What are the Requirements?
Section C403.2.4 prohibits fossil-fuel warm air furnaces and electric resistance space heating equipment for commercial and multifamily permits submitted after January 1st, 2024. Prohibited HVAC systems include, but are not limited to:

- Residential gas furnaces
- RTUs with gas heating
- DOAS or MAU with gas heating
- Fan coils with electric resistance heating
- PTAC/VTACs with electric resistance heating.

There are several exceptions including:

- Emergency power or standby power.
- Makeup air systems where ERV is prohibited by Denver Mechanical Code, where the system is 100% makeup air, and all makeup air is used where ERV is prohibited.
- Electric resistance in buildings that comply with performance paths Section C407, Appendix SE or Appendix PT.
- Electric resistance used for heat pump supplementary heat.
- Electric resistance up to 5 W/sf.
- Gas furnaces or electric resistance in heated plenums.
- Replacement gas-fired furnaces that comply with section C503.3.3. Like for like replacements of gas-fired furnaces cannot use quick permits as of March 1, 2023.
- Replacement of electric resistance space heating equipment with the same kW input as the equipment being replaced.
- Temporary electric resistance heating for freeze protection before a certificate of occupancy.

Systems that can remain gas-fired:

- Unit heaters
- Radiant heaters
- Boilers
- Supplementary heat when an existing gas-fired furnace is replaced with a heat pump and C403.4.1.1 is met.

How Does this Apply to Your Project?
Project teams will need to design systems that do not include the prohibited natural gas and electric resistance systems in C403.2.4. Electric heat pump systems with low ambient temperature operation (cold climate heat pumps) can replace fossil fuel and electric resistance heating equipment in a one-for-one replacement scenario. Entirely different systems may be more desirable for projects and should be explored in early design.

Why is this Important?
The goal of C403.2.4 is to align new system requirements in the Denver Energy Code with the existing building partial electrification requirements in the Municipal code and to take advantage of the work Xcel Energy is doing to reduce carbon emissions in our electric grid. Xcel’s goal is to reduce grid emissions by 85% by 2030. All-electric buildings will emit fewer emissions as the grid gets cleaner over time.

Complying with this requirement helps buildings 25,000 sq. ft and larger achieve their building performance targets. These buildings can also receive a 10% adjustment on their Energize Denver building performance target if they are at least 80% electrified. Learn more about the Energize Denver Performance Requirements at denvergov.org/energizedenver.

What is the Climate Impact?
The 2022 Denver Energy Code will reduce operational carbon emissions for commercial new construction by 15% over the 2021 IECC. C403.2.4 is projected to reduce the operational carbon emissions by 4.6%. C403.2.4 also requires electrification which closely aligns with Denver’s climate goals.

Email energy.review@denvergov.org with questions.