Policy Brief: Fuel Tax Changes and the Impact on State Revenue for Iowa

Jerome Dumortier¹, John Marron², Fengxiu Zhang³

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Introduction
In most U.S. states, fuel taxes are the primary source of transportation funding not subject to federal control; however, due to inflation, increased fuel efficiency in vehicles, and changing driving behavior, these taxes are proving increasingly inadequate to meet the costs of maintaining the transportation system. The costs of maintaining current transportation systems and investing in new capital projects rises with the cost of living and the cost of materials; however, the effective rate of most states’ fuel taxes decrease because they are fixed rather than indexed to the rate of inflation. Given that, the financing gap between tax revenue and transportation costs will continue to widen if the status quo is maintained.

Concerns regarding the sustainability of the current reliance on fuel taxes to finance the transportation infrastructure has triggered interest in alternative approaches to calculating transportation user fees, one of which includes linking current fuel taxes to inflation. Such an approach seeks to keep the effective tax rate for fuel taxes relatively constant over time relative to the cost of living and materials. To that end, this policy brief presents a preliminary analysis for the State of Iowa and focuses on three questions regarding the implications of changes to the state’s fuel tax policy:

1. What would be the effect of a one cent reduction in gasoline and fuel taxes?
2. What would be the effect of linking the gasoline and diesel tax to inflation in 2014 in terms of annual state fuel tax revenue through 2025?
3. How much additional revenue could have been generated from linking the gasoline and diesel tax to inflation in 2008, the last time Iowa adjusted fuel taxes?

Analysis
To evaluate the abovementioned scenarios, we generated a baseline that evaluates state revenue assuming the status quo (no increase in fuel taxes, not linked to inflation) through 2025, using fuel prices as forecasted by the U.S. Energy Information Administration (EIA). Our model projects gasoline and diesel consumption as a trend based on historic information and assumes that 10 percent of the diesel consumption is not taxed (based on historic averages). Inflation is based on the U.S. Bureau of Labor Statistics’ Consumer Price Index and projected into the future based on data from the U.S. Department of Agriculture.

Finding 1: A reduction in gasoline and diesel taxes by one cent per gallon would reduce state revenue by a total of $23.35 million in 2014. Our projections indicate that the 2014 consumption of gasoline and diesel will be 1.65 and 0.76 billion gallons, respectively. Given a one cent reduction in the gasoline and diesel tax, the immediate reduction of state revenue would amount to a total of $23.35 million (all figures are 2013 dollars).

To assess the outcomes of alternative policies, we used our model to generate two scenarios: (1) indexing fuel taxes to inflation in 2014 and (2) indexing the gasoline and diesel tax to inflation in 2008, which corresponds to the last adjustment of the gasoline tax in Iowa. Figure 1 summarizes the effects on state revenue for the two scenarios where gasoline and diesel taxes are indexed to inflation in 2014 and 2008. Note that both scenarios do not include the 1 cent reduction.

¹ School of Public and Environmental Affairs, Indiana University - Purdue University, Indianapolis, Phone: (317) 274-1817, Email: j Dumortier@iupui.edu (Corresponding author)
² Indiana University Public Policy Institute
³ School of Public and Environmental Affairs, Indiana University - Purdue University, Indianapolis
**Finding 2:** Indexing the tax rate to inflation in 2014 would result in an additional $60 million in annual tax revenue. If fuel tax rates were indexed to inflation in 2014, additional real state revenue of $107 million per year would be generated by 2025. The average additional annual revenue over the period between 2015 and 2025 would be $60 million.

**Finding 3:** Indexing the tax rate to inflation in 2008 would have generated an additional an additional $121 million over the past five years. If the gasoline and diesel tax rates had been indexed to inflation in 2008, $157 million additional nominal state revenue per year would have been generated by 2025. The average annual revenue over the period between 2009 and 2025 would have been $79 million. If Iowa had indexed the gasoline and diesel taxes to inflation in 2008, $121 million in additional revenue would have been generated in the five years since 2008.

**Summary**
Our model projects that linking Iowa’s fuel taxes to the rate of inflation could have a substantial impact on the state’s ability to maintain its transportation system into the future. Had the state indexed fuel taxes to inflation in 2008, it would have secured an additional $121 million in the past five years to support transportation maintenance and new investments. If Iowa maintains its current fuel tax regime and does not link its fuel taxes to inflation, it will be foregoing $107 million in additional annual fuel tax revenue by 2025. In order to ease the immediate burden of indexing fuel taxes to inflation, some policymakers have suggested an immediate reduction in the fuel tax by one cent. In Iowa, such a reduction would represent $23.35 million in foregone tax revenue; however, the short term loss of revenue would be quickly recovered through linking fuel taxes to inflation.