2026 Idaho Energy and Mineral Landscape

Idaho Governor's Office of Energy and Mineral Resources

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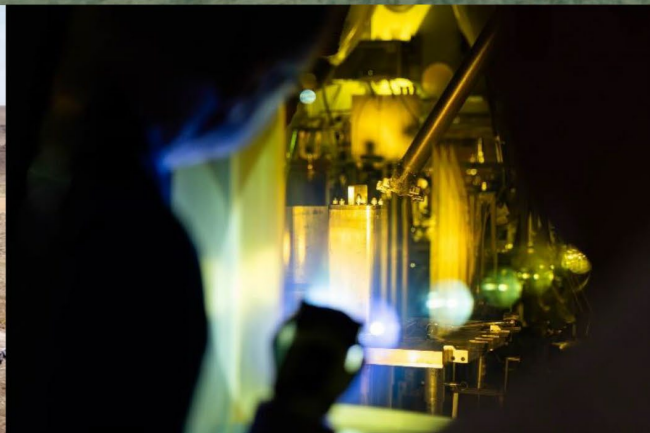
Boise, Idaho 83720



Created by the Idaho Governor's
Office of Energy and Mineral Resources

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Special thanks to Intermountain Gas Company, a subsidiary of MDU Resources Group, for printing and binding this edition of the Idaho Energy and Mineral Landscape.

Note: Energy statistics compiled for the 2026 Idaho Energy and Mineral Landscape reflect the most recent data available from a wide variety of sources. Different sources will update energy data at irregular intervals, some more frequently than others. For that reason, the facts and statistics referenced in this document, including graphs and tables, represent the most up-to-date information available, but may be several years old. Each year, the Idaho Governor's Office of Energy and Mineral Resources staff conducts thorough research to ensure that the data presented in this document is accurate and complete.

About the Idaho Energy and Mineral Landscape

The Idaho Governor's Office of Energy and Mineral Resources (OEMR) coordinates energy and mineral planning, permitting processes, and policy development in the state of Idaho. OEMR works to ensure that Idaho's energy and mineral resources are developed and utilized in an efficient, effective, and responsible manner that sustains the quality of life for its residents and enhances the economy. OEMR serves as the clearinghouse and first point of contact for the state on energy and mineral matters, administers energy-related grant funding to Idaho communities, oversees the Idaho Strategic Energy Alliance (ISEA) and the Idaho Advanced Nuclear Energy Task Force, serves as a resource for policymakers, and coordinates efforts with federal and state agencies and local governments.[i]

OEMR prepares the Idaho Energy and Mineral Landscape, which provides a clear, data-driven snapshot of how Idaho produces, uses, and manages its energy and mineral resources and brings together the most current information on the state's energy systems, mineral assets, and related economic activity. This overview helps policymakers, communities, and the public understand Idaho's resource landscape and supports informed planning for the state's long-term growth and resilience.

As of December 2025, OEMR administers the following energy-related programs. A detailed list of OEMR's programs can be found in Appendix A.

- Idaho Energy Resiliency Grant Program
- Wildfire Resilience Investment Program
- State Energy Loan Program
- Government Leading by Example
- Energy Efficiency Conservation Block Grant Program
- K-12 Energy Enhancement Program
- Facility Improvement Expense Reduction Program
- National Electric Vehicle Infrastructure Program (in cooperation with the Idaho Transportation Department and the Idaho Department of Environmental Quality)

In addition to the Idaho Energy and Mineral Landscape, OEMR prepares other publications which are described in Appendix B.

Table of Contents

1. Energy Landscape

Idaho's abundant natural resources enable reliable and low-cost energy which sustains Idaho's quality of life for its citizens and the economy. There are several key attributes that enable a dynamic energy industry in Idaho including the low cost of doing business, availability of an energy-ready workforce, access to leaders in energy innovation, and friendly regulations and tax structures.[ii] Today, Idaho's economy remains closely tied to its ability to provide affordable and dependable power to households and businesses, with projected electricity demand contributing an estimated $84.1 million to $168.1 million in economic activity each year.[iii]

Rapid population growth continues to reshape Idaho's energy landscape. Since 2000, the state has grown by roughly 700,000 people (an increase of 54 percent) making Idaho one of the nation's fastest-growing states.[iv] Idaho Power, the state's largest electric utility, projects that electricity demand over the next five years will equal the total growth experienced over the previous four decades combined.[v] Much of this increase is driven by the residential sector, which accounted for the largest share of year-over-year load growth from 2024 to 2025.[vi]

At the same time, large-load customers, which are typically industrial users with high, continuous electricity needs, are expanding across the state. Utilities are now modeling scenarios that include an additional 300 to 500 megawatts of near-term demand.[vii] While these customers pay their own interconnection costs, utilities must still plan for the infrastructure needed to reliably serve them, often requiring new transmission investments and additional generation or storage resources.[viii]

Figure 1. Large Load Interconnection[ix]

Twin Falls is the home to the Chobani Plant, the world's largest yogurt factory. In 2025, Chobani announced a $500 million expansion of this plant, which will increase production by 50% and create a minimum of 160 new jobs. The availability of reliable and affordable energy is critical for key heating, fermentation, and cooling processes during yogurt production.[x]

Meeting these challenges while maintaining affordability of electricity, heating fuels, and transportation fuels is a central focus of Idaho's energy policy. The State of Idaho, through agencies such as the Governor's Office of Energy and Mineral Resources (OEMR), is advancing policies, improving coordination, and directing funding toward projects that strengthen grid resilience, enhance energy security, and promote conservation to help Idahoans save money. These efforts position Idaho to manage population and economic growth while preserving the reliability and cost-effectiveness of Idaho's energy system.

Figure 2. U.S. Forest Service Chief Schultz at the 2025 Idaho Energy and Mineral Summit

On December 4, OEMR hosted the first annual Idaho Energy and Mineral Summit, an event that highlighted the agency's role in bringing together partners from industry and all levels of government. The summit demonstrated how OEMR convenes industry experts, decisionmakers, and community leaders to share insights, strengthen collaboration, and support responsible development of Idaho's energy and mineral resources.

Workforce, Research, and Education

The energy sector in Idaho represents 4.1% of total state employment and the average wage for employees in the energy industry in Idaho is $91,000. Within the energy sector, in 2024 energy efficiency added the most jobs, nearly 700, comprised mostly of new HVAC and lighting technicians. The electric power sector employs over 3,311 Idahoans, 70% of whom work in solar and wind careers. Since 2020, Idaho has had over 24.8% growth in the clean energy sector and a 6.1% increase in 2024, which was the highest growth rate of clean energy jobs in the nation. These jobs span work in renewable generation, storage and grid, energy efficiency, biofuels, and clean vehicles.

Idaho's education and training ecosystem supports a deep energy workforce pipeline. Boise State University offers courses and research programs spanning energy generation, efficiency, nuclear safeguards, cyber resilience, and advanced materials, with labs developing nanomaterials and sensors for extreme environments and nuclear applications. The University of Idaho contributes through biodiesel education, energy efficient building research, advanced transportation technology, and geology programs focused on sustainable resource development and energy resiliency. Idaho State University provides bachelor's and master's degrees in nuclear engineering, hands on reactor related training through the Energy Exploration Center, and workforce preparation through its Energy Systems Technology and Education Center. Community colleges across the state—including the College of Southern Idaho, College of Eastern Idaho, and College of Western Idaho—offer programs in renewable energy, HVAC, mechatronics, electrical apprenticeships, and energy systems maintenance. Specialized institutions like Northwest Lineman College train thousands of power delivery professionals each year, while utilities such as Kootenai Electric Cooperative invest in new training facilities to support grid operations and workforce development. Together, these institutions form a comprehensive statewide network preparing Idaho's next generation of energy professionals.

Idaho National Laboratory

As the U.S. Department of Energy's nuclear energy research, development and demonstration center, the Idaho National Laboratory is at the forefront of reliable energy and national security innovation. As one of the state's largest employers, INL has an annual research budget exceeding $2 billion and contributes nearly $4 billion to the state's economy.

Located across an 890-square-mile site with an expanding campus in Idaho Falls, INL features world-class research facilities and comprehensive science and engineering capabilities that help fulfill its vision to change the world's energy future and secure the nation's critical infrastructure. INL is also a leader in integrated energy solutions, cybersecurity and critical infrastructure protection.

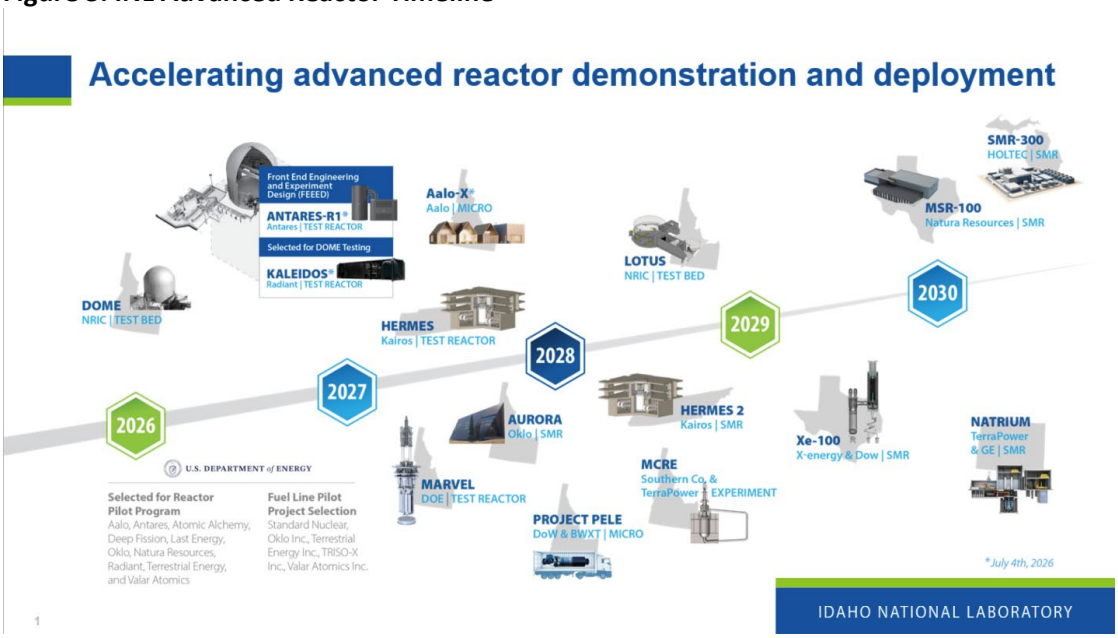
Nuclear energy: INL is pioneering advanced nuclear energy technology to meet the demand for reliable, affordable power. In the next several years, INL will host first-of-a-kind nuclear reactor demonstrations, providing critical insights into the design, safety, licensing and operations of tomorrow's advanced reactors.

These include:

> Microreactor Applications Research Validation and Evaluation project, or MARVEL, a microreactor producing up to 20 kilowatts, enough to power 10 homes.
>
> Project Pele, a mobile microreactor for the U.S. Department of War, providing reliable power to the military.
>
> Molten Chloride Reactor Experiment, or MCRE, a subscale experiment using molten chloride salts as fuel for more efficient heat generation.

By leading programs like the Gateway for Accelerated Innovation in Nuclear and the National Reactor Innovation Center, INL partners with the private sector to provide support and resources to test and commercialize cutting-edge nuclear technologies. Several advanced reactor demonstrations are expected to be located at INL this decade.

Figure 3. INL Advanced Reactor Timeline[xi]



Integrated energy: INL researchers are accelerating the integration of reliable energy sources like nuclear, geothermal and waterpower, to the national grid while developing technologies that will support a resilient domestic supply chain of critical materials and minerals used in everyday products and for national defense systems.

INL's new Energy Technology Proving Ground is designed to accelerate the commercialization of advanced energy technologies. It will provide large-scale test beds for heat, electricity, hydrogen, and carbon systems, enabling industry to partner with government to validate performance and readiness for commercial deployment.

National security: INL is at the forefront of U.S. national security, delivering breakthrough solutions to protect critical infrastructure, energy systems and defense assets. Our experts counter emerging cyber, physical, and nuclear threats with advanced science and engineering to ensure resilience where it matters most.

We secure industrial control systems with AI-driven threat detection and intelligence analysis and develop next-generation wireless technologies for reliable, secure communications — even in extreme conditions.

In nuclear security, INL leads global efforts to reduce proliferation risks, enhance detection technologies and embed cybersecurity into nuclear systems. From advanced materials to unmanned systems and protective barriers, we design and test innovations that safeguard critical facilities and military assets worldwide.

1.1 Energy System

Energy is the ability to do work. There are many sources of energy such as biomass, hydropower, geothermal, petroleum, and natural gas. Energy sources in their natural states are considered primary energy sources and can be converted to secondary sources such as electricity or gasoline. Energy is typically measured in Joules (J), and BTUs.

Idaho's energy system is complex and deeply interconnected with the broader Western region. Unlike states with large fossil fuel reserves or major refining capacity, Idaho relies heavily on imported fuels for transportation and heating. Electricity generation within the state is dominated by renewable resources—primarily hydropower—while natural gas and petroleum products are brought in through regional pipelines and supply networks.

This interconnectedness means Idaho electricity providers share generation and transmission resources across multiple states to maintain reliability and balance supply and demand. Similarly, fuel markets are regional, with prices and availability influenced by infrastructure, interstate pipelines, and global commodity trends. Understanding Idaho's position within this larger Western energy system is essential for energy security and planning for future demand.

Energy can be grouped into three categories: transportation fuels, heating fuels, and electricity. Understanding these categories provides the foundation for analyzing how energy flows through an economy and supports daily life.

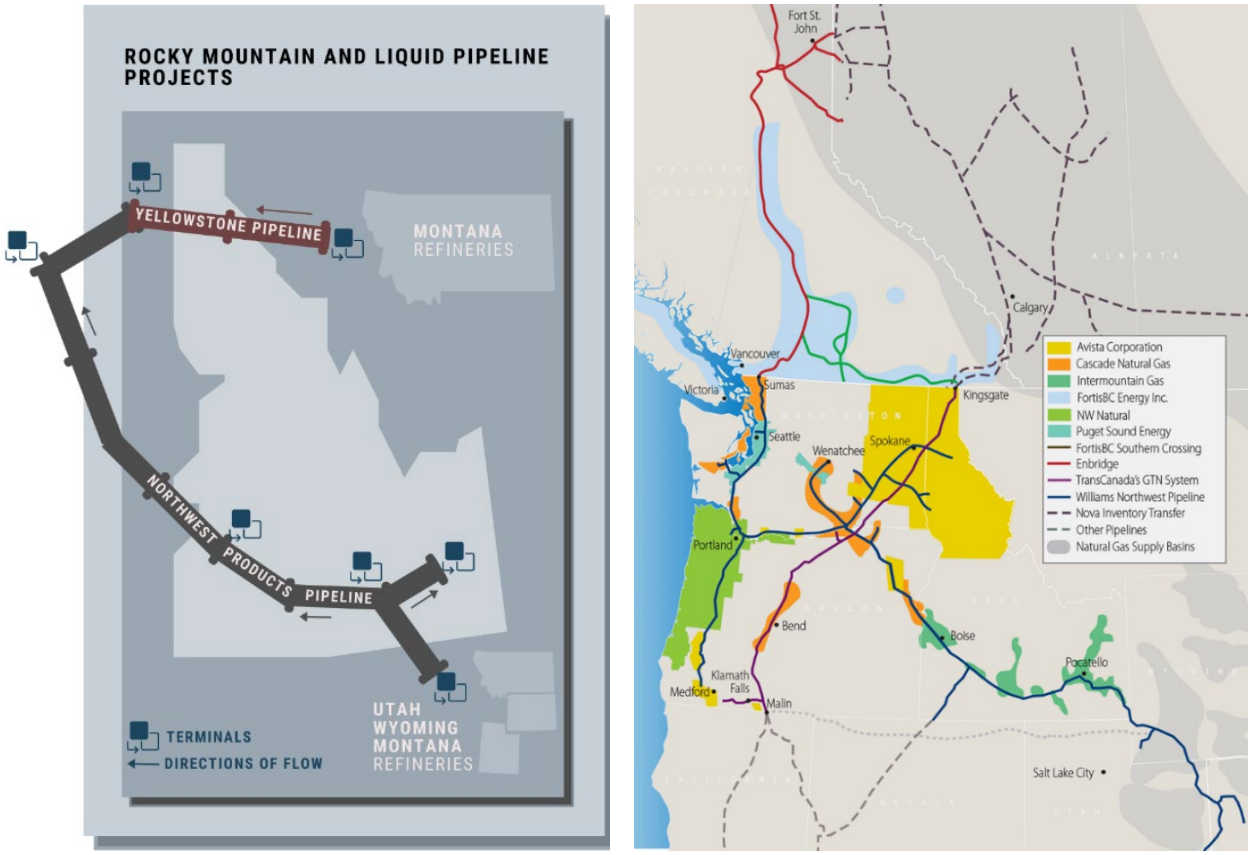
Figure 4. Categories of Energy

Transportation Fuels	Heating Fuels	Electricity
Energy for moving people and goods	Energy for space heating, water heating, and industrial processes	Energy for powering devices, lighting, and machinery
		

1.1.1 Transportation and Heating Fuels

Idaho's energy economy heavily relies on fossil fuel resources. Accounting for 64% of the state's total energy consumption, natural gas, petroleum (diesel, motor gasoline, and jet fuel), and propane are essential for the continued provision of low-cost energy and heating for Idahoans. Transportation fuels are essential for mobility and commerce, with petroleum products such as gasoline, diesel, and aviation fuels dominating this sector. Alternatives like liquid biofuels and gaseous fuels such as natural gas, propane, hydrogen, and electricity are also used.

Figure 5. Idaho Petroleum (left) and Natural Gas (right) Systems[xii]



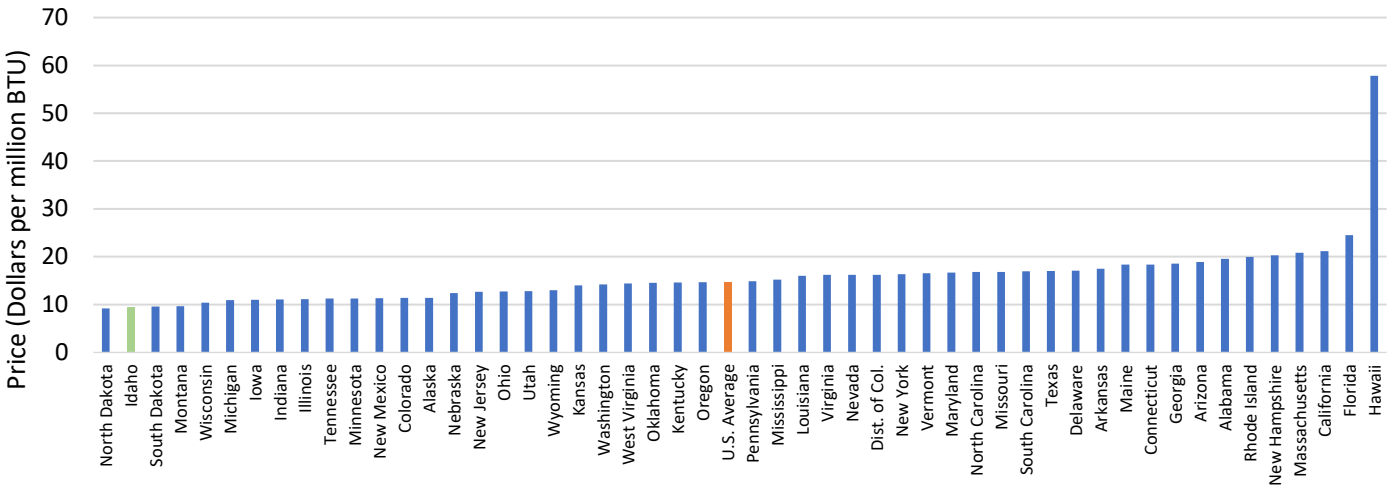
Petroleum products, including gasoline, diesel, and aviation fuel—are used for transportation, electricity production, and heating. Petroleum accounts for over one-third of Idaho's energy consumption, mostly consisting of motor gasoline and diesel. Idaho's small population contributes to it being among the ten states with the lowest total petroleum consumption, but per-capita petroleum use is near the national average. Prices are typically higher than the national average because Idaho relies on petroleum imports from nearby states. With no petroleum refineries and limited storage capacity, Idaho moves petroleum through pipelines, railcars, barges, and truck delivery. The Northwest Products Pipeline connects Salt Lake City refineries with Idaho Falls, Pocatello, Burley, and Boise before continuing to Pasco and Spokane. Northern Idaho relies on refined products from refineries near Billings, Montana, transported through the Yellowstone Pipeline to Moses Lake, Washington. Most petroleum products are transported by pipeline, with some shipped by barge on the Snake River into Lewiston and others delivered by truck from terminals to fueling stations.

Natural gas is also used as a transportation fuel in the form of compressed natural gas (CNG) or liquefied natural gas (LNG), both of which increase onboard storage and driving range. Renewable natural gas (RNG), produced from the decomposition of organic matter, is pipeline-quality gas interchangeable with conventional natural gas and qualifies as an advanced biofuel under the Renewable Fuel Standard. Despite its versatility, natural gas accounts for only 5% of Idaho's transportation fuel use. Idaho has two public CNG refueling stations, in Boise and Nampa, and some municipal and commercial fleets operate private stations. As of 2023, Idaho has no commercial RNG facilities.

