

120 WAYS YOU CAN COMBAT CLIMATE CHANGE

A compilation of suggestions from several sources

Introduction

Though the terms “global warming” and “climate change” sound innocuous, they denote the greatest crisis the civilized world has ever faced—literally! It has already begun: Arctic permafrost and sea ice are melting, as are the glaciers covering Greenland and Antarctica, starting a noticeable rise in sea level. Glaciers and snow-cover on mountains the world over are melting, too, contributing to disastrous shortages in water for drinking and agriculture. As the oceans become warmer and more acidic from the carbon dioxide (CO₂) they absorb, drastic changes in sea life are caused; from tiny plankton to coral reefs to whales, many species are dying. Many thousands of people have already died, from heat waves, floods, droughts, and severe storms, but also from northward-moving tropical diseases. We don’t know how far we are from a tipping point, when the dark sea and soil exposed by melting ice and snow absorbs much more heat, which will lead to more melting, releasing frozen methane, a greenhouse gas (GHG) 20+ times as powerful as CO₂, then even more heating, in a vicious circle.

Some global warming can be attributed to cyclic changes beyond human control, but hard data show that GHG, notably CO₂ and methane, after centuries at a steady level, began a steady and accelerating rise in the atmosphere starting with the Industrial Revolution, fuelled by coal, oil, natural gas, and other fossil fuels, followed by rising world temperature. It is already too late to prevent serious environmental destruction and the deaths—even extinction—of many organisms, including large numbers of our own species. The world’s nations began to act a decade ago, with the Kyoto agreements to cut GHG to 1990 levels by 2012, but the US government refused to sign on. It is up to us, the concerned citizens of America, to do everything we can, starting right now! And even as our national government starts to act, we shall still have to do our parts as individuals.

Here, then, are some suggested actions you can take to reduce your “carbon footprint”—the amount of greenhouse gases you personally contribute to global warming by going about your daily life. They have been drawn from many sources, too hastily for proper recognition and thanks, and originally intended only for Truro use, which explains an occasional local reference. As you use them, and think of others, tell your local Energy Committee, for future collaborative editions.

In each of the categories (with an *italicized heading*) the actions are divided into two groups. First come the easier and cheaper ones; then—after an otherwise blank line that says *Then:*—actions that require more effort, money, planning time, or other expenditure. Clearly, most people will want to try out the easier ones first, then move into the harder ones. Don’t be intimidated that there are so many; just skim through, picking out a few to try first that seem most doable. Then, when you are ready, add some more, ideally at regular intervals. And don’t feel guilty that you aren’t already doing a lot; very few people are. The point is to get started, wherever you are, and keep it up!

Indoors At Home and at Work

Keeping warm/keeping cool. They use up about 44% of household energy bills (USDE).

1. Get a free energy audit. from Cape Light Compact. An expert examines all the ways your house admits and loses too much heat, explains how to fix them.

2. While you wait, plug air leaks. Caulk and weatherstrip doors and windows, cover your air conditioner, install storm windows, and add insulating shades or drapes to keep icy drafts out of your home in winter. You can buy spray-cans of insulating foam to stop up cracks and chinks that are otherwise hard to block.

3. Open south-facing shades/curtains during the day, and close them at night to make the most of the sun's energy during winter. During the summer, close these shades during the day.

4. In winter, *turn thermostat down* to 55° at night and when you will be away for a large part of the day; during day in occupied areas set it no higher than 68° and dress warmly. *Reverse ceiling fans* to push the warmer air down. For every degree you lower your heat in the 60-degree to 70-degree range, you'll save up to 5 percent on heating costs.

5. In summer, *use electric fans* before turning on air conditioner (A/C), then keep fans on and *set AC no lower than 70°*—try 75, and higher settings when you are away during the day. A difference of 2 degrees can reduce a home's CO₂ emissions by up to 9 percent over the course of a year. If you have a gas furnace, *turn off its pilot light* until heating season. If your area cools off in the evening, *open windows and doors with screens* to bring the inside temperature of the whole house down without A/C.

