

Steps That Businesses Can Take To Manage Rising Natural Gas Costs

FACT SHEET

To learn more about Focus on EnergySM call 800.762.7077 or visit focusonenergy.com

You can reduce natural gas use at your facility. 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 product and service providers to complete energy-saving projects.

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

SIX ACTIONS THAT WILL REDUCE NATURAL GAS USE

1. Install setback thermostats or check settings of existing units
2. Ensure energy management systems are working properly
3. Install boiler system controls
4. Maintain steam systems
5. Optimize hot water systems
6. Install heat recovery units

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 now. They 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 one percent for every one 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. EMS often are 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 15 percent to 20 percent for noncondensing boilers and up to 40 percent for condensing boilers.

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 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 five percent to ten percent. Simple payback is often one year or less.

4. Tune-up boilers every three to six months. Do not ignore basic maintenance; keep steam systems operating at peak efficiency and you will manage energy costs more effectively. Routine maintenance can reduce facility energy use by two percent.
5. Implement additional, longer term boiler modifications. Several actions will further increase boiler efficiency. These equipment 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. These actions will 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 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 Fahrenheit reduction in water temperature will generally save three to five 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, driers, 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.

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.

LODGING

- Space and water heating together to 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 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.
- A new generation of window film products helps greenhouses cut winter natural gas use, often substantially.

MANUFACTURING CUSTOMERS

- 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 usage. We offer fact sheets, case studies and technical data sheets on many of the energy saving actions and technologies discussed in this action list. We sponsor a variety of training courses and seminars statewide that are open to all business customers. 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.