



2024 Biennial Energy Report

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Report to the Legislature

Director Joe Nguyễn



ENERGY DIVISION

Acknowledgments

Washington State Department of Commerce
Jennifer Grove, Assistant Director, Energy Division

Glenn Blackmon, Director, Energy Policy Office

Elizabeth King, Director, Energy Emergency Management

Nick Manning, Legislative and Rulemaking Coordinator

Energy Policy Office

Stephanie Celt, Hydrogen, Renewable Fuels, Industrial Decarbonization

Bill Drumheller, Emerging Energy Technologies

Nora Hawkins, Renewable Energy and Battery Storage

Steven Hershkowitz, Clean Transportation

Lauren Hogrewe, Sustainable Fuels

George Lynch, Electric Power Transmission

Elizabeth Osborne, Regional Energy Issues

Aaron Peterson, Rural and Agricultural Energy

Shannon Pressler, Hydrogen Public Engagement

Steven Polunsky, Clean Transportation

Austin Scharff, Utilities and Markets

Stephanie Scott, Energy Workforce

Dan Seimann, Clean Energy Siting

Aaron Tam, Data and Analysis

Emma Wyma, Clean Transportation

ENERGY DIVISION

1011 Plum St. SE
P.O. Box 42525
Olympia, WA 98504-2525

www.commerce.wa.gov

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Executive summary

This 2024 Biennial Energy Report provides the governor and Legislature an update on progress made and recommended next steps to stay on target with the state's commitment to reduce greenhouse gas emissions and build a clean, equitable, and inclusive energy economy. It is informed by the [2021 State Energy Strategy](#) (SES), which was developed and published by the State Energy Office at the Washington State Department of Commerce in collaboration with public, private, nonprofit and tribal representatives. The SES provides a roadmap for developing the affordable and reliable clean energy needed to meet the state's commitment to reduce greenhouse gas emissions to 45% below 1990 levels by 2030, 70% below 1990 levels by 2040, and 95% below 1990 levels, with net zero emissions by 2050, and to comply with 100% clean electricity law.

Commerce develops the Biennial Energy Report every two years after the publication of each SES, as required by RCW 23.21F.

Most of the editorial content of this report was produced in late 2024. Some of the federal programs and policies mentioned are no longer active, and some previously available resources linked in the report have been removed. The report retains those references to capture the work across the last two years.

Legislative mandate

The State Energy Office, as established in RCW 43.21F, is required to submit a biennial report updating the Legislature on the state energy strategy per [RCW 43.21F.045\(2\)\(h\)](#), which directs the Department of Commerce, as the state agency responsible for coordinating implementation of the state energy strategy, to:

"... prepare and transmit to the governor and the appropriate committees of the legislature a report on the implementation of the state energy strategy and other important energy issues, as appropriate."

Report structure

This report identifies six priority strategies based broadly on the 2021 SES and provides updates on progress made and recommended next steps within each. Priorities include:

1. Prioritize equity and environmental justice in the clean energy transition
2. Develop clean electricity resources, including demand response programs and transmission upgrades
3. Invest in energy efficiency, clean energy improvements, and emerging technologies
4. Use and improve broad-based programs to limit GHG emissions
5. Promote multi-state projects and respond to anticipated changes in federal policy
6. Ensure energy security, resilience and safety

Some recommended actions have the largest near-term potential impact. Summarized below are the immediate next steps that should be prioritized to implement these actions within each priority strategy.

Near-term recommendations

Priority 1: Prioritize equity and environmental justice in the clean energy transition

Sector	Next steps
Transportation	<ul style="list-style-type: none"> ○ Increase funding for the EV Instant Rebates program to offer benefits to more low-income residents and to provide additional rebates for multifamily home charging. ○ Continue to provide funding for the Washington Electric Vehicle Program (WAEVCP) to increase access to community-based charging infrastructure in overburdened and vulnerable communities. ○ Develop capacity for combining energy, mobility, and emerging technologies with in-depth community engagement to address societal imperatives, including traffic safety, reliable/safe/affordable public transit, access to health care, and food deserts.
Buildings	<ul style="list-style-type: none"> ○ Continue to provide funding for critical energy efficiency and decarbonization work for affordable multifamily housing and as part of the state’s Clean Buildings Performance Standard (CBPS). ○ Continue to provide funding for high-efficiency electric appliance rebates for low and moderate-income customers. ○ Implement recommendations from the Commerce-commissioned Washington Residential Energy Contractors Workgroup Gap Analysis by piloting a clean buildings scholarship program in partnership with the Office of Minority and Woman-Owned Business Enterprises (OMWBE).
Energy burden and affordability	<ul style="list-style-type: none"> ○ Pursue recommendations in the Low-Income Energy Assistance 2023 legislative report to strengthen and clarify energy assistance responsibilities of electric utilities under CETA. ○ Implement Washington’s Solar for All program to reduce the energy burden of income-qualified households through solar deployment and leverage state funding for energy storage to increase the resilience of these households.
Clean energy siting and development	<ul style="list-style-type: none"> ○ Continue to provide funding for the Clean Energy Fund to support community-designed clean energy projects and initiatives. ○ Continue to fund solar and storage grants that increase community resilience, particularly in areas subject to frequent power outages. ○ Provide continued funding for the Clean Energy Community grants program to support communities in implementing their local decarbonization goals.
Workforce development	<ul style="list-style-type: none"> ○ Prioritize collaboration with the Workforce Training & Education Coordinating Board (WTB) through participation in the Clean Energy Technology Workforce Advisory Committee (CETWAC) and supporting preparation of the Clean Energy Workforce Report required under Chapter 231, Laws of 2023 (HB 1176), due to the Legislature in December 2025

Priority 2: Accelerate development of clean electricity resources, including demand response programs and transmission upgrades

Sector	Next steps
Clean energy siting and development	<ul style="list-style-type: none"> ○ Continue to provide funding for critical energy efficiency and decarbonization work for affordable multifamily housing and as part of the state’s Clean Buildings Performance Standard (CBPS). ○ Increase staffing and other resources within the Department of Commerce to provide the information, guidance and support to facilitate efficient siting and permitting of clean energy facilities and transmission, including mapping and dashboard, coordinated generation and transmission planning, grid enhancement, siting best practices, integration of energy development into local codes, community benefits and labor agreements, workforce development, and tribal energy development. ○ Support recommendations in the interagency Clean Energy Siting Coordinating Council’s first annual report, published in October 2024.
Transmission	<ul style="list-style-type: none"> ○ Explore the feasibility of establishing a state role in the development of new interstate transmission capacity, such as the transmission authorities that operate in Colorado and New Mexico. ○ Continue Washington’s participation in the Western Power Pool’s Western Transmission Expansion Coalition transmission planning initiative, Northern Grid regional transmission planning, and the Committee on Regional Electric Power Cooperation’s Transmission Collaborative for regional transmission cost allocation.
Workforce development	<ul style="list-style-type: none"> ○ Complete the electrical transmission workforce study as directed by the Legislature (Chapter 231, Laws of 2023). This work is supported by a workgroup including labor and utility representatives that advise and make recommendations to ensure that Washington has the electrical transmission workforce needed to meet its climate goals.

