**Electric-Ready Mandate and All-Electric Appendix Proposal**

**Add new text as follows:**

**C103.2.2 Electrification system**. The construction documents shall provide details for additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.

**Revise text as follows:**

**C105.2.5 Electrical system.** Inspection shall verify lighting system controls, components, ~~and~~ meters, and additional electric infrastructure as required by the code, approved plans and specifications.

**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 and/or lighting that uses *fuel gas* or *fuel oil*.

**COMMERCIAL COOKING APPLIANCES.**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.

**FUEL GAS.**A natural gas, manufactured gas, liquified petroleum gas or a mixture of these.

**FUEL OIL.** Kerosene or any hydrocarbon oil having a flash point not less than 100°F (38°C).

**MIXED-FUEL BUILDING.**A *building* that contains *combustion equipment* or includes piping for such *equipment*.

**Revise text as follows:**

**C402.1.1 Low energy buildings and greenhouses.** The following low-energy buildings, or portions thereof separated from the remainder of the *building-*by*-building* *thermal envelope assemblies* complying with this section shall be exempt from the building thermal envelope provisions of Section C402.

1. Those containing *no combustion equipment* with a peak design rate of energy usage less than 3.4 Btu/h·ft2 (10.7 W/m2) or 1.0 watt/ft2 of floor area for space conditioning purposes.

**C402.1.1.1 Greenhouses.** Greenhouse structures or areas containing no *combustion equipment* that are mechanically heated or cooled and that comply with all of the following shall be exempt from the building envelope requirements of this code:

**C402.1.2 Equipment buildings.** Buildings that comply with the following shall be exempt from the building thermal envelope provisions of this code:

6. Contain no *combustion equipment.*

**Revise text as follows:**

**C405.5.3 Gas lighting.** Gas-fired lighting appliances shall not be ~~equipped with continuously burning pilot ignition systems~~ permitted.

**Add new text as follows:**

**C405.16 Additional electric infrastructure.** Buildings that contain *combustion*

*equipment* and end-uses shall be required to install electric infrastructure in accordance with this section*.*

**C405.16.1 Electric infrastructure for dwelling and sleeping units.** *Combustion equipment* and end-uses serving individual *dwelling units*or *sleeping units* shall comply with Section R404.6*.*

**C405.16.2 Combustion space heating.** Spaces containing *combustion equipment* for space heating  shall comply with either C405.16.2.1 or C405.16.2.2

**C405.16.2.1 Low-capacity heating.** Spaces containing warm-air furnaces with a capacity less than 225,000 Btu/h and gas- and oil-fired boilers with a capacity less than 400,000 Btu/h shall be provided with a designated exterior location(s) that complies with the following:

1. Natural drainage for condensate from cooling equipment operation or a condensate drain located within 3 feet (914 mm) of the location of the space heating equipment, and
2. A dedicated branch circuit in compliance with NFPA70 Section 424.4 based on heat pump space heating equipment sized in accordance with the requirements of Section C403.1.1 and terminating within 3 feet (914 mm) of the location of the space heating equipment with no obstructions. Both ends of the branch circuit shall be labeled “For Future Heat Pump Space Heater.”

**Exception:** Where an electrical circuit in compliance with NFPA70 Sections 440.4(B) and 440.35 exists for space cooling equipment.

**C405.16.2.2 High-capacity heating.** Spaces containing all other space heating *equipment* shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the *equipment* and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric *equipment* with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, “For Future Electric Space Heating Equipment”.

**C405.16.3 Combustion water heating.** Spaces containing *combustion equipment* for water heating  shall comply with either C405.16.3.1 or C405.16.3.2

**C405.16.3.1 Low-capacity water heating.** Spaces containing water heaters with a capacity less than 300,000 Btu/h (88 kW) shall comply with the following:

1. A dedicated 208/240-volt branch circuit with a minimum capacity of 30 amps terminating within 3 feet (914 mm) from the water heater shall be provided and be accessible to the water heater with no obstructions. Both ends of the branch circuit shall be labeled with the words "For Future Heat Pump Water Heater" and be electrically isolated,
2. A condensate drain that is no more than 2 inches (51 mm) higher than the base of the installed water heater and allows natural draining without pump assistance shall be installed within 3 feet (914 mm) of the water heater,

1. The space shall meet minimum dimensions of 3 feet (914 mm) by 3 feet (914 mm) by 7 feet (2134 mm) high, and
2. The space shall meet a minimum volume of 700 cubic feet (20,000 L) or the equivalent of one 16-inch (406 mm) by 24-inch (610 mm) grill to a heated space and one 8-inch (203 mm) duct of no more than 10 feet (3048 mm) in length for cool exhaust air.

