ARTICLE

705

INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

Introduction to Article 705—Interconnected Electric Power Production Sources

Anytime there is more than one source of power supplying a building, safety concerns arise. In cases where a source such as a generator is used strictly for backup power, Articles 700, 701, or 702 require transfer switches and other safety measures to be implemented. When interconnected electrical power production sources, such as wind powered generators, solar PV systems, or fuel cells are connected in parallel with utility power, there is no transfer switch. In fact, there will often be multiple sources of electrical supply connected simultaneously. Article 705 covers the requirements for the interconnection of electric power sources that operate in parallel with a primary source. The primary source is typically the electric utility power source, but it can be an on-site source.

705.13 Power Control Systems

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Power control systems that control the output of power production sources, energy storage systems, and other equipment must be listed. The power control system must limit the current to the ampacity of the conductors or the ratings of the busbars to which it is connected in accordance with 705.13(A) through (E).

(A) Monitoring. The power control system controller must monitor all current within the power control system.

A busbar or conductor on the load side of the service disconnect that is not monitored by the power control system must be sized in accordance with 705.12.

Where the power control system is connected to the supply side of service equipment as permitted by 705.11, the power control system must monitor the current on the service conductors and prevent overload of those conductors.

(B) Settings. The sum of the power control system currents plus all monitored currents from other sources of supply must not exceed the ampacity of any busbar or conductor ampacity supplied by the power production sources.

Where the power control system is connected to an overcurrent device protecting busbars or conductors not monitored by the power control system, the setting of the power control system must be set to the ratings of that overcurrent device.

(C) Overcurrent Protection. The power control system must provide overcurrent protection either by overcurrent devices or the functionality as an overcurrent device in the product listing.

Note: Some power control systems are listed to provide overcurrent protection.

(D) Single Power Source Rating. The rating of the overcurrent device for any single power source controlled by the power control system is not permitted to exceed the rating of the busbar or the ampacity of the conductors to which it is connected.

(E) Access to Settings. The access to settings of the power control system must be restricted to qualified personnel in accordance with the requirements of 240.6(C).

Author's Comment:

- According to 240.6(C), restricted access is achieved by one of the following methods:
  - Locating behind removable and sealable covers over the adjusting means.
  - Locating behind bolted equipment enclosure doors.
  - Locating behind locked doors accessible only to qualified personnel.
  - Password protection, with the password accessible only to qualified personnel.