Tips on Curbing Your Personal GHG Emissions

This page provides a number of tips and suggestions for how to reduce your individual greenhouse gas emissions.

At Home

Heat & Cool Your Home Efficiently

- *Move your thermostat down 2° in winter and up 2° in summer*
  Almost half of the energy we use in our homes goes to heating and cooling. Each degree you are able to raise the thermostat, you save 3-5% on air conditioning costs.You could save about 2,000 pounds of CO_2 a year with this simple adjustment. The American Council for an Energy Efficient Economy has more tips for saving energy on heating and cooling.

- *Clean or replace filters on your furnace and air conditioner*
  Cleaning a dirty air filter can save 350 pounds of carbon dioxide a year.

- *Install a programmable thermostat*
  Programmable thermostats will automatically adjust the heat or air conditioning at night and readjust it in the morning. They can save you $100 a year on your energy bill.

- *Cool with air movement and ventilation*
  Unless you live in a very humid climate, ceiling and house fans can be adequate replacements for air conditioning.

Make Minor Home Improvements

- *Make simple adjustments*
  Keep doors and windows closed when the air is on. Use shades and drapes to keep the hot sun out.

- *Replace your old single-glazed windows with double-glazing*
  This requires an upfront investment but will halve the energy lost through windows and pay off in the long term. If you go for the best the market has to offer (wooden-framed double-glazed units with low-emission glass and filled with argon gas), you can even save more than 70% of the energy lost.

- *Get a home energy audit*
  Many utilities offer free home energy audits to find where your home is poorly insulated or energy inefficient. You can save up to 30% off your energy bill and 1,000 pounds of carbon dioxide a year. Energy Star can help you find an energy specialist. Or do it yourself by following the DOE's guidelines.

- *Insulate and weatherize your home*
  Properly insulating your walls and ceilings can save 25% of your home heating bill and 2,000 pounds of carbon dioxide a year. Caulking and weather-stripping can save another 1,700 pounds per year.

- *Clean your heating and cooling system where it delivers the goods*
  Dust on the registers in a forced-air system can cut its efficiency by 10% or more. The same goes for dust on baseboard heaters and radiators. Vacuum these parts of your heating system regularly using a brush nozzle. Unscrew registers from walls and vacuum accessible surfaces inside the ducts. Use a flexible hose rather than a metal or plastic wand, and fasten the brush securely to the hose with duct tape.

- *Keep humidity under control*
  Because relative humidity affects comfort, tailoring the humidity in your house to the season reduces the use of energy for heating and cooling. For most people, a relative humidity of around 60 percent in winter permits a thermostat setting for heat that would be too low in drier air. In summer, a relative humidity of around 40 percent allows a thermostat setting for air conditioning that would be uncomfortably high in humid air.
  Both air conditioners and furnaces dry the air in your house. In summer, that's usually all right, but in winter and during summers in desert-like climates, the air often becomes too dry. The solution is to install a humidifier at the furnace or to purchase a stand-alone unit. If the air in your house is uncomfortably damp despite heating and air conditioning, consider

buying a dehumidifier to pull additional moisture from the air.

- *Keep your attic cool*
  Attic radiant barriers made of reflective foil block the transfer of radiant heat from a hot roof into the attic. Reducing the transfer of this heat while improving the ventilation in your attic can lower the temperature of the entire house. More information at the U.S. Green Building Council.

- *Take the extra step: Switch to green power*
  In many areas, you can switch to energy generated by clean, renewable sources such as wind and solar. The Green Power Network is a good place to start to figure out the options available in your area.

Choose & Use Appliances Wisely

- *Look for ENERGY STAR qualified products*
  When buying new products, such as appliances for your home, get the features and performance you want AND help reduce greenhouse gas emissions and air pollution. Look for ENERGY STAR qualified products in more than 50 product categories, including lighting, home electronics, heating and cooling equipment and appliances.