**C405.16.3.2 High-capacity water heating.** Spaces containing water heaters with a capacity greater than or equal to 300,000 Btu/h (88 kW) shall comply with the following:

1. Conduit that is continuous between a junction box located within 3 feet (914 mm) of the *equipment* and an electrical panel shall be provided. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric *equipment* with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, “For Future Electric Water Heating Equipment”, and
2. A condensate drain that is no more than 2 inches (51 mm) higher than the base of the installed water heater and allows natural draining without pump assistance shall be installed within 3 feet (914 mm) of the water heater,

**C405.16.4 Combustion cooking**. Spaces containing combustion equipment for cooking shall comply with either C405.16.4.1 or C405.16.4.2

**C405.16.4.1 Commercial cooking.** Spaces containing *commercial cooking appliances* shall be provided with a dedicated branch circuit with a minimum capacity of 12 kVA per 1 kBtu of appliance input capacity. The branch circuit shall terminate within 3 feet (914 mm) of the appliance with no obstructions. Both ends of the branch circuit shall be labeled with the words “For Future Electric Cooking Equipment” and be electrically isolated.

**C405.16.4.2 Light and medium duty cooking.** Spaces containing light- and medium duty cooking *equipment* not designated as *commercial cooking appliances* shall be provided with a dedicated branch circuit in compliance with NFPA 70 Section 422.10. The branch circuit shall terminate within 6 feet (1829 mm) of fossil fuel ranges, cooktops and ovens and be accessible with no obstructions. Both ends of the branch circuit shall be labeled with the words “For Future Electric Cooking Equipment” and be electrically isolated.

**C405.16.5 Combustion clothes drying.** Spaces containing combustion equipment for clothes drying shall comply with either C405.16.5.1 or C405.16.5.2

**C405.16.5.1 Commercial drying.** Spaces containing clothes drying *equipment,* and end-uses for commercial laundry applications shall be provided with conduit that is continuous between a junction box located within 3 feet (914 mm) of the *equipment* and an electrical panel. The junction box, conduit and bus bar in the electrical panel shall be rated and sized to accommodate a branch circuit with sufficient capacity for an equivalent electric *equipment* with an equivalent equipment capacity. The electrical junction box and electrical panel shall have labels stating, “For Future Electric Clothes Drying Equipment”, and

**C405.16.5.2 Residential drying.** Spaces containing clothes drying *equipment, appliances,* and end-uses serving multiple *dwelling units*or sleeping areas with a capacity less than or equal to 9.2 cubic feet shall be provided with a dedicated 240-volt branch circuit with a minimum capacity of 30 amps shall terminate within 6 feet (1829 mm) of fossil fuel clothes dryers and shall be accessible with no obstructions. Both ends of the branch circuit shall be labeled with the words “For Future Electric Clothes Drying Equipment” and be electrically isolated.

**Revise text as follows:**

**C406.1 Additional energy efficiency credit requirements.**New *all-electric* *buildings* shall achieve a total of 10 credits and new *mixed-fuel buildings*shall achieve a total of 15 credits from Tables C406.1(1) through C406.1(5) where the table is selected based on the use group of the building and from credit calculations as specified in relevant subsections of C406. Where a building contains multiple use groups, credits from each use group shall be weighted by floor area of each group to determine the weighted average building credit. Credits from the tables or calculation shall be achieved where a building complies with one or more of the following:

**Add new Appendix as follows:**

**APPENDIX CD ALL-ELECTRIC COMMERCIAL BUILDINGS**

**About this appendix:** *Appendix CD requires the installation of all-electric equipment and appliances in new construction in order to reduce carbon emissions and improve the safety and health of commercial buildings.*

**Section CD101**

**GENERAL**

**CD101.1 Intent.** The intent of this Appendix is to amend the *International Energy Conservation Code* to reduce greenhouse gas emissions and improve the safety and health of buildings by not permitting *combustion equipment* in buildings.

**CD101.2 Scope.** This appendix applies to new commercial buildings.

**Section CD102**

**ALL-ELECTRIC COMMERCIAL BUILDINGS**

**CD102.1 Application.** Commercial buildings shall be *all-electric buildings* and comply with Sections C401.2.1 or C401.2.2*.*