

What are the allowed uses of natural gas in residential buildings?

The use of natural gas equipment, except where used for space or water heating, has not been restricted as part of the changes to the WSEC-R. Natural gas may still be used for cooking, fireplaces, and as supplementary energy for electric heat-pump water and space heaters.

Space Heating - WSEC-R Section 403.13:

The energy code will now require that the primary system used for space heating be a heat-pump. Natural gas may be used for space heating where using a natural gas heat-pump. Natural gas may also be used for supplementary heat in accordance with WSEC-R Section 403.1.2.

Water Heating - WSEC-R Section 403.5.7

The energy code will now require that hot water be provided by heat pump equipment; however, this requirement only applies to one- or two-family homes and townhouses. Natural gas may be used for water heating in multi-family residential buildings. Natural gas may also be used for the operation of a natural gas heat-pump or for supplementary heat in accordance with WSEC-R Section 403.5.7.1. Heat trace freeze protection or snow/ice melt systems using natural gas will also still be permitted under the energy code.

What is supplementary heat?

Heat-pumps rely on pulling energy from the outdoor air and concentrating it into either a home or a hot water source. However, when it gets cold outside, these systems lose efficiency and performance; therefore, a supplementary source of heat is often required. Supplementary heat is a backup system where a secondary piece of heating equipment or energy source may be used. Commonly, the supplementary heat can be produced via electric resistance coils or through the installation of a conventional natural gas furnace.

To use natural gas as a supplementary heat source for space heating, the dwelling must have a thermostat with controls set to only use the natural gas system when the outdoor temperature is 40°F or lower. The supplementary furnace shall have a minimum thermal efficiency (Et) of 81%, although energy credits are available for units with an AFUE greater than 95%.

To use natural gas as a supplementary heat source for water heating, the heat-pump water heater must be incapable of meeting demand, be located in an unconditioned (exterior or unheated) space that is below 40°F, be operating in defrost mode, or where the heat pump malfunctions or loses power. [WSEC 403.5.7.1]



To learn more about the State of Natural Gas in Washington, including updates regarding development of the WA State Energy Code and additional resources available, please visit this QR Code.

How can I get in touch with Cascade staff for questions?

For questions related to the WA State Energy Code and how to comply:

Ty Jennings, Building Codes Specialist

Monday thru Friday 8am to 5pm PST

Ty.Jennings@CNGC.com

509-975-0154

For questions related to Cascade's Energy Efficiency Program:

Energy Efficiency Team Hotline

Monday thru Thursday 8am-5pm PST

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866-626-4479

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Frequently Asked Questions Regarding Natural Gas for the 2021 WA State Energy Code



In the Community to Serve®

Is there a ban on natural gas in new construction in Washington?

With the 2021 WA State Energy Codes (WSEC), the State Building Code Council (SBCC) has voted to approve limitations on the use of natural gas in both residential and commercial buildings in WA state effective July 1, 2023. These limitations, intended to reduce greenhouse gas emissions, generally prohibit the use of natural gas for space or water heating, unless complying with specific exemptions.

At the local level, there are restrictions on the use of natural gas space and water heating equipment in new commercial buildings, and for certain retrofits and remodel activities in some Washington cities, including Seattle and Bellingham.

What restrictions to the use of natural gas have been passed by the SBCC?

On April 22, the Washington State Building Code Council (SBCC) approved changes significantly limiting the use of natural gas in new and retrofitted commercial buildings. Effective July 1, 2023, new commercial construction in WA may not include natural gas equipment for space or water heat, with a few exceptions. Electric heat-pumps will be required to meet space and water heating needs. Electric receptacles must also be installed next to certain natural gas appliances in dwelling units (mostly applies to new multifamily buildings).

On November 7, the SBCC approved similar changes limiting the use of natural gas in new and retrofitted residential buildings. Effective July 1, 2023, new residential construction in WA is required to use heat-pumps - gas or electric - for both space and water heating. Natural gas remains an option for cooking, fireplaces, and may also be used as a backup, secondary energy source.

Commercial vs. Residential: Which category does my multi-family project fall under?

The WA State Residential Energy Code (WSEC-R) applies to one-family, two-family, townhouses, and smaller multi-family buildings. Multi-family buildings only fall under commercial energy code provisions if they are greater than 3-stories tall, or where access to units is through an interior common space.

Are there incentives available to build new high-efficiency construction utilizing natural gas?

Yes. Cascade's Energy Efficiency department is pleased to offer a suite of rebates for energy efficiency upgrades to new residential and commercial natural gas buildings. These include rebates for ENERGY STAR® and Built Green certified homes. All residential new homes incentives can be found on our website. Commercial buildings incentives, including custom options, are available as well.

To apply for or to learn more about the available energy efficiency rebates, please visit the QR code or website listed below:



www.cngc.com/energy-efficiency

What are the allowed uses of natural gas in new commercial buildings?

The use of natural gas equipment other than natural gas space and water heating equipment in commercial buildings has not been restricted as part of the recent WSEC-C. However, a new electric connection must be placed next to any natural gas range, cooktop, oven, clothes dryer, or water heater in dwelling units within a new multifamily building.

Allowed uses of natural gas space and water heating equipment in new commercial buildings and retrofit/remodel scenarios are as follows:

All Regions:

- Natural gas as equipment other than space and water heat [Exc. to C403.1]
- Small systems that account for less than 5% of the total building heating capacity for conditioned floor area (natural gas fireplaces) [Exc. 8, C403.1.4]
- Natural gas for industrial processes [Exc. to C403.1]
- Buildings served by existing district energy systems [Exc. 11, C403.1.4 and Exc. 4, C404.2.1]
- Institutional Group I-2 and Group I-3 occupancies required to have full emergency back-up systems [Exc. 18, C403.1.4 and Exc. 7, C404.2.1]
- Replacement of steam boilers [Exc. 5, C503.4.6]
- Retrofits/renovations in existing buildings for HVAC systems where compliance “would trigger an unplanned utility electrical service upgrade” [Exc. 6, C503.4.6]
- Like-for-like replacements for failing space heating equipment that requires immediate replacement and where no other HVAC work is planned [Exc. 7, C503.4.6]
- Like-for-like replacements for a single fuel-fired service water heating appliance with a unit that is the same type and has the same or higher efficiency and the same or lower capacity [Exc. 1, C503.5]
- Replacements of natural gas storage water heaters with an input of 75,000 Btu/h or less [Exc. 2.2, C503.5]
- Replacement of natural gas instantaneous water heaters with an input of 200,000 Btu/h or less and 2 gallons or less of storage [Exc. 2.3, C503.5]
- Instances where the code official determines that existing building constraints make compliance technically infeasible for water heating [Exc. 3, C503.5]
- Hospitals, research facilities and other buildings where natural gas is required for “specific needs that cannot practicably be served by heat pump or other space heating systems.” where approved by the code official. [Exc. 9, C403.1.4]
- Natural gas may also be used to supplement electric heat pump water heaters. The heat pump must meet 50% of a building's water heating needs. [C404.2.1.1]

SBCC Zone 5 (East of the Mountains):

- Auxiliary heating for air-to-water heat pumps [Exc. 6, C403.1.4]
- Kitchen make-up air tempering [Exc. 10, C403.1.4]
- Dedicated outdoor air system energy recovery ventilator (ERV) auxiliary heat [Exc. 16, C403.1.4]

What counties served by Cascade Natural Gas are included in SBCC Zone 5?

Cascade serves the following counties in SBCC Zone 5:

- Adams
- Benton
- Chelan
- Douglas
- Franklin
- Grant
- Walla Walla
- Yakima