Propane is widely used to heat homes and businesses, particularly in rural areas. Residential propane prices in Idaho ranged from $2.21 to $2.567 per gallon as of November 2024. Propane is not regulated by the PUC and is delivered by private companies via truck. Consumption is seasonal, peaking in fall and winter. Propane is also used as transportation fuel, with nine publicly available refueling stations in Idaho. It is most used in specialized medium- and heavy-duty vehicles capable of running on liquefied petroleum gas. The Idaho Department of Environmental Quality's Vehicle Replacement Program has funded several propane school buses.

Heating fuels are essential for maintaining comfortable living spaces and supporting industrial processes. Natural gas and heating oil dominate residential and commercial heating, though biomass, propane, and electricity are also widely used. In some regions, district heating systems and geothermal energy provide additional options. Idaho ranks second lowest in residential natural gas prices, behind only North Dakota. Residents pay 64% of the U.S. average, making Idaho one of the most affordable states for natural gas. Most residential natural gas use is for heating—critical during Idaho's winters—and for cooking.

Figure 6. Residential Natural Gas Prices by State, 2023[xiii]

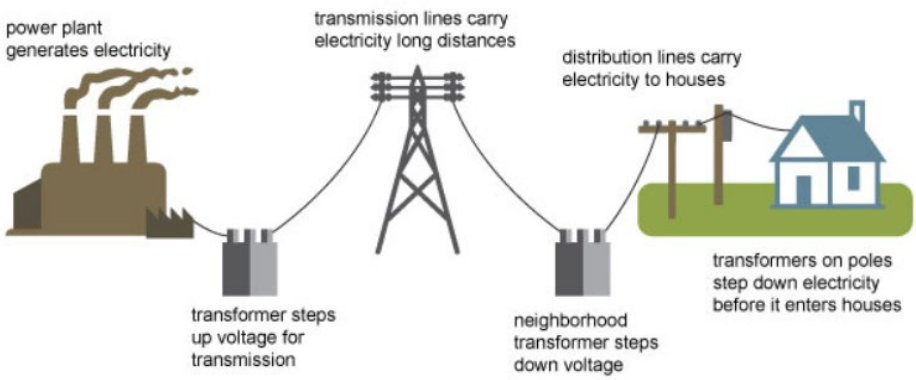


1.1.2 Electricity

Electricity is a secondary source of energy. It is produced by converting primary sources of energy into electrical power. Electricity is delivered by electrons, typically moved through a wire. Electricity generation is measured in watts for small devices, and kilowatts (kW) for larger devices. The capacity for this generation is measured in multiples; one megawatt (MW) is equal to 1,000 kW, and one gigawatt (GW) is equal to 1,000 MW. One kilowatt hour (kWh) is one kW generated or consumed for one hour.[xiv,xv]

The electricity system, or grid, is a system of electricity substations, transformers, and power lines that transport electricity to customers. There are three main components to the grid: generation, transmission, and distribution. Electricity is produced at a power plant from a generation resource. Electricity from power plants moves through a substation then through transformers that increase the voltage. Transmission lines then carry electricity over long distances to a substation that decreases the voltage. Once the voltage decreases, distribution lines safely deliver power to customers.[xvi] This infrastructure enables the efficient distribution of electricity across regions and ensures a reliable power supply for consumers.

Figure 7. Generation, Transmission, and Distribution[xvii]

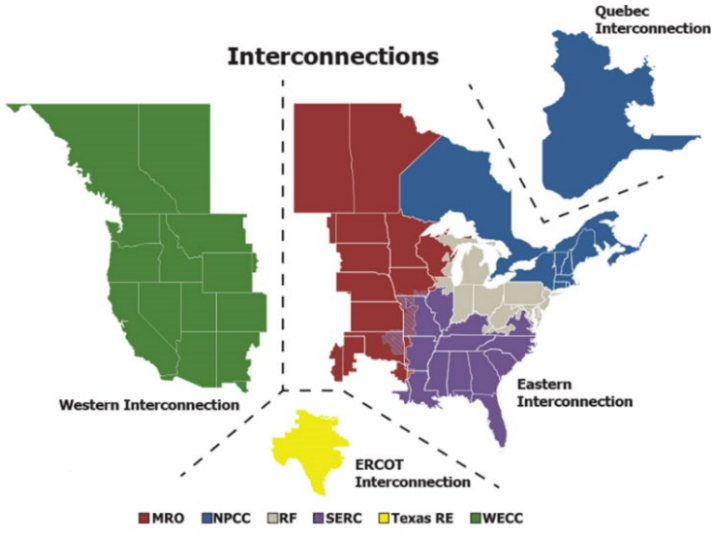


Transmission plays a vital role in energy integration, economic growth, energy security, and ensuring reliability and resiliency. A robust transmission network allows for the efficient integration of energy sources into the grid. Diverse and interconnected transmission networks enhance energy security by

providing support during system failure or disruptions, which is especially important in areas prone to extreme weather conditions. Reliable and resilient infrastructure ensures uninterrupted power supply to essential services like hospitals and other emergency services. A resilient grid also defends against potential disruptions caused by natural disasters, cyberattacks, or other unforeseen events.

The transmission network in the U.S. and Canada is made up of four separate interconnections. The Western Interconnection links Idaho with the rest of the western U.S. and two Canadian provinces. It serves 90 million people, is comprised of approximately 156,000 miles of transmission lines, and spans more than 1.8 million square miles.[xviii] A large proportion of generation capacity comes from hydroelectricity, wind, and solar. Coordination throughout the Western Interconnection on a local, sub-regional, and regional basis ensures a reliable and adequate integrated system of electricity for consumers. The Western Electricity Coordinating Council (WECC) is the regional entity that monitors and enforces compliance with electricity reliability standards throughout the Western Interconnection.[xix]

Figure 8. North American Electric Reliability Corporation (NERC) Regional Electric Interconnections[xx]



Electricity markets in the Western United States have developed gradually through regional collaboration aimed at improving system reliability, affordability, and coordination across utilities. Unlike regions with centralized, multistate Regional Transmission Organizations (RTOs), the West features a mix of markets tailored to its geography and utility needs.

Western energy markets operate through a combination of bilateral trading and organized market platforms. Bilateral trading allows utilities and power providers to negotiate electricity purchases directly. However, organized markets have increasingly supported real-time and day-ahead coordination.[xxi]

The Western Interconnection includes several market initiatives that help utilities balance supply and demand, optimize transmission use, and integrate a variety of generation resources. These include real-time energy markets such as the Western Energy Imbalance Market (WEIM) and the Western Energy Imbalance Service (WEIS), which allow utilities to access least-cost electricity across a broader footprint.[xxii,xxiii]

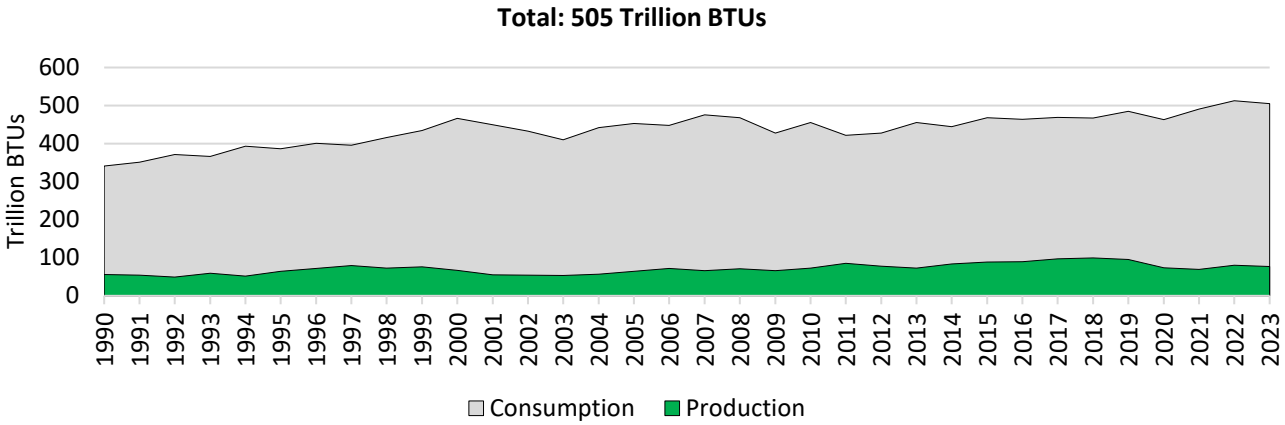
Day-ahead markets are also expanding. The California Independent System Operator (CAISO) Extended Day-Ahead Market (EDAM) and the Southwest Power Pool (SPP) Markets+ initiative represent two distinct approaches to regional day-ahead coordination.[xxiv,xxv] These platforms aim to improve market efficiency, reduce costs, and support state-level energy goals. For more information on CAISO EDAM, SPP Markets+,

and other regional coordination efforts, see Section 6.2: Regional Entities. These market structures contribute to a more integrated Western grid, helping Idaho and its neighbors manage growing electricity demand and enhance grid resiliency.

1.2 Energy Production and Consumption

In 2023, Idaho consumed approximately 505 trillion British thermal units (BTUs) of energy. Of that energy, 15.2% was produced in Idaho. Utilities meet energy demand by importing resources located outside the state, such as through regional energy markets. The state's imported energy requires a robust and well-maintained infrastructure of highways, railroads, pipelines, and transmission lines to facilitate economic development and meet Idahoans' needs.

Figure 9. Idaho Energy Production and Consumption, 2023 [xxvi,xxvii]



Petroleum accounts for over 37% of Idaho's energy consumed, mostly consisting of motor gasoline and diesel. Clean sources of energy represent over 15% of Idaho's total energy consumed. This growing share includes hydroelectricity, biomass, geothermal, solar, and wind.

Figure 10. Sources of Total Energy Consumed in Idaho, 2023 [xxviii]

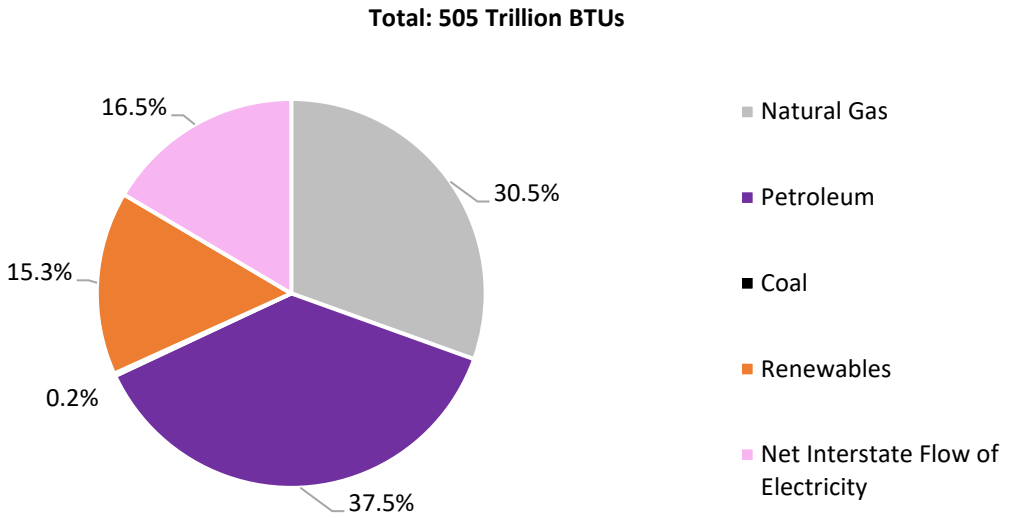
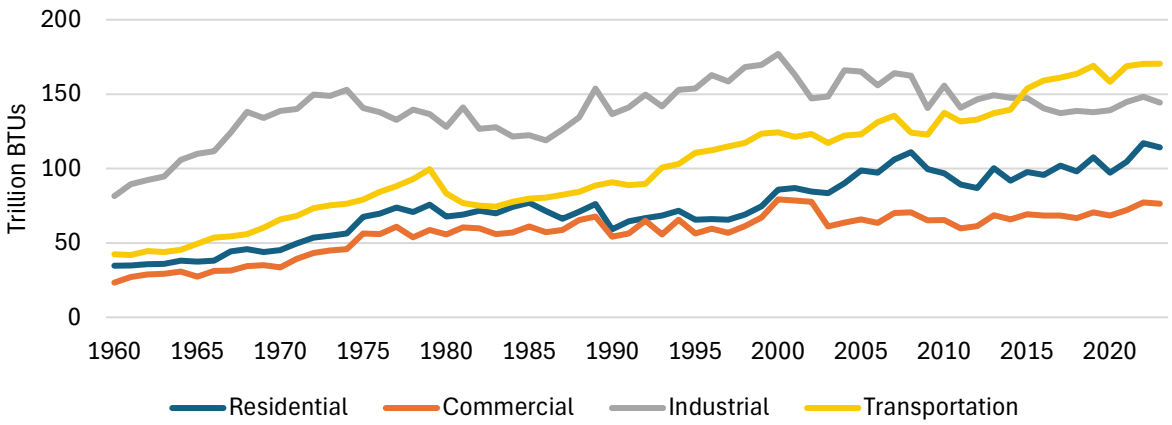


Figure 11. Idaho Energy Consumption by Sector, 1960-2023[xxix]



Energy consumption can be tracked by its end-use sector: residential, commercial, industrial, or transportation. Residential consumption includes single-family, multi-family, and manufactured homes. Commercial consumption is the smallest sector and includes businesses, retail stores, and government facilities. Industrial consumption includes facilities used to produce, process, and manufacture products. This encompasses mining, agriculture, manufacturing, and other industries throughout the state. Transportation is the largest sector and includes fleet vehicles, personal vehicles, shipments, and air travel.

The share of energy consumed by each sector has changed in Idaho since 1960. From 1960 until 2015, the industrial sector used the highest proportion of energy. Industrial energy use has been declining since 2000, and in 2015, the transportation sector, which has been growing steadily since 1960, surpassed industry as the largest energy consuming sector in Idaho. Residential energy consumption has been on the rise and could surpass industrial use if current trends continue. Energy consumption for the commercial sector has been relatively consistent, with only a small increase between 1975 and 2023.

Figure 12. Idaho Natural Gas Consumption by Sector, 2023[xxx]

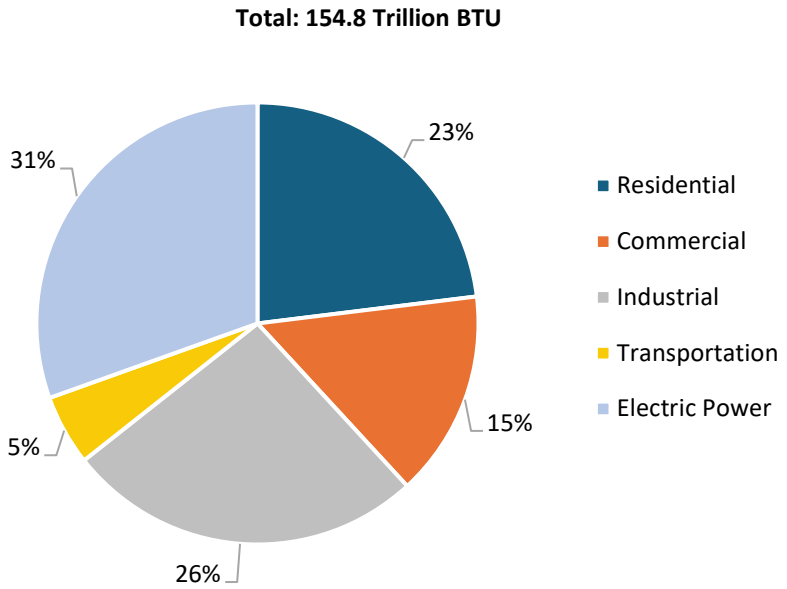
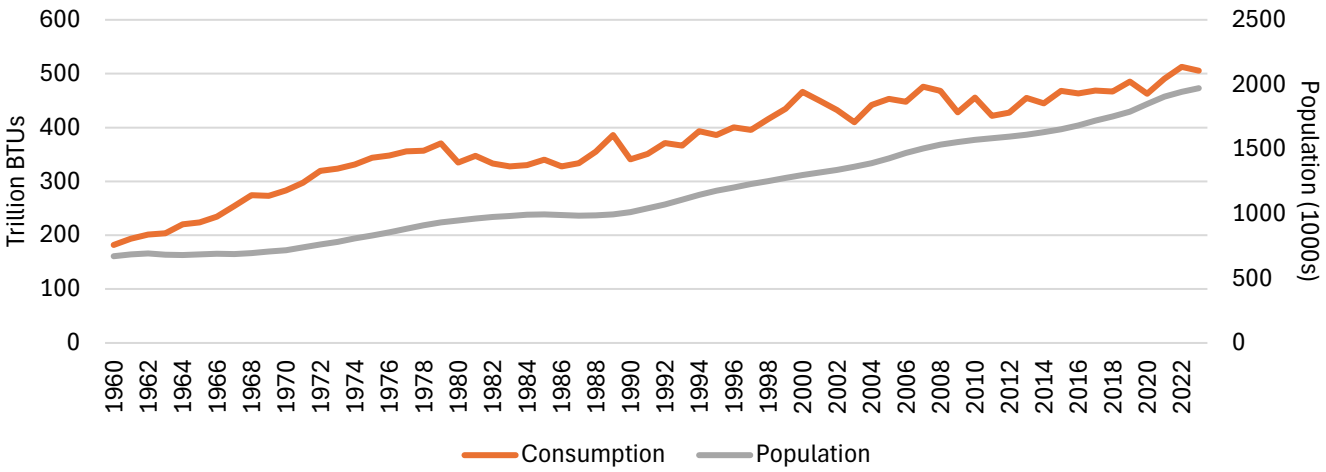


Figure 13. Idaho's Population and Energy Consumption by Year, 1960-2023[xxxi,xxxii]



As shown in Figure 13, the state's energy consumption has increased from 1960 to 2023 along with Idaho's population. Between 1960 and 1991, Idaho's population increased by 55% while its energy consumption increased by 94%. The trend reversed between 1992 and 2023, where population increased by 89% while energy consumption only increased 44%. This indicates Idaho is becoming more energy efficient, as even though the population is growing at a high rate, Idaho's energy consumption has increased at a much lower rate. Energy efficiency and improved energy technologies made it possible to consume less energy per capita despite the state's growing population.[xxxiii]

Although per capita energy use is decreasing in Idaho, demand is projected to significantly increase throughout the West. Electricity demand is projected to increase 20% over the next decade, mostly due to the development of new data centers, manufacturing, cryptocurrency, and electrification.[xxxiv] New generation and transmission resources are needed to meet the pace of this demand, which will require extensive and careful coordination between states.

2. Energy Providers

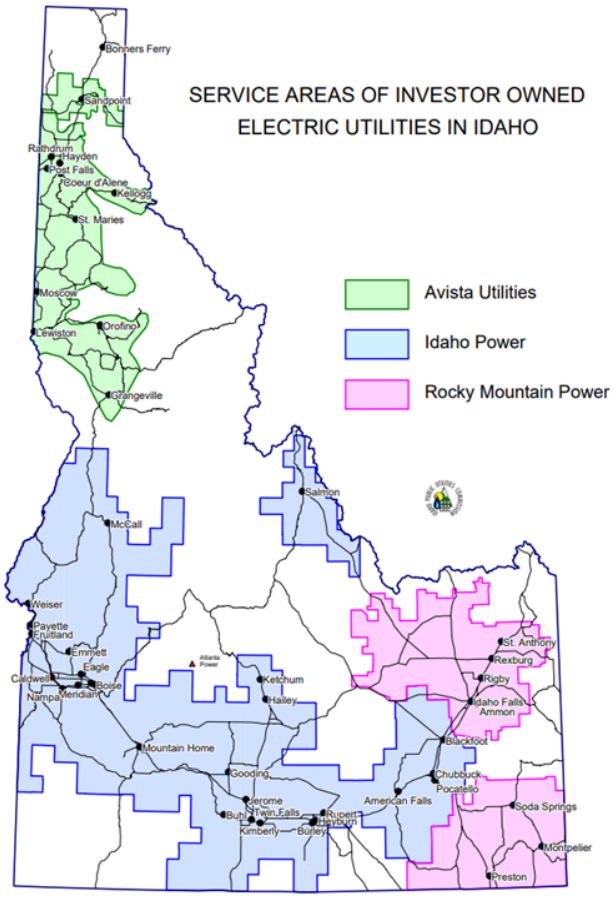
Idaho's energy landscape is shaped by a mix of providers that power homes, businesses, and industries across the state. From large federal entities to local cooperatives, each plays a unique role in meeting energy demand. This section explores the major players in Idaho's energy ecosystem and highlights their evolving strategies.

2.1 Investor-owned Utilities

Idaho's grid is operated by three investor-owned utilities (IOUs), as well as 29 municipal and rural electric cooperative utilities, which are listed in Appendix C. Idaho's three IOUs serve approximately 84% of the state's electricity needs, while the municipal and rural electric cooperative utilities serve the remaining 16%.[xxxv]

Idaho's IOUs work with stakeholders to develop Integrated Resource Plans (IRPs) that must be filed with the Idaho Public Utilities Commission (PUC) every two years. IRPs forecast energy demands over 20 years and evaluate a variety of different resources to meet demand, including the addition of generation resources and demand-side measures such as conservation and energy efficiency programs. IRPs typically select a "preferred resource strategy" based on evaluation criteria including cost, risk, reliability, and environmental factors.

