

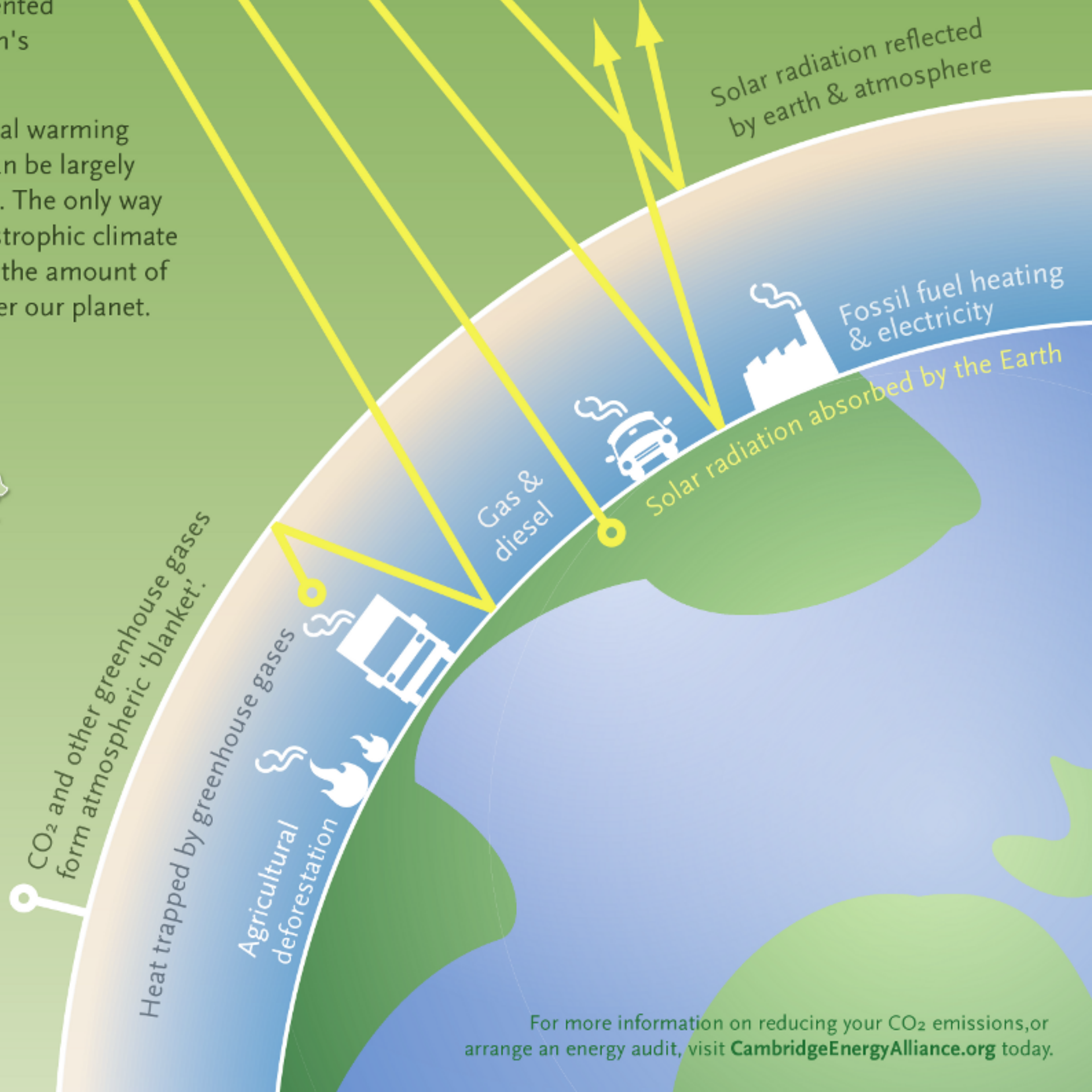
What is Climate Change?

