

The links between federal transportation policy and climate change

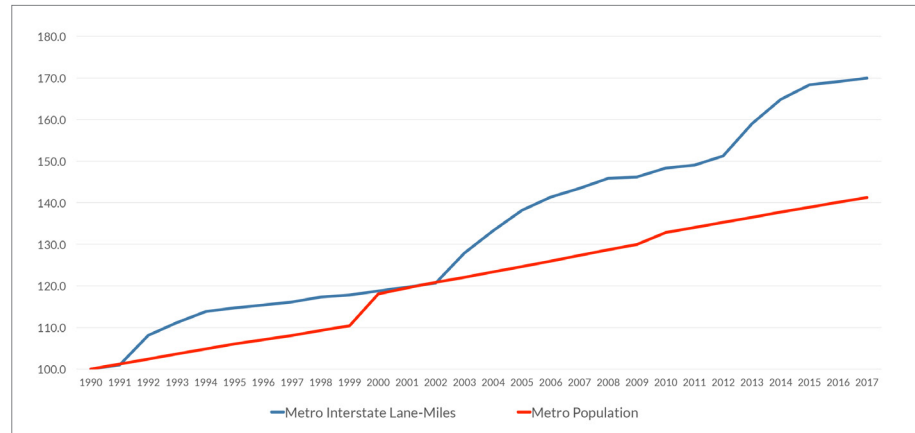
Transportation is now the single largest source of greenhouse gases (GHG), contributing 28 percent of the United States' total GHG emissions, surpassing electrical generation.¹ While many other sectors have actually improved, transportation is headed in the wrong direction.

Why are transportation emissions growing, and where do the bulk of them come from?

Driving represents 83 percent of all transportation emissions and these emissions are rising—despite more efficient vehicles and cleaner fuels—because people are forced to make more and longer trips.^{2,3,4} Transportation emissions are the result of a combination of three things: vehicle efficiency, the carbon content of fuel, and the distance people travel (vehicle miles traveled, or VMT). Gains in two of these areas could be negated by losses in the third. That's where we find ourselves today as transportation emissions continue to grow. Why?

Federal transportation programs were designed to support and encourage long distance driving. The Interstates were intended to connect cities to one another and to create access to rural areas. Even with the interstate system completed, the federal transportation program continues a singular focus on highway expansion, rewarding the states that expand the most with more federal funding. With new roads subsidized by the federal government, localities struggle to stay ahead of development that spreads further from the center of metro areas, forcing people to travel further to access jobs and services.

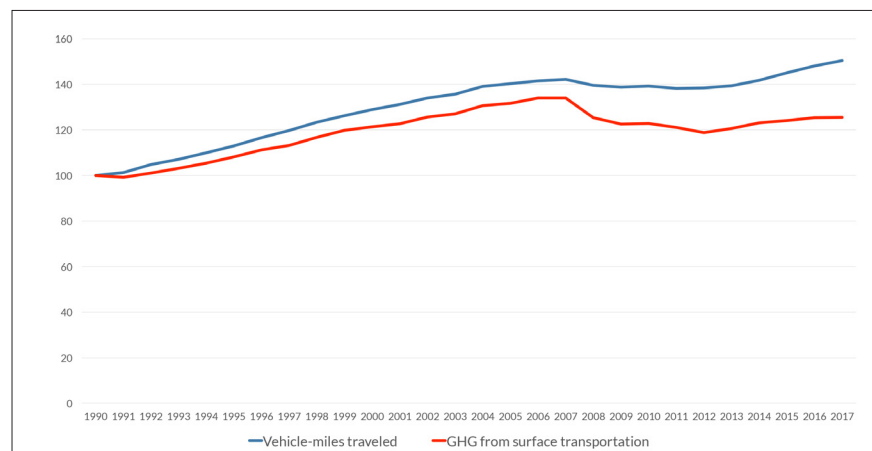
The resulting growth in driving and congestion leads to a demand for more roads, which induces even more driving.⁵ The U.S. has added metro Interstate lane miles faster than our



metro population has grown. This strategy has failed to “solve” traffic congestion and has significantly increased greenhouse gas emissions, offsetting the modest gains made in vehicle efficiency and cleaner fuel.⁶

States are starting to see that they can't reach their climate goals without reducing driving:

The State of Minnesota recently found that, “the average Minnesotan would have to drive an estimated 1,500 fewer miles per year” to achieve its climate goals.⁷ The State of California found that, even after a ten-fold increase in the number of zero emission vehicles, it would have to reduce VMT per capita by 25 percent to achieve its climate goals.⁸ Hawaii came to a similar conclusion.⁹



Existing federal transportation policy makes this problem worse

We subsidize driving and fail to provide other choices

- 80 percent of federal transportation formula funding is for roads. Though they are permitted to, states rarely use these funds for other purposes and there is no requirement to prioritize maintenance first.
- States are rewarded with more federal funds for burning more fuel, increasing vehicle miles traveled and building new lane-miles with larger amounts of federal funding.
- Often, state and local authorities use funding intended to make walking or bicycling safer for roadways instead.¹⁰

It is far easier to build roads than transit

- Funding for new roads is guaranteed through the highway trust fund. Funding for new transit is discretionary and has been repeatedly targeted for cuts or outright elimination.
- The federal government will only cover up to about 50 percent of the cost of new transit projects, while covering around 80 percent of the cost of new roads.

We ask the wrong questions and fail to hold agencies accountable

- Because free flowing traffic is considered the gold standard, roads are built to ensure traffic flows quickly. This means that a long-distance commute where a car moves very quickly would be considered more successful than a far shorter commute at a slower speed in traffic. Designing roads with speed as the highest goal is what leads us to more and wider roads, and more and longer trips. Instead, roads should be considered as part of a network which is judged on whether people can reach jobs and services by any mode of travel, not the simplistic measure of whether some of them travel at high speed when driving.
- In 2012, Congress gave states more discretion over spending in exchange for a weak, opaque system of accountability in which states are required to set targets for transportation safety, state of repair and traffic movement. These targets can be negative (e.g., a safety target of increasing roadway deaths) with no rewards for hitting targets nor penalties for missing them. After seven years most of those targets are still not public. There are also no requirements for states or communities to measure and report the GHG emissions and VMT per capita effects of their transportation investments.

1 <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

2 Figure does not include the substantial GHG from cement-making and other elements of road construction. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100USI5.pdf>

3 <https://rhg.com/research/preliminary-us-emissions-estimates-for-2018/>

4 Pie chart source: VMT and GHG trends, starting from 1990. Sources: EPA, FHWA.

5 http://www.dot.ca.gov/newtech/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf

6 1] Relationships between highway capacity and induced vehicle travel Robert B. Noland *

7 <https://www.minnpost.com/environment/2019/01/minnesota-has-done-a-pretty-good-job-reducing-greenhouse-gas-emissions-from-electricity-generation-reducing-emissions-from-transportation-could-be-harder/>

8 https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf

9 <https://rhg.com/research/transcending-oil-hawaiis-path-to-a-clean-energy-economy/>

10 <https://usa.streetsblog.org/2019/01/31/rhode-island-looting-biking-and-walking-funds-for-highways/>