

Make the Switch at Phipps!

Phipps Conservatory leads the charge to support climate stability, one household at a time

Project Summary



In a new display at the entrance to Phipps, 16 oil barrels provide a visual representation of the amount of CO₂ guests can prevent from being released into the atmosphere annually by switching to renewable energy.

Founded in 1893 in Pittsburgh, Pennsylvania, **Phipps Conservatory and Botanical Gardens** is dedicated to showing that people, plants, health, planet and beauty are all interconnected. As part of a systems-based approach to leadership in sustainable buildings, practices, programs and research, Phipps embraces green power solutions throughout its campus.

Nearly nine out of 10 Phipps guests surveyed in 2016 considered climate change a threat now or in the future. In 2017, Phipps set a principal goal of demonstrating to its guests that every one of us can have an impact, and that addressing this critical issue is something

that each individual can take part in. With this in mind, Phipps launched **Make the Switch at Phipps!**, a green power drive conducted through a special partnership with Green Mountain Energy. Seven days a week, Green Mountain Energy manages a station in Phipps' Tropical Forest Conservatory where guests can switch their home electricity generator to 100% green power right on the spot, and those that do are given a free Phipps membership.

Through this innovative new effort, which directly impacts the voluntary market for green power, guests are incentivized to switch to green power and to deepen their engagement at Phipps in one easy and powerful action. By switching to green power, a family makes a first critical step toward living more sustainably, and through their new membership to Phipps, they increase their access to the Conservatory itself, a valuable resource for reinforcing the importance of green and healthy living and a constant reminder of the beauty and efficacy of our natural world. By offering its most valuable resource as an incentive to embrace green power, Phipps makes clear to its guests just how important and impactful their decision really is.



Since the launch of the green power drive in January, Green Mountain has converted more than 1,600 households to green power. By the end of a year, these 500 households alone will have prevented 12,640 tons of carbon dioxide emissions — the equivalent of saving 152 tanker trucks of gasoline from being burned, or 28 million miles driven by an average passenger car. And the numbers are growing every day.

In 16 states in the U.S., consumers can pick their electricity provider. They can choose to use renewable energy; they just need the help and motivation to do it. Phipps' program is non-partisan, voluntary, and speaks to those who believe in climate change and think something should be done about it today. It is working because we have eliminated some of the obstacles to switching. People tend to procrastinate, think the problem is too monumental for them to make a difference, or do not have the time or resources to do the research. Offering our visitors simple climate change facts that demonstrate that small actions do make a difference, providing information about the types of programs offered and incentivizing them with Phipps memberships on the spot makes for a compelling case — and it takes less than 10 minutes of a guest's time. Through its partnership with Green Mountain Energy, Phipps is selling memberships in bulk and at a discount, which helps to balance the cost. As the program continues to thrive, Phipps plans to partner with professional associations like the American Association of Museums, the Association of Zoos and Aquariums, and the American Public Gardens Association to present the drive as a model for replication. It is our hope that environmentally-focused institutions throughout the country will follow our lead.



For the past 120 years, Phipps Conservatory and Botanical Gardens has excelled in showcasing the natural world through plant display. Today, from buildings and landscapes to programming, amenities and beyond, Phipps seeks to show that human and environmental health are inextricably interconnected, and that sustainable actions — ranging in scale from the construction of the world's greenest building to the planting of a raised vegetable garden bed in a backyard — are the key to ensuring that these critical interconnections are harmonious,

mutually beneficial and healthy for future generations. Phipps' holistic efforts to embrace green power as an example for others include the following:

Buildings

All of our new building projects since 2005 have been energy efficient and/or LEED certified. In 2007 we adopted the Living Building Challenge as our standard. These new buildings operate at net-positive energy from renewable energy produced on-site.

- **Welcome Center:** First LEED®-certified visitor center in a public garden (2005)
- **Production Greenhouse:** First and only LEED®-certified greenhouse (Platinum, EBOM) (2006)
- **Tropical Forest Conservatory:** World's most energy-efficient when opened, no greenhouse effect, earth tubes for cooling (2006)
- **Center for Sustainable Landscapes:** 24,350-square-foot research/education/administration building (2012):

- First and only facility to meet four of the world's highest green building standards:
 - Living Building Challenge™
 - LEED® Platinum
 - Four-Stars Sustainable SITES™
 - WELL Building Platinum
- Generates all its own energy from renewable energy produced on-site from PV's and wind
- Uses 70% less energy than a typical office building
- **SEED Classroom:** Modular, replicable, designed to meet Living Building Challenge – net-positive energy certified (2015)
- **Exhibit Staging Center** (coming soon): Designed to meet Living Building Challenge and operate with net-positive energy



Operations



Our practices are focused on reducing energy use. For the energy we do use, we either produce it on-site with renewables or purchase renewable energy credits to offset any purchased electricity. We purchase carbon offsets to offset all the carbon generated from the combustion of fossil fuels used to heat our buildings.

- 100% of campus electricity produced on-site with solar and wind or by purchasing renewable energy credits, \$1,850/year (since 2005)
- All carbon produced to heat all our facilities is offset with carbon credits: \$6,760/year (since 2010)
- Our sponsorship program focuses exclusively on partnerships that reflect our sustainable mission and values
- We reinvested the energy sector investments in our portfolio into renewable energy investments (2015)
- Energy Star compliant equipment (appliances, computers, etc.) set to optimal modes, motion sensor equipped CFL and LED lights, and individual task lamps help to further reduce energy usage
- Our horticulture program focuses on organic principles which minimizes our need for fossil fuel based fertilizers and pesticides

- Our café features local, and organic produce which minimizes the need for fossil fuel based transportation, fertilizers and pesticides

Research

Part of our research program is devoted to collaborating with local universities and providing our buildings to be used as a lab for original research devoted to building performance.

- Collaborative research with Carnegie Mellon and University of Pittsburgh

Programs

All of our programs promote and follow sustainable practices. In addition, many directly or indirectly address climate change and the need to develop sustainable lifestyles that are in harmony with nature. This includes our:

- Science education programs for children
- High school and college internship program
- Botany in Action fellowship program for Ph.D. students
- Sustainable horticulture programs for adults
- Certificate programs for professionals
- Interpretive signage, programs and tours for nearly half a million visitors per year



Videos

- The Evolving Green Story of Phipps: A Living Building Takes Shape: <https://www.youtube.com/watch?v=IG1srhdIZHk>
- Thinking Like Nature: <https://www.youtube.com/watch?v=79fsu4MUI8I>
- One Health, One Planet: <https://www.youtube.com/watch?v=CPDrpZrtp6A>

Resources

- Make the Switch at Phipps! Green Power Drive: <https://phipps.conservatory.org/calendar/detail/make-the-switch-at-hipps-green-power-drive>
- Green Healthy Spaces: A Summary of Sustainable Efforts at Phipps: <https://phipps.conservatory.org/assets/documents/green-healthy-spaces1.pdf>
- Green Innovation at Phipps: <https://phipps.conservatory.org/green-innovation/>

- Phipps and Climate Change:
<https://phipps.conservatory.org/green-innovation/for-the-world/climate-change/>
- Research Institute at Phipps:
<https://phipps.conservatory.org/green-innovation/for-the-world/research-institute/research-publications>
- *Building in Bloom: The Making of the Center for Sustainable Landscapes:*
<http://living-future.org/building-bloom>
- Beauty and Inspiration: A Tradition of Horticultural Excellence:
<https://phipps.conservatory.org/assets/documents/beauty-and-inspiration.pdf>