USING ENERGY PRUDENTLY

Hoosier Interfaith Power & Light’s Program to Help Your Congregation “Walk the Talk” of Caring for Creation
USING ENERGY PRUDENTLY:

Hoosier Interfaith Power & Light’s Program to Help Your Congregation “Walk the Talk” of Creation Care
Introduction

People of faith seek to live as good stewards of creation, beginning with their own buildings. But it can be hard to “walk that talk” with older facilities, lean budgets, and a fixed pool of volunteers.

Hoosier Interfaith Power & Light offers Using Energy Prudently to help guide you through the process of becoming a congregation that both teaches and lives environmental stewardship.

Using Energy Prudently will help your congregation to ...
• Improve your building’s energy efficiency
• Live out your values by caring for creation
• Practice what you preach about good stewardship
• Spend less on utilities and more on your mission

This guide is available both as a downloadable pdf and in ePub format for reading on a tablet or phone. Clickable links throughout the guide will access further information both at the Hoosier IPL website and elsewhere. Information on our website related to this guide will continue to be expanded and updated as we enhance UEP and related H-IPL programs, but they will be linked with the guide you now have.

We at Hoosier IPL are delighted to be helping your congregation begin—or continue—Using Energy Prudently!

Hoosier Interfaith Power & Light
Spring, 2016
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Section 1

Organizing Your Leadership for Prudent Energy Use

There’s no denying that change is hard, especially in religious institutions. Individuals cannot make institutional changes alone. But such cultural shifts often begin with one person or one small group. Whether you are a member wishing to engage your fellow congregants in creation care, a building manager wanting to improve your facility’s efficiency, a finance committee member hoping to reduce utility bills, or a pastoral leader committed to helping those you serve to practice renewed responsibility for creation, your convictions and commitment can be the starting point for a much larger movement in your congregation and even your city.

With patience, prudence, and persistence over time, an individual or small group can inspire widespread changes in attitude and practices. Much depends on cultivating buy-in, especially among congregational leaders. This section will guide you in: 1) organizing your congregation’s general environmental ministry; and 2) creating a group to focus specifically on using energy prudently.
Organizing for Creation Care

Here are some tips for successfully organizing your congregation’s environmental ministry in general. Such a commitment will organically nurture the concern for prudent energy use for the sake of creation’s health and the wellbeing of all people, present and future:

First, communicate with key people in the congregation. If you are a pastoral leader, begin talking with your board, elders, and influential members about your convictions concerning creation care. If you are a member, talk with the pastoral staff and the congregation’s leaders, explaining your vision for creation care and the congregation’s involvement. Seek their blessing or even their participation. Ask for their ideas. Find out who else in the congregation they suggest that you talk to.

Then, begin inviting interested people to gather as a Green Team or Creation Care Steering Committee. You might consider at least three channels of invitation:

- Approach people individually that you think would be interested and/or valuable.
- Make announcements during worship or at other appropriate times.
- Include invitations in written communications such as a newsletter.

When inviting, think in terms of the various kinds of people who could be instrumental: members of the pastoral staff; leaders in capacities such as property management, finance, religious education, youth work, mission, or worship; individuals whose own professions touch on environmental or justice concerns; and people displaying personal commitments to environmental responsibility. Invite retired people who have time to give, and young people who may be among the most passionate and knowledgeable advocates for creation.

Choose a time and place to meet, but be sure to keep a list of those who express interest but cannot attend the first meeting. Don’t be discouraged if just one or two show up. That’s all it takes to begin a movement.

At your meetings, don’t assume everyone shares the same awareness. Talk about your own desires to honor creation, support environmental
justice, protect the interests of future generations (or whatever motivates you). Invite others to introduce themselves and to talk about their own motives and concerns. Ask: what do you envision doing to address these concerns? What do you dream of for this congregation? You may brainstorm a great many things, and should keep them all in mind, but choosing together one manageable first project will help you build success.

Consider various team members’ talents and comfort zones, and cultivate leadership opportunities congruent with what they do best.

Create an event, or series of events, that will give your group visibility in the congregation. Many who don’t like to join committees may show up for other activities. Here are some ideas:

- Bring in an outside speaker.
- Host a documentary film and discussion.
- Plan a day to clean up garbage along a nearby river.
- Host an electronic recycling day.
- Organize an incandescent bulb eradication day around the church.

If possible, arrange to lead a study group—an adult, young adult, college, or high school forum—to raise the issue of religious responsibility for creation with a wider circle in the congregation. Listen to what the participants say. Invite those who are willing to join your fledgling group of creation-care seekers.

Bear in mind the “steering committee” function of your team: you are not the ones doing all the creation care for the congregation. Rather, you are the clearing house, organizers, resources, and motivators for wider and wider circles of congregants to become creation caregivers.
Once you have a bit of a track record, ask the congregation's leadership for an official status for your team—as a committee of the church board, as a coalition of representatives from other committees central to the congregation's functioning (such as property management, worship, education, mission, and finance), or however it fits best into the congregation's leadership structure. Find out to whom to offer reports, and when.

With the pastoral leadership and worship team, plan and hold an environmentally themed worship service, either at a key time such as Tu B'shevat, the Feast of St. Francis, Ramadan, or Earth Week, or at a time that is appropriate for your congregation's own calendar. Emphasize gratitude and celebration as well as concern and confession, and use your faith's traditional resources of scripture, song, and prayer, capitalizing on the attention to creation already embedded there.

Create an ongoing presence for environmental concerns on the congregation’s website and through regular updates in the newsletter and/or announcements.

If your faith has a congregational certification program for environmental work, you might consider applying for it. See Section 11 below.

**Organizing for Using Energy Prudently**

The following are tips for developing a focus on prudent energy use in the congregation:

Talk with pastoral leaders and with trustees of the building's physical plant about the reasons you hope the congregation will take, or is taking, steps to conserve energy. Don’t assume you are the first to raise these issues—find out what steps might have already been taken, and for what reasons, and with what results. Here are several possible talking points:
- Reducing energy bills means that members’ contributions can be better spent on program and mission, and budgets will be more affordable for the next generation.

