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CONSTRUCTION TIP SHEET:
RESIDENTIAL SOLAR ELECTRICAL SYSTEMS

This Tip Sheet reflects code requirements of the Maine Uniform Building and Energy Code (MUBEC)
Note- The intent of this Tip Sheet is to provide a general understanding of the code requirements and does not address the subject in great detail.

Solar electrical systems installed in private homes generate power that helps offset a portion of power supplied by the utility company. Photo-Voltaic (PV) solar panels are a way to generate power in a way that is cleaner for the environment. This tip sheet provides information on the requirements for installing PV systems in single- family homes, two-family homes, and townhouses as defined by the IRC.

Requirements prior to installation:

Building Permit- ground units are considered a structure and roof or wall mounted units are fastened to the structural components of the building. There are also International Energy Conservation Code (IECC) requirements that must be met. A building permit will ensure these code requirements are met correctly.

Electrical Permit- PV Solar Panels are considered a non-mechanical electricity generating device which operates by converting sunlight directly into electricity. It ties into your house's electrical system and back-feeds the power grid when your in home system is not drawing enough amperage. Permits and inspection approvals are required for all PV installations that connect to the building's electrical system. Some jurisdictions require an electrical plan review. Check with your local jurisdiction to determine if a plan review is required prior to permit issuance.

Installation requirements:

1. **Firefighter Accessibility-** Roof access points and pathways for firefighters are required. (See figures 1 and 2 on the following page)
2. **Access Points-** Roof access points must be located at strong points of building construction, in areas that do not require ground ladders to be over windows or doors, or under overhead obstructions like trees, wires, or signs.
3. **Limitations-** Each PV array is limited to one hundred fifty (150) feet in either direction.
4. **Separation-** Multiple arrays must be separated by a thirty-six (36) inch wide clear access pathway.
5. **Hip roof-**
   - **I.** Panels and modules on hip roofs must be located to provide a thirty-six (36) inch wide clear access pathway from the eave to the ridge on all roof sections containing solar equipment, except on roof slopes of 2:12 or less.
   - **II.** Panels and modules on roofs with hips and valleys must not be located less than eighteen (18) inches from a hip or valley where solar equipment is to be placed on both sides of the hip or valley. Where panels or modules are only on one side of the hip or valley, they may be placed directly adjacent to the hip or valley, except on roof slopes of 2:12 or less.

6. **Single ridge roof-** Panels and modules on roofs with a single ridge must be located to provide a thirty-six (36) inch wide clear access pathway from the eave to the ridge on all roof sections containing solar equipment, except on roof slopes of 2:12 or less.
7. **Ridge clearance-** Panels and modules must be a minimum of eighteen (18) inches from the ridge to allow fire department ventilation operations. Panels may be located up to the ridge when the fire chief determines ventilation operations will not be used, or when the fire chief approves alternate ventilation methods.

