Faith and Energy Efficiency

While no one single weather event can be directly attributed to human activity, it is evident that the Earth and its climates are changing. Storms are more intense. Floods are more frequent. Deserts are expanding. Sea levels are rising. The consequences of climate change not only threaten creation, the Earth and its inhabitants, but also are disproportionally borne by the most vulnerable among us. "The rapid pace of the changes is placing a burden on living creatures, including humans, and especially on those who most depend on the natural environment – the vulnerable poor. The poor have fewer options when their homes are flooded or their cities are hit by a heat wave or their farmland is affected by drought."[1] Faced with these realities, many faith-based communities are reflecting on their own duty to combat climate change.

Congregations across the county, guided by their faith, have become conscious of a responsibility to reduce energy usage and cut carbon emissions. Energy efficiency upgrades support faith-based communities in being better stewards of the Earth, while potentially cutting thousands of dollars from utility bills. In addition installations of energy improvements enhance reputations as beacons of light in the larger community, and inspire greater conservation practices in residential homes.

> **'Because God's glory is revealed in creation, we should be intentional about caring for His artistry.'**
>
> Dorothy Boorse, 'Loving the Least of These,' National Association of Evangelicals

Financial Impact

Faith-based facilities, both large and small, can benefit from cuts in energy usage. In 2010 St. Alban's Episcopal Church in Monroe, GA installed a new Energy Star rated heating, ventilation, and air conditioning system.[2] This upgrade, along with other low cost measures, empowered St. Alban's to cut its energy usage by 70,000 kWh a year. Such reductions not only save the church $1800 a year in energy costs, but also have the same positive impact on carbon dioxide emissions as taking 8.75 cars off the road each year.[2] In 2010 St. Alban's was named an Energy Star Congregation Award recipient.

Similarly, in 2011 Ohev Solom in Washington, D.C., became the nation's first synagogue to earn an Energy Star Congregation Award.[3] Installation of low-cost energy efficiency upgrades went a long way towards helping Ohev Solom earn the designation. For example switching out incandescent light bulbs for light-emitting diodes in exit signs will save the synagogue $10,424 over the lifetime of the newly installed LEDs.[3]

Such success stories while inspirational, are also attainable here in the Southeastern United States. As an example, the average congregational-based building in the South Atlantic spends $.76 per square foot on energy annually. If a 10,000 sq. ft. congregation in Charlotte cut its energy usage by 30 percent, it would result in an estimated annual energy savings of $2,285.*

Options

Faith-based facilities have a unique opportunity to capitalize on energy efficiency savings due to the intermittent nature of the activities that they host.[4] Unlike homes and businesses, most congregations see their energy needs peak on the weekend when services are being held. By installing efficiency upgrades that identify when facilities are vacant and then turn off unneeded systems, congregations can stop throwing out money on lighting and ventilating empty rooms.

Many faith-based facilities operate large commercial kitchens. These kitchens are rich with energy savings opportunities. By upgrading commercial food equipment to Energy Star rated appliances congregations can save 35 percent more energy.[4] This is equivalent to an annual savings of up to $170 per refrigerator, $120 per freezer, $600 per deep fryer, $550 per steam cooker, and $430 per hot food holding cabinet.[4] Similar savings rates can be achieved by upgrading office equipment such as computers, printers, fax machines, and scanners to Energy Star rated equipment.

Faith and the Environment

Stewardship

Responsible use of God's Creation.

Justice

Working to ensure fair usage and distribution of natural resources.

Community of Life

Understanding our role in the interdependent ecosystem.

Awe

Recognizing the fingerprints of the divine in the created works.

Source: Georgia Interfaith Power & Light, Principles of Our Faith

* Electricity consumption data is 2003 CBECS data for Faith-Based Facilities from the U.S. Department of Energy. for the South Atlantic Division. Natural gas consumption data is from the South Region. Energy prices are the March 2012 average retail price to Commercial consumers and from the US. E.I.A. A 30 percent savings rate is consistent with a **major** energy rehab. Actual results may differ as all buildings vary.

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Every time someone leaves a room without turning off the light, energy and money is needlessly wasted. Occupancy lighting sensors detect when a room is in use.[4] When a sensor detects movement it turns the lights on. Likewise when it detects that there has been no motion for a period of time, the sensor turns the lights off. Similarly another type of lighting sensors, daylight dimmers, can detect the amount of daylight in a room and dim the lights accordingly, saving even more of the congregation's dollars.[4]

Low-Cost Energy Efficiency Measures

- Move lower attendance and weekday services from large sanctuaries to chapels.
- Change or clean HVAC filters once a month during summers and winters.
- Install power management software on office equipment.
- Install ceiling fans in sanctuaries to increase air circulation and prevent hot and cold spots.

Source: ENERGY STAR®, Putting Energy into Stewardship: Congregations Guide

Demand-controlled ventilation systems also reduce total energy bills, without the need for human control.[4] These systems do not detect motion, but instead detect the amount of carbon dioxide in the air. When more people enter a space, thus increasing carbon dioxide levels, the system increases the amount of air from outside. As people leave the room, ventilation is reduced. As a result not only do these systems save congregations money, but they increase the comfort level of spaces as well

Inspiration

When a faith-based organization invests in energy efficiency its impact is not bound by the four walls of a sanctuary. In embracing energy conservation as a form of stewardship, congregations teach and inspire their members. Individuals are most likely to engage in energy efficiency measures when an example has been set for them by community leaders.[5] The City of Houston attributes outreach to religious leaders as an essential element to the success of its Power to the People weatherization program.[5] Green Faith, a non-profit organization, uses faith-based outreach to educate underserved low-income and urban communities about government sponsored incentive programs.[6] These programs offer cash rebates for residential weatherization projects.

Although industrialization of the global North is a primary driver of climate change, it is the global South who will bear the consequences. Faith-based communities strive to combat such inequities, not contribute to them. Energy efficiency upgrades offer congregations the opportunity to continue this work, while inspiring a greater reverence for God's creation, the Earth and its people, within their ministries.

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