

The New Green Star Award

Making Changes for a Greener World

Make changes for a greener world by recycling, reusing, reducing energy consumption, or conserving material for the next 12 months. To participate, choose items from the list below, or add one of your own, that will result in a minimum of 2,000 pounds reduction of carbon emissions over the next year. Then fill out a pledge card, which can be found in the community announcement brochure rack at the west end of Harmony Hall, at the Green Team table on February 11 or 18, or online at www.ucop.org.

At the end of the quarter, submit to the Green Team all support documentation for the changes you made. Once they have been approved, you will receive a handsome “Green Star” Certificate and acknowledgement by Unity Church of Overland Park. What’s more, the person who reduces the most carbon dioxide for the quarter will have his or her name permanently engraved on the Green Star plaque.

Lifestyle change options:

1. Insulate attic to R50.

Average household reduction of carbon emissions: 2,142 pounds a year.

Why:

Because warm air rises, heat loss is one of the greatest sources of energy inefficiency in a home. The first line of defense is insulating your attic floor. Insulating your attic to R38, or R50 if you have an electric heater, is not that hard, and delivers a good bang for the buck, saving an estimated 2,142 pounds of carbon every year.

How:

This is one of the more expensive steps, but it can pay for itself within about 5 years. Conduct an energy audit to determine what kind of insulation you have and at what R-value. You can do this yourself or hire a professional. Once you know how insulated your attic is, make plans to correct your insulation, if needed. You can find information on types and methods of insulation at U.S. Department of Energy’s Consumer Guide. The Kansas City Home Performance Network program of the Metropolitan Energy Center is available to help homeowners make energy efficient changes like this one. Call 816-835-7593 or e-mail energy@kcenergy.org for more information. Also, some cities are beginning to offer low-interest loans for energy efficiency and tax credits may be available.

Required Support: Copy of receipt for materials and/or labor performed to insulate the attic.

2. Plant a Tree.

Average household reduction of carbon emissions: 1,600 pounds a year

Why:

According to the USADA Forest Service and the American Public Power Association, trees properly placed around buildings can reduce air conditioning needs by 30-50 percent and can

save 20-50 percent in energy used for heating. When selectively placed around a house, they provide excellent protection from summer sun by shading roof, walls and windows. After the leaves drop in autumn, deciduous trees permit winter sunlight to reach and warm the house. Trees also increase property value while cleaning the air and improving water quality. Plant on the south and west sides of your house

How:

Consult a nursery owner or other professional about selecting the right tree for your home. A tree's future size, shape, and overall appearance must be known before purchase. Other considerations are foliage texture and density, flowers, fruits and fall coloration. Some kinds of trees are very particular about sunlight, moisture, and soils. Find out more about trees planting and care from Bridging the Gap's affiliate, Heartland Tree Alliance.

Required Support: Copy of receipt that you purchased at least a 3" diameter tree.

3. Insulate basement.

Average household reduction of CO2 emissions: 1,148 pounds a year

Why: Hot air from the furnace rises up through the house and into the attic through leaks while cold outside air is pulled in through basement leaks, creating a chimney effect. This makes a home feel drafty and contributes to higher energy bills. After insulating the attic against air leaks, sealing the basement is the next best step to making your home more energy efficient, saving you money every month.

How: If your basement is not part of your living space, insulate the basement ceiling to keep the floor above it warm. If your basement is part of your living area, insulate the walls – not the ceiling. According to the U.S. Department of Energy, basement walls with insulation on the exterior perform better than basement walls with insulation on the interior. This step requires the help of a professional, as improperly insulated basement walls can damage a home's foundation. Before insulating, be sure to check for moisture problems and any cracks in the foundation wall and be sure to repair or seal them. The Kansas City Home Performance Network program of the Metropolitan Energy Center is available to help homeowners make energy efficient changes like this one. Call 816-835-7593 or e-mail energy@kcenergy.org for more information.

Required Support: Copy of receipt for materials and/or labor that you insulated your basement.

4. Recycle paper, glass and #1 & #2 plastics.

Why: By recycling paper, glass and #1 & #2 plastics, the average family of four reduced CO2 emissions by 1,000 pounds annually.

How: A list of recycling locations can be found at <http://www.recyclespot.org>.

Required Support: Submit a statement of the type of items you recycle and where they were taken for recycling.

5. Use Canvas or cloth bags instead of paper or plastic.

Average household reduction of carbon emissions: 780 pounds a year

Why: “Free” plastic bags ultimately cost both consumers and the environment. Each year billions of bags end up as ugly litter that breaks down into tiny toxic bits polluting our soil, river, lakes and oceans. The production of plastic bags requires petroleum and often natural gas, both non-renewable resources that put off greenhouse gas emissions. Additionally, prospecting and drilling for these resources contributes to the destruction of fragile habitats and ecosystems around the world.

