

A \$10 BILLION LOSS

Illinois' Motor Fuel Tax Should Have an Inflationary Adjustment



Frank Manzo IV
Policy Director

Jill Manzo
Researcher

Illinois Economic Policy Institute
www.illinoisepi.org
(708) 375-1002

A \$10 BILLION LOSS: ILLINOIS' MOTOR FUEL TAX SHOULD HAVE AN INFLATIONARY ADJUSTMENT ILEPI Economic Commentary #31

Executive Summary

Despite a 25 percent rise in usage of Illinois' highways, roads, and bridges over the past two and a half decades, total Motor Fuel Tax revenues have not kept pace. If Motor Fuel Tax revenues had been adjusted for the overall Consumer Price Index over the past 23 years, the state would have generated **\$10 billion** in additional revenue. Inaction in addressing the declining purchasing power of infrastructure investment funds has contributed to a deteriorating system of transportation infrastructure in Illinois.

It is time to adjust the Motor Fuel Tax rate or introduce a vehicle-miles-traveled program to generate revenue to fix existing transportation structures and to build new multi-modal transportation systems. As construction costs have increased with other prices and CAFE Standards continue to rise, the current 19-cent gasoline tax and 21.5-cent diesel tax are less effective sources of revenue than ever before.

- Illinois lawmakers could adjust the Motor Fuel Tax by 15 cents per gallon and index the tax to inflation. A 15-cent adjustment in both the gasoline tax rate to 34 cents per gallon and the diesel tax rate to 36.5 cents per gallon would raise **\$1 billion** in new annual revenues, restoring Motor Fuel Tax funding to 1993 levels after accounting for inflation.
- While this Motor Fuel Tax adjustment restores funding to previous levels, a new \$100 fee on vehicle registrations could help to fix the presently inadequate condition of Illinois' roads by generating an additional **\$1 billion** in annual transportation funding.
- An alternative option to fund transportation system improvements is a "mileage-based user fee," which charges vehicles per mile traveled instead of per gallon consumed. One proposal, [the Illinois Road Improvement and Driver Enhancement \(I-RIDE\) Program](#), could conservatively generate **\$2.6 billion** in additional funding per year.

Illinois has reached a crossroads. The state can continue down the path of unsustainable funding in the face of rising costs and improved vehicle fuel efficiency, or it can be a national leader in paving the way for long-term revenue solutions. Now is the time for action to properly fund all modes of transportation in Illinois.

Introduction: Illinois' Crumbling Infrastructure

Illinois is the transportation hub of the nation. There are 67 public transit providers in Illinois transporting over 400 million rides to workers, families, and tourists on Illinois roads. Every day, millions of cars, trucks, trains, boats, and flights carrying freight and passengers travel within the state. Illinois is in dire need of infrastructure investments to repair the current transit systems.

Infrastructure investment allows businesses to thrive, creates thousands of jobs, and boosts the economy. The state's overdue infrastructure maintenance has created numerous safety, congestion, and freight movement challenges. Approximately 42 percent of Illinois' major roads are in "poor" or "mediocre condition" and 16 percent of bridges are "structurally deficient" (ASCE, 2014). Fixing existing transportation networks and creating modern systems with sustainable funding sources are needed across all modes of transportation.

The future population of Illinois deserves better, higher-quality infrastructure. By 2030, Illinois is expected to have a population of 13.4 million residents, an increase of over 500,000 people (Barrella & Beck, 2009). Additional services and system expansions are required to support this growth, alleviate congestion, and ensure that firms in Illinois are able to efficiently transport their products to the market. Actions must be taken now to save Illinois' crumbling infrastructure.

Illinois' Inadequate Funding of Transportation Infrastructure

Poor infrastructure costs billions of dollars in Illinois. Poor roads annually cost the motorists \$3.7 billion in extra vehicle repairs and operating costs (ASCE, 2014). Each year, traffic congestion causes an additional \$4 billion loss in productivity. Traffic crashes amount to another economic loss of \$9 billion annually (Manzo, 2015). Ultimately, underinvesting in transportation infrastructure costs the state of Illinois and residents of Illinois billions of dollars each year. Every year the state fails to make necessary repairs, the costs increase.

