

# A Quick Guide to Saving Energy and Money with Your Boiler System

## Maintain Equipment for Best Efficiency

Good maintenance can add years to equipment life and increases efficiency.

- Institute or review maintenance policy:
  - Assign someone to monitor maintenance;
  - Review maintenance with your provider;
  - Have professional inspect & clean flues, valves and vents;
  - Have combustion analyzer testing done.
- Other aspects that affect energy use:
  - Check the efficiency of the water pump;
  - Ask about converting to a variable-speed fan drive pump when new pump is needed, which conserves both gas and electricity;
  - Ask about adding an outdoor reset so water temperature is adjusted based on weather.
- Prevent heat loss:
  - Seal and insulate your building;
  - insulate the pipes leading from the boiler.

## Reduce Use for Greater Savings

Setting a thermostat back 10° to 15° for 8 hours can save 5% to 15% a year on your heating bill.

Reduce use of boiler & chiller by using:

- Programmable thermostats (see toolkit);
- Personal & ceiling fans to reduce need for AC;
- Space heaters for individual workstations.

Doing this will affect humidity & temperature.

- Control summer humidity in infrequently-used spaces, especially those below grade:
  - Monitor humidity with a hygrometer.
  - To reduce humidity with the least energy, set programmable thermostat to cool space (& remove moisture) in the (cooler) early AM.
  - Consider using a dehumidifier in problem areas to reduce the need to run AC, especially if the AC unit covers a larger area.
- **Organs** (American Institute of Organ Builders)
  - Organs are safe from 40°–100° F.
  - Humidity should stay between 30% & 80%.
  - Lowering the temperature of the space to 40°–55° during the week in winter helps prevent overly-dry conditions.
  - Although temperature affects organ tuning, the tuning reverts back to normal when the temperature returns to original setting.
- **Pianos:**
  - Pianos do best in a fairly consistent environment, so to compensate for high humidity in summer and dryness in winter, install a humidistat (\$500 to \$750).
  - A floor-length drop cloth can help reduce temperature variations.

## Plan for Efficient Upgrades

Purchasing more efficient equipment pays off quickly: the efficiency of HVAC equipment has increased while the cost difference between economy and high efficiency models has fallen. Even with low natural gas prices, paying the difference may take just 4 to 6 years – followed by pure savings. And rebates from utility companies can help offset the extra upfront cost. Look for ENERGY STAR® equipment.

## Replacing Equipment: Factors to Consider

**Lifetime cost** = upfront + operating costs

**Operating costs** are a function of the equipment's efficiency & thermostat settings.

## How to decide:

- Designate a property committee member to research the options;
- Get unbiased advice from a professional who will not be installing your equipment;
- Talk to members of other congregations, non-profits or member businesses.

## How to Pay:

- Set aside a percent of budget;
- Make this part of a capital campaign;
- Reinvest savings from energy conservation.
- Take out a loan: a higher efficiency unit will pay it back with the energy savings.

### The Seventh Day Initiative



Caring for Creation