

# Railroads: Green From the Start

ASSOCIATION OF AMERICAN RAILROADS

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## Summary

With railroads, affordable transportation and environmental responsibility go hand in hand. In fact, railroads are **the** environmentally-friendly way to move freight, thanks to their unique ability to fight highway gridlock, lower fuel consumption, reduce greenhouse gas emissions, and reduce pollution. Through the development of new “green” technologies and environmentally-responsible operating practices, railroads are committed to even greater environmental excellence in the years ahead.

## Freight Railroads = Fuel Efficiency

- Dictionaries should show a picture of a locomotive next to the word “efficient.” In 2008, U.S. freight railroads moved a ton of freight an average of **457 miles per gallon** (up from **436** in 2007) Rail fuel efficiency is up 94 percent since 1980.
- Railroads are three or more times more fuel efficient than trucks. If just 10 percent of the long-distance freight that moves by truck moved by rail instead, estimated fuel savings would exceed a **billion gallons per year**. This is exactly the kind of solution to energy problems that America is looking for.
- Since 1980, railroads have nearly **doubled** how much freight they move — while using virtually the **same amount of fuel!** What other industry has doubled its output without using more fuel?
- Railroads aren’t satisfied, though — they’re constantly searching for new ways to save fuel. They’ve acquired thousands of new energy-efficient locomotives, including hybrids and modern “gensets” that have several independent engines that turn on and off depending on need. Railroads are also adopting innovative new technologies, such as hyper-intelligent computer systems that use a train’s weight and location to calculate the most fuel-efficient speed.

**A freight train hauls one ton of freight an average of 457 miles on one gallon of fuel – more than three times farther than a truck.**

Gallons of Fuel Consumed Hauling One Ton of Freight Coast-to-Coast:

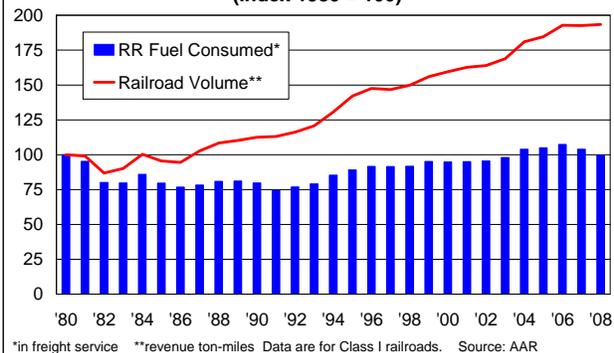
Trains: 7 gallons

Trucks: 27 gallons\*



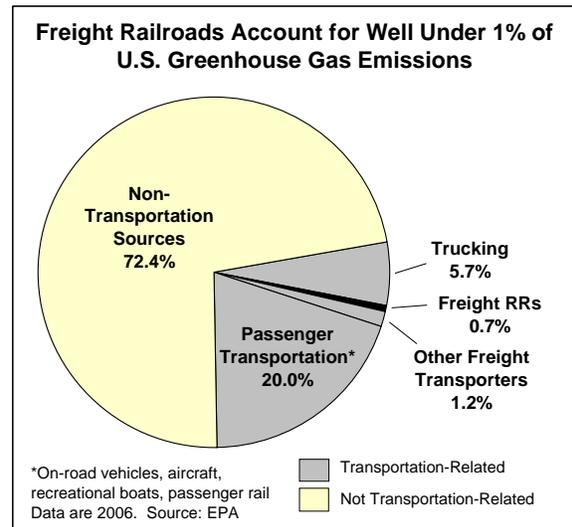
\*AAR estimate based on U.S. DOT data.

**Since 1980, Rail Freight Volume Has Nearly Doubled But Rail Fuel Consumption Is Only Slightly Higher (Index 1980 = 100)**



## Freight Railroads = Lower Greenhouse Gas Emissions

- Greenhouse gas emissions are directly related to fuel consumption. That means that **moving freight by rail instead of truck reduces greenhouse gas emissions by two-thirds or more.** If just 10 percent of long-distance freight now moving by truck moved by rail instead, annual greenhouse gas emissions would fall by more than 12 million tons. That's equivalent to taking **2 million cars off the road** or **planting 280 million trees.**
- America's seven largest freight railroads have all joined the Environmental Protection Agency's "SmartWay Transport," a voluntary partnership aimed at improving fuel efficiency and reducing greenhouse gas emissions.



## Freight Railroads = Less Highway Gridlock

- Because a freight train can do the work of **280 or more trucks**, railroads help fight highway gridlock. In a very real way, freight rail gives back one of the most valuable assets of all — time.
- Railroads also **reduce the huge economic costs** of highway gridlock. According to the [2009 Urban Mobility Report](#) published by the Texas Transportation Institute, highway congestion in the United States costs us \$87 billion just in wasted travel time (4.2 billion hours, or nearly a full week for every traveler) and wasted fuel (2.8 billion gallons, or three weeks' worth of gas for every traveler) per year. Lost productivity, cargo delays, and other costs add tens of billions of dollars to this tab.
- **Relief** for highway gridlock **is right in front of us** — but it's not on the highway. Shifting freight from trucks to rail reduces the pressure to build costly new roads and helps cut the cost of maintaining the roads we already have.

## Freight Railroads = Emissions Control

- We can all breathe easier with rail — literally. Moving freight by rail rather than truck significantly reduces emissions, and that means cleaner air for all of us.
- In March 2008, the EPA issued — and the rail industry immediately endorsed — stringent new locomotive emissions standards that will **cut** particulate emissions by up to **90 percent** and nitrogen oxide emissions by up to **80 percent**. The new standards will also yield big reductions in emissions of other harmful pollutants.
- Numerous environmental groups have praised the new standards. For example, the Natural Resources Defense Council calls them “a **strong program** that will go a long way towards solving the problem of diesel train and ship pollution in the future.”