Figure 14. Idaho's IOU Service Territories[xxxvi]

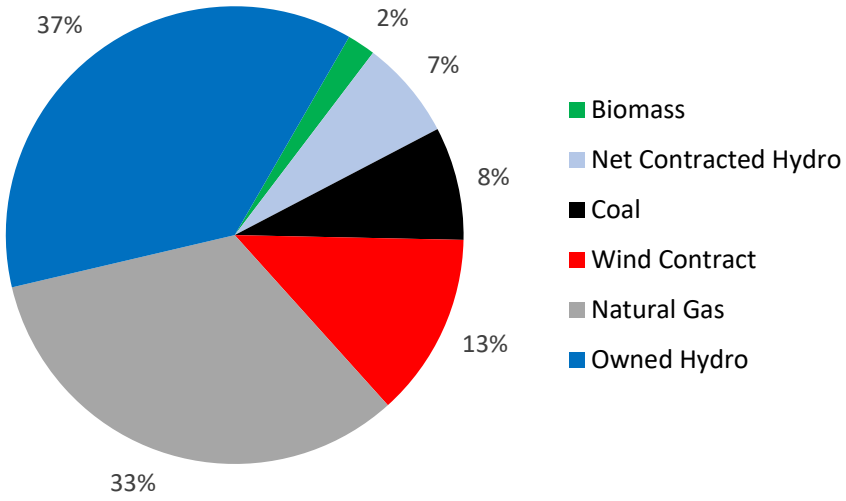


Avista

Avista is an investor-owned electric and natural gas utility headquartered in Spokane, Washington. Avista serves more than 145,000 electric and 95,000 natural gas customers in north and central Idaho. Avista generates electricity by utilizing a mix of hydroelectric, natural gas, coal, biomass, and wind generation, See Figure 15. This electricity is delivered through 2,800 miles of electrical transmission lines, 19,900 miles of electrical distribution lines, and 8,200 miles of natural gas lines.

Avista's company-owned and contract hydroelectric resources are in western Montana, eastern Washington, and northern Idaho (Post Falls, Clark Fork River Hydroelectric Development and Cabinet Gorge); and its natural gas-fired baseload and capacity resources are in Idaho, Oregon, and Washington. It also has an ownership share in the Colstrip coal-fired power plant in Montana which is scheduled to stop serving Avista's customers by the end of 2025. To meet growing demand and non-Idaho generation requirements, Avista may incorporate small modular nuclear reactors, power-to-gas (ammonia/hydrogen) fueling combustion turbines, and long-duration energy storage technologies by 2045. Nuclear development could begin as soon as 2030. The draft 2025 electric IRP plans to incorporate small modular nuclear reactors into Avista's resource mix in 2045.

Figure 15. Avista's 2025 Resource Portfolio[xxxvii]



Avista has saved 275 average megawatts (aMW) since it began offering energy efficiency programs in 1978. Current Avista energy efficiency programs reduce demand by nearly 12.2%, or by 156 aMW. Avista predicts that energy efficiency will serve 32% of future demand, reducing demand by 105 aMW through 2045. Avista's demand response and energy efficiency programs reduce the need to purchase high-cost wholesale electricity from out-of-state networks, allowing Avista to meet both winter and summer peak loads.

While annual energy demand has held at 0.09% per year, Avista anticipates 2026 energy loads to be 4.5% higher than 2023 loads. This increase of 50 average MW is driven by recent community economic growth and a new large load beginning in August 2024. Over the next 20 years, Avista expects an average annual growth rate of 0.91%, with winter peak load estimated to grow at 1.12% and summer peak loads at 1.14%. In April 2019, Avista announced its goal to have a carbon neutral portfolio by the end of 2027 and to serve its customers with 100% clean electricity by 2045. Over the next ten years (2026-2035), Avista's resource

strategy focuses on new regional transmission projects, energy efficiency, distributed solar generation, natural gas combustion turbines, wind, and demand response. The following ten years (2036-2045) includes more natural gas combustion turbines, wind, distributed and utility-scale solar, energy storage technologies, renewable fuels including green hydrogen and ammonia, nuclear energy, and additional demand response programs. Beyond compliance with Washington's Clean Energy Implementation Plan, Avista plans to retire and replace some natural gas combustion turbines, expand transmission, develop an all-source request for proposals for demand response opportunities in 2025, and investigate options to increase natural gas availability for existing and potential natural gas generation.

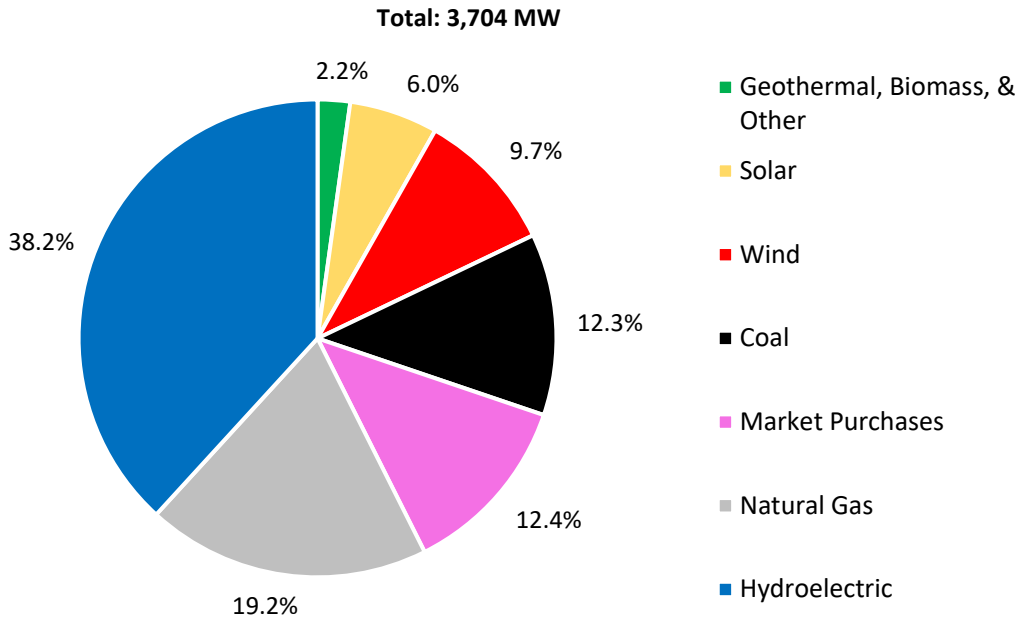
Idaho Power

Idaho Power is the largest electricity provider in the state. Headquartered in Boise and founded in 1916, Idaho Power today services more than 650,000 customers throughout its 24,000 square mile service territory in southern Idaho and eastern Oregon.[xxxviii]

Idaho Power primarily relies on company-owned hydropower, coal- and gas-fired generation facilities, and long-term power purchase agreements to supply the energy needed to serve customers. Idaho Power's company-owned hydroelectric generation facilities include the 1,267 MW Hells Canyon Complex, which provides approximately 70% of Idaho Power's hydroelectric generating capacity and 30% of the company's total generating capacity. With 17 low-cost hydroelectric projects at the core of its diverse energy mix, Idaho Power's residential, business, and agricultural customers pay electricity prices 20% to 30% below the national average.[xxxix] This electricity is supplied through approximately 4,800 miles of transmission lines and approximately 30,000 miles of distribution lines. Idaho Power began construction on the 300-mile Boardman-to-Hemingway high-voltage transmission line project in late 2025 and aims to bring it into service in late 2027.

Idaho Power also generates electricity at the Langley Gulch natural gas-fired, combination-cycle combustion turbine power plant near New Plymouth, and two natural gas-fired, simple-cycle combustion turbine power plants near Mountain Home. Idaho Power has joint ownership in baseload coal facilities located in Wyoming and Nevada — the Jim Bridger and North Valmy power plants. Idaho Power exited the Boardman coal facility located in Oregon in 2020 and half of its share of the Valmy coal facility in 2019. In 2024, two of the four units at Jim Bridger were converted from coal to natural gas, with the other two units planned to be converted in 2030. In 2026, North Valmy's two units are also planned to be converted from coal to natural gas, and Idaho Power will reenter operation of its full share of the facility. By 2030, Idaho Power aims to exit coal-fired generation and add a net total of 261 MW of natural gas-fired generation by 2043. Idaho Power's resource portfolio mix for 2024 is shown in Figure 16. Idaho Power-owned generating capacity was the source for about 67% of the energy delivered to customers. Purchased power comprises 33% of the total energy delivered to customers.[xl]

Figure 16. Idaho Power 2025 Resource Portfolio[xli]



Between 2004 and 2024, Idaho Power achieved a cumulative average annual load reduction of 354 MW through energy efficiency investments. In 2024, Idaho Power's energy efficiency programs achieved 143,599 MWh of incremental energy savings, which represents enough energy to power approximately 12,596 average homes in Idaho Power's service area for one year.[xlii] Additionally, Idaho Power operated three demand response programs in 2024. The total demand response capacity was approximately 323 MW with an actual load reduction of 257 MW.[xliii] The average annual number of Idaho Power customers is expected to increase from nearly 648,000 in December 2024 to 867,000 in 2045.

PacifiCorp/Rocky Mountain Power

PacifiCorp is the largest grid operator in the western United States, providing electric service to about 2.1 million customers across its 141,500 square mile service territory in California, Idaho, Oregon, Utah, Washington, and Wyoming. For customers in Idaho, Utah, and Wyoming, PacifiCorp operates under the name Rocky Mountain Power. Rocky Mountain Power serves 89,000 customers in 14 Idaho counties.[xliv]

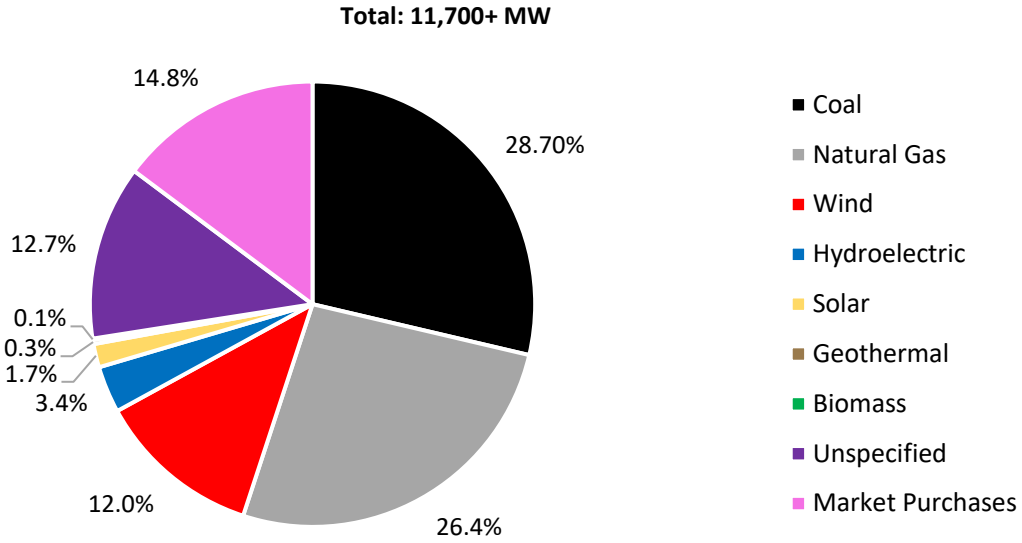
PacifiCorp owns 14,132 MW of generation capacity from a diverse mix of hydroelectric, wind, natural gas, coal, solar and geothermal sources.[xlv] PacifiCorp's customers receive electricity through approximately 17,500 miles of transmission lines, 64,000 miles of distribution lines, and 900 substations.[xlvi] The Populus Substation known as Energy Gateway West Sub-Segment D.3 is scheduled to come online in 2034 in Southwest Idaho. This transmission line will run 200 miles at 500 KV of high voltage, which will help meet the expected increase in demand in Idaho.[xlvii]

The forecasted system load in the region has decreased 3.9%, with the average annual growth rate set at approximately 2.03% for load and 1.91% peak. The changes to load forecast result from lower projected demand from new large customers who are expected to provide their own resources.[xlviii] From 2024 to 2033, residential customers in Idaho are expected to decrease 0.94% per year and commercial customers in Idaho are expected to decrease 0.30% per year.[xlix]

PacifiCorp's 2025 IRP identifies the company's investments in new renewable energies, demand-side management resources, storage resources, advanced nuclear, and renewable peaking resources all supported by new transmission investments.[l] Rocky Mountain Power is the largest regulated utility owner of wind power in the West and the company plans to expand their wind, solar and storage resources on their path to a net-zero emissions future.[li]

PacifiCorp's 2025 IRP indicates the PacifiCorp aims to add 5,912 MW of solar, over 3,782 MW of wind, and over 5,912 MW of storage capacity by 2045. Additionally, the company aims to bring online 500 MW of advanced nuclear capacity by 2031.[lii]

Figure 17. Rocky Mountain Power 2023 Resource Portfolio[liii]



2.2 Municipal and Cooperative Utilities

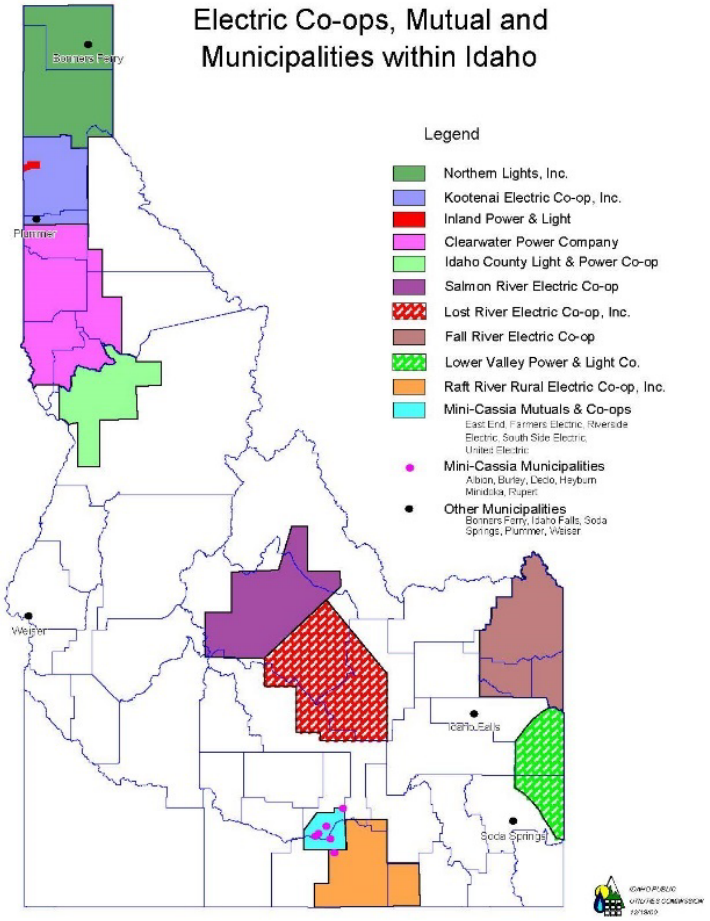
A municipal utility is owned and operated by a municipality or a group of municipalities. A cooperative electric utility is a private, not-for-profit electric utility legally established to be owned and operated for the benefit of those using its service. It will generate, transmit, and/or distribute supplies of electric energy to cooperative members.

There are 29 municipal and cooperative utilities in Idaho. These utilities are not subject to PUC regulation. Instead, Idaho's municipal and cooperative electric utilities provide competitively priced energy services to their members and residents and are generally governed by an independently elected Board of Directors or city councils.

The Idaho Consumer-Owned Utilities Association (ICUA) has 21 members and serves over 140,000 Idahoans, or about 16% of total Idaho electricity customers. Not all Idaho municipal and cooperative utilities are members of ICUA.[liv] Over 96% of the power ICUA utilities distribute is purchased from the Bonneville Power Administration (BPA). The Federal Columbia River Power System (FCRPS), which includes the four Lower Snake River Dams (LSRDs), is the backbone of this low-cost, on demand energy supply. In addition, some municipalities and cooperatives are beginning to acquire their own generation resources and are entering into Power Purchase Agreements (PPAs) with other energy providers.[lv] For example, Idaho Falls Power owns and operates five hydroelectric projects, owns a portion of the Horse

Butte Wind project, and operates a small amount of solar. The remainder of Idaho Falls Power's electricity needs are met by BPA agreements and market purchases, a small amount of which is nuclear generation.[lvi]

Figure 18. Idaho's Municipal and Cooperative Utilities Service Territories



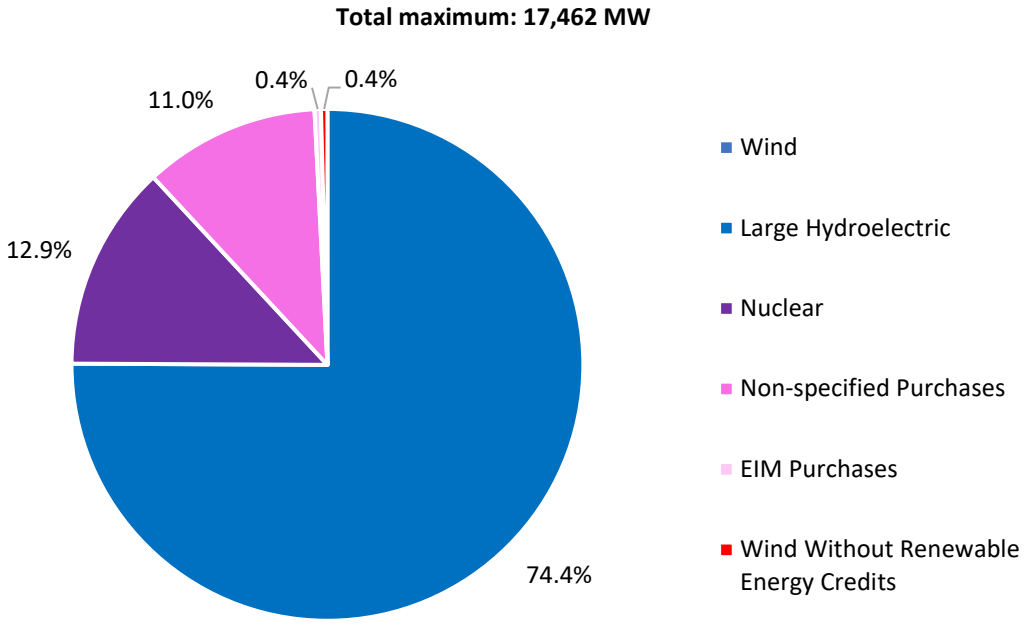
Idaho Falls Power, Lost River Electric Cooperative, Salmon River Electric Cooperative, and the Idaho Energy Authority are members of the Utah Associated Municipal Power Systems (UAMPS). UAMPS is a nonprofit headquartered in Salt Lake City, Utah, that supports its 50 members across seven Intermountain states with financial-, acquisition-, construction-, and operation-related energy services. UAMPS conducts resource planning, evaluation of power resources or services for its members, and develops power-generating facility projects. UAMPS members can choose to participate in any of UAMPS's 13 ongoing projects to support resource needs.[lvii]

2.3 Bonneville Power Administration

BPA is one of four Power Marketing Administrations under the U.S. Department of Energy (DOE) that supply power throughout their regions.[lviii] Power marketing administrations are federal agencies within the Department of Energy who operate electric grids and sell electricity from federally-owned and operated hydroelectric dams. There are four power marketing administrations: the Bonneville Power Administration, the Western Area Power Administration (WAPA), the Southeastern Power Administration (SEPA), and the Southwestern Power Administration (SWPA). All power marketing administrations own and operate transmission, except for SEPA. Here, SEPA must negotiate transmission agreements with private utilities.[lix,lx]

BPA is a separate and distinct entity in the DOE under the DOE Organization Act of 1977.[lxi] BPA is self-funded and has its own federal borrowing and procurement authorities which it utilizes to serve the Northwest. BPA's territory includes Idaho, Oregon, Washington, western Montana and small parts of eastern Montana, California, Nevada, Utah, and Wyoming. BPA serves publicly owned cooperatives, municipalities, and public utility districts that serve federal installations, regional IOUs, and direct-service industrial customers.[lxii] BPA supplies about 32% of regional power, primarily from hydroelectric generation.[lxiii]

Figure 19. BPA Resource Portfolio, 2024 [lxiv]



BPA sources power from 31 federal hydroelectric dams that are operated by the U.S. Army Corps of Engineers (USACE) and the Bureau of Reclamation (BOR). These dams are referred to as the Federal Columbia River Power System.[lxv] It also markets power generated from some non-federal plants in the Northwest, as well as additional power from the 1,169 MW Columbia Generating Station nuclear power plant in Richland, Washington.[lxvi] BPA operates and maintains approximately 15,000 miles of high-voltage transmission lines and 262 substations servicing 323 transmission customers that serve about 14.4 million people in its service territory.[lxvii]

Annually, BPA publishes a Pacific Northwest Loads and Resources Study (White Book) which documents regional retail loads and resource capabilities that serve the federal system and Pacific Northwest for 10 years. The most recent White Book details resource capabilities from 2025 through 2036. The White Book uses public resource planning reports submitted by individual utilities, the Northwest Power and Conservation Council (Council), and the Pacific Northwest Utilities Conference Committee. Under firm water conditions, the Federal Columbia River Power System is projected to have annual energy deficits across the study period. Overall, these shortages are greater than projected in the 2024 White Book. Under average water conditions, the Federal Columbia River Power System is projected to have annual energy surpluses throughout the study period. The Pacific Northwest Region is projected to have an annual energy surplus followed by deficits in the later study years. This deficit results mainly from

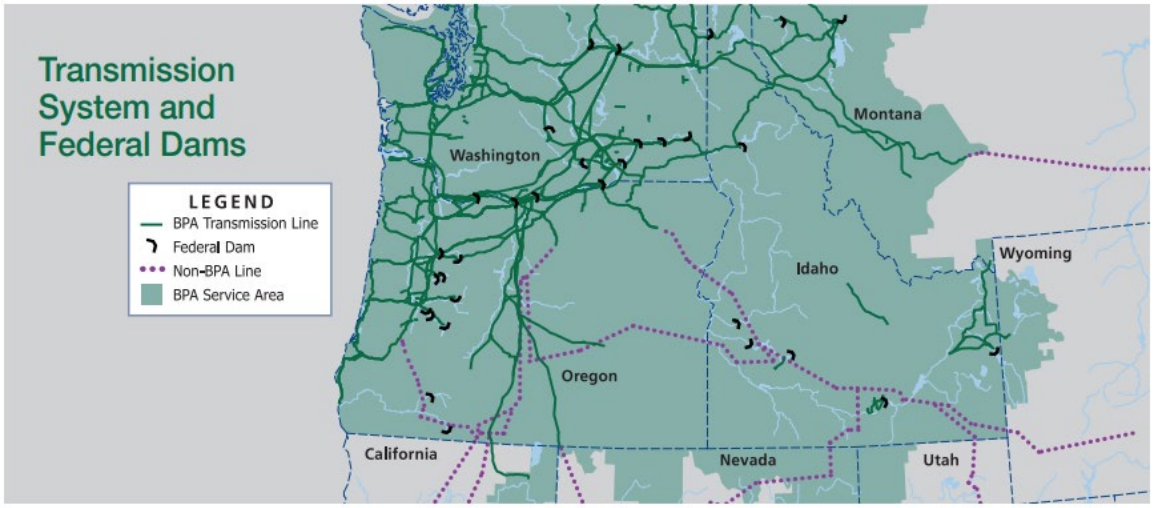
increasing retail loads in the region.[lxviii] Under the Northwest Power Act, BPA is responsible for providing the net load requirements of its requesting customers.

