



## Memorandum

<b>Date:</b>	December 19, 2018
<b>To:</b>	<b>Municipal Building Officials</b>
<b>From:</b>	Joseph V. Cassidy, P.E., State Building Inspector 
<b>Subject:</b>	PV Systems – Rapid Shutdown Requirements – NEC

Connecticut amended 2017 NEC section 690.12 to eliminate 690.12(B)(2) as this requirement had a future effective date. This is consistent with our practice in past codes. The reference to 690.12(B)(2) in 690.12(B) should have been deleted as well. The corrected Connecticut language for this section is as follows:

**(AMD) 690.12 Rapid Shutdown of PV Systems on Buildings.** PV system circuits installed on or in buildings shall include a rapid shutdown function to reduce shock hazard for emergency responders in accordance with 690.12(A) through (D).

Exception: Ground-mounted PV system circuits that enter buildings, of which the sole purpose is to house PV system equipment, shall not be required to comply with 690.12.

**(A) Controlled Conductors.** Requirements for controlled conductors shall apply to PV circuits supplied by the PV system.

**(B) Controlled Limits.** The use of the term, *array boundary*, in this section is defined as 305 mm (1 ft) from the array in all directions. Controlled conductors outside the array boundary shall comply with 690.12(B)(1).

**(1) Outside the Array Boundary.** Controlled conductors located outside the boundary or more than 1 m (3 ft) from the point of entry inside a building shall be limited to not more than 30 volts within 30 seconds of rapid shutdown initiation. Voltage shall be measured between any two conductors and between any conductor and ground.

**(C) Initiation Device.** The initiation device(s) shall initiate the rapid shutdown function of the PV system. The device “off” position shall indicate that the rapid shutdown function has been initiated for all PV systems connected to that device. For one-family and two-family dwellings, an initiation device(s) shall be located at a readily accessible location outside the building.

The rapid shutdown initiation device(s) shall consist of at least one of the following:

- (1) Service disconnecting means
- (2) PV system disconnecting means
- (3) Readily accessible switch that plainly indicates whether it is in the “off” or “on” position.

Where multiple PV systems are installed with rapid shutdown functions on a single service, the initiation device(s) shall consist of not more than six switches or six sets of circuit breakers, or a combination of not more than six switches and sets of circuit breakers, mounted in a single enclosure, or in a group of separate enclosures. These initiation device(s) shall initiate the rapid shutdown of all PV systems with rapid shutdown functions on that service. Where auxiliary initiation devices are installed, these auxiliary devices shall control all PV systems with rapid shutdown functions on that service.

**(D) Equipment.** Equipment that performs the rapid shutdown functions, other than initiation devices such as listed disconnect switches, circuit breakers, or control switches, shall be listed for providing rapid shutdown protection.