

Report presents best policy options to reduce petroleum use

June 23 2011

It will take more than tougher fuel economy standards for U.S. transportation to significantly cut its oil use over the next half century. It will likely require a combination of measures that foster consumer and supplier interest in vehicle fuel economy, alternative fuels, and a more efficient transportation system, says a new report from the National Research Council. Public interest in reducing the cost of securing the nation's energy supplies, curbing emissions of carbon dioxide and other greenhouse gases (GHGs), and improving transportation operations could motivate such varied actions.

"It is not simply a matter of choosing a single best policy," said Emil Frankel, director of transportation policy, Bipartisan Policy Center, Washington, D.C., and chair of the committee that wrote the report. "Decisions about whether and how to reduce transportation's use of oil will require officials to consider a range of options."

The U.S. [transportation sector](#) accounts for more than two-thirds of the nation's oil use and about 25 percent of its [carbon dioxide emissions](#). Federal regulations over the past 40 years such as [fuel economy standards](#) have helped the transportation sector make significant gains in controlling its oil use and emissions. However, these measures are likely to do little more than temper growth in the sector's carbon dioxide emissions and demand for oil over the next several decades, the committee said.

To achieve earlier, larger, and sustained gains, a longer-term strategy

involving a mix of policy measures and impacts on [transportation energy](#) demand and supplies is needed. The report was developed to inform policymakers of the pros and cons of available policy options to reduce [energy use](#) and emissions over time from cars, trucks, and aircraft -- the U.S. transportation modes that collectively account for 95 percent of transportation oil use.

The [policy options](#) examined in the report include a range of approaches but are not ranked in any particular order:

- land-use and travel-demand management measures aimed at curbing household vehicle use
- low-carbon standards for transportation fuels
- public investments in transportation infrastructure to increase vehicle operating efficiencies
- transportation fuel taxes
- vehicle efficiency standards, "feebates," and other financial incentives to motivate interest in vehicle efficiency

Because some of the policies are market and demand oriented, others regulatory, and others hybrids of the two, they produce different responses from users and suppliers of transportation vehicles and fuels. They also have different track records of implementation and thus differing prospects for early application.

The report says that any serious actions must ultimately cut the amount of oil used and GHGs emitted from the nation's 225 million cars and light trucks. Policymakers need to look beyond measures that center

largely on suppliers of vehicles and fuels and adopt policies that will also cause consumers to respond with strong and sustained interest in saving energy and lowering emissions.

In assessing opportunities for policy, the report says fuel taxes have both the greatest applicability across modes and the widest scope of impact. Raising fuel prices can lead to increased consumer and supplier interest in more fuel-efficient vehicles and operations. It can also reduce the total amount of energy-intensive travel by making it more expensive.

However, political resistance to fuel taxes is high. The federal gas tax, approximately 18 cents per gallon, has not been raised since 1993. To make this a more viable option over time, pursuing innovative ways to use the new tax dollars could help spur and sustain public support.

The committee said that vehicle standards with a more focused impact on vehicle energy and emissions performance have the advantage of familiarity and public acceptance. This advantage is important because it can mean early savings in oil use and emissions. Purchase incentive programs that impose fees on inefficient vehicles to fund rebates on efficient ones -- known as feebates -- may ultimately motivate consumers to buy the newer designs. However, neither efficiency standards nor such purchase incentives will prompt vehicle users to engage in more energy-efficient operations, such as driving less or carpooling more.

Creating an environment less dependent on private vehicles may pay dividends by reducing the total demand for vehicle travel, but this may take decades to bring about through land-use planning and controls. In the meantime, public investment in infrastructure for highways, airways, and waterways can make transportation more efficient while reducing system delays and congestion. These operational benefits may be politically palatable ways to save energy and emissions in the near term,

especially if consumers face higher energy prices down the road.

Provided by National Academy of Sciences

Citation: Report presents best policy options to reduce petroleum use (2011, June 23) retrieved 26 April 2024 from <https://phys.org/news/2011-06-policy-options-petroleum.html>

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