RECD1-4-22

IECC: R404.6.2 (New), R404.6.2.1 (New), R404.6.2.2 (New), R404.6.2.3 (New), R404.6.2.4 (New), R404.6.2.5 (New), R404.6.2.6 (New), R404.6.2.7 (New), R404.6.2.8 (New)

Proponents: Mike Stone, representing I**ECC Electrical power, Lighting, Renewables, and Storage subcommittee**

2024 International Energy Conservation Code [CE Project]

Revise as follows:

R404.6.2 Group R occupancies. Buildings in Group R-2, R-3 and R-4 shall comply with the requirements of Sections R404.6.2.1 through R404.6.2.8~~Appendix CB~~.

Add new text as follows:

R404.6.2.1 General.. A *solar-ready zone* shall be located on the roof of residential buildings that are three stories or less in height above grade plane, and are oriented between 110 degrees and 270 degrees of true north or have low-slope roofs. *Solar-ready zones* shall comply with Sections R404.6.2.2 through R404.6.2.8.

Exceptions:

1. A building with a permanently installed, on-site renewable energy system.
2. A building with a *solar-ready zone* that is shaded for more than 70 percent of daylight hours annually.
3. A building where an *approved* party certifies that the incident solar radiation available to the building is not suitable for a *solar-ready zone*.
4. A building where an *approved party* certifies that the *solar-ready zone* area required by Section R404.6.2.3 cannot be met because of extensive rooftop equipment, skylights, vegetative roof areas or other obstructions.

R404.6.2.2 Construction document requirements for a solar-ready zone. Construction documents shall indicate the solar-ready zone.

R404.6.2.3 Solar-ready zone area. The total *solar-ready zone* area shall be not less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas and mandatory access or set back areas as required by the *International Fire Code*. The *solar-ready zone* shall be a single area or smaller, separated sub-zone areas. Each sub-zone shall be not less than 5 feet (1524 mm) in width in the narrowest dimension.

R404.6.2.4 Obstructions. *Solar-ready zones* shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights and roof-mounted equipment.

R404.6.2.5 Roof loads and documentation. A collateral dead load of not less than 5 pounds per square foot (5 psf) (24.41 kg/m^2) shall be included in the gravity and lateral design calculations for the *solar-ready zone*. The structural design loads for roof dead load and roof live load shall be indicated on the construction documents.

R404.6.2.6 Interconnection pathway. *Construction documents* shall indicate pathways for routing of conduit or plumbing from the *solar-ready zone* to the electrical service panel or service hot water system.

R404.6.2.7 Electrical service reserved space. The main electrical service panel shall have a reserved space to allow installation of a dual-pole circuit breaker for future solar electric and shall be labeled “For Future Solar Electric.” The reserved spaces shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

R404.6.2.8 Construction documentation certificate. A permanent certificate, indicating the *solar-ready zone* and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

Reason: We cannot point to an Appendix for requirements; the requirements have to be stated in the section itself. This proposal takes the requirements from the referenced Appendix CB and copies it into the R404.6.2 section. There are some edits to consider, given that the R404.6.1 section that applies to other residential buildings does not contain some of these sub-sections, as they are covered in R103 and R401.

Bibliography: Appendix CB from 2024 IECC-C, 1st public comment draft [https://www.iccsafe.org/wp-content/uploads/IECC2024P1CE_2022-09-07-clean-gray-red2.pdf]

Cost Impact: The code change proposal will neither increase nor decrease the cost of construction.
None. Rather than pointing to an Appendix for a requirement, it brings the requirement text into the actual section.