Under BPA's current 20-year power sales contract, Idaho municipal and cooperative utilities (customers) purchase power under a tiered rate methodology. Customers can purchase power sold at a Tier 1 rate locking in the federal base system's lowest cost generation portfolio. When the customer exceeds the amount of power they are eligible to purchase at a Tier 1 rate, they can purchase power from BPA at a Tier 2 rate, acquire resources independently, or jointly with other utilities to meet future demands. BPA's current 20-year contracts run through September 30, 2028.

BPA works with customers to fund and implement energy-efficiency programs. Since the early 1980s, BPA and its customers have acquired more than 2,590 aMW in electricity savings through energy efficiency.[lxix] In 2024, BPA updated its Energy Efficiency Action Plan targets to reflect new input from the Council's 2021 Power Plan and its own Resource Program analysis. BPA sets an energy efficiency incentive budget every two-year rate period. BPA aims to save 340.7 aMW through 2027.[lxx]

Idaho cooperative and municipal utilities, through their power rates with BPA, invested over $5 million in energy efficiency measures through direct payments to customers in 2020 and 2021.[lxxi] Cooperative and municipal utilities in Idaho have been utilizing energy efficiency programs to help meet additional resource needs for over 40 years.

Figure 20. BPA Transmission System and Federal Dams[lxxii]



2.4 Natural Gas Utilities

Avista Corporation

Avista Corporation (Avista) serves over 93,000 natural gas customers in Idaho's northern and central regions. Avista's North Division supplies gas to eastern Washington and northern Idaho along its 75-mile interstate pipeline.[lxxiii]

Avista's natural gas distribution system consists of approximately 3,300 miles of distribution pipelines in Idaho. Avista holds firm access rights to both Canadian and Rocky Mountain natural gas supplies through the Williams Northwest and TransCanada Gas Transmission Northwest pipelines. Avista also holds rights to the Jackson Prairie storage facility in Washington.

According to Avista's 2023 Natural Gas Integrated Resource Plan (IRP), forecasting natural gas customer demand is becoming more difficult due to policy updates in Oregon and Washington.[lxxiv] Nevertheless, Avista estimates natural gas customers will increase by 1.1% annually.[lxxv]

Intermountain Gas Company

Intermountain Gas Company (IGC) was founded in Idaho in 1950 and is a subsidiary of MDU Resources Group. IGC distributes natural gas to over 412,500 residential, commercial, and industrial customers in 74 Idaho communities.[lxxvi] IGC's 145 industrial and transport customers comprise 46% of its annual energy demand, while residential and commercial customers comprise 36% and 17%, respectively.

IGC uses approximately 13,300 miles of pipelines across 50,000 square miles in southern Idaho.[lxxvii] IGC holds firm capacity rights on William's Northwest Pipeline as well as three upstream pipelines to deliver gas to the distribution system. The upstream systems are Gas Transmission Northwest, Foothills Pipeline, and Nova Gas Transmission. IGC owns and operates the Nampa liquified natural gas (LNG) storage facility and leases storage at the Jackson Prairie underground facility, the Plymouth LNG facility, and from Dominion Energy's Mountain West/Williams Pipeline's Clay Basin underground storage field.

Since 2017, the IGC Energy Efficiency Program has operated with the goal of acquiring cost effective demand-side management resources in the form of natural gas therm savings. Residential customers can earn rebates for the purchase and installation of high-efficiency natural gas equipment and construction of energy-efficient homes. The program offers tools such as a calculator to estimate energy savings from the installation of high-efficiency appliances and a video library demonstrating home weatherization measures to enhance energy efficiency.

Commercial customers are also eligible for rebates when they install high-efficiency natural gas space heating and kitchen equipment. The program's website provides energy savings tips for businesses and includes a commercial kitchen savings estimator for the installation of high-efficiency commercial kitchen upgrades.

In 2022, 7,945 rebates were issued to IGC customers, a 43% increase from the previous year. The program engages customers through interactive online educational materials and activities designed to promote energy efficiency for both homes and businesses.

Dominion Energy

Dominion Energy, formerly called Questar Gas, based in Salt Lake City, provides natural gas service to residential, commercial, and industrial customers in Utah, southwestern Wyoming and about 2,500 customers in Franklin County, Idaho.[lxxviii] The Public Utilities Commission (PUC) has elected to allow the Utah Public Service Commission to regulate Dominion Energy's activities in its small Idaho service area.[lxxix]

3. Energy Sources

Idaho's energy landscape is shaped by the state's geography, its abundant natural resources, and a long history of practical decision-making.

3.1 Hydroelectricity

Hydroelectricity is a carbon-free energy resource generated by harnessing the force of moving water. Idaho has numerous generating hydroelectric power plants with a combined capacity of 6,748,000 MWh, making the state the eighth-largest hydroelectricity producer in the nation.[lxxx] The largest projects include

the 1,167 MW Hells Canyon Complex (consisting of the Hells Canyon, Oxbow, and Brownlee dams) owned by Idaho Power, the 400 MW Dworshak dam operated by the USACE, and the 260 MW Cabinet Gorge Project owned by Avista.[lxxxi] Actual energy output varies depending on annual water supply conditions.

The flexible nature of hydroelectricity enables it to meet fluctuating grid demands and mitigate supply losses associated with intermittent resources such as wind and solar. Idaho's abundant water resources allow for hydroelectricity to be a reliable baseload energy resource that provides affordable energy to Idahoans. In 2024, hydroelectricity supplied approximately 44% of in-state electricity generation, contributing significantly to utilities' ability to provide low-cost power to customers.[lxxxii]

Beyond energy production, hydroelectric facilities provide additional benefits, including flood control, dependable irrigation for agriculture, and recreational opportunities such as boating, fishing, rafting, and swimming at reservoirs across the state.

Figure 21. **Hydroelectricity and Hydrogen Innovation**[lxxxiii]

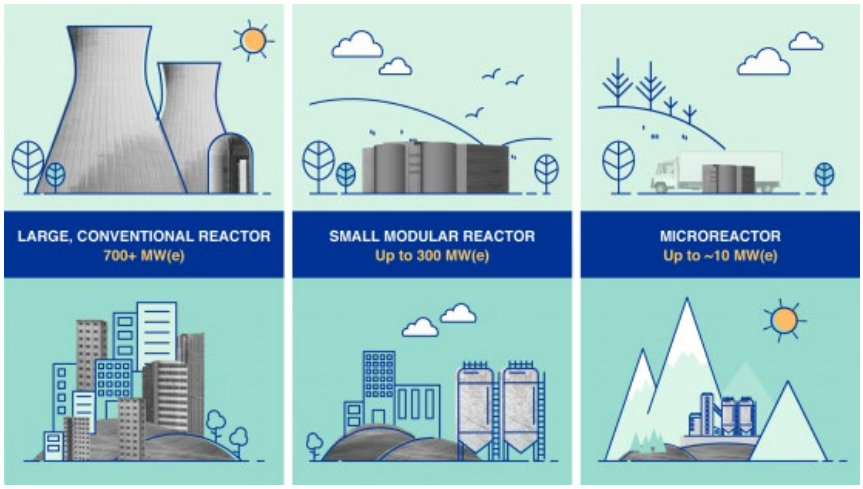
Variable water flows and shifting electricity demand can limit the efficiency of hydroelectric power plants. To address this, Idaho Power, in partnership with INL and Pacific Northwest National Laboratory, is exploring how to integrate hydrogen production into its 17 hydroelectric power plants. This approach could store energy, stabilize the grid, and improve oxygen levels in river systems. It demonstrates how research and innovation are driving new solutions in Idaho's energy landscape.[lxxxiv]

3.2 Nuclear

Nuclear energy is a carbon-free power source. Nuclear power contributes nearly 20% of electricity in the nation and is the largest source of clean energy in the U.S.[lxxxv] As of April 2024, there are 54 commercially operating nuclear power plants with 94 nuclear power reactors in 28 states that, in total, generate over 100,000 MW.[lxxxvi]

Compared to other energy resources, nuclear power is dramatically more land-efficient—up to 173 times more than wind and 31 times more than solar per generated megawatt per acre. Many new reactor designs incorporate enhanced safety features, modular construction methods, and the ability to recycle fuel, lowering long-term costs and environmental impacts. Unlike intermittent renewables, advanced reactors provide around-the-clock, carbon-free baseload electricity, offer the flexibility to ramp output in support of variable wind and solar, and supports reliability and affordability.

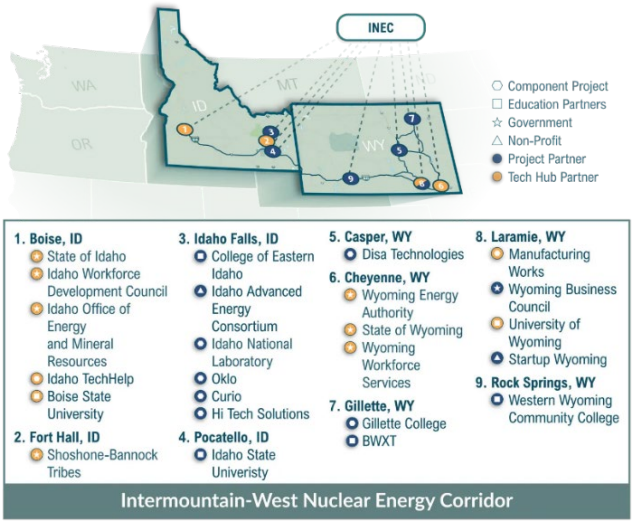
Figure 22. Nuclear Reactor Types[lxxxvii]



Idaho's advanced workforce pipeline, and world-class research institutions position the state to lead the next era of nuclear energy development. State agencies, INL, utilities private developers, and the newly established Advanced Nuclear Task Force — created by Governor Little through executive order in September 2025 — are coordinating efforts to accelerate deployment and strengthen the state's competitive edge.

Partnerships reinforce Idaho's role as a central hub for nuclear development and a proving ground for technologies that will shape the nation's energy mix. The Idaho Advanced Energy Consortium (IAEC) and Idaho's universities add depth to this ecosystem by advancing reactor technologies, preparing the supply chain, and training the skilled workforce needed to support commercial projects. The Intermountain-West Nuclear Energy Corridor (INEC) and the Tri-State Compact with Utah and Wyoming create a broader framework for siting, permitting, workforce mobility, and shared infrastructure.

Figure 23. Intermountain-West Nuclear Energy Corridor[lxxxviii]



INEC was established was one of 31 designated Tech Hubs in the U.S. by the Economic Development Administration. INEC spans a corridor of 685 miles between Idaho and Wyoming, seven Tribal Nations, and includes over 2 million people. INEC is establishing the region as a nexus for advancing nuclear energy and is catapulting the region into global technology leaders.

3.3 Wind

Wind is a clean energy resource that generates electricity using turbines. Because wind is intermittent, storage and dispatchable resources are needed to supplement demand when wind generation is not available. These dispatchable resources include battery energy technology, hydroelectric power, nuclear power, and natural gas-fired generators.

Idaho's wind production grew 1,018% from 2008 to 2023 and [lxxxix] Wind generates approximately 15% of Idaho's electricity and is produced by 588 wind turbines.[xc,xci] In 2023, the wind industry employed 1,065 Idahoans.[xcii]

Wind mapping studies estimate that Idaho has a potential wind generation capacity of 213,000 MW, with 1,100 MW currently installed.[xciii] The Snake River Plain in southern Idaho represents the state's greatest wind resource potential.[xciv]

3.4 Solar

Solar power is a clean energy resource that harnesses sunlight to generate electricity. It is produced using two main technologies: photovoltaic (PV) solar cells and concentrated solar power (CSP). PV systems convert sunlight to electricity using solar panels arranged in arrays and angled towards the sun. CSP technologies use mirrors to concentrate sunlight onto receivers, generating heat that drives turbines or engines to produce electricity.[xcv]

In addition to generating electricity, solar energy can be used to heat water and buildings through active and passive heating systems. Active systems circulate water or heat-transfer fluids through a series of pumps and controls located in pipes throughout a home. Passive systems rely on the movement of hot water rising and cool water sinking to push water through a pipe system in a home. Both systems require a water storage tank and solar panels to collect the heat.[xcvi]

Utility-scale solar generation in Idaho began in August 2016, contributing just 0.2% of the state's electricity generation that year. In 2025, the total installed solar had grown to approximately 1,286 MW, enough to power 176,416 homes. Idaho has 35 solar companies, consisting of manufacturers, developers, and installers, and the solar industry provides 770 jobs in the state.[xcvii]

Figure 24. Pleasant Valley Solar 1[xcviii]

Pleasant Valley Solar 1 is located in Ada County. When construction completed in March 2025, it became the largest operational solar facility in Idaho, with a 200 MW capacity. The facility was built with the help of 220 construction workers. rPlus Energies plans to expand the site with a second phase, Pleasant Valley Solar 2, which is currently under construction and will add 125 MW of capacity. [xcix]

3.5 Bioenergy

Bioenergy is renewable and derived from biological materials – or biomass. Biomass can include agricultural crop waste, energy crops, animal waste, algae, and wood products and can produce heat, electricity, and transportation fuels. Idaho has long been an innovator in bioenergy. Idaho is the first state to use farmed crop seeds for biodiesel production, the first to use less toxic ethanol instead of methanol, and the first place that a vehicle was driven 100,000 miles solely on biodiesel.

As of 2023, Idaho has one operating ethanol plant in Burley capable of producing 60 million gallons of ethanol per year. Wood waste biomass from Idaho forests, primarily, and other biomass and landfill gas provided about 3% of Idaho's electricity production in 2023.[c] Feedstock projections indicate that Idaho produces over 2.5 million metric tons of wood waste from forests, mills, and urban sources, respectively.[ci] Idaho has three dedicated biomass manufacturing facilities and several research-based operations across the state.[cii] Clearwater Paper, based in Lewiston generates roughly half of its energy through biomass and black liquor renewable biomass – black liquor is a by-product of paper mills.

Recent technological developments have made it possible to capture gas from decomposing waste and refine it into usable natural gas. The Hidden Hollow Energy Landfill Gas Project in Boise, which has been operating since early 2025, captures methane from the Ada County Landfill and converts it to renewable natural gas. Natural gas produced by this method is then injected into pipelines and used for heating and power generation in Idaho. Generating power and heat from waste is an innovative solution that could enhance Idaho's energy independence and resilience.[ciii]

Figure 25. Energy From Wastewater in Nampa[civ]

Nampa Public Works plans to utilize wastewater solids from the water treatment process to generate new products and sources of energy at their wastewater treatment plant. Biosolids are dried to reduce waste volume and then are combined with wood pellets and heated in a pyrolysis machine. This process synthesizes gas which can be burned for power generation and granular carbon or biochar that is used in agriculture and filtration.

3.6 Geothermal

Geothermal energy is a renewable, carbon-free energy resource derived from the heat within the earth. Unlike intermittent resources, geothermal energy provides reliable baseload power generation, meaning it can be utilized 24/7, or whenever needed. An estimated 13,550 MW of untapped geothermal power exists in Idaho, much of it in the southern portions of the state.[cv] Ormat Technologies manages Raft River Enhanced Geothermal System Project, the first commercial geothermal power plant in the Northwest. Located in Cassia County, the 11 MW project came online in 2008 and is Idaho's only operating

commercial geothermal power plant.[cvi] Idaho is one of seven states with utility-scale electricity generation from geothermal energy.[cvii]

In addition to electric generation, direct use of geothermal waters is the oldest, most versatile, and most prevalent utilization of geothermal energy.[cviii] There are over 1,000 geothermal wells and 200 springs across Idaho. Geothermal wells are holes drilled to access subterranean geothermal resources, while geothermal springs are natural bodies of surface water heated by the earth's crust. Wells that have a bottom hole temperature greater than 85°F and less than 212°F are designated as low-temperature geothermal (LTG) resource wells.[cix] These LTG resources are used for space heating, aquaculture, greenhouses, and recreation throughout the state.

Idaho's capital city, Boise, is home to the nation's first geothermal district heating system. Warm Springs Heating District, which was built in the late 19th century, continues to service over 300 customers in east Boise.[cx] The City of Boise's geothermal heating utility delivers naturally heated water through over 20 miles of pipeline to over 6 million square feet of building space. Boise plans to expand its geothermal system to help meet its goal to achieve carbon neutrality by 2050.[cxi]

The Capitol Mall Geothermal Energy Project was completed in 1982 and continues to provide low-cost space and hot water heating to the Idaho Statehouse and eight other state buildings. The Idaho Statehouse was the first geothermally-heated capitol in the nation.

The future of Geothermal energy is promising in Idaho. Although Idaho only has one operating geothermal plant, exploration is underway to develop more. The BLM recently completed a lease sale on September 9th, 2025, for geothermal exploration on 24,355 acres in Elmore, Washington, and Bonneville counties[cxii]. In addition to the September sale, 68,025 acres of federal land in Cassia, Blaine, Camas, and Owyhee counties were leased for geothermal development in December, bringing the grand total of land to nearly 100,000 acres[cxiii]. Idaho has never been so thoroughly explored for geothermal energy until now, indicating there will be extensive potential for continued geothermal development in the coming years.

Figure 26. Geothermal Power Accelerator[cxiv]

Idaho joined the Geothermal Power Accelerator (GPA) in December 2025. The GPA is a coalition of states working in tandem to develop policies and programs around geothermal energy that will aim to lower project costs, reduce regulatory burden, and rapidly connect reliable baseload energy to the electric grid. As Idaho's representative in the GPA, OEMR will work with public and private entities to move geothermal energy forward in the State of Idaho.

3.7 Combined Heat and Power

Several Idaho facilities and industrial users have incorporated systems that generate on-site electricity and thermal energy in a process known as CHP. CHP is typically deployed at sites such as industrial

operations and university or corporate campuses, which have high demand for electricity and hot water or steam. As of 2025, there are 22 CHP systems in Idaho with a capacity of 213 MW, predominantly used in wood product facilities, dairies, hotels, and large industrial food processors. Half of Idaho's 22 CHP facilities utilize renewable fuels.[cxv]

3.8 Hydrogen

Hydrogen is the most abundant element in the universe. Today, hydrogen is commonly used for industrial aerospace operations, electricity generation, and vehicle transportation. Hydrogen can be blended in natural gas lines and combusted with natural gas, providing similar thermal output with lower carbon impact. While Idaho utilities do not currently utilize hydrogen, Idaho Power aims to add 340 MW of hydrogen power generation to two natural-gas-fired electricity plants by 2037.[cxvi,cxvii]

New methods to produce hydrogen have increased interest in it as an energy source. Currently, over 99% of hydrogen production worldwide comes from processing coal or natural gas while less than 1% comes from water electrolysis[cxviii]. Techniques like methane pyrolysis split methane molecules from natural gas into carbon and hydrogen, creating two viable products with less waste compared to conventional methods of hydrogen production[cxix]. Regardless of the technique, all current methods of hydrogen production require vast amounts of coal, natural gas, or water, resources that typically have more pertinent uses aside from production of hydrogen.

In recent years, technological and scientific advances have started a wave of exploration for 'pure' or 'geologic' hydrogen. Like natural gas, geologic hydrogen is trapped underground and accessed by drilling. The biggest advantage to geologic hydrogen is that no reforming or electrolysis is required to obtain it. Geologic hydrogen collects underground purely as H_2, which means no chemical bonds need to be broken before it can be used in industry. While interest in geologic hydrogen is higher than ever, there are currently no proven commercially viable hydrogen systems in the United States. Exploration is underway in a handful of states, however, including Idaho. In November 2025, Cascade Exploration commenced drilling operations to explore the potential of hydrogen in Notus, Idaho[cxx]. While there are no concrete results yet, if geologic hydrogen is discovered and deemed economically viable, Idaho could establish itself as a leader in the development of a new primary energy source.

3.9 Coal

Idaho has a small amount of estimated recoverable coal reserves but does not have any commercial coal production. Idaho utilities hold ownership shares in coal-fired power plants located in neighboring states. There are no longer any operating utility-scale coal-fired power plants in Idaho, but small amounts of coal are shipped to the state's industrial users by rail and truck from Utah, Colorado, and Pennsylvania.

