

## Calculating Your Carbon Footprint

*A “carbon footprint” is a way to measure how much greenhouse gas (carbon dioxide) an organization, event or product emits.*

What is your church's carbon footprint? More importantly, do you know how to use your carbon footprint to improve both the environment and your church's environmental communications?

Knowing your church's carbon footprint is important for several reasons:

- It promotes your church's efforts to become more environmentally sustainable.
- It demonstrates fiscal responsibility because, generally, long-term costs decline when your carbon footprint declines.
- It enhances your church's reputation in the community as a responsible and caring organization.
- It inspires your church members and others in the community to reduce their carbon footprints.

Knowing your church's carbon footprint and ways to reduce it enables your church to determine how much it will cost to reduce energy consumption. If the church is undertaking a capital campaign, for example, this information can be valuable in demonstrating why the church needs money and how the congregation is a good steward of money and the environment.

Switching to low-energy light bulbs and replacing the old church van with a hybrid model will reduce emissions, but your building's heating and cooling systems are by far the largest energy consumers and where you should focus your work. Reducing energy consumption is the best way to shrink your church's carbon footprint. This is hope-filled work that helps us care for God's creation.

*I consider that the sufferings of this present time are not worth comparing with the glory about to be revealed to us. For the creation waits with eager longing for the revealing of the children of God; for the creation was subjected to futility, not of its own will but by the will of the one who subjected it, in hope that the creation itself will be set free from its bondage to decay and will obtain the freedom of the glory of the children of God. We know that the whole creation has been groaning in labor pains until now; and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly while we wait for adoption, the redemption of our bodies.*

— Romans 8:18-23

## Steps to determining — and reducing — your carbon footprint

The carbon footprint of an individual, household or organization is measured as the total amount of green gasses, including carbon dioxide equivalents (CO<sub>2</sub>e) generated by conscious actions, choices and habits. Measuring these carbon footprints helps you gauge where you are doing well and where you can make adjustments to reduce the impact of your community on the earth. If you would like to learn about the role carbon offsets play in the work of greenhouse gas reductions, we recommend the [Climate Action Reserve](https://climateactionreserve.org) online at [climateactionreserve.org](https://climateactionreserve.org).

The survey provided at the beginning of this Nurture & Sustain toolkit might have shown that your community is passionate about reducing their carbon footprint. If so, we recommend that you share this resource with your church Vestry or Council, your Buildings & Grounds Ministry Team and staff, and others on your campus who are able to provide leadership regarding your facilities.

How do you find out how much energy your church building consumes and translate that into your carbon footprint? Here are some options:



*In Tanzania, Episcopal Relief & Development partners with the Anglican Diocese of Central Tanganyika to teach beekeeping as a sustainable livelihood in drought-prone communities.*

1. Calculate how much energy your church building consumes by using information from the U.S. Energy Information Administration and [this table](#). You'll need details on square footage, building age, type of roofing and wall materials and type of heating and cooling systems to calculate energy consumption. The resulting sum is described in kilowatt-hours (kWh).  
  
This number is your church's carbon footprint. Now, you have a starting point for finding ways to reduce that footprint.
2. Use energy-use-calculation software. These calculate energy use based on the systems in your building and provide projections and suggestions for reducing energy use. They are designed for building maintenance professionals, so if you go this route, collaborate with your church facilities team. Online resources like [Energy Star Portfolio Manager](#) or the free [online carbon footprint calculator](#) can help you measure and track your energy consumption. Congregation-specific tools and information are also available on the [Energy Star for Congregations](#) and [Cool Congregations](#).
3. Hire a company to conduct a building energy audit. Search your local Google directory for "building energy audits." This is the most expensive method and shouldn't be undertaken unless church leaders are making a serious commitment to energy reduction via building upgrades. The benefits of hiring a company to conduct the audit are that they also act as consultants during the retrofit process, are required to be pre-certified on the state level and can provide the most comprehensive information available on energy consumption now and after upgrades are made. They also can calculate how long it will take to recover a church's investment in new systems through energy savings, a crucial piece of information when seeking capital-improvement funds.
4. Share your church's carbon footprint process and energy-reduction steps with your church members and the community. Let them know ways that they can reduce energy consumption in their own homes or commercial buildings.

Being able to communicate in specific and accurate terms about energy usage and energy reduction will prepare you to talk persuasively about your church's commitment to environmental protection.

The news and images about climate change can be frightening. Exploring opportunities to make a difference in creation care with your congregation can create an environment of hope and perseverance, which is an antidote to that fear. Episcopal Relief & Development has a [helpful resource](#) for individuals and congregations who would benefit from exercises, prayers and conversations to build resilience during uncertain times.

After using the resource for discerning your carbon footprint, we encourage you to consider inviting a local expert to provide a more detailed study, including recommending improvements to gardens, roofs and other means of beautification that make a difference.

Additional means of measuring the environmental impact of your buildings and grounds can be found in the [Eco-Church Survey](#) and the Church of England's [self-guided checklist](#).