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Assessment of Regulatory and Legislative Policies Impacting the Adoption of Dual-Fuel Equipment in the Northwest

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Introduction: Research Objectives and Context

The **Northwest Energy Efficiency Alliance (NEEA)** is an alliance of more than 140 utilities and energy efficiency organizations working on behalf of over 14.5 million energy consumers across the four Northwest states. As a dual-fuel alliance, NEEA is uniquely positioned to identify opportunities that leverage both the natural gas and electric systems to deliver efficient, affordable and reliable solutions for Northwest customers.

As the Northwest faces growing energy demand, rising winter peaks, and increasing resource adequacy concerns, dual-fuel technologies offer a practical way to reduce energy use, manage demand and improve overall system performance while supporting customer affordability and comfort. By taking advantage of the complementary benefits of both the natural gas and electric systems dual-fuel solutions can create value for customers, utilities, and the region as a whole.

To better understand the regulatory and legislative policies influencing adoption of dual-fuel equipment in the Northwest, NEEA engaged Potential Energy NW.

About the Assessment

This report, completed by Potential Energy NW in May 2026, includes existing regulatory and legislative policies influencing adoption of dual-equipment in Idaho, Montana, Oregon and Washington, examples from outside of the Northwest where dual-fuel programs are more mature, and evolving dual-fuel definitions. Secondary research is complemented by interviews with utility and regulatory stakeholders. The report is intended to be a reference for the region in evaluating the policy and regulatory barriers to large scale adoption of dual-fuel approaches to address growing energy system needs.

The recommendations from this independent analysis do not necessarily reflect the perspectives or recommendations of the Northwest Energy Efficiency Alliance.

Looking Forward

The Northwest needs pragmatic solutions that can deliver efficiency, affordability and reliability when the grid needs them the most. Dual-fuel technologies provide a flexible pathway that allows utilities, regulators and policymakers to gain experience, collect data and evaluate tradeoffs while the region's energy system continues to evolve.

Dual-fuel technologies are one potential tool within a broader portfolio of energy efficiency, load flexibility, resiliency and emissions-reduction strategies. Their role will vary by state, market, building type and policy environment. Near-term research, pilots and shared analysis can help utilities, regulators and policymakers identify the most promising applications, evaluate tradeoffs, and determine where dual-fuel systems offer a practical pathway for delivering value for the region's energy consumers. NEEA plans to publish additional learnings from dual-fuel efforts as they become available.

For questions about this research or to learn more about NEEA's ongoing dual-fuel work, please contact Jonathan Belais at jbelais@neea.org.

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Executive Summary

The Northwest Energy Efficiency Alliance (NEEA) identified dual-fuel equipment as having potential to deliver significant emissions reductions, energy cost savings, and energy system reliability and efficiency benefits to the Northwest. Demand side resources have a long history of providing regional energy system benefits but recent regional projections for significant resource adequacy gaps by 2030 have prompted NEEA to explore whether dual-fuel measures might play a larger role in mitigating the gap.

NEEA defines dual-fuel systems as customer equipment which uses electricity and natural gas interchangeably to heat or cool water or air. These systems are designed to leverage the most efficient use of both fuels to achieve energy and cost savings, emissions reductions, and consumer comfort. The most common application is for residential HVAC systems consisting of a ducted electric heat pump and a natural gas furnace. Adoption of dual-fuel equipment in Northwestern states is relatively modest but growing. Although the technologies are commercially available, customer awareness is limited, contractor sales and installation practices are varied, and adoption is not broadly encouraged by utilities nor the equipment industry generally.

This report is an assessment of existing regulatory and legislative policies influencing adoption of dual-fuel equipment in the Northwest along with examples of extra regional frameworks where dual-fuel is more mature. Interviews with regional experts representing utility, regulatory and stakeholder perspectives on dual-fuel augmented research of secondary sources used to assess Northwest policies and compare them to external frameworks.

Research and interviews revealed consistent themes and attributes of external policy frameworks that enable dual-fuel systems:

- Clear statutory or regulatory direction that allows for “efficient fuel switching” or “fuel substitution” to count as energy efficiency and/or decarbonization resources
- Collaboration between utilities is required, particularly where single-fuel utilities operate in shared service territories
- The evolving nature of understanding how to implement and optimize dual-fuel is clearly reflected in the framework guidance. For example, the idea that more data is needed to determine baselines, costs, benefits and risks for dual-fuel measures that will inform future revisions and adjustments to cost allocation is used to justify initial program offers for later evolution.
- Program budgets are allowed to include funding for customer education and contractor training.

- Specific electric and gas utility requirements were added to statute or regulatory guidance to offer dual-fuel and electrification measures, often as the result of government-funded studies.
- Complementary regulatory and program tools to fund and implement dual-fuel measure offers. Examples include fuel neutral energy savings goals, winter heating rates, GHG contribution payment from electric to gas customers, and decoupling.

Despite critical differences in climate goals and local circumstances, there are consistent themes and lessons learned across most experiences with dual-fuel offers that can provide valuable insights for the Northwest.

- Dual-fuel is seen as a pragmatic tool to lower total energy system emissions at lower cost than full electrification where gas furnaces exist.
- Promotion of dual-fuel measures is still relatively new with more to learn and implement in real life situations.
- The long-term outlook for these program examples tends to vary by the local vision of climate policy. Where the climate policy is focused on electrification, the role of dual-fuel measures may be transitory. Where climate policy is more flexible or less stringent, the outlook is to continue to grow dual-fuel as a cost-effective efficiency measure with other customer benefits.

Even where dual-fuel adoption is relatively mature, lingering issues regarding allocation of costs, benefits and risks of dual-fuel remain, as it is a relatively new resource with limited performance data. In the Northwest, where implementation of economy-wide climate policy is evolving (WA, OR), combined utility planning is in the early stages, with near term opportunities to evaluate how dual-fuel fits within the larger policy context. All states are facing affordability and reliability concerns, and dual-fuel may be considered a pragmatic investment in support of those priorities as well.

Recommendations for Northwest entities exploring the role of dual-fuel:

It is not the intention of this report to recommend specific policy changes, but rather to recommend how to better identify and describe the value proposition for dual-fuel to the utility system, customers, and society. Combined with supporting market and technical information, these recommendations could support decision makers in evaluating the opportunity within their state-specific goals and priorities and develop appropriate policy and regulatory changes to enable that value.

- Develop a high-level resource potential assessment for dual-fuel opportunities by state so policy makers, regulators and all stakeholders can understand the potential magnitude of short and long-term costs, benefits and risks and underlying assumptions.

- In parallel to a resource potential assessment, continue to learn by doing and collect relevant project and market data to inform standardized measure design practices and design of new tools to cost-benefit analysis to inform cost benefit allocations across electric and gas utility customers.
- Expand customer education and contractor understanding.
- Find and focus first on the use cases where energy savings, emissions reductions, winter peak impact avoidance and customer benefits exist.
- Continue to develop and test technology allowing real-time and third-party modulation between fuels, the cost and policy considerations of adding this functionality and quantification of scenarios to optimize system use, whether from customer, utility or societal perspective.

1. Introduction and Background

The Northwest Energy Efficiency Alliance (NEEA) identified dual-fuel equipment as having potential to deliver significant emissions reductions, energy cost savings and energy system reliability benefits to the Northwest¹. Demand side resources have a long history of providing regional energy system benefits in the Northwest but recent regional projections for significant resource adequacy gaps by 2030² have prompted NEEA to explore whether dual-fuel measures might play a larger role in mitigating the gap.

Dual-fuel systems, also known as hybrid heating, are defined in this context as customer equipment which uses electricity and natural gas interchangeably to heat or cool water or air. The most common application is for residential HVAC systems consisting of a ducted electric heat pump and a natural gas furnace. Use of gas heating typically occurs when outdoor temperatures fall below a set point or when the system is optimized to achieve other customer or energy system goals. These other goals may include minimizing operating costs or optimizing peak demand impacts across the gas and electric systems. Other emerging applications for dual-fuel solutions include residential water heating, commercial water or space heating, and industrial production processes.

Adoption of dual-fuel equipment in Northwestern states is currently modest but growing. Although the technologies are commercially available, customer awareness is limited, contractor sales and installation practices are varied, and adoption is not broadly encouraged by utilities nor the equipment industry generally.

Dual-fuel applications can provide similar customer, utility system, and societal benefits that existing well-established Northwest energy efficiency and demand response (DR) utility customer programs, building codes and other policy supported actions achieve. A key difference is that implementation of dual-fuel ratepayer funded programs needs to consider costs, benefits, and risks for both gas and electric energy systems and customers simultaneously when defining its role in state policies.

NEEA has been assessing the landscape of technologies that enable dual-fuel applications to perform well in the Northwest. This report is a complementary assessment of existing regulatory and legislative policies influencing adoption of dual-equipment in the region along with examples of extra regional frameworks where dual-fuel is more mature. Based on a review of existing Northwest and extra regional frameworks and interviews with regional experts representing utility, regulatory and stakeholder perspectives on dual-fuel, recommendations for further exploration are provided.

¹ Advancing Dual-Fuel Residential HVAC to Achieve a Reliable, Resilient and Affordable Energy Future . (June 2025). Northwest Energy Efficiency Alliance (NEEA). <https://neea.org/wp-content/uploads/2025/06/Dual-Fuel-HVAC-White-Paper.pdf>

² Olson, A. (April 2026). Resource Adequacy and the Energy Transition in the Pacific Northwest. https://www.ethree.com/wp-content/uploads/2026/04/E3-NW-RA-Final-Report_040826.pdf

Defining Dual-Fuel

The concept of dual-fuel equipment is relatively new, even to those in the energy industry, so it is important to first establish a common understanding of what it is before analyzing how existing policies may or may not be impacting adoption. NEEA defines dual-fuel measures as equipment that directly uses gas and electricity for the same end use and can do so interchangeably.

Historically, gas and electric utility system planning and customer programs like energy efficiency have been single fuel focus. The term “fuel-switching” generally describes when customers take action to switch the type of fuel they use for space and/or water heating, cooking, or other heat related processes, to a different fuel. When customers switch fuels, there are implications for the electric and gas utilities that serve them, including short-term increases or decreases to utility sales and longer-term impacts on utility resource planning decisions. These energy system impacts create the need for establishment of fuel switching governance policies. In the Northwest, each state has a different interpretation(s) of what limitations are needed for utility or program administrator customer program³influence over customer fuel choice. It's these policies that have largely set the working agreements between gas and electric utility customer programs over time.

Rather than “switching” the home from one fuel to another, dual-fuel is designed to leverage the most efficient use of both fuels to achieve energy and cost savings, emissions reductions, and consumer comfort. **Equipment that may use either fuel requires a more holistic analysis of cost, benefits and risks than current policies or guidance may consider or allow.** Since dual-fuel is different from fuel switching, policies or programs to encourage adoption of dual-fuel will need new regulatory guidance and tools if used to achieve cross-fuel priorities.

Potential Benefits, Costs and Risks of Increasing Dual-Fuel Adoption

NEEA and interviewees identified several potential benefits to increasing adoption of dual-fuel equipment that align with many state or regional goals and policies, as well as costs and risks for consideration.

Benefits include:

- Total combined energy savings
- Fewer emissions with increased utilization of increasingly decarbonized electricity balanced by direct natural gas use to avoid high emitting electric generation at peak.
- Ability to modulate between fuel types based on operating cost differentials, extreme weather events or other system constraints resulting in combined system cost reductions and reliability benefits without impacting customer end use.
- Does not exacerbate winter electric peak demand growth.
- Lower equipment cost for an air source heat pump than cold climate heat pump

³ See each state specific section for a summary of how fuel switching is treated.

- Some customers may prefer gas heat when outside temperatures are low and may be more likely to install a heat pump knowing they have gas heating if/when needed.

However, there is also potential for added costs and risks to dual-fuel adoption:

- Dual-fuel customers continue to pay monthly gas and electric customer fixed and volumetric charges which may require new rate designs that allocate costs and benefits equitably for changed customer use patterns. (e.g. low use or tiered usage rates for gas customers and winter heating rates for electric customers)
- Dual-fuel leads to reduction of sales for gas utilities and increased electricity sales, leading to the need for new tools and regulatory mechanisms to reassess how the costs, benefits and risks of dual-fuel programs are allocated to utilities and their customers.
- Where full electrification is the priority, dual-fuel may be seen as perpetuating the existence of gas equipment in homes for 15-20 years before achieving full electrification.

2. Northwest Dual-Fuel Policy Landscape

The following section explores the current landscape of relevant state legislation and regulatory rules and guidance in each of the four Northwestern States (Idaho, Montana, Oregon, Washington) and assesses how these policies impact dual-fuel adoption. Each state profile consists of an overview and summary as well as the following four sections.

Utility and Energy Landscape

Dual-fuel use cases rely upon gas and electric service supply to the customer site. It is important to understand the overlapping landscape of gas and electric utilities within each of the four states to see how state and regulatory policies apply. There exists a patchwork of utility ownership structures and geographical service territories across the Northwest. Utilities can be sorted into investor-owned utilities (IOUs) or consumer-owned (COU), to indicate a mix of business models and oversight authorities between state regulatory commissions and local boards or city officials. Consumer-owned utilities include municipalities, public utility districts, irrigation districts, and cooperatives. The majority of utilities operate as single fuel service providers and most investor-owned utilities have discontinuous service territories that overlap with multiple other gas or electric utilities. A brief overview of the utility landscape for each state illustrates the extent of the complexity in overlapping gas and electric services to shared customers.

This section also highlights the current building stock, focused on residential where dual-fuel is most common today. Figure 1, from NEEA's most recent Residential Building Stock Assessment (RBSA), shows that 43 percent of single-family households in the Northwest primarily heat with a gas furnace. In urban locations, the prevalence of gas furnaces for primary heat increases to 52 percent. At the state level, Idaho has the highest rate of gas furnaces in residential homes at 55%, followed by Montana at 49%. Note that the "All Other" segment includes heat pumps, electric baseboard, fireplaces/stoves, boilers and other primary heating.

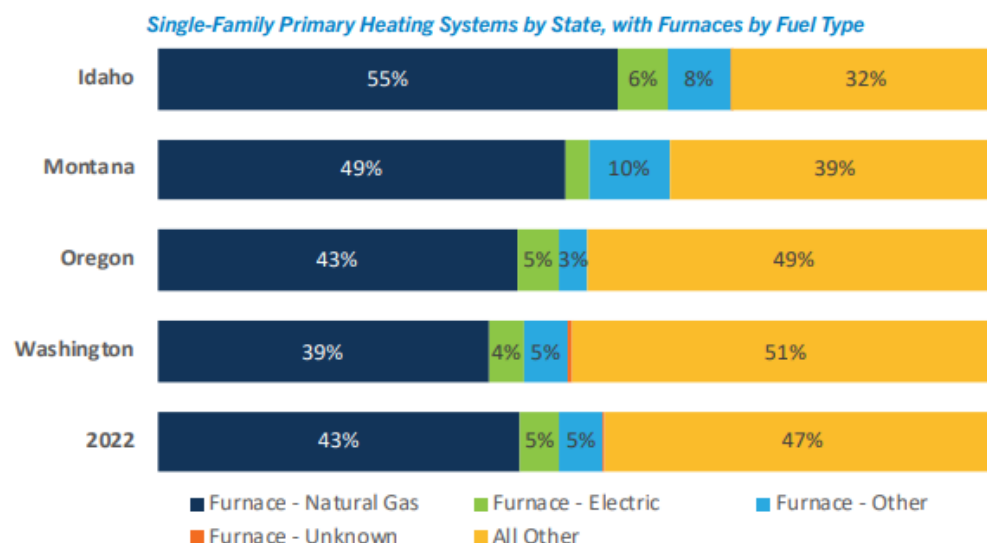


Figure 1. Single-family primary heating systems by State, NEEA RBSA (2022)⁴

Existing Dual-Fuel Programs and Pilots

A limited number of utilities are currently offering customer incentives for dual-fuel equipment. Several are running pilots or small-scale demonstrations to address specific research questions about the operations, costs, benefits, and risks of dual-fuel equipment to participating customers and across the gas and electric systems.

Related State, Local and Regulatory Policies

An inventory of current related state policies and mechanisms that impact energy efficiency, load flexibility, demand response and the adoption of dual-fuel is provided including the following:

- State climate policies and goals
- Utility long term planning requirements and eligible resources
- Statutes, rules or regulatory commission guidance related to energy efficiency, load flexibility or demand response acquisition including cost-effectiveness definitions and fuel switching considerations

In addition to state specific laws and policies, there are regulatory authorities for IOUs that are consistent across states. Utility regulatory commissions ensure that monopoly utilities are operating in the public interest, receiving fair compensation for services and are meeting an obligation to serve all customers located in their territory fairly, at the customers' request for service.

Recent Developments in Dual-Fuel

Related activities such as open regulatory proceedings, utility plans and stakeholder comments that show how energy and climate policy is quickly evolving.

Considering all these factors, the current impacts to dual-fuel adoption are then summarized.

⁴ 2022 Residential Building Stock Assessment. (2024). <https://neea.org/wp-content/uploads/2025/03/2022-Residential-Building-Stock-Assessment.pdf>

Oregon

Overview

While there are no explicit state or regulatory policies in Oregon that directly encourage customer adoption of dual-fuel equipment, several policies do create indirect support while others may be indirectly and directly discouraging adoption.

