

# Heat Efficiently

## Getting the most out of your building's heating system



As energy costs continue to rise and building performance expectations increase, maintaining an efficient heating system is more important than ever. For building owners, facility managers, and operators, underperforming systems can lead to higher utility bills, unexpected equipment failures, and costly repairs.

The good news is that optimizing your heating system doesn't always require a full replacement. With the right combination of routine maintenance, system monitoring, and targeted upgrades, you can improve efficiency, extend equipment life, and create a more comfortable environment for occupants.

### Optimizing System Performance

A well-maintained heating system is the foundation of efficient operation. Proactive maintenance not only improves performance but also helps identify issues before they become costly problems.

#### **Schedule a professional cleaning and inspection**

at the start of each heating season to ensure your system is operating safely and efficiently.

**Replace filters regularly** based on manufacturer recommendations to improve airflow, system efficiency, and indoor air quality.

**Seal duct leaks** with mastic tape to keep warm air from escaping and maintain even heating for greater comfort.

**Insulate ducts** to retain heat and ensure it reaches occupied spaces.

**Clean ductwork and registers to ensure consistent** heat delivery throughout your space.

**System cleanliness:** Regular cleaning of ductwork and registers supports better air quality and comfort.

**Ensure proper heat distribution** by keeping areas around registers unobstructed.

If your system requires frequent repairs or struggles to meet demand, it may be time to evaluate replacement options. Proper system sizing is critical.



*Maximize heating efficiency, comfort, and reliability with proactive maintenance, regular cleaning, proper airflow management, and timely system upgrades.*

## Heat Efficiently *continued*

### Fueling Boiler Efficiency

Boilers play a central role in many heating systems, and even small inefficiencies can lead to significant energy waste. In addition to routine maintenance and annual inspections, targeted monitoring and upgrades can dramatically improve performance.

**Monitor combustion performance** with flue gas analyzers or oxygen trim systems to maintain proper oxygen levels, ideally below 6%, for efficient combustion.

**Track flue gas temperature**, as rising temperatures may indicate scale buildup or fouling, reducing heat transfer efficiency.

**Remove scale buildup** with regular cleaning to improve heat transfer and reduce the fuel required to meet heating demands.

**Measure carbon monoxide levels** to ensure they remain below 200 parts per million, a threshold above can indicate incomplete combustion and wasted energy.

**Inspect boiler insulation regularly** and repair any damage to prevent unnecessary heat loss.

**Inspect steam traps** to catch and repair leaks before they lead to wasted steam and reduced system performance.

Efficiency upgrades can further enhance performance. For example, boiler economizers can preheat feedwater and improve efficiency by up to 3%, while upgrading to a modern, high-efficiency burner can deliver energy savings with a relatively quick payback period.

### Beyond Heating Equipment

Optimizing your heating system is only part of the equation. A holistic approach that addresses the building itself can further reduce energy use and improve comfort.

**Existing Building Commissioning (EBCx)** upgrades existing controls with one-time commissioning, can identify and fix inefficiencies to help you reach your energy and decarbonization goals.

For more information, visit: [ngrid.com/controls](https://ngrid.com/controls)

### Building Insulation and Air Sealing

Weatherization is widely considered one of the most cost-effective energy-efficiency strategies. Measures like insulation upgrades and air sealing work together to prevent warm air from escaping and cold air from entering, which directly reduces the energy required to maintain comfortable indoor temperatures.

**By addressing drafts, poorly insulated walls, and inefficient building components, these upgrades can significantly reduce heating demand and improve overall system efficiency.**

For more information, visit: [ngrid.com/weatherization](https://ngrid.com/weatherization)

