

ORDINANCE NO.

AN ORDINANCE AMENDING ARTICLE 12 OF CITY CODE CHAPTER 25-12 TO ADOPT A SOLAR-READY PROVISION TO THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

PART 1. City Code Section 25-12-263(A) (*Local Amendments to the Energy Code*), is amended to add the following provisions as additional local amendments to the commercial provisions of the *2015 International Energy Conservation Code*:

C402.6 Commercial Solar Ready (Mandatory). A designated zone must be identified on the construction documents as “Reserved for Future Solar Installation”. This identified “Solar-Ready Zone” must be located within the Potential Solar Area (defined below), free from obstructions such as, but not limited to, vents, pipes, ducts, and other equipment and must comply with access, pathway, smoke ventilation, spacing, and other requirements of the City of Austin Land Development Code.

Exceptions:

1. Potential Solar Area of less than 2,000 square feet (185.8 square meters)
2. High hazard buildings (Group H)
3. Buildings located within the downtown network, as identified by Austin Energy
4. Buildings equipped with on-site renewable energy in accordance with section C406.5

C402.6.1 Solar-Ready Zone area.

The size of the Solar-Ready Zone must be at least half the Potential Solar Area. Potential Solar Area is calculated as the gross rooftop area minus the Affected Area. Affected Area means the following areas:

1. Areas of the roof that are shaded for at least 50% of annual daylight hours.
2. Areas of that are not Low-Sloped Roof that are oriented from 300° northwest, north to 90° east
3. Gross area of all skylights.
4. Area of rooftop equipment and required access paths.
5. Areas of roofs used for helicopter landing or for rooftop parking.
6. Green roofs and occupied rooftop areas.
7. Areas required by City Code to not contain solar equipment.

No part of the Solar Ready Zone can be in an Affected Area. The designated Solar-Ready Zone and the Potential Solar Area can be made up of multiple non-contiguous areas.

1 Each sub-area must be at least 80 square feet (7.432 square meters) and must be a
2 rectangle the short side of which measures at least 6 feet (1.83 meters).

3 **C402.6.2 Structural loads.** Areas of the roof that are part of the Solar-Ready Zone must
4 have structural design loads for roof dead load and roof live load clearly indicated on the
5 construction documents.

6 **C402.6.3 Equipment location and interconnection pathway.** The construction
7 documents must indicate a location for inverters and metering equipment and a pathway
8 for routing of conduit from the Solar-Ready Zone to the point of interconnection with the
9 electrical service.

10 **C402.6.4 Electrical distribution system.** The Building's electrical service distribution
11 system must have reserved space to allow for the future installation of solar electric and
12 must be permanently marked as "For Future Solar Electric".

13 **PART 2.** City Code Section 25-12-263(B) (*Local Amendments to the Energy Code*), is
14 amended to add the following provisions as additional local amendments to *ASHRAE*
15 *90.1-2013*:

16 **5.4.6 Commercial Solar Ready (Mandatory).** A designated zone must be identified on
17 the construction documents as "Reserved for Future Solar Installation". This identified
18 "Solar-Ready Zone" must be located within the Potential Solar Area (defined below),
19 free from obstructions such as, but not limited to, vents, pipes, ducts, and other
20 equipment and must comply with access, pathway, smoke ventilation, spacing, and other
21 requirements of the City of Austin Land Development Code.

22 **Exceptions:**

- 23 1. Potential Solar Area of less than 2,000 square feet (185.8 square meters)
24 2. High hazard buildings (Group H)
25 3. Buildings located within the downtown network, as identified by Austin Energy
26 4. Buildings equipped with on-site renewable energy in accordance with section
27 C406.5

28 **5.4.6.1 Solar-Ready Zone area.**

29 The size of the Solar-Ready Zone must be at least half the Potential Solar Area. Potential
30 Solar Area is calculated as the gross rooftop area minus the Affected Area. Affected Area
31 means the following areas:

- 32 1. Areas of the roof that are shaded for at least 50% of annual daylight hours.
33 2. Areas of that are not Low-Sloped Roof that are oriented from 300° northwest,
34 north to 90° east
35 3. Gross area of all skylights.
36 4. Area of rooftop equipment and required access paths.

- 1 5. Areas of roofs used for helicopter landing or for rooftop parking.
- 2 6. Green roofs and occupied rooftop areas.
- 3 7. Areas required by City Code to not contain solar equipment.

