

## Energy Saving Ideas for Combustion Systems, Steam Generation Systems & Process Heating Systems

Think saving energy will require costly new equipment or complicated changes to your operating practices? Think again!

Here are twenty steps you can take this year for little or no cost, using in-house expertise. You'll be amazed to discover how some simple changes can cut your energy bills.

Find out how to save energy in all your combustion systems, or focus more specifically on your steam boiler system or process heating system

### All Combustion Systems ([Read More](#))

1. Operate furnaces and boilers at or close to design capacity
2. Reduce excess air used for combustion
3. Clean heat transfer surfaces
4. Reduce radiation losses from openings
5. Use proper furnace or boiler insulation to reduce wall heat losses
6. Adequately insulate air or water-cooled surfaces exposed to the furnace environment and steam lines leaving the boiler
7. Install air preheat or other heat recovery equipment

### Steam Generation Systems ([Read More](#))

1. Improve water treatment to minimize boiler blowdown
2. Optimize deaerator vent rate
3. Repair steam leaks
4. Minimize vented steam
5. Implement effective steam trap maintenance program
6. Use high-pressure condensate to make low-pressure steam
7. Utilize backpressure turbine instead of pressure-reducing or release valves
8. Optimize condensate recovery

### Process Heating Systems ([Read More](#))

1. Minimize air leakage into the furnace by sealing openings
2. Maintain proper, slightly positive furnace pressure
3. Reduce weight of or eliminate material handling fixtures
4. Modify the furnace system or use a separate heating system to recover furnace exhaust gas heat
5. Recover part of the furnace exhaust heat for use in lower-temperature processes