(6) Means for Connecting Portable or Vehicle-Mounted Generator. Where the COPS is supplied by a single generator, a means to connect a portable or vehicle-mounted generator shall be provided.

(7) On-Site Fuel Supply. Where internal combustion engines are used as the prime mover, an on-site fuel supply shall be provided. The on-site fuel supply shall be secured and protected in accordance with the risk assessment.

(G) Uninterruptible Power Supplies. Uninterruptible power supplies used as the sole source of power for COPS shall comply with 708.20(E) and (F).

(H) Fuel Cell System. Installation of a fuel cell system shall meet the requirements of Parts II through VIII of Article 692.

708.21 Ventilation. Adequate ventilation shall be provided for the alternate power source for continued operation under maximum anticipated ambient temperatures.

Informational Note: See NFPA 110-2019, *Standard for Emergency and Standby Power Systems*, and NFPA 111-2019, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, for additional information on ventilation air for combustion and cooling.

Air-cooled radiators, air intake for combustion engines, and discharge of generated heat are some factors affecting adequate ventilation. In addition, internal combustion engines require proper exhaust ventilation to remove carbon monoxide.

708.22 Capacity of Power Sources.

(A) Capacity and Rating. A COPS shall have capacity and rating for all loads to be operated simultaneously for continuous operation with variable load for an unlimited number of hours, except for required maintenance of the power source. A portable, temporary, or redundant alternate power source shall be available for use whenever the COPS power source is out of service for maintenance or repair.

(B) Selective Load Management. The alternate power source shall be permitted to supply COPS emergency, legally required standby, and optional loads where the source has adequate capacity or where load management (that includes automatic selective load pickup and load shedding) is provided as needed to ensure adequate power to (1) the COPS and emergency circuits, (2) the legally required standby circuits, and (3) the optional standby circuits, in that order of priority. The alternate power source shall be permitted to be used for peak load shaving, provided these conditions are met.

Peak load-shaving operation shall be permitted for satisfying the test requirement of 708.6(B), provided all other conditions of 708.6 are met.

(C) Duration of COPS Operation. The alternate power source shall be capable of operating the COPS for a minimum of 72 hours at full load of DCOA with a steady-state voltage within ±10 percent of nominal utilization voltage.

708.24 Transfer Equipment.

Δ **(A) General.** Transfer equipment, including automatic transfer switches, shall be automatic, listed, and identified for emergency use. Transfer equipment shall be designed and installed to prevent the inadvertent interconnection of normal and critical operations sources of supply in any operation of the transfer equipment. Transfer equipment and electric power production systems installed to permit operation in parallel with the normal source shall meet the requirements of Parts I and II of Article 705.

(B) Bypass Isolation Transfer Switches. Means shall be permitted to bypass and isolate the transfer equipment. If bypass isolation transfer switches are used, inadvertent parallel operation shall be avoided.

(C) Automatic Transfer Switches. If used with sources that are not inherently synchronized, automatic transfer switches shall comply with the following:

(1) Automatic transfer switches shall be listed for emergency use.
(2) Automatic transfer switches shall be electrically operated and mechanically held.

(D) Redundant Transfer Equipment. If COPS loads are supplied by a single feeder, the COPS shall include redundant transfer equipment or a bypass isolation transfer switch to facilitate maintenance as required in 708.6(C) without jeopardizing continuity of power. If the redundant transfer equipment or bypass isolation transfer switch is manual (or nonautomatic), then it shall be actively supervised by a qualified person when the primary (automatic) transfer equipment is disabled for maintenance or repair.

(E) Use. Transfer equipment shall supply only COPS loads.

(F) Documentation. The short-circuit current rating of the transfer equipment, based on the specific overcurrent protective device type and settings protecting the transfer equipment, shall be field marked on the exterior of the transfer equipment.

708.30 Branch Circuits Supplied by COPS. Branch circuits supplied by the COPS shall only supply equipment specified as required for critical operations use.

Part IV. Overcurrent Protection

708.50 Accessibility. The feeder- and branch-circuit overcurrent devices shall be accessible to authorized persons only.

708.52 Ground-Fault Protection of Equipment.

(A) Applicability. The requirements of 708.52 shall apply to critical operations (including multiple occupancy buildings) with critical operation areas.

(B) Feeders. Where ground-fault protection is provided for operation of the service disconnecting means or feeder disconnecting means as specified by 230.95 or 215.10, an additional