Priority 3: Invest in energy efficiency and clean energy improvements and expand these opportunities through planning and exploration of emerging technologies

Sector	Next steps
Transportation	<ul style="list-style-type: none"> ○ Authorize state standards for minimum energy efficiency requirements of replacement tires on passenger vehicles and light-duty trucks similar to the Replacement Tire Efficiency Program being adopted by the California Energy Commission. ○ Pursue near-term recommendations in the Washington Transportation Electrification Strategy, published in February 2024. ○ Develop EV charging reliability standards to reduce range anxiety among drivers. ○ Collaborate with the private sector, state agencies and local governments to advance clean fuel availability, acquisition, transition and use. ○ Develop programs for remote industries whose products are destined for transport (such as logging, agriculture, minerals, etc.). ○ Increase efforts across transportation modes to incentivize energy-optimized freight and passenger equipment.
Buildings	<ul style="list-style-type: none"> ○ Update and provide continued funding for the Clean Building Performance Standard Grants. ○ Support the state green bank, funded in the 2024 Operating budget, to offer improved financing for energy efficiency and fuel conversion projects and develop county-level property-assessed clean energy retrofit financing programs for commercial buildings. ○ Provide continued funding for Commerce's Multifamily Building Efficiency Grants. ○ Review and pursue recommendations in the state Residential Building Decarbonization Implementation Plan, published in July 2023.
Hydrogen and renewable fuels	<ul style="list-style-type: none"> ○ Provide targeted state support to implement recommendations in the Green Electrolytic Hydrogen and Renewable Fuels 2023 legislative report. Explore and establish tax incentives and other market development strategies to encourage the use of hydrogen and renewable fuels in strategic sectors, including industry, and heavy-duty transportation sectors, including transit, aviation and maritime.
Emerging technologies	<ul style="list-style-type: none"> ○ Encourage collaboration in evaluating opportunities around offshore wind. Establish a comprehensive understanding across executive agencies of their authorities with respect to offshore wind siting and permitting and fund research in partnership with tribes to understand potential ecosystem impacts of offshore wind development.
Workforce development	<ul style="list-style-type: none"> ○ Secure state and federal funding to implement recommendations of the Residential Energy Workforce Gaps Analysis, including supporting small residential energy contractors owned by women and people of color.

Priority 4: Use and improve broad-based programs to limit GHG emissions, and focus sector-specific efforts on emissions not covered by these programs and on equity impacts within covered sectors

Sector	Next steps
Energy planning and modeling	<ul style="list-style-type: none"> Update the deep decarbonization analysis supporting the 2021 State Energy Strategy to reflect the impact of new policies and cost and technology changes. Expand the scope to include non-energy emissions and to reflect health impacts and capture energy cost effects.
Hydrogen and renewable fuels	<ul style="list-style-type: none"> Produce a report on alternative non-fossil fuels, including alternative jet fuel and sustainable maritime fuels, evaluating feedstock supply and in-state production opportunities and impacts through the Office of Renewable Fuels.
Buildings	<ul style="list-style-type: none"> Update the state’s commercial building performance standard to align with the state’s emissions targets in statute and Seattle Building Emission Performance Standard. Provide continued funding for Commerce to implement the provisions in the new Buy Clean Buy Fair legislation (Chapter 344, Laws of 2024) to address embodied carbon.
Industry	<ul style="list-style-type: none"> Complete Commerce’s assessment of decarbonization opportunities in support of a climate-aware state industrial strategy, as envisioned by the Legislature in Chapter 322, Laws of 2023 (SB 5269). Continue to provide state support for industrial decarbonization and reducing emissions in-hard-to-decarbonize sectors.
Electricity	<ul style="list-style-type: none"> Commerce and the UTC should issue clarification and/or adopt rules as necessary to clarify how the CETA 2025 no-coal standard applies to power contracts used by utilities. Clarify the eligibility of projects using carbon capture and storage as “non-emitting electric generation” under CETA, as well as the eligibility of electricity generated using biodiesel and renewable diesel fuels.
Emissions regulations	<ul style="list-style-type: none"> Support the Department of Ecology’s work to develop a report regarding future regulation of emissions from and access to no-cost allowances for energy intensive, trade-exposed industries, consistent with RCW 70A.65.110.

Priority 5: Promote multi-state projects and respond to anticipated changes in federal policy

Sector	Next steps
Transportation	<ul style="list-style-type: none"> Support efforts for Washington to lead the nation in upgrading and converting locomotives to clean fuels and battery electric power.
Electricity	<ul style="list-style-type: none"> Prioritize participation in multiple initiatives to improve planning, investment, and operation of the power grid that serves the West, including the Western Resource Adequacy Program, Western Transmission Expansion Coalition, Southwest Power Pool, Committee on Regional Electric Power Cooperation, Transmission Collaborative, California Independent System Operator and the West-Wide Governance Pathways Initiative. Continue to support regional initiatives that leverage competitive advantages in advanced nuclear and fusion energy development to obtain federal funds, grow the clean energy economy, and provide additional clean energy for Washington.
Greenhouse gas regulation	<ul style="list-style-type: none"> Support linking Washington’s cap and invest program with other jurisdictions on terms that protect overburdened communities and advance Washington’s climate objectives.
Hydrogen and renewable fuels	<ul style="list-style-type: none"> Develop additional projects to use hydrogen and renewable fuels in industry, heavy-duty transportation, and the maritime sector, complementing the substantial efforts already in place to encourage production of these fuels.
Workforce development	<ul style="list-style-type: none"> Support Governor Bob Ferguson’s administration in working with U.S. Climate Alliance members to reach the Alliance’s collective target of one million Registered Apprenticeship Program completions by 2035 to support the clean energy transition.

Priority 6: Establish a secure, safe, and resilient transition of Washington’s energy systems

Sector	Next steps
Transportation	<ul style="list-style-type: none"> Provide funding for additional energy safety expertise and capacity at the Energy Resilience and Emergency Management Office to develop and share nonbiased energy safety information through a new outreach and education program.
Workforce development	<ul style="list-style-type: none"> Train small and rural electric utility staff in cybersecurity to be prepared for and able to quickly recover from an incident, and incorporate mitigation measures as new and emerging technology becomes available.
Emerging technologies	<ul style="list-style-type: none"> Support funding to provide education and outreach to communities on emerging technologies and create spaces for collaboration with safety subject matter experts across the state.

Priorities

Priority 1: Prioritize equity and environmental justice in the clean energy transition

Context

Overburdened communities and low-income households have both the most to gain and the most to lose from the transition to clean energy because the current fossil fuel-based energy system – and its climate impacts – imposes the greatest burdens on them.

Clean energy transition offers a promising benefit to the people in these communities, including a dramatic reduction in pollution from power plants, factories, highway traffic, and other sources. Washington has made significant progress in incorporating environmental justice principles in its laws, grant programs, and public decision-making processes. Both the [Clean Energy Transformation Act](#) and the [Climate Commitment Act](#) prioritize reducing impacts on overburdened communities in planning and implementation. The [HEAL Act](#) extends these priorities to significant actions by multiple state agencies and requires environmental justice assessments during the development of programs and legislative requests.

However, if left to market forces alone, this shift could force overburdened communities and low-income households to pay for legacy energy systems without addressing the disproportionate energy burdens they have historically borne.

