

10A NCAC 13D .3402 EMERGENCY ELECTRICAL SERVICE

A facility shall provide an emergency electrical service for use in the event of failure of the normal electrical service. This emergency electrical service shall consist of the following:

- (1) In any existing facility:
 - (a) type 1 and 2 emergency lights as required by the North Carolina State Building Codes: Electrical Code;
 - (b) additional emergency lights for all control points required by Rule .3201(1)(9) of this Subchapter, medication preparation areas required by Rule .3201(1)(1) of this Subchapter, storage areas, and for the telephone switchboard, if applicable;
 - (c) one or more portable battery-powered lamps at each control point required by Rule .3201(1)(9) of this Subchapter; and
 - (d) a source of emergency power for life-sustaining equipment, if the facility admits or cares for occupants needing such equipment, to ensure continuous operation with on-site fuel storage for a minimum of 72 hours.
- (2) An emergency power generating set, including the prime mover and generator, shall be located on the premises and shall be reserved exclusively for supplying the essential electrical system. For the purposes of this Rule, the "essential electrical system" means a system comprised of alternate sources of power and all connected distribution systems and ancillary equipment, designed to ensure continuity of electrical power to designated areas and functions of a facility during disruption of normal power source, and also to minimize disruption within the "internal wiring system," as defined by the North Carolina State Building Codes: Electrical Code.
- (3) Emergency electrical services shall be provided as required by Rule .3101(b) of this Subchapter with the following modification: Section 517.10(B)(2) of the North Carolina State Building Codes: Electrical Code shall not apply to new facilities.
- (4) The following equipment, devices, and systems which are essential to life safety and the protection of important equipment or vital material shall be connected to the critical branch of the essential electrical system as follows:
 - (a) nurses' calling system;
 - (b) fire pump, if installed;
 - (c) one elevator, where elevators are used for the transportation of patients;
 - (d) equipment such as burners and pumps necessary for operation of one or more boilers and their necessary auxiliaries and controls, required for heating and sterilization, if installed;
 - (e) equipment necessary for maintaining telephone service; and
 - (f) task illumination of boiler rooms, if applicable.
- (5) A dedicated critical branch circuit per bed for ventilator-dependent patients is required. This critical branch circuit shall be provided with two duplex receptacles identified for emergency use. When staff determines that the electrical life support needs of the patient exceed the requirements stated in this Item, additional critical branch circuits and receptacles shall be provided. For the purposes of this Rule, a "critical branch circuit" is a circuit of the critical branch subsystem of the essential electrical system which supplies energy to task lighting, selected receptacles and special power circuits serving patient care areas as defined by the North Carolina State Building Codes: Electrical Code. This Item applies to both new and existing facilities.
- (6) Heating equipment provided for ventilator dependent patient bedrooms shall be connected to the critical branch of the essential electrical system and arranged for delayed automatic or manual connection to the emergency power source if the heating equipment depends upon electricity for proper operation. This Item applies to both new and existing facilities.
- (7) Task lighting connected to the automatically transferred critical branch of the essential electrical system shall be provided for each ventilator dependent patient bedroom. For the purposes of this Item, "task lighting" is defined as lighting needed to carry out necessary tasks for the care of a ventilator dependent patient. This Item applies to both new and existing facilities.
- (8) Where electricity is the only source of power normally used for the heating of space, an essential electrical system shall provide for heating of patient rooms. Emergency heating of patient rooms shall not be required in areas where the facility is supplied by at least two separate generating sources or a network distribution system with the facility feeders so routed, connected, and protected that a fault any place between the generating sources and the facility will not cause an interruption of more than one of the facility service feeders.

- (9) An essential electrical system shall be so controlled that after interruption of the normal electric power supply, the generator is brought to full voltage and frequency and connected within 10 seconds through one or more primary automatic transfer switches to all emergency lighting, alarms, nurses' call, and equipment necessary for maintaining telephone service. All other lighting and equipment required to be connected to the essential electrical system shall either be connected through the 10 second primary automatic transfer switching or shall be connected through delayed automatic or manual transfer switching. If manual transfer switching is provided, staff of the facility shall operate the manual transfer switch.
- (10) Sufficient fuel shall be stored for the operation of the emergency power generator for a period not less than 72 hours, on a 24-hour per day operational basis with on-site fuel storage. The generator system shall be tested and maintained per National Fire Protection Association Health Care Facilities Code, NFPA 99, which is incorporated by reference, including all subsequent amendments and additions. Copies of this code may be obtained from the national Fire Protection Association – online at <http://www.nfpa.org/catalog/> or accessed electronically free of charge at <http://www.nfpa.org/codes-and-standards/nfpa-99-standard-development/99>. The facility shall maintain records of the generator system tests and shall make these records available to the Department for inspection upon request.
- (11) The electrical emergency service at existing facilities shall comply with the requirements established in Sections .3100, and .3400 of this Subchapter in effect at the time a license is first issued. Any remodeling of an existing facility that results in changes to the emergency electrical service shall comply with the requirements established in Sections .3100, and .3400 of this Subchapter in effect at the time of remodeling.

*History Note: Authority G.S. 131E-102;131E-104;
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