



Solar Panel/Photovoltaic Systems

Solar Panel power systems require permits for the construction, installation and modification of the systems on **commercial** buildings. Permits are required from both the District and from the municipality in which the work occurs. If the work is in unincorporated St. Louis County, St. Louis County will also require a permit.

Requirements for all systems

Solar Panel systems will be reviewed for code compliance with IFC 2024 and, additionally, will be required to have the following items as part of the final installation:

1. There shall be a means to disconnect the power wire coming from solar panels within a system array. The means of disconnect may be a switch, breaker, fuse or other link that can be accessed and removed without the use of special tools. Keyed switches shall not be allowed.
2. There shall be a means of disconnecting power from any array to the main junction box disconnect adjacent to the Ameren service tie-in. This disconnect shall allow power to be disconnected prior to any conduit runs between the array and main disconnect. Examples of acceptable disconnects include switches and fuses. In lieu of a disconnect, the contractor may use micro-inverters that kill power at the solar panel or they may permanently maintain onsite a quantity of solid tarps (100% opacity) to completely cover the solar panel system.
3. A sign not less than 12" tall by 18" wide shall be installed at or near the front entrance to the facility and adjacent to any Knox Box location. The sign shall be made of retro-reflective sheeting on an aluminum substrate and permanently affixed to the exterior of the building by metal fasteners. The legend shall be white letters on a red background and read: "WARNING: Dual Power Sources Second source is photovoltaic system"





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Typical Approved Installation Examples:

A manual disconnect within a system array shall be provided in the immediate vicinity of the array and prior to the wiring/conduit runs from the roof. The junction and disconnect assembly shall be rated for the service used and for the position and placement of the box.



Exterior wiring must be placed in enclosed conduit. Conduit shall be labeled every 10 feet and within 1 foot of turns or bends and within 1 foot above and below penetrations per IFC 2021





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Disconnects on the exterior of the building prior to the Ameren power source shall be clearly labeled. For inverters installed in the building interior, reference to the location of the disconnect shall be provided at the meter and at the inverters.



Signs shall be placed at the main building entrance and adjacent to the Knox Box identifying that the building has dual power sources.



Tarps, if required, shall be stored onsite, out of exposure to the elements and be for the exclusive use of the fire district. The tarps shall be 100% opaque and shall be able to sufficiently cover the entire array.



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