State climate policies set significant emissions reduction requirements for electric and gas utilities boosting support of robust, yet mostly single-fuel focused, energy efficiency programs. Using customer efficiency programs to influence primary heating fuel type selection has historically been discouraged throughout the state. Adoption of electric heat pumps is broadly encouraged in numerous policies, but program funding for heat pumps is largely targeted towards replacing inefficient electric resistance heating and in some cases requires removal of gas heating equipment. Building codes for new construction generally encourage adoption of electric equipment over gas heating and heat pumps over central air conditioning to discourage continuation of direct fossil fuel use. Similarly, through regulatory proceedings, gas utility funding for line extension allowances for new construction is diminishing over time. None of these policies encourage dual-fuel applications and are likely directly discouraging dual-fuel equipment.

However, regional resource adequacy and reliability concerns shown in utility planning processes are driving interest in better understanding the potential customer and system benefits of joint electric and gas planning which includes leveraging both systems for shared reliability and affordability benefits. Utilities and Energy Trust have small scale dual-fuel pilots to better understand the costs, benefits, risks, and operational and policy challenges associated with dual-fuel applications so that the potential for contributing to joint beneficial outcomes can be understood and inform decision making. The role of dual-fuel may be seen by some stakeholders as a potential hindrance to near term full electrification while PUC staff and utilities remain open to exploring potential benefits with small scale actions.

Utility and Energy Landscape

The electric power sector uses 57 percent of natural gas in Oregon. The industrial sector follows with 18 percent, residential uses 15 percent and the commercial sector uses 10 percent.⁵ NEEA's 2022 RBSA shows 43 percent of single-family households primarily heat with natural gas with the majority of those users residing in dense population centers of the state.⁶

All of the gas utilities operate as single fuel investor-owned utilities (IOUs) in the state. (Avista, Cascade Natural Gas, NW Natural). Three electric investor-owned utilities (Idaho Power⁷,

⁵ U.S. Energy Information Administration (2025, May 15). Oregon Analysis. <https://www.eia.gov/states/OR/analysis>

⁶ 2022 Residential Building Stock Assessment. (2024). <https://neea.org/wp-content/uploads/2025/03/2022-Residential-Building-Stock-Assessment.pdf>

⁷ Idaho Power recently announced its intention to sell all of its Oregon territory and that sale is currently under review.

PacifiCorp, and Portland General Electric) serve 70 percent of retail electric sales, with the remaining 30 percent served by public utilities (cooperatives and municipalities). The Oregon Public Utility Commission regulates all IOUs while operations and rates of non-IOUs are overseen locally by boards and city officials. Portland General Electric, the largest electricity utility in the state.⁸

Dual-Fuel Programs and Pilots

There is limited data available to accurately track current adoption of dual-fuel applications but the Oregon Department of Energy (ODOE) estimates that for the most common application, adding an electric heat pump for primary heating and cooling and retaining the existing gas furnace for supplementary heat, it's a small portion of total heat pump uptake.⁹ Customers that are installing dual-fuel solutions are doing so without organized utility or state programs encouraging them to do so. As described below, any available incentives are a small portion of the total cost of new equipment because they are intended to encourage the purchase decision for a more efficient heat pump and sized to cover the incremental cost from standard equipment that otherwise would have been purchased.

Utility Dual-fuel Pilots

Although there are no full scale programs encouraging dual-fuel uptake, there are several notable pilot efforts active throughout the state to learn more about the technical aspects of system performance, the customer experience with the system, and the impacts of the system operations on the larger utility gas and electric systems.

- Energy Trust of Oregon and all five of the investor-owned utilities they serve designed a dual-fuel air-source heat pump pilot in 2023. The goal of the pilot is to install 90 single-speed air source heat pumps in homes with existing recently installed high-efficiency gas furnaces and without air conditioning, throughout shared service territories. Originally, enrollment targeted low-income households but had limited uptake until the income eligibility criteria were expanded. Final installations were planned for 2025 with evaluation to follow after one heating season to answer research questions focused on utility and customer costs and benefits.

The Phase 1 evaluation from March 2026¹⁰ reported strong customer satisfaction with added cooling but recommended that future programs focus on improving economics for customers. Targeting rural areas where higher cost natural gas is displaced and adding smart controls so that customers can optimize differing time varying electric and gas rates and emissions reductions were recommendations from the evaluation. Performance results are anticipated in 2027.

⁸ PGE Quick Facts. <https://portlandgeneral.com/about/info/quick-facts>

⁹ Oregon Energy Strategy. (November 2025). Oregon Department of Energy. <https://www.oregon.gov/energy/Data-and-Reports/Documents/Oregon-Energy-Strategy.pdf>

¹⁰ Dual-Fuel Heat Pump Pilot Phase 1 Evaluation Report. (March 2026). Apex Analytics. <https://www.energytrust.org/wp-content/uploads/2026/03/Dual-Fuel-Heat-Pump-Pilot-Phase-1-Evaluation-Final-Report-w-SR.pdf>

- Cascade Natural Gas (CNG) received regulatory approval to run a 24-unit pilot in Bend, OR over twelve months to include the 2025/2026 heating ^{11[06],12[08]} CNG is seeking to answer the following research questions.
 - 1) How much can the various hybrid system combinations reduce therm usage while still balancing resiliency and reliability?
 - 2) How can the electric and natural gas systems interact to provide the greatest benefit for systemwide energy decarbonization?
 - 3) What are the impacts of hybrid systems on customer operating cost affordability and Cascade's upfront investment costs?
 - 4) Can hybrid systems be used effectively for natural gas demand side management (non-pipe alternatives)?
- NW Natural / Eugene Water and Electric Board (EWEB) - In 2024, NW Natural and EWEB implemented a pilot to install twelve ground source heat pumps with gas furnaces back up in homes where customers had previously completed weatherization upgrades.¹³

Related State, Local and Regulatory Policies

Climate Policies

There are three major state climate policies which call for significant reductions in greenhouse gas emissions broadly, across the whole state economy, and with specific emissions reductions targets for electric and natural gas utilities.

- Executive Order 20-04: Economy-wide 80% reduction in greenhouse gas emissions by 2050
- HB 2021: Clean electricity targets for Portland General Electric, Pacific Power, and covered electricity service suppliers, including 80% emissions reductions from baseline average of 2010-2012 emissions by 2030, 90 percent by 2035, 100 percent by 2040
- Climate Protection Program: 90% reduction in greenhouse gas emissions from baseline average for years 2017-2019 from natural gas, liquid fuels, and propane by 2050, applies to NW Natural, Cascade Natural Gas and Avista Corporation

Although HB2021 only applies to the largest electric IOUs in the state, EO 20-04 applies statewide.

¹¹ Schedule 810 Hybrid System Pilot. (February 2025). Cascade Natural Gas. <https://www.cngc.com/wp-content/uploads/PDFs/Rates-Tariffs/Oregon/2025/Sch-810-Hybrid-System-Pilot.pdf>

¹² Evaluating Res Dual-Fuel Heating Systems: Findings from the Field (March 2026), GTI., <https://drive.google.com/file/d/109spQ7ezlR2gFbNsqYTVRnnCkrbkD0zf/view>

¹³ Dual-Fuel Geothermal Pilot Study (2025), Illume, <https://drive.google.com/file/d/13xSWe-nOyi5SE6pNT0a8JuQ1GajDIInya/view>

In 2025, the Oregon Department of Energy (ODOE) developed the Oregon Energy Strategy (OES) through public engagement as directed by HB 3630.¹⁴ The strategy outlines potential actions to meet the state's energy policy objectives grouped by five least-cost pathways which include energy efficiency, clean energy, electrification, low-carbon fuels, and resilience. Key strategies identified from this work that have relevance to dual-fuel applications include maximizing energy efficiency, employing strategic electrification of buildings, implementing joint electric and gas system planning, and growing demand response/flex load responses. Within the Buildings Actions section, installing dual-fuel systems in some homes is specifically noted for resilience and peak reduction benefits.¹⁵

Soon after the OES was published, Governor Kotek signed Executive Order 25-29, Reducing Greenhouse Gas Emissions and Advancing Oregon's Clean Energy Future, directing multiple state agencies to design and implement workplans that support the OES to achieve the state's energy policy goals. State agencies are currently taking action to respond to these new directives and update workplans for 2027-2029. Included in EO 25-29 related to adoption of dual-fuel are actions that mirror findings from the OES.

- Advance energy efficiency across all sectors
- Support investment in clean electricity infrastructure (including demand response)
- Increase strategic electrification of vehicles and buildings
- Strengthen resilience across all levels of the energy system

Other related state policies

State Heat Pump Goal

Oregon established a statewide goal through HB 3409 to add at least 500,000 heat pumps in buildings by 2030. This goal was established based on the recognition that energy efficient heat pumps help address energy use and climate change in Oregon's built environment. A recently released report on progress toward this goal¹⁶ estimates achieving this target by mid-2033 if adoption of heat pumps continues at the current rate. Data on adoption of dual-fuel applications is limited and considered a small portion of uptake but is acknowledged as one of several pathways customers are taking to investing in heat pumps.

¹⁴ HB 3630 State Energy Strategy S.2.

<https://olis.oregonlegislature.gov/liz/2023R1/Downloads/MeasureDocument/HB3630/Enrolled>

¹⁵ Oregon Energy Strategy. (November 2025). Oregon Department of Energy.

<https://www.oregon.gov/energy/Data-and-Reports/Documents/Oregon-Energy-Strategy.pdf>

¹⁶ Biennial Oregon Heat Pump Report. (Sept 2025). Oregon Department of Energy.

<https://www.oregon.gov/energy/Data-and-Reports/Documents/2025-Biennial-Oregon-Heat-Pump-Report.pdf>

Oregon Cooling Needs Study¹⁷

Electrification through heat pump adoption is a critical step in achieving decarbonization goals while meeting the cooling needs of Oregon residents, as identified by the Oregon Cooling Needs Study.

Proposed Codes Provide a Strong Pathway for Dual-fuel

- 2025 Oregon Energy Efficiency Specialty Code (OEESC):¹⁸ The 2025 OEESC, based on ASHRAE Standard 90.1-2022, became effective on January 1, 2025. Higher efficiency targets favor electric heat pumps over conventional gas furnaces.
- 2023 Oregon Residential Specialty Code (ORSC):¹⁹ As of early 2026, new homes built in Oregon that include cooling are required to use energy-efficient heat pumps instead of traditional AC units. While gas can still be used for supplemental heating, the new codes are expected to drive the market toward electric-only heating and cooling.

Building Performance Standard²⁰

A mandatory program with energy intensity compliance limits to take effect starting in mid-2028 for the first tier of existing commercial buildings.

Other regulatory policies include:

- Energy efficiency policies: Include requirements for electric IOU utilities to acquire all cost-effective energy efficiency and how gas and electric efficiency is acquired, tracked and reported in the state, including fuel switching considerations.
- Utility planning requirements: Gas and electric investor-owned utilities are required to implement long term planning processes by filing Integrated Resource Plans (IRPs) for how they plan to reliably serve customer needs in the next twenty years while achieving state policy requirements
- Regulatory orders from two utility rate cases mandate elimination of line extension allowances for gas customers by January 1, 2027.^{21 22} A line extension allowance is a subsidy that helps connect new customers to the utility and is paid for by existing customers through rates.

Energy efficiency and demand response background

¹⁷ Oregon Cooling Needs Study. (December 2023). Oregon Department of Energy.

<https://www.oregon.gov/energy/Data-and-Reports/Pages/Cooling-Needs-Study.aspx>

¹⁸ Oregon Energy Efficiency Specialty Code 2025 Edition. (2025) Building Codes Division.

<https://www.oregon.gov/bcd/codes-stand/Documents/25oeesc.pdf>

¹⁹ 2023 Oregon Residential Specialty Code. (2023).

<https://codes.iccsafe.org/content/ORRC2023P1/chapter-11-energy-efficiency>

²⁰ Building Energy Performance Standards. <https://www.oregon.gov/energy/save-energy/Pages/BPS.aspx>

²¹ UG 461 Order No 23-384. <https://apps.puc.state.or.us/orders/2023ords/23-384.pdf>,

²² UG 490 Order No 24-359. <https://apps.puc.state.or.us/orders/2024ords/24-359.pdf>

Oregon statute requires electric investor-owned utilities (IOUs) to acquire all feasible cost-effective energy efficiency and demand response.²³ Although this statutory requirement does not apply to gas utilities, OPUC IRP guidance for long term planning does apply to gas and IOU electric utilities and requires that energy efficiency and demand response be considered as resource options in least cost and risk resource plans. Cost effective efficiency opportunities are identified through each utility IRP process, funded by utility customers, and reported on a utility specific, and therefore fuel specific, basis tracking kWh and therms saved by utility.

Energy Efficiency

Since 2002, Energy Trust of Oregon has been the non-governmental entity designated by the OPUC to be funded by PGE and Pacific Power electric utility customers to acquire cost effective efficiency on their behalf. Each of the three gas utilities in Oregon are directed by the OPUC to transfer customer funds to Energy Trust to acquire cost effective efficiency identified in their IRPs. Idaho Power delivers their own efficiency programs as do each of the public utilities with support from Bonneville Power Administration's efficiency programs.

Energy Efficiency - Cost-effectiveness

The OPUC requires Energy Trust deliver only cost-effective measures, as assessed by the Total Resource Cost (TRC) test and the Utility Cost Test (UCT) unless they have approved an exception based on established criteria listed in the funding agreement²⁴. Each test compares costs of influencing savings to the benefits. The majority of measures have single fuel impact (either gas or electric) but for those measures where there are site specific effects where both fuels are impacted (e.g. insulation in a gas heated home with air conditioning produces therm and kWh savings) measure costs and benefits are allocated to each utility according to the relative avoided cost value of the savings produced. These measures are currently defined as dual-fuel, which differs from NEEA's definition of a measure where electric and gas fuels can be used interchangeably for the same end use. In cases where Energy Trust provides energy efficiency for gas customers and electricity is served by a public utility, any interactive electricity savings from a gas measure are quantified as non-energy benefits, benefiting the cost effectiveness of the measure.

Non-IOU electric utilities and Idaho Power align with Regional Technical Forum measure analysis protocols which track gas impacts as a non-energy benefit or cost.

Demand Response

Both PGE and Pacific Power offer residential smart thermostat programs where households with ducted heat pumps are eligible for rebates when they agree to participate in summer or winter peak demand events by allowing the utility to control pre-cooling or heating in advance of

²³ ORS 757.054. https://oregon.public.law/statutes/ors_757.054

²⁴ Agreement to Direct Funding to NonGovernment Entity (2024). Energy Trust of Oregon and Public Utility Commission of Oregon. https://www.energytrust.org/wp-content/uploads/2024/12/3964_Energy-Trust_PUC-Agreement-2024_Executed.pdf

events²⁵. For example, PGE offers \$25 per year to participants for 8-9 cooling and 4-5 heating events per year lasting 1-4 hours.

NW Natural also runs a demand response program for residential and small commercial customers and considers DR to be a targeted non pipeline alternative resource option with potential to avoid distribution system pipeline infrastructure investments. The Thermostat Rewards program season is November through March with an event window from 7:00 AM through 11:00 AM. No more than 10 events of up to four hours are called within a season. Participants receive \$25 to enroll and another \$25 for participating in 50 percent or more events.²⁶

Fuel Switching Considerations

Energy Trust designs and delivers gas and electric efficiency programs by fuel source, without assessing cross-fuel efficiency potential. This approach aligns with current Commission guidance²⁷ and is documented in Board Policy²⁸ explaining that fuel choice is a consumer decision. Incentives for high efficiency equipment within the chosen fuel are not designed to encourage customers to change their fuel preference but are designed to help customers choose the high efficiency option within their chosen fuel. Energy Trust does not intend its incentives to affect fuel choice.

OAR 860-027-0310(1), defines "Conservation" as any reduction in electric power or natural gas consumption as the result of increases in efficiency of energy use, production, or distribution and can include fuel switching. The rule further specifies that cost-effective fuel switching, defined as any substitution of one type of energy or fuel, is allowed. However, implementation of fuel switching is bounded by OAR 860-027-0310(2)(a)(A) stating that a utility should not have an incentive to pursue conservation past the point at which it is no longer cost-effective and that an energy utility should not be expected to pursue a course of action that involves an identifiable and sustained loss of profits.

In 2023, Energy Trust's board, with support of the OPUC, revised their fuel-switching policy to more broadly align with Oregon's decarbonization policies by allowing for non-ratepayer funding to be used by Energy Trust to administer programs that promote decarbonization goals, including electrification. This recent revision allows for the expansion of Energy Trust's purview, making them eligible for new grants or funding that may encourage customers to electrify heating equipment. Ratepayer-funded programs, the vast majority of Energy Trust funding, will

²⁵Smart Thermostat Program. <https://portlandgeneral.com/save-money/save-money-home/smart-thermostat-program>

²⁶ Thermostat Rewards. <https://www.nwnatural.com/thermostatrewards>

²⁷ UM 1565 Order No 13-104. <https://apps.puc.state.or.us/edockets/orders.asp?OrderNumber=13-104>

²⁸ Aligning with Oregon's Decarbonization Policies. (2023) Energy Trust of Oregon. <https://www.energytrust.org/documents/fuel-switching-policy-4-03-000-p/>

continue to support customer choice and encourage use of high efficiency equipment for the fuel customers choose.²⁹

BPA electric efficiency programs, for the balance of electric customers not served by IOUs, do not allow dual-fuel offers and do not allow fuel switching with their program designs (BPA manual, eligibility regulations), but BPA defines fuel switching as “...moving from electric to nonelectric”, not inclusive of moving from gas, propane or oil to electric.³⁰ Public utilities are not restricted in how they choose to design and fund their own customer programs and may choose to work with gas utilities on cross-fuel options in Oregon.

