ENERGY

Powering the Mountain States: A snapshot of our energy portfolio

By Sam Cardwell
Contributor

MAY 2024

MOUNTAIN STATES
POLICY CENTER

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Introduction

The states of Idaho, Montana, Washington, and Wyoming are at a critical time in their energy landscapes, navigating a complex network of resources, policies, and environmental concerns. This publication examines the energy portfolios of these states, their current mix of resources, ongoing agendas, and future trajectories. After further inspection, each state's unique challenges and opportunities shaping their energy futures become more evident.

This latest winter was a great case study for the reliability of these intermittent green sources that are being pushed nationwide. In Montana, Northwestern Energy spokesperson Jo Dee Black commented in January, "Wind and solar generation could not produce much, if any, power during the extreme cold."[1]

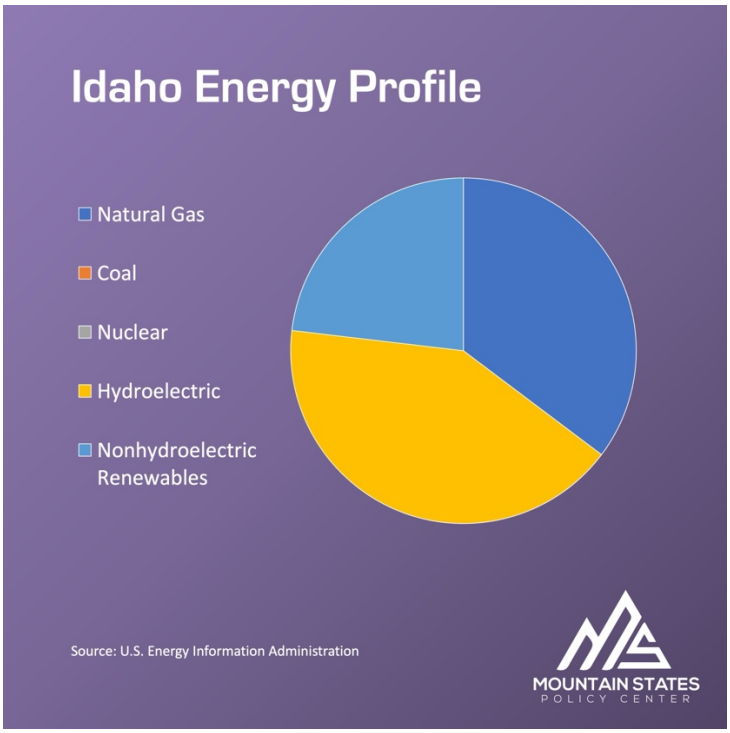
In Washington, Grant County PUD stated that "frigid temperatures throughout Grant County and the Pacific Northwest pushed energy use to record levels, strained many regional electric grids, and put a heavy draw on our region's capacity to generate electricity." As wind-generated electricity was failing, hydropower was picking up the slack.

This should be a wake-up call to legislators in all four states. With Washington's push for a natural gas ban, a national movement to breach the Snake River dams, and a surging population, legislators need to take this concern seriously. By understanding the current situation and the forces driving change, policymakers, stakeholders, and communities can make informed decisions to navigate the complexities of energy affordability and sustainability in the region.

KEY INFORMATION COLUMN

In Idaho, in-state coal production is minimal, but Idaho's utilities bring in electricity from coal-fired power plants in neighboring states.

Idaho's Energy Summary



Idaho runs on natural gas, hydroelectric, and other renewable sources such as wind and solar. In-state coal production is minimal, but Idaho's utilities bring in electricity from coal-fired power plants in neighboring states.

However, Idaho's largest electric utility plans to end its coal-fired power generation purchases by 2028.[1] Historically, hydroelectric plants typically supplied more than two-thirds of Idaho's in-state electricity generation until 2012. Since then, drought and increased generation from other renewable sources have reduced hydropower's portion of the state's total annual generation to slightly more than half.[2]

The Snake River dams are still crucial for Idaho's grid, meaning any breach would leave the state scrambling. In 2024, the Idaho Legislature passed a joint memorial stating that Idaho opposes the removal or breaching of the dams on the Columbia-Snake River System and its tributaries.[3] The legislature also passed a resolution in support of the Idaho National Laboratory which is a U.S. Department of Energy laboratory that conducts research on nuclear and renewable energy sources.[4]

