

# Urban vs. Rural Implications: User Fee Alternatives to the Gas Tax

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Smith**

State of Illinois approves motor fuel tax increase and other revenues to support capital infrastructure

*Editorial:* A \$45 billion public works plan and what does Illinois get? Deeper in debt.

Pritzker's Nearly \$45B Capital Plan Is Way Better for Transportation Than Expected

From road repairs to transit expansions, \$33 billion in capital bill will have 'monumental' impact

**BREAKING** TOP STORY

State

**Illinois governor signs budget, revenue and capital improvement bills**

**REBUILD ILLINOIS** 

# Presentation Overview

- 2019 Illinois Capital Bill Overview
- Declining Viability of the Gas Tax
- Rural vs. Urban Implications of Alternative User Fees
  - Tolling
  - Mileage-Based User Fees



# Illinois Capital Bill Overview

# Illinois Capital Bill Highlights

## **\$45b total, \$33b for transportation**

### *Sources of revenue:*

- Doubling the gas tax 19 cents, indexed
- Diesel differential increase from 2.5 cents to 7.5 cents per gallon (no index) → elimination of commercial distribution fee
- Sales tax on gas (6.25%) from GRF to Transportation
- Increases to motor vehicle registration
  - Passenger vehicles - \$50 (now \$148)
  - Commercial vehicle \$100
  - Electric vehicle fees \$248 total – from \$35 biennially to same base registration, plus \$100 for not paying MFT
- Certificate of title fees increased \$55
- Allows expanded local collection of MFT

# Illinois Capital Bill Highlights

## *Distribution:*

- \$2.5b annually for transportation
- Six years \$20.5b, 54% in bonding
  - \$14b roads and bridges
  - \$4.5b transit
  - \$1.5b passenger rail, freight rail, ports, airports
  - \$50m bike-ped

## ■ Project list:

- \$1b for I-80 expansion 
- \$400m for CREATE
- \$500m for Amtrak expansion from Chicago to Rockford, Quad Cities 
- \$100m Kendall County Metra BNSF extension 
- \$2.5m - \$6m per House/ Senate district

## Initial estimates of annual increased revenue of Senate Bills 1939 and 690

	Capital infrastructure funds	General Funds
<b>Senate Bill 1939 (funds transportation infrastructure)</b>		
Motor fuel tax	\$1,235 million	
Diesel differential	\$77.5 million	
Sales tax switch (at full implementation)	\$600 million	(\$600 million)
Vehicle registration*	\$475 million	
Electric vehicle registration*	\$4 million	
Certificate of title	\$146 million	
Commercial vehicle registration*	\$50 million	
Commercial Distribution Fee repeal		(\$54 million)
<b>Senate Bill 690 (funds water buildings, transportation, broadband, and other infrastructure)</b>		
Parking garage tax	\$60 million	
Cap traded-on property exemption	\$60 million	
Cigarette tax increase	No data at time of publication	
Gaming and gambling	No data at time of publication	

