Code Amendment Proposal Form

For public amendments proposed to the 2021 editions of the International Codes

Instructions: Upload this form and all accompanying documentation. If you are submitting your proposal on a separate sheet, make sure it includes all information requested below.

All proposals must be received by **July 23, 2021.**

CONTACT INFORMATION

Name: **Date:**

Phone: **E-mail:**

Organization or Representing Self:

By signing below, I hereby grant and assign to City and County of Denver all rights in copyright I may have in any authorship contributions I make to City and County of Denver in connection with this proposal. I understand that I will have no rights in any City and County of Denver publications that use such contributions in the form submitted by me or another similar form and certify that such contributions are not protected by the copyright of any other person or entity.

Signature:

AMENDMENT PROPOSAL

Please use a separate form for each proposal.

1) Code(s) associated with this proposal. Please use acronym: **IECC**

If you submitted a separate coordination change to another code, please indicate which code: _____

Acronym	Code Name
DBC-AP	Denver Building Code–Administrative Provisions
DBC-*xxxx*	Denver Building Code–*xxxx (code)* amendments (e.g., DBC-IBC, DBC-IEBC)
IBC	International Building Code
IEBC	International Existing Building Code
IECC	International Energy Conservation Code

Acronym	Code Name
IFC	International Fire Code
IFGC	International Fuel Gas Code
IRC	International Residential Code
IMC	International Mechanical Code
IPC	International Plumbing Code
DGC	Denver Green Code

2) Please check here if a separate graphic file is provided: ☐
Graphics may also be embedded within your proposal below.

3) Use this template to submit your proposal or attach a separate file, but please include all items requested below in your proposal. The only formatting needed is **BOLDING**, ~~STRIKEOUT~~ AND UNDERLINING. Please do not provide additional formatting such as tabs, columns, etc., as this will be done by CPD.

Code Sections/Tables/Figures Proposed for Revision:

C403.2 System design *(Modify the section)*
C403.2.4 Space heating equipment *(Add new section)*
C403.4.1.1 Heat pump supplementary heat *(Modify the section)*

Proposal:

Add definitions as follows:

EMERGENCY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection and ventilation systems in the event of a failure of the primary power. Emergency power systems are required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

STANDBY POWER SYSTEM. A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

Modify the section as follows:

C403.2 System design. Mechanical systems shall be designed to comply with Sections C403.2.1 through ~~C403.2.3~~ C403.2.4. Where elements of a buildings mechanical systems are addressed in Sections C403 through C403.14, such elements shall comply with the applicable provisions of those sections.

Add new section as follows:
Effective January 1st, 2024: Permit applications submitted to the Agency after January 1st, 2024, shall comply with section C403.2.4.

C403.2.4 Space heating equipment. Fossil-fuel warm air furnaces and electric resistance space heating equipment shall not be permitted to be used for space heating.

Exceptions:

1. Where it has been demonstrated to the *code official* that the *building* is required by an applicable law or regulation to provide space heating with an *emergency power system* or a *standby power system*
2. Make-up air systems where energy recovery ventilation is prohibited by the IMC
3. Electric resistance in *buildings* that comply with Section C407 or Appendix TE
4. Electric resistance heat used for supplementary heat in accordance with Section C403.4.1.1
5. Up to 5 W of electric resistance space heating per square foot of *conditioned floor area* in the *building*, not including supplementary heat.
6. Electric resistance heating elements integrated into heat pump equipment
7. Replacement gas-fired furnace equipment that complies with section C503.3.3.

Modify the section as follows:

C403.4.1.1 Heat pump supplementary heat. Heat pumps having supplementary ~~electric resistance~~ heat systems, shall have controls that limit supplementary heat operation to only those times when one of the following applies:

1. The vapor compression cycle cannot provide the necessary heating energy to satisfy the thermostat setting.
2. The heat pump is operating in defrost mode.
3. The vapor compression cycle malfunctions.
4. The thermostat malfunctions.

Supporting Information:

Purpose:

To align the requirements for electrification of space conditioning for new construction in 2022 with those set for existing buildings for 2025 in Energize Denver..

Energize Denver Reference:

(1) When a gas-fired warm air furnace located outside a building is proposed to be replaced with a new gas-fired warm air furnace, the new gas-fired warm air furnace may only provide supplementary heat, and the primary heating system shall be electric.

(2) When a unitary air conditioner or condensing unit serving a heated space is proposed to be replaced, the unit shall include electric equipment capable of providing space heating, and any other heating equipment serving the space shall be reconfigured to provide only supplementary heat.

Bibliography:

City and County of Denver, "Denver Renewable Heating and Cooling Plan," 2021, https://www.denvergov.org/Government/Departments/Climate-Action-Sustainability-Resiliency/Initiatives/High-Performance-Buildings-and-Homes/Renewable-Heating-Cooling

RMI, "All Electric Homes: A Win for the Climate and the Economy," 2018, https://rmi.org/all-electric-new-homes-a-win-for-the-climate-and-the-economy/

Community Energy, Colorado Building Electrification Report, 2020, https://www.communityenergyinc.com/COelec

Pragmatists for Clean Air, 2021, https://pragmatistsforcleanair.org/progress

Referenced Standards:

N/A

Impact:

Note: Discuss the impact of this proposal in this section AND indicate the impact of this amendment proposal for each of the following:

- The effect of the proposal on the cost of construction: ☐ Increase ☐ Reduce ☐ No Effect
- The effect of the proposal on the cost of design: ☐ Increase ☐ Reduce ☐ No Effect
- Is the proposal more or less restrictive than the I-codes: ☐ More ☐ Less ☐ Same

Departmental Impact: (To be filled out by CPD staff)

Note: CITY STAFF ONLY. Discuss the impact of this proposal in this section AND indicate the impact of this amendment proposal for each of the following:

- The effect of the proposal on the cost of review: ☐ Increase ☐ Reduce ☐ No Effect
- The effect of the proposal on the cost of enforcement/inspection: ☐ Increase ☐ Reduce ☐ No Effect