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[1] *U.S. Energy Information Administration - EIA - Independent Statistics and Analysis*, available at https://www.eia.gov/state/analysis.php?sid=ID#:~:text=Idaho%2C%20known%20as%20the%20Gem%20State%2C%20is%20rich

[2] *Idaho Energy Landscape 2 Created by the Idaho Governor's Office of Energy and Mineral Resources 304 N. 8*, from https://oemr.idaho.gov/wp-content/uploads/2023-Idaho-Energy-Landscape-MASTER-FILE.pdf

[3] *Idaho State Legislature.* SJM 103. 2024.

[4] *INL*. (2019). INL. https://inl.gov.

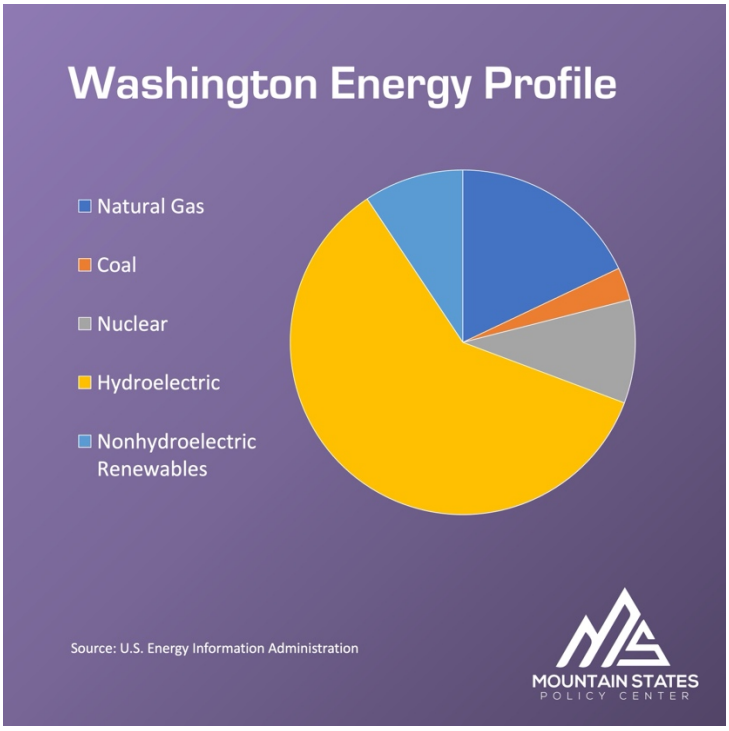
KEY INFORMATION COLUMN

Idaho has substantial wind energy potential in the southern portion of the state and on mountain ridges across the state.

Although only a small amount of the state's land is suitable for wind power development, Idaho has substantial wind energy potential in the southern portion of the state and on mountain ridges across the state. But currently, Idaho isn't exploring solar or wind in a substantive fashion. This means the grid should continue to hold up well in the cases of extreme weather.

Source	Thousand Megawatt-hour	% Of Energy	Type
Natural Gas	462	35.2%	Baseload
Coal	0	0%	Baseload
Nuclear	0	0%	Baseload
Hydroelectric	545	41.7%	Baseload
Nonhydroelectric Renewables	303	23.1%	Intermittent

Washington's Energy Summary



Washington State is heavily dependent on hydroelectric energy, so one of the biggest threats to energy stability would be the breaching of the Snake River dams.

Washington State is heavily dependent on hydroelectric energy, meaning one of the biggest threats to energy stability would be the breaching of the Snake River dams. In its efforts to replace hydroelectric energy, the Washington State Legislature has been pushing for other renewable sources including solar and wind.

KEY INFORMATION COLUMN

Washington State also has a goal of 100% zero-emissions electricity by 2045.[5] In the desired timeline, all electric utilities must eliminate coal-fired generation serving Washington state customers by 2025.

In the final days of the 2024 legislative session, the legislature passed Engrossed Substitute House Bill 1589.[6] This bill allows major energy providers to increase energy bills for customers to pay for expensive upgrades to their systems to decarbonize. Washington's Building Industry Association estimated that gas rates will increase by almost $1,000 per year due to this legislation. Not only does this approach raise prices, but the alternative sources of solar and wind energy sources are intermittent and haven't proven to be reliable sources because of their dependency on other factors to run.

