

How federal transportation policy can address climate change

The US surface transportation program is designed to promote long distance driving, virtually guaranteeing an increase in greenhouse gas emissions from transportation. Among other incentives, its funding formulas reward the states that use their money to increase driving and build new roads. Here are four ways that Congress should make changes to align its transportation funding with its efficiency and climate goals.

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 Transportation has now surpassed electrical generation as the top GHG emitter.

Where do the bulk of transportation emissions come from, and why are they growing? Driving represents 83 percent of all transportation emissions and these emissions are rising—despite more efficient vehicles and cleaner fuels—because people are driving more and making longer trips.^{2,3,4} **Transportation emissions are the result of a combination of:** 1) vehicle efficiency, 2) the carbon content of fuel, and 3) the distance people travel (vehicle miles traveled, or VMT). Even if you make gains in two of these areas, losses in a third can negate any improvements, and that's where we find ourselves today as transportation emissions continue to grow.

Federal transportation policy solutions to address climate change

1) Incentivize transportation choice

To reduce emissions, we must allow people to take fewer and shorter car trips by giving people transportation choices other than driving, such as transit, walking, and biking. Today, the transportation market is distorted because federal policy incentivizes the construction of auto-only communities and limits transportation choices. Instead, federal policy should incentivize states and local communities to invest in projects that provide people with transportation choices other than a car trip.

- **All modes should receive the same federal share.** Currently, the federal government will fund up to 80 percent of a road project (even 90 percent in limited cases), while it will only fund up to 50 percent of a transit project.
- **Reform federal funding distribution.** Currently, each state receives dedicated road funding through the highway trust fund formulas, which increases as states increase their VMT. New public transit, bike and pedestrian infrastructure funds are either discretionary (transit Capital Investment Grant program), or an underused option within roadway funding (eg. Transportation Alternatives Program and Surface Transportation Block Grant). Congress could organize the formula funding around efficiency goals and make create more parity between the modes.
- **Prioritize maintenance with formula road funding.** Historically, states have used this formula funding for new road construction, encouraging far-flung auto-oriented development that increases the length and number of car trips. The program should focus on getting greater efficiency from the roads we have already built.

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2) Measure the right things

Communities need accurate tools to make informed choices. So what should we measure and replace?

- **Measure GHG and VMT per capita.**
In 2012, Congress gave states wide discretion over spending in exchange for a weak, opaque system of accountability. States are required to set targets for transportation safety, state of repair and traffic movement, but the targets can be negative (e.g., a safety target of more roadway deaths) with no rewards for hitting targets nor penalties for missing them. After seven years most of those targets are still not public. Further, states are not measuring the right things. States and communities should measure and report the GHG emissions and VMT per capita effects of their transportation investments.
- **Measure how well the transportation system connects people to destinations.**
Roadways are designed to move cars quickly and around the assumption that there will always be more traffic, a self-fulfilling prophecy that leads to more and wider roads. Instead of measuring speed and traffic flow on roads, we should measure how the system, and any new investment, connects people to jobs and services by all modes of travel.

3) Set climate goals and penalties for failure to achieve goals

The federal government should set GHG and VMT per capita reduction goals and require all states to implement policies to achieve these goals. States failing to achieve their goals should be penalized. States that exceed goals should be rewarded.

4) Align new construction with GHG goals

In the transit program, new capacity projects have to compete for funding and successful projects must demonstrate that they advance national and local goals, including environmental benefits and economic development. There is no such standard for new highway projects. Congress should require funding for new highway capacity to compete for funding, and preference should be given for projects that reduce GHG emissions and VMT per capita.

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=P100US15.pdf>

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

4 Figure 1. VMT and GHG trends, starting from 1990. Sources: EPA, FHWA.