6. When you go away for more than a day in winter, turn heat down to 50°; in summer, turn AC off entirely. While you're away on a trip or vacation, turn off your electric water heater. If you have a pool or hot tub, turn off its heater and reduce pump operating times.

7. Keep heat low and AC off in unused rooms; close their doors & shades.

8. Keep furnace and AC well tuned, with annual cleaning and service. Clean or change the air filter every month on your warm-air heating system during winter, on air conditioning units summers.

9. If you have a fireplace, keep the flue shut at all times except when the fireplace is actually in use. Have your chimney(s) professionally cleaned annually.

Then:

10. Install programmable thermostats, which can store as many as six temperature settings per day, returning to pre-set schedules automatically. (Costs about \$26 each.)

11. If your furnace burns oil, switch to biodiesel (B20 is locally available). It not only cuts down on CO₂ and pollutants but keeps the burner clean and in less need of service. (It costs a few cents/gal. more than fossil oil; less, through Self-Reliance.)

12. Consider changing your heating system. From best to worst retrofit: active or passive solar for part of the load; heat pump (a kind of geothermal using electricity frugally); gas, natural or propane; biodiesel; wood, usually pellets; petro diesel; coal is worst of all.

13. Consider getting a new, Energy Star, air conditioner. Newest models use significantly less electricity to do the job. Or, instead, *install a whole-house fan*, a "natural evening air conditioner."

14. Install awnings or build trellises with ornamental vines over windows that overheat your home in the summer. And *plant trees near your home* to keep it cool; plant shrubs, bushes and vines about a foot away from the wall of your home to create “dead air” insulating spaces.

15. Seal and insulate warm-air heating (or cooling) ducts and pipes.

16. If you need outdoor illumination (e.g., along paths), buy solar yard or patio lights, which need no wiring and produce no greenhouse gas.

At work, *push your employer to adopt relevant actions* listed above (and many below, also). If you do it politely and in a constructive way, you may earn bonus points.

Lighting.

17. Use daylight as much as possible; adjust your schedule to daylight-saving changes.

18. Get into the habit of turning out the lights when they are not needed, especially whenever you leave a room unoccupied. At first, it requires effort and thought; then it can become automatic and easy. And *turn off radios, TVs, etc.* when you leave a room, too!

19. When you turn on an outside light at night to welcome and assist guests, turn it off as soon as they’re inside (and then on again when they leave).

20. Use nickel-metal hydride (NiMH rechargeable batteries) for flashlights, etc. For the same amount of light, throwaways cost 100 times as much! *Get a solar recharger.* Better yet:

21. Replace each ordinary flashlight with one that uses LEDs (light-emitting diodes), which use much less electricity and thus fewer batteries.

Then:

22. Replace incandescent bulbs with compact fluorescents wherever you can. They cost more to buy but live so much longer and use so much less electricity that they quickly more than pay for themselves. Many utilities supply them free or at discounts; some are usually given with a free audit. Big box stores often have them at steep discounts. For every five CFLs you install, you’ll keep 900 pounds of CO₂, the main greenhouse gas, out of the atmosphere. When they finally do burn out, however, don’t trash them as you do incandescents; recycle them. They contain a little mercury. Read the package before you buy a *CF bulb for a dimmer-controlled fixture*; it must be specially designed to work there.

23. Replace other lights with LEDs when possible. It is now possible to buy LEDs for home illumination, especially in recessed ceiling lights. They fairly quickly repay their initial higher cost by producing the same amount of light as an incandescent using only 1% as much current! They last even longer than fluorescents and are more energy-efficient.

24. Get rid of your halogen torchiere. It is an electricity devouring monster, and there are now types that use compact fluorescent bulbs.

25. Replace bulbs (incandescent) on holiday lights with LEDs—they’re responsible for much less CO₂ even than fluorescents, and the initial extra cost is paid back in a few years. Saving energy with modest, tasteful displays is much better than trying to outdo everyone in wasting electricity regardless of the consequences.

