 acres). To encourage appropriate development that is “best for habitat and cultural resources,” they have created a map (published in Dec. 2022) that allows the user to identify DNR properties deemed viable for possible development (see Figure 13).

^j Tribal land also makes up a significant portion of the remaining land - at 6.2% - but obviously is managed with different considerations than state and federal-owned public land.

Push-Back and Possible Policy Roadblocks

While Washington citizens feel significant disgruntlement towards DNR due to its management of forests,²¹³ repeated Google searches for evidence of pushback against renewable development on DNR lands yielded no results. Further, Department of Commerce energy policy experts did not mention any anti-DNR development campaigns in a recent interview.²¹⁴ This is possibly due to the very small fraction of DNR lands available for lease – only 5,000 of the 3 million acres of state trust lands legally available for development.²¹⁵

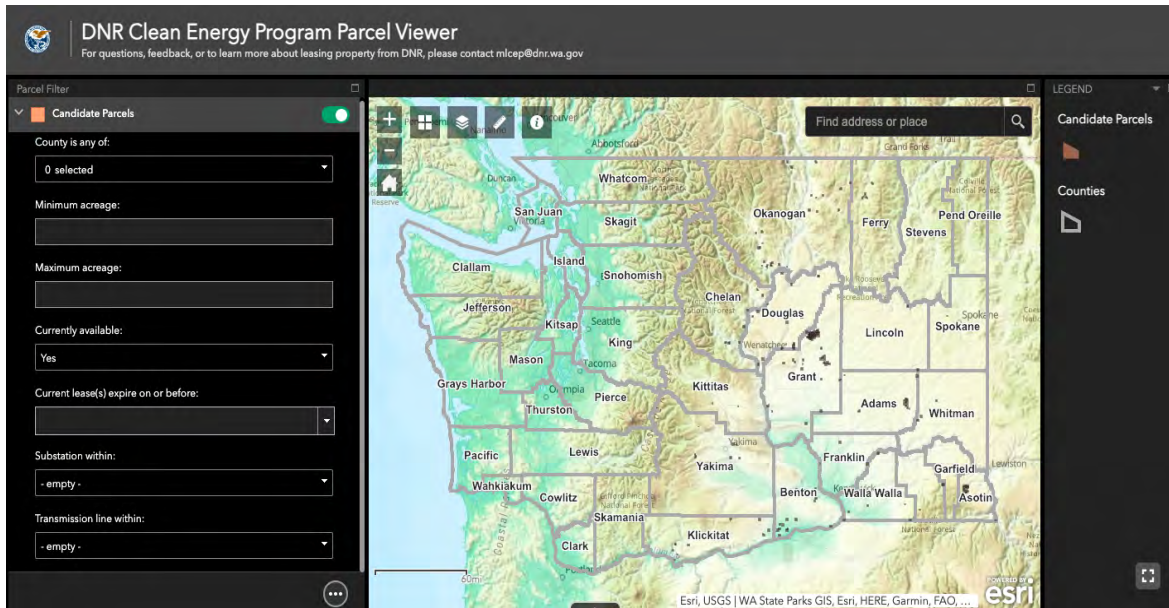


Figure 13. Screenshot of DNR’s Clean Energy Program Parcel Viewer that allows users to see areas the agency has identified as most suitable for solar development.

3 | ANALYSIS AND CONCLUSION

3.1 | CURRENT POLICY LANDSCAPE IMPLICATIONS FOR UTILITY SCALE WIND AND SOLAR

In the past decade, Washington has implemented progressive policies that collectively *should* promote renewable development and accelerate the pace of deployment. However, when taken together, it is evident that policy tweaks will be essential to a successful clean energy transition over the long-term. The intersection of pro-development climate, tax, and siting policies with urban/rural politics has already resulted in local clashes and building tensions. These tensions are delaying both wind and solar development across the state, as illustrated by the cases below.