3.10 Natural Gas

Idaho's own natural gas reserves are modest but notable. Discoveries in the Payette Basin in 2010 marked the first significant in-state resource identification, leading to Idaho's first commercial production of natural gas and natural gas liquids in 2015.[cxxi] Production remains small compared to consumption, but it contributes to local supply. In 2024, Idaho produced 1,146 million cubic feet of natural gas.[cxxii]

4. Energy Management and Technologies

Since electricity was first harnessed in the 19th Century, scientists have investigated new applications for electricity and how they can raise the standard of living. Energy technologies promote grid reliability, increase access to energy markets, make grid operations more efficient, modernize grid control, and revolutionize transportation.

4.1 Energy Assurance

Ensuring residents, businesses, and emergency services have an uninterrupted supply of energy is a priority for OEMR. Energy assurance is accomplished through energy plans and programs that boost resiliency and ensure a secure energy system. It is OEMR's responsibility to provide funding from federal grants to electric utilities for projects that increase grid strength and ensure Idaho has reliable power.

OEMR is a part of Emergency Support Function (ESF) #12, which coordinates response and recovery of Idaho's energy system during emergencies and disasters. As members of ESF #12, the Idaho Public Utilities Commission (IPUC) and the Idaho Office of Emergency Management (IOEM) work closely with OEMR to develop plans and resources for protecting and restoring Idaho's critical electricity, natural gas, and transportation fuel infrastructure[cxxiii]. As Idaho's primary agency for ESF #12, OEMR is responsible for coordinating response measures for transportation fuel emergencies, working with energy providers to determine response and recovery needs during a crisis, monitoring and analyzing current and future energy emergencies, and creating the Idaho Energy Security Plan. ESF #12 is activated to help mitigate the effects of an energy emergency or disaster. OEMR is tasked with helping utilities maintain power during extreme weather events like wildfires, blizzards, and windstorms, which is important for ensuring the health and safety of all Idahoans.

Idaho Energy Resiliency Grant Program (ERGP)

Section 40101(d) of the Infrastructure Investment and Jobs Act provides public funding to Idaho to enhance grid infrastructure and energy resiliency. OEMR subawards funds to grid operators and utilities that can improve their energy infrastructure to increase resilience. To date, OEMR has subawarded over $12 million in state and federal funds in support of 23 projects. These projects include replacement of old technology, undergrounding of power lines, installing fire protection on electric poles, upgrading substations, and more[cxxiv].

The most recent round of ERGP funding was allocated to mitigate damage from wildfires, Idaho's greatest natural hazard. The Wildfire Resilience Investment Program (WRIP) is designed to allocate funding for utilities to invest in long-term strategic projects that reduce risks associated with wildfires. Programs like these are crucial in Idaho, where long stretches of distribution lines cross large forests and serve isolated rural communities. The potential for extended grid disruption following wildfire events necessitates investment into projects addressing system hardening, vegetation management, upgrades to monitoring systems, and outage response. OEMR carefully considers candidates and subawards funding based on potential impact to resilience, customer benefits, and need.

These programs have substantially increased grid resiliency in Idaho and reduced the potential for adverse impacts following an energy emergency. More information about ERGP, WRIP, and other OEMR programs is available in Appendix A.

4.2 Energy Efficiency

Conservation, energy efficiency, and demand response are energy saving and economic strategies that can be utilized to meet energy needs. Conservation refers to personal actions that reduce energy use such as unplugging appliances not in use or opening curtains during the day and using sunlight instead of using power from a lightbulb. Energy efficiency is the utilization of technology that consumes less energy while providing sufficient service. For example, replacing drafty windows with EnergyStar certified windows can lower household energy bills by an average of 12% and reduce UV sun damage to carpets, floors and furniture.[cxxv] Energy efficiency measures in buildings provides many potential benefits such as: saving money on utility bills, reducing maintenance costs, increasing comfort levels for occupants, and increasing energy resiliency for the community. Demand response refers to customers temporarily altering energy consumption during times of higher demand for electricity, usually in response to signals from the utility or grid operator. Collectively, these strategies are often referred to as demand side management.

The PUC directs IOUs to conduct cost-effective conservation, energy efficiency, and demand response programs.[cxxvi] Each IOU calculates the level of cost-effective efficiency potential in their IRP and offers a suite of efficiency programs for customers. Cost-effectiveness is realized when the lifecycle energy, capacity, transmission, distribution, and other quantifiable savings to Idaho residents and businesses exceeds the direct costs of the measure to the utility and participant. Cost-effective energy measures provide economic benefits to Idaho utilities by reducing energy demand within their system.

Energy efficiency technologies have significantly improved over the past several decades. Today, there are many ways that people and businesses can save money and energy, see Figure 27 for examples.

Figure 27. Energy Efficiency Sector & Technologies[cxxvii]

Residential	• High-efficiency home HVAC systems • Insulation • High performance windows and storm windows • Efficient appliances
Commercial	• Efficient consumer electronics • Commercial refrigeration • LED lighting with sensors
Industrial	• Fuel-efficient motors • Enhancements to the building envelope (e.g. roof, siding, windows)
Agriculture	• Efficient pumps and motors
Transportation	• Fuel economy standards • Fuel-saving tire design

Figure 28. Energy Efficiency and Conservation Block Grant Program (EECBG)[cxxviii]

In 2024, OEMR awarded 14 rural cities and counties with funding to complete and promote energy efficiency and conservation practices. For example, The City of Wilder replaced non-efficient heating and cooling units in 20 low-income family housing units in the Chula Vista Complex with energy-efficient mini-split air conditioning and heating units. Installing energy-efficient mini-split units should reduce energy costs for low-income families.

4.3 Energy Technologies

Across the country, the grid is aging and reaching capacity. Various grid innovations aim to make this system more efficient and effective at meeting demand.

Reclosers

To adapt to changes in electricity demand and unexpected changes in load, today's distribution system commonly utilizes a sophisticated type of switch called a recloser. Reclosers are engineered to break the flow of electrical current when normal flow is interrupted. Most interruptions – about 80% – are not permanent (lighting strikes, animals, etc.).[cxxix] When the recloser detects a change in normal current, the recloser will open the circuit for a few moments then close the circuit in hopes the fault has passed. If normal current has not been restored, the recloser will open again, this time for longer. If the fault is still present on the third close, the recloser will lock in the open position. Line crews must then address the issue on site before resetting the recloser to normal operation.

Modern digital reclosers can be programmed for a variety of grid situations including high demand, inclement weather, and nearby wildfires. Each program can modify the sensitivity of the recloser and provide operators with the control to maintain reliability, protect distribution assets, and minimize the potential for electricity-related thermal events. Through its Energy Resiliency Grant Program, OEMR has provided funding to install or upgrade reclosers to several Idaho utilities.

SCADA Systems

SCADA stands for "supervisory control and data acquisition." SCADA systems are common in industrial applications and contain software and hardware components for a user to monitor system conditions and modify operations as needed in real time.[cxxx]

In electrical grid applications, SCADA systems allow grid operators to monitor and control electric distribution. When faults occur in the system, imbedded equipment can isolate the fault, redirect current, and notify grid operators of the problem. Combined with a network of reclosers, cameras, sensors, digital meters, remote terminal units (RTUs), and programmable logic controllers (PLCs), SCADA systems support grid reliability and resiliency for operators and customers alike.[cxxxi] Through its Energy Resiliency Grant

Program, OEMR provided funding to Clearwater Power to upgrade its command center with SCADA system capabilities for its service territory.

Line Monitors

Line monitors are electronic assemblies directly attached to power lines that track the transmitted power. Line monitors are connected wirelessly to a utility's SCADA system. In the event of an anomaly, a fault, or outage, line monitors can immediately generate a report to grid operators. Line monitors are valuable to utilities because they provide real-time data collection and analytics. This information can support grid reliability and more efficient grid operation.

Distributed Energy Resources

Distributed energy resources (DERs), also called on-site, dispersed, or decentralized generation, are small power sources that can be combined to provide power to satisfy demand. Typically producing less than 10 MW, such sources can include micro-turbines, small natural gas-fueled generators, battery storage, or rooftop solar. [cxxxii] DERs are gaining popularity due to the potential for affordable renewable energy, and an increased desire for grid resiliency, largely motivated by increased occurrences of natural disasters such as storms and wildfires.[cxxxiii] DERs may comprise 30-50% of nationwide generation capacity by 2031.[cxxxiv]

RTOs/ISOs are required to open their electricity markets to participation by aggregated DERs. To comply, each RTO/ISO must file with FERC tariff provisions that establish market rules addressing specific technical and operational details impacting market participation by DER aggregations.[cxxxv]

Microgrids

A microgrid is a group of interconnected loads and DERs within clearly defined electrical boundaries that act as a single controllable entity. A microgrid can operate independently or connect and disconnect from the grid as needed.[cxxxvi] Microgrids can optimize access to reliable, clean, and resilient energy through local, interconnected energy systems that incorporate loads, decentralized energy resources, battery storage, and control capabilities. In 2020, DOE's Office of Electricity began a Microgrid Program Strategy, its vision being, "By 2035, microgrids are envisioned to be essential building blocks of the future electricity delivery system to support resilience, decarbonization, and affordability."[cxxxvii]

Energy Storage

Energy storage technologies provide the ability to store energy during periods of low demand for use at later times, adding enhanced control, reliability, and resiliency to the grid. Energy storage is important as the grid incorporates intermittent energy resources such as wind and solar. Most energy storage systems are located near distributed energy sources, such as solar and wind facilities.[cxxxviii] Common storage technologies include mechanical (pumped-storage hydroelectric power and compressed air), electrochemical (lithium-ion batteries, flow batteries, and hydrogen), and thermal.

Energy storage can play a key role in providing overall grid security and resilience, while allowing critical infrastructure, hospitals, police stations, and essential services to remain operational during emergency situations. There are federal programs that promote the adoption of additional energy storage in the U.S. for resiliency purposes at critical facilities.

In 2023, ISEA published the Utility-scale Storage Task Force Report which outlines opportunities for utility-scale energy storage in Idaho.[cxxxix] In 2022, the U.S. had 31.6 GW of installed energy storage.[cxl] Approximately 96% of existing storage is pumped-hydroelectric storage.[cxli]

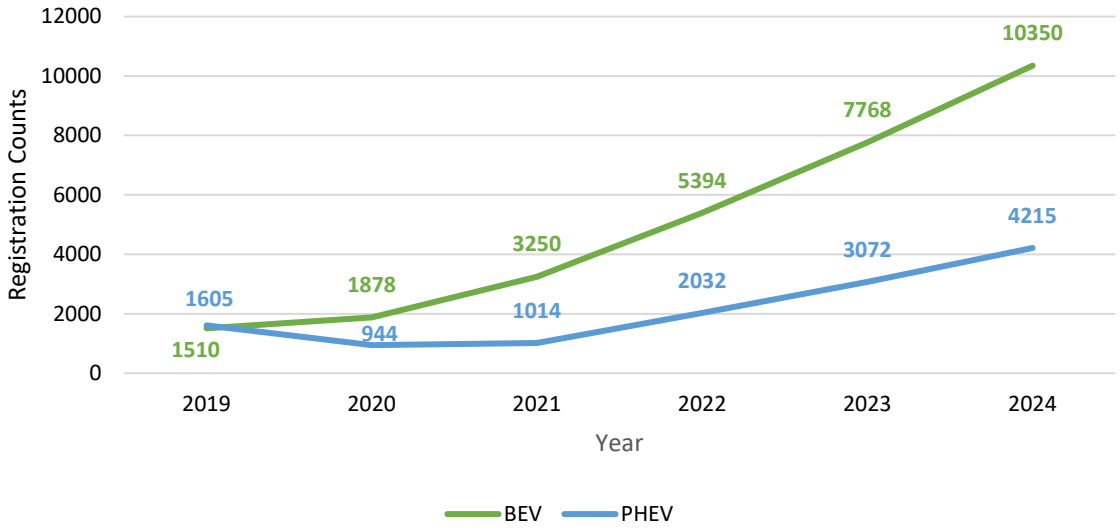
Electric Vehicles

The first electric vehicle was created in the 1930s.[cxlii] Today, battery electric vehicles (BEVs) run on batteries powered by stored electricity rather than a petroleum internal combustion engine. Plug-in hybrid EVs (PHEVs) are vehicles with both an internal combustion engine and an electric propulsion system. The battery can be charged from an external charging source, by the internal combustion engine, or through regenerative braking (a process where the electric motor uses the car's momentum to generate electricity). EV adoption is increasing rapidly across the country as advancements in technology have improved battery performance and range. As of December 2024, Idaho had a total of 10,350 BEV and 4,215 PHEV registrations. EV registrations have increased by over 585% since 2019.

Figure 29. EVs at the 2024 Pocatello National Drive Electric Week

There are three "levels" of EV charging. EVs can be charged overnight via common 120-volt outlets, also called Level 1 charging. Level 2 charging stations have a 240-volt capacity, which can be installed at residences, businesses, or fleet locations to charge at a faster rate (about 3-5 hours for a full charge).[cxliii] Lastly, direct current fast chargers (DCFC) require a specialized, 480-volt outlet and can provide a full charge after 20-30 minutes. Level 1 and 2 chargers are better suited to day-to-day use and DCFC are best suited for long-range road trips.[cxliv] As of October 2024, Idaho has 204 EV station locations and 509 ports available to the public.[cxlv]

Figure 30. Idaho BEV and PHEV Registrations, 2019-2024 [cxlvi]

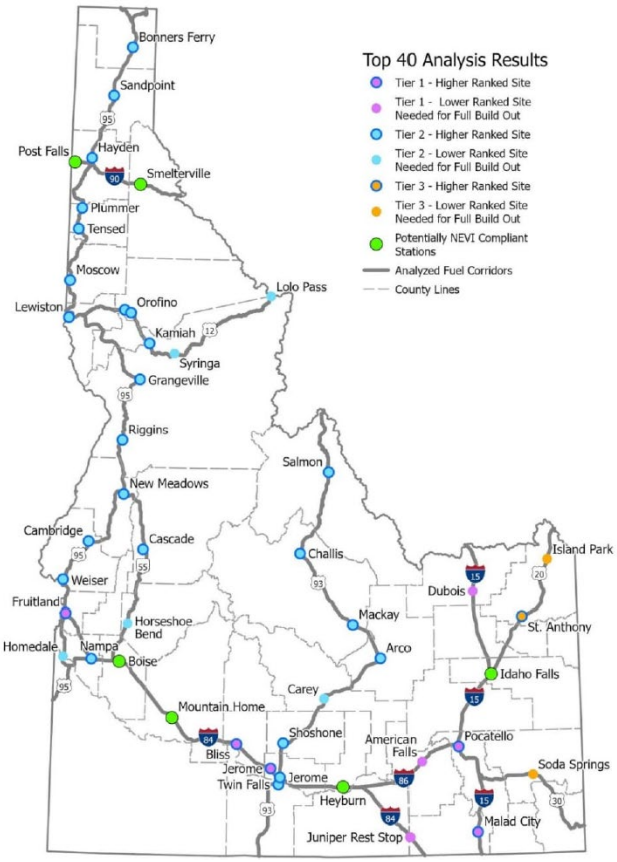


National Electric Vehicle Infrastructure Program

In partnership with the Idaho Transportation Department and Idaho Department of Environmental Quality, OEMR manages the National Electric Vehicle Infrastructure (NEVI) Program. Together, these three agencies are referred to as the Interagency Working Group (IAWG). The NEVI Program's objective is to build a system of reliable, interconnected DCFC on federally designated alternative fuel corridors.

In July 2024, the IAWG released its Siting, Feasibility, and Access Study (SFAS). The SFAS describes 40 sites for DCFC and the methodology used to select those sites. The solicitation process began in late 2024 but was interrupted in early 2025. In August 2025, the Federal Highway Administration released new guidance for national NEVI Program implementation. IAWG is currently working to restart the solicitation for sites in Pocatello, Bliss, and Lewiston.

Figure 31. Idaho NEVI Program Top 40 Sites



Hydrogen Fuel Cell Vehicles

Instead of using an electric battery to power an electric motor for vehicle propulsion, some vehicles use a hydrogen fuel cell to produce electricity for the electric motor. These vehicles are called fuel cell electric vehicles (FCEVs). Like electricity generation using stored hydrogen, FCEVs use onboard stored hydrogen, the air, and a fuel cell to create the electricity that drives the electric motor. Benefits of FCEVs include quick fueling times, high range, and the ability to use regenerative braking for greater efficiency. Some automakers have experimented with FCEV deployment, but the lack of fueling existing fueling infrastructure makes wider adoption difficult.[cxlvii]

Micromobility

While the U.S.'s primary mode of transportation is personal vehicles, micromobility is becoming increasingly popular, especially in urban areas. Micromobility refers to small, personal or shared transportation devices that usually operate at relatively low speeds (typically less than 30 miles per hour). Common micromobility devices include e-scooters, e-bikes, electric skateboards, and segways. Micromobility technologies aim to transport people over short distances or serve as "first- and last-mile" transportation options, connecting users to or from longer-range transportation options.[cxlviii] Shared micromobility (micromobility options used by multiple users[cxlix]) trips topped 133 million in 2023, a 16% increase from 2022.[cl] Federal, state, and local officials are actively investigating how micromobility can contribute to the overall transportation experience.

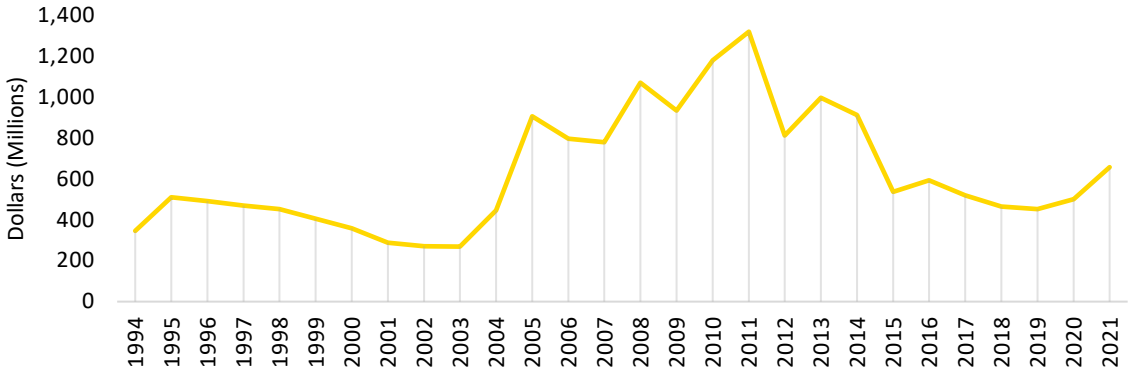
5. Minerals

The State of Idaho is focused on utilizing its robust mineral resources for the betterment of the state and country. Within the last year, Idaho has aided developers in streamlining the permitting process for mining to bolster rural economies and provide high paying industry jobs for skilled Idaho workers. Idaho is poised to become a leader in domestic mineral production and support the United States' natural resource resilience goals.

5.1 Mineral Production

Minerals are a key component of Idaho's economy. As emphasis grows on mining in the United States, Idaho will be a major contributor to American mineral production. Idaho is home to many critical minerals that are necessary for U.S. manufacturing, agriculture, defense, and even medicine. Global trends in mineral production and policy changes on the federal level have made domestic mineral exploration and development more feasible than ever before. With a mining history nearly as rich as its mineral reserves, Idaho is in an excellent position to capitalize on a market emphasizing domestic mineral production.

Figure 32. Value of Nonfuel Minerals Produced in Idaho, 1994-2021[cli]



Over the last 30 years, Idaho has produced variable quantities of minerals. Between 2019 and 2021, the value of non-fuel minerals produced in Idaho increased by 42% from $463 million to $657 million. Idaho ranked 35th in value of nonfuel mineral produced in 2021 and 11th in per capita value of nonfuel mineral produced in 2021[clii]. While the per capita rankings are promising, Idaho's mineral production is on the low end compared to other western states like Montana, Utah, Nevada, Wyoming, Arizona, and New Mexico. Idaho decreased mineral production from a peak in 2011 until 2019 but has recently been trending

upward again, see Figure 32. With a revitalized focus on expanding Idaho's mineral production and resources, these numbers should continue to increase.

5.2 Workforce and Education

In 2023, mining, quarrying, and oil and gas extraction contributed $1.28 billion to Idaho's Gross Domestic Product (GDP). Currently, mining in Idaho supports 13,801 direct and indirect jobs.[cliii] Direct mining jobs require highly specialized engineering and skilled labor, in addition to administrative support workers and transportation workers. As demand for domestically sourced raw materials increases, the mining industry will require a skilled and diverse workforce to meet the needs of the country's increased standard of living.

Figure 33. Thompson Creek Mine[cliv]

Mining jobs are some of the most lucrative in Idaho. In 2024, the average wage for a mining job in Idaho was $93,223, significantly higher than the average Idaho wage of $59,574.[clv] The mining industry employs geologists, engineers, drillers, heavy equipment operators, electricians, metallurgists, surveyors, and many other skilled professionals. Although mining jobs pay well, mining only accounted for 0.35% of the job share in Idaho in 2024. Growing the minerals industry will create more high paying jobs in rural areas and provide new economic opportunities for skilled workers.

Idaho is investing in education and training to supply the mining industry with the skilled workers it requires. The College of Western Idaho (CWI) offers a Mining Technician program and a Geosciences program, both of which result in a two-year associates degree upon completion and immediate connection to the workforce.[clvi] North Idaho College and the University of Idaho partnered in 2025 to offer Idaho's only Bachelor of Science in Geological Engineering, a degree program which will directly support operations in Idaho's 150-year-old Silver Valley mining district.[clvii] North Idaho College also offers a mine safety training program for miners and operators to decrease workplace accidents and to ensure responsible mining operations.[clviii]

Figure 34. Stibnite Launch Program at CWI[clix]

In August of 2025, Perpetua Resources and CWI partnered to create the Stibnite Launch program, which provides education and workforce opportunities to dozens of students. Perpetua donated $250,000 to CWI to provide scholarships for students in the Mining Technician and Geosciences programs. Students will be connected with the mineral industry and receive training in geology, mining operations, safety, and environmental science to prepare them for mining careers.