26. Install motion-sensitive switches to darken empty rooms, or preset timed switches that automatically turn off frequently forgotten lights.

27. Install light pipes, bringing natural (free) light into your upstairs halls or rooms. They are ducts with internal mirrors, so the entering light easily goes around bends with trivial loss of light. No electricity, no maintenance; soft restful light all day, even moonlight at night.

Hot Water.

28. Wash clothes (except those soiled with greasy dirt) in cold water. Consumers Union and Coop America agree that they get just as clean as with hot or warm. You can reduce your carbon emissions 600 pounds/yr. by switching to cold water for every load.

29. Turn the water heater setting down to 120°. That gives a good hot shower without scalding you, and you'll need to dilute hot with cold water less often (see also #32.) Also, it's a myth that scalding water gets dishes or pots cleaner than hot water that's comfortable for your hands.

Then:

30. Make sure your hot-water tank is wrapped in a good insulating blanket (R-7 or R-11; \$12).

31. Insulate hot water pipes in unheated basements or crawlspaces, especially if you have hot water space heating.

32. Convert to solar hot water. A substantial outlay, but it pays for itself in several years, and works much better than you'd think at our latitude. Carbon-free!

33. Or, convert to demand water heating (tankless). The gas or electricity goes on only when you turn on the hot water tap, and you don't waste energy keeping a tankful hot all the time.

Saving Water. Save water every way you can, especially during periods of drought. With global warming the usual weather is changing everywhere, and globally the shortage of (especially potable) water is another growing crisis. Using less is generally desirable, therefore, AND saving water saves energy, since almost everywhere in the developed world, clean water is brought to households by electric pumps. Specifically:

34. Don't let the water run while you are brushing your teeth, shaving, or washing pots and pans. Just turn it on and off as needed. Tiny saving? Not when millions of us change our habits.

35. Take shorter showers (especially hot ones). Time several of your showers for a baseline, then try cutting down by some reasonable amount like 10%, ideally to 5 min. Ditto for tub baths, and try shifting from them to showers only. Especially in summer, try wetting yourself, turn the water off while you scrub with soap and shampoo, and then turn it on to rinse. Meditate or practice singing elsewhere!

36. If you need really hot or cold water, catch the tepid water you run off and use it for another purpose, e.g. to water plants or for minor cleanup jobs.

37. Wash full loads of dishes and clothes; with most dishwashers, you don't need to rinse dishes first. Turn off the dry cycle and air dry dishes instead.

38. Patronize car washes that recycle the water. (Ask; many do.)

Then:

39. Repair leaky faucets and toilets. Of all water used, 5% is wasted in leaks.

40. Install low-flow aerators on kitchen faucets and low-flow shower heads.

41. Replace old toilets with 1.6 gallon (low-flow) ones, or, better, with composting toilets. Flush toilets are the biggest water-users in house or office. Check out the composting toilets at the Audubon Center in So. Wellfleet.

42. When buying new appliances, choose water-efficient ones, like front-loading washing machines. (See below about Energy Star appliances.)

The Refrigerator. (The ordinary household's biggest user of electricity, about 25% of it.) Having lots of food in your fridge keeps it from warming up too fast when the door is open, so

it doesn't have to work as hard to stay cool.

43. Set the temperature between 37—40° and the freezer at 5°.

44. Brush the condenser coils clean once a year; that saves electricity.

45. Make sure the rubber seals on doors fit tightly, and that doors stay fully closed.

You may need to tilt (wedge) the refrigerator back slightly, an easy adjustment.

46. Don't hold doors open unnecessarily. Decide what you want before opening.

Then:

47. Replace old ones with Energy Star models and DON'T keep the old one in the basement! And watch for the Next Big Thing: thermoacoustic refrigerators, which promise to be much more energy-efficient, and don't use refrigerants like Freon and its replacements, which not only kill the high ozone layer but are potent greenhouse gases.