Over 200 years of fossil fuel combustion and deforestation have radically increased the concentration of heat-trapping "**greenhouse gases**". As the level of CO₂ and other gases in our atmosphere increases, radiant heat is prevented from passing through the Earth's atmosphere back into space.

Scientifically documented global warming trends over the last 50 years can be largely attributed to human causation. The only way to prevent this leading to catastrophic climate change is to drastically reduce the amount of fossil-based fuels used to power our planet.

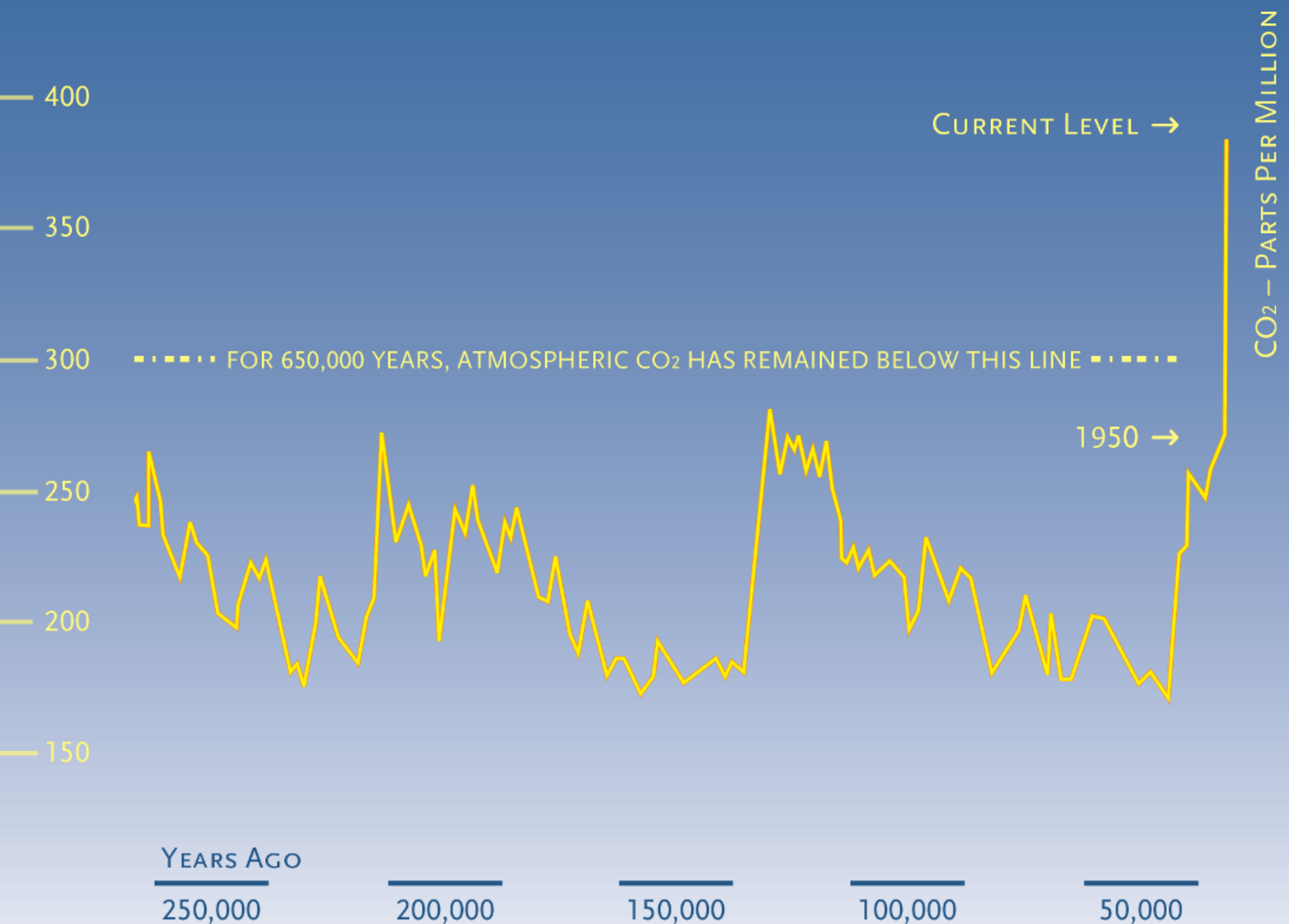
CARBON FACT

The U.S. emits more tons of CO₂ per capita than any other country in the world.