- *Turn off electronic devices you're not using*
  Simply turning off your television, DVD player, stereo, and computer when you're not using them will save you thousands of pounds of carbon dioxide a year.

- *Unplug electronics from the wall when you're not using them*
  Even when turned off, things like hair dryers, cell phone chargers and televisions use energy. In fact, the energy used to keep display clocks lit and memory chips working accounts for 5 percent of total domestic energy consumption and spews 18 million tons of carbon into the atmosphere every year!
  In the average home, 75% of the electricity used to power home electronics is consumed while the products are turned off. Avoid wasting energy by unplugging appliances when not in use or make things easier on yourself by simply using a power strip and turning off the switch on the strip to cut all power to the appliances.

- Refrigerator and Freezer Care
  Rearrange
  The refrigerator or freezer uses more energy if it is located next to hotter equipment or appliances like the cooker or boiler. For example, if the fridge or freezer is located in a hot cellar room where the temperature is about 88ºF, energy use is almost double and causes an extra 160kg of CO_2 emissions for fridges per year and 320kg for freezers.

  Check the temperature
  Recommended temperatures are 37 – 40 degrees Fahrenheit for the fresh food compartment of the fridge and 5 degrees for the freezer.

  Regularly defrost manual-defrost fridges and freezers
  Frost buildup decreases energy efficiency.

  Cover liquids and foods
  Uncovered items release moisture and make the compressor work harder.

- *Use the washing machine or dishwasher only when they are full*
  If you need to use it when it is half full, then use the half-load or economy setting. There is also no need to set the temperatures high. Nowadays detergents are so efficient that they get your clothes and dishes clean at low temperatures.

- *Wash clothes in cooler water*
  About 90% of the energy used for washing clothes is for heating the water. Switching your temperature setting from hot to warm can cut a load's energy use in half.

- *Consider replacing your toilet*
  Newer toilets use less than 1.3 gallons per flush compared to models from before 1992 that use 3.5 gallons a flush. Additionally, a leaky toilet can waste about 200 gallons of water every day. Learn more about WaterSense-labeled toilets and products.

- *Fix leaky faucets*
  Faucets that drip at the rate of one drip per second can waste more than 3,000 gallons of water each year.

- *Reduce hot water use*
  By fixing leaks, taking shorter showers, and only washing a full-load of clothes or dishes, you can drastically reduce your energy consumption. Water heating is the second-largest energy expense in U.S. households behind space heating and cooling. Learn more at the U.S. Department of Energy.

- *Cook with a microwave*
  Fast and efficient microwaves use around 50-65% less energy than conventional ovens and won't heat up your entire kitchen. Learn more at the California Energy Commission.

Light Your Home Efficiently

- *Replace a regular incandescent light bulb with a compact fluorescent bulb (CFL)*
  CFLs use 60% less energy than a regular bulb. This simple switch will save about 300 pounds of carbon dioxide a year. If every family in the U.S. made the switch, we'd reduce carbon dioxide by more than 90 billion pounds!

- *Dust your light bulbs regularly*
  Clean bulbs give off 50% more light than dirty ones, giving you all the light you're paying for. If that turns out to be more light than you need, try a smaller bulb.

- *Use 4-watt minifluorescent or electro-luminescent night lights*
  Both lights are much more efficient than their incandescent counterparts and the luminescent lights are cool to the touch. Learn more at the U.S. Department of Energy.

At the Store

- *Reuse your shopping bag*
  When shopping, it saves energy and reduces waste to use a reusable bag instead of accepting a disposable one in each shop. Waste not only sends greenhouse gas emissions into the atmosphere, it can also pollute the air, groundwater and soil.

- *Consider buying organic foods*
  Organic soils capture and store carbon dioxide at much higher levels than soils from conventional farms. If we grew all of our corn and soybeans organically, we'd remove 580 billion pounds of carbon dioxide from the atmosphere!