Horse Heaven Wind Farm in south-central Washington is a prime example of how various elements of Washington’s policy and political landscape combine and clash to produce an evolving yet tense situation.²¹⁶ Recent pro-development state policies have set the stage for Horse Heaven: It is the largest wind and solar project proposed in Washington to date and is expected to make sizable contributions towards the 2021 Climate Commitment Act’s requirement of reducing carbon emissions 45% by 2030.²¹⁷ Rather than going through a local siting process, the project developer – Scout Clean Energies – opted for EFSEC review.²¹⁸ However, due to significant local opposition, EFSEC has already

taken three times longer than typical to approve of the project (3 years versus 1) and has yet to decide.²¹⁹ This delay is due to significant community pushback. Local citizens know that electricity from the project is unlikely to stay in the area and instead could be sent to Western Washington or other urban areas. Project opponents assert that wind turbines are “too big” and far “too close” to communities, will prevent fire-fighting planes from protecting the region, could endanger the already threatened ferruginous hawk, and will cause significant light pollution in the area.²²⁰ Further, the Yakama Tribal Nation strongly opposes the project, which overlaps with its Treaty Territory.²²¹

Locals are also upset by the tax plan associated with the project. According to our calculations using the state’s new production excise tax rules, Horse Heaven would generate \$1.8 Million per year in tax revenues.^k Compared to the \$500 Million per year the area receives from the tourism and recreation economy, these tax benefits are a drop in the bucket and might even threaten the tourism economy.²²² Between the modest excise tax bill, the B&O tax abatement, and the sales tax exemption, the tax policies governing Horse Heaven are decidedly pro-developer without offering much to the local community.

Solar development faces similar challenges due to the current state policy, although far less solar is in development given the state’s lower solar insolation. Lund Hill Solar in SW Washington, the largest utility scale solar project in the state at 150 MW, achieved commercial operations early in 2023.²²³ A clear byproduct of the recent pro-clean energy climate policies, the project is also the first to lease state trust lands from DNR. These former grazing lands will generate more revenue in solar, up yearly to around \$300 per acre from the \$2 per acre grazing fee.²²⁴ Though the project was approved by local siting authorities, on the day it went live the county commissioners called a meeting over whether to keep the area’s utility-scale solar ban, set up in January 2023 in response to growing development requests.²²⁵ The community cites many reasons for their frigid attitude towards solar: the tax revenues – which we calculated to be \$144,000 per year^l– aren’t big enough, no study was done to assess the “human impact” of the project, and the project will be a visual stain on the area, taking away land that was previously used for farming or grazing. Specifically, community members ask why the “community is going to bear the brunt of all the consequences — there are many — but none of the benefits except taxes. The tax base is going to go up, but...Is that fair and equitable enough?”²²⁶

Ultimately, these case studies call for a few specific changes to Washington’s policy landscape. We see four problems existing today. First, local perspectives are not sufficiently factored into policy. Second, rural populations don’t see the responsibility of hosting development as fairly distributed between their communities and urban ones. Third, tax benefits from renewable energy projects are not enough to compensate communities for the burdens that projects impose. Finally, the split nature of siting authority in Washington means that projects are getting significantly delayed in development – while garnering negative attention.

3.2 | OPPORTUNITIES FOR MORE HARMONIOUS RENEWABLE ENERGY POLICY

Our research and the Horse Heaven and Lund Hill Solar cases illustrate the need for Washington to adjust clean energy policy to incorporate political dynamics and local perspectives while continuing to support development. To better align policies and find greater harmony, we recommend that the state consider the following suggestions.

Survey Rural Populations

Based on the evidence that rural resistance is becoming the largest roadblock to renewable development in the state, more input from communities is needed to ensure that clean energy projects are meeting their needs. Fortunately, the Washington State Department of Commerce is already

^k Assumed Horse Heaven would be 1 GW-ac of wind energy (higher tax rate than solar) and used the 10 year time horizon.

^l Lund Hill is 150 MW-ac of solar energy. Used the 10 year time horizon.

conducting a survey of rural perspectives on renewable project impacts and desired benefits.²²⁷ We strongly support the survey, as well as Commerce’s plan to use the results to propose necessary policy changes that ensure that development more closely aligns with host community needs and preferences. While the survey results will provide more insight into what additional policies are needed, our research suggests the rural communities will likely agree with the specific policies changes outlined below.