Progress

Energy burden and affordability

- Following the publication of [Commerce's Low-Income Energy Assistance 2023 Legislative Report](#), the Legislature required Commerce recommend a statewide low-income energy assistance program design to provide widespread access to energy assistance for low-income households and address energy assistance need. Commerce published the [Statewide Monthly Low-Income Energy Assistance Program Design report](#) in November 2024.
- Energy utilities, Commerce, Utilities and Transportation Commission, and the State Auditor's Office continue to track progress to reduce energy burdens for low-income households. The next legislative update on utility programs is expected in Commerce's Low-Income Energy Assistance 2024 Legislative Report, to be submitted to the Legislature in early 2025.
- Commerce provided \$200 credits to low- and moderate-income households through the Washington Families Clean Energy Credits program in September 2024, funded by a one-time \$150 million legislative appropriation of revenue from the Climate Commitment Act. The credits were not targeted to address residential home energy costs, and the program was open to households that are not low-income.
- The Legislature enacted a moratorium on energy and water shutoffs for non-payment during extreme heat emergencies.

- Commerce secured \$156 million under the U.S. Environmental Protection Agency's Solar for All program to reduce household energy burden through solar deployment.

Transportation

- The 2024 [Transportation Electrification Strategy](#) identifies key disparities harming overburdened communities.
- Electric vehicle rebates are higher for low-income drivers and prioritize leases.
- The EV charging program at Commerce uses maps depicting overburdened communities to prioritize funding consistent with Climate Commitment Act equity provisions.

Hydrogen, industry and sustainable fuels

- Washington's successfully awarded hydrogen hubs proposal includes robust community benefits plans and aligns project selection criteria with environmental justice recommendations
- Commerce's 2023 [Green Electrolytic Hydrogen and Renewable Fuels report](#) includes a robust analysis of equity, environmental justice, and tribal risks and benefits in evaluating the potential role of these energy forms.

Clean energy development

- State grant programs, such as [Energy Programs in Communities](#) (EPIC), prioritize low-income households and underserved communities to improve energy efficiency and support conversion from fossil fuel sources to clean electricity.
- EPIC's 2024 [Clean Energy Grant program](#) pooled nine funding sources to offer three tailored grant opportunities that prioritized energy equity and environmental justice. The funding goals across the three grant opportunities aimed for a minimum of 10% of the funds allocated for tribal clean energy projects, and 40% for community resiliency projects that mitigate environmental harms and/or reduce energy burden. To date, of the \$110.6 million awarded, 43% will be directed toward overburdened communities and 15% to tribes. In addition, the funding round assessed co-benefits of community resiliency to provide backup power to vulnerable community members during weather events and power outages, and included deep community involvement in funding decisions.
- CETA [Clean Energy Implementation Plans \(CEIP\)](#) include specific requirements for electric utilities to ensure that all customers benefit from the clean energy transition and reduce burdens in vulnerable populations and highly impacted communities. Investor-owned utilities developed metrics for tracking impacts on highly impacted communities and vulnerable populations, and Commerce worked with a stakeholder advisory group to develop a framework for consumer-owned utilities. The Utilities and Transportation Commission requires investor-owned utilities to select multiple metrics and actions.
- Commerce partnered with the [Affiliated Tribes of Northwest Indians](#) (ATNI) and other organizations to successfully apply for a \$2 million federal Renewable Energy Siting through Technical Engagement and Planning (R-STEP) grant. The funds will support ATNI developing a tribally led collaborative to identify culturally appropriate areas for clean energy development. This will allow tribes to proactively guide and support clean energy rather than reactively responding to proposed projects.

- The Environmental Justice Council proposed funding to support ATNI and Commerce to lead an engagement and mapping process with tribes and overburdened communities for transmission planning and development. This work builds on and is complimentary to the federal R-STEP clean energy generation mapping effort.

The work ahead

Energy burden and affordability

- Review [the Statewide Monthly Low-Income Energy Assistance Program Design](#) and consider policy options to ensure every low-income household has access to monthly bill assistance with uniform benefit levels targeted to meet each household's energy assistance need.
- Consider additional energy efficiency rebates to reduce energy costs for low-income households.

Transportation

- Target large investments in grid improvements for transportation electrification to geographic areas with the worst pollution, such as ports and bus and truck parking sites.
- Pair equity-focused rebates on electric vehicles with strategies to increase the supply of used vehicles, including imports from other states.
- Develop capacity for combining energy, mobility, and emerging technologies with in-depth community engagement to address societal imperatives including traffic safety, reliable/safe/affordable public transit, access to health care, and food deserts, consistent with the [2023 Biennial Energy Report](#).

Hydrogen and renewable fuels

- Develop tools and information resources for developers proposing hydrogen projects to evaluate environmental justice impacts and create community benefits.
- Work with industry and labs to understand and mitigate nitric oxide (Nox) pollution from combustion of hydrogen, as well as human and environmental health impacts from alternative aviation and marine fuels.

Buildings

- Prioritize measures to shield low-income households from bearing the financial impacts of legacy fossil fuel systems as other customers shift to electricity.
- Use human-centered design principles such as co-development and deep community engagement to develop more effective programs serving low-income households and diverse communities.

Workforce

- Prioritize collaboration with the [Workforce Training and Education Coordinating Board \(WTB\)](#) through participation in the [Clean Energy Technology Workforce Advisory Committee \(CETWAC\)](#) and supporting preparation of the Clean Energy Workforce Report required under [Chapter 231, Laws of 2023 \(HB 1176\)](#), due to the Legislature in December 2025.
- Continue to support high labor standards and community benefits, including labor utilization requirements, for state and federally funded clean energy projects and programs.

- Support the development of skilled and technical workforce development programs in emerging energy sectors, including hydrogen and fusion energy.
- Expand equity analysis to consider impacts on small trade contractors, including those owned by women and people of color, and promote their participation in residential and commercial programs.
- Support and guide existing programs and strategies and coordinate with the WTB and local workforce board efforts in communities where projects are sited to support clean energy workforce development, especially for vulnerable populations and overburdened communities.
- Guide efforts to balance meeting immediate clean energy workforce demands spurred by federal and state investments with creating long-term career paths that continue when historic investments end, based on lessons learned from the [American Recovery and Reinvestment Act of 2009](#).

Clean energy development

- Support tribes in establishing a tribal-led collaborative via ATNI under the awarded federal R-STEP grant to identify potential clean energy development conflicts for tribes. In addition, if an Environmental Justice Council proposal for electricity transmission engagement is funded, Commerce will partner with ATNI to engage with tribes regarding transmission corridors and will lead engagement with overburdened communities to identify low-conflict siting opportunities for transmission routes.
- Expand access to solar energy for low-income households and tribes through implementation of the [Solar for All program](#). Secure and leverage state funding for energy storage to increase the resilience of households participating in Solar for All.
- Prioritize projects that directly benefit overburdened communities, such as increasing access to jobs and affordable energy or reducing exposure to pollution.

Priority 2: Accelerate the development of clean electricity resources, including demand response programs and transmission upgrades

Context

Access to clean, reliable electricity is key to a successful transition. In multiple sectors, the most feasible and cost-effective replacement for fossil fuel energy is electricity generated from clean sources.