Recent Developments in Dual-Fuel

Updated Commission Guidance to Energy Trust

In late 2025, the Oregon Public Utility Commission (PUC) adopted Staff's recommendations on Energy Trust's 2026-2030 Multiyear Plan, directing Energy Trust to 1) further develop data collection and reporting for electrification and dual-fuel activities and 2) explore and implement least-regrets electrification and dual-fuel program strategies.³¹

Staff's memo noted these recommendations were driven by interest in learning more about the interactions of gas and electric use as current market trends show an increasing number of customers participating in Energy Trust's extended capacity heat pump incentive to replace gas furnaces. In these instances, the incentive design assumes 1,778 kWh of electric savings, calculated as the difference in annual average household use between an efficient unit compared to a baseline efficiency electric unit, to help lower the incremental cost between the two units. This calculation reflects current regulatory guidance to Energy Trust to not use incentives to influence a customer's fuel choice but rather to encourage customers to purchase the more efficient unit once their fuel decision has been made. The billing analysis for this same situation, however, reflects a large reduction in gas furnace usage of 470 therms and an increase of 4,236 kWh with the addition of the heat pump compared to existing conditions.

Data to better understand the actual impact to both energy systems from customers choosing to change primary heating fuels is currently lacking. Without better understanding of total system impacts, there may be lost opportunity activities that lead to benefits for gas and electric utilities and provide utility and customer value, including the potential for attaching heat pumps to gas furnaces with Climate Protection Program compliance value and electric capacity value. Energy Trust will be working with PUC Staff, utilities and other stakeholders to implement these recommended actions.

NW Natural IRP Action Plan and Electrification Study

²⁹ Aligning with Oregon's Decarbonization Policies. (2023) Energy Trust of Oregon.

<https://www.energytrust.org/wp-content/uploads/2016/11/4.03.000.pdf>

³⁰ Energy Efficiency Implementation Manual 2026-2027. (2025) Bonneville Power Administration.

<https://www.bpa.gov/-/media/Aep/energy-efficiency/document-library/implementation-manual-2026-2027-final.pdf>

³¹ ETO1 Staff Report. (Oct 2025). <https://edocs.puc.state.or.us/efdocs/HAU/eto1hau340588027.pdf>

NW Natural filed their 2025 Integrated Resource Plan³² with Oregon and Washington regulators in August, 2025 for Commission consideration of acknowledgement in April 2026. The plan includes an electrification study and proposed near-term action plan actions to develop hybrid heating systems and long-term strategies.

ICF's Electrification Study³³, commissioned by NW Natural, concluded that electrification of NW Natural's current gas end-use loads will substantially increase peak electric system demands by several gigawatts. The study includes caveats that the costs and feasibility of electrification are highly uncertain and more joint analysis and planning with electric utilities is needed. The costs and risks of an all-electric scenario were found to be higher than a Hybrid scenario that resulted in an 80 percent reduction in annual throughput by leveraging the gas utilities' infrastructure to meet winter space heating peak demand and avoid building new electric infrastructure. The study conclusions noted the complementary strengths and weaknesses of gas and electric systems and opportunity to further explore joint system gas and electric planning to develop coordinated solutions to shared challenges.

NW Natural integrated the study results into the Action Plan actions by adding development of a hybrid heating pilot and program. The proposed actions are intended to reduce gas emissions while maintaining reliability and affordability and to support gas and electric joint system planning to achieve decarbonization goals affordably and reliably.³⁴

PUC Staff's Recommendations, adopted by the Commission in April 2026³⁵, include a request that NW Natural "Work with Energy Trust and electric utilities to develop a hybrid heating work plan that encourages customers to install heat pumps instead of central air conditioning by January 2027."

Opposition to Dual-Fuel Programs and Gas in New Construction

While regulatory and utility staff are proposing steps to explore the benefits and costs of dual-fuel applications, some stakeholders have expressed their concerns about doing so. In recent comments on the OPUC's Docket No. UM 2417, Identifying Priorities in Implementation of Executive Orders, joint advocates recommended that the Commission "avoid policies encouraging dual-fuel systems or unnecessary gas infrastructure expansion. Every fossil fuel appliance sold today represents 15-20 years of delayed electrification."³⁶ Electrification

³² LC 86 – NW Natural's 2025 Integrated Resource Plan. (2025). NW Natural Gas Company. <https://edocs.puc.state.or.us/efdocs/HAA/lc86haa338770056.pdf>

³³ See Chapter 10, LC 86 NW Natural 2025 Integrated Resource Plan. (2025) NW Natural Gas Company <https://edocs.puc.state.or.us/efdocs/HAA/lc86haa338770056.pdf>

³⁴ Ibid

³⁵ Order No 26-150. Disposition: 2025 Integrated Resource Plan Acknowledged with Conditions. April 30, 2026. <https://apps.puc.state.or.us/orders/2026ords/26-150.pdf>

³⁶ UM 2417 - Joint Comments on Identifying Priorities in Implementation of Executive Orders 25-25 and 25-29. Submitted by Climate Solutions, Green Energy Institute at Lewis & Clark Law School, Oregon Solar + Storage Industries Association, Community Energy Project, Sierra Club, NW Energy Coalition, Oregon Just Transition Alliance, Mobilizing Climate Action Together, Oregon Environmental Council, Oregon League of Conservation Voters, ZERO Coalition, Verde, Electrify Now, The Environmental Center, and Sustainable Northwest.

advocates contend that delaying electrification may contribute to the risk of stranded assets for customers who cannot afford to switch fuels on their own. These general concerns continue to be raised in related regulatory proceedings.

Without explicit dual-fuel proposals before the Commission, it's challenging at this time for all stakeholders to be able to assess what the impact of a dual-fuel program might be on the future energy system. Oregon's current and future electricity generation mix, particularly at peak times, impacts whether electrification of end uses leads to decarbonization of the overall energy system, and factors into stakeholder positions on new construction electrification. These comments raise important concerns and considerations to be factored into decision making related to the role of dual-fuel and need to understand tradeoffs with full electrification options.

The City of Bend is considering steps to join Ashland, OR in charging for new gas appliances in new construction.³⁷ Local governments continue to seek ways in which they can reduce reliance on fossil fuels in their communities.

Summary and Assessment

Oregon has established strong climate goals to reduce emissions economy wide. These goals bolster existing energy system policies that prioritize energy efficiency and demand response and require least cost and risk planning for an affordable and reliable energy system. Increasing adoption of dual-fuel systems would seem to produce outcomes that align well with these priorities, yet adoption is limited, and any programmatic efforts are still in pilot stages. There are several likely explanations.

Policies reflect single-fuel focus in energy planning

To date, there has been limited, if any, consideration of cross-fuel impacts in long term resource planning. There are no combined fuel utilities in the state, only single fuel utilities without business case motivation nor directives to coordinate with each other. This lack of connectivity between gas and electric system planning has led to policies and regulatory guidance that is also single fuel focus. Although energy efficiency policy and outcomes are robust for both fuels, traditional tools to identify energy efficiency and flex resource potential are contained to single fuel applications and are funded by customers of that impacted utility. For example, Conservation Potential Assessments or Resource Assessment Studies to identify the technical, achievable and economic potential for efficiency and demand response resources currently do not consider the potential for dual-fuel measures because they are focused on traditional single fuel opportunities that fit current cost benefit analysis tests and customer eligibility restrictions established in current policies.

Customer programs are designed within fuel switching guidance constraints, whether from the PUC or through BPA measure eligibility requirements, and have resulted in heat pump offers

³⁷ Bend could become 2nd city in Oregon to charge for gas appliances in new homes.
<https://www.opb.org/article/2026/04/10/bend-oregon-charge-gas-appliances-new-homes/>

that are only truly targeted to homes without existing gas heating equipment. Customer choice programs in Oregon do not currently allow for the adoption of dual-fuel solutions because of current incentive structure and requirements. The current Energy Trust of Oregon program structure only provides heat pump incentives if an existing gas furnace is removed. The customer choice approach also, by definition, does not serve to raise customer awareness of the many benefits of adding an electric heat pump where gas heating exists. Without broad customer program messaging, the majority of customers have most likely not been exposed to even considering adding a heat pump.

New construction is most impacted by current policies which do not favor gas equipment installations. Recent code updates show great preference for heat pumps for residential and commercial buildings, influencing developer choices, effectively making it cost more to add gas equipment unless in dual-fuel applications. Diminishing gas utility line extension allowances are also making it more costly for adding gas to new construction than in the past.

To achieve state climate goals, long term planning for the gas utilities has been particularly contentious as gas utilities and some stakeholders see an ongoing role for providing alternative low carbon fuels with reduced sales through efficiency and some level of electrification of end uses but retention of customer numbers, while other stakeholders see only a long-term future of full electrification.

Many of these previous policy barriers to even considering dual-fuel are rapidly evolving and may soon lead to greater attention on dual-fuel opportunities and new tools and guidance to bridge current gaps between gas and electric systems.

To start, the OES names dual-fuel as having a potential role to leverage in combined system reliability, resilience and affordability. Dual-fuel applications may also fit within the OES recommendation for strategic electrification, providing clear signals that the resource should be evaluated for a potential role. Joint planning between electric and gas utilities is also evolving at the PUC with advancement anticipated in 2027 and is also a recommended action from the OES.

The PUC, through recommendations in planning proceedings to NW Natural and Energy Trust, is asking to see a dual-fuel measure work plan within a year, starting with the least regrets situation of promoting installations of efficient heat pumps instead of air conditioner replacements in existing homes with gas furnaces. When developing the measure, a new approach to evaluating the cost and benefits within a cost-effectiveness analysis will be needed as will an approach to allocating the programmatic and incentive costs to gas and/or electric customers.

The most pressing gaps to advancing dual-fuel reside in addressing the lack of data and analysis needed to quantify and clearly communicate the value proposition. Stakeholders have questions about the impacts of growing dual-fuel and how to ensure the role of dual-fuel aligns with state goals and is in the public interest.

At present most information about dual-fuel describes potential net benefits, but is not nested within the context of current planning decision making discussions so it's hard to know how large the potential impact may be and what the short and long term costs of investing in dual-fuel look like in comparison to other options. Policy and decision makers need more information describing the details of a specific program design of dual-fuel with the short- and long-term costs and benefits of that design made explicit to be able to evaluate what role makes most sense for dual-fuel in Oregon.

Washington

Overview

While there are no explicit state or regulatory policies in Washington that directly encourage customer adoption of dual-fuel equipment, like Oregon, several policies do create indirect support while others may be indirectly discouraging adoption.

Washington climate policies call for significant economy-wide emissions reductions. While just over one third of electric utility sales are overseen by the WUTC, all retail gas service is through IOUs with UTC oversight. The largest IOU is also a combined fuel utility and will be the first in the region to file an Integrated System Plan (ISP) in 2027, covering both electric and gas planning needs in one proceeding. In advance of this filing, PSE offers hybrid heating (dual-fuel) incentives to combined fuel customers with plans to discontinue the offers in 2030 per legislation. Dual-fuel is currently being tested as a transition strategy to full electrification through PSE's implementation of ISP.

Utility and Energy Landscape

There are four investor-owned gas companies regulated by the Washington Utilities and Transportation Commission (UTC): Avista Corporation, Puget Sound Energy, Cascade Natural Gas Corporation, and NW Natural. In addition, there are municipal gas utilities, Ellensburg and Enumclaw, which are overseen locally by boards and operate outside of the jurisdiction of the UTC.

Electric utilities include investor-owned utilities and consumer-owned utilities. There are three investor-owned electric utilities under the regulatory purview of the UTC: Avista Corporation, PacifiCorp, and Puget Sound Energy (PSE) meet 37% of state electric load.³⁸ Consumer-owned utilities cover the majority of electric load and include municipal electric utilities, public utility districts, irrigation districts, cooperatives, and certain mutual corporations and associations.

PSE is the largest utility in the state, delivering electricity to approximately 1.2 million customers, and providing gas service to 850,000 customers. Although they operate as a combined fuel utility, a significant portion of customers receive just electricity or gas service, depending upon location.³⁹

Approximately 39 percent of single-family households primarily heat with gas⁴⁰. About 80 percent of Washington's electricity is supplied by renewable and clean energy sources, including hydropower. The remaining need is supplied by natural gas plants and out of state

³⁸Demystifying the Northwest Utility Landscape (2025) Clean Energy Transition Institute. <https://www.cleanenergytransition.org/post/demystifying-the-northwest-utility-landscape>

³⁹ Puget Sound Energy Service Area. https://www.pse.com/-/media/PDFs/1213_ServiceAreaMap.pdf?rev=99aa60ed7e6a45b9bfec8d1fa4032f92&sc_lang=en&modified=20250912205948

⁴⁰ <https://neea.org/wp-content/uploads/2025/03/2022-Residential-Building-Stock-Assessment.pdf>

coal or unspecified resources.⁴¹ Although the last coal plant in the state was scheduled to end operations by the end of 2025, the US DOE issued an emergency order in March 2026 for the Transalta 730 MW plant to remain operational through at least June 2026.⁴²

Dual-Fuel Programs and Pilots

Similar to Oregon, there is limited data available to accurately track current adoption of dual-fuel applications in Washington. Those that are installing are likely doing so without organized utility support, if outside of PSE territory.

Utility Dual-Fuel Pilots

There are at least two notable examples of pilots to better understand dual-fuel applications. Both examples are relatively new and continue to learn more about the technical aspects of system performance, the customer experience with the system, and the impacts of the system operations on gas and electric systems.

- NEEA
This effort is a demonstration to test system performance of dual-fuel systems in thirteen Clark County, WA homes. The systems consist of an electric air source heat pump, hydronic air handler, and tankless water heater. The system can operate the gas hydronic coil and heat pump simultaneously resulting in greater efficiency and an opportunity to modulate between electric and gas heating modes. The demonstration design includes monitoring and reporting on equipment performance, market readiness, emissions reductions, customer comfort and satisfaction and energy use compared to conventional dual-fuel systems without modulating controls. Demand response potential is also explored in this pilot as the system can receive remote signals to the controller. Operating scenario events that were tested included winter peaks, wholesale electricity price excursions, GHG reduction and seasonal hydro events. Results will inform future opportunities and modifications needed to scale as well as an evaluation of capacity payment structures and enabling policy development or agreements.

Clark County PUD was motivated to engage with NEEA and NW Natural in this pilot because of the potential to serve load growth by leveraging the gas system capacity as a bridge to a decarbonized future. The pilot will test the ability to reduce site emissions while not increasing electric peak demand. Both utilities are also seeking a positive customer experience as no behavior changes or impacts to customer comfort are required for the anticipated energy efficiency, emissions and modulation benefits.

⁴¹ <https://www.commerce.wa.gov/energy-policy/electricity-policy/fuel-mix-disclosure/>

⁴² Secretary of Energy Issues Emergency Order Requiring Washington State Plant to Remain Open. (March 2026). American Public Power Association. <https://www.publicpower.org/periodical/article/secretary-energy-issues-emergency-order-requiring-washington-state-plant-remain-available>

NW Natural also sees potential for future technology pilots for collaboration with other electric utilities in overlapping service territory on constructive policy and incentives. Other areas of interest include dual-fuel air source heat pump/furnace combinations, dual-fuel ground source heat pump / furnace combinations and thermal energy networks.

- **Puget Sound Energy**

In 2023, PSE ran a heat pump rebate pilot to test energy savings and peak demand changes associated with three customer actions;

- Electric forced air furnaces (EFAF) to cold climate heat pumps (CCHP)
- Gas forced air furnaces (GFAF) to dual-fuel hybrid heat pumps (Hybrid HP)
- GFAF to CCHP

The first two measures were funded through PSE's conservation portfolio as pilots. The GFAF to CCHP systems were incentivized through PSE's Settlement Targeted Electrification Pilot (STEP) program, mandated by a 2022 General Rate Case Settlement Stipulation and Agreement⁴³.

PSE developed the pilot offerings to better understand the value of these heat pump technologies to decarbonization goals and to inform PSE's strategy to achieve these goals. Dual-fuel hybrid heat pumps were found to mitigate the risk of straining the electric grid during winter cold periods because they could provide electric heating in all but the coldest times of day (i.e., below 35 degrees F). CCHPs also mitigate peak load compared to standard ASHPs by minimizing or ⁴⁴ the use of electric resistance heat.⁴⁵

After a favorable process and impact evaluation with positive customer experience and positive total savings, PSE continues to offer ⁴⁶ and electrification measures. The gas furnace to hybrid heat pump conversion incentive of \$1,500 (or \$2,400 for income qualified customers) is only available to customers who receive electricity and natural gas from PSE and live in single family homes^[50]. The next Single Family Retrofit program evaluation will be after the 2026-2027 biennium, at which point PSE plans to re-evaluate the HHP measure. According to recent legislation, customer programs can no longer promote measures with gas equipment after 2030.

