

Congregations: An Overview of Energy Use and Energy Efficiency Opportunities



Congregational Energy Use

America's 300,000 houses of worship spend more than \$2 billion on energy each year. To reduce these expenses, ENERGY STAR helps congregations improve the energy performance of their facilities.

Consider that if America's houses of worship cut energy use by only 10 percent:

- > Nearly \$200 million would be saved — money that could be spent on other priorities.
- > More than 5.4 billion kWh of electricity would be available without additional cost and pollution.
- > More than 2 million tons of greenhouse gas emissions would be prevented, equivalent to the emissions from about 400,000 vehicles.

Most congregations can cut energy costs by up to 30 percent through low-cost changes and by investing strategically in efficient equipment, facility upgrades, and maintenance. With free, unbiased information and technical support from ENERGY STAR, congregations can not only save money, but improve their stewardship of America's natural resources.

Energy Efficiency Opportunities

There is no substitute for a comprehensive energy survey and analysis; however, here are simple steps a congregation can take to improve energy efficiency:

- > Measure and track energy performance.
- > Turn off lights when not in use or when daylight can be used.
- > Purchase energy-efficient products like ENERGY STAR qualified office equipment.
- > Install lighting occupant sensors in proper locations.
- > Tune up heating/air-conditioning (HVAC) system with an annual maintenance contract.
- > Regularly change or clean HVAC filters and install a programmable HVAC thermostat.
- > Replace incandescent light bulbs with ENERGY STAR qualified compact fluorescent lights (CFLs).
- > Install LED (light-emitting diode) exit signs.
- > Control direct sun through windows in both summer and winter to prevent or encourage heat gain.
- > Use ceiling fans for lower-cost comfort.
- > Plug air leaks with weather stripping and caulking.

How to Talk to Congregations About Energy Efficiency

Most religious traditions teach stewardship of financial and natural resources. With many pressing demands on a congregation's financial resources, it only makes sense to practice better energy stewardship. Congregations are often also at the forefront of activities that care for the earth. However, congregations frequently lack the time and technical expertise to identify and implement energy saving opportunities.

Congregations Making a Difference:

Georgetown Gospel Chapel is a 20,000-square foot property in South Seattle, WA, saving \$5,000 each year by cutting energy use by 50,000 kWh. This prevents about 60,000 pounds of annual pollution from entering the environment. Improved insulation and energy efficient windows keep the cold Seattle winter out and the warmth inside. The Chapel completely eliminated the need for one gas furnace due to conservation and efficiency and greatly reduced electrical heating needs in the parsonage. Even more money is being saved with efficient lighting upgrades.

Congregation Beth El-Keser Israel (BEKI) in New Haven, CT, began lighting upgrades in 1999 in its 33,000-square foot synagogue. Recently, BEKI replaced a 40-year-old A/C unit, saving more than \$6,000 annually. The 35,714 kWh saved are also preventing about 61,642 pounds of CO₂ emissions from being released into the atmosphere each year.

The Islamic Education Center (IEC) of Potomac, MD, is saving money and preventing pollution with common sense energy management. The IEC uses programmable thermostats throughout the mosque to save up to 20 percent on heating and air conditioning costs. The IEC strategically places artwork over windows to reduce summer heat gain and glare. The Center also installed high efficiency T-8 fluorescent lamps with electronic ballasts when they added space.

Bethesda Lutheran in Ames, IA, is saving about \$5,000 a year. The 71,428 kWh saved prevents about 100,286 pounds of annual CO₂ emissions. The savings are being achieved with compact fluorescent lights (CFLs) and controls to heat and cool only occupied rooms. The church purchased new energy efficient freezers for the food pantry/kitchen and installed storm windows over the stained glass windows.

Covington Seventh-Day Adventist Church in Taylor Mill, KY, is a 4,800-square foot facility with an adjoining elementary school of nearly 13,600-square feet. The church has upgraded to a new high efficiency HVAC system, added ceiling fans, installed programmable thermostats, light-emitting diode (LED) exit signs, and emergency lighting, resulting in annual savings of more than \$2,700 and 21,740 kWh. This prevents about 48,154 pounds of CO₂ emissions each year. "Doubting Thomases in the congregation became convinced once the real financial and environmental benefits resulted," Building and Committee chair Adam Palmer said.

ENERGY STAR® is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency.



LEARN MORE AT
energystar.gov

Congregations: An Overview of Energy Use and Energy Efficiency Opportunities



How to Talk to Congregations about Energy Efficiency (cont.)

“We don’t have the time.”

Respond with an ENERGY STAR message: “We understand that many involved in building-related decisions within a congregation are volunteers, and that their time is precious. Energy-efficiency upgrades are worth your consideration due to the savings and improved comfort they achieve. Here are some strategies to help your congregation jump-start energy savings with a modest investment of time and money.”

- > Ask your congregation members if they can provide professional or technical skills in the many areas where energy can be saved.
- > Ask your utility if they offer free or inexpensive energy audits and/or equipment rebates.
- > Invite contractors to your house of worship to suggest upgrades and provide free estimates. For a list of service and product providers in your area, visit ENERGY STAR’s directory at www.energystar.gov/spp.
- > ENERGY STAR’s expertise, tools, and information are readily available and easy to use.

“We don’t have the technical expertise.”

Congregations may lack members or staff with the technical expertise to identify and implement energy efficiency projects. However, help is available. The ENERGY STAR Congregations Network provides a variety of free resources to assist in making sound, money-saving technology decisions.

ENERGY STAR Offers:

- Guides and calculators
- Business benchmarking
- On-line training
- Rebate locators
- Technical support
- Financing resources
- Third-party recognition
- Motivational campaigns

ENERGY STAR Resources

Putting Energy into Stewardship: This online guide is designed to educate and assist the faith community in achieving the benefits of energy efficiency. It can help identify building equipment and systems that need to be upgraded in order to save money and reduce the impact on the environment.

Portfolio Manager — Measure and Track Energy Performance: By measuring, tracking, and setting goals for energy use, congregations can understand how it impacts their budget and the environment. This process can also help them gain control of energy expenses. Congregations can use EPA’s Portfolio Manager tool to benchmark their buildings.

www.energystar.gov/benchmark

Technical Assistance: E-mail your questions to epasmallbiz@energyandsecurity.com. ENERGY STAR assistance ranges from calculations on energy costs and savings to answering questions about specific technologies.

ENERGY STAR Congregations Network: Join the ENERGY STAR Congregations Network to take advantage of everything ENERGY STAR has to offer. Congregations that join the Network can receive a free monthly update by e-mail that highlights the latest news and information on energy efficiency pertinent to their facility’s needs.

Recognition for Achievements

Annual Awards: Each year, the ENERGY STAR Congregations Network recognizes outstanding congregations across the nation that are saving energy, money and preventing pollution. These national award winners receive engraved plaques and local and national public recognition as great examples of financial and environmental stewardship.

www.energystar.gov/congregations

ENERGY STAR® is a government-backed program helping businesses and individuals protect the environment through superior energy efficiency.



LEARN MORE AT
energystar.gov