Siting, building, and interconnecting clean electricity supplies to keep pace with demand is a complex challenge, requiring solutions to multiple problems at once. Government plays an important role in resolving these obstacles by implementing better siting procedures, encouraging innovation, and strengthening oversight, planning and market structures.

The clean energy transformation requires more than simply building renewable and non-emitting generation resources. Expanded transmission capacity is needed to gain access to a balanced portfolio of clean energy. Utilities also must include demand-side solutions to complement efforts to expand electric supply. Distributed solar and energy storage systems, expanded energy efficiency programs, and new demand response programs all help balance the grid and can be developed more quickly than transmission and large-scale generation.

Progress

Siting and permitting

- The U.S. Department of Energy announced a land lease for a 1 GW solar project that could be developed at the Hanford Nuclear Reservation by Hecate Energy. While the permitting process is long, this opportunity to use an existing federal energy site for clean energy development could be a model for reducing siting conflicts.
- Commerce contracted for an independent, third-party evaluation of state siting and permitting processes. [The Siting and Permitting Reform report \(PDF\)](#) was published in June 2024 and found that Washington’s permitting process requires significant reform. The authors propose recommendations addressing funding and staffing, permitting oversight and information, SEPA, EFSEC, local government, and planning and development of generation and transmission facilities.
- The Department of Ecology worked with other state, local and federal permitting agencies and tribes to develop options for consolidating clean energy permit applications. It submitted the [Clean Energy Coordinated Permit Process](#) report in 2024. The report identifies seven initial ideas for consolidation, which could be done together or independently. Additional work will be needed with engagement from industry, local and state governments, tribes, communities, and interested parties.
- The Interagency Clean Energy Siting Coordinating Council produced its [first annual report in October 2024](#). The report describes agency activities and accomplishments, identifies opportunities to improve siting and permitting, and makes 15 recommendations.

Demand response and smart grids

- Puget Sound Energy (PSE) implemented the Flex program, a demand response program accessible to residential customers. Through this program, PSE incentivizes customers to reduce their electricity use during high demand times on the electric grid. This enables PSE to invest in fewer peaking plants, which increase costs and greenhouse gas emissions. PSE Flex includes opportunities for residents to reduce energy consumption (Flex Rewards), to have PSE automatically turn down their WiFi-enabled thermostat (Flex Smart), and to have PSE signal their EV to charge at lower demand times (Flex EV).
- PSE launched the first virtual power plant in the state, which will enable it to take advantage of distributed energy resources, particularly distributed solar and storage, to help manage demand on the electric grid.
- [Douglas County PUD](#) is testing the use of hydrogen for “peak shaving” to reduce demand during extreme weather and reduce the need to use peaker plants.
- Commerce is helping accelerate use of grid-responsive buildings through grant projects like [the Advanced Grid Interactive Load Efficiency \(AGILE\)](#) project, funded by the Clean Energy Fund. Energy Northwest led an effort with Grays Harbor PUD and Pacific Northwest National Laboratory to complete a preliminary design for grid-interactive efficient buildings for Aberdeen and Hoquiam school districts. The buildings could automatically respond to peak demand on the power grid to reduce energy use to keep costs down while maintaining comfort.

Clean energy development

- Commerce completed the [Rural Clean Energy Economics and Community Engagement report](#) in 2024.

- PNNL’s [grid storage launchpad](#) officially opened in August 2024. This state-of-the-art facility in Richland will enable development and testing of new energy storage technologies. The facility will house researchers and practitioners to accelerate deployment of new innovations in energy storage.
- Utility and state investment in long duration energy storage technologies that expand capability to access clean energy, such as mechanical systems and thermal energy storage, are increasing in Washington.
- The State Energy Office, Utilities and Transportation Commission, and Department of Ecology are actively engaged in regional electricity conversations.
- The Western Resource Adequacy Program (WRAP) began its preliminary stages to deliver a region-wide approach for assessing and addressing resource adequacy and provide an important step forward for reliability in the region.
- Commerce and the Utilities and Transportation Commission held annual meetings on resource adequacy with national and regional resource adequacy experts, utilities, and the public.
- Commerce hired staff to represent Washington’s interests in regional and national transmission forums, such as Northern-Grid, Bonneville Power Administration (BPA), Western Power Pool Study, Committee on Regional Electric Power Cooperation - Western Interconnection Regional Advisory Board (CREPC-WIRAB), and Federal Energy Regulatory Commission (FERC).
- In fiscal year 2025 the Legislature provided funding to support the Nooksack tribe, in partnership with Whatcom County PUD, in conducting pre-drilling exploration and a study of the potential geothermal energy resource near Mount Baker.

Transmission expansion

- Washington joined the federal government and 20 other states to create a Modern Grid Deployment Initiative in May 2024.
- Washington is participating in the [Western Power Pool’s Western Transmission Expansion Coalition](#) transmission planning initiative and the [Committee on Regional Electric Power Cooperation’s Transmission Collaborative](#) for regional transmission cost allocation.
- Developers of the [Cascade Renewable Transmission](#) project started the siting approval process at EFSEC in late 2023. If permitted, this would result in the installation of a 400 kV high voltage direct current transmission line with a capacity of 1,100 MW. The facility would run in or alongside the Columbia River in Oregon and Washington.
- The Bonneville Power Administration (BPA) announced plans to strengthen its transmission system with 13 projects to accommodate regional load growth and enable BPA to add thousands of megawatts of new wind and solar generation and battery storage to the federal grid. Combined, the projects are estimated to cost approximately \$3 billion. Each project must undergo preliminary engineering and environmental review to inform a final decision to construct. The projects supplement 20 upgrades announced in 2023.

The work ahead

Transportation

- Evaluate the impact on energy usage of emerging transportation technologies including smart cities, autonomous vehicles, connected vehicles, ride sharing, drones, personal delivery devices, and intelligent transportation systems.

Siting and permitting

- Support the unanimous recommendations in [the Interagency Clean Energy Siting Coordinating Council's first annual report](#).
- Increase staffing and other resources at Commerce to assist communities and clean energy project developers, including:
 - Provide information to support siting of clean energy facilities and transmission, including mapping and a public dashboard, information on specific technologies, and best practices for emerging technologies.
 - Conduct planning and development functions to help achieve adequate, reliable, and affordable clean energy generation, manufacturing, and transmission, including guiding development to appropriate locations, upgrading under-efficient generating facilities, and facilitating transmission planning and capacity upgrades.
 - Support tribes, local governments, and communities to enhance local and equitable benefits associated with clean energy facilities, including integrating clean energy development into local codes, tribally led energy development, community benefits and labor agreements, workforce development, and agrivoltaics.
- Engage with dual use solar project grantees to share lessons learned and promote the adoption of agrivoltaics and other dual use solar projects that can reduce siting conflicts.

Demand response and smart grids

- Explore additional opportunities, beyond scheduled charging, to use electric vehicles (EVs) as a resource that enhances grid reliability.
- Expand utilization of virtual power plants beyond PSE to leverage distributed energy resource deployment statewide as a resource for decarbonizing electricity supply. Utilities can unlock the potential of demand-responsive water heaters and other responsive technologies in homes while maintaining comfort and reducing energy bills.
- Assess hydrogen production as large electrolysis projects come online to understand if hydrogen production is able to ramp up and down in response to variable renewables; if electrolysis displaces other load; and if there are other policy or technological approaches needed to support reliable and affordable hydrogen production and use.
- Support utility rate design that leverages grid responsive technologies to shift consumption to times of less constraint and lower demand on the electric grid.

