

THE I-RIDE PROPOSAL

A SMART, RELIABLE POLICY TO FUND TRANSPORTATION INFRASTRUCTURE

April 24, 2015
[Version 2.0]



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ILEPI-IIFFC Policy Brief #11

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Executive Summary

Illinois' transportation infrastructure is inadequate. If the State of Illinois takes no action, one in every three road miles and one out of every 10 bridges will be structurally deficient or functionally obsolete by 2020. The total annual funding needed to maintain and operate the state system has been estimated at \$5.05 billion per year. Unfortunately, declining Motor Fuel Tax receipts and the looming budgetary problems of the federal Highway Trust Fund imperil the long-term revenue sources to maintain and modernize Illinois' system. This proposed Illinois Road Improvement and Driver Enhancement (I-RIDE) program is a solution to these problems.

The I-RIDE is a road user fee for each mile traveled by a vehicle that is equal to the damage caused by the vehicle to the infrastructure plus costs to invest in future needs. Utilizing a public-private partnership (P3) agreement, the I-RIDE allows individuals to choose their own pay-as-you-drive plan. Except for the third option, Illinois motorists receive credits for their Motor Fuel Tax contributions at the pump:

1. **The I-RIDE Smart Plan** – reports only miles traveled on public, non-tolled Illinois roads using global positioning system (GPS) technology;
2. **The I-RIDE Convenient Plan** – records all miles traveled without the use of GPS location services for residents who wish to keep their location private; and
3. **The I-RIDE Deluxe Plan** – charges motorists a flat rate equal to 30,000 to 50,000 miles per year depending on vehicle class, providing an alternative for those who do not want to have mileage reporting technology in their automobiles.

The I-RIDE rate schedule would depend on the goals of the policy:

1. **Replacement-level Rates** – To simply replace the Motor Fuel Tax for Illinois motorists, the required rates are 1.5 cents per mile for passenger vehicles and single-unit trucks, 2.0 cents per mile for buses, and 2.5 cents per mile for multiple unit trucks.
2. **Improvement Rates** – To maintain and operate the state transportation system at acceptable levels, the required rates are 3.0 cents per mile for passenger vehicles and single-unit trucks, 3.5 cents per mile for buses, and 4.0 cents per mile for multiple unit trucks.
3. **Full Capacity Rates** – To bring Illinois' system up to par *and* invest in a world-class transportation network for the future, the required rates are 4.0 cents per mile for passenger vehicles and single unit trucks, 4.5 cents per mile for buses, and 5.0 cents per mile for multiple unit trucks.

Under the “full capacity” rates, the estimated bill to an Illinois household will be \$65 per month on average (including Motor Fuel Tax contributions at the pump). This is comparatively lower than typical electricity, natural gas, cable (with Internet) and cell phone bills. At just \$65 per month per household, the state is conservatively expected to generate an additional \$2.60 billion in annual funds. After allocations to both highway infrastructure and mass transportation improvements across the state, this additional funding would support over 31,000 new jobs every year, including about 19,000 direct construction jobs. Full capacity funding would also allow the state to complete the CREATE program with full funding in the next decade, would reduce traffic congestion, and would increase worker-to-firm connectivity.

The benefits of the Illinois Road Improvement and Driver Enhancement program are substantial. The I-RIDE is a fiscally-responsible policy that maintains 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 also promotes taxpayer fairness. Moreover, in promoting the stability of infrastructure funds, the I-RIDE encourages businesses to locate in Illinois because they can be certain that their products will be efficiently and predictably delivered to the market.

Illinois has reached a fork in the road. The state can continue down the path of unsustainable funding and low-quality infrastructure, or it can be a global leader in smart, comprehensive infrastructure investment policies that grow the economy. The I-RIDE allows the state to choose the second path of transit modernization, congestion alleviation, safety improvements, and “high-road” economic development. The Illinois Road Improvement and Driver Enhancement program should be implemented.

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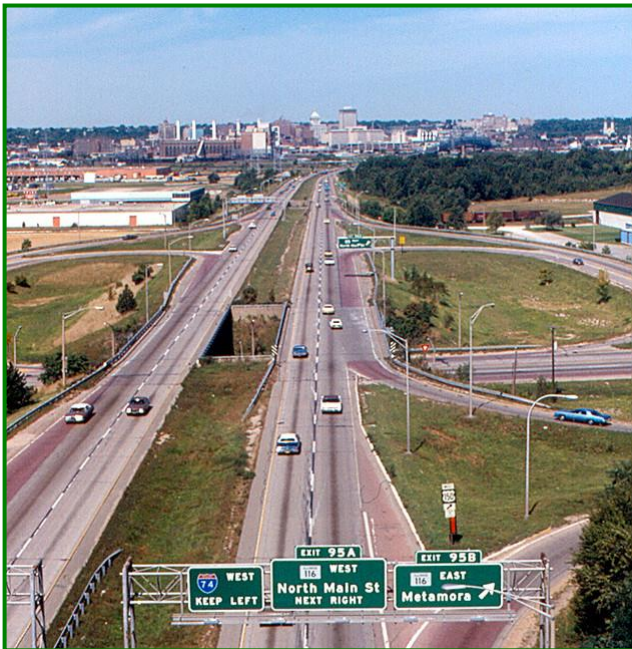
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Introduction: A Fork in the Road

Today, the quality of Illinois' transportation infrastructure is inadequate. Roads are in "poor to mediocre" condition, costing the State \$2.2 billion annually. In the Chicago metropolitan area alone, traffic congestion causes \$4 billion in lost economic productivity. Traffic crashes amount to \$9 billion in economic losses each year throughout Illinois (ASCE, 2014). Furthermore, up to 30 percent of some Chicago Transit Authority rail lines are designated as "slow zones" because of substandard sections that pose risks to public safety (Lowder, 2013). By 2018, if Illinois does not invest additional resources into infrastructure investment, nearly one-third of all road miles and one in every 10 bridges will be unacceptable (Lowder, 2013). Meanwhile, the Illinois population is expected to grow while the state economy continues to improve, increasing the number of drivers on Illinois' public roads.

Unfortunately, resources that pay for operating, maintaining, and improving the state's transportation network are stagnant and will decline precipitously over the next decade. Fifteen years into this new millennium, Illinois' transportation system is still primarily supported by Motor Fuel Tax revenues, vehicle registrations and license fees, and reimbursements from the federal government. These revenue streams are becoming more and more outdated: Motor Fuel Tax revenues are projected to experience declines at all levels of government over the next decade as Corporate Average Fuel Economy (CAFE) standards are raised and alternative fuel vehicles become more commonplace.

Illinois has reached a fork in the road. The state's transportation system must be modernized to alleviate congestion, reduce motorist costs and injuries, and provide a world-class infrastructure that attracts businesses to locate in Illinois. A significant overhaul of the state's transportation network, however, also requires the funding stream to be revamped using current technologies. Thus, in response to bleak projections for the future, Illinois must choose a different path by implementing a road user fee that provides reliable and sustainable funding for the future.



This joint Illinois Economic Policy Institute (ILEPI) and Indiana, Illinois, Iowa Foundation for Fair Contracting (IIFFC) Policy Brief proposes the Illinois Road Improvement and Driver Enhancement (the I-RIDE) program, a comprehensive public policy that modernizes the state's transportation system, promotes fiscal responsibility, and grows the economy. First, the Policy Brief describes the current transportation system in Illinois, assesses the state's projected needs, and discusses how current revenue streams are becoming more and more insufficient. Then, the "Oregon model" is evaluated as an example of a current road user fee. The proposed I-RIDE policy is subsequently proposed and presented in great detail. Illinois' system is contrasted with Oregon's system in a following section before the recaps key findings. Answers to ten questions that may surface about the policy appear in the Appendix.

A NEW WAY FORWARD

Illinois' Vast Transportation System

Illinois is positioned at the crossroads of the American economy. The state's 144,337 miles of highway, roads, and streets provide access to both the Great Lakes and the Mississippi River. On these roads, vehicles traveled 105.5 billion miles throughout Illinois in 2013. Additionally, there are 67 public transit providers in Illinois transporting over 400 million rides to workers, families, and tourists. The state also has the third largest bridge inventory in America, with 26,514 bridges. As part of the system, there are 2,185 miles of highway connecting the Illinois to the East Coast, West Coast, and the Gulf of Mexico. Finally, the state's highways connect central Illinois to nine major metropolitan statistical area (MSA) economies in less than 350 miles (Figure 1). These nine urban regions alone provide businesses in Illinois with access to 22.4 million consumers.

Figure 1: Proximity of Springfield, Illinois to Major Regional Markets via Highway

Springfield, IL to:	Market Proximity Via Highways	City Population	MSA Population
St. Louis, MO	96 miles	318,172	2,795,794
Chicago, IL	202 miles	2,714,856	9,522,434
Indianapolis, IN	209 miles	834,852	1,928,982
Milwaukee, WI	250 miles	598,916	1,566,981
Madison, WI	279 miles	240,323	620,778
Kansas City, MO	309 miles	464,310	2,038,724
Cincinnati, OH	321 miles	296,550	2,128,603
Louisville, KY	323 miles	605,110	1,251,351
Des Moines, IA	337 miles	206,688	588,999

Source: "State & County QuickFacts," United States Census Bureau (2012), available at quickfacts.census.gov/qfd/index.html. Highway travel distance provided by Google Maps.

There are 113 public-use airports and 40 freight railroads in Illinois (ASCE, 2014). Airports include Chicago O'Hare International Airport and Chicago Midway International Airport, which are able to move goods, services, and passengers anywhere in the United States in under four hours. O'Hare is the fifth-busiest airport in the world, enplaning and deplaning 66.6 million passengers, and ranks second in total aircraft movements with 878,000 total take-offs and landings each year (ACI, 2013). Illinois' comprehensive rail network includes all seven Class I freight carriers in America that operate almost 7,800 miles of railroad tracks. An additional 1,700 miles are operated by 33 regional, local, and short line companies (AAR, 2014). Between one-fourth and one-third of all rail traffic in America originates in, terminates in, or comes through the City of Chicago, the nation's largest rail hub. Furthermore, nearly half of the nation's rail *freight* touches Chicago (IDOT, 2014a).

The state's extensive road network, aviation capacity, role as the rail freight gateway, and 1,100 miles of inland waterways combine to make Illinois the largest intermodal port in the Western Hemisphere and third-largest in the world after Hong Kong and Singapore (DCEO, 2014). Illinois' intermodal facilities allow private firms to efficiently export their products to major markets across the world.



Assessment of Projected Needs

Illinois' transportation system is broken and in disrepair. Although the majority of the state's public infrastructure was built over half a century ago, public use has risen substantially as the state's population and economy have grown. With increasing consumer demand, outdated or inadequate infrastructure results in both economic inefficiency and public safety concerns.

The Illinois Department of Transportation (IDOT) predicts that only 61 percent of highways and 87 percent of bridges will be in a condition "acceptable" for public use by 2020 (IDOT, 2014b). Research prepared for the Transportation for Illinois Coalition has drawn similar conclusions— 1 in every 3 road miles and 1 in every 10 bridges will be unacceptable by 2018 (Lowder, 2013). This expected condition falls far below IDOT's goal of maintaining highways above a 90 percent favorability rating and bridges above a 93 percent favorability rating. A total of 6,183 roads and 1,033 bridges on the state system will be in backlog condition with the current revenue stream by 2020 (IDOT, 2014b).

IDOT has estimated that an additional \$28.6 billion is needed from 2015 to 2020 to bring the multi-modal system up to an acceptable performance level. This includes \$6.5 billion more for the state highway and bridge system and \$4.2 billion for local roads (Schneider, 2014). The total annual funding needed to maintain and operate the state system has been estimated at **\$5.05 billion per year** (in current 2014 dollars) (Lowder, 2013).

The cost of driving on poor roads in Illinois is currently \$2.4 billion each year in extra vehicle repairs and operating costs, or \$292 per motorist (ASCE, 2013). Without addressing the system's funding needs on the front end, these back-end personal costs will only increase. Note that these back-end costs do not include the burdens of congestion, such as lost time, higher fuel costs, and higher levels of carbon emissions.

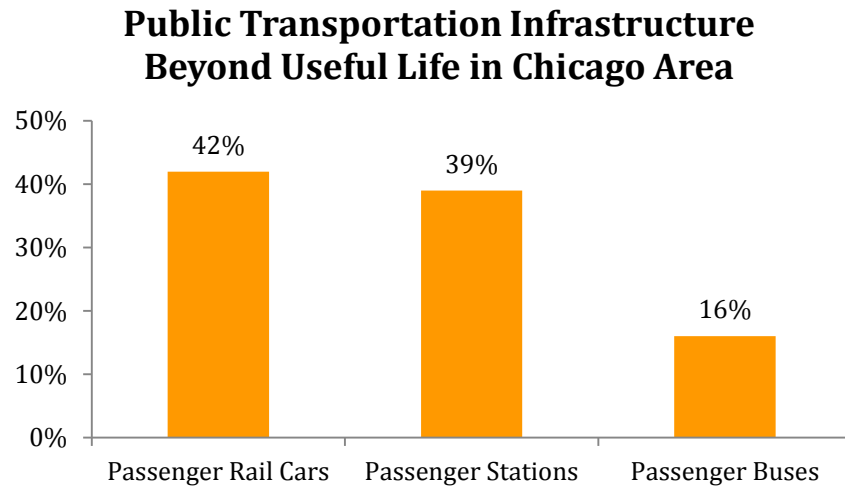
Maintaining the existing system is important, but the state also needs to improve capacity and invest in modern infrastructure to meet the growing demand. Estimated funds needed to alleviate congestion and improve business productivity range from \$1.5 billion to \$4 billion. Additionally, the state's road expansion capital need is between \$5.3 billion and \$6 billion. Finally, the estimated cost to update Illinois' Interstate Highway System so that it meets modern construction standards ranges from \$6.5 billion to \$14 billion (Lowder, 2013). Though these investments are costly, they are imperative to maintain a strong economy that works for the people of Illinois.

