

CE262-19

IECC@: CA103.6, CA103.7 (New), CA103.8

Proposed Change as Submitted

Proponents: jim edelson, representing New Buildings Institute (jim@newbuildings.org)

2018 International Energy Conservation Code

Revise as follows:

CA103.6 Interconnection pathway. Construction documents shall indicate pathways for routing of conduit or piping from the solar-ready zone to the electrical service panel and electrical energy storage system area, or service hot water system.

Add new text as follows:

CA103.7 Electrical energy storage system-ready area.

The floor area of the electrical energy storage system-ready area shall be not less than 2 feet in one dimension and 4 feet in another dimension, and located in accordance with Section 1206.2.8 of the International Fire Code. The location and layout diagram of the electrical energy storage system-ready area shall be indicated on the construction documents.

Revise as follows:

~~**CA103.7**~~ **CA103.8 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 installation and a dual-pole circuit breaker for future electrical energy storage system installation. These spaces shall be labeled "For Future Solar Electric and Storage." The reserved ~~space~~ spaces shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

Reason: Appendix CA in IECC-commercial and Appendix RB in IECC-residential have proven useful for jurisdictions seeking to add solar ready provisions to state or local codes. As many jurisdictions in which the appendices are being considered are also facing current or future constraints on electric grid capacity to accommodate existing and new distributed solar generation resources, policy objectives are emerging to support the storage of energy produced by solar panels and shift its temporal impact on the grid. This proposal modifies Appenidx CA provisions to ensure that there is design and space consideration for a standard sized battery rack, and for the connections to the electrical panels. As with the rationale for solar-ready, it is generally much more cost-effective at the time of new construction to design for future installation of this equipment than it is to retrofit later in the building's life.

The proposed language also cites the IFC to ensure there is sufficient clearance around the battery rack to meet life/safety concerns. The IFC is already referenced in Chapter 6.

Cost Impact: The code change proposal will increase the cost of construction. The cost impacts are limited to additional design professional fees, to markings on the panels, and to additional construction costs only if there were not spare square footage available in the equipment or storage rooms where panels are generally located. In that case, it would be equal to the construction costs for an additional 8 square feet of storage space.

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Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal needs to coordinate better with the IFC (Vote: 15-0).

Assembly Action:

None

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Individual Consideration Agenda

Public Comment MAKELA-1:

IECC®: CA103.6, CA103.7 (New), CA103.8

Proponents: Eric Makela, representing New Buildings Institute (ericm@newbuildings.org) requests As Modified by Public Comment

Modify as follows:

2018 International Energy Conservation Code

CA103.6 Interconnection pathway. Construction documents shall indicate pathways for routing of ~~conduit or piping~~ raceways or cable from the solar-ready zone to the electrical service panel and electrical energy storage system area, or service hot water system.

CA103.7 Electrical energy storage system-ready area. The floor area of the electrical energy storage system-ready area shall be not less than 2 feet in one dimension and 4 feet in another dimension, and located in accordance with Section 1206.2.8 of the *International Fire Code* and Section 110.26 of the National Electrical Code. The location and layout diagram of the electrical energy storage system-ready area shall be indicated on the construction documents.

CA103.8 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 a ~~dual-pole~~ two-pole circuit breaker for future electrical energy storage system installation. These spaces shall be labeled "For Future Solar Electric and Storage." The reserved spaces shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

Commenter's Reason: Disapproval was requested for CE262 at the Code Action Hearings in order to modify and clarify the language to ensure that the solar storage ready requirement would correlate with the International Fire Code and National Electric Code. Also, some of the terminology was changed in the proposal to bring it into alignment with common terminology used in the industry.

Appendix CA in IECC-commercial and Appendix RB in IECC-residential have proven useful for jurisdictions seeking to add solar ready provisions to state or local codes. As many jurisdictions in which the appendices are being considered are also facing current or future constraints on electric grid capacity to accommodate existing and new distributed solar generation resources, policy objectives are emerging to support the storage of energy produced by solar panels and shift its temporal impact on the grid. This proposal modifies Appendix CA provisions to ensure that there is design and space consideration for a standard sized battery rack, and for the connections to the electrical panels. As with the rationale for solar ready, it is generally much more cost-effective at the time of new construction to design for future installation of this equipment than it is to retrofit later in the building's life.

Cost Impact: The net effect of the public comment and code change proposal will increase the cost of construction. The cost impacts are limited to additional design professional fees, to markings on the panels, and to additional construction costs only if there were not spare square footage available in the equipment or storage rooms where panels are generally located. In that case, it would be equal to the construction costs for an additional 8 square feet of storage space.