Illinois is the third-largest intermodal port in the world (DCEO, 2014). The state has an extensive network of roads, rail, inland waterways, and aviation capacity that allow companies to efficiently export products to markets around the world. Furthermore, nearly half of the nation's freight touches Chicago (IDOT, 2014). However, these transit systems are in inadequate condition. Illinois must invest more in transportation to improve freight efficiency and passenger travel across the state, nation, and world.

Illinois' transportation system is primarily supported by Motor Fuel Tax revenues, vehicle registration and license fees, and federal reimbursements. In 2014, Illinois spent \$5.2 billion on transportation, or 8 percent of the state's total expenditures. Revenues from licenses and fees increased to \$494 million in the fiscal year of 2014, which is a \$7 million increase from 2013 (Comptroller, 2015). Still, it is estimated that the state of Illinois needs to raise an additional \$1.8 billion annually to more adequately fund transportation infrastructure needs.

Motor Fuel Tax revenues will only continue to decline as automobiles become more fuel efficient. Corporate Average Fuel Economy (CAFE) Standards for passenger cars were 27.5 miles per gallon (mpg) for 21 straight years before 2011. Then, CAFE Standards rose to 30.2 mpg for passenger cars. The standards for light trucks became 24.1 mpg (Manzo & Poulos, 2014). By 2025, however, CAFE Standards are to be raised significantly, to:

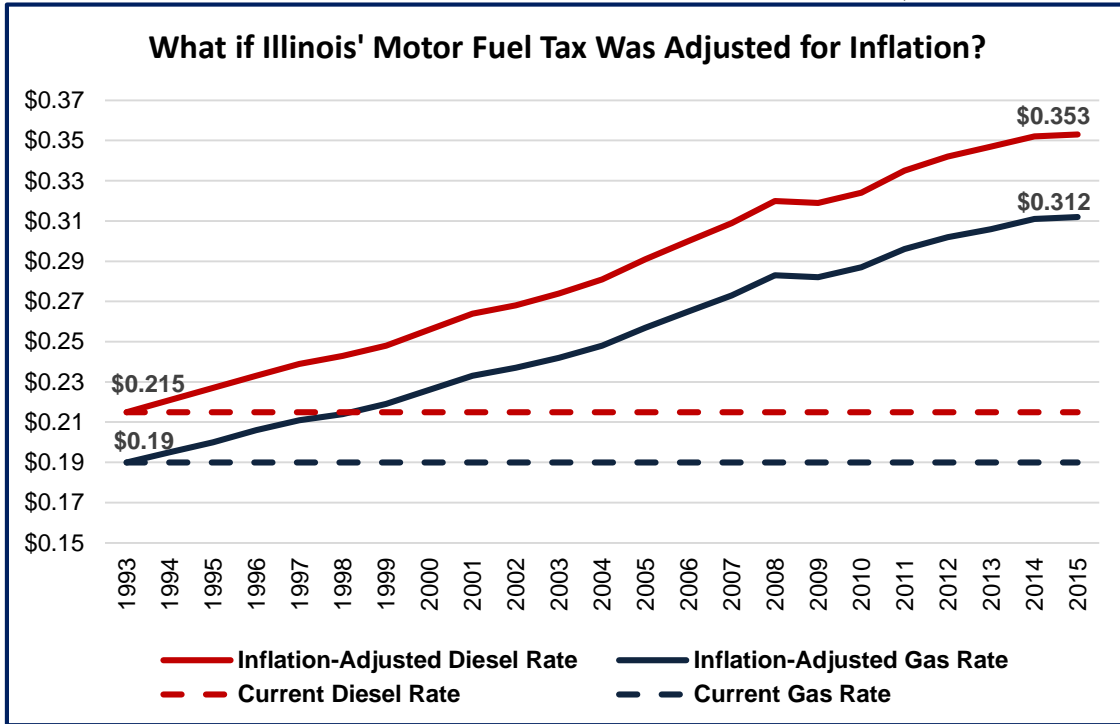
- 61 mpg for passenger cars that are 41 square feet or smaller,
- 46 mpg for passenger cars that are 55 square feet or larger,
- 50 mpg for light trucks that are 41 square feet or smaller, and
- 30 mpg for light trucks that are 75 square feet or larger.

As motorists consume less fuel to drive the same amount of miles, causing the same damage to the infrastructure, they contribute less in per-gallon gas taxes.