Related State, Local and Regulatory Policies

There are numerous state climate and energy policies in Washington which impact electric and gas utility planning, operations and customer adoption of dual-fuel applications.

⁴³ UTC dockets UE-220066/UG-220067 and UG-210918

⁴⁵ Dual-fuel and Cold Climate Heat Pump Pilot Programs Impact and Process Evaluation (2024). DNV Energy. <https://apiproxy.utc.wa.gov/cases/GetDocument?docID=51&year=2023&docketNumber=230893>

⁴⁶ Hybrid Heat Pump. PSE. <https://www.pse.com/en/rebates/heating/hybrid-heat-pump>

- Clean Energy Transformation Act⁴⁷ (CETA), passed in 2019, requires all electricity in Washington state to be 100% zero-emission by 2045. Near term requirements include electric utilities to eliminate coal-fired resources by December 31, 2025, and to make all retail sales of electricity GHG neutral by January 1, 2030. Although only applicable to electric utilities, the stated vision of CETA was generally to “allow Washington residents and businesses to power their buildings, homes, vehicles and appliances with carbon-free resources such as wind and solar. Reducing fossil-fuel use will improve the health of communities, grow the economy, create family-sustaining jobs, and enable the state to achieve its long-term climate goals.”

RCW 19.405.060 requires electric utilities to create four-year plans to meet CETA requirements. Consumer-owned utilities must use the template provided by Commerce to submit their Clean Energy Implementation Plan (CEIP) (WAC 194-40-050). Investor-owned utilities submit Integrated Resource Plans and CEIPs to the WUTC, demonstrating compliance with CETA.

- Clean Buildings Performance Standards⁴⁸ (CBPS) – First passed in 2019 and then revised for 2023, requires existing large and multi-family buildings to lower fossil fuel consumption and emissions. The second largest source of climate pollution in Washington is building construction, the type of energy used to heat or power the building, and from wasted energy from inefficient building shells. CBPS requires benchmarking of all energy sources for buildings over 20,000 SF and sets energy use intensity targets which often make it challenging to meet compliance without reducing or eliminating fossil fuel use.
- 2021 Energy code updates⁴⁹ – Washington’s building codes were recently updated to further improve energy efficiency in new homes and commercial buildings. The new codes effectively encourage builders to design non-fossil sourced homes in new construction with the “Heat Pump Priority”: Homes using heat pumps for primary heating receive up to 3 energy equalization credits, making it easier to meet requirements compared to gas furnaces.⁵⁰ As of July 1, 2023, new commercial buildings are largely required to use electric heat pumps for space heating rather than gas, supporting the overall goal of reducing building emissions. The code aligns with the CBPS to set strict energy performance targets that lead to reduced use of gas.

⁴⁷ SB 5116 <http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5116-S2.SL.pdf?q=20210822161309>

⁴⁸ Clean Buildings Performance Standard. <https://www.commerce.wa.gov/cbps/>

⁴⁹ 2021 Washington State Energy Codes <https://sbcc.wa.gov/state-codes-regulations-guidelines/state-building-code/energy-code>

⁵⁰ Washington State Building Energy Codes. <https://www.energycodes.gov/status/states/washington>

- The Climate Commitment Act ⁵¹(CCA), passed in 2021, is a cap and invest emissions trading program which sets declining emissions limits for large emitters, including gas and electric utilities, through 2050. The policy aims to reduce economy-wide emissions to 45 percent below 1990 levels by 2030, 70% by 2040 and 95% below by 2050.

Electric and gas utilities subject to the CCA receive a no-cost allowance allocation to mitigate the cost burden of the Program and protect customers. Utilities must use no-cost allowances for compliance, save them for the future or use auction sale proceeds to benefit utility customers with priority to low-income customers.

The number of no-cost allowances a gas utility receives is based on its greenhouse gas emissions from 2015-2019 and declines each year proportional to the total Cap-and-Invest Program annual allowance budgets.

- Thermal Energy Networks (HB 2131), passed in 2024, promotes establishment of thermal energy networks (TENs). TENs are defined as “all real estate, fixtures, and property involved in a utility-scale project to supply thermal energy, which is piped noncombustible fluids that transfer heat into and out of buildings for the purpose of eliminating any on-site greenhouse gas emissions from heating and cooling, improving energy efficiency, or both. Thermal energy networks may not rely on combustion to create thermal energy, except for emergency backup purposes.” This legislation authorized gas and electric companies to own, operate and manage a TEN, pending UTC project approval, with costs to be recovered from ratepayers when approved. Importantly, the gas utility obligation to serve gas customers that have access to a TEN was modified to allow service of thermal energy through a TEN.
- Large Combination Utilities Decarbonization Act (HB 1589), passed in 2024, and proposed by PSE, provides the large combined fuel utility in the state with programs and regulatory tools for a managed transition from gas to full electrification of homes and businesses. The bill establishes a long-term pathway starting with requiring integration of PSE’s electric and gas long term plans to support reliable, affordable and decarbonized energy at the lowest reasonable cost. There are a number of regulatory tools that allow for greater certainty of cost recovery when replacing gas with new clean energy projects and for accelerated depreciation of gas assets by 2050. Energy efficiency, demand response and targeted electrification program requirements are stronger with new incentives for low-income customer electrification. PSE’s dual-fuel and electrification program measures are linked to this legislation and will provide insights for transitioning customers effectively and affordably with a managed plan in place.

⁵¹ Chapter 70A.65 RCW. <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.65>

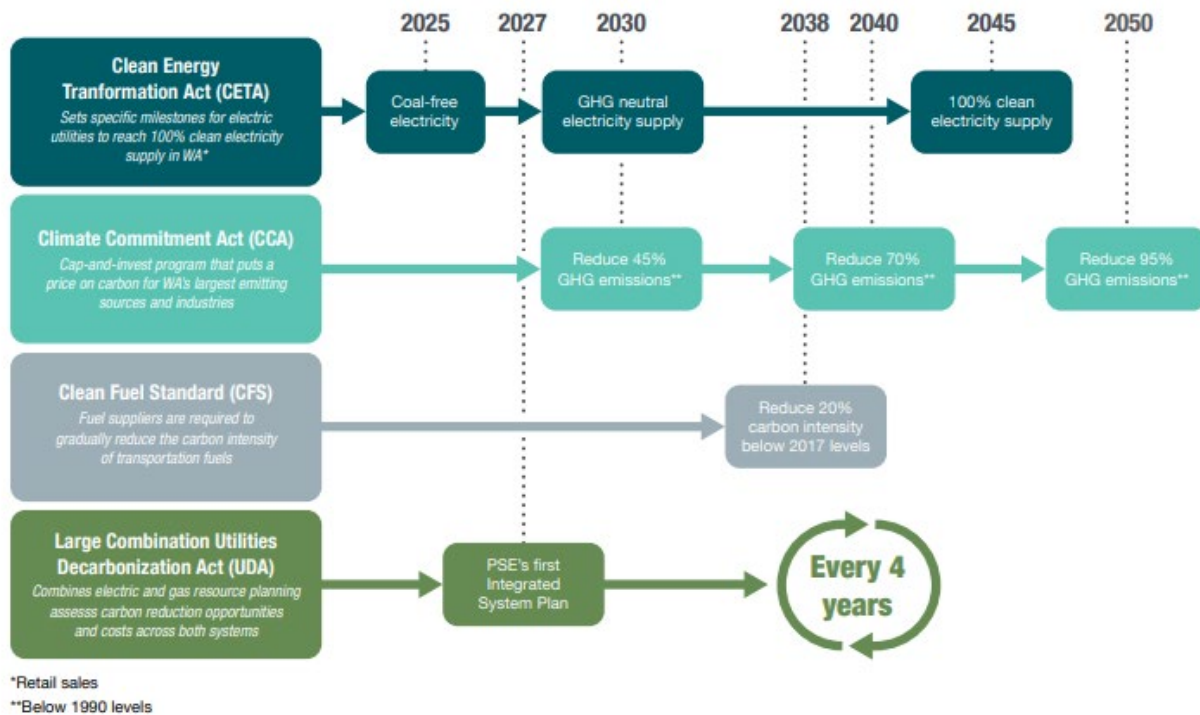


Figure 2. Policy graphic from PSE's 2025 Climate Action Update⁵²

Other potentially relevant state and regulatory policies include:

- All investor-owned and consumer-owned electric utilities in the state with more than 25,000 customers must develop integrated resource plans. An integrated resource plan must include the mix of supply and demand side resources that will meet current and projected needs at the lowest reasonable cost to the utility and its ratepayers while achieving state policy requirements.
- Gas investor-owned utilities are also required to develop and file Integrated Resource Plans (IRPs) with the WUTC demonstrating how they plan to reliably serve customer needs in the next twenty years while achieving state policy requirements.
- Adding new gas customers is discouraged through elimination of gas line extension allowances and with adoption of new buildings energy code with requirements only high efficiency heat pumps can meet. As of January 1, 2025, PSE fully eliminated gas line extension allowances. Cascade Natural Gas will eliminate their line extension allowance by March 1, 2027 as part of a rate case settlement agreement. NW Natural still has a line extension allowance for WA customers.

Energy efficiency and demand response background

⁵² 2025 Climate Action Update. (2025). Puget Sound Energy. https://www.pse.com/-/media/PDFs/Sustainability/PSE_2025ClimateActionUpdate.pdf?rev=e02801b232d64c88beb27f4ac5df1686&modified=20250729205815&hash=CF2BEAE6F97748FCB663BBD353748B0E

The Energy Independence Act⁵³ requires electric utilities to pursue all available conservation that is cost-effective, reliable and feasible. Conservation is defined in broad terms of reduced energy consumption, production or distribution, not just electricity. The UTC's integrated resource planning rules include conservation as a resource and require both electric and natural gas companies to meet customer needs with the right mix of energy supply and cost-effective conservation resources.

Utilities provide customer incentives for cost-effective conservation with savings goals and budgets overseen by the UTC for IOUs or local boards for COUs with results available on the WA State Energy Office website. Efficiency goals are established, tracked and funded, by fuel, with electric customers only contributing to electricity savings and gas customers only funding gas efficiency programs. Statewide utility efficiency programs are nationally recognized for their achievements.

Energy Efficiency - Cost effectiveness

The WUTC requires that energy efficiency is cost effective at the portfolio level, measured by the TRC test as modified by the Power Council. Each program is designed to be cost-effective as measured by the test and include quantifiable non-energy impacts and the 10% conservations benefit and a risk adder consistent with the Council's approach.

IOUs must also provide portfolio calculations of the Program Administrator Cost test (also called the Utility Cost test), Ratepayer Impact Measure test, and Participant Cost test described in the National Action Plan for Energy Efficiency's study "Understanding Cost-effectiveness of Energy Efficiency Programs."⁵⁴

Like Oregon, dual-fuel conservation measures have historically been defined as those measures that might increase or decrease use of the non-primary fuel. For example, additional costs and savings for operation and maintenance from installing energy efficient equipment are counted as an additional customer cost or benefit in the TRC. The cost of natural gas would be added to the total utility cost when calculating the cost effectiveness of measures that might increase natural gas consumption while saving electricity.

Non-IOU electric utilities align with BPA measure analysis protocols which track gas impacts as a non-energy benefit or cost.

Fuel Switching Considerations

State statute calls out one situation where fuel switching may not be supported by counties, cities, town governments and municipal utilities with public funds. Article 8, Section 10 of the Washington State Constitution prohibits financing to be used for any purposes that

⁵³ Chapter 19.285 RCW <http://apps.leg.wa.gov/RCW/default.aspx?cite=19.285&full=true>

⁵⁴ Understanding Cost Effectiveness of Energy Efficiency Programs.(2008) U.S. EPA https://19january2017snapshot.epa.gov/sites/production/files/2015-08/documents/understanding_cost-effectiveness_of_energy_efficiency_programs_best_practices_technical_methods_and_emerging_issues_for_policy-makers.pdf

result⁵⁵related to county, city and town governments and municipal utilities. Revised Code of Washington (RCW) 35.92.360^[OBJ] further clarifies that this prohibition pertains specifically to “substitution of one commercial energy supplier for another commercial energy supplier”. The NEEA/Clark County PUD/NW Natural demonstration does not encourage fuel switching but leverages the most efficient use of both fuels and is not triggering this fuel switching concern for the PUD.

These restrictions do not apply to co-ops and investor-owned utilities, only to counties, cities, town governments and municipal utilities, but fuel switching programs are still rare among these entities. Historically, electric to natural gas fuel conversion programs have been permitted to supplant use of inefficient electric resistance heating, which a 2018 UTC decision clarified that electric ratepayers should not subsidize gas conversions. Gas customers were then obligated⁵⁶costs.^[OBJ] Just within the past 5-7 years, the efficiency and emissions reduction benefits of heat pumps have been strongly promoted by electric utilities to customers with inefficient electric heating as heat pump technologies have improved. Electric utilities may not be motivated yet to add to winter peak load constraints by attempting to encourage primary gas heating customers to add an electric heat pump. The primary focus by electric utilities has been promoting heat pumps to replace electric resistance for winter peak reduction and customer savings benefits.

Other than PSE’s hybrid heating measure for combined fuel customers, electric efficiency programs (IOU or non-IOU) do not allow dual-fuel offers and do not encourage fuel switching with their program designs. The policy framework, besides the one exception case mentioned previously, does not explicitly limit fuel switching, but historically, before efficient heat pumps were widely available, gas was the more efficient heating option. Co-ops are not restricted in how they choose to design and fund their own customer programs and may choose to work with gas utilities on cross-fuel options.

Demand Response

All electric IOUs use demand response programs as flex load to add reliability to their systems. In 2025, PSE set a record of over 80 MW peak load reduction through their demand response programs during a February cold period. The most common demand response program is smart thermostat control, impacting gas furnaces as well as heat pump operations. Eligibility requirements are limited to households with heat pumps, electric forced air furnaces, and gas furnaces.

Recent Developments in Dual-Fuel

Utility Integrated Resource Plans

⁵⁵ <https://app.leg.wa.gov/rcw/default.aspx?cite=35.92.360>

⁵⁶ Docket No 170485 <https://apiproxy.utc.wa.gov/cases/GetDocument?docID=1814&year=2017&docketNumber=170485>

The Avista 2025 Gas IRP for Washington, Idaho and Oregon included a Hybrid Heating Scenario as well as an Electrification Scenario.⁵⁷ The Hybrid Heating Scenario assumes electric heat pumps were added to existing natural gas furnaces over time with a set point for gas space heat below 38° F. By 2045 the annual energy forecast is 13% lower than the base forecast. This scenario results in lower demand overall for Oregon and Washington without a total loss of these customers as was the case with the electrification sensitivity. The Hybrid scenario was the second most costly, after the electrification scenario, due to the addition costs of electric infrastructure needed to meet increased electric load. Avista did caveat the analysis to note that the costs assume base rates would not be spread by some other instrument such as accelerated depreciation of the assets in the near term to pay down costs more quickly or some other combination like spreading these rates through power costs.

The NW Natural 2025 IRP for OR and WA, as described in the Oregon section, included an electrification study and action items specific to testing hybrid heating further.⁵⁸ Specific to WA, the ICF study noted that:

“Many of the same challenges impacting electric sector evolution over the coming 25 years are also present in Washington – rising electric loads even absent electrification of natural gas end uses, clean energy targets that require the expansion of generating resources to achieve a 100% non-emitting supply by 2045, and limited capacity to interconnect additional resources at scale to facilitate policy achievement without significant new investment into transmission capacity. While electrification impacts in Washington don’t reach the scale of Oregon given the smaller number of NW Natural customers in the state, the relative impact of building electrification on peak demand is even larger, as Washington’s utilities are primarily peaking in winter to begin with. As such, and with colder temperatures, any electrification of natural gas end-uses will directly increase peak demand, rather than winter peak demand catching up with higher summer peaks before having an impact on annual peak demand.”

PSE filed a work plan for the 2027 Integrated System Plan (ISP) with the UTC as Docket U-240841 in compliance with WAC 480-96-080 (4)(c). The ISP will provide a 20-plus year view of PSE’s gas and electric energy resource needs developed through a planning process that evaluates a range of potential future outcomes. This ISP will be the first major joint planning process in the region. PSE plans to file its 2027 ISP on or before April 1, 2027.

Other relevant factors to dual-fuel adoption

- All utility IRPs are planning to achieve state climate goals while maintaining system reliability. To do so, they are signaling an increased urgency for solutions to achieve grid reliability affordably while lowering emissions.

⁵⁷ 2025 Natural Gas Integrated Resource Plan. https://www.myavista.com/-/media/myavista/content-documents/about-us/our-company/irp-documents/natural-gas-irp-documents/2025/2025-natural-gas-irp-w-cover.pdf?la=en&sc_lang=en

⁵⁸ LC 86 NW Natural 2025 Integrated Resource Plan. <https://edocs.puc.state.or.us/efdocs/HAA/lc86haa338770056.pdf>

- PSE's 2025 Climate Action Update⁵⁹ describes how their energy system is reliant on natural gas distribution to meet winter peak demand. "in January 2024, our region experienced two severe weather events: first, a powerful bomb cyclone (Jan. 8–10, 2024) that brought Seattle's first blizzard warning in over 11 years, followed by an arctic air mass during Martin Luther King weekend (Jan. 14–18, 2024) that broke numerous temperature records in the Northwest. During these extreme weather events, our natural gas distribution system was absolutely crucial in meeting heating demand across our service territory, particularly as power prices were spiking. Additionally, until electricity used to heat homes and businesses is generated by non-emitting resources, it is far more efficient and results in lower carbon emissions to use natural gas at the point of application (i.e., at the residence or commercial building)."