The public transit system faces similar capital demands that must be addressed. The Regional Transit Authority (RTA) in northeastern Illinois operates more than 5,600 train cars and buses over 7,200 route miles that provide transportation for almost 2 million riders every day (RTA, 2013). Much of the system, however, is beyond its useful life, resulting in a capital need of \$3.7 billion (Figure 2). As of 2013, 42 percent of passenger rail cars, 39 percent of passenger stations, and 16 percent of passenger buses were obsolete (Lowder, 2013). Outside of the Chicagoland area, mass transit systems that support 28.3 million riders per year face an additional \$582 million shortfall (Lowder, 2013).

Although Illinois has the 2nd-largest rail network in the country, rail freight volume is expected to increase by 24 percent by 2025 (IDOT, 2014b). This increase in projected demand would result in additional rail congestion throughout the state if the Chicago Region Environmental and Transportation Efficiency (or CREATE) program is not fully executed. Designed to enhance freight, commuter, and intercity service while improving air quality, CREATE requires an additional \$2.6 billion in funding to complete current priorities over the next five years. Once constructed, CREATE

investments will reduce motorist delays, provide access to hundreds of thousands of new commuters, and boost the economy by stimulating new jobs (CREATE, 2014).

Figure 2: Assessment of Regional Transit Authority (RTA) Needs, 2012



Source: Lowder, John. "Assessment of Illinois' Transportation Needs 2013," Page 211.

The future population of Illinois deserves better, higher-quality infrastructure. By 2030, Illinois is expected to have a population of 13.43 million residents, an increase of over 550,000 people (Barrella & Beck, 2009). Additional services and system expansions are necessary to support this growth, alleviate accompanying effects on congestion, and ensure that firms in Illinois are able to efficiently transport their products to the market.

Current Revenue Streams Are Insufficient to Meet the Need

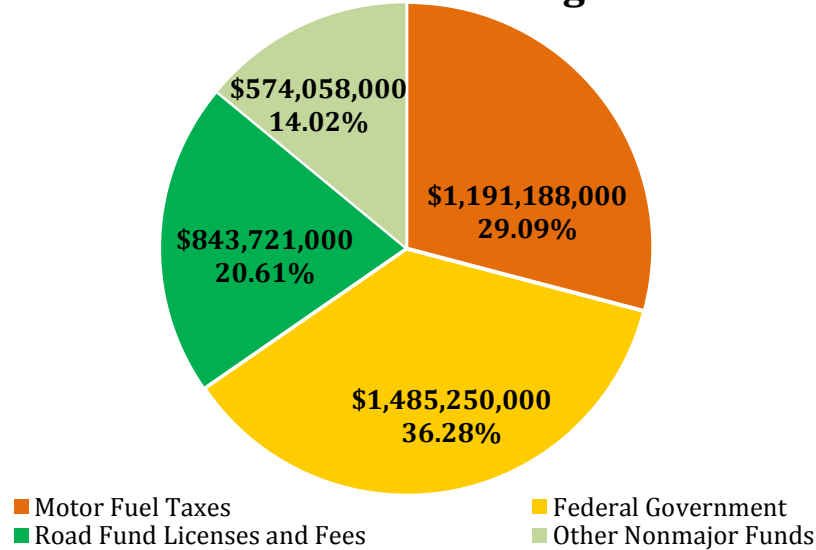
Public funding to operate, maintain, and invest in the state's transportation system is presently supported by user fees, state general funds, federal spending, and bonds. Figure 3 displays the sources of revenue for Illinois' Highway Funds. In 2013, total revenues were \$4.09 billion for the state's Highway Funds, about \$960 million below the \$5.05 billion needed to maintain and operate the current system at an acceptable condition. Of this \$4.09 billion in actual revenues, about 50 percent is derived from user charges— Motor Fuel Taxes, vehicle licenses and registrations, and fees. Federal government funds account for 36 percent of all revenues and other nonmajor governmental funds (including Series A Transportation Bonds) comprise the remaining 14 percent.

The long-term outlook of these revenue streams is negative (Figure 4). Declining and unstable revenue poses a significant challenge for long-term finances of transportation infrastructure investment. First, the state cannot count on continued funding from the federal government. Annual federal government funding has fallen to \$1.49 billion, down 16.7 percent from its 2010 peak of \$1.84 billion, "mostly due to the decline in proceeds of the American Recovery and Reinvestment Act" (CAFR, 2014). The Highway Trust Fund is only expected to bring in 2.6 percent more revenue between 2014 and 2024 despite far greater increases in costs, resulting in a 30 percent reduction in federal money available for highways and a 65 percent drop in available funds for public transit by 2025 (CBO, 2012). Second, state bonding occurs only when capital bills are enacted by the Illinois General Assembly. Prior to 2009's "Illinois Jobs Now!" capital program, the state had gone a decade without a capital bill. This political uncertainty has a negative impact on businesses, making it difficult for construction firms to make investments in workers and equipment. Finally, Motor Fuel Tax revenues have also experienced a decline every year for the past five years while the quantity-

based sources of revenue (i.e., driver's license fees and motor vehicle registrations) have been stagnant.

Figure 3: Revenue Sources for Highway Funds in Illinois, Actual Budget in FY2013

Revenue Sources for Highway Funds, FY2013 Actual Budget

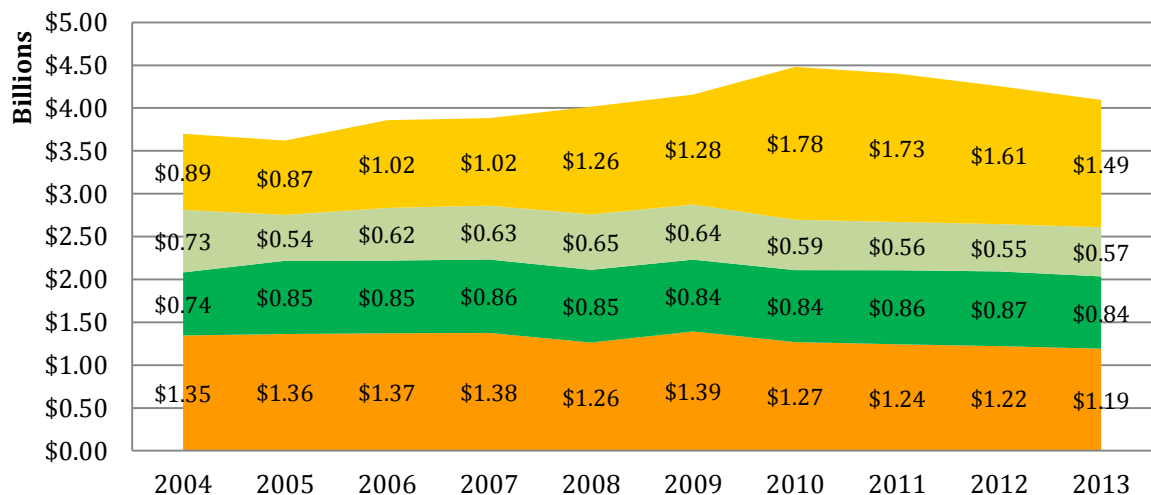


Source: 2013 Illinois Comprehensive Annual Financial Report, Page 266.

Figure 4: Revenue Sources for Highway Funds in Illinois Over Time, FY2004 to FY2013

Revenue Sources for Highway Funds Over Time

Motor Fuel Taxes Road Fund Licenses and Fees Other Nonmajor Funds Federal Government



Source: 2004-2013 Illinois Comprehensive Annual Financial Reports.

Motor Fuel Tax revenues are declining even as total vehicle miles traveled in Illinois are rising. Since 2001, the number of licensed drivers and the number of vehicle registrations have respectively grown by averages of 0.4 percent and 1.0 percent each year (Lowder, 2013). Additionally, in 2011, motorists traveled 103.37 billion miles in Illinois and paid \$1.24 billion in Motor Fuel Taxes to the state's

Highway Funds. Two years later, however, vehicle miles traveled in Illinois increased to 105.48 billion miles but Motor Fuel Tax receipts in the Highway Funds dipped to \$1.19 billion (Figure 4). Put differently, for every mile traveled, motorists paid 1.2 cents in Motor Fuel Taxes in 2011. But they paid 1.1 cents per mile in 2013 and are expected to pay 1.0 cents per mile in 2016.

Motor Fuel Tax revenues will only continue to decline as automobiles become more fuel efficient over the next two decades. Corporate Average Fuel Economy (CAFE) Standards for passenger cars had been held constant at 27.5 miles per gallon (mpg) for 21 consecutive years until 2011. During that time, regulations on “light trucks” (including SUVs) were set between 20.0 and 23.5 mpg each year. In 2011, CAFE Standards rose to 30.2 mpg for passenger cars and 24.1 mpg for light trucks (EPA, 2011). By 2025, 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.

The number of alternative fuel vehicles (AFVs) on Illinois roads is expected to substantially increase. By 2025, AFVs will account for 10 percent of all cars and 19 percent of all trucks on the nation’s roads. Accordingly, 14.4 percent of all vehicle miles traveled in America will be driven by AFVs in 2025 (EIA, 2014). The increases in fuel economy mean that Illinois drivers will buy fewer gallons of gasoline. Since the Motor Fuel Tax is a per-gallon levy of \$0.19 for gasoline and \$0.215 for diesel in Illinois, the Motor Fuel Tax Fund could be considerably depleted by 2025. It is worth noting that this decline will also harm cash-strapped local government significantly: each year, 54.6 percent of all Motor Fuel Tax revenues are allocated to local governments for road purposes.

Given these realities, Illinois will need to either extract more revenues from existing sources (e.g., raise the Motor Fuel Tax) or receive money from new revenue bases to build and maintain the state’s roads (GAO, 2012).

The Oregon Model: Why a Road User Fee Works

The best mechanism to replace current revenue sources is a road user fee based on vehicle miles traveled. Road user fees charge motorists based on their actual usage of the system. Those who drive more, pay more. A road user fee can price usage of a state’s highways and streets at a cost equal to the damage incurred to the road by the car plus the cost of modernizing the infrastructure to meet new demands in the future. A Motor Fuel Tax, by contrast, charges inefficient vehicles more because they must refill at gas stations more often. While a Motor Fuel Tax encourages consumers to purchase vehicles with higher fuel economies, it is economically unfair for some motorists to pay less even though they cause the same amount of damage and have the same amount of access. A road user fee program can maintain the incentive to purchase a fuel-efficient automobile by expending additional revenues generated on infrastructure investment for alternative fuel vehicles.

The State of Oregon has been the nation’s pioneer of the “user pays principle.” In 1919, Oregon became the first state to implement a gas tax to fund the maintenance and operation of the state’s roads (Whitty, 2007). Over eighty years later, the Oregon legislature recognized that a motor fuel tax was no longer a fair way to pay for investments in horizontal infrastructure because hybrid and electric vehicles were paying less or no fuel tax. The legislature thus established an independent Road User Fee Task Force in 2001 to devise a distance-based alternative to the gas tax.

After considering 28 different funding ideas, the task force conducted a pilot program to study the “Oregon Mileage Fee Concept,” which replaced the gas tax with a mileage-based fee collected at

fueling stations. The pilot program launched in April 2006, lasted for 12 months, and included 285 volunteer vehicles, 299 motorists, and two service stations in Portland. Upon completion of the program, the Oregon Department of Transportation (ODOT) found that the vehicle miles traveled fee could be integrated with the service station point-of-sale system; that administration is almost entirely automated and places minimum burden on business; and that the concept was viable for the state. Over nine-in-ten (91 percent) participants in the pilot program responded that they would agree to continue paying the mileage fee instead of the gas tax (Whitty & Capps, 2014).

Evaluation of the initial pilot program found that the number one concern for the motoring public was protecting privacy (Whitty, 2007). Although people regularly surrender their personal data when they use cellular phones or when they pay for goods and services with credit or debit cards, many are not comfortable sharing the same information with the government. To address these concerns, ODOT designed the use of a GPS receiver so that no one would have the ability to measure a vehicle's movements. Additionally, the pilot used private companies to create the transponders, automobile manufacturers to install the devices, service stations to extract the data on mileage, and private firms to maintain or repair the devices. In this way, Oregon did not give the state government any direct access to the transponders.

From 2012 to 2013, ODOT conducted a second pilot program called the "Road Usage Charge Pilot Program" (or RUCPP). Involving 88 drivers from Oregon, Washington, and Nevada, drivers were charged 1.56 cents per mile traveled in the RUCPP. The program addressed the public's privacy concerns while also incorporating the most-current technologies for reporting vehicle miles traveled. Since the beginning of Oregon's first program, mobile Internet access and the range of mobile apps "increased worldwide demand for mobile computing technology exponentially" (Whitty & Capps, 2014). These technological advances reduced administrative costs to the state and allowed participants in the second pilot program far more freedom in choosing their own mileage reporting device. Participants were also permitted to choose from five possible payment plans.

Figure 5: Reported Impacts of Oregon RUCPP on Revenue Collected (Whitty & Capps, 2014)

TABLE 5-2

Per-Mile Charge vs. Fuel Tax Based on RUCPP Oregon Mileage of 121,371				
FLEET FUEL ECONOMY SCENARIO	GALLONS OF FUEL CONSUMED	FUEL TAXES COLLECTED	PER-MILE CHARGE COLLECTED	PER-MILE VS. PER-GALLON
19.2 mpg	6,311	\$1,893	\$1,893	0%
24.7 (RUCPP actual)	4,914	\$1,479	\$1,893	+28%
40 mpg	3,034	\$910	\$1,893	+108%
55 mpg	2,207	\$662	\$1,893	+186%
All electric vehicles	\$0	\$0	\$1,893	N/A

Source: Whitty, James and Darel Capps (2014). "Road Usage Charge Pilot Program 2013 & Per-Mile Charge Policy in Oregon," Page 23.

