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Vehicle Registration Fee Models

The Regional Transportation Alliance (RTA) business coalition supports the implementation of a vehicle-registration based “access user fee” as a simple, fair, and resilient method of replacing the motor fuels tax to fund transportation. This would replace the existing North Carolina motor fuels tax of \$0.385 per gallon, which equates to approximately \$237 paid by the average vehicle per year¹. This memo covers the existing landscape and policies in progress related to vehicle registration and motor fuels tax alternatives being proposed or implemented at the state level.

The RTA proposal would roll up the equivalent payment of the motor fuels tax into an annual fee paid as part of vehicle registration. Note that this is focused on alternatives to the motor fuels tax paid by gasoline powered passenger vehicles, which make up 83.4% of vehicles sold in the U.S. in 2021. Diesel fueled passenger vehicles make up less than 1% of vehicle sales in the U.S according to the Diesel Technology Forum², while most diesel vehicles sold are commercial heavy-duty trucks. With an increasing share of battery powered EVs, plug-in, and hybrid cars on the roads, the traditional motor fuels tax model is becoming a less reliable source of revenue for state transportation departments as they search for alternatives.

Current Scenario: United States

Vehicle registration fees and motor fuels taxes are among the most common sources of revenue for state Departments of Transportation. According to the National Conference of State Legislatures, North Carolina is one of 26 states plus Puerto Rico that has a flat rate vehicle registration fee³ (\$36 plus county vehicle property taxes) plus a \$130 fee for Electric Vehicles to make up for a share of lost revenue from the motor fuels tax⁴. States are exploring alternatives to motor fuels taxes and different structures for vehicle registration to make up for lost revenue from electric vehicle adoption and changing driving habits.

¹ Based on an average VMT of 14,369, an average fuel economy of 23.3 mpg, and an effective gasoline tax rate of \$0.385 per gallon.

² [U.S. Vehicle Sales Dashboard | Diesel Technology Forum \(dieselforum.org\)](https://www.dieselforum.org/)

³ Puerto Rico charges a flat rate for vehicle registration

⁴ [Vehicle Registration Fees By State \(ncsl.org\)](https://www.ncsl.org/transportation/vehicle-registration-fees-by-state)

There is a wide range of variation in how the remaining 26 states (plus D.C) charge for vehicle registration, with the most common methods being weight-based, value-based or age-based. Weight-based fees are the most common graduated fees for vehicle registrations, with several states plus the District of Columbia using weight to differentiate road impact.

Weight-Based Fees for Passenger Vehicles (Example States)

State	Fee Structure	EV Fee
Florida	\$225 - initial registration, \$14.50 for vehicles under 2,500 lbs. \$22.50 for vehicles between 2,500 - 3,499 lbs. \$32.50 for vehicles over 3,500 lbs.	None
New York	\$26 under 1,650 lbs., plus \$1.50 for every 100 lbs. above \$1,650 lbs.	None
Virginia	\$30.75 – 4,000 lbs. or less \$35.75 – 4,000-6,500 lbs. \$44.75 – 6,500 – 10,000 lbs.	\$109, calculated as 85% of equivalent use of motor fuels tax
Maryland	\$135 for passenger cars up to 3,700 lbs. \$187 for passenger cars over 3,700 lbs.	None
New Jersey	\$33 to \$84, depending on weight	None
Arkansas	\$17 for cars 3,000 lbs. or less \$25 for cars 3,000 lbs. - 4,500 lbs. \$30 for cars over 4,500 lbs.	\$200
District of Columbia	\$72 for vehicles under 3,500 lbs. \$115 for vehicles from 3,500 to 5,000 lbs. \$155 for vehicles above 5,000 lbs.	Discounted fee: \$36

