



DENVER AMENDMENT PROPOSAL FORM FOR PROPOSALS TO THE 2019 DENVER BUILDING CODE AMENDMENTS AND THE 2021 INTERNATIONAL CODES

DENVER
THE MILE HIGH CITY

2021 CODE DEVELOPMENT CYCLE

1) **Name:** Courtney Anderson **Date:** 10/12/2021
Email: Courtney.Anderson@denvergov.org; **Representing (organization or self):**
City Staff Proposal (check box):

2) One proposal per this document is to be provided with clear and concise information.

Is a separate graphic file provided (“X” to answer): ___ Yes or No

3) Highlight the code and acronym that applies to the proposal

<u>Acronym</u>	<u>Code Name</u>	<u>Acronym</u>	<u>Code Name</u>
DBC-AP	Denver Building Code–Administrative Provisions	IPC	International Plumbing Code
IBC	International Building Code	IRC	International Residential Code
IECC	International Energy Conservation Code	IFGC	International Fuel Gas Code
IEBC	International Existing Building Code	IMC	International Mechanical Code
IFC	International Fire Code	DGC	Denver Green Code

AMENDMENT PROPOSAL

Please provide all the following items in your amendment proposal.

Code Sections/Tables/Figures Proposed for Revision:

Instructions: If the proposal is for a new section, indicate (new), otherwise enter applicable code section.
 C406.2

Proposal:

Instructions: Show the proposal using ~~strikeout~~, underline format.

Place an “X” next to the choice that best defines your proposal: Revision New Text Delete/Substitute Deletion

Add the following sections and renumber the following equations:

C406.2.6 More than ten percent heating efficiency improvement. Where equipment exceeds the minimum annual heating efficiency requirements by more than 10 percent, energy efficiency credits for heating may be determined using Equation 4-13, rounded to the nearest whole number. Where multiple heating performance requirements are provided, the equipment shall exceed the annual energy requirement, including HSPF and COP.

$$\underline{EEC_{HEC} = EEC_{10} \times [1 + ((HEI - 10 \text{ percent}) / 10 \text{ percent})]} \quad \text{(Equation 4-13)}$$

Where:

EEC_{HEC} = energy efficiency credits for heating efficiency improvement

EEC₁₀ = C406.2.3 credits from Tables C406.1(1) through C406.1(5)

HEI = the improvement above minimum heating efficiency requirements

Supporting Information (Required):

All proposals must include a written explanation and justification as to how they address physical, environmental, and/or customary characteristics that are specific to the City and County of Denver. The following questions must be answered for a proposal to be considered.

- Purpose: What does your proposal achieve?

This proposal would create an additional points option for heating equipment that has even higher efficiency than the higher efficiency level currently in C406.2.3.

- Reason: Why is your proposal necessary?

C406 has an additional credit option for cooling equipment that has a higher rated efficiency than the basic high-performance cooling credit option, but there is no similar credit option for heating equipment. With the heating loads driven by Denver's climate, even in commercial buildings, heating equipment efficiency plays a major role in total building performance. Additionally, high performance heat pump equipment (including low-temperature models) has rapidly advanced in the last few years, offering the market more high-performance options for heating equipment, particularly in smaller commercial buildings. For example, even though C406 only offers credit for heating equipment that exceeds federal minimums by 10% even though there are currently heat pumps available that exceed federal minimums by over 20%.

- Substantiation: Why is your proposal valid? (i.e. technical justification)

The proposal creates a mirror to the existing credit option for cooling equipment tht is more than 10% more efficient than federal minimums.

Bibliography and Access to Materials (as needed when substantiating material is associated with the amendment proposal):

None

Other Regulations Proposed to be Affected

***For proposals to delete content from the 2019 Denver Green Code in conjunction with adding it to other mandatory Denver codes and/or regulations, only.**

Please identify which other mandatory codes or regulations are suggested to be updated (if any) to accept relocated content.

None

Referenced Standards:

List any new referenced standards that are proposed to be referenced in the code.

None

Impact:

How will this proposal impact cost and restrictiveness of code? ("X" answer for each item below)

Cost:

The proposal will reduce the cost of construction by allowing projects to claim compliance credit for higher efficiencies.

Cost of construction: Increase ___ Decrease ___ No Impact
Cost of design: ___ XIncrease ___ Decrease ___ No Impact
Restrictiveness: ___ XIncrease ___ Decrease ___ No Impact

Departmental Impact (City use only):

This amendment proposal increases/decreases/is neutral to the cost of plans review.

This amendment increases/decreases/is neutral to the cost of inspections.