

RESCINDED 09-25-12



OREGON FIRE CODE

Interpretations and Technical Advisories

A collaborative service by local and state fire professionals, along with our stakeholders and customers, to provide consistent and concise application of Oregon's fire prevention and life safety regulations.

Date: April 4, 2011

Ruling: Technical Advisory No. 11-08 (Revised TA# 07-03)

Subject: Requirements for Emergency or Standby Power Supplies Including Duration

Code Reference: 2010 Oregon Fire Code (OFC), Section 604.1 and 2010 Oregon Structural Specialty Code, Section 2702.1

Definitions: For the purpose of this technical advisory, the following definitions apply.

- **Class:** The time in hours that the emergency power supply system is to operate without being recharged or refueled.
- **Essential electrical system:** A secondary power supply to maintain power to designated areas and functions of a health care facility (NFPA 99, Section 3.3.44)
- **Health care facilities:** Buildings or portion of such in which medical, dental, psychiatric, nursing, obstetrical or surgical care are provided; also includes hospitals, nursing homes, limited care facilities, clinics, medical and dental offices. NFPA 99, Section 3.3.68 (OFC, Section 604.2.16)
- **Level 1 system:** Supplies power to areas and equipment that is critical and essential to the safety of human life such as life safety illumination, fire detection/alarm systems, elevators, fire pumps, public safety communication systems, industrial processes that will create serious life/health risk if interrupted, essential ventilating and smoke removal systems.
- **Level 2 system:** Supplies power to equipment that could create hazards, hamper rescue or firefighting operations and its failure would be less critical to human life and safety.

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Content: Design, Installation and Testing Standards.

When required by the OFC and the OSSC, the installation of emergency and standby power will be in accordance with the 2005 NFPA 110 and the 2005 NFPA 111. Consult OFC, Section 604.1 and OSSC, Section 2701.1.

Emergency power systems will be inspected and tested under load in accordance with the 2005 NFPA 110 and the NFPA 111.

Health care facilities shall have systems in accordance with 2005 NFPA 99, OESC and OFC, Section 604.2.16.

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Code Ref	Requirements	Emerg. Power	Stdby Power	Power Duration	Comments
EMERGENCY					
OFC					
604. 2. 1	Group A with emergency voice/alarm com. systems	X		15 min.	2007 NFPA 72: Section 4. 4. 1. 5. 3. 1(A)
604. 2. 3	Exit signs per OFC 1011. 5. 3	X		90 min.	Transfer power within 10 sec.
604. 2. 4	Egress illumination	X		90 min.	OFC 1006. 3, Transfer power within 10 sec.
604. 2. 8	Semiconductor fab facility per OFC 1803. 15 H-5 and OSSC 415. 8. 10	X			HPM exh, HPM gas cab vent, HPM exh enclosure vent sys, HPM gas room vent sys, HPM gas detection, emerg alarm, FA, sprinkler monitoring and alarm, auto alarm and detection for pyrophoric liq & Class 3 water reactive, liq and the flow alarm switch for cabinet exh sys, etc.
604. 2. 9	Membrane struc., exit signs	X			
604. 2. 9	Membrane struc., aux inflation system		X		For permanent membrane structures
604. 2. 10	Haz Mat, OFC 2704. 7 and 2705. 1. 5	X	X		When required for mechanical vent sys, treatment sys, temp control, alarm, detection, etc OSSC 414. 5. 4
604. 2. 11	Highly toxic and toxic materials, OFC 3704. 2. 2. 8 & 3704.3.4.2.	X			7 systems; exhaust ventilation, treatment sys, gas detect, smoke detect, temp control sys, FA, emerg alarm, see exception
604. 2. 14	Highrise	X		2 hr	Exit signs and illumination, elevator car lighting, emerg voice/comm. Sys, auto fire detect sys and FA, 10 sec. transfer
604. 2. 14	Highrise		X	2 hr	Power and lighting for command center, fire pump, vent/auto fire detect equip for smoke proof enclosure, for a least 1 elevator OSSC 403.9 & 403. 10
604. 2. 15	Underground	X		Varies for each sys, 2 hr is max	Emerg voice/alarm sys, fire detect sys, elev car lighting, egress signs and illumination. Transfer power within 60 sec.
604. 2. 15	Underground		X	15 min	Smoke control, vent/auto fire detect for smokeproof enclosures, fire pumps, elevator per OSSC 3003. Transfer power within 60 sec.

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604. 2. 17	Grp I-3 power-op sliding doors				Consult specifics
604. 2. 16	Health care facilities, NFPA 99	X	X	Minimum 90 min.	The performance of a Level I EPSS in seismic risk areas should be based upon the EPS equipment operating a minimum of 96 hours without refueling if the need for an EPS persists for this period of time.
OSSC 407. 10	I-2 hospitals, nursing homes, mental hospitals, detox facilities.	X	X	96 hrs* of fuel supply for facilities required to have life support equipment.	
OSSC 308.3	Ambulatory health care facilities.	X	X	Maximum req. 24 hours. per NFPA 99	
STANDBY					
604. 2. 2	Smoke Control, OFC 909. 11		X	15 min	Transfer power within 60 sec.
604. 2. 5	Accessible means of egress elevators		X		
604. 2. 6	Accessible means of egress platform lift		X		
604. 2. 7	Horizontal sliding doors, used for egress		X		OFC 1008. 1. 4. 3 (6)
604. 2. 9	Membrane structures, aux inflation system		X		For permanent membrane structures
604. 2. 10	Haz mat, OFC 2704. 7 and 2705. 1. 5		X		
604. 2. 12	Organic peroxides, OFC 3904. 1. 11		X		Storage areas of Class 1 and unclassified detonable org perox
604. 2. 13	Covered mall > 50K sq. ft., OSSC 402. 14		X		For emergency voice alarm communication
604. 2. 14	Highrise		X	2 hr	See above
604. 2. 15	Underground		X		See above. Transfer power within 60 sec
604. 2. 18	Airport traffic control towers > 65'		X		Pressurization & mechanical equip, elevator equip, FA & smoke detection
604. 2. 19	Elevator		X		When required by other code section, transfer power within 60 sec
604. 2. 16	Health care facilities, NFPA 99		X		See above
909. 11	Smoke control systems		X	15 min	Transfer power within 60 sec
OSSC 404. 7	Atrium smoke control sys per OSSC 909. 11		X	15 min	

Other References: 2011 Oregon Electrical Specialty Code (OESC), 2005 NFPA 99 Health Care Facilities, 2007 NFPA 72 National Fire Alarm Code, 2005 NFPA 110 Emergency and Standby Power Systems and 2005 NFPA 111 Stored Electrical Energy Emergency and Standby Power Systems.