Analysis of the second pilot program yielded positive results (Whitty & Capps, 2014). The average fuel economy of RUCPP participants was 24.7 miles per gallon. For these cars, the per-mile rate of 1.56 cents generated 28 percent more revenue than the state's 30 cents per gallon fuel tax. For highly fuel-efficient cars with a fuel economy of 40 miles per gallon, the program raised revenues by 108 percent (Figure 5). Participants were also satisfied with the program: 92 percent said that the system was "easy" or "very easy" to use and 90 percent reported that they had either a more positive view or no change in their view of road usage after participating. The success of this pilot program has led Oregon legislators to establish a permanent road usage charge system to collect revenue from 5,000 volunteers beginning in July 2015.

Ultimately, a road user fee program is a smart, modern mechanism to fund transportation system improvements. Oregon's experience proves that road user fees are easy to use, are fair to taxpayers, and maintain fiscal responsibility. To address the extant and looming funding shortfalls, Illinois should develop its own road user fee based on the positive benefits of the Oregon model.

POLICY PROPOSAL

The Illinois Road Improvement and Driver Enhancement (I-RIDE) Program

To address the state's current and future transportation infrastructure needs with a modern, sustainable, and comprehensive funding method, the Illinois Economic Policy Institute (ILEPI) and the Indiana, Illinois, Iowa Foundation for Fair Contracting (IIFFC) propose the implementation of the Illinois Road Improvement and Driver Enhancement policy, or I-RIDE. The goal of the I-RIDE is to institute a true pay-as-you-go system where motorists pay for what they use and costs are not placed on future generations. The I-RIDE thus intends to replace the Motor Fuel Tax for Illinois motorists (while still collecting Motor Fuel Taxes from out-of-state motorists) and to reduce capital improvement revenues derived from bonding. The I-RIDE applies to all Illinois drivers and truckers, promotes infrastructure investment, and supports "high-road" economic development in the state.



The I-RIDE is a user fee on each mile traveled by a vehicle that equals the damage the vehicle causes as it uses the system *plus* costs to construct new infrastructure for future needs that reduce congestion and keep the economy moving. The I-RIDE charge also covers the costs to operate and maintain the transportation network on a real-time basis such as traveler information, ramp metering, incident management, and service patrols. The key to the I-RIDE's success is allowing individuals to make choices. If a Deluxe Plan is not chosen, plug-in devices which record mileage data— either with or without global positioning system (GPS) technology— are required for each vehicle.

The I-RIDE program must incorporate public-private partnerships (P3s) such that private sector vendors manage the collection of I-RIDE fees each month. The P3 arrangement promotes cost efficiency and protects an individual's right to keep his or her personal information private from the state government. The private vendor is responsible for storing mileage data; maintaining user accounts; sending monthly, quarterly, or annual invoices to participants for all vehicle miles traveled; collecting I-RIDE charges; and transferring revenues to the state. Only the private vendor will have access to Vehicle Identification Numbers (VINs). Private vendors will also be responsible for repairing and maintaining GPS devices and mobile apps.

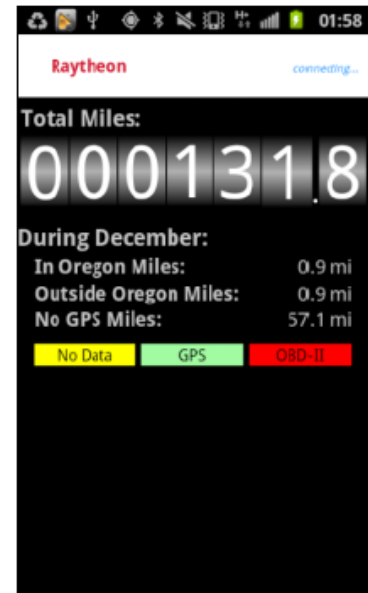
After a public procurement process, the commission administering the I-RIDE (discussed on Page 12) will select lowest-cost responsible firms to administer the program, which will be allowed to charge a "convenience fee" of between 2.0 and 4.0 percent.¹ Private vendors could use the vehicle miles traveled system as a platform for marketing pay-as-you-drive insurance, tolling services, and other vehicle services— an added incentive to submit a bid. It is worth noting that the Oregon Department of Transportation issued a Request for Information (RFI) on its second pilot program and received 28 responses, both domestic and international. A Request for Proposal (RFP) was subsequently sent to

¹ Under the three funding scenarios outlined on Pages 13 and 14, total collections to the private firm would total between \$28.7 million and \$246.6 million annually, with a 3.0 percent convenience fee on the "full capacity" plan generating an estimated \$111.6 million in revenues to private vendors.

the 28 companies and yielded 10 proposals, from which two groups were contracted to provide services (Whitty & Capps, 2014).

Motorists can select from three options to report miles traveled, all operated by a private sector partner, in accordance with their own preferences for personal privacy:

1. **The I-RIDE Smart Plan** – This plan would report only miles traveled on public, non-tolled Illinois roads, and is the economically-efficient option. Using mileage reporting technology, a smartphone app or a measurement device similar to the I-Pass (or EZ-Pass) will use location data to calculate how many miles were driven in Illinois each month. It would be able to identify when miles were driven out-of-state and off public roads (such as on Illinois toll roads), but would not charge motorists for these miles. Excluding miles traveled on toll roads is not a necessity because drivers currently pay Motor Fuel Taxes in addition to the tolls. The goal is simply to ensure that drivers are only charged for using in-state non-tolled infrastructure. To protect privacy, the devices and apps would be designed such that they cannot retain any travel history after three months.
2. **The I-RIDE Convenient Plan** – For Illinois residents who wish to keep their location private, they can choose the Convenient Plan. This option records all miles traveled without the use of location services when the device is plugged into the vehicle. Therefore, under the Convenient Plan, no location information is transmitted to private firms but drivers are charged for all miles driven, regardless of whether they were in-state or out-of-state. This plan costs more, but the added charge is essentially a premium paid to ensure privacy.
3. **The I-RIDE Deluxe Plan** – Finally, drivers can choose to pay a flat monthly rate plan to avoid mileage reporting altogether. Under the Deluxe Plan, motorists will be charged the same rate regardless of how many miles they drive. This plan is based on an assumed maximum number of miles driven per year (30,000 miles per year for passenger vehicles and single unit trucks and 50,000 miles per year for buses and multiple unit trucks). For the average motorist, this is the most expensive option, but provides an alternative for those who do not want to have any form of mileage reporting technology in their automobiles.



The Motor Fuel Tax will still exist to capture revenues from out-of-state drivers. In each monthly bill, however, Illinois motorists who choose the Smart Plan and the Convenient Plan will be credited for Motor Fuel Tax payments made at the pump according to the total number of miles driven (on only Illinois' public roads for those who select the Smart Plan). For example, suppose an Illinois motorist drives 2,000 miles in one month on in-state public roads in a 20-mpg fuel economy car. She used 100 gallons of gasoline that were taxed at \$0.19 per gallon and will be credited \$19.00 on her monthly bill. Individuals or households who choose the Deluxe Plan would not receive Motor Fuel Tax credits.

Protecting Privacy Concerns: Choice of Technologies

Private vendors will ultimately determine the best technologies available in the marketplace to administer the I-RIDE while protecting the privacy of Illinois residents. However, many technologies currently exist that could be used to collect a road user fee. The important factor to note is that there will be no government mandate to use global position system (GPS) location services to measure a vehicle's miles driven – motorists will be able to choose from various options.

First, electronic reporting is not *necessarily* a requirement for private vendors to collect revenues. Total vehicle miles traveled could be reported using a model similar to the vehicle emissions testing inspections in northeast Illinois. Establishing 1,000 locations (about one for every school district) at local DMVs and private vendors (e.g., auto repair shops or grocery stores) where motorists could go for annual reports would require a one-time capital cost but would eliminate the need for electronic recording. The annual inspection method would fall under the Convenient Plan since there would be no differentiation of miles traveled in-state, out-of-state, or on toll roads, but would allow for manual reporting. Billings in this case would likely occur once a year or on a semi-annual basis. The Deluxe Plan also eliminates the need for mileage recording or other electronic reporting.

There is a robust marketplace of devices which currently support miles-traveled fees (Sorensen et al., 2012). The pay-as-you-drive insurance industry uses “dongles,” plugged into the vehicle’s on-board diagnostics (OBD-II) port under the steering wheel, which has been standard in all cars since 1996. A dongle is $\frac{3}{4}$ ” by 2” car adapter—roughly the size of an ink jet printer cartridge and similar to a USB plug-in for online streaming from a computer or television, such as a Chromecast. Dongles can transmit data on both trips and the car’s engine health to a motorist’s phone, allowing consumers to make better decisions about their driving habits. These devices are easy to install: less than one-in-ten participants in the second Oregon pilot program called the “Help Desk” to find their diagnostic port to insert the device (Whitty & Capps, 2014). In addition, many high-end and electric automobiles include in-vehicle telematics, or infotainment systems, that are capable of wirelessly reporting mileage data. Motorists in vehicles with this feature would not require an external device but would simply activate their current system. Finally, GPS boxes or mobile applications with location services can easily measure a vehicle’s movements, charge the users of public roads only for their usage in Illinois, and benefit consumers by providing up-to-date directions to save time, money, and fuel in their trips.

Dongles, in-vehicle telematics, and GPS boxes or smartphone apps all allow motorists to transmit mileage data under either the Smart Plan or the Convenience Plan. Advanced GPS technology with wireless communications is capable of determining state jurisdiction, exact routes, and potentially the specific lane of travel—possibly permitting true congestion pricing in the future. Most Americans already grant private firms access to their physical location when they use location services on their smartphone applications, connect to the Internet through their IP address, and swipe their credit or debit cards. The I-RIDE technologies would be no different. Each technology, however, can also serve as a simple odometer and report total miles traveled to the private vendor each month under the Convenience Plan, without the need for GPS technology.

The key to the I-RIDE is motorist choice. Location reporting will only occur for those who choose the cheapest, Smart Plan option. State and local governments—including law enforcement agencies—will have no access to these individual movements. The private partners will collect this information and then appropriately bill each household for their proper vehicle miles traveled, transferring only fee collections over to the state. Finally, the GPS devices and apps will be designed such that they cannot retain any travel history after three months, or another legislated amount of time.

However, by conceding a modicum of privacy, motorists who select the Smart Plan with GPS technology would receive significant benefits. As previously noted, the Smart Plan allows motorists to enroll in cheaper pay-as-you-drive insurance plans, sends motorists reports on their driving habits and vehicle condition to help them make better decisions, provides up-to-date travel directions via GPS technology to save time and money, and ensures that motorists only pay for miles traveled on non-tolled roads in Illinois. Nonetheless, regardless of the chosen plan, the I-RIDE benefits all commuters and families by providing the revenue needed to repair and expand Illinois’ infrastructure—removing potholes, fixing bridges, and modernizing public transit networks.

Analysis of Illinois Travel Statistics

In 2012, the most recent year for which all relevant data are available, there were 8.24 million driver's licenses issued to Illinois residents (Figure 6). There were also 1.2 automobiles per driver in Illinois, or 10.13 million total vehicle registrations. Of these vehicle registrations, the vast majority were passenger vehicles (50.2 percent) or single unit trucks (48.9 percent). Passenger units include cars, minivans, and motorcycles while single unit trucks comprise vehicles such as passenger trucks, SUVs, and most moving trucks. The total number of vehicle miles traveled on Illinois roads was 104.46 billion miles, including 8.47 billion miles (8.1 percent) on tollways. This travel was fueled by 4.65 billion gallons of gasoline and 1.43 billion gallons of special fuel, such as diesel. Ultimately, the state collected \$1.28 billion in Motor Fuel Tax receipts.

Figure 6: Illinois Vehicle and Travel Statistics, 2012

2012 Illinois Statistics	
Illinois Motor Fuel Tax Revenues	\$1,275,042,000
Illinois Vehicle Miles Traveled	104,460,000,000
Toll Roads	8,474,312,000
Public Roads	96,103,688,000
National Mileage Per Vehicle	11,705
Passenger	11,265
Single Unit Trucks	11,882
Buses	25,172*
Multiple Unit Trucks	25,172
National Mileage Per Gallon	17.63
Passenger	23.32
Single Unit Trucks	17.12
Buses	6.10
Multiple Unit Trucks	6.36
Illinois Vehicle Registrations	10,131,883
Passenger	5,082,312
Single Unit Trucks**	4,951,712
Buses	30,344
Multiple Unit Trucks**	67,515
Illinois Driver's Licenses	8,235,745
Illinois Total Fuel Usage	6,077,115,000
Gasoline	4,651,888,000
Special Fuel	1,425,227,000

Sources: 2012 Illinois Comprehensive Annual Financial Report, Page 36; IDOT, "Illinois Travel Statistics 2012"; U.S. Energy Information Administration, 2014. "Monthly Energy Review October 2014"; 2012 County Business Patterns in Illinois – "Truck Transportation" employees; and Bureau of Transportation Statistics, 2012. "Transportation Statistics Annual Report."

*No data was available for national mileage per bus, so the figure for multiple unit trucks was used. Note that the CTA's 1,865 active buses traveled 159,781 miles per day for 365 days per year. Thus, CTA mileage per bus was 31,371 miles – so the 25,172 multiple unit truck estimate is a reasonable estimate for buses statewide. **Data are only presented as "trucks." For comparability, multiple unit trucks need to be subtracted out. As a proxy for multiple unit truck registrations, "Truck Transportation" employees from the Illinois profile of U.S. County Business Patterns were used.

A serious I-RIDE proposal must account for the share of vehicle miles traveled in Illinois by *Illinois motorists*. To approximate the number of miles driven by in-state vehicles, national information on both annual mileage per vehicle and average fuel economy are included in Figure 6. This analysis assumes that Illinois families and commuters own or rent automobiles that are similar to the national average and that they have similar annual travel habits to the rest of American motorists. In 2012,

the average national mileage per vehicle was 11,705 miles per year. Passenger vehicles traveled the smallest total distance (11,265 annual miles) while multiple unit trucks journeyed the farthest (25,172 annual miles). Nationwide, the fuel economy of the average vehicle was 17.63 miles per gallon in 2012, but the most fuel-efficient class was passenger vehicles (23.32 mpg) and the least fuel-efficient was buses (6.10 mpg).