- Innovative technologies have likely developed since the building was constructed or last renovated, such as LED lighting, Energy Star appliances, efficient HVAC systems, and better insulation that might improve the comfort as well as the cost-effectiveness of the building’s operations.

- Implementing energy-saving measures in the worship building can educate and set an example for members and neighbors to do so in their homes and businesses, spreading outward the influence of what the congregation does.

- Air pollution from power plants causes asthma and health concerns for people living nearby, typically low-income neighbors. As of 2014, 85% of Indiana’s electricity was still being generated by burning coal. Congregations committed to social justice can easily make the connection between energy conservation and environmental justice.

- Human-caused (anthropogenic) climate change is a present threat to life on earth, and people of faith have an ethical obligation to reduce our carbon for future generations’ sake. The burning of fossil fuels for building utilities accounts for 38% of all carbon emissions in the U.S. Because of poor maintenance, old technologies, and inattention, congregational worship buildings can be some of the worst offenders.

- Religious leaders of every faith have been advocating for creation care. It’s important for this congregation to respond to these leaders by putting their talk into our action.

- Many people, especially younger people, looking for a place to worship are concerned about environmental issues, and looking for a congregation committed to environmental health.

- Improving the building’s energy efficiency is a project many can work on together, improving their own skills and strengthening relationships.
Elicit support from members who may be knowledgeable about buildings, utilities, or energy efficiency: plant managers; engineers; builders; people working in the energy or green energy sectors; handymen; building inspectors; electricians; or even hobbyists. Bring them into the project—they may see it as an interesting puzzle to solve.

Your aim is to build a team whose specific mission is to improve your building’s efficiency. It may overlap in membership with the green team, but probably won’t coincide.

If possible, make plans to attend a Using Energy Prudently workshop (see below in Section 5 and Section 8). There you will learn in depth about the systems in worship buildings that may need your attention, and how to find the information needed to address them. You will also be able to ask questions as well as meeting representatives from other congregations in the local area who share your concerns for energy conservation. You may even be able to help one another by following up on the workshop by creating a Using Energy Prudently support group to pool knowledge and share information about products and services you discover.

Use this guide, the resources available at hoosieripl.org/uep, and the materials acquired at a Using Energy Prudently workshop to help your group decide how best to move forward to meet your goals.
Section 2

Affiliating with H-IPL and Becoming a UEP Congregation

Your congregation need not formally affiliate with Hoosier Interfaith Power & Light in order to use our tools. But we do offer that option for congregations wishing to do so. We help our affiliates find likeminded congregations in the same faith group and/or same region. We also offer the option of posting your congregation’s name, contact info, and creation care stories on our website, and keep you posted concerning new opportunities for workshops, solar panel grants, and other tools.

Your congregation may also wish to take the further step of becoming a Using Energy Prudently congregation, utilizing our entire range of tools to build a robust program of specific energy efficiency goals, and comparing efforts, information, and successes with other congregations working toward the same goals.
Becoming a Congregational Affiliate

If you are reading this guide, you have, or someone in your congregation has, already registered on the Hoosier IPL website. You have joined our online community and are receiving our newsletter and updates. If your congregation is nearby one of our regional affiliate groups, or belongs to a denomination partnering with H-IPL, a built-in community of likeminded Hoosiers is already available for mutual support. Whether or not those specific ties exist for your congregation, affiliation with Hoosier IPL will place you in a supportive statewide network of Hoosiers of all backgrounds and faiths seeking to care for creation.

To affiliate with H-IPL as a congregation, please follow this link to an online form where you will be asked for this information:

- The congregation’s name, address, and webpage (or Facebook page).
- Name, role, and contact information of one representative of the congregation’s leadership, such as the pastor, congregational president, or trustee.
- Names and contact information for 1-3 individuals who will act as liaisons for the congregation with H-IPL. Optimally, these liaisons will:
  - Receive, read, and pass on relevant information in H-IPL’s monthly newsletter to others in the congregation. The newsletter includes announcements, updates, stories, tips, and insights from around the state and the world on matters pertaining to ecology and faith.
  - Communicate your congregation’s stories, concerns, talents, events, and challenges to H-IPL staff and others in the H-IPL community.
  - Encourage inclusion of H-IPL in your congregation’s mission budget.

Becoming a H-IPL Using Energy Prudently Congregation

Congregations affiliate with H-IPL for many different reasons. But prudent energy use is at the center of our efforts. H-IPL Using Energy Prudently
Congregations embrace the more specific goal of working toward energy efficiency in congregational buildings and members' homes.

A Hoosier IPL Using Energy Prudently congregation seeks to:

- Work toward reducing electricity and gas use by at least 25% over the course of three to five years through energy tracking tools and conservation measures.

- Cultivate active environmental commitment in the congregation, collectively and individually, through such tools as our Household Energy Survey, Task of the Month, and other programs that educate and raise awareness, with the goal of having 1/3 of member households score at least 14% on the household energy survey.

- As needed and as possible, partner with H-IPL by serving as an occasional site host for our workshops and events.

There are several advantages to becoming a UEP congregation. First, if other congregations around you know that you are working with us on energy reduction measures, you will be able to support one another in these and similar measures.

Second, over the past five years Hoosier IPL has successfully obtained solar grants of up to $25,000 for 25 congregations in Indiana. We expect to continue doing so as the opportunity arises. As more congregations seek these grants, we will be looking first to those who have already begun positioning themselves as good candidates, namely our UEP congregations. For more on solar grants, see Section 10 below.

And third, congregations that meet these goals are eligible for statewide recognition as a UEP Acclaimed Congregation (see Section 11 for details). Your status and story will be highlighted on our website as a model for other congregations.

If your congregation would like to become a Using Energy Prudently Congregation, follow this link, which will take you to an online registration form.
Section 3

Auditing Your Building’s Energy Efficiency Potential

The first step in reducing your worship building’s energy use is knowing what it is. Two investigations are needed:

- On what is your building using energy? Do you have potential to conserve its power by making changes, for instance, in lighting, appliances, or heating and air conditioning?