The Kitchen Stove. Don't leave burners on when you take a pot off (a common mistake in our household). A microwave is a more energy-efficient way to cook many things than a stove. When buying a new range, get an Energy Star model.

Clothes Washers and Dryers.

48. Use the energy-saving settings (also on other major appliances) and run full loads only.

49. Dry clothes on outdoor clothes lines, or on indoor drying racks. Those can be found in second-hand furniture stores if not elsewhere.

50. Carefully wash many clothes labeled "dry clean only" (unnecessary) and—if you can find one nearby—send them to 'Green' cleaners that don't use perc, an unhealthy and environmentally harmful GHG used by the vast majority of dry cleaners. Ask!

Then:

51. Choose energy-efficient models (Energy Star) and front-loading instead of top-loading types of washers and dryers.

Computers and Other Electronics

52. Turn off your electronic appliances when not using them. (You might be surprised how many people keep TVs and/or computers going when they leave a room.)

53. On your computer, make sure the Sleep function comes on automatically after a period of non-use, and hit the Sleep button when you need to be away from the computer awhile during the day, Quit or Power down at night. (Save 300 lb. of CO₂ per yr..)

54. Disconnect any that you won't be using for more than a day. A good way is to keep them all plugged into surge protectors, with which you can easily turn off several at once, especially at the office when day's done or at home when you go to bed. According to the American Council for an Energy Efficient Environment, home electronics and small household appliances that require direct current—such as televisions, VCRs, answering machines, cordless telephones, stereos, and others—usually *leak electricity even when they're turned off!* This way, the average US household wastes 50 watts of power constantly, which adds up to around 400 kWh per year. (An easy way to save 600 pounds of CO₂/yr.)

Then:

55. When replacing a computer or most other electronic appliances, look for Energy Star (energy-saving) models. Demand that the seller take back your old one at no charge; many brands do and all should, for recycling. When getting a new TV, *don't buy a plasma screen*; it uses as much electricity as an extra refrigerator!

Food and Kitchen. Note: All these suggestions are **good for your health**, as well. They can all be adopted at once with little extra cost; hence, no “*Then.*”

56. Don't buy bottled water. Tap water is just as good or better, far cheaper, and using it instead of bought water bottled in plastic saves a lot of greenhouse gas. Many of the best-selling brands bottle tap water from municipal water supplies anyway. Especially eschew waters imported from distant lands; think of their wholly unnecessary carbon cost!

57. Cut down on carbonated soft drinks. So many of us love our sweet, fizzy “pause that refreshes” that it's probably unrealistic to urge giving it up entirely, but do drink a lot less carbonated beverages and don't start your kids drinking them. Most are sweetened with high-fructose syrup, chemically converted in energy-wasting ways from the starch of corn, one of the most greenhouse-gas producing of crops. Energy is wasted in the bottles and transport, and each drink releases CO₂ to the air. Plus, of course, the fact that fizzy soft drinks are mostly bad for you: they dissolve tooth enamel; they contribute a lot to the obesity epidemic; many contain large amounts of caffeine; and many other chemicals of doubtful or unknown safety go into their recipes.

58. Keep a kitchen garden if you can. You get the freshest vegetables, berries, etc. without travel to buy the produce or for it to come to your store, and you can be sure it's organic (see #59).

59. Buy locally grown food. A large proportion of supermarket food—including the organic—has traveled thousands of miles, burning fossil fuels. “The average piece of food on your table was transported 1400 miles.” (Source: Janine Benyus, *Biomimicry*) Local is almost sure to be fresher, and buying it sustains your community. If a *community-based agriculture system is available, patronize it.* If you have to choose between organic and local, making it local is more important; travel generates lots of GHG! Find and *patronize a local farmer's market.*

60. Buy organically grown food. In addition to the health benefits, the pesticides and artificial fertilizers used on non-organic food are made using lots of fossil fuel and venting much greenhouse gas (more than just CO₂; e.g., nitrogen oxides).

