

***“What we do in the next two to three years will determine our future.”***

***“This is the defining challenge of our age.”***

Rajendra Pachauri, scientist/economist who heads the Nobel Peace Prize winning UN Intergovernmental Panel on Climate Change (IPCC), which just finished its last report, and UN Secretary-General Ban Ki-moon.

### **So here are some things we can do**

This is a summary of the many things we can do to reduce our carbon footprint, help reduce global warming, and save money in the process. (Note: “lbs” refers to pounds of carbon dioxide, the primary cause of global warming. All values and costs are approximate.)

**MEASURE YOUR PROGRESS** Measure your carbon footprint before and after implementing energy actions. Go to <http://www.12020.org/index.php?page=what-can-you-do> (click on “Download Carbon Footprint Calculator”). We need to reduce our personal carbon emissions by 2% every year to reach a target of an 80% reduction below 1990 levels of CO<sub>2</sub> emissions by the year 2050. (Goals set by Jefferson County and Port Townsend).

#### **1. For Your Home – so many possibilities!**

- a) **Green Energy** – This is one of the quickest, easiest and the least expensive ways to cut in your carbon footprint. Changing to all Green Power with Puget Sound Energy can reduce your carbon footprint by 2,000 lbs/year or more, especially if you use electricity for heat (PSE energy is approximately 47% “green” and 51% fossil). The change will add \$0.0125/kilowatt hour to your monthly energy bill (about \$10 for a home using 800Kwh/month), but that will be more than offset by the suggestions that follow. Go to [http://www.pse.com/solutions/home\\_greenPower.aspx](http://www.pse.com/solutions/home_greenPower.aspx) for more information.
- b) **Power Down** - Compact fluorescent light bulbs cut emissions by 80 lbs/year for each 5 hours of use/day and you save about \$1.47/bulb/year in electric costs. Turn off lights & appliances when not needed, use power-strip shut offs for computers, stereo, TVs, DVDs, and anything with a transformer plug to eliminate “vampire” loads. Consider motion sensors to turn lights off and on (a Heath/Zenith unit costs \$20 and has a 70 foot range). Clean the condenser coils on your refrigerator at least twice a year (more often if you have pets). Consider LED lights which use very little energy.
- c) **Hot Water** - Turn your hot water heater to 120 degrees & use full hot when showering. Insulate exposed hot water pipes. Install a timer on your water heater so it only works when you need hot water (easiest with electric water heaters & saves 5% to 10% of your hot water energy costs). Consider installing a dielectric heat trap on your water heater to reduce convection heat loss, especially if you have copper water piping. Consider a solar hot water heating system which costs about \$6,000, pays for itself in about 10 years and provides up to 30% (\$2,000 max) in tax credits.
- d) **Washing** – Wash only full loads of dishes & laundry. One washer load less/week: 175 lbs/year. Use cold water to wash clothes and set your dishwasher to air dry. Switching one load/week from hot to cold: 225 lbs/year. Use a clothes line to dry clothes when possible. One dryer load less/week: 200 lbs/year. Clean the lint filter on your clothes dryer before each load. Wash yourself in a 5 minute shower with a low flow shower head (425 lbs/year/person)! Wash clothes only when they are actually dirty (usually clothes can be worn 2 or more times before they actually need washing).
- e) **Heating & Cooling** – Improving your home insulation can save up to 25% on your heating bills and CO<sub>2</sub> emissions from heating. Install a programmable thermostat (a model from RiteTemp costs \$39 and takes less than 30 minutes to install; a more durable model from Honeywell costs \$150). Set your heat as low as possible and close off rooms that are not in use. Reducing the temperature in your house from 70 degrees to 66 (& wearing a sweater!) and to 58 degrees at night or when no one is at home can save 1,400 lbs/year. Close curtains and blinds at night to keep in the heat. Clean or change heating furnace filters at least annually & once each 3 months while in use (350lbs/year plus lower heating costs). If you have an older propane furnace, heater or fireplace, turn the pilot light off when it’s not in use (200lbs/year plus lower heating costs).
- f) **Make Your Own** – Consider installing a photovoltaic energy system to make your own electricity from the sun’s energy (there are more photovoltaic systems in Port Townsend/capita than in the city of Seattle!). A 3 Kilowatt photovoltaic installation hooked into the energy grid costs about \$23,000. By a process called “net metering” you actually sell your extra electricity back to PSE! Check with local contractors Power Trip Energy or Olympic Energy Systems. They also install solar hot water systems. No sales tax on solar power equipment!
- g) **Eat Local** – Food grown in the USA travels 1,500 miles on average, leaving a trail of carbon pollution. Imported food has an even longer carbon trail. Look for the “Local” signs on food at the Co-Op for locally grown food and go to our wonderful Farmer’s Market. Join a CSA (Community Supported Agriculture) group.

