

# Commercial Risk Advisor



## Protecting Against Electrical Room Fires



Electrical rooms can pose significant fire risks if not properly designed, built and maintained. To protect people and property, it is essential for facilities to take targeted steps to mitigate these risks before they escalate.

Electrical room hazards often stem from preventable issues, including faulty electrical wiring, overloaded circuits, loose electrical connections, neglected maintenance, improper insulation, damaged or dirty equipment, overheating, electrical switch sparks, improper storage of flammable materials, static electricity, human error and short circuits. Additionally, while not preventable, natural disasters such as floods, earthquakes or lightning strikes can damage electrical infrastructure and trigger fires or explosions.

To reduce the risk of electrical room fires, property managers and business owners should ensure appropriate design measures, safety protocols and maintenance practices are in place. Strategies to consider include the following:

- **Plan and layout the electrical room properly** by following NFPA 70 guidelines for electrical design, installation and inspection, as well as guidelines for access, dedicated electrical space, illumination, fire resistance and construction, signage and identification, egress and workplace safety.
- **Install fire detection and suppression systems** by using smoke detectors, heat sensors and automatic fire suppression systems. Consult with fire protection professionals to ensure that systems are properly designed, installed and maintained, meeting all applicable requirements and codes.
- **Control access** by restricting entry into the electrical room to qualified and authorized personnel, thereby reducing the risk of tampering or accidental damage.
- **Ensure electrical safety best practices** by creating, routinely reviewing and enforcing thorough policies and procedures.
- **Utilize environmental controls**, such as:
  - **Ventilation and cooling systems** to prevent overheating
  - **Moisture control** to prevent water intrusion, leaks or condensation from forming and creating fire hazards
  - **Temperature regulation** in the electrical room to add another safeguard against overheating
- **Conduct routine maintenance and inspections** of equipment by regularly checking for wear, corrosion and electrical faults to find and address issues early. Outdated components should be promptly replaced.
- **Train staff** on electrical room safety hazards, the proper handling of flammable materials, the use of personal protective equipment, emergency procedures, fire extinguisher use, and how to report any issues.
- **Maintain housekeeping** by adhering to a cleaning schedule, keeping the room and electrical components free of conductive dust or chemical residues, and ensuring the area is sealed against dirt and pests.
- **Have storage rules** that require the room to be kept free of flammable or combustible materials (e.g., paper, cardboard, fuel and cleaning supplies) and clutter.
- **Implement lockout/tagout procedures** that ensure equipment is safely de-energized during maintenance to prevent accidental startup or shock.

Electrical room safety is an ongoing commitment, and proactive risk management is essential to prevent electrical room fires. By prioritizing preventive best practices, organizations can protect their infrastructure, safeguard personnel and avoid fires. Contact us today for more information on risk management.

## Mitigating Outdoor Heater Risks

Although outdoor heaters can be beneficial, they also come with unique risks. Without proper precautions, these appliances could pose significant fire safety concerns and cause serious injuries. It's vital for commercial property owners with outdoor heaters on-site to understand their related hazards and ensure compliance with applicable standards.

Both electric and propane heaters pose similar hazards, particularly in terms of fire safety. For instance, these appliances could spark fast-spreading fires if placed near flammable materials or other sources of ignition. Poor placement or insufficient securement methods could also prompt them to tip over and generate extensive fires. If these appliances tip over in crowded areas, they may strike nearby individuals as they fall, possibly resulting in severe injuries. Without knowledge of safe handling methods, employees could also experience burn injuries when setting up, adjusting or moving outdoor heaters.

The National Fire Protection Association (NFPA) standards (i.e., sections 11 and 69 of NFPA 1 and NFPA 58) provide recommendations for commercial property owners to follow when operating outdoor heaters on-site. Federal agencies (i.e., OSHA), states and local jurisdictions have implemented these standards within their regulations and municipal codes, ultimately making them legally binding.

For electric heaters, the NFPA recommends selecting heaters listed by a qualified electrical testing laboratory. Following the manufacturer's instructions is also essential. Heaters should be placed in stable areas where they cannot be easily overturned and at least 3 feet away from any combustible materials. Whenever possible, heaters should be plugged directly into appropriate power receptacles. If extension cords must be used, they must have sufficient current capacity and be plugged directly into approved receptacles or adapters. Each cord must serve only one heater and be properly grounded. Cords that are spliced, deteriorated or damaged should be avoided, and extension cords or multiplug adapters must not be used as substitutes for permanent wiring. Additionally, cords should not be attached to structures or run through walls, ceilings, floors, or under doors or floor coverings. They must not be exposed to environmental or physical damage. Electric heaters must always be unplugged when they are not in use.

The NFPA also provides several recommendations for the safe use of propane heaters. Only propane heaters listed by an organization recognized by the authority having jurisdiction should be used, and manufacturer's instructions should be followed. Installation, modification and maintenance should be performed by a qualified professional. Propane heaters should never be used in enclosed spaces. Their placement must comply with commercial property occupancy guidelines.

Like electric heaters, propane units should be placed where they cannot be easily overturned. They also must be kept at least 3 feet away from combustible materials. Additionally, hoses should be kept short, visible and protected from damage. Propane cylinders must be stored properly, away from ignition sources and protected from physical damage, tampering, and extreme temperatures. Cylinders should always be stored upright with the valve facing upward and should never be stored inside buildings or on rooftops. When stored outdoors, cylinders must be placed at least 5 feet from any doorway or opening in buildings with two or more exits, 10 feet from buildings with only one exit, and 20 feet from any vehicle service station fuel dispenser. Propane heaters should be turned off when not in use.

In addition to adhering to NFPA recommendations, commercial property owners should implement regular inspection, cleaning and maintenance schedules for their outdoor heaters, making repairs or replacements as needed. It is also essential to train employees on proper safety practices when handling these appliances. Employees should never use outdoor heaters that appear damaged and must always position them on flat, stable surfaces, securing them with appropriate materials. Outdoor heaters and their components, including cords, should be kept away from walkways and high-traffic areas to prevent accidents. If smoke or gas is detected, heaters should not be plugged in or ignited. Control knobs should be adjusted gradually to avoid overworking the units. Before moving heaters, they should be unplugged or switched off, gas disconnected (if applicable) and allowed to cool down; burners and reflectors should never be touched while the heater is on. In the event of a fire caused by an outdoor heater, employees must follow workplace emergency procedures.

Contact us today for more risk management guidance.

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