61. Eat less meat. The production of meat—*especially beef!*—requires astonishing amounts of water, and cattle vent a lot of methane, a greenhouse gas more than 20 times as potent as CO₂; more comes from their poop as it decomposes. More than one third of all materials and fossil fuel consumed in the US is used putting meat on our tables! Some experts say that meat is a bigger source of GHG than all cars and trucks. Vegetarian food requires much less energy and water to produce, and has real benefits to health also.

62. Eat less highly processed food; fresh, not frozen. Not only is it better for you but enormous amounts of energy are used processing foods, in the process greatly raising the cost (both monetary and carbon) of what we eat.

Yard and Garden

63. Compost food and yard waste, and use the result to fertilize and improve the quality of your soil. Brochures explaining how to do it are available at the Swap Shop.

64. Use other organic fertilizers instead of chemical ones. Use chemical fertilizers (especially high-nitrogen kinds) very sparingly and carefully; not only does making them use

and produce a lot of greenhouse gases, but the runoff pollutes the groundwater and nearby salt water, harming the local biosphere. Surprisingly, human urine is a first-rate organic fertilizer.

65. Catch rainwater for use in garden and yard in rainbarrels or a cistern.

66. Never set sprinklers so that the water is wasted on pavement or while it rains.

(Seems too obvious to mention? Just look around; it happens a lot, even on Town properties.)

67. Minimize loss of water from evaporation by using soaker hoses and drip irrigation to water gardens, and water before 9AM and after 7PM.

68. Water lawns no more than one inch/week, even if they brown in summer; they recover when rains come again.

69. Plant and maintain trees on your property, especially to shade the house during summer. It will considerably diminish the cost of keeping cool, and trees sequester carbon; the longer it's stored out of circulation, the less greenhouse effect.

70. Layer mulch on bare ground around plants, including trees, retaining water.

71. In the fall, rake up and compost leaves, or if you don't have room, give them to someone who does. Burning wastes good humus and pollutes the air.

Then:

72. Use an electric or (better) a hand lawn mower, not a gasoline model; set it to "high" and leave grass clippings in place. They help control weeds and enrich the soil.

73. Composting toilets produce useful fertilizer for yard, trees, flowers, and shrubs besides saving huge amounts of water.* Waterfree urinals are odorless, save enough water to be economical to add as well as or instead of composting toilets.

74. Install a system to divert graywater (from sinks and baths) to gardens (or lawn); it will save a lot of water and put less load on your Title Five system. You'll need a plumber.*

75. Replace traditional grass lawns with drought-tolerant native plants, or even with vegetable as well as flower gardens.

Conserve Paper.

76. Use both sides when printing anything, from a letter to a book. Reuse paper printed on one side for drafts, notes, and other informal purposes.

77. Replace paper napkins and towels with cloth ones. Even though they have to be washed, it's an environmental gain: Making paper requires great amounts of energy, fouls huge quantities of water, and cuts down the time during which trees keep carbon out of circulation. US paper use continues to expand dramatically; we need to slow that down and recycle a lot more of it, including corrugated cardboard and pasteboard.

78. Put dirty paper into your compost bin; earthworms eat it. Recycle clean used paper and cardboard of all kinds if not coated with wax or plastic (see #90, below).

The Three R's of Waste

Reduce

79. Reduce waste by your purchases: buy less stuff, choose goods with minimal or no packaging (e.g., buy in bulk, bringing your own containers), and take your own bags or reuse

* Get recommendations from Self Reliance (508-457-7679), an excellent source of information about energy efficiency and renewables. In many ways, it is well worth becoming a member, including saving you money.

the store's. Recycle as much as you can of the paper, cardboard, and plastic packaging you do end up with.

80. Rent or borrow tools you seldom use rather than buying them.

81. As gifts, choose experiences (tickets, trips, concerts, etc.), not goods.

82. Reduce your junk mail. You can get off junk mail lists via the Direct Marketing Association: www.dmaconsumers.org/cgi/offmailinglist. Or get a Stop the Junk Mail Kit from Consumer Research Institute: www.stopjunk.com. If all that seems like too much trouble (you may have to repeat it annually), subscribe to www.greendimes.com; they will do it all for you, monitor and follow up, plus *planting a (carbon-storing) tree* for you every month: \$36/yr. Recycle what junk mail you do get; notice that our post office now provides special blue bins to recycle paper. It's best to open it first; see the PO instructions.

