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2020-01	Rooftop Photovoltaic (Solar) Installations			January 13, 2020
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Informational Bulletin 2020-01 Photovoltaic (Solar) Installations

Purpose:

On November 20, 2019, the Board of Fire Control voted to approve an amendment to the requirements for solar installations on roofs for one-and two-family dwellings and added a requirement for a review and stamp of a NH licensed professional engineer for all installations.

Background:

The solar industry approached the State Fire Marshal's Office during the adoption of the 2015 edition of NFPA 1 and expressed concerns about the impact of the access and pathway requirements as outlined in the code. The solar industry indicated that the new requirements would result in a dramatic decrease in the solar installations in our state. A group of representatives from the solar industry, building officials and fire officials met to review and develop a proposed amendment for the Board of Fire Control to consider. The work of this group also identified a need to have an engineering review for all rooftop installations, a practice that was in place by most solar installation companies already. The approval of code amendment proposal petition RE 19-03-15 is a result of that work.

Explanation/Guidance:

1. Effective December 5, 2019 the following amendments to NFPA 1 Section 11.12 are in effect:

11.12.2.1.7 Structural Analysis.

Photovoltaic systems installed on roofs shall be reviewed and stamped by a NH licensed professional engineer.

11.12.2.2.2 One- and Two-Family Dwellings and Townhouses.

Photovoltaic systems installed in one-and two-family dwellings and townhouses shall be in accordance with this section.

Exception: Photovoltaic systems not occupying more than 50% of the aggregate roof area of one- and two-family dwellings only. When applying this exception a minimum 18" ridge setback shall be required unless approved by the AHJ.

2. The intent of the requirement for the NH PE review and stamp is to verify that the added loading of the solar equipment will not have a negative impact on the structural stability of the building. This applies to **all** rooftop solar installations. The equipment itself adds a load to the roof and the equipment may impose unbalanced loading conditions that need to be evaluated. An example of this would be when the snow melts or sheds off the panels on one side of the roof and the roof is fully loaded on the opposite side.

3. One- and two-family dwellings are allowed coverage up to 50% of the aggregate roof area. While it is likely that a single roof plane would be covered in full, this arrangement is intended to still provide access from the opposite side. The 18" ridge setback was added to allow the placement of firefighting roof ladders and operations along the peak. The setback can be reduced if approved by the local fire official.
4. NFPA 1 Section 11.12.2.2.1.1 also provides 7 exceptions that shall be considered by the AHJ to grant exceptions where access, pathway, or ventilation requirements are reduced.