4 No part of the Solar Ready Zone can be in an Affected Area. The designated Solar-Ready
5 Zone and the Potential Solar Area can be made up of multiple non-contiguous areas.
6 Each sub-area must be at least 80 square feet (7.432 square meters) and must be a
7 rectangle the short side of which measures at least 6 feet (1.83 meters).

8 **5.4.6.2 Structural loads.** Areas of the roof that are part of the Solar-Ready Zone must
9 have structural design loads for roof dead load and roof live load clearly indicated on the
10 construction documents.

11 **5.4.6.3 Equipment location and interconnection pathway.** The construction documents
12 must indicate a location for inverters and metering equipment and a pathway for routing
13 of conduit from the Solar-Ready Zone to the point of interconnection with the electrical
14 service.

15 **5.4.6.4 Electrical distribution system.** The Building's electrical service distribution
16 system must have reserved space to allow for the future installation of solar electric and
17 must be permanently marked as "For Future Solar Electric".

18 **PART 3.** City Code Section 25-12-263(C) (*Local Amendments to the Energy Code*), is
19 amended to add the following provisions as additional local amendments to the
20 residential provisions of the *2015 International Energy Conservation Code*:

21 CHAPTER 7 [RE]

22 Residential Solar Ready

23 **R701.1 Residential Solar Ready.** New Residential Buildings must have a Solar-Ready
24 Zone. A Solar-Ready Zone is a section or sections of the roof or building structure
25 designated and reserved for future installation of a solar photovoltaic or solar thermal
26 system. The Solar-Ready Zone must not include areas shaded by parts of the building or
27 other obstructions.

28 **R701.2 Construction document requirements for Solar-Ready Zone.** Construction
29 documents must indicate the Solar-Ready Zone on a roof plan.

30 **R701.3 Obstructions.** Solar-Ready Zones must be free from and not shaded by
31 obstructions, including but not limited to vents, chimneys, parapets and roof-mounted
32 equipment.

33 **R701.4 Electrical service reserved space.** The main electrical service panel must have
34 a reserved space to allow installation of a dual pole circuit breaker for future solar electric

1 installation and must be labeled “For Solar Electric.” The reserved space must be
2 positioned at the opposite (load) end from the input feed location or main circuit location.

3 **R701.5 One-family and two-family dwellings.** New detached one-family or two-family
4 dwellings must have a total Solar-Ready Zone area of not less than 240 square feet (22.3
5 m²) per dwelling, exclusive of required access or setback areas. The Solar-Ready Zone
6 must be oriented between 90 and 300 degrees of true North. The Solar-Ready Zone must
7 comprise areas not less than six feet (1.83 m) on one side and at least one area of not less
8 than 100 square feet (9.29 m²) exclusive of any required access or set back areas.

9 **Exceptions:**

- 10 1. A Building with less than 800 square feet (74.32 m²) of roof area per dwelling
11 unit.
- 12 2. A Building with a Solar-Ready Zone that is shaded by trees or adjacent
13 structures for more than 50 percent of annual daylight hours.
- 14 3. A Building Site on which the applicant has demonstrated, through
15 documentation, existence of a unique hardship preventing compliance.
- 16 4. New residential buildings with a permanently installed on-site renewable
17 energy system with an output of not less than one watt per square foot (.092 m²)
18 of conditioned floor area, or an on-site renewable energy system with a total
19 output of at least two kilowatts.

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21 **R701.6 Townhomes.** Townhomes must have a total Solar-Ready Zone area of not less
22 than 160 square feet (14.86 m²) per dwelling unit, exclusive of required access or setback
23 areas. The Solar-Ready Zone must be oriented between 90 and 300 degrees of true
24 North. The Solar-Ready Zone must comprise areas not less than six feet (1.83 m) on a
25 side and at least one area of not less than 100 square feet (9.29 m²) exclusive of required
26 access or set back areas.

27 **Exceptions:**

- 28 1. Dwellings with less than 600 square feet (55.74 m²) of roof area per dwelling
29 unit.
- 30 2. A building with a Solar-Ready Zone that is shaded by trees or adjacent
31 structures for more than 50 percent of annual daylight hours.
- 32 3. A Building Site on which the applicant has demonstrated, through
33 documentation, existence of a unique hardship preventing compliance.

34 **R701.7 Multifamily buildings.** New multifamily buildings of four stories or fewer must
35 have a Solar-Ready Zone that is not less than 25% of the total roof area of the building.

