

# Memorandum

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**FROM:** Christina Steinhoff, Principal Planning Analyst, NEEA

**SUBJECT:** Cascade Natural Gas 2023 Annual Savings Report for Washington

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NEEA is an alliance of utilities and energy efficiency organizations that pools resources and shares risks to transform markets toward energy efficiency that benefits consumers in the Northwest. The alliance works together to accelerate the innovation and adoption of energy-efficient products, services, and practices in the Northwest. By pooling together regional resources, NEEA:

- Leverages relationships with the Department of Energy, trade allies, and national and regional manufacturers to identify and advance new efficient technologies, product designs, test procedures, product specifications and standards to increase the availability and demand for energy-efficient products, services and practices,
- Conducts research and energy use analysis, market characterization studies, and stock assessments to help the region identify the best efficiency opportunities and inform utilities resource planning efforts,
- Defines and executes program strategies to remove market barriers leading to increased adoption of the most energy efficient products available,
- Builds relationships with midstream supply chain partners such as distributors, retailers, and trade allies to collect regional data and build market capability and infrastructure to increase availability within the Northwest of the most efficient products,

- Gathers, cleans, and analyzes sales, shipment, and distributor data to track markets and inform regional investment decisions.

NEEA's goal is to make energy efficiency a self-sustaining standard of practice in markets. Codes and standards are a core element of locking in that permanent market change, so NEEA works at state and national levels to influence more efficient building codes and equipment efficiency standards to save customers energy and ensure that Northwest needs are represented in the process.

Utilities, energy efficiency administrators, and the Regional Technical Forum all benefit from NEEA's work through knowledge sharing, the development of new energy efficiency measures, and the resulting market changes leading to energy savings.

NEEA reports these energy savings to Cascade Natural Gas as they develop over time. Because most programs in the gas portfolio are still in the early stages of Market Transformation, the savings are mostly comprised of early work on building energy codes. NEEA is focused on advancing new technologies, implementing strategies to remove market barriers and leveraging market opportunities to increase the adoption of new efficient products, which should lead to additional savings over time. The attached *Frequently Asked Questions* document provides an overview of this work.

NEEA tracks energy savings based on the work described as a lagging indicator of progress. This memo provides energy savings estimates for 2023. Details about baseline and technical assumptions are in the attached Excel spreadsheet. Please contact Christina Steinhoff at [csteinhoff@nea.org](mailto:csteinhoff@nea.org) with any questions.

## **2023 Savings Estimate Summary**

Cascade Natural Gas's share of the 2023 natural gas energy savings associated with NEEA's initiatives is 77,127 annual therms<sup>1</sup> (Table 1). To calculate the savings, NEEA removes an estimate of savings occurring from naturally occurring adoption based on baseline trends in the Northwest, and savings reported through regional local incentive programs. [Appendix A](#) provides more details about the calculation and allocation methodology.

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<sup>1</sup> Annual therms represent first-year savings and a sustained reduction in load.

**Table 1: 2023 Energy Savings\* (Annual Therms)**

Residential New Construction	Commercial New Construction	Products (Standards)	Total Savings
62,085	11,428	3,614	77,127

*\*Net Market Effects = Total Regional Savings - Local Program Savings - Baseline Savings*

## Regional Gas Savings Portfolio

NEEA is developing and advancing new energy efficiency measures to add to its savings portfolio. Annual gas savings will increase over time as programs in the portfolio advance into full-scale market development. Table 2 lists NEEA’s expectations for gas savings.

**Table 2: Savings Expectations**

Program	Products	Year Expected for Reporting*
Commercial Code	WSEC 2018	2021 (savings forecast phases out with adoption of WSEC 2021)
Residential Code	WSEC 2018	2021 (savings forecast phases out with adoption of WSEC 2021)
Efficient Rooftop Units	Efficient Rooftop Units	2022 (expected to ramp up in 2026/2027)
Products (Standards)	WA Commercial Kitchen Equipment, Commercial Boilers, Residential Gas Furnaces,	2021, 2023, 2029
High-Performance Windows*	ENERGY STAR version 7, where U-Factor ≤ 0.22	2025
Efficient Gas Water Heater*	Gas Heat Pump Water Heater	2025

*\*Years are pending program advancements.*

*The table above only includes programs that were in the portfolio for the whole year. Advanced Commercial Gas Water Heating was advanced in December of 2023 and other potential programs are expected to be part of the portfolio in Cycle 7 starting in 2025.*

## Appendix A: Methodology to Estimate Energy Savings

### Allocation Methodology

NEEA allocates code savings for gas measures using a state/service territory approach. NEEA models code savings rates by state and applies the state-level savings rates to state-level new construction square footage estimates from Dodge Data & Analytics and units from the U.S. Housing and Urban Development to calculate energy savings. NEEA allocates the state-level savings to service territories based on the utility's share of the state residential customers (Residential Codes) and commercial energy sales (Commercial Codes) from the Energy Information Administration (EIA-861).

**Table 3: State Code Savings Allocation Share for Cascade Natural Gas**

Sector	WA	OR	ID
Residential	15.84%	0.00%	0.00%
Commercial	17.02%	0.00%	0.00%

For voluntary programs, NEEA allocates regional savings (Idaho, Oregon, and Washington) using the utility's share of investment in NEEA's natural gas portfolio (Table 4).

**Table 4: Cascade Natural Gas Share of Regional Savings**

Business Plan	Share of NEEA's Regional Funding
2020-2024	9.22%

### Naturally Occurring Baseline

NEEA approximates the share of the savings that would have occurred without market intervention. To calculate these savings, NEEA forecasts the naturally occurring baseline adoption at the regional level for energy efficiency measures within each Market Transformation program. NEEA uses the best available data—historical sales data, industrial reports, market studies, etc. A third-party evaluation reviews the methodology as well as provides recommendations for adjustments. NEEA also presents the methodology and forecast to its Cost Effectiveness Advisory Committee, which includes funder representatives from each funder in the alliance, state regulators from across the region, and the Northwest Power and Conservation Council.

## Local Programs

NEEA avoids reporting savings from units already counted through local utility programs by subtracting an estimate of the incentives associated with NEEA's Market Transformation efforts. NEEA surveys its gas funders annually to estimate the overlap at the regional level and removes the utility's funder share of this overlap prior to reporting energy savings.

## Technical Assumptions

The technical assumptions are assumptions NEEA uses when calculating the savings rates such as hours of operation, HVAC interaction factors, and climate zone weights. NEEA uses the best available information such as regional stock assessments, the Regional Technical Forum, third-party research, and the 2021 Power Plan. NEEA also presents the assumptions to its Cost Effectiveness Advisory Committee.

The savings rate is measured against the energy consumption of the alternative. In cases where NEEA works on different efficiency levels of the same product, the savings rate is incremental to the lower efficiency measure. The resulting value represents the incremental energy savings of the measure in comparison to the alternative.