Figure 7 estimates total Motor Fuel Tax revenues based on these statistics and estimates. For example, the 5.08 million passenger vehicles were assumed to have each traveled 11,265 miles in 2012, equating to 57.25 billion annual vehicle miles traveled by automobiles in this class. With a fuel economy of 23.32 mpg, this means that 2.45 billion gallons of gasoline were consumed to power these vehicles. At a gas tax rate of \$0.19 per gallon, Illinois' passenger vehicles were estimated to have contributed \$466.4 million in Motor Fuel Tax revenues in 2012. This same process is used to value Motor Fuel Tax contributions for single unit trucks, buses, and multiple unit trucks. Ultimately, Illinois motorists are found to have supplied \$1.20 billion in Motor Fuel Tax revenues, or 94.41 percent. On the other hand, out-of-state drivers accounted for 5.59 percent of revenues deposited into the Motor Fuel Tax Fund.

Figure 7: Estimated Motor Fuel Taxes Paid by Illinois Drivers Only, By Class of Vehicle, 2012

Class of Vehicle Registered by Illinois Motorists	Total Vehicle Miles Traveled	Total Gallons Consumed	Motor Fuel Tax Rate	Motor Fuel Tax Revenues
Passenger Vehicle	57,252,244,680	2,454,754,735	\$0.190	\$466,403,400
Single Unit Trucks	58,836,241,984	3,436,495,648	\$0.190	\$652,934,173
Buses	763,819,168	125,216,257	\$0.215	\$26,921,495
Multiple Unit Trucks	1,699,487,580	267,341,133	\$0.215	\$57,478,344
Total	118,551,793,412	6,283,807,772	---	\$1,203,737,411
Estimated Revenues From Illinois Motorists as a Share of All Revenues in 2012				94.41%

Sources: See Figure 6.

This estimate makes sense. Although Illinois is the fifth-most visited state in America (Census, 2012) and had 103.5 million tourists from around the United States alone in 2013 (Associated Press, 2014), the typical motorist on any given Illinois road is not a visitor. He is a commuter heading to work or a consumer going to shops and restaurants or a household head bringing her family to a friend's house. Moreover, for comparative purposes, the share of construction work done in Illinois by in-state businesses was 93.2 percent, according to the 2007 Economic Census. Presuming that 94.41 percent of vehicle miles were traveled by in-state residents is thus a practical estimate.

I-RIDE Rates: Three Possible Scenarios

An I-RIDE Commission will be established to set I-RIDE rates according to demand. The I-RIDE Commission will be modeled after the Illinois State Toll Highway Authority's (ISTHA) Board of Directors. An independent body, the I-RIDE Commission will consist of 20 members. The Governor of Illinois (or a representative) and the IDOT Secretary of Transportation (or a representative) will serve as ex officio, nonvoting members. The other 18 commissioners shall be appointed from the nine IDOT regions (two per region) by the legislature to serve one four-year term. No more than 10 commissioners can be from the same political party as the Governor. Only the 18 regional commissioners have voting power. A Chair must be elected among the regional commissioners by the regional commissioners for a two-year term. Finally, the Commission would consider nonbinding IDOT staff recommendations, but would vote on matters autonomously.

Figures 8, 9, and 10 present anticipated annual I-RIDE revenues based on three possible rate schedules. Estimates are based on reported statewide vehicle miles traveled by vehicle class from

IDOT for 2013. They also assume that 91.9 percent of vehicle miles traveled were on public, non-tolled roads and that 94.41 percent of all miles were traveled by vehicles registered in Illinois (IDOT, 2013). Revenues are displayed first assuming that 100 percent of Illinois motorists chose the Smart Plan—the most conservative for revenue projections—and then assuming that every Illinois driver chooses the Deluxe Plan—which offers the highest possible revenue projections.

Figure 8: Estimated New Revenues from I-RIDE Compared to MFT Revenues, Replacement-Level Rates

Scenario 1: Replacement-Level Rates				
2013 Vehicle Miles Traveled on Public Roads (91.9%)	Annual Vehicle Miles Traveled	I-RIDE Rate	100% Smart Plan Revenues	100% Deluxe Plan Revenues
Passenger Vehicles and Single Unit Trucks	90,189,116,100	\$0.015 per mile	\$1,277,213,168	\$4,262,904,926
Buses	632,203,200	\$0.020 per mile	\$11,937,261	\$28,647,770
Multiple Unit Trucks	6,101,496,000	\$0.025 per mile	\$144,010,559	\$79,676,139
Total	96,922,815,300		\$1,433,160,988	\$4,371,228,836
Motor Fuel Taxes from In-State Motorists			-\$1,124,600,591	-\$1,124,600,591
New Revenues under 100% I-RIDE Smart Plan			\$308,560,397	\$3,246,628,245

Under the first scenario, the I-RIDE rates effectively replace the Motor Fuel Tax (Figure 8). The “replacement-level rates” are 1.5 cents per mile for passenger vehicles and single unit trucks, 2.0 cents per mile for buses, and 2.5 cents per mile for multiple unit trucks. At 2013 levels of annual vehicle miles traveled on non-tolled roads, this rate schedule would generate \$1.43 billion in annual funds if every driver had a location-based measuring plan. Compared to actual Motor Fuel Tax revenues, these rates would result in a \$0.31 billion net gain in annual funding. Because some motorists will choose the Convenient Plan and the Deluxe Plan, however, higher overall revenues are likely in this scenario. Rates in the replacement-level scenario mirror the per-mile charge of the Oregon Model: Starting June 2015, 5,000 volunteers will pay 1.5 cents per mile traveled in the state.

Figure 9: Estimated New Revenues from I-RIDE Compared to MFT Revenues, Improvement Rates

Scenario 2: Improvement Rates				
2013 Vehicle Miles Traveled on Public Roads (91.9%)	Annual Vehicle Miles Traveled	I-RIDE Rate	100% Smart Plan Revenues	100% Deluxe Plan Revenues
Passenger Vehicles and Single Unit Trucks	90,189,116,100	\$0.030 per mile	\$2,554,426,335	\$8,525,809,853
Buses	632,203,200	\$0.035 per mile	\$20,890,206	\$50,133,598
Multiple Unit Trucks	6,101,496,000	\$0.040 per mile	\$230,416,895	\$127,481,823
Total	105,477,000,000		\$2,805,733,437	\$8,703,425,274
Motor Fuel Taxes from In-State Motorists			-\$1,124,600,591	-\$1,124,600,591
New Revenues under 100% I-RIDE Smart Plan			\$1,681,132,846	\$7,578,824,683

Under the second scenario, the I-RIDE rates replace the Motor Fuel Tax revenues while allowing the state to make critical infrastructure improvements (Figure 9). The following are the “improvement rates” in this scenario: 3.0 cents per mile for passenger vehicles and single unit trucks, 3.5 cents per mile for buses, and 4.0 cents per mile for multiple unit trucks. At 2013 levels of annual vehicle miles traveled on public roads, this rate schedule would generate \$2.81 billion in annual funds if every driver had a location-based measuring plan. Compared to actual Motor Fuel Tax revenues from in-state drivers, these rates would result in a \$1.68 billion net gain in annual funding. The rates are higher than those in Oregon, for reasons explained on Page 22.

In 2013, receipts from Road Fund licenses and fees (\$0.84 billion), federal reimbursements (\$1.49 billion), and out-of-state motorists paying gas taxes (\$0.07 billion) totaled \$2.40 billion. Adding the \$2.81 billion in I-RIDE collections would bring total revenues for the state's transportation infrastructure network up to \$5.21 billion annually— without the need for any transportation bonds. Although federal reimbursements to Illinois are unlikely to remain as generous for reasons discussed previously, additional revenues from motorists who choose the Convenient Plan and the Deluxe Plan should largely (if not entirely) offset this loss. Thus, even under conservative estimates, the improvement rates are expected to provide enough revenue to cover the estimated \$5.05 billion total annual funding needed to maintain and operate the state system (Lowder, 2013).

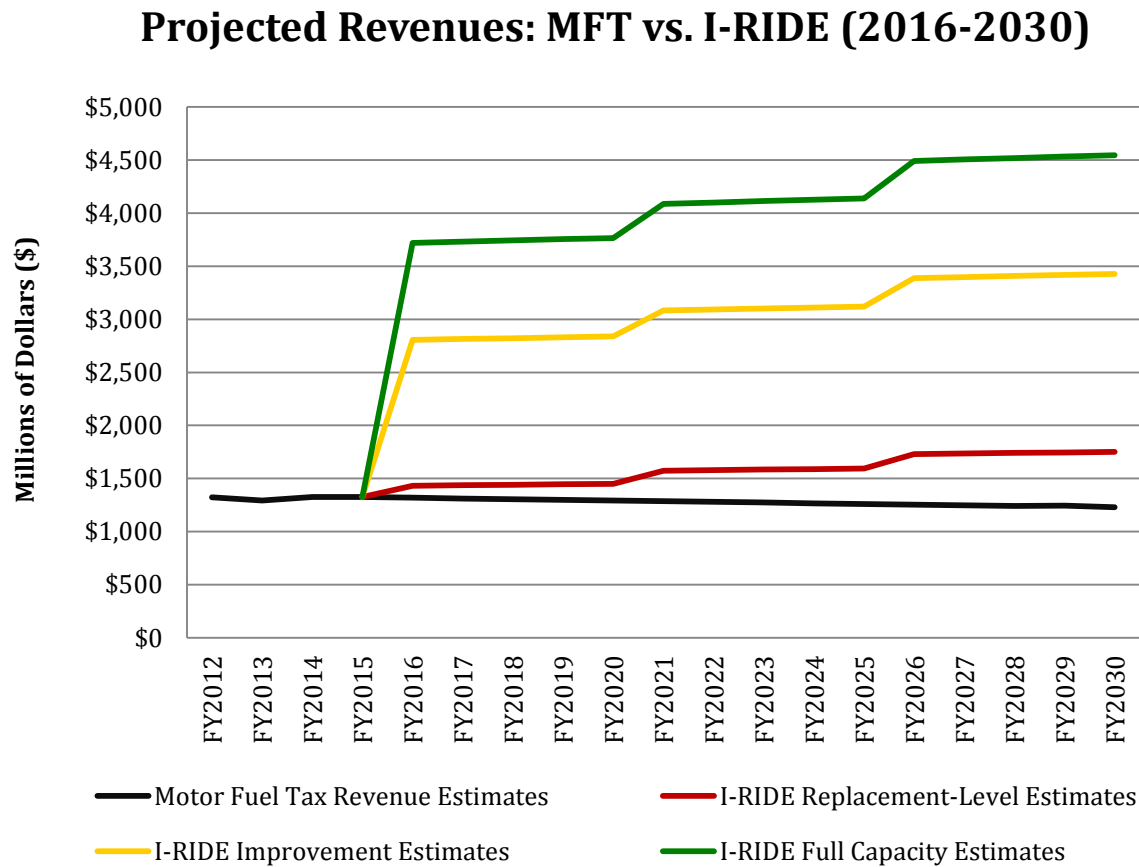
Under the third and final scenario, the I-RIDE rates not only replace the Motor Fuel Tax and let the state make critical improvements, but also allow Illinois' infrastructure to reach record levels of quality (Figure 10). "Full capacity rates" are 4.0 cents per mile for passenger vehicles and single unit trucks, 4.5 cents per mile for buses, and 5.0 cents per mile for multiple unit trucks. At 2013 levels of annual vehicle miles traveled on non-tolled roads, this rate schedule would generate \$3.72 billion in annual funds if every driver had a location-based measuring plan. Compared to actual Motor Fuel Tax revenues, these rates would result in a \$2.60 billion net gain in annual funding. Due to motorists who choose the Convenient Plan and the Deluxe Plan, however, this increase in revenue is likely to be even larger.

Figure 10: Estimated New Revenues from I-RIDE Compared to MFT Revenues, Full Capacity Rates

Scenario 3: Full Capacity Rates				
2013 Vehicle Miles Traveled on Public Roads (91.9%)	Annual Vehicle Miles Traveled	I-RIDE Rate	100% Smart Plan Revenues	100% Deluxe Plan Revenues
Passenger Vehicles and Single Unit Trucks	90,189,116,100	\$0.040 per mile	\$3,405,901,780	\$11,367,746,470
Buses	632,203,200	\$0.045 per mile	\$26,858,837	\$644,574,834
Multiple Unit Trucks	6,101,496,000	\$0.050 per mile	\$288,021,119	\$159,352,279
Total	96,922,815,300		\$3,720,781,736	\$12,171,673,583
Motor Fuel Taxes from In-State Motorists			-\$1,124,600,591	-\$1,124,600,591
New Revenues under 100% I-RIDE Smart Plan			2,596,181,145	\$11,047,072,992

Whatever the chosen rate schedule, the rates must be indexed to inflation— the Construction Cost Index— to maintain a predictable and sustainable revenue stream. ILEPI and the IIFFC recommend that the per-mile fees are adjusted after five-year intervals. Accounting for inflation over a longer period of time avoids periods of sudden change (e.g., economic recessions) in the rate of inflation and constantly instills a half-decade of revenue certainty for both businesses and policymakers.

Figure 11 compares projected tax revenues under the current Motor Fuel Tax system to the potential I-RIDE rates. As vehicles become more fuel efficient, the Illinois Commission on Government Forecasting and Accountability projects that Motor Fuel Tax revenues will decline, on average, by 0.5 percent per year until 2030. The I-RIDE, on the other hand, generates revenues from vehicles regardless of fuel efficiency and is pegged to inflation over five years. Since rates are collected per mile rather than per gallon, I-RIDE's replacement level rates would be projected to experience a stable rise from 2016 to 2030, ultimately generating a total of \$4.72 billion more in cumulative revenue over the next fifteen years compared to projected Motor Fuel Tax revenues. Projected revenues from "improvement" and "full capacity" rates are even higher, allowing the state to make critical infrastructure investments.

