

## REDUCING GASOLINE CONSUMPTION: THREE POLICY OPTIONS

Lawmakers and public interest groups concerned about U.S. energy security and carbon dioxide emissions have proposed policies to reduce gasoline consumption. Those policies include raising the corporate average fuel economy (CAFE) standards that govern cars and light trucks, increasing the federal tax on gasoline, and setting a limit on carbon emissions from gasoline use and requiring gasoline producers to hold allowances for those emissions (a policy known as a cap-and-trade program).

This study weighs the relative merits of those three policies against several major criteria: whether they would minimize costs to producers and consumers; how reliably they would achieve a given reduction in gasoline use; their implications for the safety of driving; and their effects on such factors as traffic congestion, requirements for highway construction, and emissions of air pollutants other than carbon dioxide. The analysis examines two additional policy implications that lawmakers may be concerned about: the impact on people at different income levels and in different parts of the country, and the effects on federal revenue.

The three policy options would all lead to reductions in gasoline consumption, but they would measure up differently according to those criteria.

- Raising the gasoline tax would be cost-effective in that it would minimize the decline in corporate profits and consumers' welfare that would result from lower gasoline consumption. The reason is that a tax increase would provide an equal incentive for producers and consumers to undertake all possible activities to save gasoline, rather than focusing on just a few activities (such as improving the fuel economy of vehicles). By discouraging driving, a higher gasoline tax would also tend to decrease various driving-related external costs, such as traffic congestion, the need to build and maintain highways, and emissions of various vehicle pollutants. However, a tax increase would not reliably ensure a given reduction in gasoline use; it would have to be modified over time to achieve the desired reduction. Moreover, available research does not indicate how raising the gasoline tax would affect the safety of driving.

Studies provide conflicting evidence about how the cost of a higher federal gasoline tax would be distributed among households at different income levels, but they do find that cost increases would be higher for rural households than for urban ones. Regardless of how those costs were distributed, a rise in the gasoline tax would boost federal revenue. The government could use that revenue in various ways, which would have differing effects on the economy as well as different distributional consequences.

- A cap-and-trade program could be constructed that would be just as cost-effective as a higher gasoline tax and would reduce driving-related external costs to the same degree. Depending on how the program was designed, however, it could differ from a tax increase in how predictably it would deliver a specific reduction in gasoline use, its distributional effects, and its impact on federal revenue. No research is available on the safety implications of a cap-and-trade program.

- Raising CAFE standards would not be a particularly cost-effective way to reduce gasoline consumption because it would rely on improving the fuel efficiency of passenger vehicles and would fail to discourage driving. In fact, by lowering the cost of operating a vehicle, higher CAFE standards could encourage people to drive more, which could increase congestion. In addition, under the standards' current design, automakers could use unproductive compliance methods that would impose costs on producers or consumers but not reduce gasoline consumption. An increase in CAFE standards would be more reliable than a tax increase in achieving a specific amount of gasoline savings, but it would be less reliable than a cap-and-trade program.

The effect of CAFE standards on safety is a controversial topic. Most members of a National Research Council committee recently concluded that the decline in the weight and size of cars that has accompanied CAFE standards has led to more vehicle fatalities. The committee proposed an alternative design for those standards that would address safety concerns.

Higher CAFE standards would lead to lower revenue from the federal gasoline tax. No information is available, however, about the possible distributional effects of raising fuel economy standards.

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