

## CHURCH ENERGY USE: CAN WE HARNESS HOPE?

Carbon dioxide emissions have been implicated as a key factor in rising global temperatures. Because all church buildings use energy, much of it derived from carbon-based sources such as oil and coal, congregations play a role in energy consumption. Although congregations represent a small piece of the big picture, they can still offer hope for the community or the wider church.

The U.S. Environmental Protection Agency (EPA) estimates that if every house of worship nationwide (about 300,000) cut back energy use by 10%:

- \$200 million could be saved and used for other projects for the community good
- 5.4 billion kilowatt hours of electricity could be used elsewhere without generating additional pollution
- 200 million tons of greenhouse gases would *not* be emitted—the equivalent of keeping 400,000 cars off the road or planting half a million trees.<sup>1</sup>

### The Basics: What Is Energy?

Inside Energy, a collaborative journalism initiative, describes the current situation in a video titled “Energy Explained.”<sup>2</sup> Energy use was flat until the past century when it skyrocketed. The average person in the U.S. today uses 100 times the energy that his or her great grandmother did a hundred years ago. Today, worldwide, our biggest single source of energy is petroleum. The vast majority of energy use goes to generating electricity. We generate electricity by burning coal and natural gas, splitting atoms, damming rivers, and harnessing the wind and sun.

While the demand for energy in the U.S. has started to level off, energy use varies greatly across countries. The average American uses three times the energy of a typical Chinese citizen. For certain, our energy use patterns will be quite different in coming generations. For example, more cars could run on electricity than on gasoline. Whatever happens, today’s energy choices will affect how we make energy in the future.

### Establish a Carbon Footprint Baseline

A carbon footprint is “the weight of carbon or carbon dioxide emitted into the atmosphere each year from the burning of fossil fuels.”<sup>3</sup> Another way of measuring the carbon footprint is the number of acres of the Earth’s surface required to absorb the carbon once it is emitted. Several online tools allow individuals and households to calculate their carbon footprints. Congregations can use these same tools to estimate their carbon footprint. Interfaith Power and Light (IPL)—a nonprofit organization devoted to environmental stewardship—developed the Cool Congregations calculator specifically for churches.<sup>4</sup>

### Conduct an Energy Audit

An energy audit, a systematic analysis of how and where a building is using energy, affords a framework for determining how and where energy efficiency measures might be taken. Jerry Lawson, the National Manager of Energy Star Small Business/Congregations at the EPA, recommends that small- to medium-size churches start



“THE NEW SOUND SYSTEM IS  
AN ENERGY-EFFICIENT UPGRADE...  
IT ONLY KICKS ON WHEN YOU SAY SOMETHING PROFOUND.”

with a walk-through of the building with knowledgeable church members. Kansas IPL offers a do-it-yourself energy audit form for congregations.<sup>5</sup> A professional consultant might be required for larger churches or those with a complicated HVAC system. Before hiring someone, ask your local utility whether it offers free consulting services. If IPL has an affiliate in your state, ask them for a professional referral.

### Organize an Energy Treasure Hunt

Another option involves organizing an Energy Treasure Hunt for the whole congregation. While the EPA designed this program for businesses, the idea can be easily adapted for congregations. Gather a group to spend several hours scouring the church facility for ways to save energy. As with any treasure hunt, turn it into a contest. For ideas, download the “Energy Star Treasure Hunt Guide.”<sup>6</sup>

### Finally, Get Down to Business

Footprints, audits, and treasure hunts supply a baseline as leaders begin to measure progress toward the goal of reducing carbon emissions. And these activities further serve an educational function when the congregation is invited to get involved. But where to start? The EPA offers an “Energy Star Action Workbook for Congregations.”<sup>7</sup> The Interfaith Coalition on Energy (ICE) also offers additional web resources for anyone. They supply these tips for saving energy:<sup>8</sup>

*Monitor energy usage and cost.* Weight watchers know the importance of monitoring what you consume. This principle applies to church buildings and energy as well. Start by reading the utility bill. This can be intimidating, but by continually monitoring usage and cost, churches get sound feedback on progress. Ask questions: How much is being spent? What are the units being consumed (kWh for electricity, CCF for natural gas, gallons for oil)? An added bonus: you might detect billing errors.

*Turn things off.* No matter how small the device—lamp, computer, or air conditioner—the greatest savings come from turning it off and keeping it off. This is especially true for worship facilities, which are used intermittently. Visit when the building is empty and you might be surprised to see energy wasters still running. To reduce “standby power” (power used by equipment when switched off or in standby mode) plug appliances into a power strip and turn the strip off.<sup>9</sup> For heating and AC, install programmable thermostats and set them to heat and cool at times when the building is in use.<sup>10</sup>

*Look for the least expensive energy.* Many states deregulated electric and gas markets. That means consumers have retail choice when it comes to which company supplies electricity and natural gas. The utility provides the transmission, while an independent supplier provides the energy. Do an internet search using the term “energy deregulated states” to see if this applies to your state.<sup>11</sup>

*Tune systems to optimal performance.* It helps to have a single person controlling the energy system for the building. That person should learn to become a tinkerer, adjusting water temperatures, air temperatures, dampers, and pilot light flames, for example. Ask a contractor to help with an annual tuning of oil or gas burners.

*Purchase energy efficient upgrades.* Fortunately, with each passing year, the equipment used in most worship facilities is becoming more energy efficient, including heating and air conditioning systems, computers, dishwashers, light bulbs, and ballasts. Look for the Energy Star label when purchasing products.

### Start Small!

Energy conservation represents an example of “chunking down,” moving from a complicated reality (such as climate change) to its smaller components (purchasing energy efficient LED light bulbs). George A. Miller, a psychologist, coined the term “chunking” to refer to the strategy for mastering information overload by breaking a larger whole like a phone number or shopping list into groups or “chunks” like 888-888-8888 or meat-dairy-produce. In this instance, the church building represents a small chunk, connected to a larger conglomeration of oil wells, coal mines, solar panels, power plants, utility grids, and much more. Start small and aspire to do more!

---

1. Rebekah Simon-Peter, *7 Simple Steps To Green Your Church* (Nashville: Abingdon, 2010), 10-11.

2. <http://insideenergy.org/2017/01/12/energy-explained/>

3. <http://www.coolcongregations.org/calculator>

4. <http://www.coolcongregations.org/calculator>

5. <http://www.interfaithpower.org/wp-content/uploads/2011/07/Energy-Audit-KSIPL.pdf>

6. <https://www.energystar.gov/buildings/tools-and-resources/energy-star-treasure-hunt-guide-simple-steps-finding-energy-savings>

7. [https://www.energystar.gov/buildings/tools-and-resources/energy\\_star\\_action\\_workbook\\_congregations](https://www.energystar.gov/buildings/tools-and-resources/energy_star_action_workbook_congregations)

8. <http://www.interfaithenergy.com/>

9. <https://energy.gov/energysaver/articles/3-easy-tips-reduce-your-standby-power-loads>

10. Rebekah Simon-Peter, *7 Simple Steps*, 84.

11. <https://www.electricchoice.com/map-deregulated-energy-markets/>