Source: NCSL

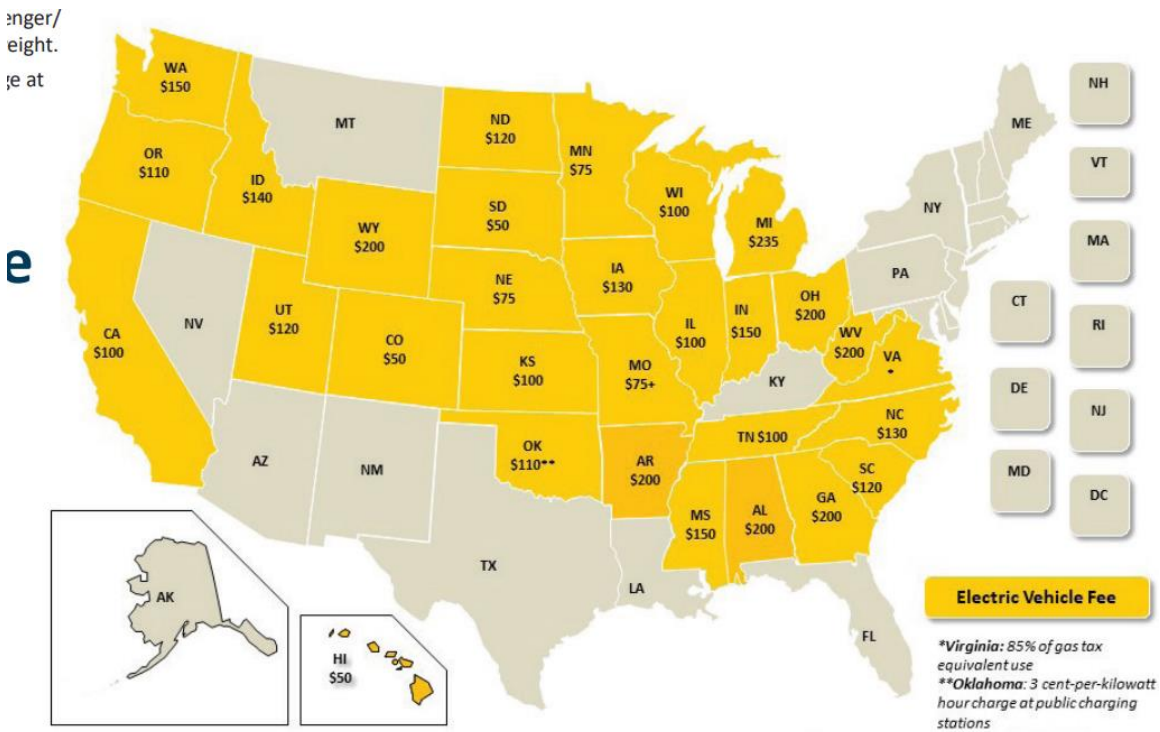
The cost difference for weight-based fees ranges from marginal (Florida, Virginia) to large (DC) to account for the impact of heavier vehicles on roads. The District of Columbia is considering increasing its tax on heavy vehicles to \$500 for vehicles over 6,000 pounds, becoming the most expensive in the nation.⁵ Washington State (see

⁵ [A New Way to Curb the Rise of Oversized Pickups and SUVs - Bloomberg](#)

below) has a complex fee structure system for vehicle registration which has gone through a series of controversial changes since 2019.

Many states charge an additional fee for electric vehicles to make up for lost tax revenue, as EVs do not pay the motor fuels tax. As of 2022, 30 states had an electric vehicle fee according to the American Road and Transportation Builders Association (ARTBA).

Electric Vehicle Fees for Passenger Vehicles: 2022



Source: TIAC, "State Electric Vehicle Fees", Feb. 2022

Source: ARTBA TAIC. [State Electric Vehicle Fees 2022.pdf](https://transportationinvestment.org) (transportationinvestment.org)

WASHINGTON

Washington has a mixed fee structure for registration, with registration fees based on a flat \$30 statewide car tab, \$13.25 processing fees, weight fees, and local taxes based on county and vehicle type. To support Sound Transit in 2016, voters approved an additional excise tax on vehicles in the Seattle Metro Area (Pierce, King, and Snohomish Counties) which was then removed by the 2019 ballot initiative I-976, known as the \$30 car tab. This ballot measure capped Car Tab Fees to \$30 or \$43.25, taking away additional fees totaling hundreds of dollars (table below) mainly intended for public transit funds. In 2020, Washington's Supreme Court ruled the \$30 car tab initiative,

unconstitutional, arguing it had a subject that was not expressed in its title and was an impermissible separate subject.

The current fee structure in Washington is as follows:

Washington Fee Structure

State	Fee Structure	EV Fee
Washington	\$43.25 standard fee Plus, weight fees +\$25 for 0-4,000 lbs. +\$45 for 4,000-6,000 lbs. +\$65 for 6,000-\$8,000 lbs. +\$72 for 8,000 lbs. and up Plus, local taxes and fees +\$20 to \$80 depending on location Plus, Sound Transit Tax +1.1% of vehicle value ⁶	+ \$150

Source: Government of Washington

The fee structure continues to be controversial⁷. The \$30 car tab initiative is popular outside of Metro Seattle because it simplifies and lowers vehicle registration costs but is unpopular in Seattle (King & Snohomish Counties) because it strips main sources of funding for public transit. Legislation is ongoing in Washington, including a mix of alternative bills to change vehicle registration and road usage fees.