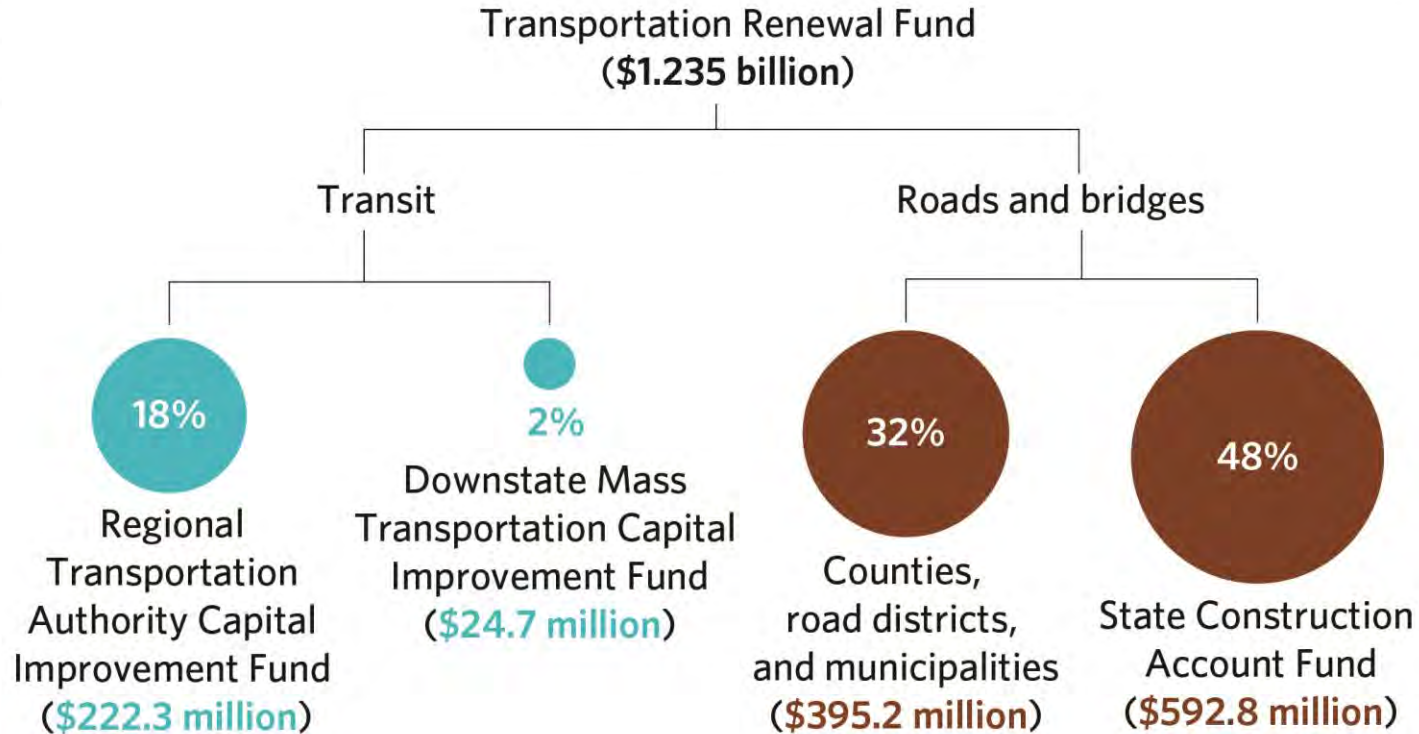
\*\$1 of the increase is directed to the Secretary of State

Source: Illinois House of Representatives staff analysis, ReBuild Illinois proposal, Illinois Office of the Comptroller, and State of Illinois analysis provided by the Transportation for Illinois Coalition.

# Distribution of Illinois' 19-cent motor fuel tax increase

Note: Percentages represent the portion of \$1.235 billion in anticipated new annual motor fuel tax revenue.

Source: Chicago Metropolitan Agency for Planning analysis of Illinois Senate Bill 1939.