During extreme weather events, these energy sources have proven to not be reliable.[7] Wind, specifically, has proven to disappear when there are extremely high or low temperatures. While these diversification efforts of the power grid are understandable, they are coming at the expense of reliable baseload power like natural gas, nuclear, and hydro.

Source	Thousand Megawatt-hour	% Of energy	Type
Natural Gas	1,507	18.0%	Baseload
Coal	258	3.0%	Baseload
Nuclear	815	9.7%	Baseload
Hydroelectric	5,033	60.0%	Baseload
Nonhydroelectric Renewables	786	9.3%	Intermittent

Montana Energy Summary

Montana has a heavier portion of coal-generated energy than Washington State or Idaho.

Montana has a heavier portion of coal-generated energy than Washington State or Idaho.[8] Between 1986 and 2020, coal-fired generation provided most of the electricity produced in the state due to the completion of the Colstrip Plant. But the future of coal generation in Montana is changing.[9]

Montana-Dakota closed the coal-fired Lewis and Clark Generating Station in 2021 after the utility's economic analysis found the Sidney plant could no longer compete with other resources. Since then, hydroelectric dams have

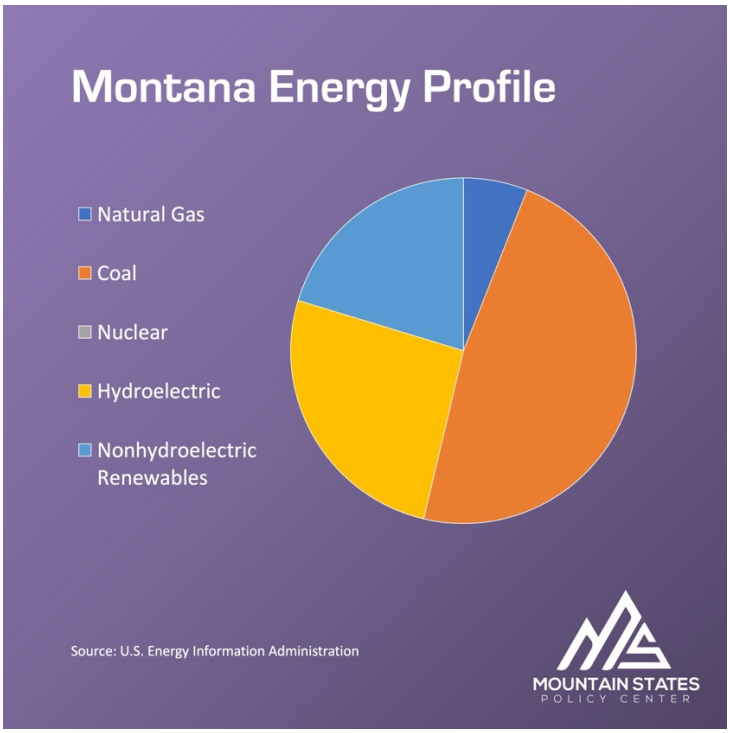
[5] Clean Energy Transformation Act. Washington Utilities and Transportation Commission. https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/clean-energy-transformation-act
[6] *Washington State Legislature*. HB 1589. 2024.
[7] *Cold weather reveals wind's vulnerabilities and the need to empower energy consumers*, by Todd Myers, Washington Policy Center, available at https://www.washingtonpolicy.org/publications/detail/cold-weather-reveals-winds-vulnerabilities-and-the-need-to empower-energy-consumers
[8] *Understanding Energy in Montana, 2023 available at* https://deq.mt.gov/files/Energy/Documents/FINAL2023_Understanding%20Energy%202023_Web_300dpi-with%20images_Final.pdf
[9] Eggert, A. (2023, December 23). *Wind power set to overtake coal generation capacity in Montana*. Montana Free Press. https://montanafreepress.org/2023/12/22/wind-power-set-to-overtake-coal-generation-capacity-in-montana/

KEY INFORMATION COLUMN

In 2021, Montana ranked sixth among all states for power generated by hydroelectric dams.

