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Live Green!

30 things we can all do to fight climate change

By Jim Paterson

So was it the days in January when it was 65 degrees? Or the polar ice caps melting and endangering the polar bears? Perhaps it was that guy down the street with the hybrid car and solar panels who finally got your attention with his rant about global warming.

Whatever the reason, more and more people in the Bethesda area are becoming concerned that climate change is happening faster and with more severe consequences than previously imagined. And more and more people want to do something about it. The question is what can be done to diminish your carbon footprint—or the amount of carbon dioxide you create directly or indirectly.

The good news is that, even without running for elected office or starting a wind energy company, there is plenty that individuals can do to live greener lives. And for the most part, these things can be done without fundamentally changing how we live. More than anything, it takes awareness, vigilance and changing long-standing habits.

Here are 30 ways in which you can use less energy and water, and create less waste and pollution.

By doing so, you'll set a great example for your kids and neighbors, probably save money in the long run, and do your part to fight global warming and save precious natural resources.

Energy conservation

It isn't as public as a Prius or as sexy as a solar cooker, but just using less energy is huge.

Our electricity generally comes from dirty power plants, which create about 40 percent of our CO₂ emissions and use huge amounts of water for cooling. The EPA reports that Pepco gets about 40 percent of its power from nuclear power plants (not great either) and 45 percent from coal (the dirtiest), and has higher-than-average emissions of sulfur dioxide but slightly lower than average emissions of carbon dioxide (CO₂), which is a major contributor to global

Bethesda

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warming ([Web site](#)). The National Resources Defense Council (NRDC) also ranks all power companies on their [Web site](#).

According to the [Alliance to Save Energy \(ASE\)](#), the average American household, through its use of electricity and natural gas, produces about 22,000 pounds of greenhouse gasses a year. Given the average size of homes in the Bethesda area, it's safe to say that most produce more than 22,000 pounds.

That's the bad news. The good news is without too much effort you can trim that by 25 percent, Jeff Harris, ASE vice president for programs, says. Since 20 percent of the CO₂ we're creating comes from energy use in the home, clearly resizing your footprint here will help ([Web site](#)). Here's how to do it:

- 1. Get comfortable.**

Remember Jimmy Carter in that sweater? He lost the election, but he was right. Heating and cooling account for almost 75 percent of your home energy consumption, and just setting your thermostat one degree lower in the winter and higher in the summer saves 5 percent. You can probably be comfortable with a four-degree shift, or a 20 percent savings.

- 2. Find other ways to cut heating use.**

Insulation and leak sealing can save 20 percent of your comfort costs, a programmable thermostat, 6 percent, efficient new systems, more than 10 percent. Don't heat or cool unused rooms, don't move the thermostat wildly up down, and think about new, much more efficient windows.

Choose a few of these things and without much effort you can reduce your impact by nearly 25 percent. Seems like a good place to start.

- 3. Getting into hot water.**

That old hot water tank is a huge energy user—because it continually idles along and because we are obsessed with cleaning things and tend to be wasteful with hot water. So, we waste energy and water in one turn of the faucet handle.

Hot water heaters are responsible for 15 percent of our energy use, or as much as 5,000 lbs of CO₂ annually, and you can buy an efficient tank (for from \$300 to \$400, plus a tax credit) that cuts energy use in half ([Web site](#)). You can also insulate the heater and the pipes and set the temperature of the tank down to 120 degrees, saving another 3 percent to 5 percent in total energy costs for each 10-degree reduction ([Web site](#)).

- 4. The turn-off.**

More importantly, you can just use less hot water: Don't let the shower run, don't let the faucet run, and wash or rinse anything you can—especially clothes—in cold water. You can find ways throughout your day to cut hot water use, possibly in half, which, with an efficient tank and insulation, could reduce overall energy use and emissions you are creating by 10 percent.

5. **Cold hard facts.**

So what is the other appliance that is on all the time and is the No. 4 big energy user? Yep, the refrigerator, which produces 10 percent of your total emissions. Buying an efficient one can cut energy use as much as half, but don't plug the old one in downstairs. It more than doubles your energy use for refrigeration because that old one is probably inefficient. There are logical things to do about refrigeration (don't set it too cold and don't leave the door open) but the biggest thing is to get an Energy Star model.

6. **Those little lights.**

All those things that have lights on at night and are not really doing anything account for more than 5 percent of your energy use, according to the Lawrence Berkeley National Laboratory. From the cordless screwdriver or cordless phone to the television, this stuff probably uses more power while off in a year than on. Unplug them or put them on a power strip you can turn off easily, especially if you are away, and look for Energy Star models that use less "phantom power." When you leave your computer on in active mode, it needs about the same amount of power as a light bulb, creating 630 pounds of CO₂ annually. (And, by the way, experts say it is a myth that you damage your computer by turning it off and on.)