Climate Policy and Fair Share

Washington remains in an interesting position to dictate its own climate future. Since it already has a 100% clean energy standard, the need for renewables has been mandated by the state, meaning the state will have to get to a fully decarbonized grid one way or another. The expansion of PURPA has made project development and interconnection far easier, making WA a prime location for smaller projects. From a policy and investment perspective, this means reforms to the Clean Energy Fund (CEF) to help reduce friction with rural communities and maximize benefits for those who welcome multiple smaller projects into their community. By mandating a “fair share” for communities to take on renewables, the state can help reduce friction by promoting the benefits of hosting renewables and reducing the potential for large projects to be forced upon communities. Fair share, a recent policy proposed by energy planning thought leaders,^{228,229} would require communities to hit a certain renewable capacity target and be rewarded for any more they decide to take on. Communities may be more willing to engage in funding talks that bring about the most economic development opportunity for them, further increasing visibility of the CEF statewide. Reforms to the CEF can happen in two parts: reducing the scope of what is funded and expanding its budget.

As of 2023, the CEF has several projects under its belt that spread the wealth too thin to make a real impact on the deployment of renewables along with all its other goals. By shrinking the scope, the CEF becomes a program to provide incentives for building decarbonization, project development, and consumer education. The funding provided by the state can be more targeted, incentivizing communities to take advantage of it, and enticing developers to leverage the CEF and work with communities from step one. To the second point, expanding the funding pool and continuing to push the CEF into the deployment-based program it has evolved into, allows the state to take chances on more place-based experimental projects, and aid communities that may not have had access to funding for specific forms of development. Clear demarcations of where funding goes and to what projects becomes paramount. Having explicit programs to fund community solar and other forms of distributed generation, which may only be partially covered by the current arms of the fund, may make access to smaller scale projects easier for communities and developers. In order to maximize community benefits over the status quo, tax and siting reform would need to occur in tandem with a fair share policy and are described below.

Production Excise Tax Changes

Lund Hill Solar farm’s tax contribution of \$144,000 per year is relatively small. To put it in perspective, it is equivalent to around 4% of Klickitat School District’s 2023-24 general fund.²³⁰ As evidenced by this, and the contrast in the case of Horse Heaven between the \$1.8 Million/year tax benefits from Horse Heaven and the local \$500 Million/year recreation economy, the production excise tax for renewables in Washington state is not high enough to make communities see the benefits as substantial. We recommend that the production excise tax be scaled up so that it offers more significant local benefits to host communities. Increasing this tax rate would help the state move towards tax policy that is both developer-friendly in its clarity and consistency and community-friendly in its impact.

Siting Reform

Tensions around the siting process are one of the greatest sources of delay in Washington’s renewable deployment. One way to improve siting policy would be placing greater restrictions on the

scale of projects that EFSEC can approve. If EFSEC only made decisions on *smaller* scale projects (e.g., less than 50 MW for solar, 100 MW for wind)^m, then their “super-authority” over local siting bodies could be used to quickly approve of projects with fewer community impacts, while leaving the larger, more controversial projects to local authorities. Additionally, EFSEC could adopt consistent rules concerning light and noise pollution to respond to growing community concerns about these impacts.

Simultaneously, greater clarity is needed on the reach of local siting authorities. If EFSEC’s power is scaled back, policies outlining the extent of local county and city siting boards are necessary for ensuring that residents and leaders understand their roles and powers in the siting process. Again, by clarifying rules, this could reduce project delays and give local authorities the power they need to successfully guide their communities through a clean energy transition. However, unless communities have guidance about the amount of renewable development they *must* undertake, reducing EFSECs authority and expanding local powers will not result in more renewable deployment. Thus, this policy must be implemented alongside a “Fair Share” climate policy to work.

Conclusion

In many senses, Washington State is leading the charge on the clean energy transition with pro-climate policies, attractive tax and siting rules for developers, and a powerful liberal voting base that makes a pro-clean energy Democratic majority likely in coming elections. However, like other states across the nation, Washington must address growing resistance from rural communities as the pace of renewable development increases. Unless projects are modified to work better for those most impacted, deployment will falter as communities organize against renewable development and the large-scale transformation of beloved landscapes that it often entails. Fortunately, Washington policy experts and the legislature are aware of these challenges. The state is well poised to make the modifications necessary to improve the policy landscape affecting renewables and must do so to continue to lead efforts towards a clean energy future.

^m These numbers are rough estimates. In general, it is important to note that wind projects require more land than solar. Since WA is more suitable for wind than solar, the state should prioritize modifying EFSEC such that wind siting becomes more efficient first and foremost.

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