

NEEA Cycle 7 Natural Gas Business Plan: Value Delivery for Puget Sound Energy

PREPARED FOR PUGET SOUND ENERGY BY:

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The Northwest Energy Efficiency Alliance (NEEA) is an alliance of more than 140 electric and natural gas utilities and energy efficiency organizations working on behalf of more than 13 million energy consumers. As a dual-fuel organization, NEEA is dedicated to accelerating both electric and natural gas energy efficiency, pooling resources and sharing risk to advance the adoption of energy-efficient products, services and practices.

As lawmakers and regulators in Washington explore pathways to achieving state decarbonization goals, NEEA has an important role to play in helping Puget Sound Energy navigate the clean energy transition by accelerating the development and adoption of efficient and affordable natural gas technologies and locking in those savings through codes and standards.

Cycle 7 Natural Gas Business Plan Overview

In 2015, NEEA began its first regional natural gas Market Transformation effort. At the time, very few efficient gas products were commercially available given the comparatively lower levels of investment in efficient natural gas products and programs versus electric. Over the last decade, NEEA's natural gas portfolio has been focused mostly on early stage emerging technologies and relationship development with market actors. In that time, NEEA has learned a lot about the challenges and opportunities related to natural gas Market Transformation and has continued to refine its approach and portfolio to find the highest value opportunities for the region.

In Cycle 7, NEEA's natural gas portfolio will grow from having only one program in the market to having three to four. The increased costs associated with running a larger and more mature portfolio along with inflation are reflected in an increased budget.

Value Delivery to Puget Sound Energy:

During the next business cycle (2025-2029), NEEA's natural gas efforts will benefit Puget Sound Energy's Natural gas customers by:

- Accelerating the adoption of efficient technologies with a focus on commercial, dual-fuel and fuel-neutral opportunities that bring added benefits such as peak load growth, resource adequacy, affordability and decarbonization. Programs that are in the market or under consideration include:

- Commercial efficient rooftop units, including measures that are fuel-neutral (apply to gas and electric-heated units) like energy recovery and box insulation, as well as dual-fuel heat pump units.
- Commercial gas water heating systems, which include highly efficient gas heat pumps as well as dual-fuel systems that include gas and electric components.
- Commercial high efficiency dedicated outdoor air systems that are designed to maximize energy recovery and minimize gas heating requirements.
- Residential dual-fuel heat pumps that reduce gas usage and mitigate peak load growth.
- Scanning for commercially available emerging technology opportunities, focusing on end-uses and market segments that are least likely or slower to electrify (e.g., efficient commercial laundry).
- Monitoring and engaging the new construction industry to 1) promote homebuilding and commercial construction practices that reduce energy use for all fuels 2) ensure awareness of the most efficient residential gas and dual-fuel options for homebuilders who are continuing to build gas heated homes 3) advance efficient gas and dual-fuel opportunities in commercial, 4) validate viable technologies for code proposals, and 5) track and report on code compliance and compliance pathways, including fuel options selected by builders.
- Gathering commercial, residential and multi-family regional building stock data to help the region identify additional opportunities for natural gas energy efficiency and provide critical inputs for market characterization and baseline studies (e.g., Commercial Building Stock Assessment and Residential Building Stock Assessment).
- Continuing engagement with critical market partners to ensure Northwest influence with technology developers and manufacturers as well as leverage investments from outside the region to maximize Puget Sound Energy investment.
- Undertaking research and outreach to understand which consumer segments are/ are not benefitting from NEEA's Market Transformation interventions and identify ways to accelerate the benefits of Market Transformation to all Northwest customers.
- Bringing regional stakeholders together, including gas and electric utilities, to collaborate and address shared energy system goals.

- Training, tools and resources to support the contractor base and increase the market’s ability to install, test and maintain energy-efficient products, services and practices.
- Collecting data and conducting market research and independent third-party evaluations that can be used to help Puget Sound Energy develop its own local efficiency programs.

Value Metrics

In Cycle 7, NEEA will estimate, track and report five- and ten-year energy savings to Puget Sound Energy, along with associated avoided carbon benefits. Five-year estimates are provided in Table 1.

Table 1 – Cycle 7 Business Plan Energy Savings Estimates

Cycle 7 Value Delivery	Source	Puget Sound Energy Estimate
5-year Energy Savings, Funder Share Estimate – Business Plan, March 2024	Natural Gas Portfolio	2.5 – 7.0 MM Therms
5-year Energy Savings, Service Territory Estimate – Current Forecast, Sept. 2024	Natural Gas Portfolio	0.4 – 1.5 MM Therms
	Dual-Fuel Heat Pumps	0.0 – 1.7 MM Therms
	Total 5-year Savings Value	0.4 – 3.2 MM Therms

In March 2024, NEEA’s Board approved the Cycle 7 Business Plan, with an estimated energy savings range of 6-17 MM Therms for the region. On a funder share basis, NEEA estimated energy savings for Puget Sound Energy between 2.5 – 7.0 MM Therms. Subsequently, Washington HB 1589 required NEEA to shift the focus of its Natural Gas portfolio away from residential programs toward more commercial, dual-fuel and fuel-neutral opportunities. In addition, the 2021 Washington energy code for both residential and commercial makes it currently more difficult to continue to use gas fuel in space and water heating to meet the more stringent code requirements. In September 2024, NEEA revised its five-year savings estimate to reflect these new considerations in the portfolio. The revised savings estimate for Puget Sound Energy’s service territory is based on the following assumptions:

Low Range Assumptions:

- No new construction with natural gas space and water heating.
- Time needed to build out new programs pushes savings into Cycle 8.

