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Pima County Board of Supervisors
130 West Congress Street
Tucson, Arizona 85701

Members of the Pima County Board of Supervisors:

I would like to first thank the Board of Supervisors and the Tucson-Pima County Joint Consolidated Code Committee for developing the recommended update to the County's building codes. This is an important step in keeping the County up-to-date with the newest building codes, enabling the County and the City of Tucson to be in the forefront of communities in the U.S. with these codes.

I served on the Pima County-City of Tucson Joint Building Code Committee for over 11 years (2000-2011) and so fully appreciate the amount of work that goes into updating our building codes. I strongly support the longstanding effort to keep the City and County building codes consistent so that there aren't conflicts or differences for designers and builders whether working in the city or county. However, looking at the proposal for the County's code update I note that the City adopted all the appendices for the 2018 International Residential Code (IRC), including "Appendix T Solar-Ready Provisions—Detached One- And Two-Family Dwellings And Townhouses." I see that this appendix is missing in the County's proposed code adoption. There are two very similar appendices in the 2018 International Energy Conservation Code (IECC) — "CA" and "RA" — for the commercial and residential sections of the IECC respectively. Adopting the IRC Appendix T will have the same result for residential construction as Appendix RA in the IECC and will keep the City and County building codes in alignment.

I urge you to amend the proposal to add the 2018 IRC Appendix T. What is important about the Solar-Ready provisions is the relatively small additional cost for new houses to insure that solar access isn't inadvertently impaired while eliminating the much greater expense and difficulty of retrofitting a residence for either solar thermal or solar electric installations in the future. This appendix provides straightforward guidance and isn't burdensome compared to the significant future benefit. We need to be doing everything we can to make it easier and more affordable for homeowners to use renewable energy.

Thank you for considering this revision to the proposed code adoption. I have attached the wording of the 2018 IRC Appendix T below for your convenience.

Sincerely,

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2018 International Residential Code (IRC)

APPENDIX T SOLAR-READY PROVISIONS—DETACHED ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES

User note:

About this appendix: Harnessing the heat or radiation from the sun's rays is a method to reduce the energy consumption of a building. Although Appendix T does not require solar systems to be installed for a building, it does require the space(s) for installing such systems, providing pathways for connections and requiring adequate structural capacity of roof systems to support solar systems. Section numbers in parenthesis are those in Appendix A of the residential provisions of the International Energy Conservation Code®.

SECTION T101 SCOPE

T101.1 (RA101.1) General. These provisions shall be applicable for new construction where solar-ready provisions are required.

SECTION T102 (RA102) GENERAL DEFINITION

T102.1 General. The following term shall, for the purpose of this appendix, have the meaning shown herein.

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar thermal system.

SECTION T103 (RA103) SOLAR-READY ZONE

T103.1 General. New detached one- and two-family dwellings, and townhouses with not less than 600 square feet (55.74 m²) of roof area oriented between 90 degrees and 270 degrees of true north, shall comply with Sections T103.2 through T103.10.

Exceptions:

1. New residential buildings with a permanently installed on-site renewable energy system.
2. A building where all areas of the roof that would otherwise meet the requirements of Section T103 are in full or partial shade for more than 70 percent of daylight hours annually

T103.2 (RA103.2) Construction document requirements for solar-ready zone. Construction documents shall indicate the solar-ready zone.

T103.3 (RA103.3) Solar-ready zone area. The total solar ready zone area shall be not less than 300 square feet (27.87m²) exclusive of mandatory access or setback areas as required by the *International Fire Code*. New townhouses three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet (185.8 m²) per dwelling shall have a solar-ready zone area of not less than 150 square feet (13.94 m²). The solar-ready zone shall be composed of areas not less than 5 feet (1524 mm) in width and not less than 80 square feet (7.44 m²) exclusive of access or set-back areas as required by the *International Fire Code*.

T103.4 (RA103.4) Obstructions. Solar-ready zones shall be free from obstructions, including but not limited to vents, chimneys, and roof-mounted equipment.

T103.5 Shading. The solar-ready zone shall be set back from any existing or new, permanently affixed object on the building or site that is located south, east or west of the solar zone a distance not less than two times the object's height above the nearest point on the roof surface. Such objects include, but are not limited to, taller portions of the building itself, parapets, chimneys, antennas, signage, rooftop equipment, trees and roof plantings.

T103.6 Capped roof penetration sleeve. A capped roof penetration sleeve shall be provided adjacent to a solar-ready zone located on a 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 1/4 inches (32 mm).

T103.7 (RA103.5) Roof load documentation. The structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

T103.8 (RA103.6) 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.

T103.9 (RA103.7) 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 installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

T103.10 (RA103.8) 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.