



In the United States, fuel taxes have long been used almost exclusively for maintaining the road infrastructure. However, U.S. fuel taxes per vehicle-mile have declined by more than half in absolute terms and as a portion of total fuel costs between 1960 and 2004, due to inflation and increased vehicle fuel efficiency. Because of this, many jurisdictions are no longer able to properly maintain their transportation network. Increasing fuel taxes is one manner in which to raise funds in order to restore and expand the transportation infrastructure.

Beyond the current infrastructure concerns, fuel taxes also have environmental benefits. Compared to other environmental tax structures, the fuel tax is simple to implement and maintain. And when introduced in conjunction with other tax legislation, the overall tax impact on the consumer can be marginalized.

### **Raising Fuel Taxes Increases Efficiency**

According to the CBO, burning a gallon of gasoline releases 8.9 kilograms of carbon dioxide into the atmosphere.<sup>1</sup> Currently carbon dioxide emissions are unregulated. Reductions in gasoline consumption would lead to roughly proportional reductions in carbon emissions.<sup>2</sup> By CBO's estimate, increasing the federal tax on gasoline by 46 cents per gallon would achieve a 10 percent reduction in gasoline consumption in the long run (once all existing vehicles were retired).<sup>3</sup>

Another study noted a 10% price increase typically reduces fuel consumption by about 3% within one year and 7% over a five to ten year period. One third of these savings are a result of reduced driving while two-thirds are a result of increased use of fuel-efficient vehicles.<sup>4</sup> In addition to carbon emission reductions, a higher gasoline tax would tend to decrease congestion, road construction and maintenance, and emissions of regulated pollutants by discouraging driving.<sup>5</sup> Further, a decline in regulated pollutants would occur even in the face of increased driving.<sup>6</sup>

It should be noted fuel tax increases would not have a big impact on the level of congestion. But, the CBO notes, "even small policy-induced changes in the amount of driving could have significant economic costs".<sup>7</sup>

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<sup>1</sup> <http://www.cbo.gov/ftpdoc.cfm?index=3991&type=0&sequence=2>

<sup>2</sup> See id.

<sup>3</sup> <http://www.cbo.gov/ftpdoc.cfm?index=5159>

<sup>4</sup> J. Agras and D. Chapman (1999), "The Kyoto Protocol, CAFE Standards, and Gasoline Taxes," Contemporary Economic Policy, 17:3 cited in Oregon Dept. of Transportation, Policy Section, "Policy Notes: A Brief Reference on Fuel Costs and Fuel Efficiency," Vol. 5, Issue 1, Jan. 2001, at [www.odot.state.or.us/tdb/policy/Policy\\_Notes/jan2001.pdf](http://www.odot.state.or.us/tdb/policy/Policy_Notes/jan2001.pdf). by vtpi.org at [http://www.vtpi.org/tdm/tdm11.htm#\\_Toc161022579](http://www.vtpi.org/tdm/tdm11.htm#_Toc161022579)

<sup>5</sup> <http://www.cbo.gov/ftpdoc.cfm?index=3991&type=0&sequence=1>

<sup>6</sup> <http://www.cbo.gov/ftpdoc.cfm?index=3991&type=0&sequence=1>

<sup>7</sup> <http://www.cbo.gov/ftpdoc.cfm?index=3991&type=0&sequence=6>

## **Raising Fuel Taxes is Simple and Flexible**

Today, every state, including Minnesota, has a fuel tax system in place. Therefore, the implementation costs of a fuel tax increase are minimal. Further, a fuel-tax escalator, where the fuel tax is automatically increased each year is administratively simple and legislation could require periodic reviews in case of a change in circumstances.<sup>8</sup>

Germany implemented such a plan from 1999 to 2003. By 2004, fuel consumption was 7% lower than it was in 1999 and cars with 78 mpg had been added to the market.<sup>9</sup> By slowly implementing a tax increase, you allow taxpayers to adjust to the price change easier.

Alternatives such as congestion pricing or emission taxes would require new technical and taxing regimes with likely higher transaction costs.<sup>10</sup> In addition, if in the future a carbon tax system was implemented, the fuel tax system could be easily converted.<sup>11</sup> Finally, many studies analyzing the optimal tax scheme for managing transportation externalities include some form of a fuel tax in conjunction with other taxing mechanisms. <http://www.rff.org/rff/Documents/RFF-RPT-carsenviron.pdf>.

## **Raising Fuel Taxes Can Be Implemented With Minimal Regressive Effects**

There is some concern that a rise in fuel taxes will fall disproportionately on lower classes or those who have no other transportation options. Although fuel prices have been shown not to fall on the lower class any more than the upper classes when taken over the lifetime, offsetting any increases could be done by offering tax credits or lowering of other taxes such as income taxes.<sup>12</sup> Many European countries have followed this path, including Germany.<sup>13</sup>

Further, by encouraging the purchasing of fuel efficient vehicles, the impact of external price increases on the consumer are lowered and the decreasing of fuel use lowers the amount of wealth sent to foreign countries while increasing the amount of funding available for our own transportation network. <http://www.vtpi.org/tm/tm17.htm>

## **Conclusion**

When it comes to addressing the myriad of issues arising from transportation and energy use, every different proposal has positives and negatives. Ideally a long-term comprehensive strategy will be developed. At the present moment however, a fuel tax increase is the best solution because of its environmental benefits, its simple design, and its easy fit into a broader environmental and tax scheme.

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<sup>8</sup> <http://www.rff.org/rff/Documents/RFF-DP-06-26-REV.pdf>

<sup>9</sup> <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2006/12/17/INGT8MV4SM1.DTL>

<sup>10</sup> <http://www.rff.org/rff/Documents/RFF-DP-06-26-REV.pdf>

<sup>11</sup> <http://www.rff.org/rff/Documents/RFF-RPT-carsenviron.pdf>

<sup>12</sup> <http://www.rff.org/Documents/RFF-Resources-148-gasoline.pdf>

<sup>13</sup> <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2006/12/17/INGT8MV4SM1.DTL>