

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: _____

<u>Acronym</u>	<u>Code Name</u>	<u>Acronym</u>	<u>Code Name</u>
DBC-AP	Denver Building Code–Administrative Provisions	IFC	International Fire Code
DBC-xxx	Denver Building Code–xxx (code) amendments (e.g., DBC-IBC, DBC-IEBC)	IFGC	International Fuel Gas Code
IBC	International Building Code	IRC	International Residential Code
IEBC	International Existing Building Code	IMC	International Mechanical Code
IECC	International Energy Conservation 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:

C404.10 Water heating equipment (Add new section)

Proposal:

Add new sections as follows:

C404.10 Water heating equipment. Fossil fuel and electric resistance instantaneous and storage water heating equipment shall not be used to provide service hot water in new *buildings*.

Exceptions

1. Resistance heating elements integrated into heat pump water heating equipment.
2. Electric resistance elements used for recirculation loop temperature maintenance.
3. Electric storage water heaters with a rated water storage volume no greater than 20 gallons.
4. Instantaneous electric water heaters located within 10 feet of the point of use.
5. Hot water storage tanks.
6. Electric resistance equipment where not less than 100 percent of the annual service water-heating requirement is provided by an *on-site renewable energy system* not used to meet any other provision of this code.
7. Water heating systems that serve end-uses that require water temperature of 141°F (55°C) or hotter.
8. Electric resistance storage water heating equipment in *buildings* where not less than 75% of the annual service water heating requirement is met by a solar thermal system.
9. *Buildings* that comply with Section C407 or Appendix ET.

Supporting Information:

Reference to Energize Denver

- (3) When a storage water heater or instantaneous water heater is proposed to be replaced, it shall be replaced with an electric water heater.
- (4) The electrification requirements of subsections (c)(1) – (3) above may be met by a heat pump or by electric resistance space or water heating equipment. If the electrification requirements are met by electric resistance space or water heating equipment, then the system shall be provided with an onsite renewable energy system sized to provide not less than 100 percent of the annual energy use of the electric resistance space or water heating equipment, with the following exceptions: an onsite renewable energy system is not required where heat pumps are not available for that system type, or where new electric resistance equipment is replacing existing electric resistance equipment. An onsite renewable energy system used to comply with this section shall not be used to meet any other regulatory requirement.

Purpose:

Move Denver towards its community-driven climate goals, health goals, and affordability goals through the use of clean, highly-efficient, cost-effective, and all-electric technologies.

Reason and Substantiation:

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