In Montana's Constitution, there is a right to a "clean and healthful environment."

proven to be an important resource in Montana's energy generation mix and produced half of the state's net electric generation in 2021.[10]



In 2021, Montana ranked sixth among all states for power generated by hydroelectric dams. There has always been a push for wind, as Montana's large geographic area and high plains regions make it one of the highest-ranked states for utility wind generation potential in the United States.

In Montana's Constitution, there is a right to a "clean and healthful environment."[11] Based on this right a lawsuit was filed in March of 2020, *Held v. Montana*. The plaintiffs argued that the state's support of the fossil fuel industry had worsened the effects of climate change on their lives, and deprived them of their constitutional right. The plaintiff won the case in August of 2023, but it was immediately appealed by the Attorney General Austin Knudsen. Since then, several amicus briefings have been filed by a host of research organizations, businesses, and legislators.[12] This ruling will have a substantial impact on energy permitting going forward.

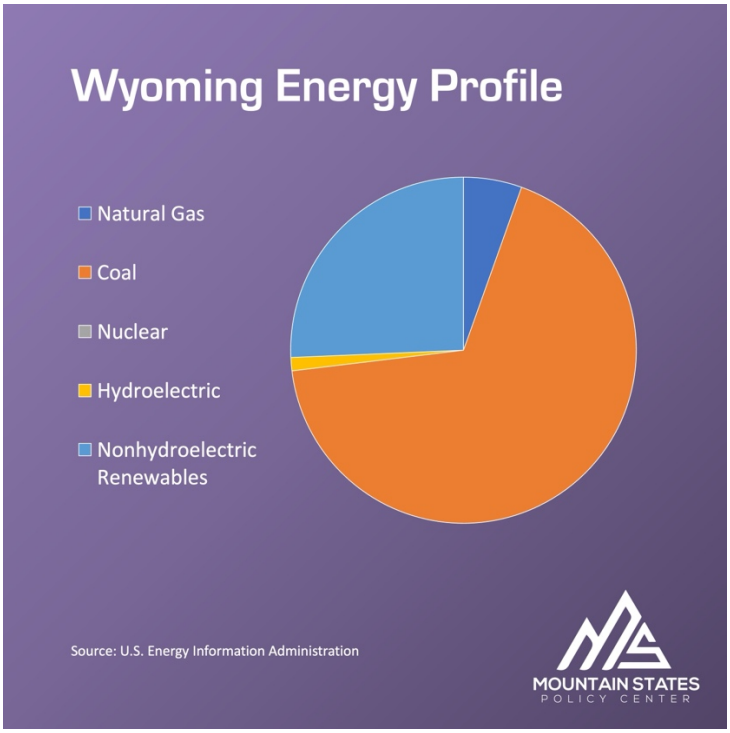
Source	Thousand Megawatt-hour	% Of Energy	Type
Natural Gas	88	3.8%	Baseload

[10] *A Guide to the Montana Environmental Policy Act* https://leg.mt.gov/content/Publications/Environmental/2021-mepa-handbook.pdf
[11] Perls, H. (2023, August 30). *Held v. Montana: A Win for Young Climate Advocates and What It Means for Future Litigation - Harvard Law School*. Eelp.law.harvard.edu. https://eelp.law.harvard.edu/2023/08/held-v-montana/
[12] Miller, B., February 26, D. M., & 2024. (2024, February 26). *Legislative leaders, business groups file briefs supporting state in Montana climate case • Daily Montanan*. Daily Montanan. https://dailymontanan.com/2024/02/26/legislative-leaders-business-groups-file-briefs-supporting-state-in-montana-climate-case/

KEY INFORMATION COLUMN

Coal	1,064	46.1%	Baseload
Nuclear	0	0%	Baseload
Hydroelectric	650	28.1%	Baseload
Nonhydroelectric Renewables	509	22.0%	Intermittent

Wyoming's Energy Summary



Behind Texas, Wyoming stands as the second largest exporter of energy in the nation, as it produces 12 times more energy than the state consumes.

