

2024 IECC

NBI has submitted proposals into the ICC process to advance the 2024 IECC. The proposed amendments cover a wide range of measures and improve the code by adding additional efficiency, clarifying requirements, and creating greater flexibility for code users and local jurisdictions. Learn more at newbuildings.org/code_policy/2024-iecc-national-model-energy-code-base-codes.

Code Change Title: Commercial Decarbonization CEPI-22-21

Summary: Requires all new construction be all-electric.

Add new definitions as follows:

ALL-ELECTRIC BUILDING. *A building that contains no combustion equipment, or plumbing for combustion equipment, installed within the building, or building site.*

APPLIANCE. *A device or apparatus that is manufactured and designed to utilize energy and for which this code provides specific requirements.*

COMBUSTION EQUIPMENT. *Any equipment or appliance used for space heating, service water heating, cooking, clothes drying, or lighting that uses fuel gas or fuel oil.*

COMMERCIAL COOKING APPLIANCE. *Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances include deep fat fryers, upright broilers, griddles, broilers, steam-jacketed kettles, hot-top ranges, under-fired broilers (charbroilers), ovens, barbecues, rotisseries, and similar appliances. For the purpose of this definition, a food service establishment shall include any building or a portion thereof used for the preparation and serving of food.*

EQUIPMENT. *Piping, ducts, vents, control devices and other components of systems other than appliances that are permanently installed and integrated to provide control of environmental conditions for buildings. This definition shall also include other systems specifically regulated in this code.*

Revise text as follows:

C401.2 Application. Commercial buildings shall be all-electric buildings and shall comply with Section C401.2.1 or C401.2.2.

Revise text as follows:

C404.9.1 Heaters. The electric power to all heaters shall be controlled by an on-off switch that is an integral part of the heater, mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater in a location with ready access. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be ~~equipped with continuously burning ignition pilots~~ permitted.

Revise text as follows:

C405.4.3 Gas lighting. Gas-fired lighting appliances shall not be ~~equipped with continuously burning pilot ignition systems~~ permitted.

Revise tables as follows:

Table C406.1(1) Additional Energy Efficiency Credits for Group B Occupants

Climate Zone:	0A & 1A	0B & 1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
C406.7.3: Efficient fossil fuel water heater	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C406.1(2) Additional Energy Efficiency Credits for Group R and I Occupancies

Climate Zone:	0A & 1A	0B & 1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
C406.7.3: Efficient fossil fuel water heater	5	5	6	6	8	7	8	8	8	9	9	9	10	10	9	10	11

Table C406.1(3) Additional Energy Efficiency Credits for Group E Occupancies

Climate Zone:	0A & 1A	0B & 1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
C406.7.3: Efficient fossil fuel water heater	NA	1	1	1	1	1	1	2	2	3	2	3	2	3	3	3	5

Table C406.1(4) Additional Energy Efficiency Credits for Group M Occupancies

Climate Zone:	0A & 1A	0B & 1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
C406.7.3: Efficient fossil fuel water heater	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table C406.1(5) Additional Energy Efficiency Credits for Other* Occupancies

Climate Zone:	0A & 1A	0B & 1B	2A	2B	3A	3B	3C	4A	4B	4C	5A	5B	5C	6A	6B	7	8
C406.7.3: Efficient fossil fuel water heater	5	5	6	6	8	7	8	8	8	9	9	9	10	10	9	10	11

Delete section without substitution:

~~**C406.7.3 Efficient fossil fuel water heater.** The combined input capacity weighted average equipment rating of all fossil fuel water heating equipment in the building shall be not less than 95 percent Et or 0.95 EF. This option shall receive only half the listed credits for buildings required to comply with Section C404.2.1.~~

In order to meet President Biden’s 2050 goal of reducing greenhouse gas emissions in half by 2030 and achieving net zero carbon emissions by 2050, the United States must not only reduce energy use through energy efficiency and move to utility scale and on-site renewable energy, but also transition away from using combustion equipment in buildings that runs on fossil fuels to electric equipment. In 2020, combustion equipment in commercial and residential buildings accounted for 36% of the United States energy-related greenhouse gas emissions. To meet President Biden’s goal, it is crucial that new buildings built today are all-electric so that emissions from these buildings are not “locked-in” by gas-dependent building infrastructure.

Requiring all-electric construction as described above will result in new construction that is less expensive to construct than a building constructed with gas appliances and in the long term will result in fewer retrofit costs for building owners to meet future policy goals to eliminate all carbon emissions in the U.S. by 2050.