83. Whenever you can, buy from companies that make efforts to reduce their emissions. See www.responsibleshopper.org/greenshift for specific advice. And *boycott corporations like Exxon Mobil* that have funded anti-global-warming "scientists" and get rich from selling GHG-producing fossil fuels.

Then:

84. Don't buy cheap, disposable things like cameras. In the long run, you save money, and one of the worst things about our economy is the proliferation of things you use once and throw away.

Reuse

85. Use your ingenuity to find ways to repair and reuse things, and find new uses for old ones.

86. Give still-usable things to friends/relatives, thrift shops and other charities, Swap Shops, Freecycle.

87. Sell them at a yard sale, or on eBay, Craigslist, etc.

88. Give used books to the public library (or other charity) for book sales, or take them to the Swap Shop. Beat-up, no longer (or never, like some old school books) readable ones: tear off and junk the cover, put the pages into the waste paper recycling shack.

89. Buy used goods, where appropriate, from just-mentioned sources or get them free from Swap Shops.

Recycle

90. Recycle as much as you can. Take full advantage of our recycling center—find out all the things accepted for recycling from the on-line listing (<http://www.truro-ma.gov/transfersta/RECYCLING%20IN%20TRURO.pdf>). Many people don't go beyond the obvious (paper, plastics, cans & bottles). *Many* other discards may be recycled! Truro, for example, recycles auto tires & rims, big metal parts, antifreeze, lead-acid batteries (and tells you where in P'town to recycle drain oil); other batteries of **all** types large and small; all sorts of (unusable) books, phone books, magazines, catalogues, anything else *clean* that's made of paper, pasteboard or cardboard; fluorescent lights (compact & tubes); things containing mercury: switches, instruments, thermometers; "white goods"—major appliances like refrigerators, washers, dryers, ranges; metal scrap of all sizes from nails to empty tanks, things made of aluminum, copper, lead, bronze & other alloys, as well as iron/steel/tin; TVs, computers, monitors, cell phones, and other electronic gadgets; old CDs & DVDs. (There is a charge for some big items.) According to the US EPA, every year "The current national recycling efforts reduce greenhouse gas emissions by **50.8 million tons** MTCE (this is

equivalent to the **annual** GHG emissions from 40.3 million cars.)” [MTCE means metric tons carbon-dioxide equivalent]. Recycling is a big way you can do something about global warming.

91. Recycle, don't discard, outdated computers, cell phones, TVs and other electronic equipment. If they still work, donate them to charities. (See also #51.)

92. Don't discard deposit beverage containers; hand them in for the money or help charities or public institutions get that benefit. The bottles and cans get reused/recycled.

93. Buy products with recycled content; use salvaged materials when possible.

Your Car

94. Use your car as little as possible: carpool whenever you can, use the Flex bus and other mass transit, shop locally, plan trips to accomplish many chores at once.

95. If you have two cars, drive the one with best mileage the most. Consider making do with just one.

96. Get out and walk more; it's good for you. More than a quarter of US car trips are one mile or less, and 13.7 percent are a half-mile or less. For most of us, these are walkable distances. Find a backpack or briefcase on wheels that can tote your work items and laptop. For shopping trips, invest in a sturdy shopping cart or collapsible crate on wheels.

97. Bicycling is an excellent way to minimize car use and get exercise at the same time. Mount a wire basket or pannier bag to your bicycle so you can carry more and do more chores per trip.

The following tips on increasing your gas mileage will not only lessen your contribution of greenhouse gases but will save you money.

98. Drive conservatively and cooperatively. Don't try to win imagined races by jackrabbit starts or by unnecessary accelerating and passing. Savings may include a life or two, perhaps your own.

