Discover additional tips on how your company can reduce its natural gas bills by contacting:

Industrial Assessment Center Program
www.oit.doe.gov/iac

Office of Industrial Productivity and Energy Assessment
oipea-www.rutgers.edu
732-445-5540
oipea@camp.rutgers.edu

Office of Industrial Technologies Clearinghouse
www.oit.doe.gov/clearinghouse
1-800-862-2086

Energy Information Administration
www.eia.doe.gov

Alliance to Save to Energy
www.ase.org

Gas Technology Institute
www.gri.org

American Gas Association
www.aga.org

Contact our Clearinghouse at 1-800-862-2086 or visit our website at www.oit.doe.gov/clearinghouse

Ten Timely Tips

Discover how to conserve natural gas and keep your energy bills to a minimum.

Reduce Your Industrial Natural Gas Bill

Don't let natural gas prices burn your company!

While companies recognize the value of natural gas as a versatile, clean-burning fuel, prices are expected to rise this winter.

The U.S. Department of Energy is committed to helping industries lower their energy bills.

DOE's Best Practices program offers companies

- training
- software tools
- plant-wide assessments
- tip sheets
- technology showcases

to help them cut costs, save energy, and reduce waste with today's technology.

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10 Tips for Saving Natural Gas

Think saving energy this winter will require costly new equipment? Think again.

Cutting your natural gas bill can be as simple as adjusting a dial.

Get started with some of these simple, low-cost steps, and be sure to encourage active worker involvement. You may also want to consider additional measures, such as a plant-wide assessment available through the U.S. Department of Energy’s Best Practices program.

Equipment Maintenance

- Inspect and recalibrate thermocouples in furnaces to obtain more accurate zone temperature measurements and help increase furnace efficiency.
- Install removable insulation on uninsulated valves, pipes, and fittings to reduce losses in the process heat distribution system.
- Inspect steam distribution systems for leaks and repair where necessary. Possible sources of unnoticed leaks include piping, valves, process equipment, steam traps, flanges, and seals.
- Regularly clean strainers upstream of steam traps to prevent particle accumulation. Excessive deposition can hasten the need for repair or replacement.

Facility Issues

- Measure and manage ventilation in the plant. Use an economizer to optimize outside air use. Replace warped or worn outside air dampers.
- Reexamine your gas contract. Consider renegotiating terms to gain lower rates with utilities.

Operations

- Minimize surplus combustion air by tuning damper settings on boiler draft fans, installing over-fire draft control systems, sealing doors, etc. Excess air in the combustion chamber contributes to heat loss via flue gas escape.
- Potential gain in furnace efficiency of 1% when air and oxygen content are reduced by 15% and 1.5%, respectively.

- Lower the water temperature in boilers to reduce short-cycle loss as well as convective and radiant heat loss.
- Potential boiler efficiency gains of 1% when the stack gas temperature is decreased by 48°F
- Prevent scale accumulation by ensuring water treatment systems are operating effectively. Scale build-up in boiler feedwater tubes inhibits both throughput and heat transfer.
- Potential gains in boiler efficiency of 10-12%
- Rework schedule of processing operations (e.g., lessen the frequency of mixed and/or partial loads) to reduce delays and reheat requirements.

Potential energy savings of 2-5%

Potential energy savings of up to 5%

Potential boiler efficiency gains of 10-15%

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The Chestertown facility has two boilers with over 300 steam traps and annually produces 25,000 tons of chemicals.