

July 9, 2007

TO: All Concerned

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EMERGENCY GENERATORS – Fuel Gas Supplies

Question:

Are there Code provisions that address fuel supplies to emergency electrical power generators? Does the City of Phoenix have specific Rules or stipulations regarding these installations?

Answer:

Many emergency electric power generators are fueled with natural gas. Due to the critical nature of emergency power [elevators, fire pumps, lights, etc] it is essential that the fuel supply to these generators not be interrupted. It is routine and appropriate for fire-fighters to turn off all gas supplying a burning building. The one exception should be the fuel supply to an emergency power generator. In part, NFPA 110.7.9.7 requires that “the fuel supply to (emergency generators) be connected AHEAD of the building’s main shutoff valve, and identified as supplying an emergency generator”.

This requires installation of a separate gas piping branch that is independent of the balance of the gas piping system, and ahead of any MAIN gas supply shut-off valve. The valve serving the “emergency power” branch shall be clearly identified with a permanent tag stipulating “EMERGENCY POWER – DO NOT TURN OFF”. The 2006 UPC requires all main gas valves to be readily accessible. Such valves shall be accessible from ground level so that gas valves may be turned-off without entering or climbing onto a building to reach its shut-off valve(s). This rule applies whether the building is multi-story or single story.

In summary, a piping system that by its design could result in an unintentional interruption of the fuel supplying an emergency generator would comply with neither the UPC nor NFPA 110, nor would it be consistent with the life safety objectives of providing power during emergency conditions. The obvious intent of the Codes is to provide emergency power for the purpose of safely evacuating an endangered building. A loss of power, even briefly, could result in a dire outcome that may well have been avoided with a reliable source of emergency power. First responders benefit greatly from a well-designed system of piping with valves that are properly located, identified, and readily accessible.