

Electric space heaters are commonly used to provide supplemental or temporary heat in residential, commercial, agricultural, and industrial occupancies, particularly in areas where permanent heating is limited, unavailable, or temporarily out of service. While they can provide a practical means of addressing localized heating needs, their portability and ease of use also create a need for added oversight.

This guide provides property owners with practical considerations to support safer electric space heater use and help reduce the potential for loss.

Understanding the Risk

Although electric space heaters are simple to operate, several factors can shape their level of risk. When an electric space heater is improperly selected, placed, powered, operated, or maintained, it can increase the potential for fire, smoke damage, and electrical failure. Common contributors to loss include inadequate clearance from combustible materials, unstable placement, overloaded circuits, damaged cords or plugs, and unattended operation.

Did you know? Long-term space heater use increases risk and cost

While they can be effective for localized heating needs, electric space heaters are not designed or manufactured to be a permanent heating solution. When relied upon over the long term, they can not only increase the potential for fire, smoke damage, and electrical failure, but also operate less efficiently than conventional, permanent heating appliances. Where ongoing heat is required, a permanent heating system, such as a furnace or heat pump, is the safer and more cost-effective solution.

Risk Mitigation Practices

Electric space heater safety relies on proper selection, suitable placement, responsible operation, and regular inspection and maintenance. These measures help reduce the potential for fire, smoke damage, and electrical failure.

Selection

Before purchasing or using an electric space heater, property owners should confirm that the appliance is suitable for its intended use.

Key selection considerations include (but are not limited to) the following:

- Selecting equipment that is certified for use in Canada by a recognized testing or certification organization, including the Canadian Standards Association (CSA) and Underwriting Laboratories of Canada (ULC/cUL).
- Selecting a heater that is suitable for the intended environment, especially where moisture, combustible dust, or flammable vapours may be present.
- Selecting heaters equipped with built-in safety features such as automatic shutoff devices that trigger in response to overheating or tip-over conditions, integrated thermostats that cycle the heater on and off as needed, and cool-touch exterior surfaces that help reduce burn hazards.

Placement

Electric space heaters should be positioned where they can operate without exposing nearby materials or occupants to unnecessary heat or contact hazards.

Key placement practices include (but are not limited to) the following:

- Maintaining at least three feet of clearance in all directions around the heater, including from walls, furniture, textiles, and any other stored materials.
- Placing heaters on non-combustible surfaces that are stable and level, where they are unlikely to be bumped, tipped over, or obstructed.
- Keeping heaters away from walkways, exits, doorways, and other high-traffic areas.

Operation

Electric space heaters should be operated in accordance with the manufacturer's instructions and only under conditions that allow them to be used safely.

Key operating practices include (but are not limited to) the following:

- Plugging heaters directly into a permanent wall outlet; the use of extension cords, power bars, multi-plug adapters, or other temporary wiring arrangements should be prohibited.
- Confirming that the electrical circuit can support the heater; these heaters should not share circuits with other high-demand equipment to prevent overloading.
- Ensuring power cords are not routed under rugs, carpets, furniture, doors, or other locations where they may be pinched, damaged, or hidden from view.
- Turning heaters off when the area is unattended or unoccupied, including before leaving the area or going to bed.

Inspection and maintenance

Electric space heaters should be inspected and maintained in accordance with the manufacturer's instructions to ensure they remain suitable for continued use.

Key inspection and maintenance practices include (but are not limited to) the following:

- Inspecting cords, plugs, controls, guards, exterior surfaces, and safety features for damage, deterioration, overheating, or abnormal operation.
- Removing heaters from service immediately where damaged cords, loose plugs, unusual odours, sparks, excessive heat, or other unsafe conditions are identified.
- Keeping heaters clean and free from dust, debris, lint, or other materials that could restrict airflow or affect safe operation.

In Summary

Losses involving electric space heaters are often linked to conditions that can be identified and corrected before damage occurs. While a permanent heating solution is preferred where ongoing heat is required, proper selection, placement, operation, inspection, and maintenance all play an important role in reducing this exposure when electric space heaters are used. Maintaining these controls over time supports safer use and helps prevent temporary heating from becoming a long-term exposure.

References

National Fire Protection Association | NFPA 1 – Fire Code

National Fire Protection Association | Electric Portable Space Heater Safety
www.nfpa.org/education-and-research/home-fire-safety/heating

Electrical Safety Authority | Indoor Safety
www.esasafe.com/safety/home-electrical-safety/indoor-safety

The BC Forest Safety Council | Using portable space heaters at work
www.bcforestsafety.org/wp-content/uploads/2023/11/mag_CrewTalk-SpaceheaterSafety.pdf

Government of Canada | Danger to human health or safety assessment for portable electric heaters
www.canada.ca/en/health-canada/services/consumer-product-safety/legislation-guidelines/guidelines-policies/information-regulated-parties-enforcement-approach-general-prohibitions/danger-human-health-safety-assessment-portable-electric-heaters.html

