

Tolling's Potential in a Changing World



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Tolling in America today

- ❖ 34 states have toll roads, bridges, tunnels
- ❖ 128 toll operators, 342 facilities
- ❖ 6,250 center-line miles tolled
- ❖ 53 express toll lanes in operation, 11 states
- ❖ 2018 toll revenue: \$20 billion

21st century tolling

| | <u>20th-C</u> | <u>21st-C</u> |
|-----------------|--------------------------|--------------------------|
| Payment | cash | electronic |
| Rates | fixed | fixed/variable |
| Cost to collect | 20-30% | 5-10% |
| Duration | temporary | ongoing |

Comparing tolls & fuel taxes

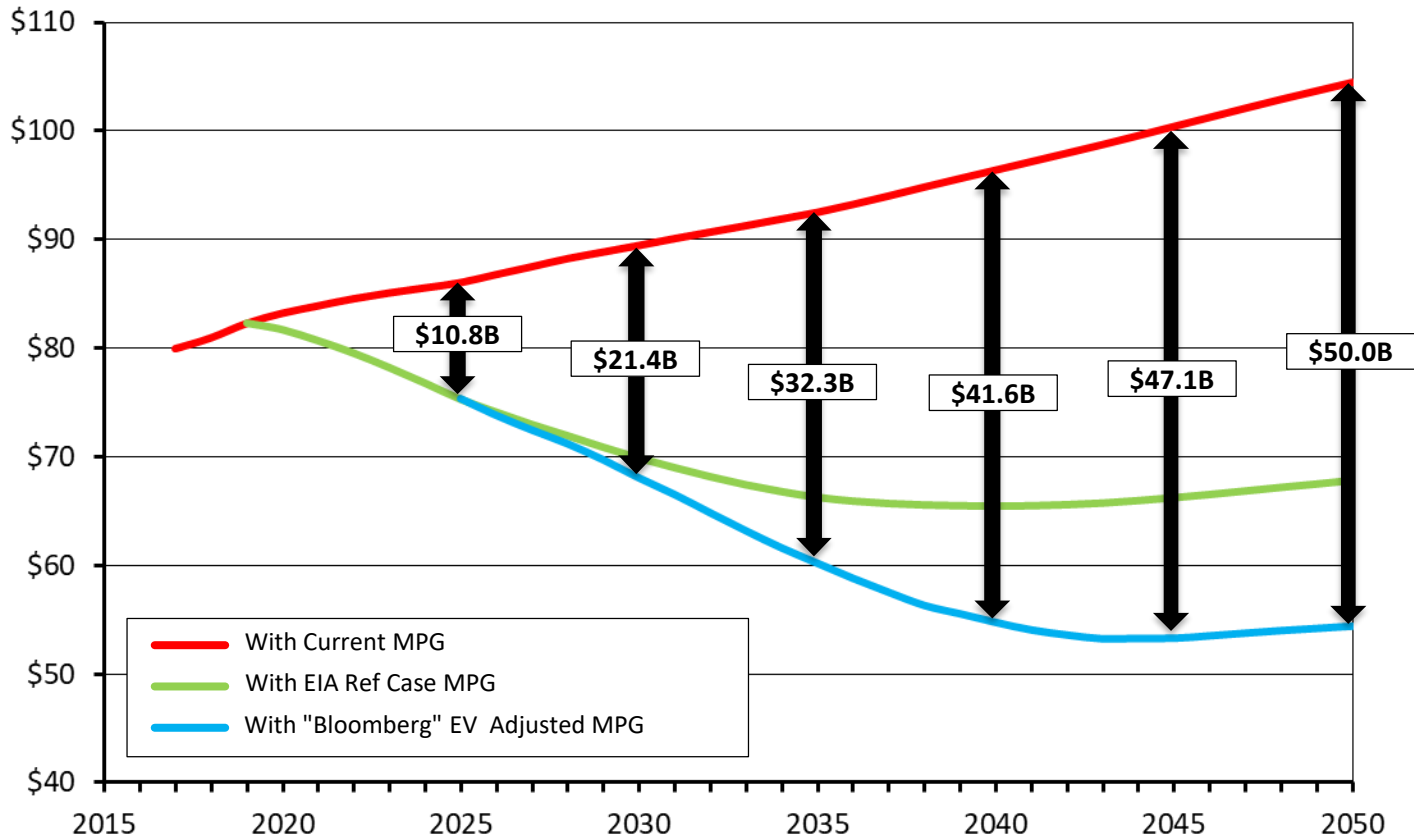
| | <u>Fuel tax</u> | <u>Toll</u> |
|---------------|-----------------|---------------|
| Paid to: | State | Road provider |
| Rate basis: | Avg. cost | Cost of road |
| Maintenance: | Legislators | Bondholders |
| Big projects: | Appropriations | Revenue bonds |
| Who pays: | Gas users | All users |



Approximate State and Federal Fuel Tax Revenue

2019 Dollars; Assumes Nominal \$0.48/Gal. Combined Average Tax

Approximate Annual Gas Tax Revenue (Billions, 2019)
(Assumes Overall Average State and Federal Tax of \$0.48/Gallon)



What do US households pay for basic infrastructure?

(National average per household)

| | |
|-------------------|-------------|
| ⊕ Electricity | \$107/month |
| ⊕ Telephones | \$102 |
| ⊕ Natural gas | \$ 83 |
| ⊕ Cable/satellite | \$ 80 |
| ⊕ Water | \$ 71 |
| ⊕ Highways | ??? |

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| ⊕ <i>Highways*</i> | <i>\$ 46</i> |

*Federal + average state gas taxes

Americans are willing to pay more, for better highways & bridges



- ⊕ NCHRP Synthesis 377:
 - ⊠ Public wants to see value
 - ⊠ How revenues are used is important
 - ⊠ Public prefers tolls to increased taxes
- ⊕ HNTB America Thinks 2018 Surveys
 - ⊠ 73% willing to pay more for better highways:
 - 46% would pay tolls for specific highway and bridge projects
 - 27% would rather everyone pay higher taxes for these improvements.