7. **And the other lights.**

Lighting is 10 percent of your electric consumption and there is a simple way you can cut it in half. Compact fluorescent bulbs are almost as good as a regular bulb these days (which devotes 90 percent of its energy use to heat) and use about one-third of the power. And now there is new LED (light-emitting diode) lighting, using the technology you see in the clock on your DVD player and apparently offering plenty of light (see [the Go Filament Free! Web site](#)). Home Depot has an LED bulb that you can have on for 12 hours a day costing you 80 cents per year, although initially they cost \$39. Efficiency is similar to compact fluorescents, but prototypes are in the works that will drop energy usage much further. **Brand new LEC (light-emitting capacitor) technology offers efficient flat panels of light in all sizes—and was voted one of *Time* magazine's best inventions last year.**

Turning lights off, using dimmers, using sunlight and reducing the wattage of bulbs also can help cut that lighting bill in half too.

8. **Buy the right thing.**

Energy Star products have been ranked by the federal government as meeting certain efficiency standards—and they can result in a 10 percent to 50 percent savings in energy use ([Web site](#)). They range from big users such as dryers and hot water heaters to light bulbs, ceiling fans and exit signs.

9. **Get a checkup.**

You can have a professional do an energy audit ([Web site](#)) or try one online through Pepco ([Web site](#)) or at <http://hes.lbl.gov/>. And you can use online calculators to see how much energy each appliance or gadget uses with a calculator like the one on the [EPA Web site](#).

Behind the Wheel

The average car gets around 20 miles to the gallon and, according to the EPA, produces 11,500 pounds of greenhouse gases a year. But it doesn't have to be that way.

10. **Get a hybrid.**

Hybrid vehicles use both gasoline and electricity as fuel—and they use less gas and produce many fewer greenhouse gases. For example, the Toyota Prius, the most popular hybrid, gets between 50 and 60 miles to the gallon, using about one-third of the gasoline of the average car and cutting emissions by the same amount. Five more miles to the gallon means saving 17 tons of greenhouse gases over the lifetime of the vehicle, according to the Alliance to Save Energy.

11. **Use your current car more efficiently.**

Don't let your car idle unnecessarily; get regular tune-ups, which can cut gas consumption by 4 percent; properly inflate your tires (3 percent); avoid speeding (from 7 percent to 23 percent). Simply replacing a faulty oxygen sensor can improve your mileage by as much as 40 percent.

Making energy

There are two other ways to help make sure the energy you use has a smaller effect on the environment—by making your own or buying green energy.

12. **In the sun.**

Solar generation will cost you \$25,000 for a system that provides one-third of your power and is tied to the grid (so you can sell power back), according to Neville Williams, founder of [Standard Solar in Gaithersburg](#), which specializes in residential solar systems. But you'll get a \$2,000 tax credit, an increase in home value that he estimates at \$15,000 on average, and stable price for that energy while other energy prices soar. A solar system that just heats hot water (remember that energy hog) costs about \$10,000, although there are rebates and tax credits. The system will take care of about 75 percent of water heating needs, but an "on demand" water heater will also be necessary.

13. **Buy green.**

There is an easier way to get green energy—by making sure it is put on the grid. It doesn't mean that you'll directly be getting power generated from a windmill or huge solar array, but buying green power or green power credits guarantees that the portion of the electricity coming to you has to be generated from a green source. A new Bethesda-based company, [Clean Currents](#), helps consumers and businesses purchase clean energy.

On Jan. 1, 2007, Montgomery County began offering a credit of one

cent per kilowatt-hour (buying green power typically will cost you an additional two to three cents per kilowatt or \$10 on a \$200 electric bill). The county's Clean Energy Network program also connects you with and allows you to compare products from vendors, including Clean Currents, who have been screened and will connect you with clean energy suppliers nearby ([Web site](#)).

Food

Seventeen percent of the energy we use goes to producing our food, which creates three-quarters of a ton of CO₂ per person per year. So, think about eating carefully and less, which is healthy for the planet and you.

14. **Buy organic.**

Organic stuff uses fewer chemicals, and big agriculture is a huge contributor to environmental woes.

15. **Buy local.**

Shopping at local markets for organic food reduces energy use because local stores frequently buy locally as well—meaning items don't have to be shipped as far.

