

DO A LITTLE. CHANGE A LOT
A Biographical Sketch on Energy

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“DO A LITTLE, CHANGE A LOT” is a program¹ to guide citizens of Northern Scotland in their efforts to reduce an individual’s or a family’s carbon footprint. An individual’s carbon footprint is defined as the amount of carbon a person generates per year through daily activities such as dishwashing, doing laundry, showering, maintaining a comfortable indoor temperature and driving. This paper will cover what my family has done personally as we strive toward a carbon neutral status.

Climate change is arguably the single, most important crisis in human history and will impact every living thing on earth. Efforts to positively alter this life-changing phenomenon must be worldwide and it would seem that those countries that have caused most of the problem should take initial responsibility for solving it. This is where you and I come in. Since Americans generate from 25 to 28% of the world’s greenhouse gas emissions, but we comprise less than 5% of the world’s population, the most effective thing we can do is to lobby our elected officials to establish the laws that are essential to reduce these emissions. This will require improved efficiency and conservation in the use of energy and a reduced dependence on fossil fuels (coal, oil and natural gas). Every elected official and/or candidate at every level of government must have a realistic plan to slow and, ultimately, stop climate change. We as voting citizens MUST demand no less!

What can we do as individuals to reduce emissions in our daily lives? You’ll be surprised how simple it is to reduce your carbon footprint. There are innumerable lists of carbon reducing actions available to you. The most helpful, user-friendly resources are:

www.seattle.gov/climate/getinvolvedHome.htm

www.rmi.org/sitepages/pid331.php

www.rmi.org/sitepages/pid341.php

www.epa.gov/climate

Hayes, Denis. The Official Earth Day Guide to Planet Repair, Island Press, Washington, D.C., 2000, pp 89-91.

Flannery, Tim. The Weather Makers: How Man Is Changing the Climate and What It Means for Life on Earth, Atlantic Monthly Press, New York, 2005, pp 302-306, 316.

When our home was built in the 1970s several energy conservation measures were included in the construction. All heating ducts and hot water pipes were wrapped with insulation. The hot

¹ www.dochange.net

water heater was also wrapped (newer, energy efficient models are well insulated and do not require wrapping) and the attic was well insulated.

Beginning with our outdoor projects, composting both yard^{2 3} and kitchen waste⁴ is an efficient way to reduce trash and recycling while creating a great water-conserving mulch and a natural fertilizer from worm castings. If you have neither the space nor inclination for composting, then consider grass cycling with a mulching, electric lawn mower (less air and noise pollution). We use no toxic chemicals on the lawn or garden—no herbicides or pesticides. In addition to being toxic to air and water, such chemicals require energy to produce. Some water conservation has been achieved with soaker hoses in the garden and flowerbeds. We built a water collection system of six fifty-gallon pickle barrels that catch the water runoff from our storage shed. This extra water is most useful during our driest summer months. We also chip pruned tree limbs and storm debris to use as mulch around trees, shrubs and flowerbeds. We have added a number of trees (both native and ornamental) to our landscape, but we need to select more native plants because they require much less water and fertilizer.

Part of the “Reduce, Reuse, Recycle” mantra includes being a smart shopper. Think of how irritated you become when you buy a tiny item and have difficulty removing it from a large, mostly plastic wrapper. These are products to avoid whenever possible. It takes oil to produce plastic, more energy to manufacture the package and excessive landfill space when discarded. Look for a similar item wrapped in an efficient package, defined as just big enough to hold the product. If consumers avoid the poorly packaged items, the reduced sales may communicate to the producer that this product is unacceptable. Another aspect of smart shopping is to buy locally grown or produced products. Transportation is a huge contributor to climate change. To date our legislators are not enthusiastic about making the changes that are essential to improve our transportation system. Rail transport and mass transit are two important alternatives to our obsession with cars, trucks and roadways, but it is going to take major effort from all of us to overcome the power/money of the oil, auto and trucking industries. If you purchase or grow fruits and vegetables locally in season, you reduce the need for the long hauls by polluting trucks and airplanes.⁵ Our garden is a tremendous help with fresh vegetables and berries now and frozen for use through the winter months.

We have owned two hybrid autos over the past seven plus years and currently have one. We highly recommend hybrid vehicles that provide excellent gas mileage. Many hybrids are being

² Backyard Composting, Your Complete Guide to Recycling Yard Clippings. Harmonious Press, Ojai, CA, 1992.

³ Martin, Deborah L. and Gershuny, Grace, Editors, The Rodale Book of COMPOSTING. Rodale Press, Emmaus, PA. 1992.

⁴ Appelhof, Mary, WORMS Eat My Garbage, 2nd Ed., Flower Press, Kalamazoo, Michigan, 1997.

⁵ Kingsolver, Barbara, Animal, Vegetable, Miracle -A Year of Food Life. Harper Collins Publishers, New York, NY, 2007.

developed with big engines now, but they defeat the goal of fuel efficiency. With the exception of the bus system in the metropolitan area, mass transit is just being developed in our region; therefore, residents of smaller towns have few alternatives to driving at this time other than car or vanpools. Walking or cycling serves well for short trips and light loads.