Figure 11: Comparison of Proposed I-RIDE Rates to Comparable Per-Mile Charges in Illinois

Sources: Motor Fuel Tax revenue estimates provided by the Commission on Government Forecasting and Accountability, which projects that revenues will fall on average by 0.5 percent per fiscal year as cars continue to improve on fuel efficiency, reducing gallons of motor fuel consumed. I-RIDE estimates are based on an average annual population growth of 0.3 percent per year (and a comparable increase in vehicle miles traveled) and are adjusted for inflation every five years, assuming an average annual inflation rate of 2.0 percent.

Figure 12: Comparison of Proposed I-RIDE Rates to Comparable Per-Mile Charges in Illinois

Type of Road User Fee	Passenger Vehicles	Heavy Trucks
First Scenario: Replacement-level Rates	\$0.015 per mile	\$0.025 per mile
Second Scenario: Improvement Rates	\$0.030 per mile	\$0.040 per mile
Third Scenario: Full Capacity Rates	\$0.040 per mile	\$0.050 per mile
Illinois Tollway Rate	\$0.060 per mile	\$0.440 per mile
CMAQ Optimized Toll Rate	\$0.160 per mile	\$0.360 per mile
Elgin-O'Hare Expressway Rate	\$0.200 per mile	\$1.600 per mile

Sources: CMAP, 2013. "Recommendation on Proposed Illiana Corridor," Page 6; Illinois Tollway, 2014; Hinz, 2014. "Illiana could charge tolls four times those of other Illinois tollways," *Crain's Chicago*.

The rates in all three scenarios are lower than per-mile charges to use similar roads in Illinois (Figure 12). The average price on the Illinois tollway system is 6 cents per mile if using an I-Pass transponder and 13 cents per mile if paying in cash. The Chicago Metropolitan Agency for Planning (CMAP) estimates that the optimized toll rate in northeastern Illinois is actually 16 cents per mile for passenger cars and 36 cents per mile for trucks (CMAP, 2013). Additionally, IDOT has stated that toll rates for the proposed Elgin-O'Hare expressway could be "20 cents per mile for cars and may be as high as \$1.60 for heavy trucks" (Hinz, 2014).

The State of Illinois has historically underfunded transportation, which has had a direct, negative effect on future generations. A total of \$1.25 million was deposited into state revenue funds from the Motor Fuel Tax in 2013. Given that there were 4.76 million households in Illinois in 2013 (Census, 2013) and assuming that 94.4 percent of taxes collected were from in-state motorists, the average amount paid in Motor Fuel Taxes was about \$20 per month for the typical household.

Conversely, under the I-RIDE rates in the third scenario, the state conservatively generates \$3.72 billion dollars in transportation revenues. For the typical household, the average monthly road usage bill— *including* money already expended in gas taxes at the pump— would be about \$65 in this scenario. Of course, some families who drive more will pay more and others will pay less, but \$65 is the average cost to have the highest-quality connection to jobs, restaurants, stores, and people.

The I-RIDE invoice compares very favorably to other monthly household expenditures in Illinois (Figure 13). The costs to stay connected to the power and energy grids are higher in the state: the average household energy cost is \$93 per month and the average natural gas bill is \$78 per month. To illustrate, Figure 14 contrasts a hypothetical family's monthly electricity bill with their monthly I-RIDE bill under the third, full capacity scenario. Additionally, the cost to stay connected to entertainment is \$60 per month for expanded basic cable service (not including Internet). Finally, many cellular phone bills range from \$120 per month to \$148 per month for American households. A world-class transportation infrastructure system is not cheap, but it is cheaper than most other household expenditures.

Figure 13: Average Expenditures of Illinois Households to Stay Connected, Annual and Monthly

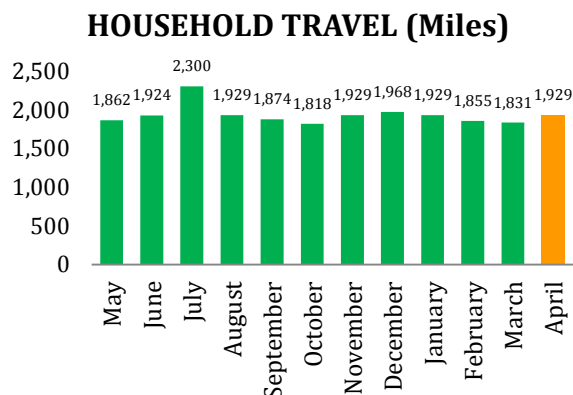
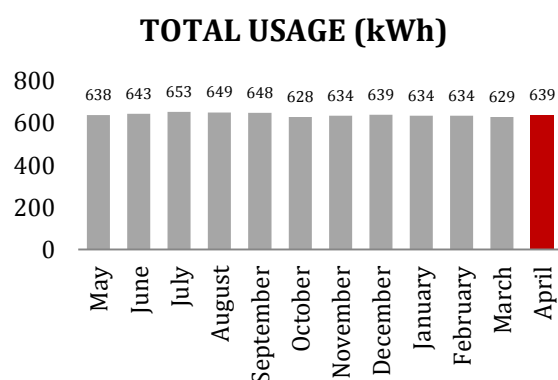
Average Expenditures of Illinois Households	Annual	Monthly
<i>Costs to Stay Connected to: Power and Energy</i>		
Electricity Costs (2009)	\$1,113	\$93
Natural Gas Costs (2009)	\$933	\$78
<i>Costs to Stay Connected to: Entertainment</i>		
Cable TV: Expanded Basic Service	\$723	\$60
<i>Costs to Stay Connected to: Wireless Cellular Phones</i>		
Verizon	\$1,776	\$148
Sprint	\$1,728	\$144
AT&T	\$1,692	\$141
T-Mobile	\$1,440	\$120
<i>Costs to Stay Connected to: Jobs, Restaurant, Stores, and People</i>		
Current Motor Fuel Taxes	\$235	\$20
Proposed I-RIDE Fees: Improvement Rates	\$589	\$49
Proposed I-RIDE Fees: Full Capacity Rates	\$781	\$65

Source: 2013 Illinois Comprehensive Annual Financial Report, Page 238; U.S. Census Bureau State & County QuickFacts 2008-2013: Illinois; 2009 Residential Energy Consumption Survey by the U.S. Energy Information Administration; the 2014 Report on Cable Industry Prices by the Federal Communications Commission; and Johnson, 2014. "5 Low-Cost Alternatives to Your Pricey Cellphone Plan" U.S. News Money.

Figure 14: Example of Monthly Bill – Electricity vs. Full Capacity I-RIDE for Household with 2 Vehicles

ELECTRICITY BILL			
Residential - Single 4/1/15 - 5/1/15			
SUPPLY CHARGE			\$43.85
Electricity Supply	639 kWh X 0.0647		\$41.35
Transmission Services	639 kWh X 0.0102		\$6.48
Purchased Electricity			-\$3.98
DELIVERY CHARGE			\$35.51
Customer			\$15.77
Standard Metering			\$3.41
Distribution Facilities	639 kWh X 0.0244		\$15.58
IL Distribution	639 kWh X 0.0012		\$0.75
TAXES & FEES			\$13.39
Environmental Recovery	639 kWh X 0.0002		\$0.11
Environmental Efficiency	639 kWh X 0.0022		\$1.43
Franchise Cost			\$4.22
State Tax			\$2.63
Municipal Tax			\$5.00
TOTAL AMOUNT DUE			\$92.75

I-RIDE INVOICE		
Smart Plan - 4/1/15 - 5/1/15		
VEHICLE 1	2011 Ford Focus	\$30.94
Class	Passenger	
Reported Fuel Economy	27 mpg	
Road User Fee	938.75 miles X 0.040	\$37.55
Motor Fuel Tax Credits	938.75 miles X 0.19 / 27	-\$6.61
VEHICLE 2	2010 Chevrolet Tahoe	\$27.07
Class	Single-Unit Truck	
Reported Fuel Economy	15 mpg	
Road User Fee	990.17 miles X 0.040	\$39.61
Motor Fuel Tax Credits	990.17 miles X 0.19 / 15	-\$12.54
COLLECTION FEES		\$1.74
Convenience Fee	\$58.01 X 0.03	\$1.74
Late Fees		\$0.00
TOTAL AMOUNT DUE		\$59.75



Investing I-RIDE Funds to Serve the People of Illinois

Total revenues remitted by private vendors to the state will be deposited into an Illinois Road Improvement and Driver Enhancement Fund. Although a new addition to total transportation revenues, the I-RIDE Fund changes nothing about the current system (Figure 15). Just as is the case for state bond-supported capital projects, I-RIDE funds still flow into an 80/20 split between highways and transit before being distributed regionally. For highways and roads, 45.6 percent of net Motor Fuel Tax collections go to the state highway system while 54.4 percent are dedicated for local highway purposes. Northeastern Illinois' public transportation systems receive 90.0 percent of transit dollars while downstate systems receive the remaining funds. The only adjustment to the current system is that net I-RIDE revenues flow into the system (Figure 16).

Figure 15: Distribution of Transportation Infrastructure Revenues, Before I-RIDE

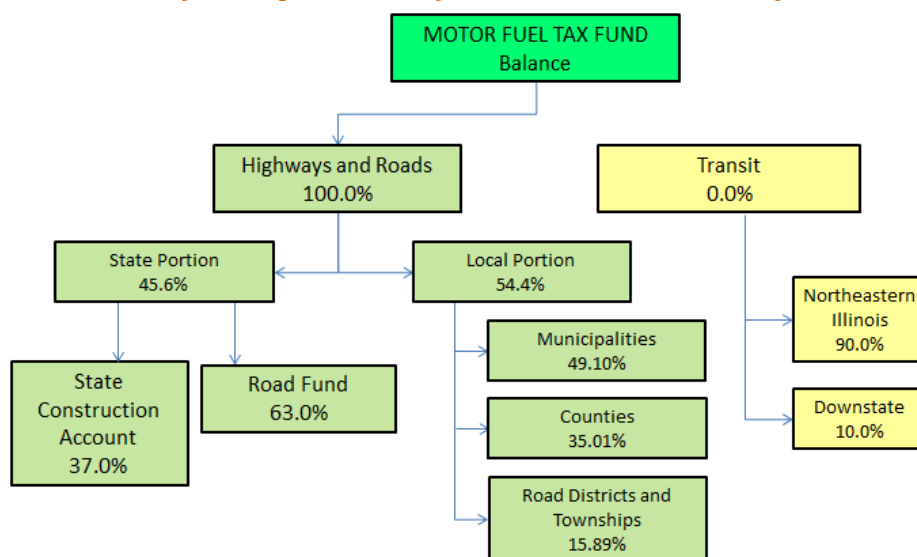
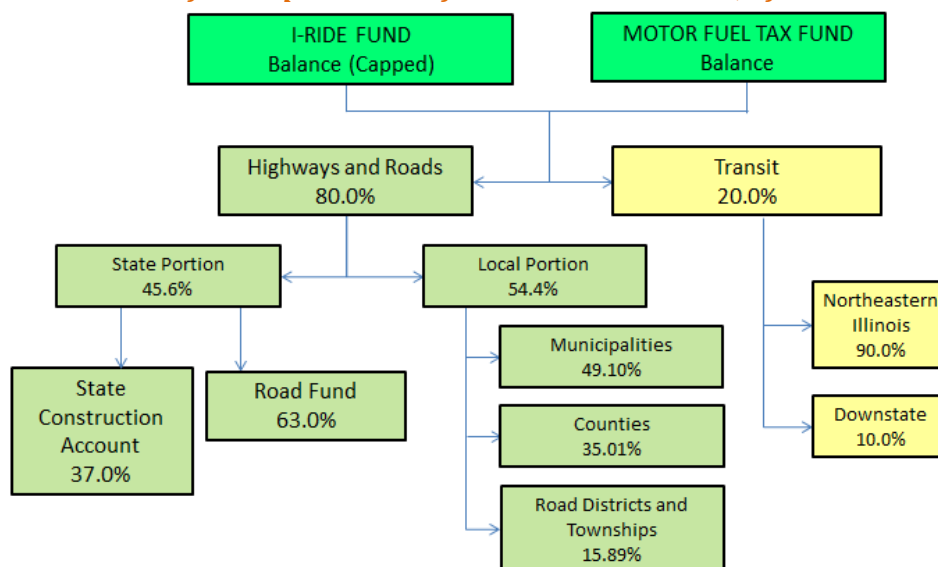


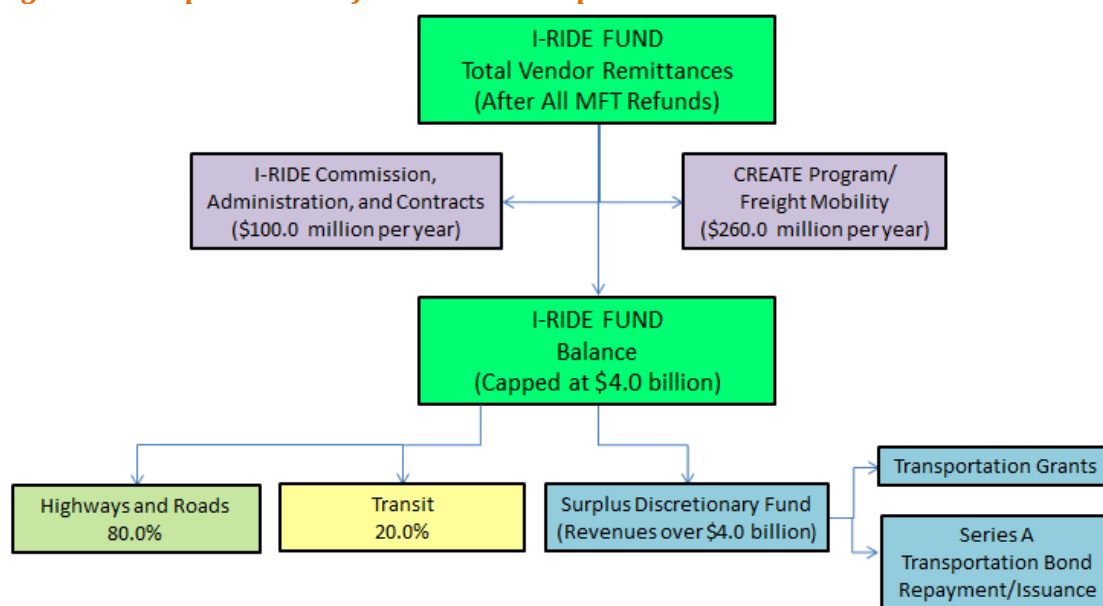
Figure 16: Distribution of Transportation Infrastructure Revenues, After I-RIDE



Once all vendor remittances are deposited in the I-RIDE Fund, some revenue will be taken off-the-top (Figure 17). First, \$100.0 million each year is designated for the I-RIDE Commission and associated administrative and contractual costs. According to the *Comprehensive Annual Financial Report For the Year Ended December 31, 2013* of the Illinois State Toll Highway Authority, comparable “procurement, IT, finance, and administration” expenses totaled \$24.3 million in 2013 (ISTHA, 2013). Since the I-RIDE Commission will be administering a statewide program, overhead expenses are expected to exceed those of the Tollway. To provide a conservative estimate and account for unexpected administrative costs, it is assumed that \$100.0 million will be needed each year.

