

GLOBAL WARMING

The Ten Most Important Things You Can Do

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The information in this handout is taken from two books by Mick Winter, a writer living in California's Napa Valley.

Sustainable Living: For Home, Neighborhood and Community - www.SustainableLivingBook.com.

Peak Oil Prep – Three Things You Can Do to Prepare for Peak Oil, Climate Change and Economic Collapse (an expanded version of “Sustainable Living”) - www.PeakOilPrep.com

Fight Global Warming – and save money at the same time

You can combat global warming without giving up much, if anything. How? Through the excess and slack built into our system. In fact, by living a more sustainable, less polluting lifestyle, you can even *gain* a lot.

You don't have to live more sustainably for the sake of the planet; you can do it just for yourself, because the less energy you use (whether it's in the form of gasoline, natural gas, electricity, pesticides, fertilizers, hot water, packaged products, or a thousand other items), the more money you save. The more money you save, the less oil and gas that needs to be extracted from the earth, the fewer greenhouse-emitting power plants and refineries that need to be built, and the fewer greenhouse gasses you personally are directly responsible for.

By using less fossil fuel energy and fewer resources, you'll save money. Potentially lots of money. And, as a bonus and without any sacrifice, you'll be helping the planet and the environment as well, doing everything that you personally can to combat global warming. Not a bad deal, eh?

1 Replace Light Bulbs

The most important and effective energy-saving and money-saving thing you can do in your home or office is to replace incandescent light bulbs with compact fluorescent light bulbs.

Compact fluorescent (CF) bulbs use 66-75% less electricity to produce the same amount of light as an incandescent bulb, and they last 8-15 times as long. Replace a 100-watt incandescent bulb with a 32-watt CF bulb (which provides the same amount of light), and you can save at least \$32 over the life of the bulb. Replace 10 bulbs in your home, and that's a savings of more than \$300. A bulb can pay for itself with normal use in just five months.

It's estimated that if every U.S. household replaced just one 60-watt incandescent light bulb with a CF bulb, the pollution reduction would be equivalent to removing one million cars from the road. Think how it would be if we replaced *all* of our bulbs.

Remember "**Watt Four**"—CF bulbs use about $\frac{1}{4}$ of the wattage as do incandescent bulbs to produce the same amount of light. So as a rule of thumb, replace an old incandescent bulb with a CF bulb of about $\frac{1}{4}$ the wattage, i.e. replace a 60-watt with a 15-watt.

2 Drive Less—or not at all

By making fewer trips in your car—or none at all—you'll

- ◆ Help reduce air pollution
- ◆ Save fossil fuels
- ◆ Save money
- ◆ Improve your health (if you walk or bike instead)

If you can't *not drive*, at least drive your car *less*. You can

- ◆ Combine trips. Wait to combine a number of errands into one trip
- ◆ Telecommute at least once a week
- ◆ Carpool or use public transit whenever possible
- ◆ Share errands with neighbors

Walk

There are many benefits to walking. The physical exercise from moving your body will increase your blood flow, strengthen all the muscles in your body, loosen your joints, improve your breathing, help you lose weight over time, and increase your appetite, yet help you be satisfied with lower food intake.

Your mental outlook will improve and emotionally

you'll feel more positive. You'll also be able to get outdoors, see your neighbors and the neighborhood, enjoy nature, reduce auto pollution, save money on gas, and feel the pleasure of being outside in the air. And it's all free.

Ride a Bike

Bicycles are one of the great inventions of the world. As John Ryan's book *Seven Wonders: Everyday Things for a Healthier Planet* says:

“The Bicycle: The most energy efficient form of travel ever invented and the world's most popular transport vehicle”.

Pound for pound, a person on a bicycle expends less energy than any creature or machine covering the same distance. A bike is always handy for the one out of four car trips in the United States that are less than a mile. And it's healthy and fun.

