Proponent: Denver Fire

Proposal: Take all of DBC-IFC 604 and move to DBC-IFC 1203 unamended except for the addition of 1203.1.10.1 for Outdoor Locations.

CHAPTER 12
ENERGY SYSTEMS

SECTION 1203
EMERGENCY AND STANDBY POWER SYSTEMS

Section 1203.1.1 Stationary generators is amended by adding the following to the last sentence:
Stationary emergency and standby power generators required by this code shall be listed in accordance with UL 2200 and operated by a diesel-fueled prime mover.

Section 1203.1.1.1 Optional standby generators is added as follows:

1203.1.1.1 Optional standby generators shall be permitted in accordance with NFPA 70 (NEC) Article 702. Generators shall be fueled by a diesel or natural gas fuel source. Gaseous fuels shall be provided by a public utility and piped to the unit. Where diesel-fueled generators are located at other than grade level, individual fuel tank capacity shall not exceed 120 gallons, with a total capacity not to exceed 660 gallons on any building story or level.

Section 1203.1.3 Installation is amended by adding the following after the last sentence:
All generators shall be provided with a remote status panel in accordance with NFPA 110 and complying with Section 907.2.13.7. Optional standby generators shall also be provided with a remote status panel. Panel location shall be in an area approved by the fire code official.

Section 1203.1.5 Load duration is replaced to read as follows:
Emergency power systems and standby power systems shall be designed to provide the required power for a minimum duration of 2 hours without being refueled or recharged, unless specified otherwise in this code. If fuel pumping is required from a main fuel tank to a day tank, a duplex pumping system shall be provided. Fuel storage and handling shall comply with IFC Chap 57, as amended. Fuel supplies for emergency or required standby systems shall be located on-site.

Exception: Emergency generators supplying fire pumps shall have a fuel supply for eight hours of simultaneous operation of all connected emergency equipment.

Section 1203.1.6 Uninterruptible power source is replaced as follows:

1203.1.6 Stored energy emergency or standby power systems. Stored energy emergency and standby power systems required by this code shall be installed in accordance with IFC Section 1206, as amended, and NFPA 111 and shall have sufficient capacity to operate under full load for 90 minutes.

Section 1203.1.10 Location is added as follows:
1203.1.10 Location. All generators required by this code shall be located at grade level, or one level below grade with the filling connection located in accordance with IFC Chapter 57, as amended. Enclosure provisions shall comply with NFPA 110.

Exceptions:

1. Stationary emergency and legally required standby power generators in a stand-alone open parking garage less than 55’ in height, shall be permitted to be located on the topmost atmospheric level.

2. Stationary emergency generators located in a stand alone utility plant are permitted to be located one level above the level of exit discharge with a fuel capacity of not more than 240 gallons on that level.

3. Stationary emergency and legally required standby power generators shall be permitted to be located at one level above grade where all of the following are met:
   a. Individual fuel tank capacity shall not exceed 120 gallons at the generator day tank.
   b. Supply tank shall be provided at grade level with filling connection located in accordance with IFC Chapter 57, as amended.
   c. Duplex pumping system shall be provided between the supply tank and generator day tank.
   d. The aggregate capacity of fuel tanks shall not exceed 660 gallons.

1203.1.10.1 Outdoor locations. Where generators are located outside of a building, the following provisions shall apply.

a. Generators shall be located at least 5 feet from the exterior wall of the building. Where a generator location within 5 feet of the building is approved, the exterior wall shall be non-combustible and shall have a 2-hour fire resistance rating. The separation distance of the generator to the exterior wall shall be maintained as required by NFPA 70 and the manufacturer’s recommendations. The fire resistance rated exterior wall shall extend at least 3 feet above the generator enclosure.

b. A minimum 10-foot separation shall be maintained between a generator and any transformer, or a 2-hour fire resistance rated masonry or concrete wall shall be provided between the generator and the transformer. The separation wall shall be no less than 6 foot above the highest ground elevation on either side of the wall and not less than 2 feet above the top of the generator or transformer whichever is lower. Separation distance between this equipment and the exterior wall shall comply with NFPA 70.

Section 1203.2.2 Elevators and platform lifts is amended by adding the following to the end of the paragraph:

Standby power for platform lifts shall comply with ASME A18.1.
Section 1203.2.3 Emergency responder radio coverage systems is replaced as follows:

1203.2.3 Emergency responder radio coverage systems. Emergency power shall be provided for emergency responder radio coverage systems in accordance with Section 510.2.

Section 1203.2.10 High-rise buildings is replaced as follows:

1203.2.10 High-rise buildings. Emergency power shall be provided for high-rise buildings as required in IBC Section 403 and shall be in accordance with IFC Section 1203, as amended.

Section 1203.2.17 Smoke control systems is replaced as follows:

1203.2.17 Smoke control systems. Standby power shall be provided for smoke control systems as required in Section 909.7.

Section 1203.2.19 Covered mall buildings is added as follows:

1203.2.19 Covered mall buildings. Covered mall buildings exceeding 50,000 square feet (4,645 m²) shall be provided with emergency power systems which are capable of operating the emergency voice/alarm communication system, the smoke control system, where provided, in accordance with Section 909, the fire pump and one accessible elevator.

Section 1203.7 Emergency and standby (required or optional) power generator shop drawings is added as follows:

1203.7 Emergency and standby (required or optional) power generator shop drawings. Shop drawings for emergency and standby (required or optional) power generator systems shall be submitted for permit application as a deferred submittal in accordance with IBCA Section 133.5. Plan review and approval are required prior to issuance of a generator construction permit for system installation. Two sets of scaled, engineered installation shop drawings shall be submitted. Documents shall be of sufficient clarity and detail to fully describe the scope of work. Handwritten notes and comments on reproduced drawings are not acceptable. Submittals shall comply with Appendix N.

SECTION 1206

ELECTRICAL ENERGY STORAGE SYSTEMS

Section 1206.2.11.5 Spill control and neutralization is replaced as follows:

1206.2.11.5 Spill control and neutralization. An approved method and materials for the control and neutralization of a spill of electrolyte shall be provided in areas containing lead-acid, nickel-cadmium or other types of batteries with free-flowing liquid electrolyte. Each rack of batteries or groups of racks shall be provided with a liquid-tight 4-inch (101.6mm) minimum spill-control barrier which extends at least 1-inch (25.4 mm) beyond the battery rack in all directions. For the purposes of this paragraph, a “spill” is defined as any unintentional release of electrolyte.

Exception: VRLA, lithium-ion or other types of sealed batteries with immobilized electrolyte shall not require spill control.