Second, a share of I-RIDE Fund receipts will temporarily be deposited into the Chicago Region Environmental and Transportation Efficiency (or CREATE) program. As of January 2014, only 29 of CREATE’s 70 projects were completed or under construction. A full 22 projects were unfunded and an estimated total of \$2.6 billion in additional revenue was needed to finish the entire program. Once all projects are constructed, CREATE will generate \$28.3 billion toward the Illinois economy over 30 years (CREATE, 2014). Each year, \$260 million from the I-RIDE Fund will be allocated to CREATE to make up the shortfall and invest in Chicagoland’s rail infrastructure for long-term economic success. After ten years, this \$260 million would be allocated to investments to improve Illinois’ freight mobility— including highways, railroads, airports, waterways, and ports.

Figure 17: Proposed Flow of Illinois Road Improvement and Driver Enhancement Fund Dollars



The rest of the remittances will remain in the I-RIDE Fund for infrastructure investment within the current transportation funding system. This remainder is called the “Fund Balance.” It is what is left over after administrative costs and CREATE contributions are taken off the top *and* after Motor Fuel Tax credits are applied. As automobiles become more fuel efficient and Motor Fuel Tax revenues decline, this subtraction from the Fund Balance becomes a smaller number but has no effect on total transportation dollars.

The I-RIDE Fund Balance will be *capped* at \$4.0 billion, which is only likely to occur in the third, full capacity scenario. If remaining revenues surpass \$4.0 billion, funds in excess of the cap will be deposited into a Surplus Discretionary Fund (SDF). By law, the I-RIDE Commission

shall subsequently distribute SDF monies at their discretion for two purposes: transportation grants and bond repayment or issuance.

The I-RIDE Fund Balance will also have a legislated *floor* of \$1.3 billion. The goal of I-RIDE is to provide a long-term solution to declining Motor Fuel Tax revenues. I-RIDE Fund collections below \$1.3 billion will cause the state to experience the same problems that it faces today. Note the conservative revenue projections from the improvement rate scenario are closer to the floor than the cap, while the full capacity scenario falls in the middle. If remaining revenues fail to reach \$1.3 billion, the I-RIDE Commission is required to raise rates to make up the deficit. The commission can increase all rates or only some rates (e.g., the mileage fee on heavy multiple unit trucks) at its discretion, similar to how the Tollway Board operates. Previous to this public policy, raising the gas tax or securing funding for a capital bill were only left to the political will of state legislators.

I-RIDE Fund Balance money between \$1.3 billion and \$4.0 billion will be inserted into the current transportation framework. As with state bond-supported capital projects, 20 percent will be allotted to public transit— with 90 percent of this money designated for northeastern Illinois and 10 percent distributed to the rest of the state. The other 80 percent goes to highways and roads— with 45.6 deposited in state funds and 54.4 percent allocated to local governments. Additionally, although it is not a law, the state has followed a decades-long informal policy of directing 45 percent of highway funds to northeastern Illinois and distributing 55 percent downstate. This informal formula is incorporated into the ensuing analysis.

Under the third scenario of per-mile fees (Figure 9), conservative assumptions produce an estimated \$2.60 billion in new revenues from the I-RIDE. After committing \$100.0 million to administrative costs and \$260.0 million to CREATE/rail construction projects, approximately \$2.24 billion is available for new transportation infrastructure spending in the first full year of the I-RIDE. Northeastern Illinois would receive \$402.5 million for mass transit infrastructure and \$805.0 million for highway projects. The rest of the state would receive \$44.7 million in transit funds and \$983.9 million for road construction in one year (Figure 18).

Figure 18: Distribution of I-RIDE Expected Revenues, 1st Year and Five-Year Plan

I-RIDE Third Scenario: Full Capacity Rates	Distribution of Revenues in 1st Year	Five-Year Plan, All Else Constant
Full Capacity Model (100% Smart Plan)	\$2,596,181,145	\$12,980,905,725
Administrative Costs	\$100,000,000	\$500,000,000
CREATE Program Contributions	\$260,000,000	\$1,300,000,000
New Spending	\$2,236,181,145	\$11,180,905,725
20% Mass Transit	\$447,236,229	\$2,236,181,145
90% Northeastern Illinois	\$402,512,606	\$2,012,563,030
10% Downstate	\$44,723,623	\$223,618,115
80% State & Local Highways	\$1,788,944,916	\$8,944,724,580
45% Northeastern Illinois	\$805,025,212	\$4,025,126,061
55% Downstate	\$983,919,704	\$4,919,598,519

Under the third scenario proposed, the I-RIDE Fund Balance would generate \$11.18 billion in programmable dollars in its first five years – a portion of which should be used to invest in

infrastructure that supports alternative fuel vehicles. This estimated revenue assumes that everything is constant over the next five years, including the state's population, annual vehicle miles traveled by Illinois drivers, and the schedule of mileage fees. Since the economy has almost fully recovered from the Great Recession and vehicle miles traveled have increased every year since 2011, these are conservative expectations.



Economic Impact of I-RIDE

An \$11.18 billion boon to investments in Illinois' transportation infrastructure would deliver enormous benefits to the state economy (Figure 19). To evaluate the impact that this large-scale investment would have on the entire Illinois economy from what will otherwise occur in the absence of construction, an input-output economic impact analysis is performed. This type of analysis accounts for the interrelationship between industries in the economy, following a dollar as it cycles through the region until it is spent elsewhere (quantified through "multipliers"). The "local purchasing percentage" used in the simulations is 94.41 percent since an estimated 94.41 percent of all vehicle miles traveled in the state are driven by Illinois residents.

The estimates which follow are itemized by direct construction, indirect and induced, and total impacts. *Direct construction impacts* are the effects on construction workers as a result of this new spending. As 93.2 percent of all construction work in Illinois is performed by in-state contractors, the new I-RIDE spending stays in the state economy and promotes middle-class Illinois jobs. *Indirect and induced impacts* measure the effects of inter-industry purchases by companies related to the construction industry plus the additional consumer spending by those who are employed as a result of the direct construction impacts. *Total impacts* are the summation of the direct construction impacts and indirect and induced impacts.

An \$11.18 billion increase in transportation infrastructure spending would support 19,001 construction jobs every year for five years (95,004 job-years) which pay an average of \$65,659 in annual compensation. Due to this increased internal investment, 12,270 indirect and induced jobs would be stimulated, meaning that the I-RIDE policy would save or create 31,271 jobs in the short term. The result would be a lasting \$2.42 billion increase in the size of Illinois' economy (Figure 19).

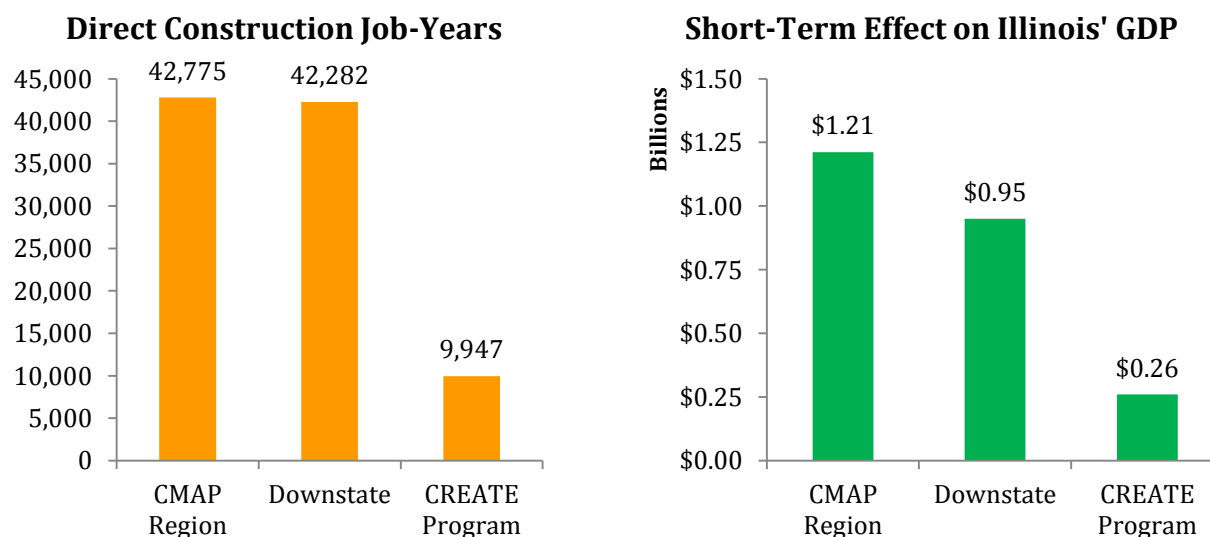


Figure 19: Impact of I-RIDE Five-Year Plan on Jobs Created, Worker Earnings, and Illinois GDP

Impact	Jobs Created	Worker Earnings	Illinois GDP
Direct Construction Impact	19,001 (95,004 job-years)	\$65,659	\$2.42 billion
Indirect and Induced Impact	12,270 (61,350 job-years)	\$52,675	
Total Impact	31,271 (156,354 job-years)	\$60,545	

Source: The Illinois Economic Policy Institute uses IMPLAN (IMpacts for PLANning) Version 3.0.17.2, Minnesota IMPLAN Group, Inc., © 2011. For analysis, ILEPI has access to all Illinois counties. Dollar estimates are in 2014 dollars. The “local purchasing percentage” was 0.9441.

Figure 20 breaks down the economic impacts by region. The first five years of the I-RIDE program would provide almost 43,000 job-years for construction workers in northeastern Illinois, represented by the Chicago Metropolitan Agency for Planning (CMAP), and over 42,000 job years for construction workers in the rest of the state. Additionally, almost 10,000 construction jobs would be supported on CREATE projects over the first five years. Infrastructure investment from I-RIDE funds would grow the CMAP regional market by \$1.21 billion, boost the downstate economy by \$0.95 billion, and would increase the state’s economic output by \$0.26 billion through the CREATE program over five years (Figure 20).

Figure 20: Short-Term Economic Impacts of the I-RIDE, First Five Years of the Policy

Source: The Illinois Economic Policy Institute uses IMPLAN (IMpacts for PLANning) Version 3.0.17.2, Minnesota IMPLAN Group, Inc., © 2011. The “CMAP Region” includes the following counties: Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will. “Downstate” includes all counties not in the CMAP Region. For the “CREATE Program” economic impact analysis, all counties within Illinois were used as the study area.

The *long-term* economic impacts of just the first five-years are also substantial (Figure 21). In northeastern Illinois, the Chicago Metropolitan Agency for Planning (CMAP) has identified critical infrastructure investments for the region. These “fiscally constrained” projects are priority improvements to grow the local economy. The \$4.03 billion in additional highway funds and \$2.01 billion in new transit revenues that northeastern Illinois receives from the I-RIDE Fund Balance over five years could be used to construct eight projects on the fiscally constrained list. Five of these projects are highway investments and three are transit investments. Combined, CMAP forecasts that completion of these projects would enlarge the regional economy by \$3.01 billion, reduce the number of time spent in traffic by 34.6 million hours each year (a 6.4 percent drop in congestion), and connect residents to 79,341 new jobs.

For regional highways in Figure 21, the difference between available funds and CMAP's estimate constrained costs of the five projects is approximately \$200 million. These funds could be used in a new program to invest in infrastructure that supports alternative fuel vehicles – to provide an incentive for more consumers to purchase fuel-efficient automobiles.

Note that these impacts are only for the Chicagoland area. Downstate projects will produce positive economic results as well. In addition, the long-term effect of CREATE is \$28.3 billion in business output, so investing in one-third of all program funding over five years roughly translates into an additional \$9.4 billion in economic benefit. It must also be noted that these are long-term impacts that result only from the five initial years of the Illinois Road Improvement and Driver Enhancement program. Since the policy provides a dependable and sustainable revenue stream, the I-RIDE will serve as a driver of economic growth for decades to come.

Figure 21: Example of How New I-RIDE Funds Could Be Used in CMAP Region, First Five Years

Long-Term Impact on Northeastern Illinois		
CMAP Region	Highways	Transit
Available Funds	\$4,025,126,061	\$2,012,563,030
List of CMAP Projects	Illinois 53/120 Tollway Circle Interchange I-55 Express Toll Lanes Elgin O'Hare Western Access Illiana Expressway	Metra UP West Improvements Metra SouthWest Improvements West Loop Transit Center: Phase 1
Constrained Costs of Projects	\$3,830,000,000	\$2,100,000,000
Impact on Gross Regional Product (GRP)		+\$3,019,000,000
Annual Congested Vehicle Hours Traveled in Region		-34,584,845
Percent Reduction in Traffic Congestion		-6.39%
Jobs Accessible within 45 Minutes By Car or 75 Minutes By Transit		+79,341

Source: CMAP, 2014. "GO TO 2014 Update Appendix: Major Capital Projects," Pages 19, 29, and 30.