Carpool

Carpool to work, or even on errands, whenever possible. Talk to co-workers about sharing driving and see if your company has a policy of subsidizing carpooling, since it requires fewer parking spaces in the company parking lot.

Most municipalities and transit agencies can give you information about carpool networks, where you can

find people going to the same area in which you work.

eRideShare.com
www.erideshare.com

Use Public Transit

Use local busses, subways, trolleys, trams, trains or whatever is available. If the system could be better, lobby city hall to make it better.

Car Share

Some communities now offer *car sharing*, where you have use of a car whenever you need it, but you don't have to maintain it.

With car sharing, you pay for a car, van or truck only when you use it. Cars are available 24 hours a day, and you can reserve by phone or Internet. You never pay for repairs, insurance or monthly parking.

CarSharing Network
www.carsharing.net

Electric/Gas Scooters

Scooters aren't just fun; they're inexpensive transportation. They get great mileage, using very little fossil fuel. A gallon of gas can take you 50 miles or

more. Most new scooters will cost you anywhere from \$800 to \$4,000.

Motor Scooters
www.motorscooters.com

Electric Bikes
www.electric-bikes.com

Buy Carbon Offsets

Carbon offsets are environmentally beneficial actions that balance out the harm we cause by emitting carbon dioxide (CO₂) by travel, or other actions. The offsets are usually tree-planting or renewable energy.

Various websites let you buy “offsets” after calculating how much CO₂ you have to balance out to become “carbon neutral”. For example, your “share” of an airline flight from San Francisco to New York is estimated to be as much as 1,000 pounds of CO₂.

Carbonfund.org
www.carbonfund.org

Native Energy
www.nativeenergy.com

TerraPass
www.terrapass.com

Sell Your Car

Selling your car and using all other forms of transportation (foot, bike, bus, train) could be the best move you could make. You'll stop polluting the atmosphere, you'll save large amounts of money (gas, repairs and maintenance, insurance), you'll probably get more exercise, and you'll be able to enjoy life at a slower-pace, paying more attention to your surroundings and its inhabitants.

The U.S. Department of Labor says that car costs are the second highest expense for the average U.S. household, about 17% of expenses. That's almost the same as food and health care combined.

If you absolutely need your car to get to work, why not change jobs? Or move to a location that doesn't require a car to get to work?

The Real Costs of Car Ownership
www.bikesatwork.com/carfree/cost-of-car-ownership.html

3

Groom Your Car

Improve Your Fuel Efficiency

If you have to have your own car, there are many things you can do to get better fuel efficiency.

- Use your car's air conditioner as little as possible. Air conditioners can decrease your mileage as much as 20%.
- Drive at a steady speed. Speeding up and slowing down greatly increases fuel usage.
- Drive at moderate speeds. Most cars get their best mileage somewhere around 50-55 miles per hour.
- Keep your car in the best possible condition with regular tune-ups, and you'll get the best possible mileage. A badly maintained engine can use as much as 50% more fuel and produce 50% more pollution.
- It's better to turn off your car than to let it idle for a long period of time. More than 10 seconds of idling uses more gas than you'll use to restart.
- Most cars these days don't need a long warm-

up time. Start driving slowly as soon as you can. The car will warm up along the way.

- Measure your tire pressure monthly. Keep the tires at the proper level and you'll get better gas mileage and a smoother ride.
- Replacing a clogged air filter can improve your car's gas mileage by as much as 10 percent.

Fuel Economy
www.fueleconomy.gov

Buy a Fuel-Efficient Car

If you absolutely have to buy a car, go for the most fuel-efficient car you can find. Currently, hybrids (electric/gas) are at the top of the fuel-efficiency charts. We suggest the likelihood that a hybrid or other high-mileage car will have a high resale value; in fact, once people start realizing how high gas prices can go, your hybrid could appreciate in value far beyond what you paid for it.