Gasoline Tax Alternatives: U.S.

In addition to Washington, state legislatures are considering alternatives to gasoline taxes. In 2022, there are 35 bills in 15 states that address Vehicle Miles Traveled (VMT) Fees⁸. Utah and Virginia are two states to recently amend their gas tax alternatives for electric vehicles, recognizing the loss in gas tax revenue from increased EV adoption. Utah was one of the first states to adopt an EV fee, with an alternative per-mile tax for EVs for drivers who use their cars under 8,000 miles per year, with an annual cap which was revised in 2022.

⁶ [VehicleFees.pdf \(wa.gov\)](#)

⁷ [2020 10 16 Washington State Supreme Court rules in car tabs case finds 1976 unconstitutional .pdf](#)

⁸ [Transportation Funding and Finance State Bill Tracking Database \(ncsl.org\)](#)

UTAH

Utah's HB 186, passed on February 18, 2022, changed the structure of its road-use fees for electric vehicles, charging 1 cent per mile or an annual \$130.25 fee, aiming to stabilize road funding in the state. EV owners can opt-in to the program where they pay annually per mile. Currently, the charges are 1.5c per mile or a \$120 fee. According to the state legislature, only about 10% of drivers pay per mile.

As more EVs are adopted in Utah, the State anticipates this will make up for the shortfall in fuel taxes and the fee will ramp up to \$240 over the next decade. Legislators intend for the fee to stabilize transportation revenues over the long-term as they anticipate fuel tax revenue to be more volatile.

Utah Road Use Fee for Electric Vehicles: HB 186

Start Date	Cost per Mile	Cap
2023	1c per mile	\$130.25
2026	1.25 c per mile	\$180
2032	1.5 c per mile	\$240

Source: [HB0186 \(utah.gov\)](https://legislature.utah.gov/bills/2022/0186)

Utah makes up a portion of its transportation revenue from sales taxes: 49% of its DOT funding comes from the Transportation Investment Fund (TIF), of which about half (\$775 million) comes from sales tax revenue. Utah's 2005 TIF law allowed for 8.3% of sales tax revenue to be dedicated to the TIF, with a scale-up based on revenue growth up to 17% of sales taxes.

VIRGINIA

In 2022, Virginia updated its vehicle registration fees for fuel-efficient and electric vehicles, increasing the EV fee to \$109 per year to make up for the anticipated lost revenue from a motor fuels tax. On July 1, 2022, Virginia drivers will be eligible to enroll in the "mileage choice program" as an alternative to its highway use fee, offering an alternative for drivers who drive less than 11,600 miles annually⁹.

⁹ [Virginia Department of Motor Vehicles](https://www.dmv.virginia.gov/vehicles/registration)

PROPOSED AND CONSIDERED GAS TAX ALTERNATIVES

Several other States are establishing task forces, pilots, or commissions to study alternatives to the gas tax and VMT fees.

States with Task Forces, Pilot Programs, or Commissions to Study VMT Fees

State	Task Force, Commission, or Program
Illinois	Blue Ribbon Commission (pending)
Massachusetts	Vehicle Mileage User Fee Task Force (pending)
Oklahoma	Road User Charge Task Force (passed)
Pennsylvania	Highway Maintenance Funding Study (adopted)
California	Road Usage Charge Pilot Program (enacted)

Additionally, several states failed to implement road usage charges or VMT fees in 2022. Washington had the most bills move through its legislature, following the controversial overturn of the \$30 car tab initiative by the state supreme court. Minnesota, New York, and Vermont failed to implement VMT fees, road usage charges, and EV mileage taxes.

States with Failed or Adjourned Road Usage Fee Bills in 2022

State	Bills
Minnesota	Failed – road usage charge (H 523, S 1880)
New York	Failed – VMT fee (A 4094)
Vermont	Failed – EV Mileage Tax (H 123, S 121)
Washington	Failed – Zero Emissions Transportation Future, Per Mileage Charge, Road Usage Charges, Limited Tracking of Individuals,

Additional Resources:

The Tax Foundation advocates for a VMT tax for highway funding, but acknowledges the limits related to privacy and tracking and challenges related to enforcement and implementation.

Tax Foundation: [Vehicle Miles Traveled \(VMT\) Tax | Highway Funding | Tax Foundation](#)

The NCSL tracks state-level legislation regarding transportation funding and taxation.