- How much energy are you using and what are you paying for it?

We’ll deal with the second question below in Section 4 on “tracking your power use.” Here let's address the building itself. How can you find out potential points of energy conservation? Although some people who aren’t experts may find this question intimidating, it need not be. H-IPL suggests three ways to find out what you need to know.

Walk through the Building Yourselves, Taking Notes.

Make a date for 2-3 members of your Using Energy Prudently team to spend a couple of hours in your church building (more if it is very large), and get to know your congregation’s building. If your team does not include key people who may have more knowledge about the building’s quirks or history, such
as the pastor, the present or past property committee chair, the custodian, or the building manager, seek to invite them along, or make a date to interview them to find out the information they can provide.

Make sure you are equipped with keys that will admit you to all parts of the building. Wear old clothes. You might want to take flashlights, a camera, a measuring tape, an infrared gun for detecting heat if you have one, a clipboard, pen, and a copy of the Energy Saver Checklist prepared by H-IPL. The principal areas to inspect are: 1) lighting; 2) appliances and equipment; and 3) heating and cooling systems, which include HVAC equipment, thermostats and settings, and the building’s shell. Each of these areas can potentially yield tremendous energy savings, allowing you to recoup quickly the cost of making changes. In addition, most utilities offer rebates that make the changes even more cost-effective (more on this below).

Once you have completed a building walk-through and talked to staff or leaders who can inform you about maintenance matters, you doubtless have ideas for several projects you can pursue to tighten your building’s use of energy. In Section 5 below we will discuss prioritizing and organizing these projects.

Or Ask Your Utility for a Free Energy Audit.

If you aren’t satisfied that you have found everything necessary on your own, contact your electricity and natural gas providers and inquire whether they offer free energy audits, and schedule an appointment with them. They should walk you through the building and give you a written list of items needing attention. They should also be able to describe the rebates they make available (see below).
Or Pay a Professional for an Energy Audit.

If you still aren’t satisfied that you have enough information, you can hire a professional to do a thorough inspection of your building and give you a detailed report. Find out before they come what they charge, and what they provide.

Which option should you choose? Some UEP committees will have more confidence in their own ability to assess the building than others. If you would like to consult with us about your plans and options, contact H-IPL’s resident expert and board member, Ray Wilson, P.E., who can help you decide.

Utility-Provided Rebates and Government Incentives

Most electric and some natural gas providers offer rebates, or incentives, that help you save money on building improvements. There are three kinds:

1. Some are built into the price of items that your congregation can purchase from the utility online, such as LED lightbulbs, exit signs, thermostats, etc.
2. Others are prescriptive rebates listed on the utility’s website: the utility will reimburse you a predetermined amount for installing improved technologies, such as $100 per LED 2x4 troffer replacing fluorescent lighting, or $75 for an Energy Star refrigerator.
3. Others are custom rebates: you use a form available on the utility’s webpage to propose an improvement and the utility determines on a case-by-case basis whether and how much they will reimburse you.

Local, state, and national governments also provide rebates and incentives to help ease the cost of energy conservation. If the incentive comes through a tax credit, it will not be applicable to nonprofits like churches, but is very useful for homeowners. To search for incentives available in your area, go to http://www.dsireusa.org/.
Section 4

Tracking Your Power Use with Energy Stewards

Besides the physical condition of your building, it’s important to know how much power you are using, and what it is costing. It’s easy to think of utilities simply as services provided when you flip a switch, light a burner, or turn on the tap. But behind each of those daily actions lies a much more complex and, from an environmental perspective, costly story of mining, transport, and burning, usually involving combinations of coal, natural gas, and liquid petroleum. Even water, which looks like the same stuff that falls from the sky, is aerated, filtered, disinfected, tested, and then pumped to customers with enough force for a good hot shower—a process that requires much more hidden energy from fossil fuels than we often consider.

Furthermore, while we pay monthly costs for utilities, there are also “externalized costs.” These are the clean-up costs or permanent damage that are not factored into what industries and consumers pay. These costs are borne by neighbors, such as low-income families living close to coal-burning power plants who suffer asthma and other lung diseases from air pollution. They are also borne by people living downstream from mining sites, and by other species displaced or disrupted by mining, trucking, and power plants. Ultimately, because the combustion of fossil fuels results in increased carbon dioxide and other greenhouse gases, the externalized costs are borne by all who suffer from the effects of climate change, especially future generations.

It is for these reasons, both economic and ethical, that religious congregations are giving attention to such seemingly mundane matters as our energy bills, light switches, thermostats, and HVAC systems. Suddenly it matters more than ever how much power we use or conserve.
Most congregation members have no idea what their building’s energy use and costs are. There may be little or no conversation between staff that decides every day how to use power, a property committee busy with maintaining a tidy building, and a treasurer paying the monthly bills, much less a kitchen crew that keeps an empty refrigerator running just in case, a study group that turns up the heat and forgets to turn it down, and a maintenance crew that leaves a door propped open. Since utility rates regularly rise, no one may notice an unusual spike in costs.

Getting and staying on top of your utility use and cost is not rocket science, but it does require attention to detail. The first step is to gain access. Find out from whoever pays the bills your utility account numbers and online passwords. If that person hasn’t set up online access to the building’s utility accounts, use the account numbers to set them up (and while you are at it, give the access information back to the treasurer and suggest paperless billing). You will find there not just the latest bill, but a couple of years’ worth of records. Each bill will be so much larger than your household utility bills that for most people they are basically meaningless at first glance. But hang in there.