- *Avoid heavily packaged products*
  You can save 1,200 pounds of carbon dioxide if you cut down your garbage by 10%.

- *Eat less meat*
  Methane is the second most significant greenhouse gas and cows are one of the greatest methane emitters. Their grassy diet and multiple stomachs cause them to produce methane, which they exhale with every breath.

- *Buy locally grown and produced foods*
  The average meal in the United States travels 1,200 miles from the farm to your plate. Buying locally can save fuel and keep money in your community.

- *Buy fresh foods instead of frozen*
  Frozen food uses 10 times more energy to produce.

- *Buy recycled paper products*
  It takes 70% to 90% less energy to make recycled paper and it prevents the loss of forests worldwide.

On the Move

- *Drive smart*
  Many factors affect the fuel economy of your car. To improve fuel economy and reduce greenhouse gas emissions, go easy on the brakes and gas pedal, avoid hard accelerations, reduce time spent idling, and unload unnecessary items in your trunk to reduce weight. If you have a removable roof rack that you are not using, take it off to improve your fuel economy by as much as 5%. Use overdrive and cruise control on your car if you have those features. For more tips to improve your gas mileage, visit the Fuel Economy Guide website.

- *Tune your ride*
  A well-maintained car is more fuel-efficient, produces fewer greenhouse gas emissions, is more reliable, and is safer! Keep your car well tuned, follow the manufacturer's maintenance schedule, and use the recommended grade of motor oil.

Also check and replace your vehicle's air filter regularly. For more details, including potential savings from these actions, visit the Fuel Economy Guide website.

- *Check your tires*
  Check your tire pressure regularly. Under-inflation increases tire wear, reduces your fuel economy by up to 3 percent, and leads to increased emissions of greenhouse gases and air pollutants. If you don't know the correct tire pressure for your vehicle, you can find it listed on the door to the glove compartment or on the driver's-side door pillar. More details are available on the Fuel Economy Guide website.

- *Give your car a break*
  Use public transportation, carpool or walk or bike whenever possible to avoid using your car. Leaving your car at home just two days a week will reduce greenhouse gas emissions by an average of 1,600 pounds per year. Whenever possible, combine activities and errands into one trip. For daily commuting, consider options like telecommuting (working from home via phone or over the Internet) that can reduce the stress of commuting, reduce greenhouse gas emissions, and save you money.

- *Consider Your Air Travel Impact*
  Because of the long distances involved, even a modest amount of flying will release a substantial amount of CO_2 into the atmosphere. The level of GHGs emitted by a particular flight however, is based on a complex variety of factors including flight length, cruising altitude, and type of aircraft. Generally speaking, large aircraft are more fuel efficient than regional or turboprop planes, both because of engine efficiency and because they transport more people per vehicle. Additionally, the longer the flight, the lower the per-mile intensity since aircraft engines reach their optimal performance at a cruising speed at higher elevations. Frequent take off and landings have a negative effect on aircraft fuel economy because of the added fuel necessary to accelerate to take off speed. Super-long haul flights, however, begin to lose the benefits of higher engine efficiency because of the added fuel that must be carried.

- *Offset Your Air Travel*
  To solve the problem of climate change, we all need to consider our personal carbon emissions from driving, flying, or even turning on our computers, and we need to make continuous effort to reduce these emissions wherever possible. However, it is impossible to reduce our carbon emissions to zero no matter how hard we try. For this reason, many have taken the additional action of buying greenhouse gas offsets. When you buy offsets, you essentially pay someone to reduce or remove greenhouse gases for you.

  All offsets being sold in this new (and voluntary) environmental market, however, are not of equal quality. It is really up to the buyer to ensure that what they are buying does have an additional environmental benefit. A few questions to ask yourself when considering the purchase of offsets – 1) Do you know the type of project that has created your offset? 2) Is your project directly resulting in GHG reductions? 3) Has your offset been verified/validated by a third party? 4) Are the offsets from existing projects or projects planned in the future (if so, how long in the future)? 4) Is there some proof that your offset has not been sold to multiple buyers? 5) Is the seller transparent so that you can answer the previous questions? Clean Air-Cool Planet has published a guide to retail carbon offset providers, and an initiative at Tufts University provides information about voluntary carbon offsets.