Behind Texas, Wyoming stands as the second largest exporter of energy in the nation, as it produces 12 times more energy than the state consumes.[13] The state is generating the most coal-fired energy out of the Mountain States. But Wyoming Governor Mark Gordon is promoting an energy policy agenda that features advances in wind and nuclear technology. In 2022, the Wyoming Energy Authority signed a memorandum of understanding agreeing to collaborate on the research, development, demonstration, and deployment of nuclear energy technologies.[14]

Wyoming will continue the appropriate development of its legacy products while expanding investment in renewables, hydrogen, nuclear, geothermal, and rare earth elements.[15] In February of 2024, judges in the Ninth Circuit

[13] Lewis, M. (2021, August 30). *Wyoming is the No. 1 US coal producer, but its largest utility is ditching the fossil fuel*, available at https://electrek.co/2021/08/30/wyoming-is-the-no-1-us-coal-producer-but-its-largest utility-is-ditching-the-fossil-fuel/

[14] Maio, Pat. *Wyoming Part Of Aggressive Effort To Get Cutting-Edge Nuclear Plants Online*. (2024, March 13). Cowboystatedaily.com. https://cowboystatedaily.com/2024/03/13/wyoming-part-of-aggressive-effort-to-get-cutting-edge-nuclear-plans-online/?utm_source=Klaviyo&utm_medium=campaign&_kx=sb86JtAjdha1V5WaKhn7K3lUT7AI1iXfIVqLHEvuN7C4EYBo_c9kUcnial_oDgyZ.UXPtrV

[17] *Wyoming | State Energy Plans | NASEO*. Www.naseo.org. https://www.naseo.org/stateenergyplans-state?State=WY

KEY INFORMATION COLUMN

The energy landscapes of Washington, Idaho, Montana, and Wyoming reflect a complex interplay of resources, policies, and regional dynamics.

As states navigate the complexities of the energy transition, sustainability, and affordability, they must be wary of advancing non-hydroelectric sources at the expense of reliable baseload power.

Nothing in this publication shall be construed as an attempt to aid or hinder the passage of any legislation.

unanimously sided with Wyoming's arguments in support of the continuation of the federal coal-leasing program.[18] The decision removed a lower court order that reinstated Obama-era coal-leasing restrictions. This is a monumental judicial decision for Wyoming, as it can continue production of coal-generated energy.

But there are upcoming challenges. PacifiCorp intends to retire 14 of its 22 active coal units by 2030 and another five by 2040 and plans to add more than 3,600 megawatts of wind, more than 5,600 megawatts of solar, and around 6,700 megawatts of battery storage. With the intermittent nature of these sources coupled with the current energy velocity that Wyoming is producing, this decision could prove to be consequential.

Source	Thousand Megawatt-hour	% Of Energy	Type
Natural Gas	207	5.5%	Baseload
Coal	2,566	67.6%	Baseload
Nuclear	0	0%	Baseload
Hydroelectric	47	1.2%	Baseload
Nonhydroelectric Renewables	974	25.7%	Intermittent

Conclusion

The energy landscapes of Washington, Idaho, Montana, and Wyoming reflect a complex interplay of resources, policies, and regional dynamics. From the heavy reliance on hydroelectric power in Washington to the historic dominance of coal-fired generation in Montana and Wyoming, each state faces its own set of energy transitions and policy dilemmas. Legislative efforts to promote renewable energy sources, legal battles over environmental protections, and technological advancements in wind, solar, and nuclear power underscore the dynamic nature of the region's energy sector. It is critically important that there is a deep understanding of the regional context in shaping energy policies and practices.

Looking ahead, the Mountain States have an opportunity to lead the way toward a reliable, sustainable, and affordable energy sector. By embracing baseload sources like natural gas, hydro, and nuclear, these states can continue towards a more prosperous and resilient future. As states navigate the complexities of the energy transition, sustainability, and affordability, they must be wary of advancing non-hydroelectric sources at the expense of reliable baseload power.

[18] *Governor: Coal Leasing Moratorium Is a Step Backwards and Will Harm Consumers*. Governor of Wyoming. from https://content.govdelivery.com/accounts/WYGOV/bulletins/327e3a4

ABOUT THE AUTHOR

Mountain States Policy Center contributor Sam Cardwell lives in Boise and is an alumnus of the University of Washington and Liberty University, obtaining a bachelor's degree in political science.

Sam has worked on multiple legislative and congressional campaigns. He has experience in the governmental sphere as a legislative intern and a session aide at the Washington State Legislature.

Sam is the author of numerous MSPC studies, including *Adopting a new income tax liability threshold*.

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mountainstatespolicy.org PO BOX 2639, COEUR D'ALENE, ID, 83816 (208) 295-9525