**Energy Stewards**

You can set up your own Excel spreadsheet and start tracking the bills yourself, but H-IPL provides a much easier and more informative way to use and assess the wealth of data your energy bills actually do contain. We have partnered with Rapid Improvement Associates in Madison, Wisconsin to offer a program called Energy Stewards. Energy Stewards interfaces with the EPA’s Portfolio Manager, allowing your congregation to work toward the gold standard of building efficiency, Energy Star certification. The program also allows congregations to:

- Track energy use, even in complex facilities
- Create an action plan for energy reduction
- Measure energy reductions and cost savings
- Compare efforts with other Energy Stewards participants

Energy Stewards helps you enter your utility data, offers easy-to-read graphs and charts, and provides tracking and sophisticated analysis of energy usage. Considering the financial savings, the cost of this service to congregations is minimal. If someone on your team will faithfully enter the monthly utility data (which takes about fifteen minutes, but requires persistence, and eventually the recruitment of a successor), the cost to your congregation for the Energy Stewards basic program is $100 per year. If you prefer the enhanced program, with the data entered automatically, the cost is $150 per year. Since 15 minutes a month adds up to three hours when you could be improving your efficiency rather than typing numbers, we recommend the enhanced program.

Below is a glance at the home page, showing the various kinds of information to be found at Energy Stewards:

Below is an example of the kind of tracking information Energy Stewards displays. Actual electricity and gas use are shown in the top two graphs, with electricity peaking in the summer months and gas in the winter. The second set of graphs shows dollar amounts paid for the utilities. The third line shows the metric tons of carbon dioxide produced from the use of both utilities.
Using Energy Prudently Guide

(left)—this is the line you want to see go downward. Next to it is the building’s Energy Star rating, which will move upward as your efficiency improves. Finally, on the bottom, is the intensity of your energy use, normalized for changes in weather. In other words, though your heating bill may rise in a very cold winter, energy improvements are still reflected in the graph, demonstrating that the weather-fighting heating bill would have risen much more had the improvements not been implemented.
If your building has solar panels, Energy Stewards will also track the power you are using from your own renewable energy source:

![On-Site Solar (kWh)](image)

Here is the screen for updating meter data from your utility bill:

![Update Meter Data](image)

And here is a sample of the action tables available at Energy Stewards, which can be tailored to your use online, saved and printed as pdfs, or downloaded as spreadsheets:

<table>
<thead>
<tr>
<th>Category</th>
<th>Action</th>
<th>What are these Codes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milestone</td>
<td>1.10 Confirm congregation participation in the H-IPL Energy Stewards &amp; your Congregation Project Team</td>
<td>3</td>
</tr>
<tr>
<td>Milestone</td>
<td>1.11 Verify the information about your congregation's facility in Energy Stewards is correct</td>
<td>3</td>
</tr>
<tr>
<td>Milestone</td>
<td>1.12 Click on this link to review the three-part video on use of this project site. They cover a range of useful topics, including how to update your energy use data, ENERGY STAR ratings and much more. Share with others on your green team and others who are involved in your energy conservation effort</td>
<td>3</td>
</tr>
<tr>
<td>Communicate</td>
<td>1.13 Inform board of trustees or other appropriate governing body of details of the energy conservation effort and seek their support</td>
<td>3</td>
</tr>
</tbody>
</table>

To find out more about the Energy Stewards program and whether it is right for your congregation, contact H-IPL board member and Using Energy Prudently project leader [Ray Wilson, P.E.](mailto:ray.wilson@energyprudently.org)
For the downloadable Energy Stewards form, [go here](#). Fill it in and email it to us at [uep@hoosieripl.org](mailto:uep@hoosieripl.org). As soon as your congregation’s data is entered, we will contact you to tell you how to log into your Energy Stewards account and begin using the tools it provides. You will also receive an emailed invoice for a one-year enrollment in Energy Stewards at the level you chose, either basic ($100) or enhanced ($150). See above for description of the distinction between these.

Here is a checklist of information you will need to register for Energy Stewards:

- Congregation name and street address
- Primary contact name, email address, and phone number
- Year building was built
- Total square footage
- Weekly operating hours
- Number of weekdays open
- Seating capacity of sanctuary
- Number of computers in building
- Whether there is a kitchen, and number of refrigerators and freezers
- Other uses of your building (such as a school or rented offices) and square footage used
- Utility suppliers and account numbers; web addresses; and login information
- Basic information on any renewable energy generated by building (e.g., solar panels)
Section 5

Finding Ways to Power Down

It’s helpful to think about your building’s utility-related systems in three large categories:

1. Heating and air (including the HVAC units, zoning, thermostats, any space or auxiliary heaters, and your building’s envelope, especially how tight it is and the adequacy of its insulation and weather stripping);

2. Lighting (including exit signs, installed lighting, and controls); and

3. Everything else: appliances, water heaters, water coolers, and other potential “energy hogs.”

Deciding what to tackle first involves several factors, including cost, payback period, availability of materials, availability of professionals or volunteers who will make the changes, and urgency (i.e., items that need to be fixed soon). If you have already acted on Sections 3 (auditing the building) and 4 (tracking power), you should already have many ideas for reducing energy use. But we have more help for you.
Using Energy Prudently Workshops

H-IPL offers Using Energy Prudently workshops across the state. At these workshops, your team will receive and learn to use an organized plethora of useful information describing conservation measures for every energy system in your building. You will have questions answered by the H-IPL leaders resourcing the workshop. You will also find out which other congregations nearby are working on their energy reduction, and may arrange to support one another in your efforts. This can be very helpful, since not every congregation or Using Energy Prudently team member has the expertise to go it alone, and since you can pool efforts in finding the best resources in a market in which energy-saving products and services are changing very rapidly.

You can get to a calendar of upcoming Using Energy Prudently workshops and to register to attend [here](#). If you do not see a workshop being offered within sixty miles of your location and would like to host one, please [contact us](#) to make arrangements.