Comparing Illinois to Oregon

In 2015, the vehicle miles traveled fee in the volunteer Oregon program will be 1.5 cents per mile. Research on Oregon's pilot programs found that a 1.56-cent charge per mile driven generated an average of 28% more in revenues than the state's gas tax. This proposal for an I-RIDE road user fee, however, supports a rate of 4.0 cents per mile traveled by passenger vehicles and single unit trucks, a fee of 4.5 cents per mile for buses, and a per-mile charge of 5.0 cents for multiple unit trucks. Why does Illinois' road usage charge program necessitate higher rates?

Compared to Oregon, the Illinois economy requires a higher level of infrastructure investment (Figure 22). With 6.0 million workers (59.2 percent of the population 16 years and older), the Illinois workforce more than triples Oregon's 1.7 million workers (55.6 percent of the population 16 years and older). The Illinois economy also produces \$460.2 billion more in economic output, with a construction industry that is \$15.8 billion larger. Additionally, Illinois households earn more income on average (\$76,773) than their Oregon counterparts (\$66,145). Since people with higher incomes travel farther and more frequently, Illinois is required to devote more resources to its transportation network (Mallett, 2004).

Figure 22: Comparison of State Economies, Illinois vs. Oregon

Economic Indicators	Illinois	Oregon
Population, 16 Years and Older, 2013	10.2 million	3.1 million
Employed, 16 Years and Older, 2013	6.0 million	1.7 million
Employed % of Population	59.2%	55.6%
<i>Economic Output</i>		
2013 Real GDP	\$671.4 billion	\$211.2 billion
2013 Real Construction Industry Output	\$22.2 billion	\$6.5 billion
<i>Income</i>		
Average Household Income, 2013	\$76,773	\$66,145

Sources: "Selected Economic Characteristics" by the 2013 American Community Survey, 3-Year Estimates; "Real GDP by State" by the U.S. Department of Commerce Bureau of Economic Analysis, converted to 2013 dollars.

Annual revenues for the state's Road Fund are currently lower per person in Illinois. Road Fund revenues were \$259 per capita in 2013 compared to \$325 per capita in Oregon during that same year (Figure 23). Furthermore, the federal government subsidizes highway construction more for Oregon. While federal payments for highways in 2012 were greater in Illinois (\$1.4 billion) than Oregon (\$0.6 billion), they only accounted for 23.7 percent of total construction and maintenance in Illinois. By contrast, the federal government supported 29.1 percent of Oregon's highway spending. Disproportionate support from the federal government allows the State of Oregon to maintain lower road user fees.

Figure 23: User Fees and Revenue Sources, Illinois vs. Oregon

User Cost or Revenue Source	Illinois	Oregon
Road Fund Revenue Per Capita, 2013	\$259	\$325
State Revenues Used for Highways, 2012	\$6.0 billion	\$1.9 billion
Federal Payments for Highways, 2012	\$1.4 billion	\$0.6 billion
Federal Government %	23.7%	29.1%

Sources: 2013 Illinois Comprehensive Annual Financial Report; 2013 Oregon Comprehensive Annual Financial Report; "2014 Report Card for America's Infrastructure: Illinois" and "2010 Report Card for America's Infrastructure: Oregon" by the American Society of Civil Engineers.

In 2013, the federal government bankrolled 43.5 percent of Oregon's General Fund revenues but just 21.2 percent of revenues in Illinois' General Fund (Figure 24). Personal income taxes, even with the temporary income tax hike in Illinois, are also greater in Oregon. An individual or family earning \$25,000 per year would pay 5.0 percent in state income taxes in Illinois and 8.1 percent in Oregon, or \$777.50 more in one year. Another individual or family with an annual income of \$100,000 would still pay 5.0 percent in income taxes in Illinois but would contribute 8.8 percent in Oregon, or \$3,780.00 more. Since state revenues from personal incomes and from the federal government are lower in Illinois, the state is prompted to make up the difference elsewhere, such as in a higher sales tax rate (Figure 3). Higher vehicle miles traveled fees in Illinois are another method to raise revenues to make up the shortfall by placing the burden of road quality on those who use the infrastructure, rather than increasing income taxes on workers who may not actually use the roads.

Illinois has the third largest bridge inventory in America with 26,514 bridges (Figure 25). Unfortunately, 4,287 of the state's bridges (16.2 percent) are either "structurally deficient" or "functionally obsolete." On the other hand, Illinois' bridge infrastructure compares favorably to Oregon's 9,407-bridge network, where 1,774 are in bad condition (18.9 percent). Illinois also has far more public-use road miles than Oregon: 144,337 miles compared to 57,262 miles (Figure

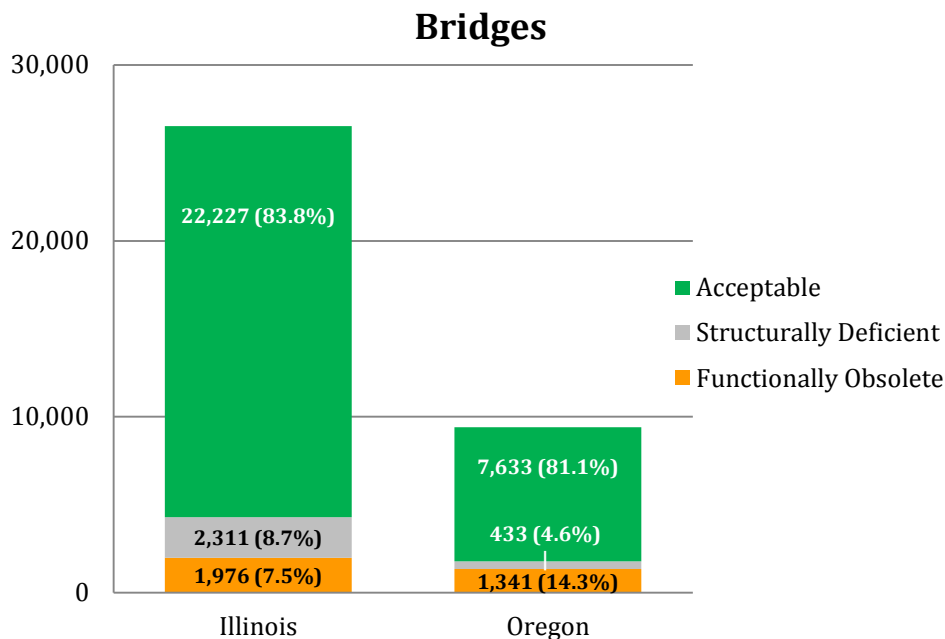
26). Three in ten (31.8 percent) public road miles are located in urban areas in Illinois compared to just two in ten (21.7 percent) in Oregon. Superior bridge quality, a larger road network, and a greater share of roads in densely-populated cities and suburbs all contribute toward higher user costs for Illinois infrastructure.

Figure 24: State Government Funds, Illinois vs. Oregon

State Government Funds	Illinois	Oregon
General Fund Revenue, 2013	\$40.6 billion	\$12.5 billion
Federal Government % of General Fund	21.2%	43.5%
Income Tax Rate: \$25,000	5.00%	8.11%
Income Tax Rate: \$50,000	5.00%	8.56%
Income Tax Rate: \$100,000	5.00%	8.78%
Sales Tax Rate	6.25%	0.00%

Sources: 2013 Illinois Comprehensive Annual Financial Report; 2013 Oregon Comprehensive Annual Finance Report; "Facts & Figures 2013: How Does Your State Compare?" by the Tax Foundation.

Figure 25: Number and Quality of Bridges, Illinois vs. Oregon



Sources: "2014 Report Card for America's Infrastructure: Illinois" and "2010 Report Card for America's Infrastructure: Oregon" by the American Society of Civil Engineers.

Demand for vehicular infrastructure is also significantly greater in Illinois than Oregon (Figure 26). There are 8.2 million driver's licenses issued in Illinois to Oregon's 2.8 million and Illinois motorists travel 104.6 billion miles compared to Oregon's 33.2 billion. At 6.1 billion gallons, Illinois drivers consumed 4.1 billion more gallons of fuel than their counterparts to the northwest. Moreover, while fewer workers commuted to work in a car, truck, or van in Illinois (84.1 percent) than in Oregon (85.4 percent), Illinois workers were more likely to travel to their jobs using public transportation, including buses: 8.7 percent to 4.2 percent. Finally, congestion is significant in Illinois, as the average commute time to work is 28.0 minutes in Illinois compared to 22.2 minutes in Oregon. The high demand by workers and families for Illinois' road network, paired with the related need to improve and expand the infrastructure to reduce congestion, contributes toward higher proposed user costs.

Figure 26: Infrastructure, Usage, and Method of Commute to Work, Illinois vs. Oregon

Roads, Usage, and Methods	Illinois	Oregon
<i>Infrastructure</i>		
Total Public Road Miles, 2012	144,337	59,262
Rural	68.2%	78.3%
Urban	31.8%	21.7%
<i>Usage</i>		
Driver's Licenses, 2012	8.2 million	2.8 million
Vehicle Miles Traveled, 2012	104.6 billion	33.2 billion
Total Motor Fuel Gallons, 2012	6.1 billion	2.0 billion
<i>Method of Commute to Work</i>		
Car, Truck, or Van	84.1%	85.4%
Public Transit	8.7%	4.2%
Mean Travel Time to Work	28.0 minutes	22.2 minutes

Sources: "Highway Statistics Series: Illinois 2012 State Statistical Abstract" and "Highway Statistics Series: Oregon 2012 State Statistical Abstract" by the U.S. Department of Transportation Federal Highway Administration; "Selected Economic Characteristics" by the 2013 American Community Survey, 3-Year Estimates.

Positioned at the crossroads of the American economy, Illinois espouses the largest intermodal inland port in the Western Hemisphere. Illinois' O'Hare International Airport is the second-busiest airport in the world, boosting Illinois' freight and material-moving industries. Illinois' comprehensive rail network is also the second-largest in the nation, with 7,028 miles of railroad. Oregon, by contrast, ranks 30th in the nation with 2,395 rail miles (Figure 27). Accordingly, Illinois transports significantly more freight than Oregon. Illinois' ports receive 119.1 million short tons of cargo, the fifth-most in the nation, compared to Oregon's 26.9 million short tons. To meet this demand, the Illinois economy comprises 8,470 business establishments in the "truck transportation" industry which employ 67,515 truckers and workers. By contrast, there are only 1,608 workers employed by 1,608 trucking establishments in the State of Oregon. Moreover, 14.0 percent of the Illinois workforce is employed in "production, transportation, and material moving" jobs compared to just 12.2 percent in Oregon.

Figure 27: Logistics and Freight Sectors, Illinois vs. Oregon

Logistics and Freight	Illinois	Oregon
<i>Rail</i>		
Railroads, 2012	7,028 miles	2,395 miles
State Rank	2 nd	30 th
<i>Ports</i>		
Short Tons of Cargo, 2012	119.1 million	26.9 million
State Rank	5 th	24 th
<i>General Freight Trucking</i>		
Trucking Business Establishments, 2012	8,470	1,608
Trucking Employees, 2012	67,515	17,735
<i>Occupation</i>		
Production, Transportation, and Material Moving Jobs	844,538	212,396
Share of Total Employment in State	14.0%	12.2%

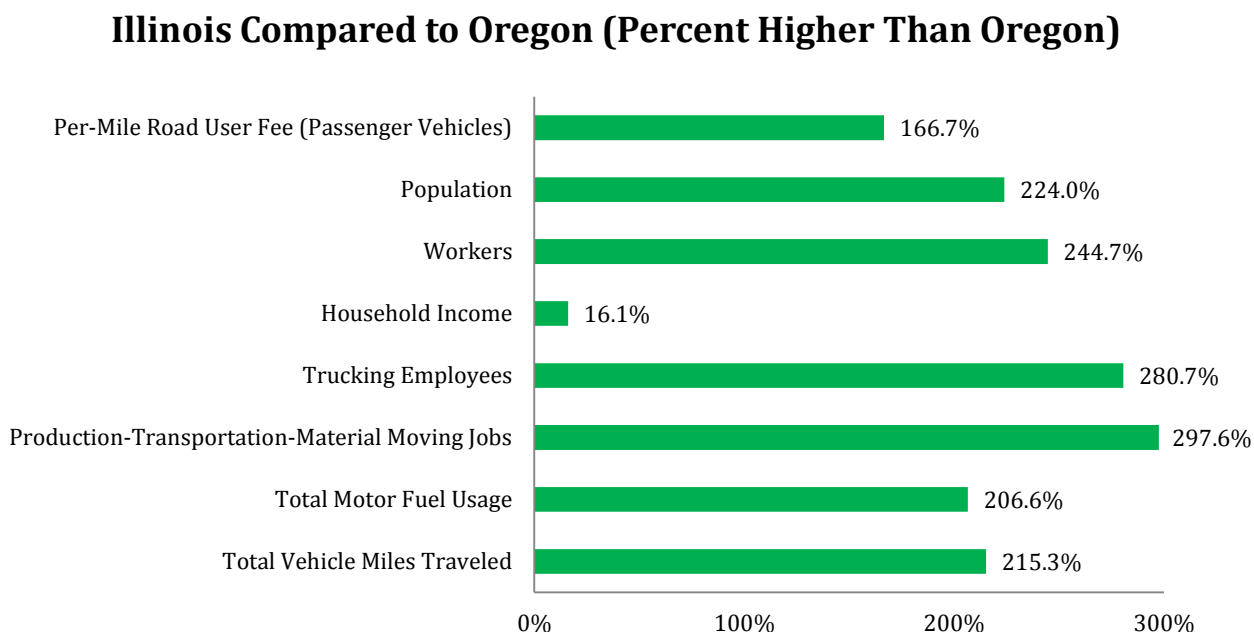
Sources: "2014 Report Card for America's Infrastructure: Illinois" and "2010 Report Card for America's Infrastructure: Oregon" by the American Society of Civil Engineers; "2012 County Business Patterns: Geography Area Series" by the U.S. Census Bureau and the U.S. Department of Commerce; and "Selected Economic Characteristics" by the 2013 American Community Survey, 3-Year Estimates.