16. **Grow stuff.**

On the family farm, as Wendell Berry once put it, the crops fed the animals and the animals fed the crops. But now we feed the crops with fertilizer, and the pollution from the animals plagues us, most notably with some of the recent E. coli outbreaks but also in our water and air. It is always a problem for the Chesapeake Bay. Your own garden allows you to buy less—even if it is a garden in pots on a deck.

17. **Eat less beef.**

Huge amounts of land are used for pasture, and estimates suggest that the grain a beef cow eats could feed 10 people; the corn they gobble up (25 pounds a day) is grown with fertilizer that uses 1.2 gallons of oil per bushel of corn to produce ([Web site](#)). The waste from cattle (130 times what a human produces—most of it untreated, with huge manure lagoons potentially spilling, leaking or overflowing ... 1,000 such incidents nationally in three years) is a major source of water pollution and their ... well, the gas they produce, methane, is a major contributor to global warming. Cow farts worldwide, believe it or not, make up 20 percent of methane we produce. Beef is a very inefficient food ([Web site](#)).

Effluence and Emissions

If there are two images that are burned in our head about environmental damage it is that big pipe spewing horrible colored glop into a pristine river and that array of smokestacks belching yellow haze.

So, what about us? What sorts of thing are we spewing and belching?

Unfortunately, sometimes it's stuff we will hate to give up.

18. The green, green grass of home.

We add some nasty stuff to our water through our lawns ([Web site](#)). The key thing about toxic stuff outside is that it never gets treated. Good old "weed and feed" is not good (www.beyondpesticides.org), especially because we tend to use too much of it (and all pesticides and fertilizers) without testing our lawns or knowing what is needed. Lawn chemicals are highly toxic, and often found downstream. "2,4-D," which is found in most weed-and-feed products, was the most prevalent herbicide detected in streams and ground water from home and garden use in one study by the Natural Resources Defense Council ([Web site](#)).

Where you can, plant ground cover or grass that sustains itself better. Be OK with a green yard and a weed or two, and get some exercise the old-fashioned way by pulling the weeds rather than spraying or sprinkling chemicals on them.

19. The cozy fire.

Yeah, sorry. In two separate studies—in Toronto (where, of course, they are used more often) and in Washington state (with winters more comparable to ours) fireplaces were found to be a substantial part of the air pollution problem ([Web site](#)). Liz Martin, a climate policy specialist at the NRDC, says fireplaces aren't a big part of the global-warming picture, but the Environmental Protection Agency (EPA) says they can create 80 percent of winter-weather pollution and they recommend inserts certified by EPA for fireplaces (which are the least efficient and most polluting) or wood-burning stoves and, sadly, fewer fires.

20. Under your sink and in your basement.

There are now good alternatives for cleaning and painting and clearing your drain that are not as toxic as traditional solvents and cleaners (www.greenfeet.com). Harsh stuff has to be manufactured and often goes into our trash or water—and much of it is harmful to you and your family in ways we may not even know yet. EPA says 50 percent of our illnesses can be traced to indoor pollution ([Web site](#)), often from household products. Look for alternatives to products that have these words on their label: toxic, flammable, caustic, corrosive, caution, danger, warning or poison. There are plenty of options—some of which you can whip up yourself. There is a list of hazards and solutions at the Maryland Department of the Environment [Web site](#), and learn more

about hazardous waste disposal—another part of the problem, [here](#).

21. **What goes down the drain.**

Washington Suburban Sanitary Commission (WSSC) spokesperson Dawn Forsythe says that homeowners should be careful about materials they use and dump into the sewer system. "People need to err on the side of caution—I've heard some experts advise that the only manufactured product that should be put into the sewer system is toilet paper. Part of the problem is that there are things we don't know." She also acknowledged the problem of system leaks and spills before sewage is treated, which happen frequently (check the [WSSC Web site](#) for the surprising numbers). She also pointed out that the European Parliament just passed a strict new law regulating some 30,000 toxic substances and banning 1,500. The best idea, avoid toxic stuff when you can and dispose of it properly.

22. **The little engines that shouldn't.**

Small motors are big polluters, especially if they are two-stroke, which usually means they make a lot of noise and you mix oil with the gas. Snow blowers, trimmers and leaf blowers, jet skis and small outboard boat engines are the worst (and are typically two-cycle). You may not use them for as long or as often, but they emit as much pollution in one hour as nearly 100 cars for the same amount of time and they contribute to noise pollution. Several cities, including Los Angeles, have banned leaf blowers. The Union of Concerned Scientists says even the average lawn mower emits as much pollution in one hour as eight new cars ([Web site](#)). Four-cycle engines are best. And a snow shovel, a rake, a broom or hand trimmers helps you and the environment and can cut trips to that energy-sucking gym.