In the Garden

- *Shade windows and walls from the summer sun*
  Trees planted to shade the southern and western windows are effective barriers to light in the hot summer sun. Not only do trees block direct sunlight, but water evaporating from trees helps cool surrounding air. According to the U.S. Department of Energy, trees that shade the south and southwest sides of a house can cut between $100 and $250 annually from air-conditioning costs. If your property has little shade, planting the right trees in the right places offers long-term benefits. The height, growth rate, regional adaptability, branch spread, and shape of different tree varieties are all factors to consider in choosing the most beneficial trees.

- *Be green in your yard*
  Use a push mower, which, unlike a gas or electric mower, consumes no fossil fuels and emits no greenhouse gases. If you do use a power mower, make sure it is a mulching mower to reduce grass clippings. Composting your food and yard waste reduces the amount of garbage sent to landfills and reduces greenhouse gas emissions. See EPA's GreenScapes program for tips on how to improve your lawn or garden while also benefiting the environment. Smart landscaping can save energy, save you money, and reduce your household's greenhouse gas emissions.

- *Plant a tree*
  A single tree will absorb about one ton of carbon dioxide over its lifetime. Shade provided by trees can also reduce your air conditioning bill by 10% to 15%. The Arbor Day Foundation has information about planting trees.

- *Mulch*
  Use mulch to help moderate soil temperature and retain moisture during dry weather, reducing the need for watering. Learn more at the U.S. Department of Agriculture.

- *Plan your garden wisely*
  Choose plants that are low-maintenance and require less water and fewer pesticides. Visit the Regional Water Providers Consortium to learn more.

- *Reduce the size of your lawn*
  Lawns use 2-3 times as much water as other plants and can result in 50% more water waste from evaporation, runoff, over spray and over watering. Learn more at Regional Water Providers Consortium.

- *Green your grill*
  A charcoal grill gives off twice the amount of CO_2 as a gas grill. If you must use a charcoal grill, buy charcoal made from sustainable sources certified by the Forest Stewardship Council. Learn more at Climate Change Central.

At the Curb

- *Recycle at home*
  You can save 2,400 pounds of carbon dioxide a year by recycling half of the waste your household generates. Earth 911 can help you find recycling resources in your area.

- *Reduce waste*
  Most products we buy cause greenhouse gas emissions in one or another way, such as during production and distribution. By taking your lunch in a reusable lunch box instead of a disposable one, you save the energy needed to produce new lunch boxes.

- *Reduce junk mail*
  Call toll-free numbers and ask to be removed from mailing lists. Pay bills and get statements online.

- *Reuse everyday items*
  Reusing is even better than recycling because the item does not need to be reprocessed. Use cloth napkins, durable coffee mugs and bottles, rechargeable batteries, and refillable pens and pencils. Learn more at the Environmental Protection Agency (EPA).

With Your Voice

In addition to the actions you can take in your home and on the road, engaging in public decision-making is an important way to combat global climate change. Every day, on the local, state, and national levels, decisions are being made that can have a positive effect on combating climate change.

Learn what your local and national representatives are doing about global warming and let them know the issue is important to you. You can contact your national legislators at the House of Representatives and Senate.

Additional Resources

Visit these sites to learn more about your impact on global climate change and what you can do to reduce it:

- Alliance to Save Energy's Power$mart Guide
- Alliance to Save Energy's Tips for the Summer - Summer specific tips

- U.S. Department of Energy: Tips on Saving Energy and Money at Home (pdf)
  English Version
  Spanish Version

- U.S. Department of Energy Fuel Economy Site
- Energy Star Site: Help with Efficient Appliances and Equipment