NCSL: [Transportation Funding and Finance State Bill Tracking Database \(ncsl.org\)](#)

Vehicle Registration and Funding Models: European Union

For comparison, European Union countries vary widely with how they tax vehicle registrations; some are weight-based while others are emissions-based. Ireland uses a graduated system based on the emissions grade, with the most efficient cars paying the lowest tax. They use the EU classification bands for emissions from A to G, with annual fees based on the emissions rating.

Annual Registration Fees for Motor Vehicles: Ireland

Band	Co2 emissions range	Annual Fee (€)
A	0	€120
A1	1-50g	€140
A2	50-80g	€150
A3	80-90g	€160
A4	90-100g	€170
A5	100-110g	€180
A6	110-120g	€190
B1	120-130g	€200
B2	130-140g	€210
C1	140-150g	€270
C2	150-160g	€280
D	160-170g	€420
E	170-180g	€600

Source: [MOTOR TAXATION - c1c067a4-052b-406a-86dd-33a6830f90ad.pdf](https://www.gov.ie/publications-and-statistics/publication/motor-taxation-c1c067a4-052b-406a-86dd-33a6830f90ad)
(www.gov.ie)

The ACEA – the European Automobile Manufacturers Association - releases an annual report which outlines the different ways vehicles are taxed and registered in EU Member States. [ACEA Tax Guide 2021 - ACEA - European Automobile Manufacturers' Association](#)

Example Access User Fee: North Carolina

In examining the potential value of an access fee, the model uses a per-vehicle access fee, based on the average motor fuels tax paid annually per vehicle (not per driver), the national average fuel economy for the entire motor vehicle fleet, and the motor fuels tax per gallon in North Carolina and select peer states for comparison. On average, each vehicle contributes \$237 annually to fund transportation through motor fuels taxes in North Carolina. A hypothetical user access fee would remain revenue neutral by raising \$237 annually to replace that amount.

Fuel Tax Rate	Average Annual Fuel tax paid per vehicle	Average fuel tax paid per month	Reduction in fuel tax rate from current level	Reduced Fuel Tax Revenue (required access fee)	Equivalent Access Fee* per Month	Notes
38.5 ¢/gal	\$ 237	\$ 19.79	0.0 ¢/gal	-	-	Current fuel tax in NC in 2022
26.2 ¢/gal	\$ 162	\$13.46	12.3 ¢/gal	\$ 76	\$ 6.32	Equivalent to fuel tax in Virginia in 2022
28.8 ¢/gal	\$ 177	\$14.80	9.7 ¢/gal	\$ 60	\$ 4.98	Equivalent to fuel tax in South Carolina in 2022
27.4 ¢/gal	\$ 169	\$14.08	11.1 ¢/gal	\$ 68	\$ 5.70	Equivalent to fuel tax in Tennessee
19.2 ¢/gal	\$ 118	\$9.87	19.3 ¢/gal	\$ 119	\$ 9.92	50:50 revenue split from fuel tax and access fee
9.0 ¢/gal	\$62	\$4.60	29.5 ¢/gal	\$ 182	\$ 15.19	Equivalent to fuel tax in Alaska, lowest in U.S.
0.0 ¢/gal	-	-	38.5 ¢/gal	\$ 237	\$ 19.79	End fuel taxes, replace with access fee

* Access fee = Additional registration fee in lieu of some or all motor fuel taxes

Note that this does not distinguish between commercial and private vehicles. For reference there were 8.5 million registered vehicles and 7.6 million licensed drivers in North Carolina in 2019.

Explanatory notes:

The above table assumes overall revenue neutrality. Some calculations above have been rounded.

Fuel tax rates/gallon as of 2022: NC = 38.5 ¢; SC = 28 ¢; TN = 27.4 ¢; VA = 26.2 ¢; GA = 32.2 ¢.

The lowest fuel tax rate in the US is Alaska, at 8.95 ¢.

The above table assumes 14,369 annual miles driven per vehicle in NC, and average fuel efficiency of 23.3 mpg, when calculating average annual fuel tax paid per driver.

14,369 miles annual miles per driver based on 2019 values of 122,475 million vehicle miles traveled, with 8.5 million total vehicles registered according to FHWA Fuel efficiency is for the entire stock of vehicles on the road in 2019, including new and existing vehicles.

Electric vehicles currently pay a \$140.25 fee in NC but no fuel taxes; as this is below the \$237 average annual fuel tax paid, this means that other motorists subsidize electric vehicles' use of the road system by ~ \$97.25/year.

Currently motorists pay \$38.75 to register their vehicle in North Carolina (fee varies by vehicle type). The access fees listed above (i.e., additional registration fees) are over-and-above that amount. The existing registration fee could be incorporated into a monthly access fee by adding \$3.23 per month (e.g.) to the above amounts.