Workshop Materials

The materials offered in the workshops are also available to you at any time [online](#). In these documents you will find detailed information to help with lighting, HVAC, and other energy matters in your worship building, as well as case studies documenting other congregations’ achievements in these areas.
Energy Star for Congregations

Another important resource for your congregation is Energy Star for Congregations, the Environmental Protection Agency's own website, which is filled with information, including an Energy Star Action Workbook for congregations. Our program Energy Stewards interfaces with Energy Star's Portfolio Manager, and your congregation can earn the Energy Star, as these congregations have, by earning an Energy Star score of 75 or higher in Energy Stewards.
Section 6

Improving Land Health

While buildings and their systems account for a very significant share of carbon pollution, another source of pollution, or of potential carbon sequestration, is land use. Trees, for instance, stabilize soil and help keep waterways clean, as well as breaking down pollutants. A typical medium-sized tree can intercept as much as 2380 gallons of rainwater per year, keeping its surrounding area much cooler than the same place would be without the tree canopy. Trees also reduce particulate pollution and sequester carbon dioxide from the air.

The amount of carbon your congregation’s land emits or sequesters isn’t directly measurable in the same way that utilities are. But you can use this calculator to estimate the benefits accrued by planting a single tree.

A congregation’s land use can show members and neighbors what sustainable creation care looks like, and can contribute in surprising ways to our future. For instance, instead of grassy lawns that require stream-polluting fertilizers and poisonous herbicides, costly watering, and petroleum-intensive mowing, a congregation’s landscape can consist of native trees and attractive flowers that provide wildlife habitats, filter water, refresh
the air, and offer inviting warm-weather meeting spaces for humans. Alternatively (or in addition), a community garden can grow fresh vegetables and fruits for church members and food pantries, provide an outdoor classroom for children, and invite members to work side by side on common projects. Surrounding trees, well placed, can add beauty and, more practically, can shelter and cool buildings, reducing the strain on HVAC systems. They can even make parking lots more pleasant.

**Cool Congregations**

H-IPL's parent organization, Interfaith Power and Light, offers a program called Cool Congregations that you can read more about in Section 11 below, “Getting Recognized for Your Efforts.” One aspect of Cool Congregations is Sacred Grounds Stewards. Your congregation is invited to enter the Cool Congregations Challenge, a competition for a $1000 award for energy-efficient projects, including a congregational grounds project that includes such features as native landscaping, water conservation, bike racks, wildlife habitats, recycling and composting, and organic gardening.
To find out more about Cool Congregations, go here. For information on entering the Cool Congregations Challenge, go here. You can find the complete guide, which includes inspiring stories of what other congregations have done, as well as an abundance of ideas of what your congregation can do.

To read about 2015 Cool Congregations Sacred Grounds Stewards winner St. Peter’s United Church of Christ in Carmel, Indiana, go here.
Section 7

Using Energy Prudently at Home

So far this guide has primarily addressed energy reduction in shared facilities. The work of building and grounds renovation for conservation provides a teaching tool for congregation members and neighbors, so that similar measures can be taken in homes and work spaces. Naturally, the project of making a home efficient is far simpler than working with a complex and large, and often old, congregational building. But let’s be honest: the extent to which individual families are comfortable making those changes often depends on the unequally distributed “handyman” talents possessed by homeowners. Some congregation members will have already made their home maximally energy efficient and are already reaping the benefits in lowered utility bills. Some may even have installed solar panels. Others may not have begun the effort or may not yet see the need.

H-IPL provides tools to help every family in the congregation to begin using energy prudently at home. Just as with worship buildings, the first step at home is to know how much energy you are using, where it is going, and how it might be conserved. Our Using Energy Prudently website offers a simple checklist to help you walk through your home and find opportunities to cut down on utility spending and carbon pollution. Here you can find a basic carbon calculator to learn
how your household’s footprint compares with others and how you might reduce it. You can also take advantage of two other programs outlined below to help your members actively care for the earth at home.

**Hoosier IPL Household Energy Survey**

Through partnership with statistician Shimon Sarraf at Indiana University in Bloomington, H-IPL offers a five-minute Household Energy Survey that will help your congregation and its members learn where they stand on reducing their carbon footprint. We have used this survey in our solar panel grant program for several years, and now we offer it to all our congregations.

The survey asks questions concerning such matters as lighting and heating in your home, personal transportation, and so on. The score given at the survey's end represents a rough estimate of the amount that an average Hoosier household would reduce its energy usage if it did the same things the respondent's household has done.

The individual survey data is collected anonymously by congregation. Participating congregations will receive a quarterly report on their congregation's aggregate results, including the number of surveys taken and the average score obtained.

Our solar panel grant congregations commit themselves to the goal of having 1/3 of their member households obtain a score of 14 or higher, or in other words, becoming 1/7 more energy efficient than the average Hoosier. While these numbers represent baseline success, any individual congregation is free to set higher goals for themselves in participation and/or score.

To view and try out a demonstration model without recording any data, go here. The link can also be found on our website here. To sign your congregation up to use the live survey and obtain survey results, go here. You will be asked for:

- The congregation's name and address, and the number of households belonging to or attending the congregation.
• Name, role, and contact information of one representative of the congregation's leadership, such as the pastor, congregational president, or trustee.

• Name and contact information for one or two individuals who will act as the survey's administrators. They will receive materials to help introduce and interpret the survey to congregation members. They will set congregational goals, provide opportunities to take the survey, and receive quarterly reports from H-IPL on progress toward meeting your congregational goals.

Task of the Month

Unless you are building a new energy-star home, making efficiency retrofits on your home in the midst of the demands of family life and employment cannot be accomplished all at once. For this reason, H-IPL provides a program we call Task of the Month: twelve monthly steps, with detailed information and instruction, to help congregation members pursue energy reduction in their homes together through the course of a year.

When you sign up for Task of the Month, you will receive monthly newsletters providing information on no-cost and low-cost tasks that reduce energy use in homes. Newsletters include directions for completing the tasks and approximate amount of money and energy saved. A monthly leader’s guide is also available, offering tips for using Task of the Month as a congregation. Task of the Month works well as a congregation-wide activity or even a friendly competition among members. For those who are already
well advanced in their energy reduction efforts, the monthly newsletters provide tips for going deeper.