How: Purchase canvas or cloth bags from one of many stores throughout the area that sell them, including Whole Foods or Natural Grocers. Keep them in your car or some other place where you will have them on hand when it is time to shop.

Required Support: Provide a copy of receipt for a reusable bag (two maximum).

6. Keep thermostat set at 68° in winter and 78° in summer.

Average household reduction of CO2 emissions: 690 pounds a year

Why: Setting your thermostat to 68 degrees in the winter and 78 degrees in the summer will save 690 pounds of CO2 annually. If that’s a change of 3 degrees or more (72 degrees can be considered the “normal” temperature setting), you can prevent the emission of almost 1,100 pounds of CO2 annually. Of course, if you already keep your thermostat lower than this in winter and warmer than this in summer, keep it up!

How: Kansas City Power & Light customers can request an Energy Optimizing programmable thermostat from KCP&L).

Required Support: Provide a receipt for a programmable thermostat, a copy of your utility bill before and after your commitment, or the readout from an electronic monitoring device such as “Watts up.”

7. Weatherize doors and windows

Average household reduction of CO2 emissions: 621 pounds a year

Why: The barrier created around a house with windows, doors, insulated walls, ceilings, and floors must be leak-free for a truly energy efficient house. About one-third of a typical home’s heat loss occurs around and through the doors and windows.

How: If your doors are in good shape and you don’t want to replace them, make sure they seal tightly and have door sweeps at the bottom to prevent air leaks. Installing insulated storm doors provides an additional barrier to leaking air. Find out how to weather-strip doors from the U.S. Department of Energy. In addition, The Kansas City Home Performance Network program of the Metropolitan Energy Center is available to help homeowners make energy efficient changes like this one. Call 816-835-7593 or e-mail energy@kcenergy.org for

more information.

Required Support: Provide a receipt for materials and/or labor for items purchased and work done.

8. What: Use a low-flow shower head.

Average household reduction of CO2 emissions: 450 pounds a year

Why: To get clean water, we tap lakes, build dams and reservoirs, and construct processing plants. By using more than we need, we overload sewer and septic systems and leach fields. Both the water itself and the energy needed to heat it cost you money. For an investment of \$10 or less you can save \$50 to \$75 per year on water bills and \$20 to \$50 or more per year on energy bills (depending on your current showerhead and utility rates).

How: For maximum water efficiency, select a shower head with a flow rate of less than 2.5 gpm. There are two basic types of low-flow shower heads: aerating and laminar-flow. Aerating shower heads mix air with water, forming a misty spray. Laminar-flow shower heads form individual streams of water. Follow the instructions that come with your shower head for installation or watch this simple explanatory video.

If you're a renter, you can still weatherize your doors and windows and reap the benefits. Be sure to check with your landlord first if you have any doubts.

Required Support: Submit a copy of receipt for purchase of the item.

9. Switch to reusable water bottles

Why: Average household reduction of CO2 emissions: 125 pounds a year.

The Beverage Industry Environmental Roundtable estimates that one 500-milliliter (0.53 quarts) plastic bottle of water has a total carbon footprint equal to 82.8 grams (about 3 ounces) of carbon dioxide (<https://mail.yahoo.com/?partner=abc>). In 2016, the average American used 167 disposable water bottles, but only recycled 38. <https://www.banthebottle.net/bottled-water-facts/>.

By switching to reusable water bottles, your family can save \$334 a year. (e.g., If there are 4 people in your family $167 \times 4 = 668$ bottles If the average cost of the water bottle (remember you buy some away from your home) is \$.50 $167 \times \$0.50 = \334).

How: Reusable water bottles are sold at many places including Walmart, Cosco and Hy-Vee.

Required Support: Copy of receipt for each reusable water bottle purchased (4 maximum).

10. Switch from Incandescent or Fluorescent to LED light bulbs: Difference between CO2 emissions of light bulb replaced and LED.

LEDs are more efficient than most other light sources, so they consume less energy for a given task or at a specific light output. Also, they do not contain hazardous materials such as toxic

mercury. Moreover, LEDs have a longer lifespan and hence reduce the frequency of disposal of lamps.

According to “**Comparison Chart LED Lights vs. Incandescent Light Bulbs vs. CFLs.**”

Why: LED bulbs use 451 pound/year of Carbon Dioxide Emissions. This compares to 4,500 pounds/year for Incandescent and 1,051 pounds/year for Compact Fluorescents.

(http://www.usalighting.com/stuff/contentmgr/files/1/92ffeb328de0f4878257999e7d46d6e4/misc/lighting_comparison_chart.pdf),

How: LED light bulbs are sold throughout the area, including most grocery stores and Home Depot.

Support: Submit a copy of receipt for each light bulb purchased and a statement of the type of bulb replaced.

11. **Other.** Provide a description of the change you’re going to make & how many pounds of CO2 emissions will be reduced annually. Also describe how the change will be accomplished and the support evidence you will provide for your commitment. (A couple of examples are Arcadia Power and Tree planting credits.)