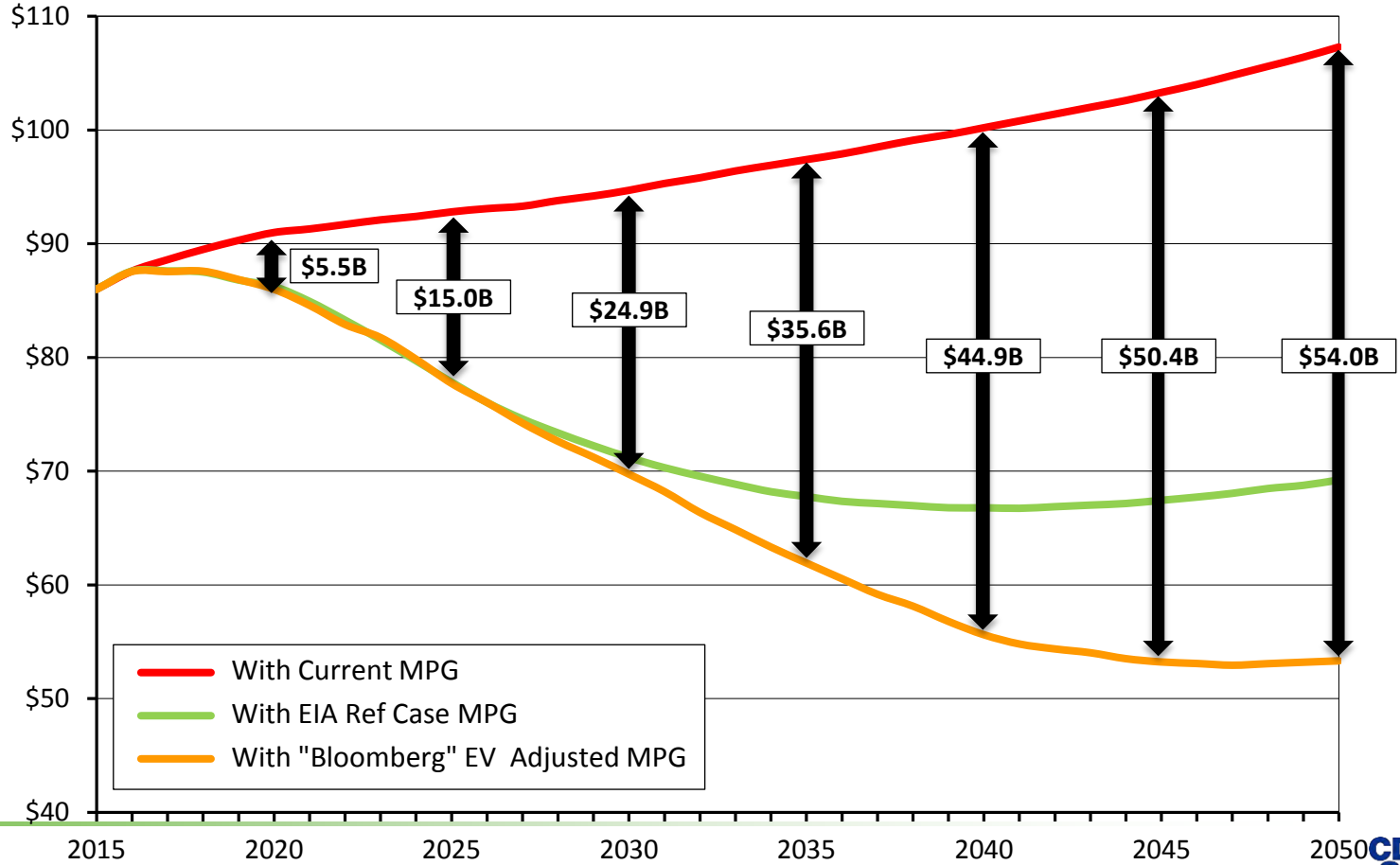




# Declining Viability of the Gas Tax

# Nationwide Gas Tax Revenue Declines

Approximate Annual Gas Tax Revenue (Billions, 2015)  
(Assumes Overall Average State and Federal Tax of \$0.47/Gallon)





# Rural vs. Urban Implications of Alternative User Fees

# Challenges

- Illinois already solved it's revenue problem!!

***“We will not have to vote on this again...”***

- IL elected official following vote

- Expanded tolling or mileage based user fees are unfair to rural residents.