To find out more about Task of the Month, and to sign up to receive the monthly newsletters either as a congregation or as an individual, go here.

**Introducing the Thirteenth Month**

Our Task of the Month administrator, Stephanie Kimball, has recently created a new program called “Thirteenth Month” for those who have already completed the year of improvements. “Thirteenth Month” includes in-depth information on additional topics for people who wish to cut the carbon footprint of their daily life, including:

- Transportation
- Travel
- Food
- Renewable energy
- Landscaping
- End-of-life choices
- Investments
- Building a movement

You can find the Thirteenth Month Guide on our website here.
Section 8

Educating One Another

Hoosier Interfaith Power & Light takes education for sustainability in faith communities very seriously, and offers several workshops to encourage insight and understanding of our ecological needs. These workshops are geared toward generating wisdom that can be lived out in daily action that, in turn, deepens understanding. We encourage all Hoosiers of faith to become adept communicators and advocates of creation care, as well as people who live out their ecological convictions with integrity. Working as partners with your congregation, your denominational body, or your regional affiliate, H-IPL’s team of expert teachers brings these workshops to your community.

Our regular teachers include:

- Dr. Ben Brabson (Bloomington), climate scientist at Indiana University.
- Ray Wilson, P.E. (Indianapolis), H-IPL board member and leader in the Using Energy Prudently workshops.
- The Rev. Dr. Patricia K. Tull (Jeffersonville), H-IPL’s program director, an ordained Presbyterian minister, writer, and biblical scholar.
• The Rev. T. Wyatt Watkins (Indianapolis), H-IPL board member, musician, and pastor of Cumberland First Baptist Church.

• Mr. Mike Oles III (Brownsburg), H-IPL’s organizing director, an experienced social activist.

• Ms. Sharon Horvath and Mr. Andy Pike (Indianapolis), members of St. Thomas Aquinas Catholic Church and longtime Creation Care Ministry leaders.

• Mr. Darrell Boggess (Bloomington), educator with Solar Indiana Renewable Energy Network (SIREN) program who explains solar performance, cost, and availability.

While we are able to create workshops on a variety of other topics, the following are the several that we lead regularly. To view the calendar of upcoming workshops, go here.

Religious Traditions and Creation Care

Religious traditions from around the world display deep respect for the earth and its creatures. From the first verse of Genesis on, for example, the scriptures shared by Jews and Christians are filled with references to the natural world. The Qur'an, likewise, emphasizes that God created the earth for all living creatures (55 [The Most Gracious]: 7-10), and that “there is no animal on earth, or any bird that wings its flight, but is a community like you” (6 [Cattle]: 38). People of faith are beginning to remember that our human story is grounded in a larger saga of life on earth,
and includes provision for justice for the vulnerable both today and in the future. This workshop, tailored to the faith backgrounds of participants, offers a theological basis for creation care. Led by Trisha Tull, H-IPL program director.

**Using Energy Prudently Workshop**

Learn how to reduce energy use by 25% or more by sealing your building’s envelope, using technology to make your heating and lighting more efficient, and identifying “energy hogs.” This workshop can be offered as a two-hour, four-hour, or daylong session and comes with a notebook of practical help, information, and tools. Led by Ray Wilson and others.

**Climate Boot Camp**

An in-depth workshop to equip faith leaders to speak confidently and knowledgeably about climate change and its impacts, and to respond as people of faith to this critical challenge. The workshop includes planning and implementing a project at participants’ own congregations, and a briefer debriefing session several weeks later. Preregistration and preparatory
reading are required. Led by Ben Brabson, Wyatt Watkins, and Trisha Tull.

**Organizing for Green Ministry**

A workshop to equip congregation members to organize for leadership that will keep environmental concerns on the agenda, and that will lead by example in areas of energy reduction, education, worship, and mission. Led by Trisha Tull, Sharon Horvath, or Andy Pike.

**Educating and Organizing for Sustainable Social Policy**

As American citizens we bear responsibility not only to act sustainably within our own homes and congregations, but also to encourage government and industry leaders into policy decisions that create the most long-term good, especially for those who cannot easily speak up for themselves: the poor, young, old, and nonhuman neighbors affected by human actions. In this workshop we learn how to organize and mobilize groups to communicate effectively with leaders. We will also explore upcoming issues facing the state and the nation. Led by Mike Oles.

**Solar Energy Forum**

The solar industry is growing quickly, but its technology is still unfamiliar to most people. The technical and financial aspects of acquiring solar panels for your congregation, home, or business are discussed in depth in this one-hour GoSolar program. Led by Darrell Boggess or Ray Wilson.
In addition to these regular teachers, we also have a growing list of other friends who are willing to share their experience and expertise. To find out more about our extended list of potential workshop leaders and their qualifications, please visit the Education page on our website.
Section 9

Celebrating Creation in Worship

For most Hoosiers of faith, worship is the single most important gathering of the week. Worship deeply touches every part of the human spirit, heart, and mind, and inspires reflection on priorities, commitments, needs, meaning, and future. Worship connects us with the holy and with our neighbors, reminds us of our sources of both gratitude and pain, and provides the forum for faithful inquiry. In worship we listen to the spirit with a more sensitive ear.

If we pay attention, the music, scriptures, and prayers traditional to most faiths actually provide far more insight into our relationship to the created world around us than modern people are used to observing. This makes sense: most faiths were founded in a pre-industrial world in which our ancestors’ daily survival depended on understanding and interacting wisely with the surrounding natural world. Realities embedded in the words and practices of our faiths, properly noted, can renew our own connections with the earth, its processes, and its creatures.
Leaders in worshiping communities can adopt practices that build worshipers' gratitude for the bounties and beauties of creation. Here are a few suggestions:

- Plan to hold services outdoors—either on your congregation's own grounds or in a nearby park—at least once or twice a year.
- Bring the outdoors inside, not just with cut flowers from the florist shop, but with flowering branches of the forsythia, dogwood, or redbud, pine cones, newly harvested produce, autumn leaves, or seedlings that your congregation is preparing to plant.
- Host an annual blessing of the animals.
- Highlight the creational aspects of holidays such as Ramadan, Sukkoth, Tu B’shevat, Palm Sunday, Easter, Pentecost, or the Feast of St. Francis.
- Incorporate Earth Week in April into your worship year.