Over the past twelve to fifteen years the following are changes we have made in our home. We replaced the bulbs in our frequently used light fixtures with compact florescent bulbs and we added double-paned windows throughout the house. During the same time frame, as appliances wore out, these were replaced with the most energy efficient/Energy Star type available. We decided against the icemaker and water dispenser when we replaced the refrigerator to help conserve energy. Although the energy efficient appliances are more expensive initially, our energy bill is lower and it is not uncommon to receive rebates for many of these purchases. For instance, tax credits were available for both hybrid cars and a rebate was offered for our front-loading washer.⁶ Water conservation and a lower water bill are other benefits of the front-loading washer. Most of our laundry is hung outdoors during the summer months. This not only saves energy but also adds the wonderful outdoor aroma to the freshly washed clothing. Recently we replaced a wood-burning fireplace with a gas fireplace. When we had to replace our gas furnace, we purchased the most energy efficient with an automatic thermostat so that lowering our night setting to 58 degrees is done automatically. We also turn the temperature down when away for several hours or on a trip. During the winter our daytime setting is 67 to 68 degrees accompanied by a fleece jacket or wool sweater. Living in a more temperate climate allows us to use screened windows rather than air conditioning during the summer months. The numerous trees that surround our home help provide a comfortable temperature. We have added foam backing to our electrical outlets on outside walls, but we have many heat conserving measures still to be completed.

Our power company (electric and gas) and numerous other energy companies across the nation will provide rebates for many energy saving measures within the home. You can save from \$50 to \$500 depending on the appliance that you are purchasing. We plan to have an energy audit by a contractor recommended by the power company and, we will gradually institute the recommendations as we can afford them. The power company's recently instituted Gas Weatherization Program provides up to 50% rebate for: floor, attic, wall and duct insulation and duct sealing. Finally, the same company has a Green Power Program in which a customer can invest in clean, renewable energy by purchasing "green tags" at \$2.00 per tag.⁷ This contribution to clean energy is made a part of our monthly energy bill. There are a number of similar services available across the United States. One example is the Center for Resource Solutions.⁸ In February 2002 we began the Green Power Program with monthly purchases of 6 green tags and two years ago we increased that to 10 green tags as a method to offset the carbon emissions that we produce. In calculating our carbon footprint which includes two cross country

⁶ www.energytaxincentives.org/

⁷ www.greentagsusa.org/GreenTags/index.cfm

⁸ www.green-e.org/base/re-products?cust=r

air trips per year, one source ⁹ indicated that we had become carbon neutral with the \$20.00 per month that we contribute to clean energy, but the Green Tags calculator ¹⁰ indicated that we are offsetting less than half of our carbon with this contribution. This disparity is caused by the differing costs of projects used by the companies to offset the carbon emissions. Since I believe that the higher estimates are more realistic, we obviously have a way to go to become carbon neutral. Carbon neutrality is achieved through reducing energy used plus offsetting the carbon emissions that we still generate with projects such as planting trees, constructing “green” buildings, and increasing sources and supplies of alternative, clean energy. Common examples of clean energy are wind, solar and biomass. Since 1991 we have reduced our electric usage by more than 2,500 kilowatt hours per year (3 average months worth) and our natural gas usage by 279 therms ¹¹ per year (2 to 3 average months worth).

I hope that sharing these experiences as we attempt to reduce the amount of carbon we emit will be helpful to you. Many of you may well be doing far more or have found methods to better accomplish the goal of carbon neutrality. For those of you who are just getting started, your timing is excellent because manufacturers are creating more efficient appliances and the choices available to you are increasing exponentially. If you are in the market for a new home, this is the perfect time. Look into the Energy Star/ Green Homes ¹² that are gaining popularity. For the rest of you, check out the web sites or books listed above for the many ways to reduce your energy use; or, if you don’t have access to a computer, contact your energy company to request a similar list or go to your local library. Other ideas for saving energy and money can be found in the “Consumer Guide to Home Energy Savings,” available from local bookstores, amazon.com ¹³ or online. ¹⁴ Our very best wishes to you and your family in your efforts to reduce your carbon footprint!

⁹ www.carboncounter.org/offset-your-emissions/personal-calculator.aspx

¹⁰ www/greentagsusa.org/greentags/calculator_offset_now.cfm

¹¹ A Therm is a unit equivalent to 100,000 British Thermal Units (BTUs), used as a basis of charges for gas supplied.

¹² www.energystar.gov/index.cfm?c=new_homes.hm_earn_star

¹³ Consumer Guide to Home Energy Savings: All New Listings of the Most Efficient Products You Can Buy (paperback). At: <http://www.amazon.com/Consumer-Guide-Home-Energy-Savings/dp/0918249465>

¹⁴ Consumer Council for an Energy Efficient Economy, Consumer Guide to Home Energy Savings: Condensed Online Version. At: <http://aceee.org/consumerguide>