99. Keep tires properly inflated and wheels aligned. That can get you an extra mile or two per gallon. Trivial? An estimated 32 million U.S. cars and trucks ride on at least two under-inflated tires, wasting 500 million gallons of gas annually.

100. Avoid high speeds. According to the EPA, you can improve your gas mileage about 15 percent by driving at 55 mph on the highway rather than 65 mph, and you'll avoid unnecessarily emitting lots of CO₂. Gas economy goes down fast at higher speeds.

101. Change your air filter regularly. A dirty air filter prevents your car's cylinders from receiving enough air and throws off the fuel/air mix, which lowers your gas mileage as much as 10 percent. You'll save up to 165 gallons of gas per year by changing them, *spark plugs, oxygen sensors, hoses and belts* when they need it.

102. Don't let your engine idle for more than a minute. Not only do you get 0 MPG idling, your engine functions inefficiently, producing more pollutants, AND it's against our state law! Modern cars don't need to "warm up" when starting on cold days; just turn the key and go. When you stop, get into the habit of turning off the motor at once. *NEVER go away from your car leaving it idling*, inviting a thief!

103. Use your car's air conditioner wisely. Your gas consumption increases by 20 percent whenever your air conditioner is running, according to the EPA. You'll save gas if you roll down the windows and enjoy the breeze around town. On the highway, keeping your windows up will save gas by reducing drag.

104. Don't top off your gas tank. Refraining (or always asking the attendant not to top off) cuts down spills and waste of fossil fuel as well as keeping carcinogens out of the air you and other people breathe.

Then:

105. Invest in an electric bike. With a range of about 20 miles between charges, electric bicycles can be recharged from any standard household electric socket.

106. When buying a new car AND when renting, choose the most energy-efficient (best mileage), which will usually be a hybrid electric. Look also for a modern diesel, which runs on biodiesel with no problem, or—coming soon—plug-in hybrids and all-electric cars. Don't hold your breath waiting for one with a hydrogen fuel cell.

Miscellaneous

Travel When staying at hotels and motels, use the same good energy practices you use at home. Don't leave the lights and TV on when you leave the room. And do you really change your sheets and towels every day at home?

107. Fly less. An average *domestic* flight contributes close to 1,700 pounds of CO₂ to the atmosphere. If possible, try to go by train or other forms of mass transportation.

108. If flying is the only option, you can purchase carbon offsets for your travel through the Better World Travel Club. For business travel, encourage your employer to create a travel-offset budget.

109. Use videoconferencing or conference calls instead of traveling to conferences. If possible, telecommute from home.

Buying Electricity

110. Switch to 'Green Electricity.' The Cape Light Compact offers a choice between 50% and 100% electricity generated from renewable sources (wind, landfill gas, solar) at a small additional cost. It's well worth it.

Investing

111. Invest some of your savings in renewable energy companies and divest yourself of stock in fossil fuel companies and others with poor environmental records. You can get equally good return from those that are working to stave off global warming, not to stoke it. A skilled investment counselor can help you choose wisely, providing capital for kinds of business that are needed for a liveable, sustainable world.

Get Active; Make Your Voice Heard

Inform Yourself

112. See the movies *The 11th Hour*, *An Inconvenient Truth* (now on DVD; also the book by Al Gore), and *The Great Warming*.

113. Read at least one of several excellent books, like Elizabeth Kolbert's *Field Notes from a Catastrophe*, Tim Flannery's *The Weather Makers*, George Monbiot's *Heat*, or Ross Gelbspan's *Boiling Point*. *Collapse*, by Jared Diamond, and *WorldChanging*, Alex Steffen (ed.) are also very informative. A librarian can suggest others; look for a special shelf at our Truro library. If you belong to a book club, suggest one of the above for everyone to read and discuss.

114. Subscribe to Web resources of information. These offer excellent email newsletters to keep you updated: www.climatecrisiscoalition.org; www.grist.org; www.nhne.org. Go to these often for information : www.rmi.org; www.ucsusa.org; www.epa.gov/globalwarming; www.apolloalliance.org; www.nrdc.org/globalwarming. Also blogs like Climate Progress (<http://climateprogress.org>) which links to many other good ones.

