

Passenger Trains: An Energy and Climate Solution

Modern passenger rail can carry large numbers of people longer and faster, more efficiently than ever before. Whether using fuel-efficient diesel engines or electrified train corridors, passenger rail does more to mitigate air pollution than automobiles or aircraft. Properly funded and developed, energy-efficient rail networks can help cut fuel use by the transportation sector, and lower carbon emissions.

These figures have only been highlighted by recent developments in the international energy market. In 2020, petroleum products accounted for about 90% of the total U.S. transportation sector energy use (Source: EIA). Any effective national policy for energy independence will require diversifying our transportation network and investing in energy-efficient, electrified passenger rail.

Energy Efficient Mass Transit

Transit rail is:

70% more energy efficient per passenger-mile than cars

74% more energy efficient than light trucks

- Mass transit saves the U.S. 6 billion gallons of gasoline annually (APTA)
- Mass transit reduces carbon emissions in the U.S. by 63 million metric tons annually (APTA)
- 3.3 billion gallons of fuel are wasted in traffic congestion in an avg. year (TTI)
- Transportation accounts for about 29% of US greenhouse gas emissions (EPA)
- Individuals can avoid driving 4,400 miles each year by taking public transportation

Smaller Footprint

- It takes 16 lanes of highway to carry as many people per hour as just a single two-track railroad.
- Railroads reduce the amount of paved surface required for transportation. Serious degradation of aquatic ecosystems occurs when more than 10% of a watershed is paved.
- 300 miles of railroad uses less land than a single commercial airport.



A two-track railroad can carry as many people in an hour as would require 16 lanes of highway if each person drove solo.



Passenger Trains are the Green Travel Option

Amtrak travel produces up to 83% fewer greenhouse gas emissions than driving and up to 73% fewer emissions than flying.

The most effective national policy for reducing harmful pollution is to allow consumers to choose to travel by train instead of on crowded highways and airports.

Innovative equipment helps Amtrak find solutions for energy efficiency:

Amtrak trains are: 53% more energy efficient per passenger-mile than light trucks 45% more energy efficient than automobiles 34% more energy efficient than domestic airline travel

Amtrak has reduced its greenhouse gas emissions by 20% over the past decade—the equivalent of removing 51,251 passenger vehicles from the road.

By investing in modern equipment and facilities, Amtrak will be able to further reduce greenhouse gas emissions by 40% over the next decade.

Amtrak Helps Mitigate Direct and Indirect Air Pollution:

- Running electric locomotives on the Northeast Corridor and fuel-efficient diesels elsewhere
- Removing tens of millions of passengers a year from highways and airports
- Encouraging denser development around many of its stations
- Adding to the appeal and cost-effectiveness of local and regional rail travel by serving passengers, making connections and sharing facilities