

Actions Your Business Can Take To Manage Rising Natural-Gas Costs

FACT SHEET

You can reduce natural-gas use at your facility and this Focus on Energy action list will help you get started. If you do not have the expertise in-house, work with Focus on Energy and local experts, such as contractors and market providers, to complete energy-saving projects.

This fact sheet identifies no-cost, low-cost, and moderate-cost options to increase your business's energy efficiency. Each step you take will help you manage rising natural-gas costs now and in years to come.

SEVEN ACTIONS THAT WILL REDUCE NATURAL-GAS USE

1. INSTALL SETBACK THERMOSTATS OR CHECK SETTINGS ON EXISTING UNITS (NO-/LOW-COST ACTIONS)

If you have not installed setback thermostats in your small- to medium-sized facility, you are wasting energy and money. Install these inexpensive units to ensure that you are not over-heating buildings during non-operating hours. If setback thermostats are installed, double-check their settings and reset them if necessary to match seasonal operating hours and temperature requirements. You can reduce natural-gas use by 1 percent for every 1 degree Fahrenheit you set back the thermostat.

2. ENSURE THE ENERGY MANAGEMENT SYSTEM IS WORKING PROPERLY (NO-/LOW-COST ACTIONS)

If your medium to large facility has an energy management system (EMS), make sure it is set correctly and operating properly. EMSs are often set incorrectly, which wastes energy and money. If a qualified staff member cannot adjust your system, hire an expert to do it for you. The savings will be substantial: You can reduce natural-gas use by up to 20 percent by using an EMS correctly.

3. INSTALL BOILER-SYSTEM CONTROLS (LOW-/MODERATE COST ACTION)

If your building or process uses a boiler, install system controls. These controls, such as outdoor temperature resets, manage the boiler's operating temperature. They trim natural-gas use during fall, spring, and some winter warm spells. The benefits of installing boiler controls are substantial: you will reduce the boiler's natural-gas use by 5 to 15 percent.

4. MAINTAIN STEAM SYSTEMS (LOW-/MODERATE-/HIGH-COST ACTIONS)

Many school, commercial, industrial, and government buildings operate steam systems and will save energy by taking the following actions. For example, a typical industrial facility can reduce steam system-related natural-gas use by up to 20 percent.

1. Reduce steam system leaks. Repair leaks in steam piping, condensate return lines, and fittings. Wasted steam equals wasted energy.
2. Insulate piping and valves. Examine piping and valves and insulate them. If existing insulation is damaged, replace it immediately. Uninsulated pipes lose heat and cause the boiler to use more natural gas than necessary.
3. Test steam traps, replace defective traps, and maintain existing ones. Malfunctioning steam traps waste steam and result in higher boiler fuel consumption. You can reduce your boiler's natural-gas use from 5 percent to 10 percent. Simple payback is often one year or less.
4. Tune up boilers annually. Do not ignore basic maintenance; keep steam systems operating at peak efficiency and you will manage energy costs more effectively. Routine maintenance can reduce boiler gas use by 2 percent.
5. Implement additional, longer-term boiler modifications. Several actions will further increase boiler efficiency. These equipment

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modifications include: 1) adjusting boiler operations by adding stack economizers; 2) maximizing condensate return; 3) automating blowdown and recovering heat from the blowdown stream; 4) recovering flash steam heat; and 5) installing automatic burner controls such as linkageless controls and oxygen trim controls. These actions can pay for themselves in one to three years.

5. OPTIMIZE HOT-WATER SYSTEMS (NO-/LOW-/MODERATE-COST ACTIONS)

You can take several actions to reduce both natural-gas and water use.

1. Minimize use. Many businesses can find ways to reduce hot-water use. Install low-flow, high-efficiency pre-rinse sprayers at dishwashing stations in food service operations, replace full-flow showerheads in lodging facilities and locker rooms with low-flow units, install low-flow faucet aerators, and upgrade laundry systems.
2. Adjust hot-water temperatures. Unless high temperature levels are required by code, set water-heater temperatures to 120°F. Each 10-degree reduction in water temperature will generally save 3 to 5 percent on water-heating costs.
3. Insulate hot-water pipes. Add inexpensive insulation to all hot-water piping and reduce heat loss.
4. Install more efficient hot-water systems. If you are considering a change, make sure you install energy- (and water-) efficient units.

6. INSTALL HEAT-RECOVERY SYSTEMS (MODERATE- TO HIGH-COST ACTIONS)

Many businesses and farm operations should consider installing heat-recovery systems to capture waste heat from refrigeration equipment, boilers, dryers, furnaces, and other manufacturing processes. This waste heat can then be used to meet other heating or hot-water needs and displace the need for natural gas. If you already have a heat-recovery system, make sure it is working properly.

7. CONSIDER RENEWABLE ENERGY (MODERATE-/HIGH-COST ACTION)

After you complete energy-efficiency projects, consider investing in a renewable energy system to help lower your natural gas bills for years to come. On average, every dollar you spend on energy efficiency could save you three to six dollars on the cost of a renewable energy system. That's why it is important to maximize the energy efficiency of your business before you purchase any renewable energy system. The smaller your energy needs, the lower your monthly energy

bills—and the less you'll need to spend on a renewable energy system that's capable of meeting your needs.

BUSINESS-SPECIFIC STEPS FOOD SERVICE OPERATIONS

- Water heating accounts for up to 17 percent of a restaurant's energy use. Install low-flow high-efficiency pre-rinse sprayers at dishwashing stations to reduce energy and water use and costs.
- Turn down or turn off gas-powered cooking equipment during slow periods.
- Install ENERGY STAR® qualified cooking equipment.

LODGING

- Space and water heating together account for 49 percent of a lodging business's energy use. Install low-flow showerheads in guest rooms and pre-rinse sprayers in food service areas. Also consider installing new laundry technologies such as an ozone system or a water-reclamation system to reduce or recover hot water from wash water.

AGRICULTURAL BUSINESSES

- Dairy operations can install heat-recovery tanks to capture waste heat from refrigeration systems and reuse it to meet space- or water-heating needs.
- Greenhouses have several options to help reduce winter natural gas use. Replace inefficient greenhouse unit heaters with new condensing-unit heaters or an under-bench heat distribution system. Avoid overheating the space with automated climate controls. Keep the heat inside at night by installing a thermal curtain and/or new generation poly film or polycarbonate glazing.

MANUFACTURING

- Heat-recovery systems will help you reduce energy waste and improve the efficiency of your operation or process. If you were postponing these projects because the project economics seemed weak, it is time to reexamine them.

LEARN MORE

Focus on Energy can help you with these steps to take control of your business's natural-gas use. We offer fact sheets, case studies, training courses, and seminars statewide. We can answer your energy-efficiency questions, provide assistance, make recommendations, and connect you with local contractors who can help. Additionally, we offer financial incentives for many projects on a first-come, first-served basis. Call 800.762.7077 or visit focusonenergy.com.

Focus on Energy works with eligible Wisconsin residents and businesses to install cost effective energy efficiency and renewable energy projects. Focus information, resources and financial incentives help to implement projects that otherwise would not be completed, or to complete projects sooner than scheduled. Its efforts help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect our environment and control the state's growing demand for electricity and natural gas. For more information, call **800.762.7077** or visit focusonenergy.com.