Hybrid Cards
www.hybridcars.com

4 Buy Local

Locally owned businesses help the local economy. Chain stores don't. A study done in Chicago found:

- ◆ For every \$100 in consumer spending with a local firm, \$68 remains in the Chicago economy vs. \$43 for spending at a chain store.
- ◆ For every square foot occupied by a local firm, the local economy benefits by \$179 vs. \$105 for a chain store

Shop at Locally Owned Businesses

Buy everything, including food, from locally-owned businesses. Even better, whenever possible buy not just from local businesses but from local *producers* (farmers, craftsmen, manufacturers).

The more food, goods and services that are produced within your community, the more you can depend on those things continuing to be produced. Because they will require little or no transport, they will be much less dependent on oil supplies, except for that needed in their production.

Support Local Farmers

Local farmers are a community treasure. Do everything

you can to support them. Buy their produce at your local farmers' market. (If you don't have one, help start one.) Many local farms offers weekly delivery (or pickup) of food baskets. You can sign up for their service, paying monthly or quarterly. Community Supported Agriculture (CSA) can include paying for regular food baskets or actually investing in the farm.

Local Harvest
www.localharvest.org

Eat Organic - but choose local *non-organic* over distantly grown organic

Organic foods are not only chemical-free but higher in vitamins and minerals as well since the land they're grown on is almost always healthier than the soil used for mass-produced crops and livestock. Plus, since they don't use pesticides and fertilizers made from petroleum and natural gas, they lessen the release of greenhouse gasses into the atmosphere.

However, these days many of our organic foods are imported from as far away as South America or Asia. Supermarket foods can travel an average of 1,200-1,500 miles before they reach your plate, using energy and resulting in increased air pollution. Buy food that is locally produced and in season, and you help reduce

that energy requirement. Local farms are a valuable resource; your support helps to keep them alive. You also give yourself the pleasure—and health—of being able to eat very fresh, nutritious foods.

100 Mile Diet
www.100milediet.org

5 Plant Trees

Trees absorb carbon dioxide and produce oxygen. They also lead to lower air temperature, provide shade and shelter, cut down noise pollution, improve water quality, and stabilize soil. That's a lot more than we humans do. The least we can do is plant more trees.

A single tree can remove as much as 25 pounds of carbon dioxide a year. If one out of every two Americans planted one tree by their home or business, we could save \$4 billion in energy costs and reduce carbon dioxide emissions by 18 million tons a year. The shade from three trees around your home could reduce your air-conditioning needs up to 50%.

When you're planting trees, consider fruit and nut trees. If they're appropriate for your tree location, you

might as well get food as well as shade.

Tree People
www.treepeople.org

6 Start a Garden

Home Garden

When you grow your own food, you know exactly how it has been grown. If you wish, you can grow organically, using non-hybrid "heirloom" seeds, assuring that you get the healthiest, tastiest and most nutritious food possible.

No matter how small your living space, you can still grow some of your own food, even if it's just sprouts, herbs, or a couple of tomato plants. A garden in your yard can be as small or large as you wish and have space for. A 4'x4' area can produce a lot of food, particularly if you do "intensive" gardening.

There are many different methods, styles, techniques, and theories of gardening. We suggest you visit your local nursery and ask their advice. They know the soil and climate in your area. You can also check with your

local gardening clubs or, if you live in the United States, your local agricultural advisor or Master Gardeners branch.

Square Foot Gardening
www.squarefootgardening.com

Organic Gardening
www.organic-gardening.net

Master Gardeners
www.ahs.org/master_gardeners

National Gardening Association
www.garden.org

Community Garden

Neighborhood gardens (also called “community gardens” or “urban gardens”) are shared plots within an urban or neighborhood setting. Gardeners share tools, knowledge and labor to produce food for themselves and others. There are an estimated 18,000 community gardens throughout Canada and the United States.

To find an existing community garden, check with your city parks department or your county or local state agricultural advisor. If that doesn't work, try the local school district. If that doesn't work, start one yourself.