Clean energy development

- Incorporate recommendations from the [Rural Clean Energy Economics and Community Engagement Study and Legislative Report](#).
- Share and analyze information gathered through initial hydrogen projects as part of broader effort to understand the potential role of hydrogen in power generation. Clarify when hydrogen for electricity generation is beneficial, including regarding costs to ratepayers, overall energy efficiency and air quality (if combustion rather than fuel cells).
- Continue to engage regional partners to move forward a single, West-wide energy market through the [Pathways Initiative](#).
- Support the development of new power sources and technologies, like small modular reactors and fusion machines.
- Continue to pursue use of geothermal energy resources in Washington for electricity production and for networked heat distribution at the community level.
- Through the [Northwest Power and Conservation Council's Power Plan](#), continue to evaluate technologies that do not yet appear cost effective such as offshore wind.
- Explore options to address infrastructure siting challenges that hinder expansion of electrolytic hydrogen production, carbon utilization, and development of renewable energy resources.

Transmission

- Explore the feasibility of establishing a state role in the development of new interstate transmission capacity, such as the transmission authorities that operate in Colorado and New Mexico. Ensure that utilities have adequate authority to develop transmission in partnership with other entities.
- Fulfill Washington's commitments under the Federal-State Modern Grid Initiative:
 - Prioritize or accelerate efforts that support the adoption of modern grid solutions to meet growing electric grid needs cost effectively, including efforts that increase capacity and maximize utilization of existing infrastructure.
 - Explore opportunities at the executive and legislative levels to address capacity challenges facing the grid in an expedient manner.
 - Explore pathways to facilitate adoption of high-performance conductors and grid enhancing technologies, which may include considering these technologies in grid planning, financial incentives, performance standards, and updated cost-effectiveness criteria.
 - Help assess and communicate the potential benefits of modern grid technologies to partners and stakeholders within and across states, including local governments and the public.
 - Share successes, challenges, lessons learned, and best practices with other states.

Workforce development

- Complete the electrical transmission workforce study as directed by the Legislature that will advise and make recommendations to support the needs of the electrical transmission workforce to reach the electrical transmission capacity necessary to meet the state's climate goals.
- Ensure a broad geographic distribution of apprenticeship programs and training related to electricity and transmission to meet statewide demand.
- Expand workforce programs to increase availability of trained and geographically dispersed expertise and programs to transition legacy related occupations and facilities, such as gas stations.

Priority 3: Invest in energy efficiency and clean energy improvements as equipment and systems are being added and replaced. Expand these opportunities through planning and exploration of emerging technologies.

Context

The transformation of our energy systems from fossil fuels to clean, efficient sources is not an immediate task. While the state's strategies reflect the time required for transformation, it is also crucial that we take advantage of every opportunity that arises to improve energy efficiency and shift energy consumption from fossil to clean energy. Each new vehicle, new factory line, new building, new purchase of farm equipment, new heating system installation, etc., is an opportunity to choose clean and efficient over polluting and inefficient. This opportunity-based approach limits costs compared to what would happen if the state delayed action and then found itself replacing or retrofitting equipment that was already in use.

However, the State Energy Strategy and other analyses have shown that a replacement-only approach will not reduce our use of fossil fuels quickly enough to meet our climate requirements. Policy makers and program implementers should also expand opportunities to reduce emissions in existing equipment. One example is tire efficiency standards, which reduce the fuel consumption for existing vehicles before they are replaced by EVs. Another is the development of sustainable fuels, which allow for emissions reductions in existing vehicles.

Progress

Transportation

- The [Interagency Electric Vehicle Coordinating Council](#) published Washington's [Transportation Electrification Strategy](#) in March 2024. The strategy provides a detailed analysis of stock rollover opportunities and limitations.
- In 2023, Washington achieved the fastest growth of any state in new electric vehicle sales. The state has also implemented significant new incentives for new electric vehicles and has streamlined the process for applying those incentives. New incentives on used EVs increase equity and environmental justice, as well as strengthen the overall market for EVs.
- The Legislature authorized support for pilot programs to electrify and charge off-road mobile equipment.

Buildings

- The Legislature expanded Washington's nation-leading performance standard for existing non-residential buildings in 2022. The law originally applied to buildings with at least 50,000 square feet, and the 2022 amendment created a second tier of buildings with at least 20,000 square feet. Commerce [adopted rules](#) in July 2024 to implement the program expansion.
- The Washington State Building Code Council adopted updated state energy codes for residential and commercial buildings, which took effect in March 2024. These updates maintain the [Legislature's direction](#) to achieve a 70% reduction in net energy consumption by 2031.

Hydrogen and renewable fuels

- Commerce published [recommendations for development of hydrogen and renewable fuels](#) in January 2024, implementing a provision of a 2022 law that created the [Office of Renewable Fuels](#). The report identifies opportunities to use green electrolytic hydrogen and renewable fuels in industry and some transportation sectors as a replacement for fossil fuels, where direct use of electricity is not feasible.
- In July 2024, the U.S. Department of Energy made an initial award of \$27.5 million for the Pacific Northwest Hydrogen Hub, which will eventually receive up to \$1 billion in federal funding for green electrolytic hydrogen production and use in Washington, Oregon, and Montana.
- In 2023, the Legislature increased funding for the Office of Renewable Fuels to support development of sustainable fuels to reduce emissions from air transportation. The law also provides substantial tax incentives for production and use of alternative jet fuel.
- In 2024, Commerce initiated a cooperative project with British Columbia to explore opportunities for cross-border development of green hydrogen.

Emerging technologies

- In 2022 and 2024, the Legislature took multiple actions to support emerging technologies:
 - Directed the Department of Natural Resources to reassess technical potential for geothermal energy and consider more advanced geothermal technologies entering commercialization.

- Made \$25 million available to support Energy Northwest in evaluating deployment of advanced fission reactors.
- Established a fusion energy workgroup to clarify state oversight of fusion energy facilities.
- Increased resources for Commerce to support development of alternative jet fuels.
- Supported several analyses of the feasibility of carbon dioxide removal technologies in Washington.
- In June 2024, Commerce published a [proposed framework for stakeholder and tribal engagement concerning offshore wind development](#). In September 2024, Gov. Jay Inslee announced his intention to start a collaborative research effort “focused on understanding the potential impacts of offshore wind on the marine environment and identifying strategies to avoid, minimize, and if necessary and deemed appropriate, mitigate those impacts.”

The work ahead

Transportation

- Advance the recommendations in tables 1 and 2 of the [Washington Transportation Electrification Strategy](#) to reduce transportation sector emissions in line with the state’s climate requirements.
- Authorize state standards for tire efficiency. Tire efficiency has a significant effect on fuel consumption and consumer costs, and replacement tires are often worse than the tires sold on new vehicles. State standards will protect consumers and reduce pollution from gasoline and diesel.
- Develop EV charging reliability standards so EV owners have more confidence and reduced range anxiety.
- Collaborate with the private sector to advance clean fuel availability, acquisition, and transition and use.
- Develop programs for remote industries whose products are destined for transport (such as logging, agriculture and minerals).
- Increase efforts across transportation modes to incentivize energy-optimized freight and passenger equipment.