- h) **Reduce, reuse, recycle** – If you can reduce the amount of waste produced by your household by 30 gallons/week, you will reduce your carbon emissions by 3,000 lbs/year. A 15 gallon reduction gets you 1,350 lbs/year. How? Bring your own cloth bag when shopping, buy in bulk, buy items with the least packaging, and buy reusable items. Compost whatever you can. Reduce junk mail by writing to: Mail Preference Services, Direct Marketing Assoc, PO Box 9008, Farmington, NY 9008 and request they remove your name & address from all 3<sup>rd</sup> class mailing. You can get the same thing by paying a \$5 fee at [www.DirectMail.com/Junk\\_Mail](http://www.DirectMail.com/Junk_Mail). You can also call the 800 customer service number of all companies now sending you catalogues and request that you be removed from their list, or use their return envelope for the same purpose. Consider having a waste-free holiday by asking friends and family to make a donation to your favorite charity or measuring their own carbon footprint instead of sending you a gift. See <http://www.wastefreeholidays.com/> for more on this.

**2. On The Road** – Transportation is the single largest cause of carbon pollution in the Northwest. You can reduce 10% to 30% of your carbon load by traveling smart.

- a) **Stop driving** - Walk, bike, ride the bus, carpool. Celebrate car-free days! Traveling 200 miles in a 20mpg vehicle = 200 lbs.
- b) **Fly less** – Each mile of air travel is worth 0.5 to 1 lb/person.
- c) **Go electric** – Consider an all-electric vehicle. The Co-Op has a plug for charging and you can use your all-green energy from PSE to charge it at home. Electric cars cost 10% to operate compared to fossil fuel cars. There are 4 different makes running around PT right now!
- d) **Make it efficient** - Keep your car in shape by keeping the tires properly inflated and keeping the engine tuned up.
- e) **Go for low** - If your household has more than one vehicle, use the most fuel efficient for the most occupant miles (an occupant mile is one occupant moved one mile. If there are 2 occupants in a car and it goes 1 mile, that's 2 occupant miles, etc.)
- f) **Drive smart** - Plan your trips for efficiency. What is the shortest route to cover all your errands? For most cars, 45 to 55 mph is the most fuel efficient speed. Get rid of unnecessary weight in your car. Each 100 lbs reduces fuel efficiency by 1%. Turn your engine off if you stop for more than a minute or two while waiting for the kids at school or at a railroad crossing or closed bridge. In combination, these reduce 1,200 lbs/yr.
- g) **Telecommute!**

**3. Buying New Appliances** – Always buy new appliances that have the EPA's Energy Star symbol. See [www.energystar.gov](http://www.energystar.gov) for more information. PSE has rebates for some appliances (see #5).

**4. Remodeling And Home Products** – Many local builders specialize in green home design and construction including: Ann Raab – [www.olympicdesigngroup.com](http://www.olympicdesigngroup.com) ; Chris Stafford – [www.building-green.net](http://www.building-green.net) ; Bruce Glenn – [www.strawbalehomes.com](http://www.strawbalehomes.com) , Kevin Coker at Coker design Works; and Northwest EcoBuilders Guild – [www.ecobuilding.org](http://www.ecobuilding.org) . There are also many web sites to help those who “do-it-your-self” find green products: [www.fscus.org](http://www.fscus.org) lists suppliers of sustainable wood and paper products including Carl's Building Supply in Hadlock and Star Copy and Media Center in PT; [www.environmentalhomecenter.com](http://www.environmentalhomecenter.com) sells all you need for a green home; and [www.rateitgreen.com](http://www.rateitgreen.com) lists and lets visitors rate green products.

**5. Look For Money** – Browse the “Database for State Incentives for Renewable Energy” at [www.dsireusa.org](http://www.dsireusa.org) to see what Washington offers in tax incentives for greening your home. And see the Alliance to Save Energy at [www.ase.org/taxcredits](http://www.ase.org/taxcredits) for a list of products such as windows, insulation and heating systems that can earn you up to \$500 in federal tax credits. Compare your energy costs year to year. If there's a significant increase compared to last year's costs, it's time to find out why. Is a heating duct broken or disconnected? Have air leaks around windows or doors begun because weather stripping has failed? Is the fireplace damper closed when it's not in use? Has the attic insulation been damaged by construction or critters? Has a crack between the foundation and frame of the house opened up? Any of these can be like leaving a window open. A candle or incense stick can help you find air leaks. Weather stripping, caulking, insulation foam, window putty and door “sweeps” are all inexpensive hardware items and easy to install. When you need things for your household, consider buying used items (furniture, kitchen items, etc.) Not only is it less expensive, it also helps us move from a “cradle to grave” cycle in our economy to a “cradle to cradle” cycle of sustainability. Habitat, Salvation Army, Children's Thrift and Wandering Wardrobe are all good sources.