

Timothy Ibisch

From: Timothy Stoner <timothy.stoner@belw.org>
Sent: Monday, August 08, 2016 11:41 AM
To: Timothy Ibisch
Cc: rscholtes@bevcomm.net; 'Rick Scholtes (rscholtes@bevcomm.com)'
Subject: Solar Ordinance

Hi Tim,
Sounds like there were a couple of questions in regards to the proposed solar ordinance.

BELW's main concern was to secure our interconnect agreement language for the safety of customers, staff and system and insure the BELW's interconnect agreement is approved by BELW before the building permit is issued.

One issue was setback clearance from the edge of the roof ridge, the 10 ft. requirement again is just a suggestion/guideline to provide a large area of access for emergency responders to move about in case of a fire. IBC code references 3, 4 and 8 ft. clearances. The City of Blue Earth is free to set up your ordinance as the council wishes.

The suggestion that solar units don't overload the designed weight limit. Although both suggestions have merit, it may be easier to just simply state the Building Inspector will issue permits that comply with the latest version of the International Building Codes IBC chapter 31. The issues of setbacks and weight limit suggestions/guidelines were discussed during a work session with the Fire Chief- Roger Davis, Building Inspector – Steve Anderson and myself based on the International Building Codes IBC chapter 31 adopted by the Minnesota State Building code.

Attached below is the International Building Codes IBC chapter 31 for reference. I'm certainly able to attend the council meeting if needed. Feel free to call with any questions.

Thank you, Tim Stoner

SECTION 3113 SOLAR PHOTOVOLTAIC POWER SYSTEMS

3113 Solar photovoltaic power systems; general.

Solar photovoltaic power systems shall be installed in accordance with this part and Minnesota Rules, Chapter 1315.

Exception: Detached, nonhabitable Group U structures including parking shade structures, carports, solar trellises, and similar structures shall not be subject to the requirements of this part. Minnesota Rules, Chapter 1315, applies.

3113.1 Access and pathways.

Roof access, pathways, and spacing requirements shall be provided in accordance with Sections 3113.1 through 3113.3.

Exceptions:

1. Residential structures shall be designed so that each photovoltaic array is no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in either axis.

2. Panels/modules shall be permitted to be located up to the roof ridge where an alternative ventilation method *approved* by the fire department has been provided or where the fire department has determined vertical ventilation techniques will not be employed.

3113.1.1 Roof access points.

Roof access points shall be located in areas that do not require the placement of fire department ground ladders over openings such as windows or doors, and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

3113.1.2 Residential systems for dwelling units.

Access to residential systems for *dwelling units* shall be provided in accordance with Sections 3113.1.2.1 through 3113.1.2.4.

3113.1.2.1 Residential buildings with hip roof layouts.

Panels or modules installed on residential buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. The access pathway shall be located at a location on the building capable of supporting the live load of firefighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3113.1.2.2 Residential buildings with a single ridge.

Panels or modules installed on residential buildings with a single ridge shall be located in a manner that provides two 3-foot-wide (914 mm) clear access pathways from the eave to the ridge on each roof slope where panels/modules are located.

Exception: This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3113.1.2.3 Residential buildings with roof hips and valleys.

Panels or modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

3113.1.2.4 Residential building smoke ventilation.

Panels or modules installed on residential buildings shall be located no higher than 3 feet (914 mm) below the ridge in order to allow for fire department smoke ventilation operations.

3113.2 Other than residential buildings.

Access to systems for occupancies other than *dwelling units* shall be provided in accordance with Sections 3113.2.1 through 3113.2.1.2.

Exception: Where it is determined by the fire department that the roof configuration is similar to that of *dwelling units*, the residential access and ventilation requirements in Sections 3113.1.2 through 3113.1.2.4 shall be permitted.

3113.2.1 Access.

There shall be a minimum 6-foot-wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either access of the building is 250 feet (76 200 mm) or less, there shall be a minimum 4-foot-wide (1290 mm) clear perimeter around the edges of the roof.

3113.2.1.2 Pathways.

The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. The pathway shall be over areas capable of supporting the live load of firefighters accessing the roof.
2. The centerline access pathways shall be provided in both axes of the roof. Centerline access pathways shall run where the roof structure is capable of supporting the live load of firefighters accessing the roof.
3. The pathway shall be a straight line not less than 4 feet (1290 mm) clear to skylights or ventilation hatches.
4. The pathway shall be a straight line not less than 4 feet (1290 mm) clear to roof standpipes.
5. The pathway shall provide not less than 4 feet (1290 mm) clear around roof access hatch with at least one not less than 4 feet (1290 mm) clear pathway to parapet or roof edge.

3113.3 Smoke ventilation.

The solar installation shall be designed to meet the following requirements:

1. Arrays shall be no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.
2. Smoke ventilation options between array sections shall be one of the following:
 - 2.1. A pathway 8 feet (2438 mm) or greater in width.
 - 2.2. A 4-foot (1290 mm) or greater in width pathway and bordering roof skylights or smoke and heat vents.
 - 2.3. A 4-foot (1290 mm) or greater in width pathway and bordering 4-foot by 8-foot (1290 mm by 2438 mm) “venting cutouts” every 20 feet (6096 mm) on alternating sides of the pathway.

3113.4 Ground-mounted photovoltaic arrays.

Ground-mounted photovoltaic arrays shall comply with this part and Minnesota Rules, Chapter 1315. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.



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