The Motor Fuel Tax: 1993 and Today

Inflation in the economy has increased the overall price of goods and services. Though annual inflation has remained relatively low and consistent in the past two decades due to targets established by the Federal Reserve, over time the prices of household items, food, and general services have risen significantly since 1993. Paired with rising construction and materials costs, a constant Motor Fuel Tax means that the state has less revenue to invest in transportation construction. Thus, a constant Motor Fuel Tax means either less work or lower relative earnings for Illinois contractors and construction workers, or both.

FIGURE 1: MOTOR FUEL TAX RATE ADJUSTED BY INFLATION, 1993-2015



Source(s): BLS, 2016: [1993-2015 CPI Inflation Calculator](#).

Illinois has not raised its Motor Fuel Tax since 1993. For the past 23 years, the gasoline tax rate has remained constant at 19 cents per gallon. If the Motor Fuel Tax had kept up with inflation, the gasoline tax would have been **31 cents** in 2015, or 12 cents more than the current rate, while the diesel tax rate would have been 35 cents per gallon (BLS, 2015) (Figure 1). Indexing the Motor Fuel Tax to inflation through the Consumer Price Index (CPI-U) would have generated additional revenue for transportation if it was gradually adjusted over the past 23 years.

Figure 2 contrasts data on actual revenues generated from Illinois’ Motor Fuel Tax at the current per-gallon rate with potential revenues if the tax had been indexed for inflation. Since the Motor Fuel Tax was last raised, the state has lost \$10.0 billion in potential transportation revenue simply by not accounting for overall inflation in total. If relative funding had been the same over the 23-year period as it was in 1993, Illinois would have had **\$10 billion** more in Motor Fuel Tax revenues for additional infrastructure investments.

If Motor Fuel Tax revenues kept up with the overall price inflation, revenues would have been higher every year. Receipts would have improved substantially from 2003 to 2008, fallen during the recession, and then increased again from 2011 to 2015. Instead of a \$1.3 billion intake in 2015, total revenue would have been \$2.2 billion – which is a revenue gap of \$851.4 million. Thus, the current annual loss in revenue from not increasing the tax per gallon by 12 cents is now \$851.4 million – and the gap is growing larger every year.

Two phenomena are worth noting. First, if the Motor Fuel Tax was indexed for inflation, the tax would have increased by 0.6 cents per gallon on average every year. This marginal adjustment every year would cause a small drop in fuel consumption, as the higher price discourages some portion of motorists from driving. However, the analysis also does not consider the rising fuel efficiency of vehicles. The average fuel efficiency of all light duty vehicles on the road was 19.2 miles per gallon in 1993. By 2013, the comparable average fuel efficiency was 21.6 miles per gallon – a 0.6 percent average annual increase that will only continue as CAFE Standards rise. To achieve the same relative funding as 1993 when cars now use less fuel but cause the same damage to the infrastructure, the Motor Fuel Tax rate would have to be even higher. Thus, the revenue loss, relative to 1993, is even greater because the state has not accounted for the “Average Fuel Efficiency of U.S. Light Duty Vehicles” published by the U.S. Bureau of Transportation Statistics (BTS, 2014).