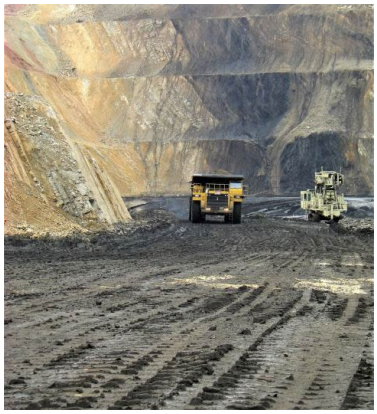
5.3 Critical Minerals in Idaho

Idaho is the home of a wide variety of critical minerals that drive the economy and enhance national security. Critical minerals are defined in the Energy Act of 2020 as minerals that are essential to the economic or national security of the United States, serve an essential function in manufacturing, and have a supply chain that is vulnerable to disruption[clx]. The United States has historically relied on foreign countries for critical minerals, but recently the importance of domestic mining and manufacturing has become apparent. Idaho has vast reserves of critical minerals like antimony, cobalt, lead, silver, zinc, and phosphate. Continued mine development will allow Idaho to unlock the potential of these key commodities and bolster its own economy.

Phosphate

The premier mineral in Idaho is not the shiny gold or silver mined from hard rock deposits deep underground. Instead, it comes from a midnight black, crumbly rock that straddles ridgelines in the southeast corner of the state. That mineral is phosphate, sourced from organic-rich sedimentary rocks deposited in an ancient seaway that covered Idaho. Phosphate rock has been pulled out of the ground in Idaho since the early 20th century and is presently mined at three principal locations, all in Caribou County[clxi]. These mines are all part of the Western Phosphate Field, a large deposit spanning Idaho, Montana, Wyoming, and Utah that contains 30% of United States phosphate reserves. Idaho contains all but one of the phosphate mines in the Western Phosphate Field.[clxii]

Figure 35. Phosphate on the Critical Minerals List[clxiii]



In November 2025, the U.S. Geological Survey published its 2025 List of Critical Minerals, composed of the 60 most vital minerals to the U.S. economy and national security. In 2025, Phosphate was a new addition to the list first created in 2017. This was in large part due to a collaborative effort between the OEMR and Idaho Geological Survey that began in 2018. After receiving multiple letters from the State of Idaho over the last seven years, the U.S. Department of Interior finally recognized the criticality of phosphate and agreed to add it to the critical minerals list.

Phosphate rock is processed to extract the element phosphorous, which is an essential mineral for every living organism and as such is crucial for the continued success of Idaho's agricultural industry. Phosphate is processed in southeast Idaho near Pocatello to make fertilizer and food additives and is currently the largest mineral industry in the state, supplying 4% of the world's phosphate and contributing almost half a billion dollars to the economy every year[clxiv]. In October 2025, the Caldwell Canyon Mine was approved by the BLM, which is projected to add 800 jobs and generate $80 million in federal lease royalties over its lifespan[clxv]. Demand for phosphate rock is predicted to increase, positioning Idaho to continue as a leader in phosphate mining far into the future.

Antimony

Idaho contains the largest known antimony deposit in the country. Antimony is primarily utilized for production of ammunition, semiconductors, optics, batteries, and flame retardants[clxvi]. The United States previously imported 63% of its antimony from China, the world's largest antimony producer. In December 2024, China banned the export of antimony to the United States, doubling the price overnight and creating a shortage in a valuable defense material[clxvii]. This change fast-tracked the development of Perpetua's Stibnite Gold Project, a gold mine with antimony extracted as a secondary mineral. Located in Valley County, Stibnite was mined for antimony during World War II to enhance the United States' ammunition production. The project was permitted in September 2025 and is expected to begin producing gold and antimony by 2028[clxviii].

Cobalt

Idaho hosts the Cobalt Belt, the nation's second largest cobalt deposit. Cobalt is necessary for producing lithium-ion batteries, superalloys for gas turbine engines, and airbags in cars. It is also a key component in defense technology, including military drones and aircraft, advanced nuclear reactors, and precision-guided missiles[clxix]. Most of the world's cobalt is produced in the Democratic Republic of the Congo (DRC) and refined in China. Idaho's Cobalt Belt could be a domestic alternative, although there are currently no processing facilities in the United States, which makes the economics of cobalt production challenging.

Jervois Global planned to open the Idaho Cobalt Operations mine near Salmon in 2022 but was shut down before opening due to market volatility[clxx]. On December 4, 2025, the federal government signed a security-for-minerals deal with the DRC to support cobalt mining in Africa[clxxi]. This action could expand U.S. cobalt processing capabilities and create an avenue for domestic development, however, due to the cheap costs of labor and development overseas, this will likely diminish the potential for cobalt mining projects in Idaho.

Lead

Lead is a historically versatile mineral that has been used by humans for at least 5,000 years. Lead's negative health effects on humans were realized in the 1980s, which resulted in the diminishment of lead use in everyday products. Lead is still applicable, however, for lead-acid batteries that power industrial forklifts, airport ground equipment, mining equipment, and utility vehicles. Lead batteries also find use as an uninterruptable power source for hospitals and telecommunications networks. While roughly 90% of lead is used in batteries, it is also a component of load-leveling equipment for electric utilities, ammunition, casting metals, and ceramics[clxxii]. In Idaho, lead is mined as a secondary mineral in the Silver Valley near Coeur d'Alene. Two mines there were identified as the fifth and eighth largest lead producing mines in the United States, and Idaho is one of only three states that mines lead[clxxiii]. The supply chain for lead is strong, with the U.S. only importing 28% of its lead. Although lead is no longer in its heyday, there are still many uses and worldwide consumption continues to increase year after year, making it an important resource for Idaho[clxxiv].

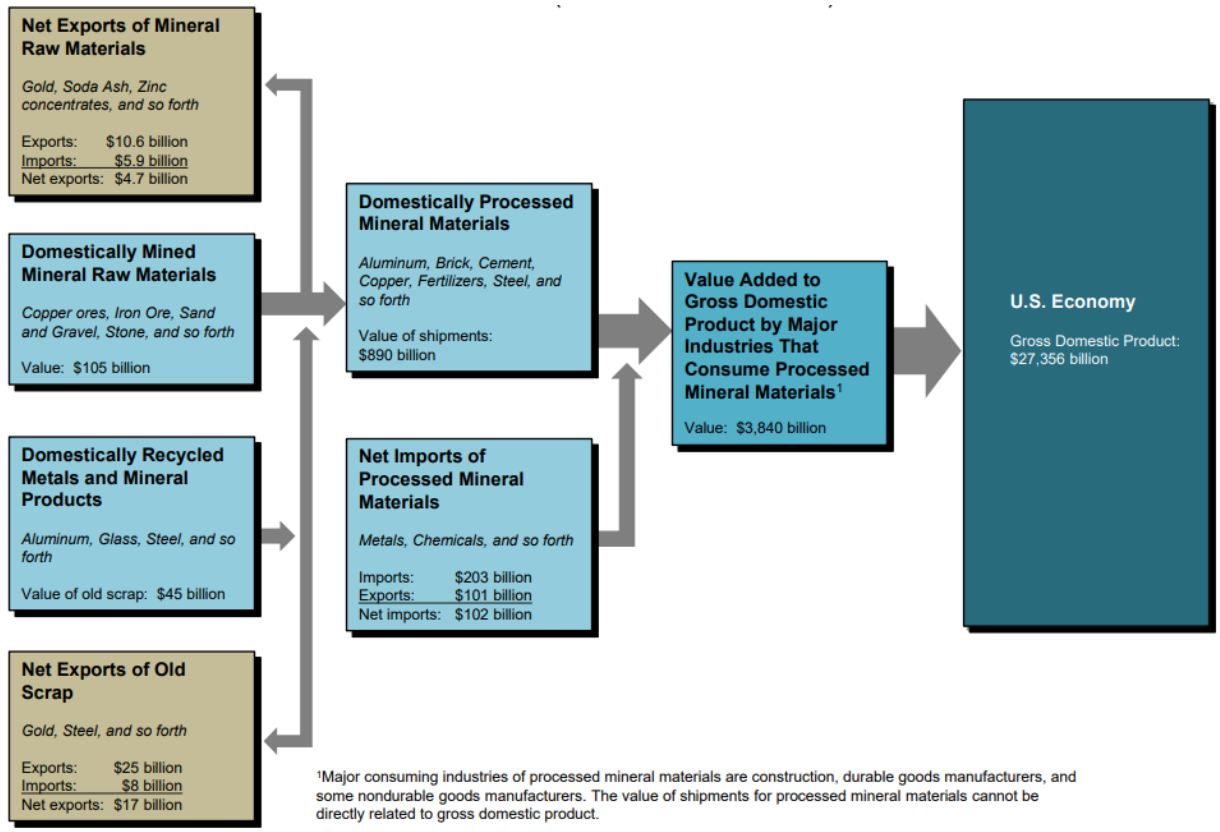
Silver

Idaho is the second largest silver producer in the United States. In 2023, Idaho produced over 319,000 pounds of silver valued at over $120 million. Silver is highly conductive and is used for electrical products, photovoltaics, jewelry, photography, and pharmaceuticals[clxxv]. In Idaho, silver is produced in the Coeur d'Alene mining district, which includes the Lucky Friday and Galena Complex mines, the fourth and sixth largest silver mines in the country, respectively. The price of silver has more than doubled in the past year, reaching a price over $70 as of December, 2025[clxxvi]. The U.S. currently imports large quantities of silver from Mexico, which coupled with silver's important technological applications, solidify its spot on the critical minerals list. Idaho is well-positioned to continue profiting from this valuable commodity.

Zinc

Like lead, zinc is mined as an accessory to silver in the Coeur d'Alene district. Zinc is primarily used to make galvanized steel and is the fourth most produced metal in the world. The rubber, chemical, paint, and agricultural industries also utilize zinc, and even humans, plants, and animals need zinc to develop properly[clxxvii]. It is no wonder zinc is considered critical. Only one mine, Lucky Friday, produces zinc in Idaho[clxxviii]. Zinc is mined as a byproduct of silver, but nevertheless, the more valuable minerals that can be produced at the same time, the better.

Figure 36. The Role of Nonfuel Minerals in the U.S. Economy[clxxix]



5.4 Minerals Outlook

Looking forward, Idaho's mineral future is promising, yet uncertain. Following policy changes on the federal level, discussion around homegrown mineral development has changed for the better. Americans have become more aware that many of the day-to-day technologies we benefit from are highly reliant on the mineral industry. Mining practices have become more responsible and sustainable in the last century coupled with a growing understanding of environmental cleanup and resource protection. Many U.S. mining companies are now committed to sustainable practices that benefit everyone, which has made steps toward removing the stigma of environmental damage caused by mining.

The future of mining in Idaho, however, is not free of hurdles. Since the 1970s, the U.S. has largely divested from domestic mineral processing in favor of globalization and lower prices, which in turn allowed countries like China to dominate the minerals market. For many companies, it is no longer economically feasible to mine and process minerals in the U.S., especially when China can artificially control the price of metals it has massive market share over, like cobalt[clxxx]. The fluctuation of metal prices makes the prospect of investing in a mine daunting, and as recently as 2023, Idaho saw its only cobalt mine close due to a rapid fall in cobalt price[clxxxi].

To overcome these challenges, Idaho will have to mine smarter and continue developing its workforce. Mining projects that extract multiple mineral resources are more resilient and are less impacted by price swings. Diversification has worked well for mines like Lucky Friday in the Silver Valley, where silver, lead, and zinc have been consistently extracted since 1942[clxxxii]. Encouraging development of mining projects

that aim to produce multiple commodities is a good first step towards the long-term success of the mining industry in Idaho.

Mines are only as good as the people working them, which means Idaho must continue investing in students and skilled tradespeople. It is imperative that the benefits of mining be passed on to the communities surrounding mines, and the most effective way to do that is to train Idahoans to work high paying mining jobs. The U.S. currently awards 160 undergraduate mining degrees per year compared to over 2,500 per year in China[clxxxiii], meaning a major issue for U.S. mines is a lack of experienced personnel. In Idaho, community colleges and four-year universities alike are bolstering their mining curriculum and offerings, which will directly combat this disparity and provide the state with a capable workforce to staff new projects. While the prospect of revitalizing the U.S. mineral industry may be daunting, Idaho possesses the tools and natural resources to be leader in domestic mining.

6. Stakeholders

Idaho's energy policy is influenced by several federal, state, and local government actors in addition to local, state, and regional private sector partners.

6.1 State Entities

Idaho Governor's Office of Energy and Mineral Resources

OEMR coordinates energy and mineral planning, permitting processes, and policy development in the state of Idaho. OEMR works to ensure that Idaho's energy and mineral resources are developed and utilized in an efficient, effective, and responsible manner that sustains the quality of life for its residents and enhances the economy. OEMR serves as the clearinghouse and first point of contact for the state on energy and mineral matters. It oversees the Idaho Strategic Energy Alliance, serves as a resource for policymakers, and coordinates efforts with federal and state agencies and local governments.[clxxxiv]

OEMR prepares publications such as the Idaho Energy and Mineral Landscape and the Idaho State Energy Security Plan.[clxxxv] A detailed list of recent publications can be found in Appendix B.

As of December 2025, OEMR administers the following energy-related programs. A detailed list of OEMR's programs can be found in Appendix A.

- Idaho Energy Resiliency Grant Program
- Wildfire Resilience Investment Program
- State Energy Loan Program
- Government Leading by Example
- Energy Efficiency Conservation Block Grant Program
- K-12 Energy Enhancement Program
- Facility Improvement Expense Reduction Program
- National Electric Vehicle Infrastructure Program (in cooperation with the Idaho Transportation Department and the Idaho Department of Environmental Quality)

Idaho Public Utilities Commission

The PUC regulates Idaho's investor-owned electric, natural gas, telecommunications, and water utilities to ensure adequate service at just, reasonable, and sufficient rates. The PUC has quasi-legislative and quasi-judicial, as well as executive powers and duties. The PUC has authority to promulgate administrative rules under the Idaho Administrative Procedures Act.[clxxxvi] Statutory authorities for the commission are established in Idaho Code Titles 61 and 62. The PUC consists of three commissioners, appointed by the Governor and subject to Senate confirmation, who serve staggered six-year terms. No more than two commissioners may be of the same political party. The PUC renders decisions about utilities based upon evidence presented in the case record. PUC orders may be appealed directly to the Idaho Supreme Court.[clxxxvii]

The PUC holds formal hearings that resemble judicial proceedings and are recorded and transcribed by a court reporter. Technical hearings consist of formal parties that have been granted "intervenor status" and present testimony and evidence. During public hearings, members of the public can testify before the commission.

To ensure its decisions are based upon the best information available, the PUC employs engineers, accountants, economists, and investigators to analyze issues and provide recommendations. In the PUC's formal proceedings, the staff is a separate party to the case and may present its own testimony, evidence, and expert witnesses. Staff recommendations are considered by the PUC along with those of other parties to each case, which may include utilities, the public, and agricultural, industrial, business, or consumer groups.

Idaho Strategic Energy Alliance

ISEA, formed through Executive Order, is responsible for advising and providing information to elected officials, stakeholders, and the public through a Board of Directors in furtherance of the principles of Idaho's Energy Policy.[clxxxviii] ISEA increases awareness and understanding of Idaho's diverse energy resources; increases awareness of cost-effective energy efficiency and conservation opportunities within Idaho; improves cooperation, collaboration, and communication among Idaho's public and private-sector entities in the areas of energy efficiency, conservation, and affordable and sustainable energy development; and provides a forum to showcase Idaho's new and innovative energy technologies.[clxxxix]

ISEA's most recent reports cover alternative fuels, utility-scale storage, and energy resiliency and reliability.[cxc] Currently, ISEA's two active working groups are the State Energy Policy Working Group and the Advanced Nuclear Strategic Framework Working Group.

Idaho Advanced Nuclear Energy Task Force

The Idaho Advanced Nuclear Energy Task Force is charged with strengthening Idaho's leadership in nuclear innovation by advising the Governor on policy issues ranging from spent fuel and regulatory reform to energy security, federal partnerships, and industry outreach. It coordinates with state, regional, and national partners to track technological advances, policy shifts, and cross-jurisdictional opportunities, while also developing materials that position Idaho as a national hub for nuclear research and private-sector growth. The Task Force monitors developments at INL, national industry trends, legacy

cleanup progress, and emerging investment interest, and reports on any subcommittee activities. It evaluates the feasibility of advanced reactor technologies, identifies public-private partnership opportunities, aligns state efforts with universities, utilities, and federal agencies, and advances workforce development initiatives to support Idaho's expanding nuclear sector.

Idaho Energy Resources Authority

The Idaho Energy Resources Authority (IERA) is an energy lending/financing entity authorized to issue revenue bonds to diversify and expand the state's economy through improvements in Idaho's electricity infrastructure. It was established by the Idaho State Legislature in 2005 to promote transmission, generation, and clean energy development in the state and the region.[cxci]

IERA allows Idaho's municipal and cooperative utilities to jointly own and finance transmission and generation projects for the benefit of their ratepayers. IERA can participate in planning, financing, constructing, developing, acquiring, maintaining, and operating electric generation and transmission facilities and their supporting infrastructure. While IERA has bonding authority to promote specific projects, it has no legislative appropriation, no full-time staff, and no ability to finance projects that are not backed by ratepayers. The services provided by IERA offer unique opportunities for Idaho's municipal and cooperative electric utilities to help materially lower the development costs of critical energy projects in the state.

Idaho Office of Emergency Management

The Idaho Office of Emergency Management (IOEM) is the state's emergency management agency and part of the Idaho Military Division. IOEM is tasked with assisting Idaho's 44 counties and Tribes in navigating disasters. IOEM prepares the state in preparing, protecting, and mitigating the effects and potential damages from all hazards including energy and fuel related response during disruptive events. IOEM oversees the Emergency Operations Plan, the Threat and Hazard Identification and Risk Assessment and Stakeholder Preparedness Review, State Hazard Mitigation Plan, and the Idaho Response Center (IRC).[cxcii] The IRC is a space for stakeholders to facilitate response and recovery operations resources during an emergency or disaster. The stakeholders may include but are not limited to federal, local, and tribal governments and the private sector.[cxciii]

Idaho Department of Lands and Oil and Gas Conservation Commission

IDL leases and issues rights-of-way for energy projects on state endowment lands and provides some regulation of Idaho's mining industry.[cxciv] Approximately 3.4 million acres of endowment lands exist in Idaho with 2.5 million acres of surface estate. The endowment beneficiaries are the Idaho Department of Corrections, Idaho State Department of Education, Idaho Division of Veterans Services, Idaho Educational Services for the Deaf and the Blind, University of Idaho, Lewis and Clark State College, Idaho State University (ISU), and the Idaho Capitol Commission.[cxcv]

The Oil and Gas Conservation Commission consists of a county commissioner from an oil and gas producing county and four governor-appointed members: one member with expertise in oil and gas, holding a college degree in geosciences or engineering and at least five years of experience in the oil and gas industry, one member who is a mineral interest owner without an oil and gas lease in a county where oil and gas have been produced, and one member who is a resident of Idaho with expertise in land use, having at least five years of relevant experience.[cxcvi]

IDL reviews applications for drilling, well treatment, pit construction, and other activities in conjunction with the Idaho Department of Water Resources and the DEQ. The Oil and Gas Administrator may hold administrative hearings on certain types of applications for activities that may affect other mineral interest owners.[cxcvii]

Idaho Department of Environmental Quality

DEQ was created by the Idaho Environmental Protection and Health Act and is responsible for enforcing state environmental regulations and administers a number of federal environmental protection laws including the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act.[cxcviii] DEQ issues permits for energy and mining projects under the Idaho Pollutant Discharge Elimination System, in which DEQ received full permitting authority as of July 1, 2021.[cxcix] DEQ has six regional offices across the state that work in partnership with local communities, businesses, and citizens to identify and implement cost-effective environmental solutions for projects.[cc] In addition to energy and mining related projects, DEQ has partnered with OEMR and the Idaho Transportation Department (ITD) to administer electric vehicle (EV) programs. DEQ administers the Vehicle Replacement Program (VRP), a rebate program to replace certain medium- and heavy-duty diesel vehicles with alternative fuel or new diesel fuel vehicles.[cci]

Idaho State Department of Agriculture

Agriculture is Idaho's largest industry. The Idaho State Department of Agriculture (ISDA) oversees more than 60 sections of Idaho Code.[ccii] The Bureau of Weights and Measures (Bureau) is responsible for assuring the accuracy of commercial weighing and measuring devices such as petroleum meters, fuel pumps, and propane meters. The Bureau monitors gasoline octane levels and is responsible for Idaho's fuel quality and labeling.[cciii]

Idaho Department of Water Resources and Idaho Water Resource Board

The Idaho Department of Water Resources (IDWR) approves or denies proposals to appropriate water or change existing water rights, archives water right records, recommends and records adjudicated water rights, and oversees the delivery of water in times of shortage.[cciv] This is important in the development of energy and mineral projects to ensure all water rights during project construction and operation are protected. IDWR is responsible for the safety of dams, geothermal drilling permits, ground water protection (well construction oversight), the regulation of stream channel alterations, and coordination with local communities to comply with the National Flood Insurance Program.