The fuel tax falls short on mega-projects

- ⊕ Fuel tax yields same amount per mile driven—on 2-lane roads and Interstates.
- ⊕ Mega-project may need 4 to 5 cents/mi. but fuel tax yields only 2 to 3 cents/mi.
- ⊕ Tolls are better suited to mega-projects.
- ⊕ Increased use of tolls for those would free up gas tax for other roads.

America's greatest megaproject challenge: aging Interstates

- ⊕ Aging, undersized Interstate highway system: a major problem, with no current solution.
- ⊕ With 5% of lane-miles, they handle 25% of VMT (35% if other limited-access included).
- ⊕ Most built in 1960s, 1970s—and are past their design life.
- ⊕ Many lack enough lanes for current and future traffic.
- ⊕ Major bottlenecks at key urban interchanges.

The National Academies of
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CONSENSUS STUDY REPORT

**Renewing the National
Commitment to the
Interstate Highway System**
A Foundation for the Future



TRB report conclusion:

We need to replace existing Interstates

- ❖ Pavement is wearing out.
- ❖ Numerous bottleneck interchanges.
- ❖ Not enough lanes for projected growth.
- ❖ No dedicated truck lanes (for LCVs, platooning, autonomous trucks).
- ❖ Poor services.

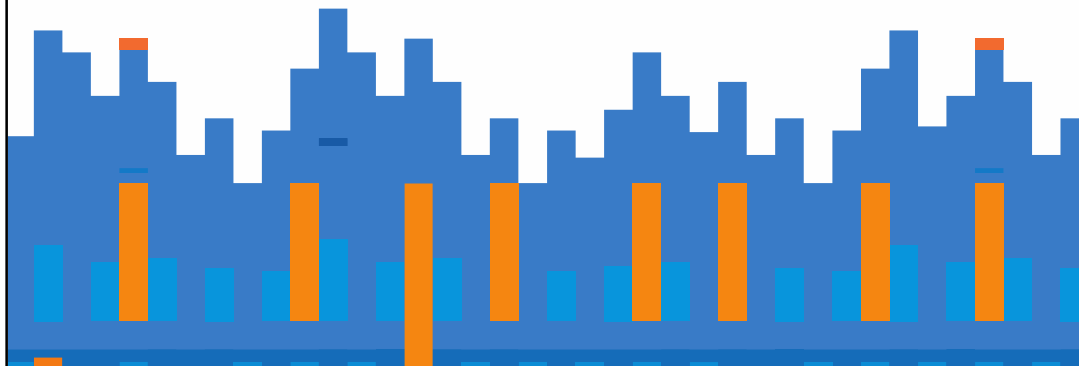
TRB report proposal:

- ⊕ Estimated cost: \$57B/year over next 20 years (>\$1 trillion).
- ⊕ Huge federal fuel tax increases (300%).
- ⊕ But Congress would likely spread the increase over all of surface transportation.
- ⊕ Federal/state 90/10 formula as in 1956.
- ⊕ Pay as you go; no financing.



THE CASE FOR TOLL-FINANCED INTERSTATE REPLACEMENT

by Robert W. Poole, Jr.
March 2019



A toll-financed approach would make better sense.

- ⊕ Per-mile electronic toll is user-friendly.
- ⊕ Could be charged *instead of* fuel taxes.
- ⊕ Bond the revenue; rebuild much sooner.
- ⊕ Guaranteed ongoing maintenance, per bond covenants.
- ⊕ Would free up federal & state gas tax for all other highways.

Tolled motorways overseas; mostly investor-owned

📍 Europe:

- 📍 France, Italy, Spain, Portugal

📍 Latin America:

- 📍 Argentina, Brazil, Chile, Colombia, Mexico, Peru

📍 Asia:

- 📍 Indonesia, Malaysia, Philippines

📍 Australia:

- 📍 Expressways in Brisbane, Melbourne, Sydney

Motorist and trucker concerns

- ⊕ Double taxation (fuel tax + toll)
- ⊕ Revenue diversion
- ⊕ Tolls first, maybe better roads someday
- ⊕ Make only trucks pay
- ⊕ Make out-of-staters pay most of cost

Customer-friendly tolling provisions

1. Tolls all-electronic.
2. Charged *instead of* fuel tax, not in addition.
3. Revenues used *only* for capital and operating costs of Interstates.
4. Charge tolls only *after* bridge or corridor is rebuilt, in operation.
5. Charge *all* vehicles, not just trucks.
6. Charge *same rates* to in-state and out-of-state vehicles.

How Congress could help, in pending reauthorization bill

- ⊕ New pilot program, all states eligible.
- ⊕ Exemption from 1956 ban on tolling *if* the state agrees to customer-friendly tolling.
- ⊕ No reduction in federal highway funding, but flexibility to spend on non-Interstate highways.
- ⊕ Electronic tolling interoperability requirement.

Conclusions:

- ❖ Tolling plays a limited role today, but is well-suited to mega-projects.
- ❖ Fuel tax revenues trending downward, funding crunch ahead.
- ❖ Customer-friendly tolling could *replace* fuel taxes for mega-projects, such as rebuilding/modernizing Interstates.

Questions?

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<https://reason.org/topics/transportation>

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