FIGURE 2: REVENUES FROM MOTOR FUEL TAX IN ILLINOIS IF ADJUSTED FOR INFLATION, 2003-2013

Year	Gasoline Tax (MFT)	Adjusted Gasoline Tax (CPI-U)	Actual Revenue (from CAFRs)	Revenues if MFT Adjusted for Inflation (CPI-U)	Revenue Loss from Not Adjusting for Inflation
1993	\$0.19	\$0.190	\$1,056,565,000	\$1,056,565,000	\$0.00
1994	\$0.19	\$0.195	\$1,098,820,000	\$1,127,736,316	\$28,916,316
1995	\$0.19	\$0.200	\$1,154,482,000	\$1,215,244,211	\$60,762,211
1996	\$0.19	\$0.206	\$1,197,288,000	\$1,298,112,253	\$100,824,253
1997	\$0.19	\$0.211	\$1,231,754,000	\$1,367,895,232	\$136,141,232
1998	\$0.19	\$0.214	\$1,287,585,000	\$1,450,227,316	\$162,642,316
1999	\$0.19	\$0.219	\$1,306,238,000	\$1,505,611,168	\$199,373,168
2000	\$0.19	\$0.226	\$1,342,733,000	\$1,597,145,568	\$254,412,568
2001	\$0.19	\$0.233	\$1,357,756,000	\$1,665,037,621	\$307,281,621
2002	\$0.19	\$0.237	\$1,355,665,000	\$1,691,013,711	\$335,348,711
2003	\$0.19	\$0.242	\$1,326,000,000	\$1,688,905,263	\$362,905,263
2004	\$0.19	\$0.248	\$1,444,000,000	\$1,884,800,000	\$440,800,000
2005	\$0.19	\$0.257	\$1,426,000,000	\$1,928,852,632	\$502,852,632
2006	\$0.19	\$0.265	\$1,427,000,000	\$1,990,289,474	\$563,289,474
2007	\$0.19	\$0.273	\$1,443,000,000	\$2,073,363,158	\$630,363,158
2008	\$0.19	\$0.283	\$1,406,000,000	\$2,094,200,000	\$688,200,000
2009	\$0.19	\$0.282	\$1,349,000,000	\$2,002,200,000	\$653,200,000
2010	\$0.19	\$0.287	\$1,295,000,000	\$1,956,131,579	\$661,131,579
2011	\$0.19	\$0.296	\$1,302,000,000	\$2,028,378,948	\$726,378,948
2012	\$0.19	\$0.302	\$1,269,000,000	\$2,017,042,105	\$748,042,105
2013	\$0.19	\$0.306	\$1,254,000,000	\$2,019,600,000	\$765,600,000
2014	\$0.19	\$0.311	\$1,273,000,000	\$2,083,700,000	\$810,700,000
2015*	\$0.19	\$0.312	\$1,326,000,000	\$2,177,431,579	\$851,431,569
Total Sum =					\$9,990,597,132

Source(s): Illinois Comptroller, 2015: *Comprehensive Annual Financial Reports (CAFRs)* for FY 1993-FY2015; BTS, 2015: *2015 is an estimated figure that is also used by the Commission on Government Forecasting and Accountability.

While cars are more fuel efficient today than they were in 1993, they continue to do the same amount of damage to roads. The average motorist paying a 19-cent fee per gallon today is contributing less in funding than he or she was in 1993, due to both inflation and better fuel efficiency. At the same time, Illinois’ population has increased by over 1 million residents since 1993, meaning that more vehicles are on the roads. Thus, demand for the state’s transportation infrastructure has increased over time, but revenue taken in to fix the damages has fallen.

Potential Ways to Solve the Transportation Funding Gap

If Illinois lawmakers wish to improve investment in road infrastructure, steps must be taken to address this trend and close the revenue gap. The first two potential approaches would eliminate much of the road funding gap using traditional methods. The alternative proposal, however, achieves this goal through an innovative policy solution appropriate for a technologically-advanced modern economy.

Solution #1: Pass an Inflationary Adjustment to the Motor Fuel Tax of 15 Cents Per Gallon and Index for Inflation

One way to help restore 1993 levels of road construction funding could be through an inflationary adjustment to the Motor Fuel Tax. The annual underfunding of Illinois’ transportation systems will continue to worsen without legislative action. To improve investment of infrastructure in all modes of transportation, Illinois lawmakers could adjust both the gasoline tax and the diesel tax by 15 cents per gallon. The new fees per gallon would become 34 cents per gallon for gasoline and 36.5 cents per gallon for diesel fuel. The fees per gallon could then be indexed to inflation using the Consumer Price Index reported by the Bureau of Labor Statistics at the U.S. Department of Labor (BLS, 2015).

The inflationary adjustment could be passed immediately. As of February 2016, Illinois has the 17th-lowest average gasoline price in the country (Illinois Gas Buddy, 2016). The average price of gas has fell from over \$3.50 per gallon in August 2014 to \$2.35 per gallon in February 2015. Since then, the cost has decreased even further, to \$1.62 per gallon (Gas Buddy, 2016). Even with a 15-cent inflationary adjustment, Illinois would not currently be among the top 20 states with the highest gas prices.