Summary and Assessment

Washington's multi-layered, robust climate policies uphold the state's vision to move away from fossil fuel use. While the strong support for cost effective energy efficiency to reduce emissions aligns with benefits of dual-fuel systems, expanding dual-fuel measures beyond current offers may be tempered by other policy factors.

Until the recent passing of the Large Utility Decarbonization legislation, similar to Oregon and many other states, there has been limited consideration of cross-fuel (natural gas and electricity) impacts in long term resource planning. Climate policies assign emission reductions accountability by emitter but lack a systems approach to optimizing solutions for costs per emission reduction across residents and businesses. The lack of required coordination between gas and electric for combined and for single fuel utilities has led to continued single fuel optimization for costs and emissions reductions. Models show that electrifying fossil fuel end uses is an effective pathway for the state to meet climate goals but supporting policies and guidance for how to electrify are in the early stages of development.

As PSE begins to implement Integrated System Planning, they will be on the leading edge of this work along with the WUTC and stakeholders, working through the details of costs, benefits and risks to decarbonization and creating new tools to guide public interest decision making as they consider impacts to both systems at once. Current dual-fuel measures are due to expire at the end of 2030 per language in HB 1589 but some interviewees were less certain about legal implications for dual-fuel systems that provide benefits towards decarbonization and efficiency. The impact of dual-fuel measures will be evaluated and considered by the company, regulators and stakeholders within ISP and next round program development.

⁵⁹ 2025 Climate Action Update (2025). https://www.pse.com/-/media/PDFs/Sustainability/PSE_2025ClimateActionUpdate.pdf?rev=e02801b232d64c88beb27f4ac5df1686&modified=20250729205815&hash=CF2BEAE6F97748FCB663BBD353748B0E

Strong building energy codes make clear the policy intention of the state to eliminate fossil fuels in new construction, likely limiting dual-fuel considerations to only existing buildings with existing gas. The elimination of many of the gas line extension allowances through WUTC proceedings furthers the economic case for electrification of new construction.

Less than 40 percent of single-family households use gas furnaces for primary heat, the lowest percentage of the four Northwest states yet those with gas furnaces are more likely to reside in population centers where more contractors may be available to install dual-fuel.

Besides PSE's ISP, there are several other recent actions to explore the characteristics of dual-fuel to inform potential future program proposals.

- Gas and electric utility long-term planning studies are signaling an urgency to address energy system reliability needs affordably. Dual-fuel program analysis may show the benefit of low-cost reliability and emissions and the value of adding dual-fuel to the resource mix.
- Relatedly, hybrid heating planning scenarios in long-term planning processes and pilots are informing greater options. Implementation of pilots and studies are currently helping identify costs, benefits, risks and barriers to dual-fuel.
- Smaller gas utilities are modeling hybrid heating but not yet offering programs to encourage uptake of heat pumps where gas heating is primary nor are overlapping electric utilities who are focused on offering heat pumps to replace electric resistance heating doing so. At present, the case for dual-fuel is not compelling enough for single utilities to justify developing a proposal without directives from oversight.
- Recent legislation is introducing new regulatory mechanisms and processes to enable transition to decarbonization including expanding the definition of utility obligation to serve to include thermal energy networks, and adding integrated electric and gas planning for the largest utility with requirements for studying targeted electrifications and accelerated depreciation of gas infrastructure.

Gaps to the advancement of dual-fuel are similar to Oregon, and mostly related to gaps in understanding. Project cost and performance data is limited since it is a new resource without the rigorous evaluation data for regulators, customers and utilities. Data needs include market stock and flow data to reveal customer trends necessary to understand how to influence customer actions. Once more information is available, coordinated analyses to develop dual-fuel measures that reflect total energy, emissions and cost reductions based upon a redefined baseline (current state or full electrification) can be developed to inform funding and cost allocation decisions. Introducing modulation of dual-fuel brings additional questions about who is controlling the design parameters that signal which fuel to use when, who pays and who benefits. Those are all regulatory policy issues yet to be teed up.

Interviews with a broad range of WA stakeholders revealed a shared desire to learn more about what PSE's Integrated System Plan will reveal about the estimated cost and feasibility of investments needed to achieve clean electrification at a pace that meets policy timelines. There is general speculation that hybrid heating measures may be shown to provide significant value going forward to achieve short term emissions reductions while lessening the need for winter peak resources for full electrification. Utility compliance with CETA and CCA may further complicate the role of dual-fuel as both have future milestones that trend away from fossil fuel use.

Idaho

Overview

There currently are no explicit state or regulatory policies in Idaho that directly encourage customer adoption of dual-fuel equipment. However, Rocky Mountain Power and Enbridge customer programs do encourage adoption by providing meaningful financial incentives and technical information to customers. Both utility offers originated in Utah and they were able to transfer the designs to their Idaho service territories with regulatory approval. Other utility programs likely have a neutral or negative impact on customer uptake.

The lack of statewide climate policies to require electric and gas utilities to reduce emissions and having the lowest gas rates in the country may be hindering utility and customer motivation to invest in dual-fuel. Regional resource adequacy and reliability concerns shown in utility planning processes are driving interest in better understanding the potential customer and system benefits of joint electric and gas planning which includes leveraging both systems for shared reliability and affordability benefits and may lead to future interest in dual-fuel.

Utility and Energy Landscape

Gas Companies

There are three investor-owned gas companies under regulatory jurisdiction of the Idaho Public Utilities Commission (IPUC): Avista Corporation, Enbridge Gas, and Intermountain Gas. Intermountain is the largest gas utility serving the Boise area. Avista is the only combined fuel utility in the state, also delivering electricity services to northern Idaho.

In 2024, the electric power sector was the largest natural gas consumer in Idaho, accounting for about 34% of the state's natural gas use. The industrial sector accounted for 25%. The residential sector made up 23% of the state's natural gas use, as just over half of Idaho households use natural gas as their primary energy source for heating. The commercial sector accounted for about 18% of the state's natural gas consumption, and a small amount of natural gas was used in the transportation sector as vehicle fuel.⁶⁰

Electric Companies

There are three investor-owned electric utilities under the regulatory purview of the IPUC: Avista Corporation, Rocky Mountain Power, and Idaho Power. Combined, they cover 86% of electricity demand in the state.⁶¹ The remaining electricity needs are served by twenty-eight municipal utilities and rural electric cooperatives that buy almost all of their electricity from the Bonneville Power Administration (BPA), which markets power mainly from hydroelectric facilities at federal dams and other facilities in the Pacific Northwest. The major population center of Boise is served by Idaho Power.

⁶⁰ U.S. Energy Information Administration. <https://www.eia.gov/states/ID/analysis>

⁶¹ Demystifying the Northwest Utility Landscape <https://www.cleanenergytransition.org/post/demystifying-the-northwest-utility-landscape>

Hydroelectric power plants have historically supplied more than two-thirds of Idaho's total in-state electricity generation. The balance of Idaho's in-state generation is supplied mostly by natural gas and wind power. In 2024, natural gas-fired generation provided 31% of Idaho's in-state electricity and wind power accounted for 15%. Solar power, biomass-fueled facilities, and geothermal energy collectively provided about 9% of the state's generation. About one-third of the electricity consumed in Idaho arrives over interstate transmission lines from out-of-state generating facilities owned by Idaho utilities and from the BPA⁶².

Dual-Fuel Programs

Both Rocky Mountain Power and Enbridge offer financial incentives to customers for installation of efficient electric heat pumps paired with gas furnace back up heating. Idaho Power offers rebates for air-source heat pumps but requires that supplemental heat be electric, not gas⁶³.

Enbridge Gas offers rebates for residential dual-fuel heating systems through their ThermWise program. Purchases of Tier 1 or Tier 2 Energy Star electric heat pumps, either with an existing gas furnace or newly installed gas furnace for back up heating, are eligible for a rebate of \$700-\$1,200. Rocky Mountain Power offers \$1,000-\$2,000 in rebates for new heat pumps with amounts varying by heat pump tier and back up furnace efficiency ratings. These gas utility offerings are also jointly available in UT and WY.

Avista does not directly promote dual-fuel heating but does promote fuel switching from inefficient electric systems to gas furnaces. Avista currently offers rebates for customers with electric resistance baseboard or electric furnaces and with electric usage of at least 4,000 kWh and less than 340 therms in the last 12 months to switch to gas furnaces.⁶⁴ If the customer also converts water heating from electric resistance to gas, the rebate increases by \$750. Avista also offers \$300-\$600 rebates for new Tier 1-Tier 3 electric heat pumps.

Related State, Local and Regulatory Policies

Unlike Washington and Oregon, Idaho does not have state-wide emissions reduction goals but similar to all Northwestern states, does enjoy a significant amount of emissions free generation from renewable resources and investor-owned utilities are required to submit Integrated Resource Plans with the Idaho Public Utilities Commission. IRPs are required to include all cost effective and achievable energy efficiency.⁶⁵

⁶² U.S. Energy Information Administration <https://www.eia.gov/states/#57>

⁶³ Ducted Air Source Heat Pumps. <https://www.idahopower.com/energy-environment/ways-to-save/savings-for-your-home/rebates-and-offers/heating-and-cooling-efficiency-program/ducted-air-source-heat-pump-existing-homes>

⁶⁴ Idaho Primary Heat Conversion Rebates <https://www.myavista.com/energy-savings/rebates-idaho/single-family-energy-rebates-idaho/conversions-from-electric>

⁶⁵ ACEEE State and Local Policy Database. <https://database.aceee.org/state/energy-efficiency-resource>

Even without a state requirement to reduce emissions, in 2019, Idaho Power, the largest electric utility in the state, made a voluntary commitment to achieve a goal of 100% clean energy by 2045 which is reflected in their 2025 IRP.⁶⁶ Over the next twenty years, they plan to add over 4,000 MW in resources by converting two coal plants to natural gas, and adding new gas plants as well as wind, solar, batteries, and transmission, while continuing to acquire cost effective energy efficiency and demand response resources.

Idaho also adopted residential and commercial building energy codes and, in addition to utility efficiency programs, the state offers loans and tax credits for energy efficiency projects.⁶⁷ To further encourage energy efficiency, the IPUC approved Fixed Cost Adjustments for Idaho Power and Avista, which are rate adjustment mechanisms that decouple the utility's revenues from customers' energy usage. This mechanism is used to encourage energy conservation by removing the utility's disincentive for sales to decrease.

The primary cost-efficiency test for energy efficiency is the Utility Cost Test with the Total Resource Cost Test and Participant Cost Tests used as secondary screens. Idaho Power and Avista electric efficiency customer programs follow BPA measure definitions and eligibility requirements for new efficient air source heat pumps, requiring that supplemental heat only be electric and that the heat pump replace an existing electric furnace or baseboard heating to be eligible for an incentive.⁶⁸

Recent Developments in Dual-Fuel

Intermountain Gas Company's 2025 IRP describes how growing demand for electricity nationally is leading to increased need for more generation, including new gas power plants. Building on that context, the direct use of gas for residential and commercial space and water heating and other applications is described as 91% efficient compared to indirect use by a gas power plant with 36% efficiency.⁶⁹ Although Intermountain is a single fuel utility, they make the connection between electricity demand and the ongoing role they see for gas to play in regional energy system reliability. Intermountain's energy efficiency program does not currently include dual-fuel systems, but they are planning for emerging efficient gas technologies including gas heat pumps.

⁶⁶ Idaho Power 2025 Integrated Resource Plan.

<https://docs.idahopower.com/pdfs/AboutUs/PlanningForFuture/2025IRP/2025%20IRP%20Final.pdf>

⁶⁷ ACEEE State and Local Policy Database. <https://database.aceee.org/state/idaho>

⁶⁸ Ducted Air Source Heat Pumps. <https://www.idahopower.com/energy-environment/ways-to-save/savings-for-your-home/rebates-and-offers/heating-and-cooling-efficiency-program/ducted-air-source-heat-pump-existing-homes/>

⁶⁹ Intermountain Gas Company Integrated Resource Plan 2025-2030. <https://www.intgas.com/wp-content/uploads/PDFs/Rates-Tariffs/IRP/09-2025-Integrated-Resource-Plan.pdf> p 7

Summary and Assessment

- Least cost and risk planning and customer affordability concerns continue to drive Idaho's energy efficiency investments which are included as cost-effective resources in required Integrated Resource Plans.
- The largest electric utility set a voluntary emissions reductions goal for 2050 and has a significant energy efficiency portfolio but at this time does not include dual-fuel systems within their portfolio.
- Where dual-fuel systems are encouraged (RMP and Enbridge programs) the motivation behind those programs originated from their Utah programs but are retained in Idaho largely for customer service benefits.
- Direct use of gas is promoted as more efficient than indirect use of gas from a gas plant to generate electricity.

Montana

Overview

Montana is rich in energy resources, both renewable and fossil fuel, but does not have a state-wide clean energy goal. Reliability and affordability are top priorities of energy policy. Energy efficiency and demand response contribute to these goals but building electrification efforts are limited to local efforts and is not a priority for the state. Recent federal policy changes have led to the current pause on heat pump and electrification program funding but more state level energy policy guidance is anticipated this fall from a Governor directed Energy Task Force. For now, the state Department of Environmental Quality (DEQ) is focusing on building the contractor market and raising customer awareness of efficient heat pumps is serving to lay the groundwork for future potential growth of dual-fuel as policy goals may evolve.

Utility and Energy Landscape

The industrial sector leads Montana's end-use energy consumption, accounting for 30% of the state total. The residential sector makes up 25% of natural gas use and 13% of electricity usage. About half of Montana households use natural gas as their primary energy source for home heating. The state's temperature extremes contribute to Montana's residential sector being among the top five states with the highest per capita energy consumption.⁷⁰

Investor-owned utilities NorthWestern Energy and Montana-Dakota Utilities (MDU) are the primary combined fuel (electric and gas) providers in Montana. NorthWestern Energy covers most of the state, while MDU serves eastern regions. Other providers include Energy West Montana (recently acquired by NorthWestern Energy, for gas service only) and multiple electric cooperatives, municipal suppliers, plus two municipal gas providers operating in the state at a smaller scale. IOUs are regulated by the Montana Public Service Commission (PSC).

NorthWestern Energy is the largest provider of both electricity and natural gas, serving the western two-thirds of the state and Yellowstone National Park. They serve over 400,000 electric customers and over 200,000 natural gas customers. MDU serves 25,500 electric and natural gas customers and is a member of the Midcontinent Independent System Operator (MISO), not the Northwest Power Pool.

Related Utility Efficiency Programs

There are no explicit state or regulatory policies in Montana that directly encourage or discourage customer adoption of dual-fuel equipment but customers are encouraged to purchase more efficient gas or electric heating equipment, depending upon their current primary heating fuel. Northwestern offers \$450 per unit for Central Heat Pump⁷¹ (Ductless or Ducted) ENERGY STAR® rated or SEER2 ≥ 15.2 and HSPF2 ≥ 8.5 to electric customers and High Efficiency Furnace incentives of \$425 per unit for AFUE ≥ 90% that replaces AFUE ≤ 80% furnace. MDU offers a High Efficiency Furnace incentive of \$300 per unit for AFUE ≥ 90% but

⁷⁰ U.S. Energy Information Administration <https://www.eia.gov/states/mt/analysis>

⁷¹ Efficiency Rebates and Incentives. <https://www.northwesternenergy.com/billing-payment/ways-to-save/rebates-incentives>

does not currently provide incentives for electric heat pumps. The following table from MDU's website is an informative guide for customers.

HEATING YOUR HOME IN MONTANA

Energy Source	Space Heat Efficiency	Annual Energy Cost	Installation Costs
Natural Gas	95% Furnace	\$446	\$13,000
Electric	100% Furnace	\$1,541	\$12,000
Propane	95% Furnace	\$1,145	\$13,000
Heat Pump (Air Source)	160% Seasonal Efficiency	\$963	\$14,000
Heat Pump (Ground Source)	350% Seasonal Efficiency	\$440	\$21,000

Figure 3. MDU's comparison table for customer heating options⁷²

According to EIA data, Montana has the second lowest residential retail natural gas rates in the country, just after Idaho.⁷³ With very low gas rates and limited demand for summer cooling, it's challenging to make the business case from the customer perspective to add an efficient electric heat pump.

Related State, Local and Regulatory Policies

It is the policy of Montana "to promote energy efficiency, conservation, production, and consumption of a reliable and efficient mix of energy sources that represent the least social, environmental, and economic costs and the greatest long-term benefits to Montana citizens" (90-4-1001, MCA). There are a variety of incentives in state law for electric efficiency and conservation. They include the Universal System Benefits Programs (USBP), tax deductions, tax credits, Montana state building codes, incentive-based codes for local governments, low-income weatherization, the alternative energy revolving loan program, energy performance contracting, energy conservation in schools programs, and the State Building Energy Conservation Act.⁷⁴ Montana requires efficiency in building construction through statewide energy codes with minimum standards for insulation, ventilation and air sealing to reduce energy use and Montana statute⁷⁵ requires electric utilities to file Integrated Least-Cost Plans which include an evaluation of conservation and demand-side management programs.