7 Use Less Energy

More than half of the energy used in the average home is for heating and cooling. Remember that your goal doesn't have to be to heat or cool the entire home; it's simply to heat the *people* in it.

Summer

There are a number of ways to keep your home cooler —without the cost and energy use of air conditioning.

- Close drapes, curtains, blinds and windows on hot days. At night, open them up to let the cool air in.
- Use ceiling fans instead of air conditioning. Fans don't actually lower the temperature of the air in the room, they lower the *perceived* temperature because they increase the evaporation of moisture on your skin. Since they cool *you* and not the air, turn them off

- when no one's in the room.
- Shade your home and windows with trees, deciduous plants and/or awnings.
 - If you must use air conditioning, set your thermostat no lower than 77° F when you're at home, 85° F when you're away from home. 77° F gives you the most comfort at the least cost.
 - Turn off your furnace pilot light during the warm season.

Winter

- Dress warmly to deal with the cold; putting on a sweater is cheaper than raising the thermostat.
- Radiant heaters use much less energy because they heat people, not the air in the room.
- Keep your thermostat set no higher than 68° F. during the day. Set the thermostat to 55° F. before going to bed at night.
- Replace/clean your furnace filter regularly to make it more effective and save energy.
- On sunny days in the winter, keep the drapes open on south-facing windows to let the sun shine in. At night, close the drapes to retain indoor heat.
- During the winter, set your ceiling fan to run

clockwise at low speed. This produces a gentle updraft, which forces warm air near the ceiling down into the occupied space.

- Stay warm at night by wearing a nightcap, since we lose most of our heat through our head and neck. Socks or other comfortable foot coverings will keep your feet warm.
- Insulate your home against heat loss and periodically check the insulation.
- Weather-strip and caulk to minimize air leaks.

Power

- Turn off lights when you don't need them. The act of turning a light on uses very little electricity. It really does save electricity and money to turn them off.
- Disconnect all electrical items when not in use because many appliances consume electricity when they're turned off but still plugged in.
- Since a water heater uses more energy than any other device in the home, keep its temperature set at 120°, which is still hot enough for showers, dish washing, and clothes washing. Even better, install a tankless device that heats water on-demand.

- Get up earlier and go to bed earlier. Natural light saves energy and is easier on your eyes.
- Turn your computer off when you're not using it, particular a CRT monitor, which uses more than half of the system's energy.
- A laptop computer uses up to 90% less energy than a desktop computer.
- Don't preheat your oven. It's necessary only for baking.
- Turn off the stove burners 2-3 minutes (and the oven 10 minutes) before the end of cooking time. The food will continue to cook and you'll save money.
- Electric kettles use much less energy than a stove burner when heating water.
- Use small appliances such as toaster ovens or microwaves to cook or re-heat small amounts of food. They'll use up to 50% less energy than your oven.
- Your refrigerator uses more energy than any other home appliance. Keep your refrigerator coils clean (at least every year and preferably every six months), don't keep the refrigerator jam packed with food (although this helps the freezer), and keep the refrigerator set between

37°-42° F. and the freezer between 0° and 5° F.

- Water boils faster if there's a lid on the pan. Once it's boiling, turn it down to a light boil instead of a rolling boil. The temperature will be just as hot.
- Thaw frozen foods before cooking; they'll need less energy to cook.
- Food cooks faster in glass dishes than metal ones.
- Use a clothesline instead of a dryer.
- Wash clothes in cold water—it works just as well with most washers.
- Dry loads of clothing consecutively to take advantage of the heat from the previous load.

Home Energy Saver
<http://hes.lbl.gov>

Use a Hand Lawn Mower

Gas-powered lawn mowers are a major source of air pollution. Switch to a hand-powered lawn mower and you'll save money, get exercise, and reduce energy use and air pollution. If you can't use a hand mower, at least switch over to an electric mower. They don't pollute and are much quieter than gas-powered

mowers.

