

ENVIRONMENTAL FAST-FACTS **{Put one in each Sunday Bulletin}**

Week 1

Narrative in Bulletin (same each week for 8 weeks):

Scientists have concluded that when amount of carbon in the atmosphere exceeds 350 parts per million, we can't have a planet "similar to the one on which civilization developed and to which life on earth is adapted."

The bad news is we're already past that number—we're at 400 parts per million, which is why the Arctic is melting, why drought is spreading across the planet, why people are already dying from diseases like dengue fever and malaria occurring in places where they've never been seen before.

Each week between now and April 19th, the Sunday before Earth Day, the Green Team will offer an "Environmental Fast Fact" highlighting something you can do to be a better steward of the earth and the Average household reduction of CO₂ emissions that will be realized. Each week we'll provide a tip that reduces CO₂ more than one before.

Week 2

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.

Week 3

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! (But what if I'm too hot or too cold?)

How: Set it and forget it! You can also buy a programmable thermostat. Kansas City Power & Light customers can request an Energy Optimizing programmable thermostat from KCP&L.

Week 4

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 weatherstrip doors from the U.S. Department of Energy.

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.

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.

Week 5

Air dry clothes

Average household reduction of CO2 emissions: 780 pounds a year

Why: Air drying clothes saves in electricity costs and can lengthen the life of clothes. Air drying also won't shrink or set stains into your clothes.

How: Homeowners can install a clothesline. DoItYourself.com has a helpful guide to installing your own. If you live in an apartment or your homeowners association won't allow clotheslines, you can use drying racks and some type of clothes rod, available at most discount stores or hardware stores. You might locate a clothes rod in your laundry room above the dryer, use a sturdy shower curtain rod in the bathroom or get a metal clothes racks that hooks over the back of a door.

Week 6

Use Canvas 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 bags or use some you already own to transport your groceries instead of using

plastic or even paper bags. Keep them in your car or some other place where you will have them on hand when it is time to shop.

Week 7

Recycle paper, glass & #1 and #2 plastic bags.

Average household reduction of CO2 emissions: 1,000 pounds a year

Why

Recycling saves natural resources, energy, and landfill space. In most cases, making products from recycled materials creates less air pollution and water pollution than making products from virgin materials. Recycling is often the least expensive waste management method for cities and towns.

How

Bridging The Gap services several Community Recycling Centers through the Kansas City metro region. You can recycle glass and many other materials there. If you live in Kansas City, Missouri you may be eligible for curbside recycling KC Recycles, which picks up both paper and plastic. For more information on recycling in the greater Kansas City area visit recyclespot.org.

Week 8

Eat one less meal per week.

Average household reduction of CO2 emissions: 1,040 pounds a year

Why: Meat is the most energy-intensive form of food because livestock use most of the energy and protein value of their feed through digestion and bodily maintenance. To give you an idea it takes 25 gallons of water to produce a pound of wheat. On the other hand it takes 2,500 pound of water to produce a pound of meat. Lack of water is now the greatest single threat to farms, making it vital to develop food production systems that use less water. A reduced dependence on meat one of the simplest ways to increase the ratio of food produced to water consumed.

How: Ask your vegetarian or vegan friends for recipe suggestions or search online, where you can find thousands of meat-free recipes for free! Choose the ones that sounds the best to you and start eating one meat-free meal each week. Eating your meat-free meal on the same day each week will help you remember to keep up the habit.

Week 9

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.

Week 10

Cut your gasoline use by one quarter

Why: On average, a passenger car emits 11,400 pounds of CO₂ every year – almost one pound of CO₂ per gallon! Cars and light trucks are the top sources of emissions from transportation. In the U.S. all transportation emissions account for an entire third of total national greenhouse gas (GHG) emissions. The good news is that if people driving every day has a major impact, people choosing not to drive will also have a major impact.

How: First, determine your current gas use. Then, choose the best method of reducing your driving miles and gas consumption. Here are some ideas:

- Work from home (telecommute). Leaving your car at home two days a week will reduce your CO₂ emissions by 1,590 pounds a year!
- Carpool to work from anywhere up to 75 miles outside of downtown Kansas City through the Mid-America Regional Council's RideShare program.
- Use alternative transportation with the Kansas City Area Transportation Authority or The Jo.
- Bike or walk to the local store for errands. Each mile you walk will save about a pound of carbon.

Week 11

What: 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.

Week 12

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 (link to faq). 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.

If you're a renter, get with other residents and ask your landlord to upgrade the insulation in your unit. Be sure to point out the benefits: they will save money in energy costs, help residents be more comfortable and reduce air pollution from power plants.

Week 13

What: Drive Smoothly

Average household reduction of carbon emissions: 2,500 pounds a year

Why:

This is a free way to reduce your gasoline use and money spent at the pump while reducing the greenhouse gas (GHG) emissions of your car or truck, which make up one third of all American GHG emissions.

How:

Drive as if you have no breaks – that means no sudden stops and starts. Accelerate gently and read the road ahead to avoid unnecessary braking. Write yourself a small note on the steering wheel or dashboard to remind yourself.

Week 14

What: Use alternative transportation or carpool 2 days a week, especially on Ozone Alert days
Average household reduction of carbon emissions: 4,000 pounds a year

Why: Ozone, or smog, is a serious health risk for Kansas City residents. In the summer of 2007, Kansas City air quality broke EPA regulations several times. One of the simplest ways to reduce this ground-level pollution is to carpool or use alternative transportation. This will also reduce your carbon emissions, making it a choice beneficial to both local and global health.

How:

If you don't know anyone going your way, find carpooling buddies through Mid-America Regional Council's RideShare program. Find out more at MARC.org. If you would rather take the bus, check with the Kansas City Alternative Transit Authority or The Jo for route information.