⁷² Montana-Dakota Rates and Services <https://www.montana-dakota.com/rates-services/>

⁷³ Average Residential Natural Gas Prices. (2025) EIA.
https://www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_PRS_DMcf_a.htm

⁷⁴ Energy Efficiency and Conservation.
<https://archive.legmt.gov/content/Bills/Primers/Energy/Energy%20Efficiency.pdf>

⁷⁵ MCA 69-3-1204.
https://mca.legmt.gov/bills/mca/title_0690/chapter_0030/part_0120/section_0040/0690-0030-0120-0040.html

Without state policy mandating decarbonization and with recent reductions in federal support for renewables as well as a pause to their receipt of federal IRA HOMES/HEAR program funds, there is limited interest at the state level to push electrification or dual-fuel equipment. With limited customer program funding to encourage heat pump installations, but in anticipation of future program availability, the Montana DEQ is using their universal system benefits (USB) funding for market transformation activities that advance contractor knowledge of efficient equipment installations. Contractor training efforts are focused on creating a value proposition for better airflow and design of heat pump installations. They have also created a referral network and list of qualified contractors across five different technologies, including dual-fuel equipment. This training addresses outdated perceptions about the technologies from contractors and customers. They also focus on the importance of shell improvements as an important element of best practices to achieve optimal equipment installations.

There are no fuel switching state policies restricting promotion by utilities for one fuel or another, yet customers are generally not encouraged to switch from gas to electric for heating needs and electrification is not promoted by the state. Cooperatives are running heat pump programs to reduce existing electric resistance load but are not seeking to add load through fuel switching as many are currently resource constrained. At the municipal level, MT DEQ had been coordinating with Bozeman and Missoula on heat pump water heaters and heat pumps when the DEQ anticipated receiving federal funding for HOMES/HEAR programming but have since pulled back as there is not a program they can offer at this time.

There are examples of local initiatives that promote electrification, including Electrify Missoula⁷⁶ which provides information about prioritizing switching from gas to electricity. There are also examples of HVAC contractors installing a limited number of dual-fuel residential heating systems but without financial program support.⁷⁷

Recent Developments Related to Dual-Fuel

Northwestern Energy released a Draft of their 2026 IRP⁷⁸ with an introduction that frames the current regional energy system challenges: rising electricity demand, changing regional market structures, and the pressures to transition to lower-carbon resources while maintaining reliability during Montana's extreme winter conditions.

"Across the Western Interconnection, electricity demand is projected to rise more than 30 percent by 2035, driven by large scale data center development, transportation and building electrification, and steady native load growth. Yet, dependable firm generation additions are lagging. Regional studies by the Western Electricity Coordinating Council (WECC) and the

⁷⁶ Electrify Missoula <https://www.electrifymissoula.org/>

⁷⁷ <https://www.metrowestdailynews.com/press-release/story/484829/mountain-heating-and-cooling-showcases-advanced-hybrid-gas-electric-system-installation-in-bozeman/>

⁷⁸ 2026 Montana Integrated Resource Plan. (2026) Northwestern Energy. https://northwesternenergy.com/docs/default-source/default-document-library/about-us/erp-irp/2026-mt-irp_public-draft_1_15_26_redacted.pdf

Pacific Northwest Utilities Conference Committee (PNUCC) confirm that reliability risks are increasing as fossil-fueled generator retirements, prolonged drought, and extreme winter weather continue to stress the system.”

Northwestern’s IRP goals include ensuring progress on the Company’s 2050 Net Zero Electricity goal without compromising reliability or affordability. The draft 2026 IRP identifies a near-term capacity need emerging in the winter of 2027/2028 and summer constraints by 2032 with data center load forecasts creating highly uncertain impacts on these projections. Since there are currently no statewide policies mandating transportation or building electrification in Montana, the Company assumes growth in electric load from these sectors is expected to lag regional trends.

Montana has fewer climate and clean energy-specific mandates than other states but more state level direction is anticipated later this year when a Governor directed Montana Energy Task Force, through Executive Order 6-2025⁷⁹ will provide recommendations to the Governor for developing strategies to increase the supply of reliable and affordable energy. The Executive Order highlights the abundance of diverse resources, fossil fuel and renewables, in the state and the need to provide access to affordable energy to Montana citizens that are paying more for necessities after periods of historic inflation. Although emissions reductions are not included in the objectives, ensuring responsible development while protecting the environment is one of the many criteria for the task force to consider.

Summary and Assessment

- Currently, there is limited consideration of cross-fuel impacts in long term resource planning and identification of energy efficiency and demand response resources are contained to single fuel applications.
- The urgency to address electric system reliability needs affordably while meeting voluntary climate goals is framed by the largest utility in their most recent electric IRP as the larger context in which they are planning. Without connection to gas system planning, to role dual-fuel may play is not contemplated.
- Although there are no state climate policies with emissions reductions requirements, local organizations are encouraging customers to consider electrification.
- The Montana DEQ is advancing contractor and customer knowledge of heat pump benefits and best practices for installations in anticipation of future program funding.
- Dual-fuel may become important to the state as a load shedding measure and is more likely to be embraced than full electrification for existing gas heating customers since it

⁷⁹ https://gov.mt.gov/Documents/GovernorsOffice/executiveorders/View?doc=EO_6-2025_EnergyTaskForce.pdf

would not exacerbate electric winter peak concerns and gas service is the second lowest rate in the nation.

3. Enabling Policy Frameworks External to the Northwest

In recent years, dual-fuel equipment has begun to play an increasingly significant role in achieving energy and climate policies in other states and regions external to the Northwest. The following section explores six dual-fuel program designs outside of the Northwest and the enabling state or provincial policies and regulatory guidance. How these other regions see the role of dual-fuel in meeting their goals provides relevant insights for the Northwest.

Each profile that follows consists of an overview of a dual-fuel initiative and the enabling policy and regulatory framework behind its design. Many location-specific factors influence design details such as customer incentive amounts and equipment specifications. Policies and implementation guidance are designed with local circumstances in mind. These local factors include existing electricity generation resource mix and resource adequacy constraints, emissions reductions targets and timing, climate zone, existing building stock, customer energy rates and the spread between gas and electric rates as well as other factors. In all cases, the presence of residential gas heating exceeds 65 percent.

Framework attributes that enable dual-fuel systems

- In several cases, state/provincial climate policy was grounded in a government funded study out of which specific electric and gas utility requirements were added to statute or regulatory guidance to offer dual-fuel or electrification measures. (MN, CO, NJ, Quebec)
- Clear statutory or regulatory direction that allows for efficient fuel switching or substitution to count as energy efficiency and/or decarbonization measures. (UT, NJ, CO, MN)
- Required collaboration between utilities, particularly where single fuel utilities operate in shared service territories (MN, CO, NJ, Quebec)
- The evolving nature of understanding how to implement and optimize dual-fuel is clearly reflected in the framework guidance. For example, the point that more data is needed to determine baselines, costs, benefits and risks for dual-fuel measures that will inform future revisions and adjustments to cost allocation is used to justify initial program offers for later evolution. (MN, CO, NJ)
- Program budgets are allowed to include funding for customer education and contractor training. Training includes proper design and installation of dual-fuel systems while also encouraging the fundamentals of home insulation. (UT, MN, CO, NJ)

These examples of enabling state/provincial policy or regulatory guidance necessitated development of **new regulatory and program tools** to fund and implement dual-fuel measure offers.

- Integration of fuel neutral efficiency goals and efficient fuel or substitution benefits in measure cost effectiveness tests enabled analytical justification for higher rebates for dual-fuel measures because more benefits were quantifiable, leading to greater customer participation
- New rate designs for lower residential electric heating rates increase affordability of dual-fuel and electrification

- GHG contribution payment from electric to gas customers helped smooth the burden of total increased costs across all energy systems
- Decoupling gas utility revenue requirements mitigated the impact of reduced sales for gas utilities
- Regulatory requirements for coordinated, clear customer messaging from all key actors (gas and electric utilities, contractors, state agencies, program administrators, etc.) reduced consumer confusion and encouraging participation.

Even with critical differences in climate goals and local circumstances, there are consistent themes and lessons learned across most experiences with dual-fuel offers that can provide valuable insights for the Northwest.

- Dual-fuel is seen as a pragmatic tool to lower total energy system emissions at lower cost than full electrification where gas furnaces exist. Compared to full electrification, incremental equipment costs are typically lower (ASHP compared to CCHP), and customer satisfaction rates with comfort are higher, leading to high levels of customer adoption.
- Promotion of dual-fuel measures is still relatively new with more to learn and implement in real life situations, including the following areas.
 - Education / Information Sharing:
 - Customers: Improved awareness that dual-fuel equipment will increase their use of electricity and about differences in heat pump and furnace operations and feel
 - Regulators and stakeholders: Projected cost and timing impacts of full building electrification. More objective third party study information is needed to inform decision making.
 - Contractors: Installation practices and customer education
 - Equipment selection and installation is critical to get right and communicate clearly
 - More data is needed to better inform measure assumptions and load forecasts, experience with dual-fuel is growing but there is more to learn, put in context with other planning decisions, make transparent, and integrate into implementation.
 - With more data and improved assumptions, cost allocation between gas and electric customers can be refined equitably.
- The long-term outlook for these program examples tends to vary by the local vision of climate policy. Where the climate policy outlook continues to be robust, the role of dual-fuel measures may be transitory and inevitably overtaken by full electrification. Where climate policy is less robust or not a driving factor, the outlook is to continue to grow dual-fuel as a cost-effective efficiency measure with other customer benefits.
- Only one of the six examples was actively learning more about the value in real-time (or dynamic) modulation between electric and gas beyond assuming the temperature set

point cross over. Although concerns about electric system resource adequacy and customer affordability were consistent themes across examples, exploring the potential for greater value to the combined energy system from fuel modulation is nascent or not yet considered. In general, there is interest in having the capability available but is thought of as a potential future area of evolution to add more value once the resource installation is fine-tuned and there are enough dual-fuel systems to create a critical mass of impact to justify other costs of real-time modulation.

Minnesota

In Minnesota, residential dual-fuel heating is widely promoted as a great option for homeowners who want to maximize energy savings and ensure reliable heating affordably.

Minnesota Statute establishes a greenhouse gas emission reduction goal of net-zero emissions economy-wide by 2050. To increase building efficiency and decarbonization, 2021 legislation, the Energy Conservation Optimization Act (ECO) modernizes energy efficiency programs and specifically allows for efficient fuel switching programs for emissions reductions and electric system reliability. Minnesota's dual-fuel rebate programs for electric heat pumps paired with gas furnaces are directly enabled by these policies.

The largest electric and gas utility in the state, Xcel, offers rebates for cold climate and air source heat pumps with a bonus for ASHPs when the current primary heat is not electric. They also promote conversion of primary fuel from gas to electric with an electric space heating rate that equates to 60 percent of the current regular residential rate. The design objective behind the electric heating rate was to offset effects of added energy burden from increasing electricity consumption while lowering total energy use. For the 2027-2029 ECO triennial (due June 2026), the Minnesota PUC directed Xcel to include a discussion of how the electric space heating rate will be marketed alongside heat pumps, as ensuring eligible customers are enrolled is an important PUC priority.

Although gas utilities are not subject to emissions reductions requirements, the Commission has directed gas utilities to explain in IRPs how they considered state goals and how they will work with the electric utilities in their respective service territories to understand electric system impacts on resource options. This July, Xcel Energy is expected to file the first gas IRP in the state, with the other two gas utilities to follow in subsequent years.⁸⁰

The Minnesota Air Source Heat Pump Collaborative is funded through Minnesota's Efficient Technology Accelerator, which is a partnership funded by the state's investor-owned utilities (IOUs) and is administered by the Minnesota Department of Commerce and implemented by Center for Energy and Environment (CEE). Consumer-owned electric utilities also provide funding. The Collaborative provides clear and comprehensive information on their website,

⁸⁰ Gas IRP, Minnesota Public Utilities Commission. <https://mn.gov/puc/activities/economic-analysis/planning/gas-irp/>

enabling customer adoption of heat pumps.⁸¹ Their goal is to “make it easier for Minnesotans to choose better heating and cooling. By promoting high-efficiency air source heat pumps, we help homeowners and contractors find options that are more effective, more comfortable, and often more affordable, especially when replacing an aging air conditioner. Our efforts are shaping the future of home comfort in Minnesota, with a goal to make heat pumps the go-to choice by 2035.”

One particularly consumer friendly feature of the website is a complete inventory of currently available rebates by utility. CEE also provides extensive information and analysis regarding the benefits of dual-fuel to customers and utility systems as part of their mission.⁸²

Summary:

Residential dual-fuel HVAC is advancing in Minnesota because of regulatory directives to electric utilities to lower emissions and guidance to gas and electric utilities to coordinate efforts toward state goals while offering a package of affordable solutions in rebates and tariffs. Customer and contractor information about dual-fuel and other efficiency options is well coordinated and helpful, leading to informed consumers and installers.

Key takeaways

- Large portion of residential heating with gas furnaces (68% - EIA)
- Clear climate goal to reduce emissions
- Energy efficiency includes supporting efficient fuel switching
- Xcel Energy offers an electric space heating winter rate for customer affordability
- Education for dual-fuel is funded and well-coordinated
- Regulatory direction for gas and electric utility to coordinate on system impacts

NW Interests

NW entities may find the work of the ASHP Collaborative to be a wonderful example of coordinated information sharing that serves as a valuable resource to consumers who are seeking clear and accessible information to better inform their investment decision making process. Xcel’s electric heating winter rate and regulatory direction for joint utility coordination could be helpful tools for WA and OR to consider as they evolve joint planning and decarbonization actions.

Colorado

Dual-fuel or hybrid heating rebates currently play an important role in Colorado utility plans to meet state climate goals and support energy affordability for their customers.

⁸¹ About the Collaborative <https://www.mnashp.org/about-collaborative>

⁸² Nissen, W. (2026). Managing the Impact of Electrified Residential Space Heating. <https://www.mncee.org/managing-impact-electrified-residential-space-heating>

In 2021, the Colorado State Legislature passed SB 21-264, requiring gas utilities to reduce greenhouse gas emissions 41 percent by 2035 and 100 percent by 2050. It also required gas utilities to file Clean Heat Plans with the Public Utility Commission showing how they plan to achieve the goals. Actions that increase energy efficiency and encourage electrification are eligible clean heat resources which apply towards achieving goals.

Xcel Energy, the largest gas and electric utility in the state, filed their 2024-2027 Clean Heat Plan in 2023. The Commission order approving the plan directed the Company to prioritize offering heat pump rebates, including cases where customers were considering new air conditioners, as they saw opportunity for customers “to gain confidence in heat pump technology at a modest incremental cost or risk.” As of 2020, 7 out of 10 households heat with natural gas⁸³ in Colorado, creating significant opportunities for residential dual-fuel space heating applications or full electrification to lower gas emissions and increase total system efficiency.

SB21-264 also requires the Commission to establish a cost cap of 2.5 percent of annual gas bills for all full-service customers as a whole for expenses to achieve emissions reductions. In Xcel’s Clean Heat Plan, they explicitly note that electric customers, not gas customers, would pay for electrification through a rider, lessening the impact of the Clean Heat Plan on gas customers.

Xcel Energy offers hybrid heating rebates calculated based upon cooling tonnage as shown in the table below. Although there are households choosing to completely electrify, Xcel is finding that the vast majority of ASHP installations retain the existing gas furnace for back up.

KEY	HEATING AND COOLING EQUIPMENT	MINIMUM QUALIFYING STANDARDS*	REBATE TOTAL, WITH BONUS*	STANDARD REBATE	ELIGIBLE FOR WHOLE HOME EFFICIENCY
Bonus is available to customers with a fuel-burning system					
	Air Source Heat Pump (ASHP), Ducted*	15.2 SEER2, 11.7 EER2, 7.8 HSPF2	\$900/cooling ton at 95 F	\$300/cooling ton at 95 F	
	Air Source Heat Pump (ASHP), Non-Ducted*	15.2 SEER2, 11.7 EER2, 7.8 HSPF2	\$900/cooling ton at 95 F	\$300/cooling ton at 95 F	
	Air Source Heat Pump (ASHP), Mixed Ducted and Non-Ducted*	15.2 SEER2, 11.7 EER2, 7.8 HSPF2	\$900/cooling ton at 95 F	\$300/cooling ton at 95 F	
	Cold Climate Air Source Heat Pump (ccASHP), Non-Ducted*	16 SEER2, 9 EER2, 9.5 HSPF2, COP at 5 F ≥ 1.75, and the heating capacity at 5 F must be at least 70% of the 47 F rated heating capacity	\$2,250/heating ton at 5 F	\$750/heating ton at 5 F	
	Cold Climate Air Source Heat Pump (ccASHP), Ducted*	15.2 SEER2, 10 EER2, 8.1 HSPF2, COP at 5 F ≥ 1.75, and the heating capacity at 5 F must be at least 70% of the 47 F rated heating capacity	\$2,250/heating ton at 5 F	\$750/heating ton at 5 F	
	Cold Climate Air Source Heat Pump (ccASHP), Mixed Ducted and Non-Ducted*	15.2 SEER2, 10 EER2, 8.1 HSPF2, COP at 5 F ≥ 1.75, and the heating capacity at 5 F must be at least 70% of the 47 F rated heating capacity	\$2,250/heating ton at 5 F	\$750/heating ton at 5 F	
	Ground Source Heat Pump (GSHP)*	16 EER2, 3.3 COP, Full Load	\$3,300 /heating ton	\$1,100/heating ton	

⁸³ U.S. Energy Information Administration <https://www.eia.gov/states/CO/analysis>

Figure 4. Xcel CO 2025-2026 Rebates⁸⁴

Xcel's initial Clean Heat budget in 2021 included 500 heat pumps, then doubled each year until reaching 12,000 in 2025 for air source and cold climate units combined. Results will be reviewed in 2026, ahead of development of the next Clean Heat Plan.