The Idaho Water Resource Board (IWRB) is responsible for the formulation and implementation of a state water plan, financing of water projects, and the operation of programs that support sustainable management of Idaho's water resources. IWRB was created by the Idaho legislature in 1965 and merged with IDWR in 1974.[ccv]

Idaho Department of Fish and Game

The Idaho Department of Fish and Game (IDFG) protects, preserves, perpetuates, and manages Idaho's wildlife resources.[ccvi] IDFG provides data and technical assistance for energy and mineral projects to evaluate potential effects to fish, wildlife, and habitat as in-state and out-of-state energy demands are addressed. IDFG cooperates with project developers to mitigate and reduce impacts to wildlife. The agency is split into seven regions and is coordinated from the headquarters in Boise.

Idaho Governor's Office of Species Conservation

The Idaho Governor's Office of Species Conservation (OSC) is dedicated to planning, coordinating, and implementing the state's actions to preserve, protect and restore species listed as candidate, threatened, and endangered under the federal Endangered Species Act.[ccvii] This work is done in coordination with other state agencies and input from the citizens of Idaho for energy and mineral projects to ensure responsible development of resources and adequate protection for species. OSC is headquartered in Boise and has staff in Salmon, Sandpoint, and Moscow.

Idaho Department of Parks and Recreation

The Idaho Department of Parks and Recreation (IDPR) is the state authority on outdoor recreation and resource stewardship. IDPR manages thirty state parks and recreation programs throughout the state. IDPR analyzes impacts to recreation from energy and mineral project development, and administers the recreation programs for boats, snowmobiles, and other off-highway vehicles.[ccviii]

Idaho State Historic Preservation Office

The Idaho State Historic Preservation Office (SHPO) is administratively housed within the Idaho State Historical Society. SHPO offices nationwide encourage the preservation, documentation, and use of cultural resources. For energy and mineral projects, the Idaho SHPO consults with federal agencies to review effects to historic properties under Section 106 of the National Historic Preservation Act.[ccix] SHPO maintains the state inventory of documented cultural resources in the state, administers the Historic Rehabilitation Tax Incentive program, and provides educational and technical assistance on historic preservation issues.

Idaho Transportation Department

ITD is the state authority on transportation infrastructure. ITD maintains and operates existing roadways and plans transportation infrastructure for the future growth of the state. The agency is split into six districts and is headquartered in Boise.[ccx] ITD, OEMR, and DEQ, collectively referred to as the Interagency Working Group, administer the Idaho NEVI Program, discussed in Appendix A.

Idaho Department of Health and Welfare

The Idaho Department of Health and Welfare (DHW) promotes and protects Idahoans' health and safety. DHW provides services to promote healthy people, safe children, and stable families.[ccxi] DHW administers the State of Idaho Weatherization Assistance Program (WAP). DHW contracts with local community action agencies and nonprofits to install weatherization improvements in low-income households throughout the state.[ccxii] WAP conserves energy, saves money, and increases the comfort of homes.

6.2 Regional Entities

Northwest Power and Conservation Council

Congress created the Council in 1980 through the Northwest Power Act to better engage with Idaho, Montana, Oregon, and Washington to ensure an affordable and reliable energy system while enhancing fish and wildlife in the Columbia River Basin.[ccxiii] The Council is funded solely by wholesale power revenues from BPA. It forecasts future electricity load growth in the region and helps plan how to best meet future needs while informing the public about regional energy issues.

Every five years, the Council prepares and updates a least-cost 20-year Power Plan to advise BPA on electricity demand forecasts, electricity and natural gas price forecasts, an assessment of cost-effective energy efficiency that can be acquired over the life of the plan, and a least-cost generating resources portfolio. The 9th Power Plan is scheduled to be released to the public by mid-2026.[ccxiv] Since 1980, the Northwest has saved more than 7,800 aMW through energy efficiency. In 2024, energy efficiency was the fourth-largest energy resource in the Northwest. It accounted for 10% of the grid's capacity, behind hydropower (46%), wind (17%), and natural gas (13%).[ccxv,ccxvi] The Council published the 2021 Power Plan in May 2022 which recommends that the region acquire between 750 and 1,000 aMW of cost-effective

energy efficiency by the end of 2027 and at least 2,400 aMW by the end of 2041 to meet increasing demand.

Western Electricity Coordinating Council

WECC is the regional entity that monitors and enforces reliability standards in the Western Interconnection subject to oversight by NERC and FERC. These reliability standards apply to electric utilities and other entities that own or operate generation, transmission, or other facilities in the bulk power system. WECC promotes reliability in the Western Interconnection by serving as a central repository of data and other technical metrics about the grid.[ccxvii]

Western Interstate Energy Board

The Western Interstate Energy Board (WIEB) is an organization of 11 western states and two western Canadian provinces. WIEB provides the instruments and framework for cooperative state efforts to enhance the economy of the west and contribute to the well-being of the region's people. The legal basis of WIEB is the Western Interstate Nuclear Compact.[ccxviii] WIEB achieves this by promoting energy policy that is developed cooperatively among member states and provinces and with the federal government.[ccxix] WIEB's work is conducted through committees such as the Committee on Regional Electric Power Cooperation (CREPC), the High-Level Radioactive Waste Committee (HLRW), and the Western Interconnection Regional Advisory Body (WIRAB).

WIEB Committee on Regional Electric Power Cooperation

CREPC was established in the 1980s. CREPC is a joint committee of WIEB and the Western Conference of Public Service Commissioners. CREPC is comprised of the public utility commissions, energy and facility siting agencies, and consumer advocates in the western states and Canadian provinces and works to improve the efficiency of the western electric power system.[ccxx] The CREPC Transmission Collaborative was established in January 2024 as a working group that brings together state and provincial energy officials to coordinate and share information on regional transmission planning in the Western U.S. and Canada.[ccxxi]

WIEB Western Interconnection Regional Advisory Body

WIRAB was created under Section 215(j) of the Federal Power Act of 2005, which provides for the establishment of a federal regulatory system of mandatory and enforceable electric reliability standards for the nation's bulk power system.[ccxxii] WIRAB's membership is composed of representatives from all states and international provinces that consume electricity within the Western Interconnection. Members are appointed by Governors or Premiers.

WIRAB was established in the Western Interconnection to advise the NERC, Federal Energy Regulatory Commission (FERC), and WECC on whether proposed reliability standards within the region, as well as the governance and budgets of NERC and WECC, are just, reasonable, not unduly discriminatory, or preferential, and in the public interest.

WIEB High-Level Radioactive Waste Committee

HLRW is composed of nuclear waste transportation experts appointed by the governors of 11 western states. HLRW works with the DOE to develop a safe and publicly acceptable system for transporting spent nuclear fuel and high-level radioactive waste under the Nuclear Waste Policy Act.[ccxxiv] HLRW's primary management directives come from a series of western governors' resolutions dating back to 1985, which express the governors' goal of safe transport of nuclear waste.[ccxxv]

Reliability Coordinator West

A Reliability Coordinator (RC) coordinates with electric utilities and transmission operators to ensure the bulk power system is operated within specified limits and that system conditions are stable across the area. RC West is currently the RC for 42 entities in the Western Interconnection, overseeing 87% of the load in the western U.S.[ccxxvi]

California Independent System Operator

CAISO is one of nine independent system operators/regional transmission organizations (ISOs/RTOs) in the country and serves all three of Idaho's IOUs. ISOs/RTOs operate and provide non-discriminatory access to transmission systems for regions of the country where they provide wholesale energy marketplaces.

Western Energy Imbalance Market and Extended Day-Ahead Market

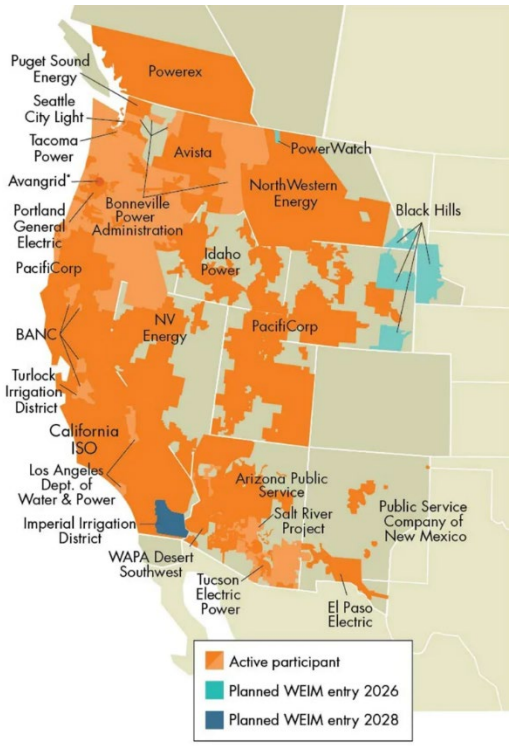
WEIM was launched in 2014 through an agreement between PacifiCorp and CAISO, which continues to oversee its daily operations.[ccxxvii] By 2025, 25 utilities across the western United States and British Columbia, Canada have either joined or announced plans to participate.[ccxxviii] Notable milestones include Idaho Power's entry in April 2018, Avista's in March 2022, and BPA's in May 2022.

WEIM leverages regional transmission systems to balance supply and demand across a vast geographical footprint in real time. It manages transmission congestion and optimizes energy production and consumption through economic bids submitted by the EIM Participating Resource Scheduling Coordinators in both the fifteen-minute and five-minute markets.[ccxxix]

In 2019, CAISO launched an initiative to develop the Extended Day-Ahead Market (EDAM), aimed at enhancing market efficiency and better integrating renewable resources through coordinated day-ahead unit commitment and scheduling across a broader footprint.[ccxxx] That same year, fifteen WEIM entities participated in the EDAM Feasibility Assessment.

CAISO released its draft final market design in December 2022,[ccxxxi] and shortly thereafter PacifiCorp became the first utility to publicly announce its intention to join EDAM.[ccxxxii] In February 2023, the EDAM design received joint approval from the ISO Board of Governors and WEIM Governing Body. FERC accepted the tariff in December 2023. Preparations throughout 2024 and 2025 focused on the anticipated go-live in 2026.[ccxxxiii]

Figure 37. WEIM Entities[ccxxxiv]



Southwest Power Pool

The Southwest Power Pool (SPP) is an RTO mandated by FERC to provide reliable power sources, transmission infrastructure, and competitive electricity prices. SPP provides a variety of services to its members including transmission expansion, market operations, tariff administration, regional scheduling, reliability coordination, and training. Its membership spans 14 states: Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

In recent years, SPP has expanded its service offerings in the Western Interconnection, offering technical services for the Western Resource Adequacy Program (WRAP) and operating the Western Energy Imbalance Service market for several Intermountain balancing areas.

SPP sources power from 1,007 generation plants with a combined accredited generating capacity of 65,639 MW. It also operates and maintains an extensive transmission network of 72,884 miles of lines and 5,292 substations.[ccxxxv]

SPP Markets+

SPP has proposed Markets+, a day-ahead market designed to simplify transmission services, centralize day-ahead markets, and efficiently integrate the growing fleet of renewable generation. In 2022, SPP began working with western utilities on the market's design, positioning Markets+ as a potential alternative to EDAM.

SPP released its final service offering in November 2022 and is seeking commitments from western utilities to share in funding its next phase of initial market design. Markets+ is currently in the implementation phase and is encouraging potential participants to start registration and onboarding. Anticipated go-live

is October 2027.[ccxxxvi] BPA announced on May 9, 2025, through its Day-Ahead Market Policy, its intent to join SPP's Markets+ day-ahead market.[ccxxxvii]

Western Power Pool

The Western Power Pool (WPP) is a voluntary organization that coordinates power plant operational data and provides guidelines for power system operations in the west. WPP's members include electric utilities that own generating plants and sell power throughout the Western U.S. and Canada.[ccxxxviii]

Western Resource Adequacy Program

WPP coordinates activities related to a comprehensive review of resource adequacy in the WPP region and the development and implementation of the Western Resource Adequacy Program (WRAP). It aims to create a region-wide approach to addressing resource adequacy and enhancing reliability by engaging stakeholders to understand regional resource supply and demand.[ccxxxix] WRAP has been in its implementation stage since 2021. In February 2023, FERC approved the tariff for the WRAP, creating a path for implementation of the region's first west-wide reliability program. [ccxl] As of 2025, 22 entities are formally committed to moving forward with the WRAP, including BPA, Idaho Power, PacifiCorp, and Avista.[ccxli]

NorthernGrid

Pursuant to rules adopted by FERC, Idaho's IOUs are required to participate in local and sub-regional transmission planning and to coordinate with neighboring sub-regional planning groups and local stakeholders.[ccxlii] NorthernGrid, the planning association which facilitates regional transmission planning across the Pacific Northwest and Intermountain West, is responsible for producing transmission expansion and economic study plans on a periodic basis.[ccxliii] These local, sub-regional, and regional planning processes identify transmission project costs, benefits, and risks and their allocation to customer group beneficiaries. It explores opportunities for project coordination at the sub-regional and regional levels to avoid costly duplication of facilities. OEMR and the PUC participate in the development of these plans.

A recent example of this coordination is NorthernGrid's involvement in the Engagement Period for FERC Order No. 1920. Order No. 1920 is a transmission and cost allocation rule that will help ensure the resiliency and reliability of the grid by establishing a process for long-term transmission planning and how it is funded.[ccxliv]

Northwest Energy Efficiency Alliance

The Northwest Energy Efficiency Alliance (NEEA) provides support to 140 regional utilities and groups, which provide services to over 13 million customers, to implement energy efficiency and conservation programs. A primary focus is to help meet future energy needs by recognizing different energy efficiency markets such as new products, services, practices, and approaches.[ccxlv] NEEA funds initiatives and serves as a forum for collective industry consensus on market acceptance of energy efficient products.[ccxlvi] Idaho Power, BPA, and Avista participate in NEEA.

6.3 Federal Entities

Department of Energy

The U.S. Department of Energy's mission is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.

The Department of Energy's 17 National Laboratories are powerhouse institutions that have led scientific innovation in the United States for more than 70 years. They possess unique instruments and facilities – many of which are found nowhere else in the world – and tackle the critical scientific challenges of our time, from combating climate change to discovering the origins of our universe, one of which is located in Idaho.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission, or FERC, is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects.

North American Electric Reliability Corporation

The North American Electric Reliability Corporation (NERC) is a not-for-profit, international regulatory authority dedicated to effectively and efficiently reducing risks to the reliability and security of the bulk power system. To accomplish that, they work with owners, operators, consumers as well as federal state and provincial regulators across North America to develop and enforce mandatory Reliability Standards, monitor the grid, train personnel, and assess risks to ensure that the grid remains reliable and secure today and in the future.

NERC hosts the GridEx exercise every two years. GridEx trains utilities on response and recovery from simulated coordinated cyber and physical security threats and incidents, strengthens crisis communications relationships, and provides a forum for lessons learned.

Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) operates and maintains approximately 740 dams and associated structures nationwide that provide significant, multiple benefits to the nation—its people, businesses, critical infrastructure and the environment. These benefits include flood risk management, navigation, water supply, hydropower, environmental stewardship, fish and wildlife conservation and recreation.

USACE's dams are part of our nation's landscape, integral to many communities and critical to watershed management. The National Inventory of Dams database identifies 406 total dams in Idaho.

Nuclear Regulatory Commission

The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.

NRC's regulatory mission covers three main areas: Reactors – Commercial reactors for generating electric power and research and test reactors used for research, testing, and training. Materials – Uses of nuclear materials in medical, industrial, and academic settings and facilities that produce nuclear fuel. Waste – Transportation, storage, and disposal of nuclear materials and waste, and decommissioning of nuclear facilities from service.

The Idaho Governor appoints an NRC liaison, who is currently the DEQ's INL Oversight Program Manager.

Department of the Interior

The U.S. Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, Native Hawaiians, and affiliated Island Communities, through the work of numerous subagencies. OEMR coordinates state agency comments on energy and mineral-related projects subject to National Environmental Policy Act review.

DOI's management in Idaho includes BOR oversight of federal water resource management efforts and management of several dams in Idaho such as Anderson Ranch, Arrowrock, American Falls, and Palisades. It also includes BLM administration of energy and mineral leases throughout Idaho and USFWS analysis on the impact of energy generation and transmission on endangered species and migratory birds.

Forest Service

The U.S. Forest Service (USFS), administered under the U.S. Department of Agriculture is a world leader in forest research, providing leadership in the sustainable management, conservation, use, and stewardship of natural and cultural resources on national forests and grasslands in the United States.

The agency's renowned fire management organization provides critical expertise in making communities and infrastructure safer. Moreover, the agency helps communities; state, local, and tribal governments; forest industries; and private forest landowners improve conditions in both urban and rural areas.

OEMR has worked with USFS on transmission rights-of-way through national forests, energy and mineral development on National Forest System lands, revision of forest land management plans, and development of woody biomass as a source of energy.[ccxlvii]

National Marine Fisheries Service

NOAA Fisheries, also known as the National Marine Fisheries Service, is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce. They have five

regional offices, six science centers, and more than 20 laboratories around the United States and U.S. territories, and we work with partners across the nation.

NOAA Fisheries is responsible for the stewardship of our nation's living marine resources and their habitats. The West Coast Region works within the coasts and watersheds of Washington, Oregon, California, and Idaho. Covering 317,690 square miles of the eastern Pacific Ocean, and more than 7,000 miles of tidal coastline, as well as the ecological functions within the states' vast rivers and estuaries, they build sustainable fisheries, recover endangered and threatened species, maintain healthy ecosystems, and protect human health.

Environmental Protection Agency

The mission of EPA is to protect human health and the environment.

EPA works to ensure that: Americans have clean air, land and water; National efforts to reduce environmental risks are based on the best available scientific information; Federal laws protecting human health and the environment are administered and enforced fairly, effectively and as Congress intended; Environmental stewardship is integral to U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy; All parts of society--communities, individuals, businesses, and state, local and Tribal governments--have access to accurate information sufficient to effectively participate in managing human health and environmental risks; lands and toxic sites are cleaned up by potentially responsible parties and revitalized; and Chemicals in the marketplace are reviewed for safety.

The Environmental Protection Agency (EPA) establishes minimum standards for clean air, land and water in energy-generating processes including those involving nuclear, coal, and hydroelectric. EPA works closely with the state departments responsible for air and water quality, including DEQ, to develop and ensure compliance with environmental standards. EPA administers the Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as "Superfund," which allows EPA to clean up contaminated sites. There are currently six sites in Idaho on the Superfund National Priorities List. [ccxlviii]

Federal Emergency Management Agency

FEMA's mission is helping people before, during, and after disasters, and our core values and goals help us achieve it. We leverage a tremendous capacity to coordinate within the federal government to make sure America is equipped to prepare for and respond to disasters. FEMA is comprised of Program Offices and Regional Offices located throughout the United States. FEMA has 10 regional offices; Idaho is located within FEMA Region 10.[ccxlix]

As a subagency of the Department of Homeland Security, FEMA leads nationwide risk mitigation efforts and coordinates disaster response operations. The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) provides today's current disaster relief framework. FEMA has 10 regional offices; Idaho is located within FEMA Region 10. OEMR and the PUC work closely with FEMA Region 10 Emergency Support Function #12 (Energy) personnel in planning and response efforts.[ccl]

Department of Transportation

The top priorities at DOT are to keep the traveling public safe and secure, increase their mobility, and have our transportation system contribute to the nation's economic growth.[ccli]

The Federal Highway Administration (FHWA) is an agency within the DOT that supports State and local governments in the design, construction, and maintenance of the Nation's highway system and various federal- and tribal-owned lands.[cclii]

The Joint Office of Energy and Transportation facilitates collaboration between DOE and DOT. The organization supports the deployment of zero-emission, convenient, accessible, and equitable transportation infrastructure, including electric vehicle chargers, zero-emission fueling infrastructure, and zero-emission transit and school buses.[ccliii]

Appendix A: OEMR Programs

OEMR currently administers seven energy-related programs. These opportunities promote energy efficiency in K-12 schools and public buildings, and support energy security and wildfire resilience. OEMR's programs are funded through state and federal programs.

OEMR has completed 70 projects since 2021. In 2025, OEMR has 39 active projects. Out of all 44 counties in Idaho, stakeholders in 31 counties have received at least one OEMR award. Finally, OEMR's projects in 2025 alone leveraged $35,732,225 in federal, state, and private funds with a 98% rural investment rate. Each of OEMR's programs is described below.

Idaho Energy Efficiency and Conservation Block Grant Program

The Idaho Energy Efficiency and Conservation Block Grant program (Idaho EECBG) offered competitive subawards of up to $100,000 to rural cities and counties. This funding is helping local governments promote energy efficiency and conservation practices while addressing the needs of growing communities, reducing tax burdens, and keeping energy rates low.

Under Section 40552 of the Bipartisan Infrastructure Law (BIL) federal formula grants are allocated to states to support subgrant funding opportunities for local governments. In 2024, OEMR awarded subgrants to 14 rural cities and counties through a competitive application process. As of 2025, 10 projects have been completed, with the remaining 4 expected to be completed by September 2026. Overall, OEMR has awarded over $1,000,000 for EECBG projects.

Idaho EECBG Subrecipients

Subrecipient	Award Amount	Project Description
City of Ammon	$100,000.00	Energy efficient streetlights
Blaine County	$66,439.82	Smart thermostats, snow sensors, and electric vehicle
City of Cascade	$100,000.00	Geothermal plan, heat pumps
Clearwater County	$53,577.85	Energy efficient server
City of Hailey	$100,000.00	Solar photo-voltaic system
Horseshoe Bend	$100,000.00	Energy efficient wastewater pump
City of Lewiston	$100,000.00	Energy efficient lighting in public library
City of Marsing	$93,500.00	Energy efficient wastewater pump
City of Pierce	$43,026.51	Weatherization of City Hall
City of Preston	$100,000.00	Outdoor energy efficient lighting
Shoshone County	$79,454.94	Weatherization of City Hall
City of St. Maries	$74,592.30	Energy efficient wastewater pump
Teton County	$23,514.00	A/C mini-split units, garage door sealing
City of Wilder	$100,000.00	A/C mini-split units in low-income housing

Idaho Energy Resiliency Grant Program

The Idaho Energy Resiliency Grant Program (ERGP) promotes strategic investments that achieve measurable enhancements to grid resilience, modernize grid infrastructure, and mitigate risks associated with increased electrification and disruptive events. Funded by both state and federal sources, ERGP aims to strengthen Idaho's electric grid.