Climate Change by the Numbers

Global mean surface temperature has increased about 1.1°F (0.6°C) since the beginning of the 20th century.



CLIMATE TREND

The IPCC predicts if current climate trends continue, global surface temperatures may rise up to 10° F in the next 100 years.

The numbers don't lie: Every day, new stories surface about changes in animal and plant habitats due to climate change, along with increased incidents of extreme weather events like droughts and floods. Some figures, however, appear to be even more alarming.

Northern Hemisphere sea-ice has decreased 10-15% since the 1950s. Greenland's ice sheet is losing 50-100 billion tons of ice each year, equivalent to the weight of 41 billion cars.

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For more information on reducing your CO₂ emissions, or arrange an energy audit for your home or business, visit CambridgeEnergyAlliance.org today.

Climate Change: New England



The New England climate provides four distinct seasons and supports a rich variety of fruits, vegetables and other food crops.

Climate change will result in more frequent days with temperatures over 90°F. Rising sea temperatures and levels will lead to increased beach erosion.

Cod fish, a staple of the New England fishing industry for over 300 years, is expected to disappear from our waters this century.

By 2100, Massachusetts maple and birch forests will be reduced by more than 50%. Apple and cranberry production will dwindle due to fewer prolonged frosts and cold days.

TOMORROW'S FORECAST

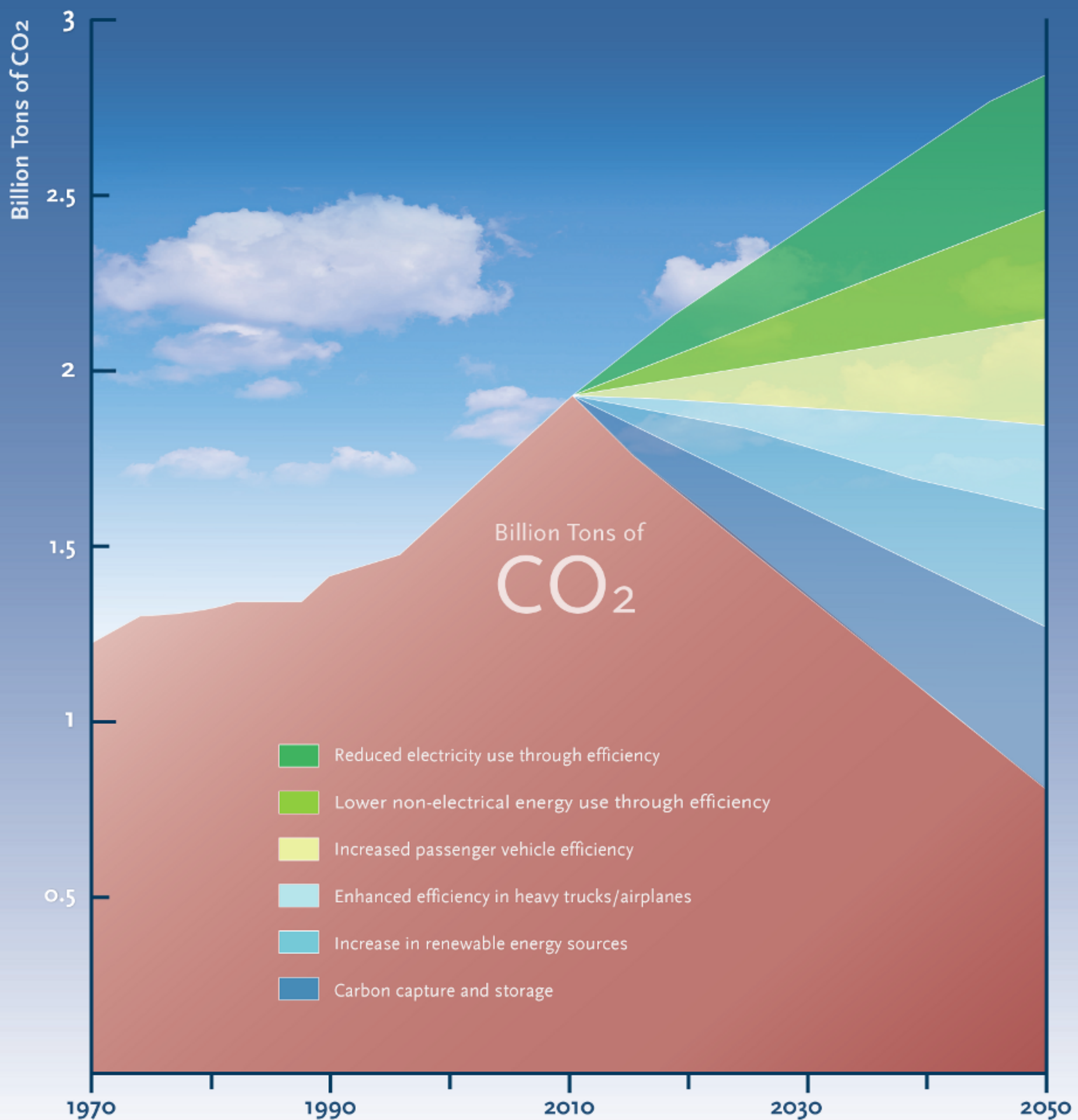
The International Panel on Climate Change predicts New England will experience increased flooding and storm surges as sea levels rise due to melting land ice.



