



**Date:** November 2, 2023  
**To:** City of Houston HPW-HPC  
**Attention:** CCM  
**From:** Jensen Hughes  
**Subject:** Solar Readiness

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This technical memo is provided to describe the new changes to solar readiness in the Houston Amendments to the 2021 Residential Code (IRC) and the 2021 International Energy Conservation Code (IECC).

### Background

1. In working with the US Green Building Council (USGBC) Houston, the South-central Partnership for Energy Efficiency as a Resource (SPEER), the Sierra Club and other organizations dedicated to energy efficiency we made a great deal of headway in reviewing and approving proposed amendments to the 2021 Building Codes that will help Houston develop a more sustainable and resilient city.
2. This appendix provides guidance on the preparing a home for solar energy so the structure can be easily equipped with solar power in the event the homeowner chooses to install solar panel.
3. New to this code cycle is the adoption of the Commercial Solar-Ready appendix. This appendix will be optional, not mandatory, and is intended to provide guidelines for commercial buildings wishing to utilize solar power in the future.
4. This Appendix is only mandatory for new residential one- and two-family dwellings (and townhouses) but is only applicable to certain homes built with 600 sq/ft of roof area oriented between 110 and 270 degrees of true north.

This appendix does not require:

- The installation of conduit, rewiring or pre-plumbing.
- Any specific physical orientation of a residential building.
- Any increased load capacities for residential roofing systems.
- The redesign of plans.

**memo.**

**Amended Appendix AT in Residential Code and Appendix RB in Energy Conservation Code**

**AT 103.6 (RB 103.6) Capped roof penetration sleeve.** A capped roof penetration sleeve shall be ~~provided~~ indicated on the construction documents adjacent to a solar-ready zone located on the roof slope of not greater than 1 unit vertical in 12 units horizontal (8 percent slope). The capped roof penetration sleeve shall be sized to accommodate the future photovoltaic system conduit, but shall have an inside diameter of not less than 1- $\frac{1}{4}$ " (32mm)

*Justification:*

The solar appendix is optional and not part of the base code. This change clarifies the intent of the solar appendix to have documentation available to the homeowner. No safety impacts. This will be added to the construction documents already provided and can be inspected. The documentation of solar-ready zones and roof load calculations (already performed during the design phase) will assist building departments as well as any future solar contractors seeking to install renewable energy systems on a roof. If a homeowner wishes to install a solar energy system later, this documentation can save thousands of dollars in labor, installation, design and integration of the solar system into the house or townhouse.

**Amended Appendix CB SOLAR-READY ZONE – COMMERCIAL.****Solar Ready Zone – Commercial**

The Provisions contained in this appendix are optional and are not mandatory ~~unless specifically referenced in the adopting ordinance.~~

*Justification:*

The commercial solar appendix is adopted as an optional appendix and is intended to provide to ability to design for commercial solar readiness.