Buildings

- Advance recommendations in the state's 2023 [Residential Building Decarbonization Implementation Plan](#). The state energy code must continue to improve the performance of new buildings, and existing homes must be better served by utility and government programs to reduce emissions from fossil fuels, improve the resilience of homes to a changing climate, and reduce the amount of wasted energy.
- Increase efforts to serve the energy needs of low-income households and overburdened communities. Expanded programs are needed to improve energy efficiency of these homes and replace fossil fuel-fired equipment with high-efficiency electric heat pump space and water heaters.
- Implement the \$7.78 million U.S. Department of Energy grant to support the [Building Efficiency and Clean Operations Network \(BEACON\) Fellows Program](#), which will establish a cohort of at least 60 fellows to provide energy services to owners/operators of large commercial and multifamily buildings, helping them

capture energy savings and comply with the Washington Clean Buildings Performance Standard. Buildings in areas identified as underserved and overburdened communities will be prioritized.

- Secure and implement additional pending federal grants:
 - U.S. DOE Training for Residential Energy Contractors (formula funds)
 - U.S. DOE Energy Auditor Training
- Secure funding to implement recommendations of the [Residential Energy Workforce Gaps Analysis](#), including supporting small residential energy contractors owned by people of color and women.

Hydrogen and renewable fuels

- Develop additional projects to use hydrogen and renewable fuels in industry, heavy-duty transportation and the maritime sector, complementing the substantial efforts already in place to encourage production of these fuels. The state should explore tax incentives and other market development strategies for targeted use of these fuels and provide information and tools to help communities understand the impacts of replacing fossil fuels with clean fuels.

Emerging technologies

- Incorporate the best information available on emerging technologies in long-term planning, such as the state's [Climate Pollution Reduction Grant decarbonization analysis](#) and the [Northwest Power and Conservation Council's 9th Power Plan](#).
- Encourage federal initiatives for increasing absorption of atmospheric carbon dioxide into the ocean following models like the Ebb Carbon and PNNL facilities in Sequim and Port Angeles.
- Engage with communities and consult with tribes to understand perspectives on offshore wind. Synthesize research on ecological impacts of potential offshore wind development. Establish a comprehensive understanding across executive agencies of their authorities with respect to offshore wind development.

Priority 4: Use and improve broad-based programs to limit GHG emissions, focusing sector-specific efforts on emissions not covered by these programs and on equity impacts within covered sectors.

Context

Washington has established comprehensive and strong policies to reduce greenhouse gas emissions, notably the Climate Commitment Act, the Clean Fuels Standard, and the 100% Clean Electricity law or Clean Energy Transformation Act (CETA). Voters ratified the CCA in November 2024 by defeating Initiative 2117 by a margin of 62% to 38%.

These mechanisms will require further adjustment, but they provide the basic framework to enable a “firm but flexible” approach for Washington to meet its decarbonization requirements. For emissions covered by the CCA cap, the allowance mechanism enables business decisions to guide reductions even when no specific requirement or incentive applies to an activity. Likewise, CETA allows utilities to choose from a variety of

renewable resources, as well as nuclear power, and to continue making limited use of fossil natural gas until 2045. Under the Clean Fuels Standard, fuel suppliers are afforded the flexibility to gradually reduce the carbon intensity of transportation fuels through strategies that align with their business models.

Policy initiatives that address sectors outside the CCA cap have greater impact on overall emissions, compared to reductions covered by the CCA. Electrification in sectors outside the CCA can effectively expand the scope of its coverage, since emissions from electricity are under the CETA cap. Within covered sectors, the priority should be on improving equitable outcomes. In sectors where electrification is difficult, recent efforts have focused on building supply chains for alternative fuels like green hydrogen, and on innovative solutions like industrial symbiosis to utilize carbon for new products and sustainable fuels. In cases where electrification is expensive or otherwise unavailable, especially for low-income and overburdened communities, policy makers have focused on providing opportunities for residential fuel switching among other solutions.

Progress

Hydrogen, industry and sustainable fuels

- Commerce implemented a [grant program](#) to support hard-to-decarbonize sectors in a cost effective way through electrification, efficiency, or other methods.

Buildings and energy efficiency

- Washington recently passed residential fuel switching programs that will help low-income customers transition away from gas appliances and toward electric ones.
- [Chapter 291, Laws of 2023](#) establishes a new model for energy efficiency and carbon emissions reductions through the utilization of new district energy systems.
- [New legislation](#), enacted at Commerce's request, takes the first step to account for embodied carbon in state building construction projects by addressing the carbon footprint of supply chains for building materials – currently responsible for 11% of building sector emissions. The legislation establishes reporting requirements for building materials and working conditions for state agency new building construction and major renovations.

Electricity

- In its first [interim assessment of CETA under RCW 19.405.080](#), Commerce found that:
 - The extended time period for meeting clean electricity standards – allowing use of fossil fuels for up to 20% of electricity until 2045 – provided the utility industry with time to develop and implement technologies needed to achieve the 100% clean standard.
 - Utilities and policy makers have acted to make investments, develop markets and programs, strengthen resource adequacy, and reduce barriers to new facilities.
 - Clean electricity has become even more important to the state's energy and climate policies as consumers and businesses move away from fossil fuels in transportation, buildings, and industry.
 - Utilities and policy makers have acted to make investments, develop markets and programs, strengthen resource adequacy, and reduce barriers to new facilities.

- Commerce and the UTC convened annual [resource adequacy meetings under RCW 19.280.065](#) to discuss expert assessments of the industry’s ability to meet the electricity requirements of consumers and businesses.
 - The agencies have emphasized the central role of resource adequacy in state policy. The meetings illustrated the complexity of this challenge, including the need to improve government siting procedures, streamline interconnection of new generating facilities, reduce supply chain barriers, and increase investment in transmission capacity.
 - The meetings also highlighted opportunities to maintain resource adequacy through better management and operation of the power grid, including more use of demand response, virtual power plants, upgrading existing transmission facilities, and installing advanced grid enhancing technologies.
 - In November 2024, the UTC issued [draft rules for investor-owned utilities](#) to interpret the requirements of CETA’s 2030 GHG Neutral standard, comparable to rules earlier adopted by Commerce covering consumer-owned utilities.
 - In 2023, the Legislature enacted Commerce-request legislation to address a potential loophole in CETA related to large customers purchasing fossil-fired electricity directly from non-utility suppliers.

The work ahead

Transportation

- Extend and expand programs to reduce Vehicle Miles Traveled (VMT) including commuter trip reduction incentives, shifting passenger and last-mile deliveries to electric-only, micromobility or active transportation methods, and public transportation programs prioritized on areas with VMT increases.
- Explore ways to involve more transportation entities in the Climate Commitment Act marketplace.
- Address energy issues through a strategic focus on leveraging housing, land use, and transportation policies.
- Identify and standardize variances among statutory definitions (such as "[active transportation](#)").