As of January 1, 2026 gas utilities are no longer able to offer incentives for new efficient gas equipment and gas line extension allowances are capped at \$300. Both of these measures, directed by the CPUC, are intended to continue to advance the overall state goal of transitioning from fossil gas by 2050.

This July, Xcel plans to file an Electric Heat Tariff with the Commission to complement their building electrification measures of the Clean Heat Plan. As customers add heat pumps for efficient cooling and replace a portion of gas heating, customer energy budgets are shifting to more electric costs. The new tariff will be similar to one Xcel already has in place in Minnesota to improve affordability for customers.

Summary:

Colorado dual-fuel uptake is mostly driven by gas utility compliance actions to achieve state mandated emissions reductions through Clean Heat Plans that include efficiency and electrification. Early Commission direction to initially prioritize the air conditioner replacement market and allow retention of gas furnaces, was well received by customers with significant rebates seeking to balance customer affordability with efficiency and emissions reductions. Although not currently focused on smart controls to modulate between electric and gas use for a variety of optimization schemes, retention of gas systems with hybrid systems is providing total energy system benefit by not compounding electric winter capacity constraints and more efficient heat pumps help to lower summer capacity needs.

Going forward, the state vision for full decarbonization may continue to put pressure towards less reliance on hybrid options but currently these systems are providing affordable emissions reductions and space cooling and heating comfort. As the next Clean Heat Plans are designed, results of the first plan will inform next steps.

Key takeaways

- Large portion of residential heating with gas furnaces (76% - [EIA](#))
- Robust climate goals
- Clean heat plans with specific climate goals for gas utilities
- Commission direction to prioritize dual-fuel heat pump measures for AC replacements
- Cold climate customers find comfort and reliability with gas backup and reasonable cost compared to full electrification

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<https://xcelnew.my.salesforce.com/sfc/p/#1U0000011ttV/a/R300000AUK1y/XduxJdUQb8WEZ6U.nLV58gRculY.h1wUkY6PG8ILVHE>

- Evolving program and policies as they learn more, results to be integrated in next round of Clean Heat Plans

NW Interests

Cold climate performance results from CO may be of interest to similar climate regions of the NW where customers are choosing to retain existing gas furnaces for comfort, affordability and reliability. Combined fuel utilities of the NW may also be interested in tracking how Xcel is managing the integration of gas and electric planning processes within the company, system operations, and within dual-fuel customer homes and businesses.

Utah - Rocky Mountain Power and Enbridge Gas

Since 2021, the largest electricity and gas utilities in Utah, Rocky Mountain Power and Enbridge Gas Utah (formerly Dominion Energy), have seen increased customer adoption of dual-fuel residential heating systems due to their coordinated customer rebate programs. Shared customers who install a new electric heat pump are eligible for rebates from both utilities towards the cost of a new efficient heat pump where both program eligibility requirements are met. If the customer also installs a new gas furnace at the same time, the total rebate is higher than if an existing gas furnace can be used for back up heating. Both utilities also coordinate training for contractors and customer education, jointly raising awareness and streamlining the process of program participation.

Utility	Measure	Incentive	Eligible Equipment
Enbridge ⁸⁵	Tier 1 dual-fuel heating system	\$1,000 (\$700 without new gas furnace)	ENERGY STAR® certified ducted heat pump with HSPF2 ≥ 7.5 (HSPF ≥ 9.0); SEER2 ≥ 13.3 (SEER ≥ 14.0); ENERGY STAR® certified natural gas heating system (AFUE ≥ 95%); changeover setpoint ≤ 40 F
Enbridge	Tier 2 dual-fuel heating system	\$1200 (\$850 without new gas furnace)	ENERGY STAR® certified ducted heat pump with HSPF2 ≥ 8.5 (HSPF ≥ 10.0); SEER2 ≥ 17.1 (SEER ≥ 18.0); EER2 ≥ 10.9 (EER ≥ 11.5); ENERGY STAR® certified natural gas heating system (AFUE ≥ 97.5%); changeover setpoint ≤ 40 F
RMP ⁸⁶	Dual-fuel heat pump – AHRI rated	\$1,450	7.5+ HSPF2, 14.3+ SEER2; 90+ AFUE furnace; or 8.5+ HSPF2, 15.2+ SEER2, 80+ AFUE furnace
RMP	Dual-fuel heat pump – non-AHRI rated	\$700	7.5+ HSPF2, 14.3+ SEER2, 80+ AFUE furnace

Table 1: Utah dual-fuel heat pump rebates

⁸⁵ [ThermWise Appliance Rebates | Utah, Idaho & Wyoming | Enbridge Gas](#)

⁸⁶ [Dual-fuel heat pumps - UT - Wattsma Home](#)

Enabling Legislative and Regulatory Framework

In the 2020 Utah Legislative session, HB 0431⁸⁷ modified the definition of demand side management related to energy efficiency programs for large-scale natural gas and electric utilities to explicitly include the use of heat pumps. Rocky Mountain Power saw this expanded direction as an opportunity for their customers to add efficient heating and cooling, effectively also motivating the company to achieve more kWh sales as customers with primary gas heating would choose to switch to electric primary heat while continuing to use gas for back up needs.

For the gas utility to embrace customer adoption of heat pumps, they received Utah Public Utilities Commission approval to decouple residential rates from revenues. This regulatory mechanism allows the company to earn the same amount of revenues with fewer therm sales by spreading total revenue requirements over reduced sales. The heat pump program does not impact the gas company revenues yet increases customer satisfaction.

With this legislative direction and regulatory mechanism in place, both utilities are able to analyze the cost effectiveness of offering heat pump incentives through revised benefit cost analyses that capture the combined fuel impacts of dual-fuel operations. RMP quantifies the therm savings as kWh savings added to the electricity savings when comparing an efficient qualifying heat pump to a standard efficiency heat pump as attributable fuel substitution savings. RMP looked to California's approach to evaluating dual-fuel measures through use of the Total System Benefits and Fuel Substitution Guidance for references when developing their approach to evaluating costs and benefits of dual-fuel measures. Enbridge values and reports total therm savings from using the gas furnace for backup. If a new gas furnace is installed, they also quantify the difference in gas use between the new efficient unit and standard.

The Southwest Energy Efficiency Project (SWEET), a longstanding energy efficiency advocacy organization focusing on energy policy in southwestern states, described these initial complementary dual-fuel offers for existing homes in climate zones 5 and higher as being generally cost effective for several reasons, but also noted where concerns or limitations may be appropriate.⁸⁸ Compared to full electrification through addition of cold climate heat pumps in existing homes with gas furnaces, there is cost savings to dual-fuel in avoiding duct improvements, panel upgrades and higher equipment cost.

Dual-fuel heat pumps in single family homes have become by far the largest contributor to RMP's residential existing single family program savings in Utah equating to 28.6% of 2023-2024 existing homes program savings and 74% of gross evaluated HVAC savings for the residential program.⁸⁹ RMP's focus on developing the Pro Network for Contractors to deliver

⁸⁷ HB 0431 <https://le.utah.gov/~2020/bills/static/HB0431.html>

⁸⁸ [A unique partnership to promote dual-fuel heat pumps: Dominion Energy and Rocky Mountain Power - Southwest Energy Efficiency Project](#)

⁸⁹

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/environment/dsm/utah/UT_WSH_2023-2024_Report.pdf

properly installed DF measures plus their ongoing attention to maintaining simplified program requirements and ease of participation are credited with driving customer interest.

Summary:

Both utilities saw the opportunity to increase heat pump uptake for customers and shared energy system benefits with a small change to energy efficiency statute language. The electric utility increased sales, to their benefit, but customers also benefited from more efficient cooling and partial heating while the gas utility benefited from customer experience with the program, retaining customers while maintaining revenues with decoupling.

Key takeaways

- Large portion of residential heating with gas furnaces (86% - [EIA](#))
- Aligning policy with utility motivations can lead to effective innovation
- Allowing efficient fuel substitution enabled greater adoption of efficient heat pumps for partial heating and cooling
- Coordinated and focused contractor training and tools with simplified eligibility requirements built trust and motivation
- Decoupling of gas revenues from sales motivated gas utility participation

NW Interests

This example shows how a small language change might create motivation for gas and electric utilities to innovate with a solution to maximize their business and customer outcomes as approved by the regulator. RMP's quantification of fuel substitution benefits by converting saved therm to kWh and how they track and report savings has enabled them to grow adoption of dual-fuel with Enbridge and may be of interest to NW states. The attention to growing the contractor network for high quality installations may also serve as a useful example for the Northwest and the reference to fuel substitution guidance and total resource benefits test from California may inform NW entity methods for evaluation of costs and benefits when considering dual-fuel measures.

Ontario - Enbridge Clean Home Heating Initiative and IESO

In Ontario, hybrid heating programs had initially been funded through a combination of provincial government funds and federal grants distributed to the Independent Electricity System Operator (IESO) for electric customer programs and gas utilities including the largest, Enbridge Gas.

The Clean Home Heating Initiative was first introduced in September 2022⁹⁰ with a government commitment of up to \$4.5 million to provide hybrid heating incentives to residential customers in London, St. Catharines, Peterborough, and Sault Ste. Marie followed by an additional \$8.2M in support in 2023 for Barrie. Hybrid heat pump systems were promoted as providing the energy-efficiency benefits of an electric air-source heat pump (ASHP) with the reliable heat of an existing natural gas furnace. Enbridge piloted a dual-fuel program with smart switching in several hundred homes in Ontario as part of the CHHI funding, successfully testing the extent to which smart-switching controllers could optimize fuel used based on price and system need.⁹¹

Initially, the initiative focused on messaging the contribution of hybrid heating towards reducing greenhouse gas emissions. Then, in late 2025, the Ontario government repealed sections of climate policy, removing requirements to set emissions reduction targets and report on progress. These changes followed earlier federal administration actions to cancel the cap-and-trade program. With these recent major policy changes that remove carbon charges, the economics for many efficiency, dual-fuel and electrification projects have changed, so much so that dual-fuel may no longer lead to the bill savings that had been estimated when the program was first designed.

While climate policy may be in transition, IESO is continuing to work on customer and contractor education as the financial driver to add a heat pump is not showing up in bill savings. With dual-fuel, the two key drivers of bill savings and emissions reductions are more challenging now as gas is relatively cheap with the removal of the carbon charge and emissions reductions targets are less clear as affordability is taking a stronger policy focus than sustainability. They are still preparing for a future where there may be a cost of carbon once more that would impact cost effectiveness and drive adoption.

Summary:

The combination of climate goals with emissions reductions targets and a carbon charge for fossil fuel led to early interest and success with dual-fuel measures. Recent policy changes that remove both drivers serve to illustrate how reliant program designs are on policy support. It also reflects that even in times without support policy and funding, market transformation activities can continue at lower cost to continue to prepare for future policy changes.

Key takeaways

- High percentage of residential gas heating (72% - [IESO](#))

⁹⁰ Ontario Launches Clean Home Heating Initiative. <https://news.ontario.ca/en/release/1002324/ontario-launches-clean-home-heating-initiative>

⁹¹London Residential Smart Hybrid Heating Pilot. (2023). Sustainable Technologies.

<https://sustainabletechnologies.ca/reports/london-residential-report/>

- Recent policy changes have made the customer business case for dual-fuel more challenging

NW Interests

The Enbridge smart switching pilot may help inform NW entity design of similar smart switching pilots and to quantify the value of real-time control for dual-fuel in the NW. The Ontario experience may also help to reinforce for the NW the importance of continuing to focus on market transformation efforts if/when policy support for funding or market conditions may challenge the value proposition of dual-fuel

New Jersey

In New Jersey, current dual-fuel or hybrid heating programs are promoted through a New Jersey Board of Public Utilities (NJBPUB) approved \$1.5 billion, three-year building decarbonization (BD) initiative (through July 2027 (Triennium 2)), to transition homes to cleaner and more efficient energy use. In 2020, 75% of residential space heating in New Jersey used natural gas, making the potential for residential hybrid heating measures significant.

Two of seven strategies to achieve state clean energy targets by 2050 that were defined in the 2019 New Jersey Energy Master Plan: Pathway to 2050 (“EMP”): “Maximize Energy Efficiency and Conservation and Reduce Peak Demand” (Strategy 3) and “Reduce Energy Consumption and Emissions from the Building Sector” (Strategy 4) directly led to the creation of the building decarbonization initiative. The EMP also set priorities for building decarbonization, starting with new construction and converting electric baseboards, oil and propane to efficient electrification. The EMP works in tandem with the Global Warming Response Act which set statewide emissions reduction goals of 80% below 2026 levels by 2050⁹² to set the overarching climate vision for the state. In addition, Governor Murphy signed Executive Order 316 (February 2023) setting significant residential and commercial building electrification goals.

Within that context, in July 2023, the NJ BPU directed electric and gas utilities to propose energy efficiency, peak reduction and building decarbonization (BD) programs to start in 2025 and run through June 2027. The BPU set specific parameters for what types of programs to include.

- Fuel switching of a space heating system, such as a fuel oil or natural gas furnace, to an electric HP
- Fuel switching of a domestic water heater, such as a propane or natural gas heater, to an electric HP;
- Replacement of both a furnace and air conditioner with an electric HP;
- **Hybrid, or dual-fuel, heating system**, such as the replacement of an air conditioner with an electric HP in a central air system that retains a well operating natural gas

⁹²Greenhouse Gas Emissions <https://dep.nj.gov/ghg/ghg-emissions-goals/>

furnace that is not close to the end of its useful life; the replacement HP should be sized to meet either the full or partial heating demand load, with higher incentives for full load; the system could include integrated controls to switch between the furnace and the HP during the heating season when either the operating cost or emissions are lower for the furnace than for the HP; and

- Conversion of other gas to electric end-uses, such as induction cooking and dryers.

BPU Staff recommended BD programs receive an exception to cost effectiveness requirements in Triennium 2 because programs that meet the design requirements are in the public interest and provide necessary data, skills development and capacity to inform the design and delivery of the next funding round of programs and to scale the programs in the longer term. All programs are required to produce net source energy savings on a fuel-neutral MMBtu basis and report net source savings and CO2 equivalent.

Where gas and electric utility service territories overlap, utilities were directed to provide coordinated and consistent delivery to shared customers. Contractor training to promote the BD programs and to size and install units properly is also a required part of BD program design. Electric distribution companies (“EDCs”) were directed to achieve primary objectives of reducing consumption of energy below what would have otherwise been used. Gas distribution companies (“GDCs”) were allowed to offer BD programs specifically to gas customers who are eligible for hybrid heating systems and district geothermal heating.

In justifying cost allocation of hybrid program budgets to gas customers, Staff concluded that when customers currently using fossil-fueled equipment choose to convert to electric equipment, their electricity consumption will increase but their total energy consumption will decrease. Reducing overall energy usage is within the BPU’s authority.

For New Jersey Natural Gas (NJNG), the building decarbonization programs have led to their customer offering through the SAVEGREEN program for \$1600 to \$2000 for an ASHP to reduce the total cost which can then be applied to an on bill repayment program up to \$25,000 at 0% interest over 7 years as a standard offer and over 10 years for income qualified customers.

Contractors have described the offer as easy to “sell” to customers, and customer adoption is exceeding NJNG expectations. Like other utilities, the BPU allows NJNG to use a Conservation Incentive Program (CIP) bill adjustment as a regulatory mechanism to break the link between revenue and gas sales to customers, removing any company disincentive to support efficiency and BD programs. Over the next five years, NJNG anticipates customer interest in this measure will grow.

Summary:

New Jersey has clear clean energy and emissions reductions goals with specific inclusion of hybrid heating as a building decarbonization measure and directives to deliver building decarbonization programs. New regulatory guidance and tools for designing and evaluating BD programs add clarity in efficiency. BPU expectations for BD programs are clear and include fuel

neutral goals, exceptions to cost effectiveness, requirements to show total energy savings and emission reductions and dedicated coordinated contractor training and program delivery across utilities.

Key takeaways

- High percentage of residential gas heating (74% - [EIA](#))
- Electric and gas utilities are directed to coordinate delivery and contractor training
- The first round of BD programs will gather data and build experience with dual-fuel to inform future programs
- Fuel neutral savings goals motivate electric and gas utilities

NW Interests

BPU guidance for BD programs includes several points that may be of interest to NW entities including fuel neutral savings goals, special reporting requirements, direction to coordinate delivery and contractor training across utilities and expectations that the first BD programs will lead to important lessons to inform the next round of BD programs, including hybrid heating.