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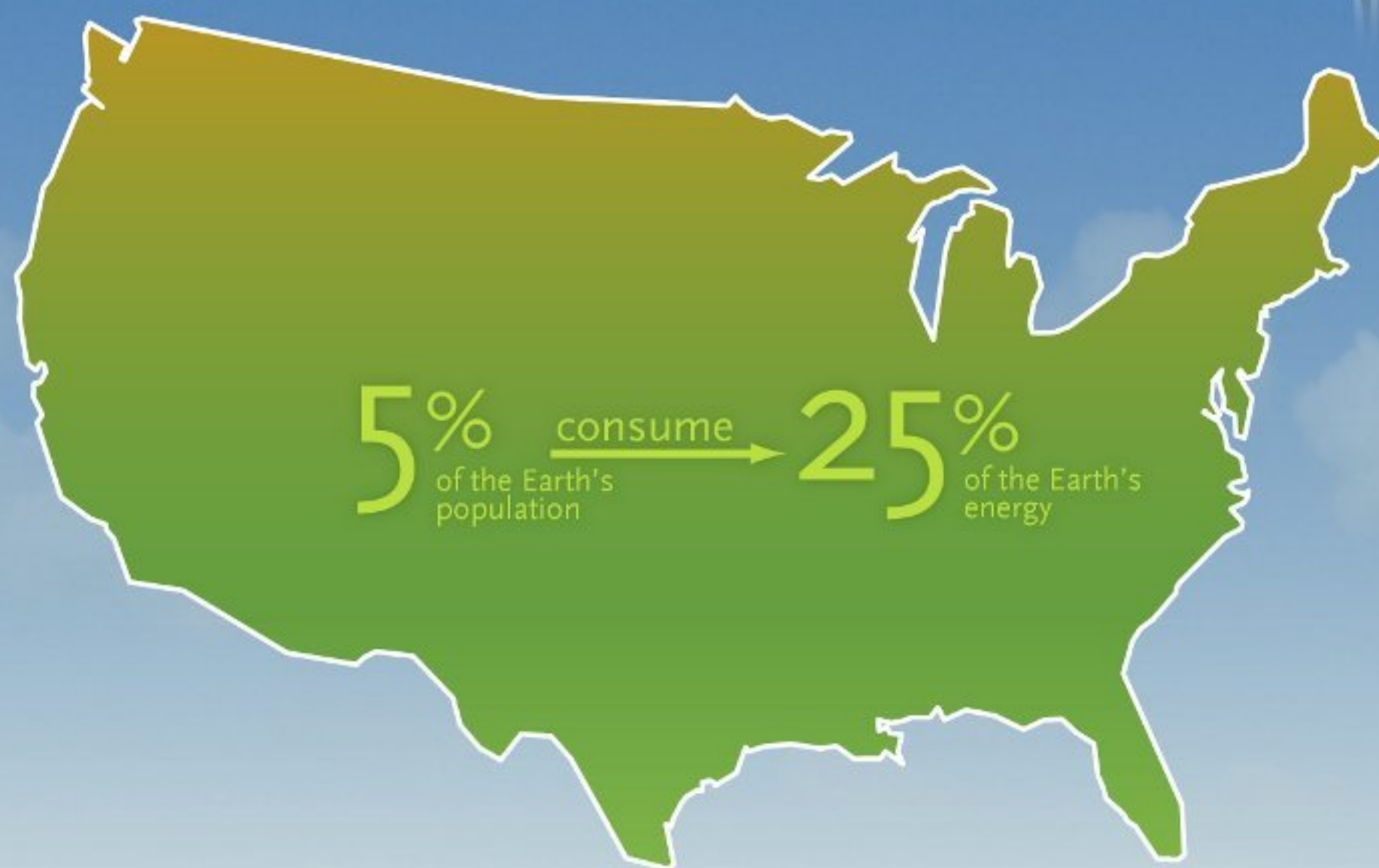
Cutting CO₂ Emissions in Half



