

GLOBAL WARMING: Understanding the Forecast

What is Global Warming, Anyway?

Like the glass in a greenhouse, certain gases that occur naturally in the atmosphere tend to trap the sun's heat. This natural "greenhouse effect" helps keep the Earth's average temperature at a comfortable 60° F. Without these greenhouse gases, the Earth would be about 0° F, like a deep-frozen snowball.

But human activities are causing some greenhouse gases, such as carbon dioxide, to build up in the atmosphere. Whenever we burn fossil fuels (gasoline, oil, coal, or natural gas), more carbon dioxide is emitted to the atmosphere. Forest destruction and agriculture also release greenhouse gases.

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If we do not act to reduce our emissions of these heat-trapping gases, it is predicted that global average temperature could rise 3° to 8° F in the next 100 years. Just a few degrees' difference in the global average temperature can mean a major climate change. When the Earth was only 9° F colder, for example, what is now New York City was buried under 1000 feet of ice.

What Life Could Be Like in a Warmer World

Many plants and animals may not be able to adjust to the shifts in climate that a 3° to 8° global warming would bring, and human societies could face serious disruptions. Food crops such as corn are sensitive to heat and drought, and heat waves would be more severe. Atlanta, for example, now has about 10 days each year over 95°F. By the middle of the next century, 59 days a year could be that hot.

As ocean waters warm and expand and some glaciers melt, sea level may rise about 12 inches, flooding low-lying islands and coastal areas where millions of people now live. Powerful ocean storm surges would reach further inland, and hurricanes in some regions could become stronger and more frequent.

What We Can Do To Reduce the Risk of Global Warming


Global warming is not like turning on a heater; we can't just turn it off later if the Earth warms too fast for comfort. Once we emit greenhouse gases into the atmosphere, most of them remain there for decades, continuing to trap heat. If we wait until all the consequences become obvious, it could be too late to do much about them.


But we can act now to insure against the risk of disruptive future warming, by reducing our greenhouse gas emissions today. There are many practical options that will not only cut these emissions but also save money and reduce air pollution — *see the other side of this page.*




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A GREENHOUSE DIET

 Whenever you save energy — or use it more efficiently — you reduce the demand for gasoline, oil, coal, and natural gas. Less burning of these fossil fuels means lower emissions of carbon dioxide, the major contributor to global warming.

 Right now the U.S. releases about 40,000 pounds of carbon dioxide per person each year. If we can reduce energy use enough to lower greenhouse gas emissions by about 2% a year, in ten years we will “lose” about 7000 pounds of carbon dioxide emissions per person.

 Here are 20 simple steps that can help cut your annual emissions of carbon dioxide by thousands of pounds. The carbon dioxide reduction shown for each action is an average saving.

Home Appliances

1. Run your **dishwasher** only with a full load. Use the energy-saving setting to dry the dishes. Don't use heat when drying. *Carbon dioxide reduction: 200 pounds a year.*
2. **Wash clothes** in warm or cold water, not hot. *Carbon dioxide reduction: Up to 500 pounds a year for two loads a week.*
3. Turn down your **water heater** thermostat; 120 degrees is usually hot enough. *Carbon dioxide reduction: 500 pounds a year for each 10-degree adjustment.*

Home Heating and Cooling

4. **Don't overheat** or overcool rooms. Adjust your thermostat (lower in winter, higher in summer). *Carbon dioxide reduction: About 500 pounds a year for each 2-degree adjustment.*
5. Clean or replace **air filters** as recommended. Cleaning a dirty air conditioner filter can save 5 percent of the energy used. *Carbon dioxide reduction: About 175 pounds a year.*

Small Investments That Pay Off

6. Buy energy-efficient **compact fluorescent bulbs** for your most-used lights. *Carbon dioxide reduction: 250 pounds a year by replacing one frequently used bulb.*
7. Wrap your water heater in an **insulating jacket**. *Carbon dioxide reduction: Up to 1000 pounds a year.*
8. Install low-flow **shower heads** to use less hot water. *Carbon dioxide reduction: Up to 300 pounds a year.*
9. Caulk and **weatherstrip** around doors and windows to plug air leaks. *Carbon dioxide reduction: Up to 1000 pounds a year.*
10. Ask your utility company for a **home energy audit** to find out where your home is poorly insulated or energy-inefficient. *Carbon dioxide reduction: Potentially, thousands of pounds a year.*

Getting Around

11. Whenever possible, **walk, bike, carpool, or use mass transit**. *Carbon dioxide reduction: 22 pounds for every gallon of gasoline you save.*
12. When you buy a car, choose one that gets good **gas mileage**. *Carbon dioxide reduction: About 2500 pounds a year if your new car gets 10 mpg more than your old one.*

Reduce, Reuse, Recycle

13. **Reduce waste:** Buy minimally packaged goods; choose reusable products over disposable ones; recycle. *Carbon dioxide reduction: 1000 pounds a year if you cut down your garbage by 25%.*
14. If your car has an air conditioner, make sure its **coolant is recycled** whenever you have it serviced. *Equivalent carbon dioxide reduction: Thousands of pounds.*

Home Improvements

15. **Insulate** your walls and ceilings; this can save about 25 percent of home heating bills. *Carbon dioxide reduction: Up to 2000 pounds a year.*
16. If you need to replace your **windows**, install the best energy-saving models. *Carbon dioxide reduction: Up to 10,000 pounds a year.*
17. **Plant trees** next to your home and paint your home a light color if you live in a warm climate, or a dark color in a cold climate. *Carbon dioxide reduction: About 5000 pounds a year.*
18. As you replace home appliances, select the most **energy-efficient** models. *Carbon dioxide reduction: 3000 pounds a year if you replace your old refrigerator with an efficient model.*

Schools, Businesses, and Communities

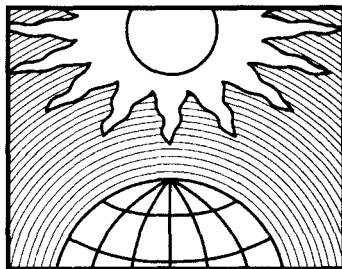
19. Reduce waste and promote energy-efficient measures at your **school or workplace**. Work in your community to set up recycling programs. *Carbon dioxide reduction: 4 pounds for every pound of office paper recycled.*
20. **Be informed** about environmental issues. Keep track of candidates' voting records and write or call to express concerns. *Carbon dioxide reduction: Billions of pounds if we vote to raise U.S. auto fuel efficiency.*

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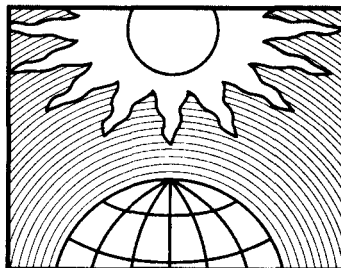
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