***“I can't support any user fee that unfairly burdens my rural constituents...”***

– Countless elected officials with rural constituents

# Alternative User Fees: Interstate Tolling

Interstate  
Tolling



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graph LR; A[Interstate Tolling] --> B[Mileage-Based User Fees]
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Mileage-  
Based User  
Fees

# Interstate Tolling Model

- Planning-level tool
- Traffic and VMT impacts
- Implementation and collection costs
- Revenue generation
- Urban vs. rural
- Travel time

Rate per Mile	Avg Annual \$[Billions] (2020-2040)	
	Toll Revenue	Net Revenue
\$0.04	\$68.40	\$54.60
\$0.06	\$93.80	\$80.90
\$0.08	\$119.50	\$106.90

# Tolling Scenarios

- **UNIVERSAL TOLLING:** All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively. Same rates in urban and rural.
- **RURAL DISCOUNT:** All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively in urban areas. 25% discount in rural.
- **TRUCK ONLY, RURAL DISCOUNT:** Statewide Truck-only tolling \$0.10 per mile in urban and \$0.075 per mile in rural.

# Driver Behavior: Changes in VMT

TOLLING SCENARIO	VMT CHANGE (MILLIONS)		
	INTERSTATES		
	CARS	TRUCKS	TOTAL
All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively. Same rates in urban and rural	(1,179)	(993)	(2,172)
	95.2%	85.8%	93.1%
All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively in urban areas. 25% discount in rural	(1,086)	(834)	(1,920)
	95.6%	88.1%	93.9%
Statewide Truck-only tolling \$0.10 per mile in Urban and \$0.075 per mile in rural	(213)	(912)	(1,125)
	99.1%	87.0%	96.4%



# Revenue Generation (in millions)

TOLLING SCENARIO	GROSS REVENUE CARS			GROSS REVENUE TRUCKS			TOTAL REVENUE
	ETC	NON-ETC	SUB-TOTAL	ETC	NON-ETC	SUB-TOTAL	
All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively. Same rates in urban and rural	\$ 475.99	\$ 250.47	\$ 726.46	\$ 417.13	\$ 129.74	\$ 546.87	\$ 1,273.33
All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively in urban areas. 25% discount in rural	\$ 435.21	\$ 229.54	\$ 664.75	\$ 358.52	\$ 112.42	\$ 470.94	\$ 1,135.69
Statewide Truck-only tolling \$0.10 per mile in Urban and \$0.075 per mile in rural (25% discount)	\$ -	\$ -	\$ -	\$ 355.32	\$ 110.44	\$ 465.76	\$ 465.76

# Revenue Generation (in millions)

TOLLING SCENARIO	CARS		TRUCKS	
	RURAL	URBAN	RURAL	URBAN
All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively. Same rates in urban and rural	\$ 260.10	\$ 466.36	\$ 358.12	\$ 188.75
All interstates tolled at \$0.04 and \$0.10 per mile for cars and trucks respectively in urban areas. 25% discount in rural	\$ 197.16	\$ 467.59	\$ 278.44	\$ 192.50
Statewide Truck-only tolling \$0.10 per mile in Urban and \$0.075 per mile in rural (25% discount)	\$ -	\$ -	\$ 274.64	\$ 191.12

# Takeaways

## Behavior (VMT)

- Shift in rural driver behavior is minimal between full toll and 25% discount toll (93.1% to 93.9%)
- All tolling scenarios have a bigger impact on truck driver behavior (12% to 15% change) compared to car driver behavior (<5% change)
- Trucks are slightly more likely to divert off of tolled facilities in the truck-only scenario → roads more congested since cars are not tolled

## Revenue

- Lose 11% of revenue between universal tolling and rural discount programs (\$137.6m) → depending on revenue generational goals, may be worth rural discount to make more politically palatable
- Across all scenarios → More revenue raised by cars in urban areas; more revenue raised by trucks in rural areas
- Tolling all interstates at \$0.04 and \$0.10 per mile for cars and trucks, respectively, raises the equivalent of \$0.19 gas tax increase

