

Add Gas Heat Pumps to C406 (2263)

IECC: C406.2.2.2.3 (New)

Proponents: Gary Heikkinen, Gary W Heikkinen Energy Consulting, American Gas Association (gary.heikkinen@nwnatural.com)

2024 International Energy Conservation Code [CE Project]

Add new text as follows:

C406.2.2.2.3 N/A. 1. Gas-fired heat pumps shall exceed a minimum efficiency of 1.0 COP at 47 deg F outdoor air temperature when tested and rated in accordance with ANSI Z21.40.4-CSA 2.94. The energy efficiency credits for heating shall be determined using Equation 4-XX rounded to the nearest whole number. $EEC_{HEH} = EEC_{H5} \times (GHPCOP / GHPCOP_{min})$ **Equation 4- XX** where: EEC_{HEH} = Energy efficiency credits for heating efficiency improvement. EEC_{H5} = **Section C406.2.2.2** credits from **Tables C406.2(1) through C406.2(9)**. GHPCOP = Gas-fired heat pump COP at 47 deg F as tested and rated in accordance with CSA/ANSI Z21.40.4-CSA 2.94. $GHPCOP_{min}$ = 1.0 COP at 47 deg F as tested and rated in accordance with CSA/ANSI Z21.40.4-CSA 2.94

Reason: This proposal adds an option for Gas-Fired Heat Pumps. There are a number of gas-fired heat pumps in the market today with more in development. GFHPs have efficiencies above 1.0 COP and up to 1.4 COP. They provide another good option for the credits table.

Cost Impact: The code change proposal will neither increase nor decrease the cost of construction. This proposal simply adds another option to the Additional Energy Efficiency Credits table and will have minimal impact on the cost of construction.

Cost Impact (Detailed): Increase

Estimated Immediate Cost Impact:

This proposal simply adds an option to the Additional Energy Efficiency Credits table and any cost increase would be minimal.

Estimated Immediate Cost Impact Justification (methodology and variables):

This proposal simply adds an option to the Additional Energy Efficiency Credits table and any cost increase would be minimal.