8

Reduce / Reuse / Recycle

Reduce

Reduce the amount of stuff that you buy. Simply use less. Buy only what you need—or what you *really*, really want. Buy items that are designed to last for many years.

“Reduce” is also referred to as “precycling”. Avoid stuff in the first place. Wherever possible, avoid packaging and containers. If you have to get them, get containers that are recyclable. Avoid prepackaged and prepared foods. Buy whatever you can in bulk to save packaging and reduce costs.

Reuse

Buy items that can be used over and over; if not by you, then by someone else. Buy items that can be repaired so that their useful lifetime can be extended.

Recycle

When you finally have no need of something, pass it on

to someone else who can use it. If it is past the point where it can be used, recycle it so that its materials can be reused in some other form.

Use Your Own Shopping Bags

Use your own sturdy cloth, nylon or net bags for shopping. You will no longer have to make the “Paper or plastic?” choice (which, in essence, is “Tree or oil?”). It avoids any need for recycling, and cloth bags are a lot stronger than paper or plastic bags. Most grocery stores sell them; some even give them away.

9 Avoid Overpopulation

Self-limiting the size of families is the only way that the planet's population can be *safely* reduced. The current population of China is about 1.3 billion people. It is estimated that if China had not instituted the policy of “one child per family” thirty years ago, the country's current population would be 300 million larger.

World Population Awareness
www.overpopulation.org

Planned Parenthood
www.plannedparenthood.org

Sierra Club

www.sierraclub.org/population

Population Connection

www.populationconnection.org

10 Lobby Governments

City/County Government

Lobby your city council and planning commission to get them to do the following things, which will make it easier for people to drive less.

- Eliminate almost all single-use zoning and change it to mixed-use zoning. Let people convert homes scattered throughout the area into mom-and-pop stores, services and restaurants. Owners will be able to live in, above, or next door, to their businesses; customers will be able to walk from their homes to the businesses.
- Convert some buildings in office parks into apartments and condominiums. Turn some of

the offices into businesses serving the residents of those apartments and condominiums. Build new apartments right in the downtown area. Put living units in shopping malls.

- Encourage people to work from their homes, and provide tax advantages for those who do.

State and Federal Government

Lobby governments to pass laws that:

- Require all vehicles to meet a minimum of 40 miles per gallon.

When Henry Ford started making the Model T in 1908, that car got 25-30 miles per gallon—and it ran on either gasoline or ethanol. Ford's Model A, released in 1927, got 20-30 miles per gallon. It doesn't appear we've made much progress since then. Perhaps it's time we did. Forty miles per gallon is technically possible; the automakers just need to be strongly persuaded.

- Turn Amtrak into a real national railroad. Forget trying to make Amtrak pay its way. It needs to be heavily subsidized (as are highways and air travel) and expanded. Rail is a far more energy-efficient method of moving people and

freight across land than are air and private automobile. For example, rail freight is eight times as energy-efficient as freight trucking.

Amtrak, such as it is, is the United States' only national passenger railroad system. In 2004, more than 25 million passengers used Amtrak. By comparison, in 1916 rail passenger used peaked with 1.2 billion passengers.

**National Association of Railroad
Passengers
www.narprail.org**

- Drastically expand funding for mass transit
- Mandate, and fund, the replacement of incandescent bulbs with compact fluorescent bulbs nationwide
- Require the federal government to set and enforce stringent caps on greenhouse gas emissions
- Require the federal government to join with the international community to combat global warming

Global Warming Resources

U.N. Panel on Climate Change
www.ipcc.ch

RealClimate
www.realclimate.org

Global Warming
www.ucsusa.org/global_warming

Climate Crisis Coalition
www.climatecrisiscoalition.org

The Heat is Online
www.heatisonline.org

Greenpeace
www.greenpeace.org

Sierra Club
www.sierraclub.org/globalwarming

Friends of the Earth
www.foe.org/globalwarming

Stop Global Warming
www.stopglobalwarming.org

WorldWatch
www.worldwatch.org

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