**Preaching Resources**

In many traditions, no other time of the week or month offers as high a ratio of listeners to speaker as preaching does. One hundred members listening to a 20-minute sermon are devoting 33 human-hours to receiving a message that will help them faithfully live their professed commitments. This makes preaching both a high privilege and a great responsibility.
In current American society, the environment in general and climate change in particular are often claimed to be political issues that should not be mentioned in worship. They are indeed political in the narrow sense that our divided society and its divisive pundits have made them so. They are also political in the broad sense that whatever practices we carry out as a shared community—whether local, national, or worldwide—is negotiated through the give and take of political processes. But convictions about the kind of world we wish to leave to future generations are not political—they are founded on the ethics taught in faith communities. Religious leaders must, on moral grounds, speak out.

Interfaith Power and Light offers a special opportunity annually close to Earth Day in April called Faith Climate Action Week, when congregations across the U.S. are invited to offer sermons, teachings, earth-honoring worship, youth events, and other activities to draw attention to climate change and the goal of a sustainable future. You can register for free downloadable materials here. Here you can list an activity that your congregation plans to carry out.

If you are a faith leader wishing to gain scientific information, theological insight, and pastoral perspectives on preaching on ecological matters and especially on climate change, you might consider signing up for our Climate Boot Camp, described among the educational offerings in Section 8 above.

We have also begun to collect climate-oriented sermons from members willing to share them, and have posted them on our website here.

**Worship Resources**

Besides the Climate Boot Camp and the Religious Teachings and Creation Care workshops described in the previous section, H-IPL offers various tools and resources for preparing for sustainable worship and preaching, and will continue to add to them as we become aware of them. Find them here.
Section 10

Bringing in the Sunshine

Hoosier Interfaith Power & Light has helped a number of congregations to research, fund, and install solar panels. These panels retain their effectiveness for at least thirty years, and within a few years pay for themselves in free energy and power sold back to the utility, leaving the next generation more sustainable budgets, reducing greatly the carbon footprint of worship facilities, and educating congregation members and neighbors about the benefits of renewable energy. If your congregation is ready not only to conserve energy but also to choose alternative sources of power, we can guide you through the process—and it is, indeed, a process!

The Basics of Solar Energy

Solar systems are fairly straightforward. They consist of an array of panels affixed to the building roof or another structure (such as a gazebo or parking lot cover) by means of metal racks, as well as wiring.
that connects the panels to one or more central inverters inside the building. Some systems are equipped instead with micro-inverters, one for each panel. The inverters convert the DC (direct current) power generated by the panels into the AC (alternating current) energy used in standard buildings. They also include meters to measure the amount of power being generated in kilowatt hours (kWhs).

If your system is interconnected with the power grid, as most systems are, the power you generate will be used first to satisfy electrical needs in the building itself, and any excess will be transmitted through the powerline into the electrical grid for neighbors’ use. Your utility company will install a bidirectional meter that will record the amount of power you receive from the utility, minus the amount of power you are selling back. This is called “net metering.”

Not interconnecting with the power grid requires the addition of a bank of batteries to store generated power for use at night and on cloudy days, and is therefore quite costly. This is why there is much discussion these days about new technologies for cheaper power storage.

Some congregations may choose to seek out smaller “demo” projects that can run on solar panels without interconnecting with the grid. These can help teach the congregation what solar looks like. For instance, if there is a window, architectural feature, or outdoor sign that you would like to highlight at night, especially one without an outlet nearby, a small solar array including a battery can be bought and installed for a couple hundred dollars.

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**Preparing for Solar**

For any congregation thinking about installing solar panels, we recommend the following steps:
1. Have the conversation: Secure approval from congregational leadership to install solar if funds become available. H-IPL can help you interpret the benefits of renewable energy for your congregation.

2. Talk to an installer or two: They offer free estimates, and will help you consider the size, positioning, and cost of your array. During this process, be sure to check on the age and condition of the roof on which the panels will be installed. Solar panels help guard the roof from further deterioration, but if it is close to the end of its life, it should be replaced before they are installed to avoid needless cost.

3. Consider publicizing the panels to your congregation as a project for which you are passively (or actively) raising funds. For example, if your congregation has a wish list consisting of major leadership-approved needs among which members wanting to make a large one-time contribution, bequest, or memorial offering can choose, make sure your solar project is included.

4. Begin (or continue) energy conservation measures, as outlined in this guide.

5. See Section 2, and register as a H-IPL Using Energy Prudently Congregation, using the full range of tools for energy use in worship buildings and member engagement, and becoming eligible to be notified first when solar panel grant opportunities arise.

Doing these five things will position your congregation well for making the move to rooftop solar. You will know more about what kind of array your particular building needs, depending on its roof structure, angle, direction, size, and shading and on your congregation's likely energy needs. It will also
begin to spread interest in renewable energy throughout the congregation, and inspire contributions by members seeking to boost the congregation’s potential.

**Funding Your Panels**

Homeowners and businesses that pay taxes can take advantage of the 30% tax credit the federal government makes available to ease the cost of renewable energy. No comparable incentive is currently available for nonprofits such as religious organizations. But a few alternatives are worth considering.

One of these is for members of the congregation to create a limited liability corporation (LLC) which can, if certain conditions are met, finance the panels and receive the 30% tax credit. One of our congregations, Englewood Christian Church in Indianapolis, has done this with good success. For more information on this option, and for a case study by Englewood, go here.

A second option is finding a low-interest loan that is structured at least in part to be repaid through the energy savings provided both by the panels and by energy conservation measures. Some faith and denominational organizations offer loans like these to their members, such as the Presbyterian Investment and Loan Corporation’s Restoring Creation Loan for Presbyterian Church (USA) congregations. Other congregations have set up low-interest loans for themselves by selling notes to interested members looking for short-term investments.