To reduce the potentially catastrophic effects of global warming, we need to cut our carbon output by up to 80%. More than half the carbon reduction needed to mitigate climate change will come from increased efficiency.

50% of these gains can be achieved through more efficient use of our lighting, heating energy and appliances. Renewable energy resources will also contribute significantly to carbon stabilization and reduction.

U.S. Energy Consumption



Despite representing only 5% of the world's population, Americans have historically consumed 25% of the world's energy resources. We each use twice as much energy as a typical Japanese citizen—and 100 times more than the average Kenyan.

We consume over 19 million barrels of petroleum per day.

With the growth in energy demand from countries like China and India, the amount of CO₂ being released into the atmosphere is rising at an ever faster rate.

American leadership is critical in addressing the global climate change crisis.



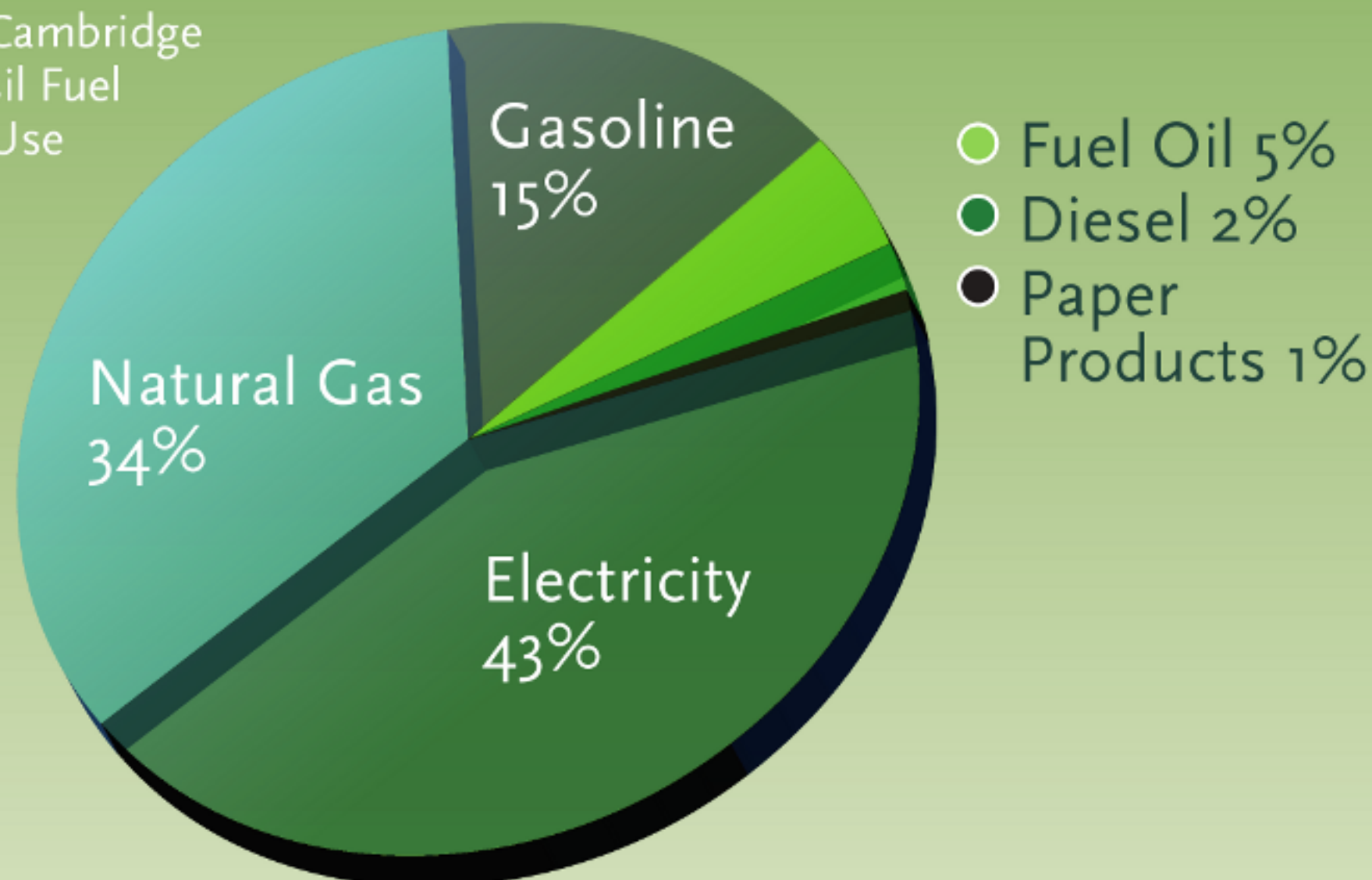
The US, Canada and Australia produce more than 20 tons of CO₂ per person every year.

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Electricity, Gas, Oil Diesel. How does Cambridge use Energy?

City of Cambridge
Fossil Fuel
Energy Use

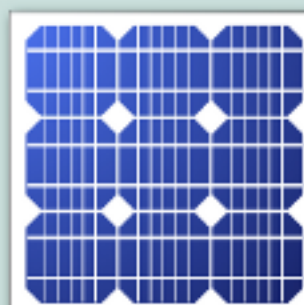


Over 80% of Cambridge's energy consumption comes from providing heating and electricity to homes and other buildings. Energy for transportation makes up 17% of all energy use.

Some city energy use trends are encouraging, while others provide cause for concern. The residential sector in Cambridge is responsible for 263,000 tons of CO₂ emissions per year—which represents a decline of 20% over the last 15 years. Meanwhile, carbon emissions from commercial and industrial operations have increased by over 22% since 1990.

No matter how each sector is doing, we each have a lot of work to do to meet the City's goal of 80% reduction in CO₂ emissions by 2050.

SOLAR FACT



Cambridge has 33 solar energy systems with 267 kW of electricity generating capacity. They reduce CO₂ emissions by 300 tons and save \$55,000 per year in electricity costs.