Recycle and reuse

The good news is that this is a battle we are winning, especially in Montgomery County, where we now recycle about 42 percent of the 1.26 million tons of waste we generate, up from 36 percent in 2000 and well on the way to the 50 percent goal for 2010, according to Adam Pultyniewicz, recycling coordinator for Montgomery County. And throughout the country we recycled 72 million tons of stuff in 2003, compared to 34 million in 1990. We're pretty good at it (sources: [1](#) and [2](#)).

23. **So, keep it up.**

The EPA says that by recycling paper, plastic, glass and aluminum, an average household is saving 425 pounds of carbon dioxide a year. Recycling cans, for example, saves 95 percent of the energy used to make new ones, and recycling cut energy use enough to power 9 million homes in 2005 ([source](#)). Energy production causes about half of our greenhouse gases. And here's an image to keep in your head—recycling a stack of newspapers 4 feet high saves a good-sized tree, according to the Sierra Club. Trees, we all know, help clean the air and can reduce temperatures and have a variety of other positive environmental effects.

24. Buy recycled stuff too.

If every household in the U.S. used just one roll of recycled toilet paper, it would save about a half a million trees, according to the NRDC. And buying those products supports the industry that will in turn buy the stuff you are putting in your blue bin, obviously. It all cuts energy use a lot.

25. Resist new paper.

Use two sides of each piece. Don't print things you don't need (e-mail could be an incredibly green technology). Don't ask for copies of things you won't use—from that report at work to that fat catalog that is available online.

26. Keep the outcome in mind when you buy.

Think about the packaging and how much you will have to discard. Packaging makes up 32 percent of what we throw away ([Web site](#)). Buy things in bulk and buy concentrated products. Look for options to purchase things that don't come with a lot of waste ([Web site](#)).

27. Cut your junk mail.

Try the [Direct Marketing Association](#) or the [Center for the New American Dream](#)—or even a group called 41 Pounds, which promises to cut by as much as 95 percent the 41 pounds of junk mail you get annually—for \$41 over five years. Profits, they say, go to environmental and school groups (www.41pounds.org).

28. Reuse containers.

Whether it is bags, bins or water bottles, we create a lot of waste with stuff we store or get things in, often temporarily. Water bottles are huge—they seem green somehow, but we use 1.5 million barrels of oil to make them annually (enough to fuel 100,000 cars), according to the Sierra Club ([Web site](#)), and a lot of energy to haul and dispose of 3 million or so we use every day. The huge companies bottling water are depleting water supplies in some rural areas or harming wetlands, according to the Sierra Club. Use a washable glass or reuse a bottle, within reason.

Even the NRDC says most municipal water is OK and WSSC, which handles treatment of water before and after it comes to us, swears by it, only recommending that baby formula water be boiled ([source](#)). WSSC also points out that standards for bottled water are actually a lot lower. For information about water and products such as test kits and healthy water bottles, visit www.watercheck.biz.

And when it comes to paper or plastic at the grocery store—well they both create environmental headaches and the best option for anything you intend to bring home are reusable bags ([Web site](#)).

29. Recycle your old bathroom.

About 20 percent of our waste is construction material, according to the Association of the Remodeling Industry, which is largely from big construction jobs but can also come from your home project. The EPA says 85 percent of it could be recycled or reused. There are places to

obtain recycled building materials locally ([Web site](#)) and the waste your new bathroom creates can be picked up by the county in some cases ([Web site](#)).

Other Things You Can Do

30. Shop green.

Buy products and services that are green and patronize businesses that are focused on sustainability. Whole Foods in Bethesda, for example, produces a ton of compost a day; My Organic Market in Rockville and the Silver Spring Co-op buy extensively from local farmers, and many Bethesda-area businesses are powered entirely by wind. They include American Plant Food, Gifford's, Grosvenor Market, Hobby Works, My Organic Market, Quartermaine Coffee Roasters, Myer Emco Audio Video, Austin Grill and Black's Restaurant Group. Many national companies are going green as well. Wells Fargo, for instance, recently became the largest corporate purchaser of renewable energy and has an aggressive 10-point environmental plan. Wal-Mart is even making an effort. Check out green businesses at www.greenbiz.com. Greenpeace has ranked the tech companies on their Web site, [here](#). Other organizations worth investigating are [Friends of the Earth](#) and the [Corporate Sunshine Working Group](#).

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