

# NEBRASKA

Good Life. Great Safety.

STATE FIRE MARSHAL AGENCY



Pete Ricketts, Governor



## GUIDANCE DOCUMENT

### 19-08 Electric Drive Fire Pump – Power Source

This guidance document is advisory in nature but is binding on an agency until amended by such agency. A guidance document does not include internal procedural documents that only affect the internal operations of the agency and does not impose additional requirements or penalties on regulated parties or include confidential information or rules and regulations made in accordance with the Administrative Procedure Act. If you believe that this guidance document imposes additional requirements or penalties on regulated parties, you may request a review of the document.

7/29/2019

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The following information has been created to help define appropriate power sources for electrically driven fire pumps.

Power shall be supplied to the electric motor-driven fire pump by a reliable source or by two or more approved independent sources.

### **Reliable Sources**

Where power is supplied by an electric utility or on-site electrical power production facility, those sources shall be deemed reliable if they possess the following characteristics:

1. The source power plant has not experienced any shutdowns longer than 4 continuous hours in the year prior to plan submittal.
2. No power outages have been experienced in the area of the protected facility caused by failures in the power grid that were not due to natural disasters or electric grid management failure. Documentation shall be provided that indicates the frequency and duration of power outages over the past five years at the premises served by the fire pump. The authority having jurisdiction shall make the determination if the source is reliable from this documentation.
3. The normal source of power is not supplied by overhead conductors outside the protected facility.
4. A separate service connection or connection to the supply side of the service disconnect is provided. Power disconnection and activated overcurrent protection should only occur in the fire pump controller.
5. Service and feeder conductors within a building are either buried under 2 inches of concrete or encased in 2 inches of concrete or brick.

### **Independent Sources**

Where reliable power cannot be obtained, two or more of the following shall also be provided:  
NFPA 20, 6-2.3

1. Electric utility whose service is located and arranged to minimize the possibility of damage by fire from within the premises and exposing hazards.
2. On-site electrical power production facility that is located and protected to minimize the possibility of damage by fire.
3. On-site standby generator located and protected to minimize the possibility of damage by fire from within the premises and exposing hazards.
4. A redundant diesel engine-driven fire pump complying with Chapter 8 of NFPA 20.
5. A redundant steam turbine-driven fire pump complying with chapter 10 of NFPA 20.

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