

Global Warming on the Road

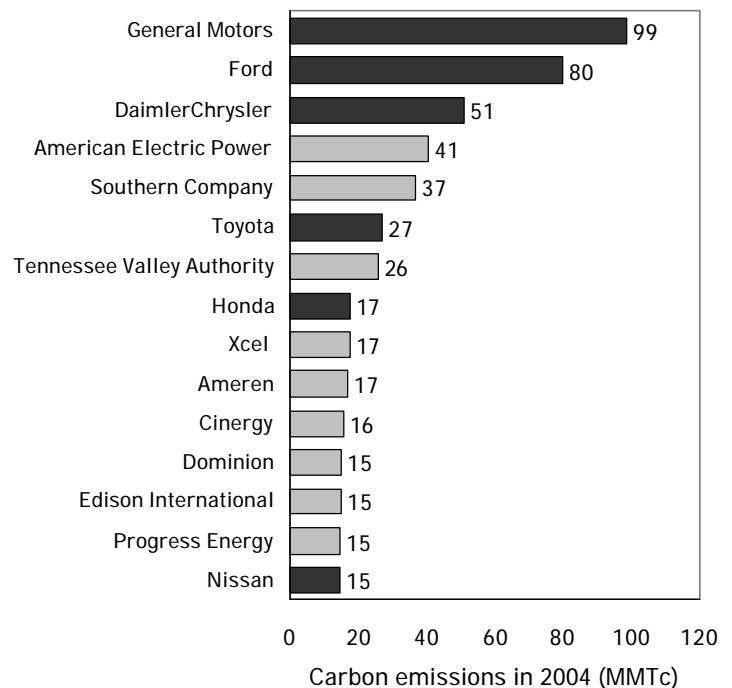
THE CLIMATE IMPACT OF AMERICA'S AUTOMOBILES

A new Environmental Defense study, *Global Warming on the Road*, provides a first-ever detailed look at the global warming pollution from all the automobiles on America's roads, from the latest luxury SUV in the suburbs to the oldest pickup on a rural lane. While most analyses have focused on new cars, we calculate what we call *rolling carbon*—the carbon dioxide (CO₂) emissions from all cars and light trucks on the road, both new and used. We tally it in two ways, by car company and by type of vehicle. The results are eye-opening.

Comparing the carbon impacts of car companies and power companies

- The carbon from vehicles built by the Big 3 (General Motors, Ford and DaimlerChrysler) each exceed the total CO₂ emissions from one of the nation's largest electric power companies, American Electric Power (AEP).
- Emissions from Toyota's products, fourth among automakers, edge out those from the Tennessee Valley Authority (TVA), third among power companies.
- Total U.S. automobile CO₂ emissions were 314 MMTc (million metric tons carbon-equivalent) in 2004. That's the amount of carbon in a coal train 50,000 miles long—enough to circle twice around the world.

Automakers vs. electric utilities: a surprising result



It's all about the numbers: many cars, many years on the road

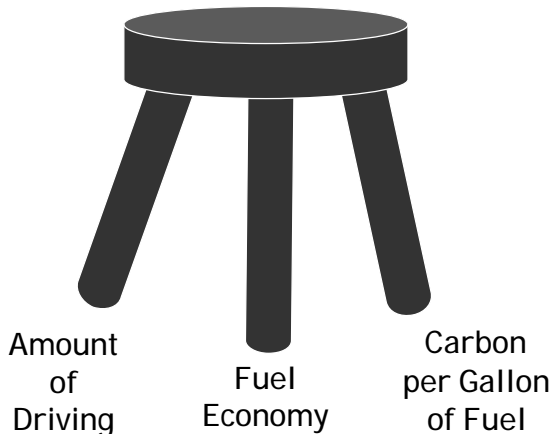
- *Vehicles stay on the road for a long time.* Another eye-opener is the fact that small cars (i.e., compacts and subcompacts) still accounted for the greatest portion (25%) of on-road CO₂ emissions, 77 MMTc as of 2004. Small cars were once top-sellers and their large share of rolling carbon is a testament to how long motor vehicles remain on the road.

- *The newest vehicles are not kind to the atmosphere.* With personal trucks leading the charge, the average new car emits more CO₂ than many older cars still in use. Thus, "cash for clunkers" concepts don't work for the climate problem. Ridding the road of high carbon emitters would mean scrapping the newest Cadillac Escalades rather than 15-year-old Buick LeSabres.
- *SUVs are now in second place but will soon be the main source of rolling carbon.* America's SUVs emitted 67 MMTc (21% of all auto emissions) in 2004, equivalent to the CO₂ emissions from 55 large coal-fired power plants. With their sales having overtaken those of small cars in 2002, SUVs will remain a dominant cause of global warming on the road for years to come.

Solving the car-climate problem

However you count them, auto emissions are big. An impact of this magnitude is a product of several factors. The main factors behind rolling carbon can be seen as a three-legged stool.

Total CO₂ Emissions from Cars



- *Amount of driving.* U.S. cars and light trucks traveled 2.6 trillion miles in 2004. That's like taking 10 million trips from the earth to the moon.
- *Fuel economy.* U.S. autos had an average fuel economy of 19.6 miles per gallon in 2004. That means that on average, each car burns just over 600 gallons of gasoline per year.
- *Carbon in the gas tank.* Gasoline contains 5.3 pounds of carbon per gallon, essentially all of which ends up in the atmosphere as CO₂ when the fuel is burned. Thus, the average U.S. car puts over a ton and a half of carbon into the air each year.

Cutting automotive CO₂ emissions means finding ways to shorten each leg of the stool. A focus on one "leg" at the expense of the others will fail to solve the problem.

What does this mean, practically? Automakers can sell vehicles that burn less fuel. Consumers need to make fuel economy a purchase priority. Energy industries need to supply low-carbon fuels. And the net benefits of increasing fuel economy or switching to low-carbon fuels ultimately hinge on how well state and local officials pursue smarter land use and offer more efficient options for travel. The legs of the stool are independent, but a complete solution depends on all of them. Moreover, the longevity of vehicles means we need to act now.

In short, reducing global warming on the road is a shared responsibility. By underscoring the magnitude of automotive CO₂ emissions, this report highlights the fact that all actors—automakers, fuel providers, consumers and various levels of government—have roles to play in solving the problem. By working together to address transportation CO₂ emissions in a comprehensive fashion, Americans can reduce global warming on the road, protecting the planet while at the same time reducing our country's dependence on oil.