Energy planning and modeling

- Continue work through Commerce and Ecology on the [Comprehensive Climate Action Plan](#) as part of the state’s EPA Climate Pollution Reduction Grant. The plan will provide a framework for addressing sectors inadequately covered by existing greenhouse gas emission programs and identifying gaps in achieving our greenhouse gas limits. The modeling for this plan is updating the analysis supporting the [2021 State Energy Strategy](#) to reflect the impact of new policies and cost and technology changes. It also expands the scope to include non-energy emissions and to reflect health impacts and capture energy cost effects.

Hydrogen and renewable fuels

- Produce a report on alternative, non-fossil fuels, including alternative jet fuel and sustainable maritime fuels, evaluating feedstock supply and in-state production opportunities and impacts through the Office of Renewable Fuels.

- Increase industrial symbiosis by using carbon dioxide otherwise emitted to the atmosphere for new products including sustainable fuels.

Buildings

- Align the energy-based targets in the state's commercial building performance standard (CBPS) with the state's emissions targets in statute and with [Seattle's Building Emissions Performance Standard](#).
- Support the continued development of an embodied carbon database for state buildings construction projects and continue to develop staff capacity to support technical work and legislative reporting to understand the carbon footprint of public building material supply chains in Washington.
- Explore options to expand embodied carbon policy to commercial buildings and transportation infrastructure.

Industry

- Support the Commerce Office of Economic Development and Competitiveness in completion of work from [Chapter 322, Laws of 2023 \(SB 5269\)](#), including assessment of decarbonization opportunities and state industrial strategy. This will help identify key sectors and facilities to focus on for decarbonization, fuel switching, and other opportunities. This could also help establish partnerships that lead to collaboration on applying for federal funding. More coordination and focus in this area is important for CCA compliance and could help go beyond it, such as seeking grants to reduce emissions more quickly or reducing emissions in facilities below CCA threshold.
- Continue to provide state support for industrial decarbonization and reducing emissions in hard to decarbonize sectors. This may include developing new or expanded funding programs in sectors and facilities prioritized in a state industrial strategy.

Agriculture

- Develop and expand programs to assist farm, ranch, and tree fruit orchard owners and operators in emissions reduction opportunities such as agrivoltaics, biofuels, irrigation efficiency, use of battery electric vehicles and equipment, and methane management.
- Encourage and fund on-farm production of clean energy resources.

Electricity

- Support businesses, utilities, power market operators, environmental advocates, and the Bonneville Power Administration in addressing issues that emerge in the implementation of CETA. Commerce and the UTC may need to issue interpretations, adopt rules, and suggest legislation to address:
 - Clarification of the 2025 no-coal standard as applied to power contracts used by utilities to hedge the risk of market price fluctuations.
 - Eligibility of electricity generated using biodiesel fuel and renewable diesel.
 - Eligibility as “non-emitting electric generation” of projects using carbon capture and storage.
 - Applicability of CETA to forms of government not already included, such as port districts.

- Clarification of compliance and reporting requirements for large customers who self-generate or purchase power from non-utility sources.

Emissions regulation

- Examine the performance of CCA provisions that provide no-cost allowances to industrial, electric utility, and natural gas distribution sectors to ensure these firms have strong financial incentives to reduce emissions. Improve the transparency of no-cost allocations to individual firms.
- Support the Department of Ecology's work to develop a report regarding future regulation of emissions from and access to no-cost allowances for energy intensive, trade-exposed industries consistent with RCW 70A.65.110.

Priority 5: Promote multi-state projects and respond to anticipated changes in federal policy

Context

Washington has been a climate and energy policy leader for more than a decade. However, the climate crisis is a global one; even reducing direct emissions within Washington can be challenging without consistent approaches in other jurisdictions. For example, meeting the demand for clean electricity requires generation and transmission investments across the West.

Since 2020, Washington's energy and climate policies have benefitted significantly from closely aligned federal policies and historic federal investments. This included both tax and incentive measures enacted by Congress, regulatory actions by the Department of Energy, the Environmental Protection Administration, and the Federal Energy Regulatory Commission. Regulatory actions included rules to improve the energy efficiency of appliances, streamline permitting for interstate transmission facilities, improve transmission planning, and establish limits on emissions from new baseload gas-fired power plants. Additionally, federally funded workforce development programs have required meeting targets to serve disadvantaged and overburdened communities and included critical funding around services such as housing, transportation and child care. The supportive federal policy environment will likely not continue in the new federal administration.

Washington must nonetheless work with the federal government and other states, even if our energy and climate policies do not align. States have already recognized this with respect to the electricity sector, where power grids, planning and reliability organizations, and wholesale power markets serve multiple states with multiple climate and energy policies.

Progress

Electricity

- Most electric utilities in Washington are committed to the [Western Resource Adequacy Program](#), with a binding program in 2027. Many are doing so through their power contracts with the Bonneville Power Administration.
- The [Southwest Power Pool](#) and the [California Independent System Operator](#) separately initiated efforts to establish organized wholesale electricity markets.
- The U.S. Department of Energy and the Federal Energy Regulatory Commission have taken major steps to streamline generation and transmission permitting requirements, improve planning and regulatory oversight of transmission projects, and identify transmission corridors of national interest.

Transportation

- The Washington State Department of Transportation received a federal award through the National Electric Vehicle Infrastructure funding from the federal government and is [accepting applications](#) to build additional vehicle charging infrastructure per the [August 2024 deployment plan](#).

Green hydrogen

- Commerce joined British Columbia in a study of cross-border opportunities to develop green hydrogen production and use.
- The [Pacific Northwest Hydrogen Association](#) (PNWH2) is developing a hydrogen hub with nodes in Washington, Oregon and Montana. Commerce is participating in and supporting the work of the hub.

Renewable energy, energy efficiency and electrification

- Commerce is implementing multiple federal grants, funded through the Inflation Reduction Act and other federal legislation, to increase deployment of energy efficiency programs, installation of solar photovoltaic systems that benefit income qualified households and tribes, and conversion from fossil fuels to clean electricity.

Energy planning

- EREMO worked with Ecology to submit the [Priority Climate Action Plan \(PCAP\)](#) to EPA as part of its Climate Pollution Reduction Grant program. The plan identifies several energy projects in Washington ready for implementation.

The work ahead

Transportation

- Support efforts for Washington to lead the nation in upgrading and converting locomotives to clean fuels and battery electric power.
- Develop testbeds for applied research in transportation energy.

Electricity

- Prioritize state government’s participation in the multiple initiatives under way to improve planning, investment, and operation of the power grid that serves the West. These include:
 - [Western Resource Adequacy Program](#)
 - [Western Transmission Expansion Coalition](#)
 - [The Committee on Regional Electric Power Cooperation Transmission Collaborative](#)
 - [Day-ahead market initiatives of Southwest Power Pool](#) and [California Independent System Operator and the Pathways governance initiative](#)
- Assess potential changes to the [state’s clean electricity law](#) that may be needed to ensure full participation in resource adequacy programs and support development of interstate electricity markets.
- Complete the regional energy needs assessment as agreed to by the U.S. government, the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Warm Springs Reservation, and the states of Washington and Oregon, including the study of electric power resources that could replace the energy services of the lower Snake River dams.
- Ensure the [Ninth Power Plan of the Northwest Power and Conservation Council](#) reflects the requirements of Washington’s energy and climate policies and incorporates the potential benefits of transmission expansion, emerging technologies, and demand-side capacity resources.
- Continue to work toward securing federal assistance for regional collaboratives of federal, state and local entities that leverage competitive advantages for Washington and the Pacific Northwest in areas like advanced nuclear and fusion energy development.

