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KEY POINTS

- **Space heating is the largest natural gas use for warehouse facilities**
- **There are several approaches to reduce energy loss from loading docks**
- **Water heating costs can be reduced by reducing the temperature setting**

Find out what incentives are available for your home or business.
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Lower Your Natural Gas Use Now: Quick Tips for Warehouses

On an average annual basis, the typical warehouse consumes 45 kBtu/ square foot. Lowering this consumption not only improves the bottom line, it also provides a more comfortable workplace for employees.



Source: www.epa.gov

Space Heating

Space heating is the largest natural gas use for warehouse facilities, accounting for 75% to 90% of total natural gas usage, depending on the climate zone.

There are a number of operational changes and low-cost upgrades that can significantly lower heating costs for most warehouse facilities, including the following:

The frequent opening and closing of loading dock doors leads to major energy losses. Regularly monitoring doors to make sure that they are closed when not in use can save a tremendous amount on heating bills.

- Use dock shelters which enclose the rear of the truck to reduce outdoor air exchange.
- Using infrared heaters in dock areas, as well as high-velocity air blowers, can help to keep cold, outside air from entering the facility when doors must be open.
- Warehouses with high ceilings should utilize ceiling fans to blow warm air down to prevent it from being wasted.
- Schedule an inspection and cleaning for all heating equipment on an annual basis to ensure that the system is operating as efficiently as possible. Change filters and check pipes and duct insulation for damage.
- Programmable thermostats are a low-cost upgrade that can save energy by operating the heating system according to occupancy schedules and nighttime and weekend setbacks.
- Proper maintenance of boilers can lead to energy savings of 10%



ENERGY SAVINGS HIGHLIGHT

**VFDs are ideal for facilities
with long operating hours
and frequently changing load
requirements**

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- may fund a portion of the cost of an energy audit study
- provides incentives on energy savings improvements
- may require pre-approval of the audit and incentives

to 20%, according to U.S. Department of Energy estimates. Scheduled inspections and maintenance should be performed at a minimum of once per year. Upgrades such as new, efficient burners, temperature and pressure controls, and boiler economizers can increase efficiency and improve fuel combustion.

- Install insulated doors to reduce conduction losses; upgrade roof and wall insulation.
- operating curve to determine the number of hours the motor is expected to operate at full load..

Water Heating

In a typical warehouse, water heating accounts for a smaller percentage of natural gas consumption than space heating, but listed below are a number of steps you can take to help save on energy bills:

- Reduce hot water usage by installing low-flow faucets and showerheads, and auto-off faucets for hand washing.
- Reduce the temperature setting on the water heater from 120°F to 110°F; higher temperatures are not necessary for normal usage and are inefficient.
- Wrap the water heater tank with an insulation blanket and make sure hot water pipes are properly insulated and free of damage.
- Install timers on water heaters. Timers can turn off your water heaters at night and turn them back on in the morning, automatically. This will reduce energy loss during periods when hot water is not required.
- Consider installing demand or tankless water heaters in break rooms and employee washrooms; this can cut water heating energy use by 30% or more. Tank water heaters must use energy to make hot water available at all times.



Another way to reduce energy consumption is through heat recovery. Capture exhaust heat from mechanical equipment to augment space heating or heat domestic hot water.



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