The flourishing freight transportation sector of the Illinois economy requires a first-class logistics network so that the state continues to be a cost-effective business option to locate to bring products to market or to export goods internationally. The price of supporting the trucking industry, however, is high: one 40-ton truck does as much damage to an interstate highway as 9,600 cars (GAO, 1994). Trucking and freight logistics therefore are a significant reason why the I-RIDE rates must be higher than Oregon's road usage charges.

Figure 28 summarizes these findings to demonstrate why Illinois' vehicle miles traveled fees will need to be higher than Oregon's rate. All comparisons are presented as the percentage amount by which Illinois exceeds Oregon. The proposed, full-capacity I-RIDE fee for passenger vehicles is 2.5 cents greater than Oregon's 1.5-cent rate because:

- Illinois has 224.0 percent more people and 244.7 percent more workers than Oregon;
- Illinois households earn 16.1 percent more each year, indicating greater ability to pay;
- Illinois' trucking industry is 280.7 percent larger than Oregon's;
- Illinois has 297.6 percent more workers in "production, transportation, and material moving" occupations, which create and deliver products; and
- Total motor fuel usage and total vehicle miles traveled are respectively 206.6 percent and 215.3 percent higher in Illinois than Oregon.

Figure 28: Illinois vs. Oregon, Select Variables, Percentage by Which Illinois Exceeds Oregon



Finally, over the long run, the increased road user fee faced by Illinois motorists would provide significant benefits. The full capacity I-RIDE rates would improve the quality of the state's existing infrastructure, reducing back-end personal costs. They also would allow Illinois to expand the network, further increasing the state's economic growth, business competitiveness, worker mobility, and quality of life. Ultimately, a higher vehicle miles traveled fee promises to be a worthwhile investment for Illinois.

Conclusion: The Benefits of I-RIDE to Workers, Businesses, and Families

Illinois' transportation infrastructure is inadequate and getting worse. If the State of Illinois takes no action, one in every three road miles and one out of every 10 bridges will be structurally deficient or functionally obsolete. Unfortunately, declining Motor Fuel Tax receipts and the looming budgetary problems of the federal Highway Trust Fund imperil the long-term revenue sources to maintain and modernize Illinois' system. The Illinois Road Improvement and Driver Enhancement (I-RIDE) program is a solution to these problems.

The I-RIDE is a fee for each mile traveled by a vehicle that is equal to the damage caused by the vehicle to the infrastructure *plus* costs to invest in future needs. Utilizing GPS or "dongle" technology, the I-RIDE allows individuals to choose their pay-as-you-go plan, for which they are billed every month, quarter, or year. Illinois motorists are credited their Motor Fuel Tax contributions in the process. Through an innovative public-private partnership framework, the I-RIDE protects personal privacy, promotes in-state infrastructure investment, and supports "high-road" economic development in Illinois.

The fees required to both bring Illinois' system up to par and invest in a modern world-class transportation network are 4.0 cents per mile for passenger vehicles and single unit trucks, 4.5 cents per mile for buses, and 5.0 cents per mile for multiple unit trucks. Under these "full capacity" rates, the state is conservatively expected to generate an additional \$2.60 billion in annual funds. After distribution to both highway infrastructure and mass transportation improvements across the state, this additional funding would support over 31,000 new jobs every year, including about 19,000 direct construction jobs. Full capacity funding would also allow the state to complete the CREATE program with full funding in the next decade, would reduce traffic congestion, and would increase worker-to-firm connectivity.

The benefits of the road user fee are substantial. The I-RIDE is a fiscally-responsible policy that maintains an adequate, predictable, and sustainable revenue stream every single year. By making those who actually drive on the roads pay for their usage, the I-RIDE also promotes taxpayer fairness, keeping money in the General Fund to pay for other public goods like schools, fire departments, and police departments. Moreover, in promoting the stability of infrastructure funds, the I-RIDE encourages businesses to locate in Illinois because they can be certain that their products and services will be efficiently and predictably delivered to the market. Finally, the I-RIDE is an innovative method of finance that will be used to build a modern system to fit the needs of future generations.



Illinois has reached a fork in the road. The state can continue down the path of unsustainable funding and low-quality infrastructure, or it can be a global leader in smart, world-class infrastructure investment policies that grow the economy. The Illinois Road Improvement and Driver Enhancement program allows the state to choose the second path of transit modernization, congestion alleviation, safety improvements, and economic development. The Illinois Road Improvement and Driver Enhancement proposal should be implemented.

Appendix: Answers to *Eleven* Questions about the Proposed I-RIDE

Question 1: Why now?

Answer 1: State government cannot *plan* the future Illinois economy. Technological innovations and private consumer demand are the forces that will shape the market of tomorrow. State government, however, can *prepare for* the future based on consumption trends. The fuel economy of cars purchased by Illinois residents has risen substantially in the past decade, and this trend is expected to continue as CAFE standards rise and alternative fuel vehicles become more prevalent. In addition, passenger vehicles are increasingly equipped with GPS capabilities. The technology exists to implement a true user-pays fee that both improves Illinois' current infrastructure system and invests in a transportation network that serves the economy of the future.



Question 2: Do residents want more infrastructure investment?

Answer 2: In two March 2013 Gallup Polls which surveyed a combined total of 2,051 American adults, 74.5 percent said that they would vote for a “program that would spend government money to put people to work on urgent infrastructure repairs” compared to 21.0 percent who would vote against (PollingReport, 2014). Locally, 84 percent of Chicago residents said in a September 2014 survey that the city needs to “greatly improve” its roads, highways, bridges, and railroads (Galland, 2014). Finally, only 26.3 percent of southern Illinois residents think that the quality of infrastructure in their area is “good” or “excellent” (SIU, 2010). The people of Illinois, like their fellow Americans, recognize the inadequate quality and supply of public infrastructure and are in favor of increased spending to improve conditions.

Question 3: Will Illinois residents evade fee payments or tamper with the devices?

Answer 3: Research from the Oregon pilot programs has found that the potential for evasion is minimal (Whitty, 2007). In 2003, the Illinois State Toll Highway Authority found that 3 percent of drivers did not pay tolls (Groark, 2003). As I-Pass transponders and photo enforcement have improved, this rate has fallen considerably. Hefty evasion fees and penalties for tampering with in-vehicle equipment can also deter those from paying less than their fair share. Finally, ILEPI and the IIIFFC suggest license revocation for those who do not pay their I-RIDE bills in the past 12 months.

With respect to anti-tampering, private vendors can select from a range of measures to prevent motorist fraud. If a private firm decides to collect information each year in annual vehicle tests, they could use tamper-evident tape on the device and perform error checks (Whitty & Capps, 2014). Devices can also record when they are installed, removed, turned on, and turned off. Odometer tampering has been a cause of fraud in the past, but modern vehicles have integrated

electric odometer systems with tamperproof technologies. Ultimately, much of these concerns will be addressed in the bidding process, with the initial Request For Information (RFI) revealing the technologies that interested firms have at their disposal to deal with cheaters.

Question 4: How will out-of-state visitors pay their fair share?

Answer 4: Unfortunately, current technology is unable to force non-Illinois motorists to pay the I-RIDE. Out-of-state residents, however, will continue to pay the in-state Motor Fuel Tax at the pump. Thus, this policy would not result in a net loss of out-of-state fees. Additionally, given that Illinois residents will receive Motor Fuel Tax credits on their monthly bill, the I-RIDE may make it politically feasible to raise the gas tax— which would raise additional revenues from out-of-state drivers and have no impact on total revenues from in-state workers, but would increase the monthly rebate to Illinois motorists. Finally, as the first state to fully adopt a road user fee, Illinois would lead by example in the region. When Illinois' neighbors follow this example, the state could enter into regional agreements to charge all motorists per mile. Evidence from Oregon's second pilot program demonstrates that the policy is scalable to a regional system (Whitty & Capps, 2014).

Question 5: Will Illinois residents be charged for miles driven in other states?

Answer 5: No. As long as households select the Smart Plan or the Deluxe Plan, they will not be charged for traveling out of state. Drivers who choose the Convenience Plan, a cheaper option than the Deluxe Plan for the vast majority of Illinois motorists, *will* pay for out-of-state driving, because their location will not be recorded by their private service provider. These drivers pay the per-mile rate for all miles driven, regardless of whether they were in-state or out-of-state.

Question 6: If private vendors serve as collection agents and are only tasked with remitting funds to the state, how can the public trust that they will not steal or distribute less money than they receive?

Answer 6: The first measure to defend vendor fraud and abuse is in the initial public procurement process. The I-RIDE Commission is to select the lowest *responsible* bidder(s) to administer the program. Detailed financial information and an extensive background check will be required of all companies that submit a bid. Second, the I-RIDE Commission will be required to conduct vendor audits every few months, using a representative sample of invoices (i.e., at least 1,000), to ensure compliance. In this sense, the state government will in fact have access to some motorists' movements through these randomly-selected invoices, but such access will be temporary and used only for program transparency and accountability. By law, these personalized invoices will be deleted and destroyed after 12 months.

Question 7: Why not integrate I-RIDE into the Illinois State Toll Highway Authority?

Answer 7: The Illinois State Toll Highway Authority operates in northern Illinois. I-RIDE is a statewide policy that requires a commission representative of the entire state. Additionally, the I-RIDE requires new public-private partnerships to protect the individual's right to privacy from the government. Finally, in the very unlikely event that I-RIDE implementation is unsuccessful, the highly-effective tollway system will not be taken down with the new

commission. After many years of proven I-RIDE success, however, it could make sense for the Illinois Road Improvement and Driver Enhancement Commission and the Illinois State Tollway Highway Authority to consolidate.

Question 8: Since fuel-efficient automobiles consume fewer gallons of gasoline, those who own or rent an alternative fuel vehicle actually pay less in Motor Fuel Taxes, providing an incentive to be environmentally-friendly. Will the I-RIDE eliminate this incentive?

Answer 8: Currently, those motorists in vehicles with better fuel economy pay less to use Illinois roads than those in fuel-inefficient automobiles, even though they cause the same amount of damage to the actual infrastructure. The I-RIDE policy is intended to address this discrepancy in revenue contributions, especially as more and more cars become fuel-efficient. Most legislators and Illinois residents will understand that it costs \$600 to drive 15,000 miles in one year. Consumers mainly buy fuel efficient vehicles to stop paying \$2 to \$3 per gallon for the *price of fuel*, not to save \$0.19 per gallon in fuel taxes.

However, there are at least three possible policy solutions to ensure that consumers are encouraged to be environmentally-friendly. First, a designated portion of I-RIDE funds can be utilized to invest in infrastructure that supports alternative fuel vehicles (e.g., increasing the number of plug-in locations for electric-powered vehicles). Second, some I-RIDE funds can be used to give a tax credit directly to the consumer at the dealership if they purchase an alternative fuel vehicle. Third, a separate, reduced I-RIDE rate could be added to the proposed



schedules on Pages 13 and 14 for fuel-efficient vehicles. ILEPI and the IIFFC recommend the first of these options (at least initially) because it immediately helps to improve Illinois' infrastructure inadequacies and the latter two would only add to the policy's administrative complexity at the start. Finally, once motorists are billed for every mile driven and their individual contributions to infrastructure damage are quantified, some may choose to in fact drive fewer miles. An itemized bill thus might help to improve Illinois' environmental quality (CBO, 2011).

Question 9: How do the City of Chicago and Cook County benefit from the I-RIDE?

Answer 9: Under the full capacity I-RIDE rates, IDOT Region 1 would receive \$1.21 billion in *new* infrastructure annual funding. The projected net increases in local revenues specifically to the budgets of Cook County and the City of Chicago are \$238.1 million and \$169.1 million, respectively (Manzo & Poulos, 2015). The current system based on the Motor Fuel Tax allocates money only to state and local highway projects. I-RIDE, on the other hand, recognizes the importance of providing a world-class, clean, and rapid public transportation system. To that end, 20 percent of all revenues in the I-RIDE Fund Balance will be designated for mass transit improvements— with 90 percent of these expenditures dedicated to IDOT Region 1. Thus, of the \$1.21 billion in new regional funding, \$402.5 million would be for mass transit infrastructure and \$805.0 million would go toward road and highway projects. Riders of the Regional

Transportation Authority (Chicago Transit Authority bus and rail system, Metra commuter rail, and Pace suburban bus service) do not pay the road user fee but receive the benefits of improved infrastructure. This provides another incentive for Chicago area residents to be environmentally friendly.

Question 10: Can there be an adjustment to the I-RIDE rates based on owner income level?

Answer 10: Yes, but with caution. While some legislators may want to have lower fees for low-income households, rate progressivity would increase the administrative complexity of the policy. A poorer household is already likely to drive fewer miles than a richer household, and consequently will tend to pay less in I-RIDE fees. Furthermore, the I-RIDE is paid only by those who use the *roads*, but a large portion of the revenues will be allocated to public transit (see Question 9 above and Page 18). Low-income individuals who are more likely to use public transportation will thus benefit from the policy. While it is possible to include rate adjustments based on disparities in income, ILEPI and the IIRFFC advises that such considerations be evaluated and debated after the program has been operational for at least a few years.

Question 11: How much would my city or county receive in new transportation funds from the I-RIDE program?

Answer 11: This is a new question answered in Version 2.0 of this Policy Brief. On April 24, 2015, ILEPI and the IIRFFC released an accompanying report, *The Distribution of I-RIDE Revenues: 2015 Local Allotments*, detailing projected revenues from I-RIDE under “full capacity” rates. Estimates are hypothetical if I-RIDE was already enacted and functioning in 2015 to provide a baseline against current revenues (Manzo & Poulos, 2015). For the full, alphabetized breakdown by village, city, township, and county, visit <http://illinoisepi.org/policy-briefs-countryside/>.

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