

terminate at a disconnecting means in or on a building or structure, the disconnecting means shall meet the requirements of 225.36.

The disconnecting means on the generator can be used as the disconnecting means required in 225.31, provided the disconnecting means is readily accessible and within sight of the building. [See the definitions of the terms *accessible*, *readily (readily accessible)* and *in sight from (within sight from) (within sight)* in Article 100.]

#### See also

**445.18** for requirements covering generator disconnecting means

*Exception: For installations under single management, where conditions of maintenance and supervision ensure that only qualified persons will monitor and service the installation and where documented safe switching procedures are established and maintained for disconnection, the generator set disconnecting means shall not be required to be located within sight of the building or structure served.*

The circuit between the generator and the building or structure is a feeder. Therefore, the requirements for outdoor feeders contained in Article 225 must be followed, including those covering disconnecting means for outdoor branch circuits and feeders. Section 700.12(D)(4) modifies the requirement in 225.31(B) for the location of disconnecting means. The feeder disconnecting means is permitted to be located at the generator location provided the disconnecting means, and not just the generator, is within sight and readily accessible from the building being supplied.

**Δ (E) Stored-Energy Power Supply Systems (SEPSS).** Stored energy power supply systems shall comply with 700.12(E)(1) and (E)(2).

**N (1) Types.** Systems shall consist of one or more of the following system types:

- (1) Uninterruptible power supply (UPS)

Informational Note: See UL 1778, *Uninterruptible Power Systems*, for further information.

UPS generally include a rectifier, a storage battery, and an inverter to convert dc to ac. Uninterruptible power supplies can be very complex systems with redundant components and high-speed solid-state switching. A common practice is to include an automatic bypass for UPS malfunction to permit maintenance. UPS systems often are used to provide a "ride-through" power source between when the normal source is lost and when the engine generator is started and brought on line.

- (2) Fuel cell system
- (3) Energy storage system (ESS)
- (4) Storage battery
- (5) Other approved equivalent stored energy sources that comply with 700.12

**N (2) Fire Protection, Suppression, Ventilation, and Separation.** The systems in 700.12(E)(1) shall be installed with the fire protection, suppression, ventilation, and separation requirements specified in the manufacturer's instructions or equipment listing.

Informational Note: See NFPA 853-2020, *Standard for the Installation of Stationary Fuel Cell Power Systems*, and NFPA 855-2020, *Standard for the Installation of Stationary Energy Storage Systems*, for additional information on fire protection installation requirements.

**(F) Separate Service.** Where approved by the authority having jurisdiction as suitable for use as an emergency source of power, an additional service shall be permitted. This service shall be in accordance with the applicable provisions of Article 230 and the following additional requirements:

- (1) Separate overhead service conductors, service drops, underground service conductors, or service laterals shall be installed.
- (2) The service conductors for the separate service shall be installed sufficiently remote electrically and physically from any other service conductors to minimize the possibility of simultaneous interruption of supply.

The use of a separate service requires a judgment by the AHJ. Such judgment should be based on the nature of the emergency loads and the expected reliability of the other available sources.

**Δ (G) Microgrid Systems.** On-site sources, designated as emergency sources, shall be permitted to be connected to a microgrid system.

The system shall isolate the emergency system from all nonemergency loads when the normal electric supply is interrupted or shall meet the requirements of 700.4(B). Interruption or partial or complete failure of the normal or nonemergency source(s) shall not impact the availability, capacity, and duration provided by the designated emergency sources.

The designated stored-energy electrical emergency power source(s) of a microgrid system shall be permitted to remain interconnected to any available power production source during operation of the emergency source(s) where the lack of, or failure of, the interconnected power production source(s), or related controls, does not impact system operation. Interconnected power production sources, other than the designated stored emergency power source(s), shall not be required to meet the requirements of this article.

**(H) Battery-Equipped Emergency Luminaires.**

**Δ (I) Listing.** All battery-equipped emergency luminaires shall be listed.

Informational Note No. 1: See ANSI/UL 924, *Emergency Lighting and Power Equipment*, for the requirements covering battery-equipped emergency luminaires and emergency battery packs. A listed emergency battery pack installed in a listed luminaire will provide similar functionality as a listed battery-equipped emergency luminaire.