If an immediate 15-cent correction is not possible, Illinois could gradually adjust the Motor Fuel tax through three five-cent increments by 2018. Figure 3 breaks down revenue projections assuming various inflationary adjustments to the Motor Fuel Tax. Some motorists may drive less with each 5-cent increase on the tax; however, the population of Illinois is also expected to grow. Accordingly, a 15-cent Motor Fuel Tax adjustment would be expected to generate **\$1 billion** in additional revenue for the State of Illinois per year. A 10-cent adjustment per gallon would increase annual revenue by \$670 million, which would not close the revenue gap but would help repair and upgrade deteriorating multi-modal transportation systems.

FIGURE 3: ANNUAL REVENUE GAIN FROM A GIVEN MOTOR FUEL TAX ADJUSTMENT, 2016

Illinois Motor Fuel Tax Adjustment	Projected Annual Revenue Gain
+\$0.05	\$335,000,000
+\$0.10	\$670,000,000
+\$0.15	\$1,005,000,000
+\$0.20	\$1,340,000,000
+\$0.25	\$1,675,000,000

Source(s): Authors’ estimates using Illinois Comptroller, 2015: *Comprehensive Annual Financial Reports (CAFRs)* for FY 1993-FY2015

Solution #2: Implement New Registration Fees of \$100 Per Vehicle

If Illinois lawmakers wish to raise enough funds to ensure that investments create one of the best transportation networks in the entire country, additional actions should be considered. One potential policy change is to raise vehicle registration fees. A \$100 additional charge for each vehicle to use the roads would be expected to generate another **\$1 billion** in new revenue.

Figure 4 presents data from the Bureau of Transportation Statistics on total vehicle registrations in Illinois for automobiles, motorcycles, buses, and trucks from 2009 through 2013. Over these five years, the average number

of registrations was 10.17 million vehicles. The current price of vehicle registration fees is \$101 in Illinois. Starting next year, Illinois could phase in an additional \$100 vehicle registration fee over four years through increments of \$25 to eventually generate another \$1 billion in transportation investment funds by 2020 (Figure 5). Note that this estimate is a conservative projection because it assumes no increase in the number of motor vehicle registrations even though the state population is expected to grow. If new residents bring or purchase vehicles, projected revenues from these added registration fees would be even higher.

FIGURE 4: AVERAGE NUMBER OF VEHICLE REGISTRATIONS IN ILLINOIS, 2009-2013

Year	Registrations (Automobiles, Motorcycles, Buses, and Trucks)
2009	10,149,000
2010	10,345,000
2011	10,306,000
2012	10,006,000
2013	10,055,000
<i>Average</i>	<i>10,172,200</i>

Source(s): BTS, 2015: *State Transportation Statistics*.

FIGURE 5: PROJECTED REVENUE INCREASES FROM NEW REGISTRATION FEES, 2017-2020

Year	Total New Registration Fee	Projected Annual Revenue Gain
<i>Average Registrations: 10,172,200</i>		
2017	\$25	\$254,305,000
2018	\$50	\$508,610,000
2019	\$75	\$762,915,000
2020	\$100	\$1,017,220,000

Source(s): Illinois Comptroller, 2015: *Comprehensive Annual Financial Reports (CAFRs) for FY 1993-FY2015*; BTS, 2015: *State Transportation Statistics*.

Alternative: Replace the Motor Fuel Tax with the I-RIDE Policy Using a Mileage-Based User Fee

In recent years, a smart, modern, and fiscally-responsible mechanism to fund transportation system improvements called a “mileage-based user fee” has become feasible. Mileage-based user fees utilize the “user pays” principle: Those who drive more, pay more. Using modern technologies, transponders and mobile apps, or a set rate, a mileage-based user fee charges a motorist based on his or her vehicle miles traveled.

The Illinois Economic Policy Institute has proposed the Illinois Road Infrastructure and Driver Enhancement (I-RIDE) Program (Manzo & Poulos, 2014). Utilizing a public-private partnership (P3) to administer the program, the I-RIDE allows individuals to choose their own pay-as-you-drive plan personalized to fit their needs and concerns. The I-RIDE would replace the Fuel Tax with a 3.0 to 4.0 cents-per-mile rate for passenger vehicles and single-unit trucks to improve Illinois’ infrastructure. Under these per-mile rates, Illinois would conservatively generate **between \$1.7 billion and \$2.6 billion** in new funding at additional cost of \$30 to \$50 per month to the average household.