Measure Your Carbon Footprint.

115. To get serious about doing your part, check out just how much GHG your way of living contributes annually, then set yourself a goal and measure your progress. See www.climatecrisis.net for tools to help you do it.

Be an Involved Citizen

116. Join one or more group—local or national—working to curb global warming, or start one. Most of them actively promote needed legislation. Take advantage of web sites that help you get in touch with them, usually on specific issues.

117. Write (or speak) to politicians, from our Selectmen to the president, about the climate crisis and solutions like a carbon tax.

118. Join a Town committee that is working on the problem, notably the Energy Committee and the Recycling Committee.

119. Volunteer to help them achieve the goals of the Kyoto Protocol locally. Falmouth, Barnstable, Provincetown, and Truro are working on climate protection plans.

Teach Your Children; Get Them Involved

120. Helping children understand how simple actions make a difference is a crucial part of creating a sustainable future. Discuss the steps on this list with your children as you start taking them. Explain to them why they are important for the health of people and the environment. And give them tasks they can do on their own, such as making sure all lights are turned off before leaving the house, helping hang laundry to dry, or putting kitchen scraps into the compost each day.

What Does It Amount To?

The Rocky Mountain Institute supplies the following tables, based on “the average American home,”

	CO₂ saved (lbs/year)	\$ saved (\$/year)
Install a programmable thermostat	1,071	\$58.10
Seal large air leaks in your home	1,489	\$80.76
Insulate your water heater	263	\$14.95
Add insulation in your attic	2,142	\$116.20
Seal and insulate your HVAC ducts	1,512	\$81.90
Install efficient showerheads	370	\$21.01
Total saved per year:	6,847	\$372.92

	CO₂ Saved (lbs/year)	\$ Saved (\$/year)
Lower water heater temperature to 120°F	214	\$12.12
Lower thermostat in winter by 2°F	353	\$19.04
Wash clothes in cold water	327	\$18.58
Turn off unneeded lights	376	\$21.04
Turn off home-office equipment	137	\$7.68
Unplug extra fridge in garage/basement	448	\$25.04
Use energy-saving mode on appliances	769	\$43.04
Increase AC thermostat by 3°F	339	\$18.90
Air dry clothes during summer	779	\$43.60
TOTAL SAVED PER YEAR:	3,742	\$209.04

Afterword

A great many of the actions promote better health and a longer life; and most of them will save you money if only in the long run. But then, thinking in terms of the long run—the world of our children and grandchildren not just our own immediate convenience and pleasure—is an important part of the change that most people will have to make if we are to stave off disaster. It’s also a sure sign of personal maturity; many would add, of spiritual growth also.

For the *really* long run, it will be necessary to stop and perhaps reverse the world’s population growth, and to give up humankind’s most profligate way of wasting all resources—war. Otherwise, a good argument can be made that all our smaller efforts will be in vain. But it is a longer argument than I can make here.

A note about sources: When I started collecting ideas of this kind for my own use, some time ago, I often did not note where I got them. As well as I can reconstruct them, however, these are some principal sources:

- www.massclimateaction.org/action.htm
- www.seattle.gov/environment/cag/GreenSeattleGuide_08.25.05.pdf
- www.coopamerica.org/programs/greenenergy/whattoknow/athome.cfm. Look also for links to Take the Carb Cutter Challenge and Living ‘Car Lite.’
- Excerpts from the RMI book *Homemade Money: How to Save Energy and Dollars*

in Your Home. (at www.rmi.org)
www.schulmeister.us/globalwarming
Several EPA sites, notably www.energystar.gov, www.energysavers.gov, and
www.eere.energy.gov/consumer/tips
Beat High Gas Prices Now by Diane MacEachern, summarized in Daily Grist
(grist@grist.org)

[Compiled by Bob Holt]
[Truro Energy and Recycling Committees]