



NORTHBOROUGH FIRE DEPARTMENT

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Photovoltaic (PV) and Energy Storage System (ESS) Installation Requirements Summary

GENERAL:

Photovoltaic (PV) (aka Solar) panel/systems and Energy Storage Systems (ESS) are regulated under the Massachusetts State Building Code (780 CMR) and Massachusetts State Fire Code (527 CMR) using guidance from the National Fire Protection Association (NFPA) and international building and electrical codes. There are separate requirements for residential, commercial, and industrial locations.

REQUIREMENTS:

The installation or modification of a PV and/or ESS must meet all requirements of 780 CMR and 527 CMR as well as the following requirements summary. ***With the constant advancements in technology and associated code requirements, the following may be modified as necessary.*

PHOTOVOLTAIC (PV) INSTALL/MODIFICATION:

- **Permitting Process:**
 - A permit application must be acquired through the Northborough Building Department.
 - The Building Department will coordinate with the Fire Department for review and approval.
- **Submitted plans and information:**
 - Must include the percentage of the total roof area covered with panels.
 - This must be supported with measurements and calculations.
 - Must be marked up with the locations and measurements of access and emergency escape/rescue pathways and setbacks.
- **Access and emergency escape/rescue pathway clearance:**
 - Must be clear of all obstructions, including panels, conduit, and service powerlines.
- **Labeling:**
 - A simple diagram of the panel layout on the roof must be affixed to the exterior disconnects.
 - Simple step by step emergency shutdown instructions must be posted at the exterior and interior disconnects.

ENERGY STORAGE SYSTEM (ESS) INSTALL/MODIFICATION:

- **Permitting Process:**

- Permits are required to be obtained from both the Northborough Building Department and Northborough Fire Department.
- Application packages should be submitted to the Northborough Building Department.
- The Building Department will coordinate with the Fire Department for review and approval.

- **Interior installation Requirements:**

- Rooms/closets containing an ESS must be protected by a fire-rated door(s) meeting the requirements of 780 CMR.
- Combustibles (including storage, furniture, and fixtures) are prohibited within a room/closet/space containing an ESS.
- The required smoke or heat detector at the ESS must be interconnected with all smoke and heat detectors in the house, no matter the power source (battery / hardwired)

- **Impact protection:**

- All ESS with the potential of sustaining damage from impact (e.g., motorized vehicles) must have impact protection installed. The base of the protection devices must be permanently secured.

- **Labeling:**

- Simple step by step emergency shutdown instructions for each system must be posted at the exterior and interior disconnects.
- A label stating the location of the ESS must be affixed to the exterior disconnects.
 - The label must match the example below (wording, layout, and colors)
 - The size and durability must adhere to the requirements for other labels.