# Alternative User Fees: Mileage-Based User Fees

Interstate  
Tolling

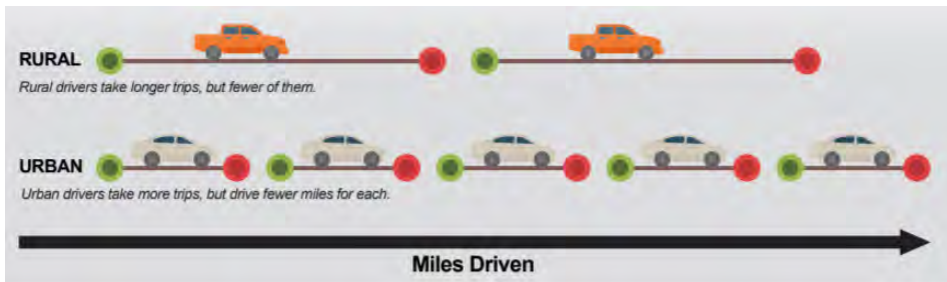


Mileage-  
Based User  
Fees



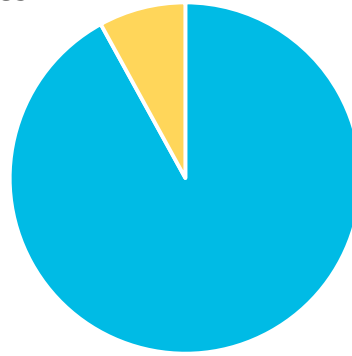
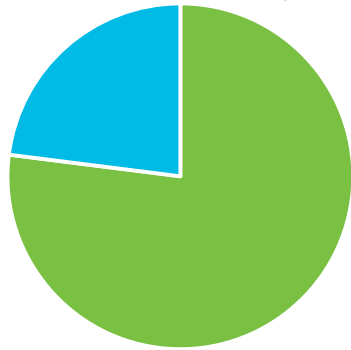
# Financial Impacts of Road Usage Charges (RUC) on Urban and Rural Households

% Savings with RUC	Urban	Mixed	Rural
Arizona	-0.7%	1.7%	6.1%
California	-0.3%	2.4%	6.3%
Idaho	-1.0%	0.9%	3.1%
Montana	-1.4%	-0.4%	1.9%
Oregon	-1.0%	2.9%	4.8%
Texas	-0.5%	1.6%	3.1%
Utah	-0.6%	3.4%	5.5%
Washington	-1.6%	3.6%	4.8%



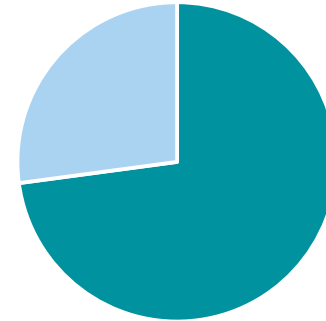
# MBUF Rates to Replace the Motor Fuel Tax

Illinois MBUF  
**\$106.8b** total



■ Urban (\$82.6b) ■ Rural (\$24.2b) ■ Cars (98.2b) ■ Trucks (8.5b)

Revenue from Fuel Tax  
**\$1.294b**



■ Gas (\$943m) ■ Diesel (\$351m)

## Pre-Capital Bill MBUF Rates

- Cars: \$0.01/ mile
- Trucks: \$0.04/mile

## Capital Bill MBUF Rates

- Cars: \$0.02/mile
- Trucks: \$0.085/mile

# Revenue Generation Under Various MBUF Rates

Car per Mile		Truck per Mile		Total Revenue
\$0.0100	\$982,229	\$0.0400	\$341,645	<b>\$1,323,874</b>
\$0.0125	\$1,227,786	\$0.0500	\$427,056	<b>\$1,654,842</b>
\$0.0150	\$1,473,343	\$0.0600	\$512,467	<b>\$1,985,810</b>
\$0.0175	\$1,718,900	\$0.0700	\$597,878	<b>\$2,316,779</b>
\$0.0200	\$1,964,458	\$0.0800	\$683,290	<b>\$2,647,747</b>

# Policy Levers for MBUF (GPS-based)

- Rural vs. Urban
- Car vs. Truck
- Time of day → Congestion
- Location → \$ for Transit
- Equity Considerations
- In-State vs. Out-of-State





# Now what?

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