Quebec - Hydro Quebec/Energir

In 2021, Hydro-Quebec and Energir, the major electric and gas utilities serving Quebec residents and businesses, developed a twenty-year dual energy agreement to convert 90 percent of existing residential primary gas heating systems to dual-fuel and use the existing gas furnaces as secondary heating to cover peak energy needs. This arrangement was estimated to result in \$400 million in GHG compensation to Energir and \$1.7B in savings for Hydro-Quebec compared to the alternative of fully electrifying residential HVAC.

This collaboration was motivated by the 2020 release of the Quebec Government's plan to reduce emissions by 2030⁹³. The plan highlighted the importance of building decarbonization and specifically stated a preference for a dual-fuel approach for heating to mitigate concerns about winter peak reliability and affordability. In response, Hydro-Quebec and Énergir engaged in a collaborative and comprehensive analysis of the emission reduction potential, cost impacts, and rate impacts of full electrification compared to dual-fuel measures for shared customers.

The results of their study collaboration showed that dual-fuel equipment achieved significant, yet fewer, emission reductions at a lower cost per emissions than full electrification for customers of both gas and electric utilities. In both cases, rates for both electric and gas customers would increase to cover the costs. For electric customers, the increase for dual-fuel was estimated to be 0.9% and for gas customers, 4%.

⁹³ 2030 Plan for a Green Economy: Framework Policy on Electrification and the Fight Against Climate Change, Government of Quebec <https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/environnement/publications-adm/plan-economie-verte/plan-economie-verte-2030-en.pdf>

	Full Electrification Scenario	Dual Fuel Scenario
GHG Reduction Potential (in 2030)	750,000 tons	540,000 tons
Total Volume of Natural Gas Displaced (in 2030)	14.16 billion cubic feet	10.13 billion cubic feet
Additional Electricity Consumed (in 2030)	2,975 GWh	1,837 GWh
Additional Electric Capacity Required (in 2030)	2,070 MW	63 MW
Net Cost for Hydro-Quebec (2022-2030 cumulative)	\$2,108 million (CAD)	\$490 million (CAD)
Net Cost for Énergir (2022-2030 cumulative)	\$594 million (CAD)	\$530 million (CAD)
Hydro-Quebec Rate Impacts (2022-2030 cumulative)	3.0%	0.9%
Énergir Rate Impacts (2022-2030 cumulative)	5.0%	4.5%

Table 2. Scenario Analysis Results from Hydro-Quebec – Énergir Collaboration⁹⁴

To address the inequity of rate impacts, the utilities designed a new cost-sharing mechanism that levels out the rate impacts across utilities where Hydro-Quebec transfers a GHG Contribution payment to Énergir, resulting in a total increase of 1.4% for electric customers and a much reduced 0.9% gas rate increase (compared to 4.5% without the payment).

The GHG Contribution is characterized as compensation for the capacity and cost savings Hydro-Quebec experiences with dual-fuel compared to full electrification. In practice the size of the payment is calculated for each customer conversion and the actual gas reduction for 15 years so the amount could vary compared to the modeled estimates. To participate, customers install electric space and water heating equipment and are enrolled in a dual-fuel electricity rate. The rate varies with temperature depending on climate zone. When temperature fall below the cross over temperature, rates increase by nearly a factor of 6 from just under 5 c/kWh to 29c/kWh⁹⁵ to encourage customers to be sure to shift to gas use.

As of 2023, commercial and institutional customers are also eligible for dual-fuel offers, requiring a special electric tariff triggered by outside temperature and with the GHG contribution payment to Énergir.

⁹⁴ CEE Reply Comments. <https://efiling.web.commerce.state.mn.us/documents/%7B20848B98-0000-C435-8B89-987B8416F9F0%7D/download?contentSequence=0&rowIndex=75>

⁹⁵ Rate DT Dual Energy. <https://www.hydroquebec.com/residential/customer-space/rates/rate-dt-how-it-works.html>

Summary:

The Quebecois government established clear direction for implementation of climate goals and utilities were motivated to proactively find an innovative, more affordable approach than full electrification. The utilities worked together, shared data, and developed a collaborative analysis that provided the insights they needed to be able to design a new compensation tool for the gas utility. The result was significant emissions reductions at lower total cost to shared customers than otherwise would have been possible by working together. The program design includes a strong price signal for customers to optimize fuel use for efficiency. This price signal acts as a safeguard to preserve the benefits of the dual-fuel system for the utility system, customers, and societal perspective.

Key takeaways

- Electric and gas utilities are motivated to coordinate with government directives for dual-fuel and electrification
- Joint utility analyses led to development of an innovative compensation between the utilities nearly equalizes rate impacts for gas and electric customers for the impact of the program
- Electric rates increase significantly below a set point temperature, encouraging optimized dual-fuel system use

NW Interests

NW entities may look to this example for joint utility coordination, analysis, and program design for shared customers that achieves societal goals and fairly allocated costs, benefits and risks within the policy and market context

4. Conclusions and Recommendations

Dual-fuel systems can provide benefits that align with Northwest climate and energy policy goals. Yet, current adoption of dual-fuel technology only leverages a small percentage of the potential benefits to the Northwest. This outcome is not intentional but likely stems from historical lack of connectivity between gas and electric system planning, making the implementation of dual-fuel challenging. Tools to fund and design customer programs to encourage adoption of efficient energy use typically focus on single fuel savings, from the utility system perspective, not from customers' or society's multifuel perspective. The Northwest is not unique; many states and regions have a similar history. Policy and regulatory tools, in large part, separate long-term planning, costs and benefits across the patchwork of utility ownership and service territories and so opportunities that cross gas and electric systems, like dual-fuel, have not been widely explored .

Even for combined fuel utilities, there has not been a need for integrated planning or coordinating operations until now. All Northwest states are currently experiencing energy affordability crises and foresee resource adequacy challenges within 5 years. Washington and Oregon also have robust climate policies that layer on top of those concerns, requiring significant economy-wide emissions reductions at the same time. It's that differentiating factor that has led both states to rapidly begin to evolve their policy tools and it's within this relatively new context that the role of dual-fuel is already being explored.

A review of dual-fuel examples external to the Northwest informed a summary of policy framework attributes, the regulatory tools they employ to implement dual-fuel, and lessons learned that Northwest states may find of interest.

Research and interviews revealed consistent themes and attributes of external policy frameworks that enable dual-fuel systems:

- State or provincial climate policy was grounded in a government funded study out of which specific electric and gas utility requirements were added to statute or regulatory guidance to offer dual-fuel and electrification measures.
- Clear statutory or regulatory direction that allows for "efficient fuel switching" or "fuel substitution" to count as energy efficiency and/or decarbonization resources
- Collaboration between utilities is required, particularly where single fuel utilities operate in shared service territories
- The evolving nature of understanding how to implement and optimize dual-fuel is clearly reflected in the framework guidance. For example, the point that more data is needed to determine baselines, costs, benefits and risks for dual-fuel measures that will inform future revisions and adjustments to cost allocation is used to justify initial program offers for later evolution.
- Program budgets are allowed to include funding for customer education and contractor training.

In general, the policy frameworks serve to create connectivity between the electric and gas systems that had not existed before. New tools include fuel-neutral energy savings goals, winter heating rates for customers with primary electric heating, decoupling of sales from utility revenues, and GHG compliance payments between utilities. Dual-fuel measures are still relatively new and so lessons learned include the need for improving and ongoing contractor training and customer information as well as data tracking and sharing to better inform the next cycle of dual-fuel measures and role within larger state climate and energy goals.

Washington and Oregon are most similar to other areas where dual-fuel is growing. Emissions reduction benefits of dual-fuel can be monetized in these states to help make the business case along with total energy savings and avoided peak infrastructure costs. Both states are also working to advance joint gas and electric planning with WA leading the way with the first Integrated System Plan from PSE in 2027, although current dual-fuel measures are set to expire by 2031. Oregon is specifically working to add a dual-fuel measure in 2027. Both states have long term goals for shifting away from fossil fuels with strong preferences for electrification in new construction.

Idaho and Montana lack climate policy as a driver for considering dual-fuel but do value efficiency, customer affordability and energy system reliability. There is limited motivation for customers to consider dual-fuel as gas rates are the lowest in the nation, and the spread between gas and electric is twice that of Oregon and Washington.

Recommendations

It is not the intention of this report to recommend specific policy changes, but rather to recommend how to better identify and describe the value proposition for dual-fuel to the utility system, customers, and society. Combined with supporting market and technical information, these recommendations could support decision makers in evaluating the opportunity within their state-specific goals and priorities and then develop appropriate policy and regulatory changes to enable that value. Examples from external frameworks may inspire supporting policy and regulatory guidance for each state.

- Develop a high-level resource potential assessment for dual-fuel opportunities by state. The concept of dual-fuel is still relatively new to the Northwest. As WA and OR work to implement climate and energy policies with more coordination of gas and electric systems, there is a near term opportunity to evaluate the role of dual-fuel within that combined system context.

To start, a high level resource assessment of the opportunity for dual-fuel (technical, achievable, economic) by state by a neutral third-party organization with input from utilities, NEEA, and others would provide more transparency to this resource and bring all stakeholders into the discussion with access to the same information. State specific priorities, customer and market data would inform the assumptions to value the benefits

and risks. Technical potential would not be limited by existing policy constraints but achievable and economic potential would. A recent study from E3 found that hybrid heating could reduce regional resource adequacy ⁹⁶ by 7 GW by 2045. ^[OBJ] At that significant of a magnitude, this first level of assumption refinement and transparency by technical and state experts would help ground truth the potential impact and risks for each state.

Results from the dual-fuel resource potential assessment could then inform long-term planning processes (IRP and DSP) at the utilities, similar to how energy efficiency and demand response measures are integrated into long-term planning processes.

- Continue to gather insights and data from pilots and joint utility coordination in parallel to a potential study, continue to learn by doing and collect relevant project and market data to inform standardized measure design practices and design of new tools to conduct cost benefit analysis to inform cost benefit allocations across utility customers.
 - More data is needed to better inform measure assumptions and load forecasts. Experience with dual-fuel is growing but there is more to learn and integrate transparently with other planning decisions.
 - With more data and improved assumptions, cost allocation between gas and electric customers can be refined equitably.
- Education and information sharing

All interviewees mentioned the need for more education and information sharing. Although dual-fuel raises additional education needs, basic information on heat pumps and customer bill impacts and comfort are also relevant and needed. Experts shared that proper equipment selection and installation is critical to achieve savings and customer satisfaction along with traditional messaging that encourages pre-HVAC installation best practices for insulation and duct and air sealing.

 - Continue and expand contractor training to reinforce critical factors for heat pump installations and broaden to include dual-fuel considerations
- Build experience with least-regrets use cases

Find and focus first on the situations where energy savings, emissions reductions, winter peak impact avoidance and customer benefits exist.

 - For example, Oregon is planning to focus on the air conditioning replacement market where gas furnaces exist, a likely use case that delivers those key outcomes.

⁹⁶ The Resource Adequacy and the Energy Transition in the Pacific Northwest study from E3 [E3-NW-RA-Final-Report_040826.pdf](#) concluded that hybrid heating could reduce RA need up to 7 GW in 2045.

- Customer economics may be challenging with added electricity use. Exploring the impact and feasibility of other tools may help narrow highest value dual-fuel opportunities
 - Insulation and air/duct sealing first
 - Electric heating rate
 - Equipment incentives
 - Capability to optimize fuel use based on total cost of heating accounting for equipment efficiency for each fuel for by price
 - Emissions savings value to customer
- Explore targeting location specific constraints on the gas and electric distribution systems for high value applications of dual-fuel systems. Targeted electrification pilots are finding areas where costly new gas infrastructure can be avoided. Dual-fuel targeting may help defer near-term electric system upgrade costs by replacing inefficient air conditioners with heat pumps for summer cooling while not exacerbating winter peak constraints.
- Quantify the value proposition of real-time controlled fuel modulation
Continue to develop and test the functionality of controls enabling real-time, third-party ability to modulate between fuels, the cost and policy considerations of adding this functionality and quantification of scenarios to optimize system use, whether from customer, utility or societal perspective. This type of control technology is nascent, but more exploration could add significant value to justify investing in adding this capability.

NEEA Specific Recommendations

- Advance regional understanding of the technology to address varied definitions, interpretations and references.
- Help regulators and policy makers, utilities and all stakeholders better understand market and performance characteristics of dual-fuel systems to inform decision making by identifying and creating data sources to inform assumptions including;
 - Provide shared insights into market and equipment stock flow information that is needed to help advance development of DF measures. (e.g. market baseline, existing building stock, stock flows)
 - Develop information on costs, benefits and risks of increased adoption of dual-fuel systems from a societal and customer perspective in terms of state-specific priorities and existing policies to inform joint resource planning and understanding and development of new cross fuel tools and regulatory guidance for cost-effectiveness analysis and cost allocation.

- What is the resource potential? Help to ground truth the recent E3 projection of impact of hybrid heating on regional resource adequacy by 2045.
- Additional analysis may be needed when comparing dual-fuel to full electrification. What are the tradeoffs in terms of costs, benefits and risks of dual-fuel systems compared to full electrification? Pull together best practices for technology selection, recommended pre-installation upgrades, and any other important factors.
- Support program implementers and regional trade ally networks with expertise in training contractors with best practices for designing and installing systems and communicating the costs and benefits to customers. (The Montana example of DEQ focusing their resources on transforming the contractor market.)
 - Assist with creating coordinated standards for dual-fuel set up such as cross over temperatures or input for how to develop standardized system installations to optimize performance
- Smart controls valuation
 - Continue to develop this expertise and awareness of potential value
 - How to optimize settings and design a program?
 - What are the potential benefits of real-time modulation?
- Explore dual-fuel adoption on air conditioning replacement market by leveraging existing market transformation expertise to grow the heat pump cooling market through mid-stream efforts targeting households with existing gas furnaces.
- Dual-fuel equipment that is fully integrated or designed for new construction brings additional considerations due to the length of time they are likely to be in operation. Be prepared to discuss the advantage of these systems in new construction over options focused entirely on electric equipment..

Appendix A: Evolving Definitions for Dual-fuel

Fuel Switching Summary from State Assessments– Energy Efficiency Historical Context		
Entity	Definition and Guidance	Example
BPA	Fuel switching is defined as “...moving from electric to nonelectric”, not inclusive of moving from gas, propane or oil to electric. Fuel switching is not an allowable use of customer funds Customers with existing gas heating equipment are not eligible for electric heat pump incentives	Technical Reference Manual Heat pump measure eligibility restrictions
WA	Article 8, Section 10 of the Washington State Constitution prohibits financing to be used for any purpose that results in “a conversion from one energy source to another” specifically related to county, city and town governments and municipal utilities. Revised Code of Washington (RCW) 35.92.360⁹⁷ further clarifies that this prohibition pertains specifically to “substitution of one commercial energy supplier for another commercial energy supplier”. IOU regulatory guidance: Customer choice	PSE’s Dual-fuel rebate, funded through gas efficiency funds (at present small scale) Electrics offer customer choice incentives: Heat pump replacement incentives (incremental value of efficient equipment) Clark County PUD follows Customer choice
OR	OAR 860-027-0310(1), where "Conservation" is defined as any reduction in electric power or natural gas consumption as the result of increases in efficiency of energy use, production, or distribution and can include fuel switching. The rule further specifies that cost-effective fuel switching, defined as any substitution of one type of energy or fuel, is allowed. However, implementation of fuel switching is bounded by OAR 860-027-0310(2)(a)(A) stating that a utility should not have an incentive to pursue conservation past the point at which it is no longer cost-effective and that an energy utility should not be expected to pursue a course of action that involves an identifiable and sustained loss of profits IOU regulatory guidance: customer choice	Energy Trust ratepayer funding may offer HP incentives to gas heated homes based on customer choice (replacement) Energy Trust may use non ratepayer funds for electrification (Federal HEAR program funding), Earth Advantage administers HEAR for non-IOU

⁹⁷ <https://app.leg.wa.gov/rcw/default.aspx?cite=35.92.360>

ID	No explicit fuel switching limitations	Avista fuel conversion incentives for high electricity use customers to gas furnace RMP and Enbridge rebates to add heat pumps to existing gas for partial displacement of gas with electricity – tracked as efficiency
MT	No explicit fuel switching limitations	Electric load building not a motivating interest, capacity constraints Customer financial motivation may be to shift from electric to gas

Evolving Policy and Potential Roles and Funding of Dual-Fuel		
As a Building Decarbonization Measure for Gas Utilities?		
WA	CCA compliance	Y
	HB 1589 post 2030	N*
OR	CPP Compliance	Y
MT	N/A	
ID	N/A	
As a Capacity Resource for Electric Utilities?		
WA	Short term vs full electrification	TBD
	Long term – CETA by 2030	Not aligned w/CETA
OR	Short term vs full electrification	TBD
	Long term - HB 2021 by 2050	TBD (alternative gas ok?)
MT & ID	Short term - No electrification baseline nor economic motivation	
	Long term	TBD

*pending further regulatory guidance

Appendix B: List of Interviewed Organizations

- Avista Corporation
- Clark County Public Utility District
- Independent Electric System Operator (IESO) of Ontario
- Montana Department of Environmental Quality
- New Jersey Natural Gas
- Oregon Citizens Utility Board
- Oregon Public Utility Commissions
- Puget Sound Energy
- Rocky Mountain Power
- Washington Utilities and Transportation Commission
- Xcel Energy