

Accessory Solar and Small Solar Facilities

Accessory Solar Energy System.

A system which is used for the production of electrical energy from energy collected by the sun including solar energy collectors, power generation facilities, facilities for storing and transforming energy, and any other appurtenant facilities, which is designed to supply power to principal use(s) on the lot. (Land Use Code Section 4.3.10.Q.)

Each lot may include a solar energy system designed to supply power to the principal use(s) on the lot. A solar energy system that cannot meet all the following standards requires review and approval through the Public Site Plan Review process. An accessory solar energy system must meet the following standards:

Building mounted system:

- a. The system components must be mounted as flush to roof or structure as practicable.
- b. A building mounted system may exceed the zoning district maximum height by 5 feet.

Ground mounted system:

- a. The system setbacks are the same as the minimum building setbacks in the underlying zoning district.
- b. The height of the system cannot exceed 15 feet.
- c. The total area of the ground mounted solar energy system cannot exceed ten percent of the lot's net area. The ground mounted system may exceed five acres as long as the system is sized for the power consumption of the principal use on the lot.

(Note: this is in addition to any building mounted solar energy system.)

For additional information on Land Use Code requirements contact:

Larimer County Planning Department
970-498-7683

Email: www.planningoncall@larimer.org

Building Permit

A building permit is required for the installation of solar systems/facilities, ground, roof or wall mounted.

Please refer to the Building Department Application Requirements for Solar System Permits noted on the back of this handout.

All building permits will be reviewed for compliance with zoning setback requirements and zoning use as designated by the Land Use Code.

Small Solar Energy Facility.

A facility which is used for the production of electrical energy from energy collected by the sun including solar energy collectors, power generation facilities, facilities for storing and transforming energy, other appurtenant facilities and any transmission lines, which is developed for the purpose of supplying or distributing electrical energy to users, a customer or customers. (Land Use Code Section 4.3.7.O.)

A building mounted small solar energy facility that meets the following standards is allowed by right:

- a. The system components must be mounted as flush to roof or structure as practicable.
- b. A building mounted system may exceed the zoning district maximum height by 5 feet.

A ground mounted small solar energy facility in which all components together disturb an area of five (5) or fewer acres requires review and approval through the Public Site Plan review process. *This approval must be obtained prior to submitting a building permit application.*

- a. The facility setbacks are the same as the minimum building setbacks in the underlying zoning district.
- b. The total area of the ground mounted solar energy system cannot exceed fifty percent of the lot's net area.
- c. Power lines must be underground except where the electrical collector wiring is brought together for connection to the transmission or distribution network, adjacent to that network. Proposed transmission facilities must be identified and included as part of the Small Solar Energy Facility project.
- d. A small solar energy facility must be designed to minimize site disturbances. Reestablishment of all disturbed areas, including the construction access, shall maintain the historic drainage patterns and permeable ground cover and must be done to minimize environmental impacts. Temporary and permanent erosion control measures shall be used as necessary to minimize erosion of the site.
- e. A Small Solar Energy Facility application must include an agreement that addresses decommissioning and abandonment of the facility. The agreement must at a minimum provide for reuse or dismantlement of the facility at the owner's expense. Disturbed areas shall be reestablished to historic drainage patterns and ground cover.

Electrical Permit

Solar systems and facilities need to obtain an electrical permit for inspection of electrical work.

Colorado State Electrical Board
1560 Broadway, Suite 1500
Denver, CO 80202

Telephone: 303-894-2985

Building Permit requirements for Photovoltaic (PV) Solar Systems and Solar Water Heating Systems

A building permit is required for the installation of the following solar systems (ground, roof or wall mounted):

- Photovoltaic (PV) Solar System, converting sunlight to electricity generation
- Photovoltaic (PV) panels or non-PV Solar Panels (SP), used for potable water heating
- Photovoltaic (PV) panels or non-PV Solar Panels (SP), used for space heating or cooling and swimming pool heating, etc.

The building permit application submittal package (**minimum two sets**) must include the following information:

- For **Roof Mounted** systems, provide roof plans delineating the location of the solar panel (module) array and/or of the solar collectors, as well as the location and labeling of all other mounted solar equipment (i.e. dedicated PV system meter, PV array DC disconnect switch, PV system utility AC disconnect switch, inverter, etc.)
- For **Roof Mounted** systems; Provide State of Colorado Registered Structural Engineers* letter addressing the ability of the roof system to withstand both the gravity and uplift loads upon the roof system by the solar panels system. Anchoring connections shall be outlined in the Engineer's letter as well.
- For **Ground Mounted** systems, provide 5 site plans delineating the location of the Solar panel (module) array and/or of the solar collectors, as well as the location and labeling of all other mounted solar equipment (i.e. dedicated PV system meter, PV array DC disconnect switch, PV system utility AC disconnect switch, inverter, etc.)
- For **Ground Mounted** systems; Provide State of Colorado Registered Structural Engineers* letter and detail sheets addressing the foundation system or ballast type anchoring system to be used for the proposed solar panels system(s).
- Manufacturer's mounting specifications and details – All systems
- Electrical one-line and three-line diagrams – PV Systems
- Product cut sheets and listings/specifications – All systems
- Construction plan notes: When installing a solar water heating system, a note shall be added to the plans to include the requirement that solar water heating equipment shall be installed in compliance with the adopted plumbing code. Similarly PV systems construction notes shall include the requirement that they comply with the adopted electrical code. – All systems.

***Project Engineers letters** shall include the wind and snow load design criteria for the area in which the system(s) are being installed. See the following code sections concerning solar systems(s) installations:

Section 1510.7, 1512.1, 1607.13.5	– 2018 International Building Code
Section 1204	- 2018 International Fire Code
Chapter 23	- 2018 International Residential Code

Wall mounted systems will be required to have the Engineers letter as well when; alterations are required to be made to the structure for their mounting that will affect the structural integrity of the structure concerned, or the load of the system affects the structural integrity of the structure concerned. As determined by the Building Department.