The I-RIDE is an innovative, comprehensive policy that would maintain an adequate, predictable, and sustainable revenue stream every year. By making those who actually drive on the roads pay for their usage, the I-RIDE would promote taxpayer fairness. The proposal would also support transit modernization, congestion alleviation, safety improvements, and economic development. Therefore, although new revenues on traditional funding sources may be the most plausible method to resolve the road construction funding gap, the benefits of the Illinois Road Infrastructure and Drive Enhancement program should be deliberated as a viable alternative.

Conclusion

Despite a 25 percent rise in usage of Illinois' highways, roads, and bridges from over the past two and a half decades, total Motor Fuel Tax revenues have not keep pace during that time. If Motor Fuel Tax revenues had been adjusted for the overall Consumer Price Index over the past 23 years, the state would have generated **\$10 billion** in additional revenue. Inaction in addressing the declining purchasing power of infrastructure investment funds has contributed to a deteriorating system of transportation infrastructure in Illinois.

It is time to adjust the Motor Fuel Tax rate or introduce a vehicle-miles-traveled program to generate sustainable revenue to fix existing transportation structures and to build new multi-modal transportation systems. As construction costs have increased with other prices and CAFE Standards continue to rise, the current 19-cent gasoline tax and 21.5-cent diesel tax are less effective sources of revenue than ever before. Illinois lawmakers could adjust the gasoline tax rate to 34 cents per gallon and the diesel tax rate to 36.5 cents per gallon and index the tax to inflation. The state could also consider phasing in the inflationary adjustment or gradually raising new vehicle registration fees. A 15-cent adjustment in Motor Fuel Taxes would raise about \$1 billion in new annual revenues, restoring Motor Fuel Tax funding to its 1993 levels. In addition, a new \$100 fee on vehicle registrations would help to fix the presently inadequate condition of Illinois' roads by generating an additional \$1 billion in annual transportation funding. An alternative option to fund transportation system improvements is a "mileage-based user fee," which charges those who use the roads at a rate equal to the damage caused by their vehicle plus the costs to invest in future needs. One proposal, the Illinois Road Improvement and Driver Enhancement (I-RIDE) Program, could conservatively generate \$2.6 billion in additional funding per year.

Illinois has reached a crossroads. The state can continue down the path of unsustainable funding in the face of rising costs and improved vehicle fuel efficiency, or it can be a national leader in paving the way for long-term revenue solutions. Now is the time for action to properly fund all modes of transportation in Illinois.

Sources and Data

- American Society of Civil Engineers (ASCE). (2014). [2014 Report Card for Illinois' Infrastructure](#). Illinois section.
- Barrella, Elise and Sara Beck. (June 2009). ["US Demographic Outlook 2005-2050: Infrastructure Implications of a Larger, More Concentrated, More Diverse Population."](#) Georgia Institute of Technology.
- Bureau of Labor Statistics (BLS). (2016). ["CPI Inflation Calculator."](#) U.S. Department of Labor.
- Bureau of Transportation Statistics (BTS). (2015). ["State Transportation Statistics."](#) Office of the Assistant Secretary for Research and Technology at the U.S. Department of Transportation. Years: 1993-2015.
- Bureau of Transportation Statistics (BTS). (2014). ["Table 4-23: Average Fuel Efficiency of U.S. Light Duty Vehicles."](#) Office of the Assistant Secretary for Research and Technology at the U.S. Department of Transportation.
- Gas Buddy. (2016). ["Gas Price Charts."](#)
- Illinois Comptroller. (2015). [Comprehensive Annual Financial Reports \(CAFRs\)](#). State of Illinois. Years: 1993-2015.
- Illinois Department of Commerce & Economic Opportunity (DCEO). (2014). ["Why Illinois: Grade A Logistics"](#)
- Illinois Department of Transportation (IDOT). (2014). ["Illinois State Rail Plan: Project Overview."](#)
- Illinois Gas Buddy. (2016). ["Gas Prices 101."](#)
- Illinois Office of the Governor. [State Budget: Operating Budget Book, Fiscal Year 2016](#). (2015). State of Illinois.
- Manzo IV, Frank and Marc Poulos. (April 2015). [The I-RIDE Proposal: A Smart, Reliable Policy to Fund Transportation Infrastructure](#). [Version 2.0]. Illinois Economic Policy Institute and the Indiana, Illinois, Iowa Foundation for Fair Contracting.