A third option is a capital fund campaign within the congregation. Many capital improvements in worship
buildings commit a congregation to a larger annual budget for cleaning and maintenance, or at least do not pay for themselves. But solar panels are different: they actually reduce the congregation’s long term financial obligations. Being practically maintenance-free, they are among the very best investments a congregation can make.

**Solar Panel Grants**

A fourth option is to apply for a matching grant through Hoosier Interfaith Power & Light. In its brief history, H-IPL has been very successful in writing grant applications to obtain solar arrays for about twenty-five congregations throughout the state. Although some monies come from other sources, most grants have been received through Indiana’s Office of Energy Development Community Conservation Challenge grant program. Since such competing grants are offered at irregular intervals, often with very short deadlines, we recommend that congregations do the preparatory work ahead of time to position themselves well as candidates for these grants (see above).

H-IPL congregational affiliates who have become Using Energy Prudently congregations are eligible to be notified first when opportunities arise to apply for solar panel grants. The grants we write are generally offered with stipulations that help magnify both the energy effectiveness of the panels and the community education made possible by their introduction. For instance, in all of our solar grant programs, congregations agree to match the grant funds as much as they can to maximize the size of their array. They agree to seek to reduce their facility’s energy use by 25% beyond what the panels themselves generate. They also agree to engage members to reduce energy by at least 14% in their homes, and to host at least two events related to energy conservation and renewable energy: a Solar Forum and a Using Energy Prudently workshop (see Section 8 on education, above). Finally, they agree to publicize their energy reduction efforts and rooftop solar installations through the media as well as through newsletters and written case studies.
There is no guarantee that the right grant will come along at the right time for your congregation. Applying for, receiving, and carrying out a solar grant is a major project involving hundreds of hours of volunteer time that no congregation can embark on lightly. But the result can be an economically feasible way to reduce utility costs for the long term future.

Congregations of all faiths throughout Indiana have acquired solar panels through grants administrated by H-IPL or through other means, and have worked to decrease their carbon footprint. Learn more about solar grants and about our solar congregations at our website. Many would be more than happy to share their experiences with others who are interested.
Section 11

Getting Recognized for Your Efforts, and Spreading the Good Word

Most congregations don’t engage in creation care in order to seek recognition. But getting recognized does put a spotlight on your efforts. It shows that your work is valuable to the human community and suggests that others follow your example. In other words, your being recognized spreads the good word about the importance of creation care.

Becoming a UEP Acclaimed Congregation

Using Energy Prudently congregations commit themselves to the challenging but attainable goals, outlined in Section 2, of reducing energy consumption in worship buildings by 25%. They also engage their members in active efforts toward reducing power use at home, demonstrated by reaching the goal of having 1/3 of their households score 14% or higher on the Household Energy Survey. And they host at least one H-IPL workshop, advertising it to neighboring congregations. When your congregation meets these goals, it is eligible to become one of our UEP Acclaimed Congregations, receiving statewide H-IPL recognition, pride of place in our publicity and on our website, and the opportunity to offer your stories and successes for the benefit of others. You may even get a plaque!

Our UEP Acclaimed Congregations have stories to tell, and other congregations will benefit from hearing them. If you think your congregation has fulfilled the commitments listed above, you may apply for UEP Acclaimed Congregation status here. Please provide narratives, photos, news articles, or
case studies related to your congregation’s work in green ministry and energy reduction. For guidance in fulfilling the commitments or documenting your efforts, please contact us.

When you become a UEP Acclaimed Congregation, with your permission we will list your congregation’s name and website on our website, along with the name of a contact person from your congregation, so that others in your area who wish to learn from your example may do so.

**Energy Star Certification**

The EPA’s Energy Star program likewise offers your congregation the opportunity to earn the Energy Star for your worship building—the same star that is found on an increasing number of energy efficient products. Here you can find ten reasons to pursue Energy Star certification. The Energy Star website for congregations offers an action workbook for congregations as well as many more tools and resources, and describes how your congregation can earn the Energy Star as these congregations have by earning an Energy Star score of 75 or higher in Energy Stewards.

**Interfaith Power & Light Cool Congregations**

Our parent organization Interfaith Power & Light offers certification as a Cool Congregation for groups that have reduced their energy use by 10% to 40%. You can read about the certification here, and apply here.

In addition, IPL offers five $1000 prizes every year in the Cool Congregations Challenge, one in each of the following categories:

- Cool Congregations Planner
- Energy Saver
- Renewable Role Model
- Sacred Grounds Steward
- Community Inspiration
To learn more about these prizes, the judging criteria, and how to apply, go here.

You can also read about our own St. Peter’s United Church of Christ in Carmel, who was awarded the Sacred Grounds Steward prize for 2014, and other stories.

**GreenFaith**

Our sister organization GreenFaith, based in New Jersey, reaches faiths across the U.S. with its own certification program, a two-year environmental leadership program for houses of worship. They provide resources, coaching, support, and networking opportunities to help congregations do holistic environmental planning. To learn more about their program and how to become involved, go here.

**Denominational Certifications**

Some faith groups and denominations have their own congregation-based environmental certification programs and resources, including the following. Go to their websites or contact a denominational official to learn more:

- Presbyterian Church (USA) Earth Care Congregations
- Unitarian Universalists Green Sanctuary Program
- Disciples of Christ Green Chalice Program
- Muslim Green Ramadan
- Jewish Coalition on the Environment and Jewish Life (COEJL) and Aytzim Ecological Judaism for sustainable Israel
- Evangelical Lutheran Church in America Lutherans Restoring Creation
United Church of Christ Creation Justice Churches
Mennonite Creation Care Shades of Green Congregations

If you are aware of other denominational programs that should be listed, please let us know.
Section 12

Finding More Resources

Want to learn more? Please go to Hoosier Interfaith Power & Light’s Resource Pages to find websites, books, articles, DVDs, and many other items of interest for greening your congregation.