- Data to report energy savings is more difficult/ slower to access.

High Range Assumptions:

- A small portion of the market will continue to meet energy code levels using dual-fuel heat pumps for space heating in residential new construction meeting market desire for gas in homes.
- New programs are able to ramp in the early years of the cycle.
- Data for tracking and reporting is available.
- Does not include all program concepts being considered for Cycle 7 (e.g., commercial gas laundry is not included) or energy savings from the federal water heating standard.
- Does not include the market uptake of previous investments such as envelope and efficient gas water heaters.

Please note, since all of NEEA's natural gas programs are still in the early stages of Market Transformation, a large portion of the energy saving from Puget Sound Energy's Cycle 7 investment will not be fully realized during this business cycle.

Cycle 7 Budget

NEEA estimates that delivering on the focus areas described above will require **a five-year regional investment of approximately \$33.5 million**. Note: The Cycle 7 Business Plan reflects a 'do not exceed' budget of \$35.3 million. However, this estimate was revised downward after Washington House Bill 1589 was adopted and NEEA subsequently decided to remove residential efficient gas water heating from the portfolio. NEEA will adaptively manage the natural gas portfolio spend, reallocating or shifting the budget downwards as appropriate based on market conditions and technology evolution, as was done in NEEA's Cycle 5 business plan.

The current Cycle 7 budget estimate of **\$33.5 million** is 77% higher than the 2020-2024 budget due to:

- **Larger, more mature portfolio** – The Cycle 7 budget assumes between two and three natural gas funded programs in the market and additional staff to support this work. This portfolio growth is the result of NEEA's work to develop the technology pipeline for natural gas products that are now poised to enter active market development. In contrast, during the previous business cycle, NEEA had one program in market development and only for the last two years of the Cycle.

- Inflation** – Since the last business planning process was completed in 2018, the consumer price index has increased by approximately 20 percent. At the time of Cycle 7 business planning, forecasted inflation was expected to add another 8 percent by 2024, resulting in a loss of purchasing power of approximately 28 percent by January 2025. Actual CPI increases through August of 2024 are at an additional 6 percent, keeping in line with the projected pace of inflation. To recover some of its purchasing power, NEEA factored in a conservative estimate for inflation into the Cycle 7 budget across both the gas and electric portfolios.

Figure 1 – 2025-2029 Natural Gas Budget (source: NEEA Cycle 7 Business Plan)

Workstreams	Electric	Natural Gas	End-Use Load Research Project ¹⁰	Other Special Projects ¹¹	Total
Emerging Technology	17,733	3,027	0	0	20,760
Market Strategy and Execution	91,005	19,512	0	20,132	130,649
Codes & Standards	16,952	1,283	0	0	18,235
Analytics, Research & Evaluation	48,552	5,333	1,914	0	55,799
Convene & Collaborate	11,910	75	0	0	11,985
Administration (Shared Services)	36,789	0	0	0	36,789
Allocation of Shared Services ¹²	(11,141)	6,088	190	4,863	0
Total (All NEEA Core Activities)	211,800	35,316*	2,104	24,995	274,215

**The Cycle 7 natural gas budget was revised downward to \$33.5 million based on discussions with NEEA's Board of Directors and following the adoption of Washington House Bill 1589. This reduction is associated with NEEA removing efficient gas water heating and high-performance windows from the portfolio.*

Risk Mitigation & Uncertainty

The Cycle 7 business plan reflects NEEA's best estimate of future conditions while maintaining the alliance's ability to respond to changing conditions or embrace new opportunities during the business cycle. For example, recent legislative changes in Washington specifically impacting Puget Sound Energy have required NEEA to shift the focus of its Natural Gas portfolio toward more commercial, dual-fuel and fuel-neutral opportunities.

The business plan ensures this flexibility by:

- Continuing forward momentum in multiple products areas to keep a diverse set of options available (e.g., commercial gas heat pumps, gas equipment, dual-fuel, fuel-neutral opportunities).
- Practicing adaptive management to maximize value delivery to the region within available resources. This approach ensures that NEEA remains nimble and able to pivot to respond to market dynamics or embrace new opportunities.
- Maintaining existing Board and funder processes, which direct regional collaboration and coordination and ensure funder oversight should portfolio shifts or trade-offs be required.

In addition, NEEA has adopted a set of Board-approved principles to guide portfolio decision-making as the energy policy landscape continues to evolve throughout the business cycle. These principles, which were developed in partnership with NEEA's Board, are intended to maximize the ability for natural gas utilities to participate in the regional portfolio and benefit from regional energy savings.

Guiding Principles:

- The portfolio will increase market adoption of affordable energy efficiency solutions that result in reportable gas energy savings.
- All activities and programs will be designed to align with state policies and/ or other decarbonization efforts.
- The focus of the portfolio will shift toward commercial, dual-fuel, and fuel-neutral products, systems, and practices.
- Dual-fuel equipment is included in this portfolio and qualifies due to the increased end-use efficiency.

Should NEEA's investment in natural gas efficiency need to be significantly reduced in Cycle 7, NEEA will work with its Board to develop a strategy and timeline for divestment. In the case that regulatory requirements restrict funders' ability to receive reimbursement for their core investment, NEEA will coordinate with affected funders to conclude funding agreements in a timely fashion. In this event, NEEA's electric portfolio would be required to absorb a portion of shared administrative costs and co-funded regional research that are currently budgeted from natural gas.