

Natural Gas in the 2021 WA State Commercial Energy Code: When is Natural Gas permitted?

With the 2021 WA State Energy Code (WSEC), the State Building Code Council (SBCC) has voted to approve limitations on the use of natural gas in commercial buildings in Washington 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. This poster presents to the user, code compliant pathways for the use of natural gas in commercial projects.



New

Construction

(Ch. 4)

To learn more about policies impacting the use of natural gas in Washington State, scan this QR code

HVAC heating shall not be provided by natural gas combustion appliances unless meeting one of the following exceptions. (C403.1.4)

Service hot water shall not be provided by natural gas combustion appliances unless meeting one of the following exceptions. (C404.2.1)

Climate Zone 5 includes Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield,

Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend

Oreille, Skamania, Spokane, Stevens, Walla Walla,

(C505.1, C505.3, and C505.4)

Zone 5 (C403.1.4, Exception #6)

Small systems (C403.1.4, Exception

Air-to-water heat pumps in Climate

Specific conditions (C403.1.4,

Exception #9)

Kitchen make-up air in Climate Zone

5 (C403.1.4, Exception #10)

District Energy (C403.1.4, Exception

DOAS ERV auxillary heat in Climate

Zone 5 (C403.1.4, Exception #16)

Low-carbon district energy systems

(C403.1.4, Exception #17)

Essential facilities ((C403.1.4,

Exception #18)

Supplamental service water heating

equipement per Section C404.2.1.4

Exceptions to mandatory heat pump

water heating

Natural gas auxiliary heating to supplement heat pump heating for hydronic heating systems. Must comply with conditions 6.1, 6.2, and 6.3 of C403.1.4.

Natural gas appliances, including decorative appliances, that either provide less than 5% of total building HVAC system heating capacity or serve less than 5% of the conditioned floor area.

Portions of buildings that require natural gas space heating for specific conditions approved by the code official for research, health care, process or other specific needs that cannot practicably be served by heat pump or other space heating systems. (Not a blanket exception for any occupancy type)

Make-up air for commercial kitchen exhaust systems required to be tempered by Section 508.1.1 of the International Mechanical Code is permitted to be heated by using natural gas.

Steam or hot water district energy systems that utilize natural gas as their primary source of heat energy, that serve multiple buildings, and that were already in existence prior to the effective date of this code, including more energy-efficient upgrades to such existing systems, are permitted to serve as the primary heating energy source.

Dedicated outdoor air systems with energy recovery ventilation are permitted to utilize natural gas for auxiliary heating to preheat outdoor air for defrost or as auxiliary supplemental heat to temper supply air to 55°F or lower for buildings or portions of buildings that do not have hydronic heating systems.

Low-carbon district energy systems that meet the definitions of low-carbon district energy exchange system or low-carbon district heating and cooling or heating only systems.

Groups I-2 and I-3 occupancies that by regulation are required to have in place redundant emergency backup systems.

C404.2.1, Exception #4 - Service hot water systems served by a district energy system that serves multiple

buildings and that was in service before the effective date of this code.

The primary heat pump system shall be sized per C404.2.1.1 and the supplemental water heating equipment

shall comply with C404.2.1.4.

C404.2.1, Exception #6 - Systems connected to a low-carbon district energy exchange system or a low-carbon district heating and cooling or heating only system.

C404.2.1, Exception #7 - Essential facilities. Groups I-2 and I-3 occupancies that by regulation are required to have in place redundant emergency backup systems.

(C505.3/C505.4.3/C505.4.3)



2002 to a commercial use or occupancy