

Saving Energy, Saving Money!

Arizonans Who Are Doing Their Part

Energy efficiency is the cleanest and cheapest energy resource available. Now, because of Arizona's Energy Efficiency Standard, more programs are available to help people significantly and immediately reduce their energy use and save money. This helps reduce pollution, limit water use, and, in the long run, reduce the need to build costly new power plants and transmission lines — that means health care costs associated with pollution are also reduced. It's good for our economy, for our health, and for our environment!

Community Christian Church — Tempe, Arizona



Installing new lights and windows. Photos by Doug Bland.

Community Christian Church is a small congregation with an average worship attendance of 75 people. Although small, the church has been very active in the community and social justice issues. One of the biggest challenges, however, was living more sustainably. Pastor Doug Bland believes that this is because, while other efforts require relatively little investment (writing a check, volunteering a few hours), being “green” ultimately means questioning deeply ingrained habits and day-to-day lifestyles. Although sermons had focused for years about being stewards of the earth, little had happened – until one of the children in the church asked the question, “What

about the animals?” The response was, “We need to have a Green Team!”

In 2007, the Green Team led the congregation in conducting an energy audit. Some people were ready to jump ahead to a more visible action such as installing solar panels, but wiser heads prevailed, saying that first the church needed to plug up energy-wasting holes and weatherize the 60-year-old building. A lighting retrofit reduced usage from 32,130 watts to 10,592 watts, an estimated 67 percent.

The money that is saved on energy use is used for growing ministries of social justice, such as helping to provide food for those less fortunate. As a charter member of Arizona Interfaith Power & Light – a religious response to climate change (see <http://www.azipl.org>) – the congregation also encouraged church members to measure their household carbon footprints and commit to reducing energy use by 10–20 percent.

In 2012, Community Christian Church finally was able to do something big and visible: installing a parking structure with a solar array that supplies 85 percent of the congregation’s energy needs.

Howard Mechanic and Janet Grossman — Prescott, Arizona

Howard and Janet moved to Prescott in 2001 and wanted to find an energy-efficient home. However, nothing was available during the limited time they had, so they bought a conventional house and set about to make it energy and water efficient.

They took a variety of steps, first increasing attic insulation to R50, installing a water- and energy-efficient washing machine (while continuing to use the “solar” clothes line), upgrading toilets to low-flow, and adding a skylight for free light while double-glazing the existing ones. For heating and cooling, they use a gas stove and an evaporative cooler. Most of their electricity and hot water comes from solar electric panels and solar hot water collectors that they installed. Janet and Howard even use a solar oven for over half of the year to save energy and money and also to keep the kitchen from over-heating.



Courtesy of Howard Mechanic.

They purchased the solar hot water collectors and washing machine used, saving energy by using recycled items. Some of these investments cost a considerable amount up front, but most have already paid themselves back. Howard and Janet estimate that they save \$2,000 per year, plus a lot of energy and water, and they help protect the planet.

Energy Efficiency Benefits Low-Income Residents!

Many communities offer weatherization and other energy-efficiency programs for low-income residents. These programs can drastically reduce the amount families spend on their electricity bills, making it easier for them to pay rent and mortgages, keeping their families in their homes. Check with your community to find out what programs might be available in your area!

Gary and Linda Davis — Miami, Arizona

Gary has a chronic illness that left him unable to work. Linda has to stay home and take care of him. Just getting by on Social Security and sick pay, they could barely make it month to month.

The Davis' furnace didn't work, and their cooling wasn't much better. They made use of the Gila County Weatherization Department's services in order to improve the efficiency of their home. Through this program, insulation was added to their un-insulated attic, their barely-operational furnace was upgraded to a gas pack that both heats and cools, and their hot water heater was properly vented. Their heating bill has been reduced by approximately 50 percent.

In a thank-you letter to the Department, they noted that their home is now much more affordable and comfortable. "This program is truly a blessing and has helped us so much with the financial and emotional stress that we have been under. From day one, when the insulation went in, even before the furnace was installed, we slept better and warmer that night."

Curtis Anderson — Globe, Arizona

Curtis' mobile home was very costly to heat and cool. The heater was old and didn't work very well. In fact, he rarely used it, choosing to use his gas oven, instead, and supplementing that with small electric heaters. He said that using these heating sources was affecting his health.

Living on just social security made it very difficult to keep warm. In the summer, he would try to stay in one room where he had a window air conditioner. His peak bills in the summer ran him a \$100 a month, which he found extremely difficult to pay on his fixed income.

After weatherization, which upgraded his furnace and installed an energy efficient air conditioning unit, sealed his ducts, and properly vented his hot water heater, Curtis

saw his electric bill drop by 45 percent. He now feels much better and says he actually has money left over at the end of the month.



Adding insulation and sealing ducts and home openings can make a big difference.



The McCarthy home stays cool in summer and warm in winter due to added insulation. Photo by Jim McCarthy.

McCarthy Residence — Flagstaff, Arizona

When Jim and Kathy built their home, they upgraded the wall insulation from R19 to R21 and the ceiling insulation from R30 to R40. During new construction, this cost only \$600 extra!

Even in Flagstaff, homes can get rather warm. While their neighbors "roast" at 85°F, unless they pay for air conditioning, Jim and Kathy just open one window on each end of the house at night and, without air conditioning, stay cool. They have ceiling fans in several rooms but rarely need them. During the winter, they save a third or more on their heating bills. The minimal cost of added insulation during new construction pays off fast wherever you live, winter and summer.

Learn more!

To learn more about energy efficiency and what you can do, please visit our webpage at <http://arizona.sierraclub.org> or contact us at (602) 253-8633 or grand.canyon.chapter@sierraclub.org.



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