Cambridge takes Action

Climate Action Timeline:



For more information on reducing your CO2 emissions, or arrange an energy audit for your home or business, visit CambridgeEnergyAlliance.org today.

Energy Efficiency in the House




Energy efficiency is the easiest and cheapest way to reduce your energy use and energy bills.

A single compact fluorescent (CFL) bulb uses 75% less energy than a conventional incandescent bulb and will save \$30 in energy costs over its lifetime. Multiply that by the number of light fixtures in your home and the savings really add up. Plug your computers and electronics equipment into power strips so you can power down when not in use. Replacing air filters and tuning your HVAC system will greatly increase its efficiency.



Install a \$20 programmable thermostat on each level of your home and you'll save at least \$200 a year in heating costs, with no loss of comfort.

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How much heat can escape through your windows and walls?



Investing in energy efficiency improvements can save homeowners 30% on their annual utility bills. Just as important, you can reduce your household CO₂ emissions by 5 tons per year.



Energy use in homes represents 20% of all US carbon emissions. And poor insulation in windows, walls and attics accounts for up to 50% of energy wasted.


To find out where air is leaking from your home, have an energy auditor conduct a blower door test or perform an infrared scan of your living spaces.


Insulate walls and ceilings with high R-factor insulation. Window film is cheap and easy to install. It insulates and creates passive solar heat. Install programmable thermostats and keep the temperature below 68° in any unoccupied room.




Reducing your Carbon Footprint

If you're interested in reducing your carbon footprint here are a couple of things to keep in mind:

 Drink tap water instead of purchasing bottled water, buy local organic food and recycle as much as you can. Increase your energy efficiency with affordable home and office improvements.

 Walk, bike or take public transportation whenever possible.

 Investigate rebates, tax credits and other subsidies for solar and geothermal systems.

Just as important, there are dozens of local resources available to help with the things you can do to make a difference!



- > Look for the Energy Star label on all appliances
- > Find out which rebates and tax credits can subsidize Energy Star appliance upgrades for your home
- > Spend your energy savings on other ways to lower your CO₂ emissions

Stop Climate Change. Starting right here in Cambridge.



Whenever possible, take public transportation.



Walk or bike—there's over 37 miles of bike lanes in Cambridge.



Shop local and eat local to reduce your carbon load.

Cambridge is rated the 4th best walking city in the US, yet almost 20% of the city's emissions still come from fossil-fuel burning vehicles.

If you're serious about reducing CO₂ emissions inside and outside your home, start by addressing the 50% of energy

wasted due to poor home insulation with affordable window insulation kits.

To further reduce your carbon footprint, join NSTAR Green and half or all of your electricity use will support wind power. Go to www.nstaronline.com for more details and get involved in your community!



Audits. Retrofits. Financing + You.

The **Cambridge Energy Alliance** (CEA) helps government, business and non-profit organizations work together to increase energy efficiency and reduce carbon emissions within the City of Cambridge.

We partner with organizations to provide low-cost and free residential and business energy audits, along with the knowledge and expertise you need to make energy improvements to your home or business.

CONTACT DETAILS

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NSTAR
www.nstar.com
info@nstar.com

CEA works with a number of local banks to provide a simple application process and low-cost financing for energy efficient retrofits. We also help to identify your eligibility for rebates, tax breaks and subsidies. Our goal is to increase the affordability of energy efficiency while reducing greenhouse gas emissions within our city.

Visit our website or contact us today and get better informed on your energy use.

INFORMATION RESOURCES

Intergovernmental Panel on Climate Change:
www.ipcc.ch

Energy Star:
www.energystar.gov

City of Cambridge Climate Plan:
www.cambridgema.gov/climate

Energy Saving Tip

Up to 70% of energy use by appliances happens while they're not being used. To prevent 'phantom' energy use, plug appliances into surge protectors and turn off.



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