The first round of the state-funded ERGP Pilot Program concluded in fall 2024, during which over $4 million was allocated to ten utilities for a total of 16 projects. These projects included undergrounding transmission lines in high-risk fire areas, fire-resistant wrapping for power poles, acquiring a new masticator for vegetation management, and enhancing automation and remote switching capabilities through the installation of Supervisory Control and Data Acquisition (SCADA) and modern reclosers.

Federal funding is available to electric grid operators, electricity storage operators, electricity generators, transmission owners and operators, distribution providers, and fuel suppliers through subawards under Section 40101(d) of the BIL – Preventing Outages and Enhancing the Resilience of the Electric Grid Formula Grants to States and Indian Tribes In 2025, OEMR executed subawards to six utilities to complete a total of seven projects, totaling over 8 million dollars in subawards. These projects include fire resistant wrapping for power poles, undergrounding transmission lines in high-risk areas, vegetation management, and purchasing of a backup substation and reclosers. These projects help strengthen the grid and provide more reliable power to communities across Idaho.

In 2025, OEMR announced a second round of funding under the Energy Resilience Grant Program. OEMR recommended seven utility projects to DOE for approval, with subawards expected to be awarded in early 2026.

ERGP Round 1 Subrecipients

Subrecipient	Award Amount	Project Description
Clearwater Power Company	$349,864	Purchase of backup substation and three reclosers
Northern Lights Electric	$1,543,542	Undergrounding 33,000 feet of powerlines
Idaho Falls Power	$1,300,000	Undergrounding powerlines in 3 downtown alleyways
Lower Valley Energy	$625,816	Undergrounding powerlines and removing old overhead distribution lines
Clearwater Power Company	$2,000,000	Utilize AI for vegetation management in high-risk areas
Idaho Power Company	$2,000,000	Undergrounding powerlines and hardening of overhead facilities
Fall River Electric	$439,156.50	Undergrounding powerlines and mesh wrapping transmission poles

Wildfire Resilience Investment Program

The Wildfire Resilience Investment Program (WRIP) is one of OEMR's newest grid resilience initiatives. WRIP facilitates electric utility investments that monitor, mitigate, and mobilize against wildfire events. The program was launched in October 2025. In December 2025, OEMR awarded about $3.5 million across eight utilities. Some of these projects include line undergrounding, pole wrapping, AI vegetation analysis, and vegetation management. The following projects begin in 2026 and will be completed by late 2027.

Subrecipient	Award Amount	Project Description
Clearwater Power Company	$650,000	Mesh wrap installation
Idaho County Light and Power Company	$220,000	Right of way expansion and vegetation management
Idaho Power Company	$650,000	Undergrounding power lines
Inland Power and Light Company	$345,634	Install weather stations and fuel load reduction
Kootenai Electric Cooperative	$351,023	Recloser installation
Lost River Electric Cooperative	$162,978	Mesh wrap installation, avian deterrence device installation, and fuel load reduction
Northern Lights, Inc.	$452,772	Weather station and line monitor installation and drone vegetation analysis
PacifiCorp	$650,000	Substation grid monitoring control upgrades

Facility Improvement Expense Reduction Program

The Facility Improvement Expense Reduction (FIXR) Program is an OEMR initiative investing in effective and rapid energy efficiency improvements for Idaho's public entities. Opened in fall 2025, the FIXR Program funded five projects across two municipalities and one school district, including installing energy efficient lighting, insulating water system buildings, and weatherizing city shop doors. FIXR Program projects will be completed in summer 2026.

State Energy Loan Program

The State Energy Loan Program is one of OEMR's longest running and widely used programs. Since the 1980s, it has provided low-interest loans to support energy projects for homes and businesses throughout Idaho. Eligible projects under the program include:

- HVAC replacement
- Efficient lighting
- Insulation
- Windows
- Weatherization
- Appliances
- Renewable energy projects

Borrowers can request up to $30,000 for single-family homes. A loan cannot be provided for energy retrofits that have already been completed or for new construction projects. All loans are assessed by a financial institution for creditworthiness and must be secured by real estate. A credit analysis fee of $100 applies to all loan applicants. Consumers can enhance their financing by accessing utility incentives, as

well as federal and state tax credits and deductions, if available. Applications are accepted annually until the maximum funding amount is reached.

Government Leading by Example Program

The Government Leading by Example (GLBE) Program will support rural governments in identifying and planning energy efficiency improvements in public facilities. By providing access to professional energy audits, dedicated follow-up assistance, and the creation of an actionable Energy Action Plan, the program will serve as an educational tool to encourage participants to prioritize energy improvements in their local facilities.

OEMR will contract with a local provider of ASHRAE level energy audits to provide services to selected local governments. OEMR will then meet with the auditor and applicant to discuss findings, and then assist the applicant in the creation of an Energy Action Plan (EAP). Quality EAP's will qualify the applicant for an incentive payment of $2,500.

Applications for this re-vamped program are accepted from 1/1/2026 to 1/16/2028.

K-12 Energy Enhancement Program (KEEP)

The K-12 Energy Enhancement Program is helping support rural public-school districts by providing funding to implement projects that will reduce energy and tax burdens, increase energy resilience, and increase energy savings. OEMR selected 15 school district applications across Idaho through a competitive grant process. The energy efficiency projects include replacing HVAC systems, windows and doors, weather sealing, lightbulbs, ceilings and insulation, lighting fixtures, thermostats, and installing occupancy sensors. The school districts will complete the KEEP projects by early Fall, 2026.

Appendix B: Publications

ISEA State of Idaho Advanced Nuclear Strategic Framework [2025]

The Advanced Nuclear Strategic Framework (ANSF) builds on Idaho's historic role in nuclear reactor development and innovation and outlines a strategy to establish Idaho as a leader in advanced nuclear energy. The framework 1) establishes key leaders in future nuclear development, 2) lists initiatives considered critical for advancing Idaho's nuclear industry, 3) identifies the supply chain for nuclear materials, 4) provides recommendations for the State of Idaho to advance its nuclear profile, and 5) summarizes roles of key stakeholders involved in Idaho's advanced nuclear development.

- View the 2025 State of Idaho Advanced Nuclear Strategic Framework here: https://oemr.idaho.gov/wp-content/uploads/Idaho-Advanced-Nuclear-Strategic-Framework-Final.pdf

Idaho State Energy Security Plan [2025]

The State Energy Security Plan 1) addresses all energy sources and regulated and unregulated energy providers, 2) provides a state energy profile, including an assessment of energy production, transmission, distribution, and end-use, 3) addresses potential hazards to each energy sector or system, 4) provides a risk assessment of energy infrastructure and cross-sector interdependencies, 5) provides a risk mitigation approach to enhance reliability and end-use resilience, and 6) addresses (A) multi-state and regional coordination, planning and response; and (B) coordination with Indian Tribes with respect to planning and response.

- The 2024 State Energy Security Plan can be found at: https://oemr.idaho.gov/financial-information/reports-and-publications/

ISEA Alternative Fuels Task Force Report [2023]

The report discusses the availability, economics, regulations, tax policy, and vehicle efficiencies with each alternative fuel, while acknowledging the barriers and recognizing the benefits associated with each alternative fuel type. The goal of this report is to provide information that allows readers to draw their own conclusions about areas where Idaho could improve its transportation sector and economy by incentivizing the adoption of alternative-fuel vehicles and the growth of alternative-fuel production capacity.

- View the 2023 ISEA Alternative Fuels Task Force Report here: https://oemr.idaho.gov/wp-content/uploads/ISEA-Alternative-Fuels-Task-Force-Report_FINAL.pdf

ISEA Reliability and Resiliency Task Force Report [2023]

The report reviews the opportunities and barriers to enhance energy reliability and resiliency in Idaho. This report 1) discusses the importance of energy reliability and resiliency for the State's economy and overviews Idaho's energy risk profile, energy emergency planning documents, and legal authorities, 2) reviews current state, local, federal, and private sector efforts to enhance reliability and resilience, 3) considers opportunities and challenges to further improve reliability and resilience in Idaho, including: funding, planning, investment in infrastructure modernization, vegetation management, cybersecurity,

supply chain constraints, and permitting and siting constraints, and 4) discusses the importance of cost-effective investment in the state's energy infrastructure.

- View the 2023 ISEA Reliability and Resiliency Task Force Report here: https://oemr.idaho.gov/wp-content/uploads/ISEA-Reliability-and-Resiliency-Task-Force-Report_-FINAL.pdf

ISEA Utility-scale Storage Task Force Report [2023]

This report presents the opportunities and options for enhancing storage within Idaho. The report provides an introduction into utility-scale storage for the state but does not provide distinct recommendations. While most recent discussions of storage have focused on battery technologies, this report provides a full overview of options for the state including the integration of mechanical storage technologies including pumped hydro, electrical and electrochemical storage in the form of batteries and supercapacitors, and thermal storage. The report also provides insight into the different scenarios and applications where storage can support grid operation.

- View the 2023 ISEA Utility-scale Task Force Report here: https://oemr.idaho.gov/wp-content/uploads/ISEA-Utility-Scale-Storage-Task-Force-Report_FINAL.pdf

OEMR Monthly Newsletter

OEMR releases a monthly newsletter covering news, programs, funding opportunities, upcoming events, and more.

- Sign up for the Monthly Newsletter at: https://oemr.idaho.gov/sign-up-for-our-newsletters/

State of Idaho NEVI Plan [2025]

The Idaho NEVI Plan outlines the State's plan for coordinated, strategic, and responsible deployment of EV charging infrastructure in Idaho consistent with the federal NEVI Formula Program requirements and the State's vision and goals.

- The NEVI Plan can be found at: https://oemr.idaho.gov/programs/national-electric-vehicle-infrastructure-program/

Appendix C: List of Idaho Electric Utilities

Investor-Owned Utilities

Avista Utilities	800-227-9187
Dominion Energy (formerly Questar)	800-323-5517
Idaho Power Company	800-488-6151
Intermountain Gas	800-548-3679
Rocky Mountain Power	888-221-7070

Municipal Electric Utilities

Albion Light and Water Plant	208-647-4644
Bonners Ferry Light and Water	800-626-4950
Burley Electric Department	208-878-2224
Declo Municipal Electric Department	208-654-2124
Heyburn Electric Department	208-679-8158
Idaho Falls Power	208-612-8280
Minidoka Electric Department	208-531-4101
Plummer Electric Department	208-686-1641
Rupert Electric Department	208-436-9600
Soda Springs Electric Light and Power	208-547-2600
Weiser Electric Department	208-414-1964

Rural Electric Cooperatives

Bonneville Power Administration	800-282-3713
Atlanta Power	208-459-7014
Clearwater Power	888-743-1501
East End Mutual Electric	208-436-9357
Fall River Rural Electric	800-632-5726
Farmers Electric	208-436-6384
Idaho County Light and Power	877-212-0424
Inland Power and Light	800-747-7151
Kootenai Electric Cooperative	800-240-0459
Lost River Electric Cooperative	208-588-3311
Lower Valley Energy	800-882-5875
Northern Lights Incorporated	800-326-9594
Missoula Electric Cooperative	800-352-5200
Raft River Rural Electric	800-342-7732
Riverside Electric Cooperative	208-436-3855
Salmon River Cooperative	877-806-2283
South Side Electric	208-654-2313
United Electric Co-Op Inc.	208-679-2222
Vigilante Electric Cooperative	800-221-8271

Glossary

Average megawatt (aMW): An average megawatt is the amount of electricity produced by the continuous production of one megawatt over a period of one year. The term, sometimes also called average annual megawatt, defines power production in megawatt increments over time. Because there are 8,760 hours in a year, an average megawatt is equal to 8,760 megawatt-hours.

Baseload: The minimum amount of electric power or natural gas delivered or required over a given period at a steady rate. The minimum continuous load or demand in a power system over a given period.

BPA: Bonneville Power Administration

British Thermal Units (BTUs): British Thermal Unit is a traditional unit of energy equal to about 1,055 joules. Production of 1 kWh of electricity generated in a thermal power plant requires about 10,000 BTUs. 1 gallon gasoline ≈ 125,000 BTUs.

Bulk power system: Facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof) and electric energy from generation facilities needed to maintain transmission reliability.

Capacity (electric): The maximum power that can be produced by a generating resource at specified times under specified conditions.

Capacity (gas): The maximum amount of natural gas that can be produced, transported, stored, distributed or utilized in a given period of time under design conditions.

CHP: Combined Heat and Power

Cogeneration (CHP): The simultaneous production of heat (usually in the form of hot water and/or steam) and power utilizing one primary fuel. Cogeneration is often used to produce power as a secondary use of the waste steam/heat from a primary industrial process.

Conservation: Demand-side management (DSM) strategy for reducing generation capacity requirements by implementing programs to encourage customers to reduce their energy consumption. Program examples include incentives/savings for the installation of energy efficient appliances, lighting and electrical machinery, and weatherization materials.

Cooperative electric utility (Co-op): Private, not-for-profit electric utility legally established to be owned by and operated for the benefit of those using its service. It will generate, transmit and/or distribute supplies of electric energy to cooperative members. Such ventures are generally exempt from federal income tax laws. Many were initially financed by the Rural Electrification Administration, U.S. Department of Agriculture.

Cost-effective: Cost-effectiveness of an energy measure means that the lifecycle energy, capacity, transmission, distribution, and other quantifiable savings to residents and businesses exceed the direct costs of the measure to the utility and participant.

DCFC: Direct Current Fast Charging

Demand: The amount of power consumers require at a particular time. Demand is synonymous with load. It is the amount of power that flows over a transmission line at a particular time. System demand is measured in megawatts.

Demand-side management (DSM): The term for all activities or programs undertaken by an electric system to influence the amount and timing of electricity use. Included in DSM are the planning, implementation and monitoring of utility activities that are designed to influence customer use of electricity in ways that will produce desired changes in a utility's load shape such as, among other things, direct load control, interruptible load and conservation.

DEQ: Idaho Department of Environmental Quality

Distribution (electrical): The system of lines, transformers and switches that connect the high-voltage bulk transmission network and low-voltage customer load. The transport of electricity to ultimate use points such as homes and businesses. The portion of an electric system that is dedicated to delivering electric energy to an end user at relatively low voltages.

Distribution (gas): Mains, service connections and equipment that carry or control the supply of natural gas from the point of local supply to and including the sales meters.

Distributed generation: Electric power produced other than at a central station generating unit, such as that using fuel cell technology or on-site small-scale generating equipment.

EIA: U.S. Energy Information Administration

Electric utility: A corporation, person, agency, authority or other legal entity that owns and/or operates facilities for the generation, transmission, distribution or sale of electric energy primarily for use by the public. Facilities that qualify as co-generators or small power producers under the Public Utility Regulatory Policies Act (PURPA) are not considered electric utilities.

Electricity generation: The process of producing electric energy by transforming other forms of energy such as steam, heat or falling water. The amount of electric energy produced is expressed in kilowatt-hours or megawatt-hours.

Electricity transmission congestion: Transmission congestion results when transmission lines reach their maximum capacity, so no additional power transactions can take place, regardless of power needs. Attempting to operate a transmission system beyond its rated capacity is likely to result in line faults and electrical fires, which should never occur. The only ways the congestion can be alleviated are to tune the system to increase its capacity, add new transmission infrastructure, or decrease end-user demand for electricity.

Energy efficiency: The utilization of technology that consumes less energy while providing sufficient service.

Endowment Lands: Lands held in trust by the state to support public institutions, such as schools, and are being considered for energy development.

FERC: Federal Energy Regulatory Commission

Forecasting: The process of estimating or calculating electricity load or resource production requirements at some point in the future.

Generator nameplate capacity (installed): The maximum rated output of a generator or other electric power production equipment under specific conditions designated by the manufacturer. Installed generator nameplate capacity is commonly expressed in megawatts and is usually indicated on a nameplate physically attached to the generator.

Gigawatt (GW): A unit of electrical power equal to 1,000 megawatts (MW)

Grid: The layout of the electrical transmission system or a synchronized transmission network.

Independent power producers (IPPs): A non-utility power generating entity, defined by the 1978 Public Utility Regulatory Policies Act, that typically sells the power it generates to electric utilities at wholesale prices.

INL: Idaho National Laboratory

Integrated Resource Plan (IRP): A plan that IOUs produce for regulators and customers to share their vision of how to meet the growing need for energy. These plans contain a preferred portfolio of resource types and an action plan for acquiring specific resources to meet the needs of customers including conservation measures. Specific resources will be acquired as individual projects or purchases and, when appropriate, through a formal request for proposals process.

Interconnection: A link between power systems enabling them to draw on one another's reserves in times of need to take advantage of energy cost differentials resulting from such facts as load diversity, seasonal conditions, time-zone differences and shared investments in larger generating units.

Interstate pipeline: A natural gas pipeline company that is engaged in the transportation of natural gas across state boundaries and is therefore subject to FERC jurisdiction and/or FERC regulation under the Natural Gas Act.

Investor-owned Utility (IOU): A utility that is a privately owned, often publicly traded corporation whose operations are regulated by federal and state entities.

ISEA: Idaho Strategic Energy Alliance

ITD: Idaho Transportation Department

Kilowatt (kW): A unit of electrical power or capacity equal to one thousand watts.

Kilowatt-hour (kWh): A unit of electrical energy that is equivalent to one kilowatt of power used for one hour. One kilowatt-hour is equal to 1,000 watt-hours. An average household will use between 800 and 1,300 kWhs per month, depending upon geographical area.

LNG: Liquified Natural Gas

Load: The amount of electric power delivered or required at any specific point or points on a system. The requirement originates at the energy-consuming equipment of the consumers. The load of an electric utility system is affected by many factors and changes on a daily, seasonal and annual basis, typically following a general pattern. Electric system load is usually measured in megawatts (MW). It is synonymous with demand.

Megawatt (MW): A unit of electrical power equal to 1 million watts or 1,000 kilowatts. Plant power output is typically measured in megawatts.

Megawatt-hour (MWh): One million watt-hours of electric energy. A unit of electrical energy that equals one megawatt of power used for one hour.

Metering: Use of devices that measure and register the amount and/or direction of energy quantities relative to time.

Microgrid: A small network of electricity users with a local source of supply that is usually attached to a centralized national grid but is able to function independently.

Municipal utility (Muni): A utility owned and operated by a municipality or group of municipalities.

NERC: North American Electric Reliability Corporation

Network: An interconnected system of electrical transmission lines, transformers, switches and other equipment connected in such a way as to provide reliable transmission of electrical power from multiple generators to multiple load centers.

NEVI: National Electric Vehicle Infrastructure Program

OEMR: Idaho Governor's Office of Energy and Mineral Resources

Peak demand: The maximum load during a specified period of time.

Pipeline system: A collection of pipeline facilities used to transport natural gas from source of supply to burner tip, including gathering, transmission or distribution lines, treating or processing plants, compressor stations and related facilities.

Primary energy sources: Energy sources in their natural states (e.g., biomass, petroleum, natural gas).

Power plant: A plant that converts mechanical energy into electric energy.

PUC: Idaho Public Utilities Commission

Regional Transmission Organization (RTO): A proposal advanced by FERC to establish regional groups to expedite the coordination of wholesale wheeling. The group is voluntary in each region and may include transmission system owners, wholesale purchasers and independent power generators.

Reliability: the ability of the bulk power system to withstand sudden disturbances while avoiding uncontrolled cascading blackouts or damage to equipment.

Renewable resource: An energy source that is continuously or cyclically renewed by nature, including solar, wind, hydroelectric, geothermal, biomass or similar sources of energy.

Resiliency: The ability to avoid, prepare for, minimize, adapt to, and recover from anticipated and unanticipated energy disruptions.

Resource adequacy: The ability of a power system to supply enough electricity, at the right locations, to keep the lights on during all hours of the year. This means system planners must ensure the mix of resources can meet demand during hot summer afternoons and cold winter nights.

Secondary sources (of energy): Energy forms that are converted from primary sources (e.g. electricity, gasoline).

Service area: The territory in which a utility system is required or has the right to supply service to ultimate customers.

Substation: Equipment that switches, changes or regulates electric voltage. An electric power station that serves as a control and transfer point on an electrical transmission system. Substations route and control electrical power flow, transformer voltage levels and serve as delivery points to industrial customers.

Tariff: A document filed by a regulated entity with either a federal or state commission, listing the rates the regulated entity will charge to provide service to its customers as well as the terms and conditions that it will follow in providing service.

Thermal generation: The production of electricity from plants that convert heat energy into electrical energy. The heat in thermal plants can be produced from a number of sources such as coal, oil or natural gas.

Transmission: The network of high-voltage lines, transformers and switches used to move electrical power from generators to the distribution system (loads). This network is utilized to interconnect different utility systems and independent power producers together into a synchronized network.

Turbine: The part of a generating unit usually consisting of a series of curved vanes or blades on a central spindle that is spun by the force of water, steam or heat to drive an electric generator. Turbines convert the kinetic energy of such fluids to mechanical energy through the principles of impulse and reaction or a measure of the two.

Volt: A unit of measurement of electromotive force or electrical potential. It is equivalent to the force required to produce a current of one ampere through a resistance of one ohm. Typical transmission level voltages are 115 kV, 230 kV and 500 kV.

Watt: A measure of real power production or usage equal to one joule per second.

WECC: Western Electricity Coordinating Council

WEIM: Western Energy Imbalance Market

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