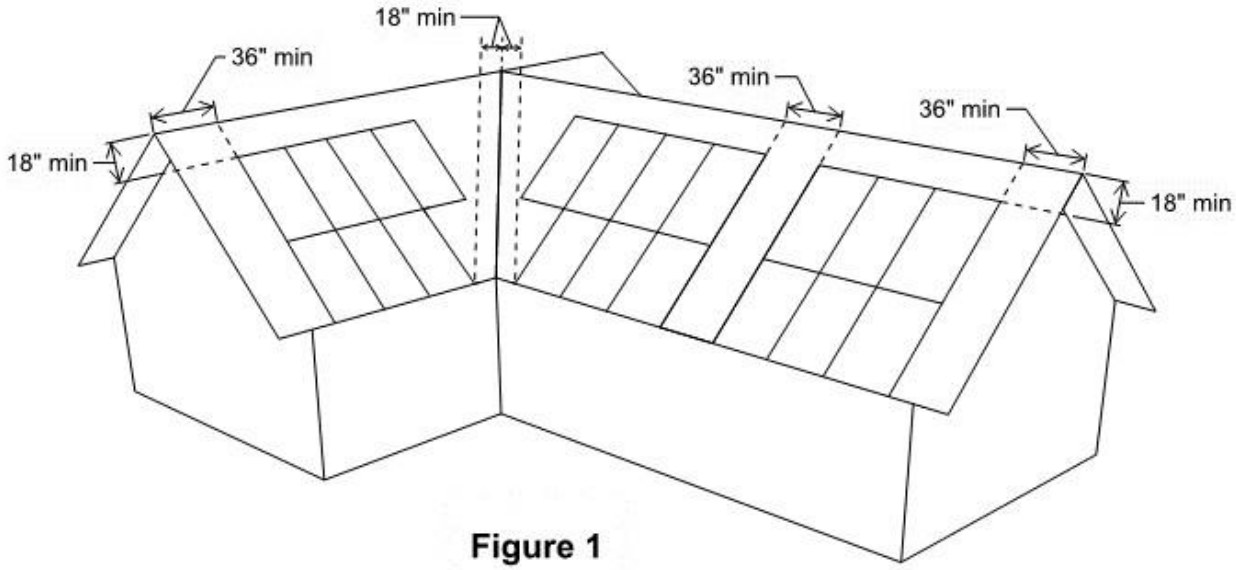

Figure 1

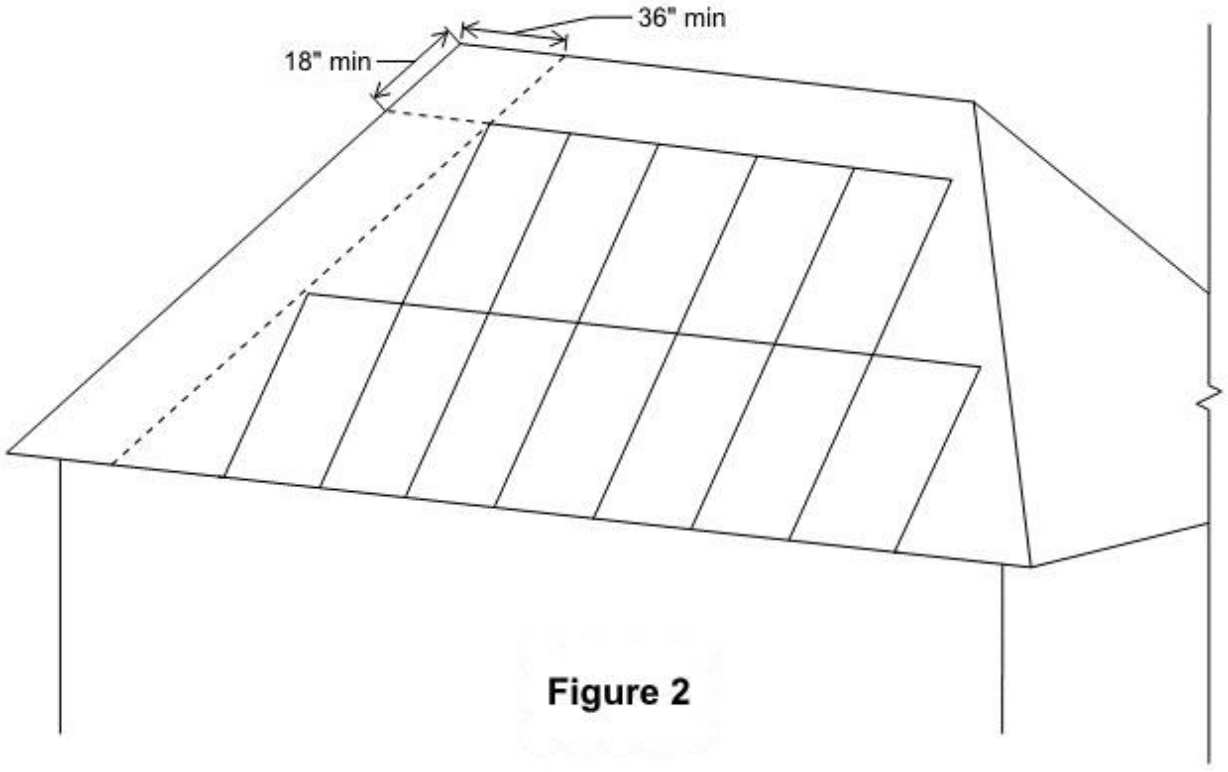

Figure 2