Green hydrogen

- Support effective communication and engagement around tax incentives that can support regional hydrogen production, including working with the PNWH2 to support access to the federal 45V Hydrogen Production Tax Credit.

Greenhouse gas regulation

- Support linkage of Washington’s cap and invest program with other jurisdictions on terms that protect overburdened communities and advance Washington’s climate objectives.

Energy efficiency

- Work cooperatively with other states to develop and implement energy efficiency standards for appliances, equipment, tires, and other products not preempted by federal standards and to ensure that federal agencies maintain and improve standards for federally regulated products.

Workforce

- Collaborate with the [Clean Energy Technology Workforce Advisory Committee](#), led by the Workforce Training and Coordinating Board, and other workforce development partners to ensure that Washington

continues to prioritize developing equitable pathways to high-paying clean energy careers, regardless of potential changes in federal priorities and investment.

- Support Gov. Bob Ferguson’s administration in working with U.S. Climate Alliance members nationwide and relevant Washington labor and other partners to reach the Alliance’s collective target of one million Registered Apprenticeship Program completions by 2035 to support the clean energy transition.

Priority 6: Establish a secure, safe and resilient transition of Washington’s energy systems

Context

The energy systems and infrastructure serving Washington’s communities and businesses must be supported and protected from natural hazards, physical and cybersecurity threats, and safety risks. As the state continues to shift away from traditional fossil-based energy sources, new energy technologies and infrastructure present novel challenges regarding reliability, cybersecurity, physical security and safety. Climate change further threatens the resilience of our complex energy system through extreme weather events, such as heat domes, and increased wildfire risk.

Since the 2021 State Energy Strategy was finalized, we have expanded the state’s energy infrastructure security and emergency management capabilities, establishing the Energy Resilience and Emergency Management Office (EREMO) in 2018. EREMO strives to mitigate potential risks to and ensure the readiness and resilience of energy infrastructure by planning, responding to, and supporting recovery efforts for the state.

Progress

Transportation

- In January 2023, the Energy Resilience and Emergency Management Office (EREMO) kicked off the Regional Resilience Assessment Program (RRAP) for the last-mile liquid fuel supply chain assessment with the Department of Homeland Security Cybersecurity and Infrastructure Security Agency for Washington State. EREMO will use this information during the transition away from petroleum-based liquid fuels to cleaner energy sources to ensure we are prepared if an energy supply disruption impacts transportation functions.
- EREMO worked with the Washington Department of Transportation to update the state plan for electric vehicle infrastructure to ensure that the contractors installing infrastructure using state and federal funds can protect, defend, and respond to a cybersecurity incident.
- EREMO participated in and provided subject matter expertise on the development of the legislative report required under SSB 5812 concerning the response to electric vehicle fires and supporting the State Fire Marshall to provide the necessary training to our state’s firefighters in response to EV battery fires.
- EREMO developed guidance and suggested policy steps to incorporate emergency stops at DC fast charging infrastructure for firefighters and public safety.

Hydrogen, industrial decarbonization, sustainable fuels

- EREMO includes sustainable fuels in updating the [State Fuel Action Plan](#) and will continue to expand the regional resilience assessment information.

Buildings and energy efficiency

- EREMO's Energy Resilience and Mitigation Program worked directly with communities and electric utilities to identify clean energy technology to support state, local, or neighborhood energy resilience. Demonstrations used in Washington, such as [Douglas County PUD's H2](#) for backup power initial demonstration projects with non-firm hydro and a backup generator at Klickitat Valley Health, are examples the program can share with communities.

Workforce

- EREMO supports staff members who sit on either degree advisory committees or centers of excellence committees. This includes the [Cybersecurity Center of Excellence](#), [Homeland Security and Emergency Management Center of Excellence](#), and the [Columbia Basin College logistics and supply chain](#) degree program advisory committee.

Emerging technologies

- EREMO established a new program for energy safety, which will provide nonbiased education and outreach to communities on emerging technology and a space with statewide safety subject matter experts to connect on safety-related issues or risks and work to develop mitigation recommendations.

Utilities and markets, electric transmission, regional electricity policy

- EREMO has supported the U.S. Department of Agriculture and U.S. Forest Service in working with many Washington electric utilities to update their service agreements for transmission corridors, which were at least a decade out of date.

Renewables, rural and agricultural, clean energy siting

- EREMO now includes changes in policy in its energy emergency response plans and actions, as well as in preparedness and mitigation actions through the resilience and mitigation program. This change has allowed the Office to shift from reacting to policy changes to being included in policy discussions that have the potential to impact our role in energy supply monitoring and response.

The work ahead

Transportation

- Continue to incorporate maritime and aviation fuel supply chain information including biofuels such as sustainable aviation fuel, sources of R100, and others for a comprehensive analysis of state liquid fuels through the liquid fuels resilience program. This information will be used for energy supply alerts, emergencies, or any other time when the state has the potential to experience a supply disruption.
- Continue work between EREMO and the Washington Department of Transportation to update the state's plan for electric vehicle infrastructure to include additional standards as our program grows, industry changes, and national cybersecurity evolves to meet the needs of the changing technology and threats.
- Support additional staffing in EREMO, per recommendations in the [legislative report](#) required per Chapter 189, laws of 2024 for a new program to provide subject matter expertise and statewide coordination with

other experts in the safety space, and to develop an outreach and educational component to share nonbiased energy safety information so others can make the best decision for themselves and their communities.

- Ensure that locations for new electric vehicle charging infrastructure support emergency response routes for evacuations. More collaboration is needed in this space statewide, from working with counties to get their information to sharing with other state agencies for emergency planning processes.

Hydrogen, industrial decarbonization, sustainable fuels

- Provide funding for additional studies and assessment of risks and best opportunities for H2 in backup power to support resilience.

Buildings and energy efficiency

- Improve energy efficiency and energy resilience for community buildings by expanding collaboration across commerce programs and engaging in community spaces as EREMO continues to grow.

Workforce

- Support cybersecurity training at small and rural electric utilities through EREMO to ensure utilities are prepared for and able to quickly recover from an incident and incorporate mitigation measures as new and emerging technology becomes available.

Utilities and markets, electric transmission, regional electricity policy

- Support improvements at the national level in the emergency work approval process and work with the local Forest Service district before wildfire season on at-risk trees outside of the transmission corridor for proactive vegetation management and also during wildfire season for response coordination.

Renewables, rural and agricultural, clean energy siting

- Support and utilize EREMO's new data visualization tool, currently under development, to conduct outreach and education on the options for the state to meet our clean energy goals, support energy-resilient communities, and increase awareness around energy infrastructure siting locations.

Emerging technology

- Support funding at EREMO for staff to create a website for nonbiased information, attend local planning committee meetings when requested, and facilitate a statewide core workgroup for collaboration.