

# LAC+USC MEDICAL CENTER FACILITIES MANAGEMENT PROCEDURE MANUAL

Page 1	Of 3
Subject: <b>Emergency Power Supply Systems</b>	Original Issue Date: 1/18/08 Supersedes: 11/26/12
Policy # <b>406</b>	Effective Date: 8/18/2020
Departments Consulted: Facilities Management	Reviewed & Approved by: Facilities Management Administration
Approved by:  Director, Facilities Management	

## **PURPOSE**

To implement a system that ensures emergency power systems are adequately sized, designed, fueled, maintained, tested and inspected so that they provide reliable service in event of loss of normal power supply.

## **POLICY**

The LAC+USC Healthcare Network Facilities Management Department provides a reliable emergency power system that supplies electrical power as required by LSC requirements and the patient care services provided.

## **PROCEDURE**

New emergency power supply systems and major modifications to existing systems are designed to ensure the generator output and electrical distribution equipment is sized and to meet the needs of the patient care activities in the affected areas and all applicable building code requirements.

All emergency power systems are designed to provide electricity to following areas/equipment in the event of a normal power utility disruption:

- Alarm systems
- Exit route illumination
- Emergency communication systems
- Exit sign illumination
- Blood, bone and tissue storage units
- Emergency and Urgent care areas
- Elevators (at least one for non-ambulatory patients)
- Medical air compressors
- Medical and Surgical vacuum systems
- Areas where electrically power life support equipment is used
- Operating rooms
- Postoperative recovery rooms
- Obstetrical delivery rooms
- Newborn nurseries
- Automatic dispensing cabinets, medication carousels, and central medication robots
- Designated refrigerators and freezers for medications

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Fuel supply systems for the generators are designed to provide a minimum of 96 hours of fuel under emergency conditions.

## Testing and Inspection

### Generators

All emergency power generators are tested monthly under a dynamic load condition. The tests are not be less than 20 days or more than 40 days apart. The loaded test shall be for a minimum of 30 minutes at a dynamic load that is a least 30% of the generator nameplate rating.

If the dynamic load of the Emergency Power Supply System is less than 30% of nameplate rating, then the generator is tested annually with supplemental loads of:

- 25% of nameplate rating for 30 minutes, followed by
- 50% of nameplate rating for 30 minutes, followed by
- 75% of nameplate rating for 60 minutes for a total of two continuous hours

All emergency power generators are tested at least every 36 months for 4 continuous hours at a minimum of 30% of nameplate capacity.

If a generator fails any of these tests, notifications/reports to management are made in accordance with established procedures set forth in the Engineering Operations Manual. Management implements interim fire/life safety procedures (if needed) and coordinate, with assistance of our electric shop and a high voltage contractor, to ensure prompt repairs of affected components. Re-tests are conducted immediately after repairs have been made.

### Automatic Transfer Switches

All automatic transfer switches are tested 12 times per year, not less than 20 or more than 40 days apart.

### Battery Operated Egress Lighting

All battery operated egress lighting are tested monthly for a minimum of 30 seconds and annually for 90 minutes.

### Maintenance

All Emergency power supply systems preventive maintenance requirements are determined by utilizing the Facilities Management Department "Utility System Maintenance Risk Evaluation

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Page 3	Of 3
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Procedure”. This process ensures that the appropriate scheduled tasks and frequencies meet the needs of the equipment and ensure reliable operation under emergency conditions.

**RESPONSIBILITY**

Facilities Management

**PROCEDURE DOCUMENTATION**

Facilities Management Procedure Manual  
Engineering Operations Manual

**REFERENCES**

NFPA 110 – 2010 Edition, Standard for Emergency & Standby Power Systems  
Joint Commission Utility Standards EC.02.05.03 & EC.02.05.07  
California Code of Regulations

**REVIEW-REVISION DATES**

5/15/12  
11/26/12  
5/29/13  
3/30/16  
12/1/17  
3/5/19