
Mileage-based User Fee for EVs

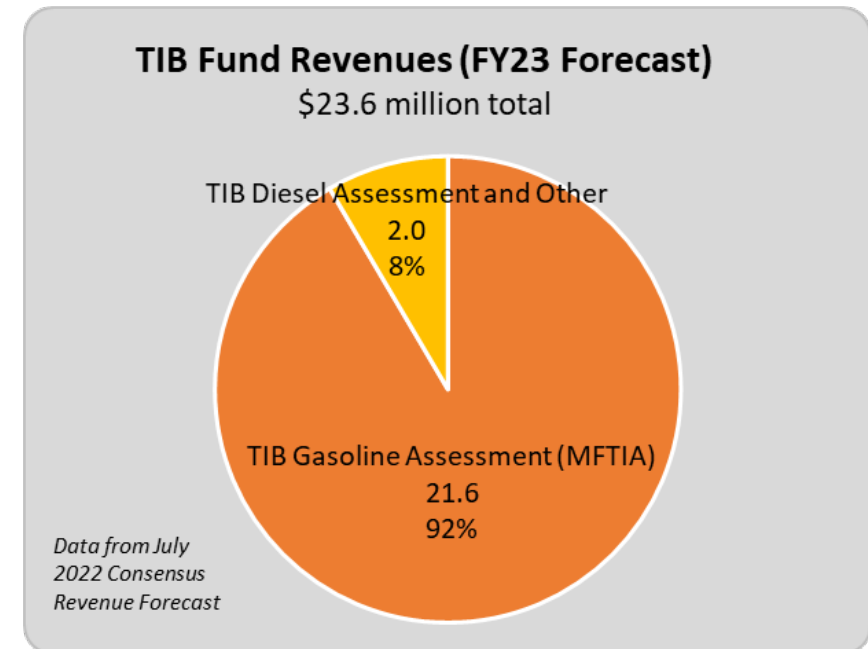
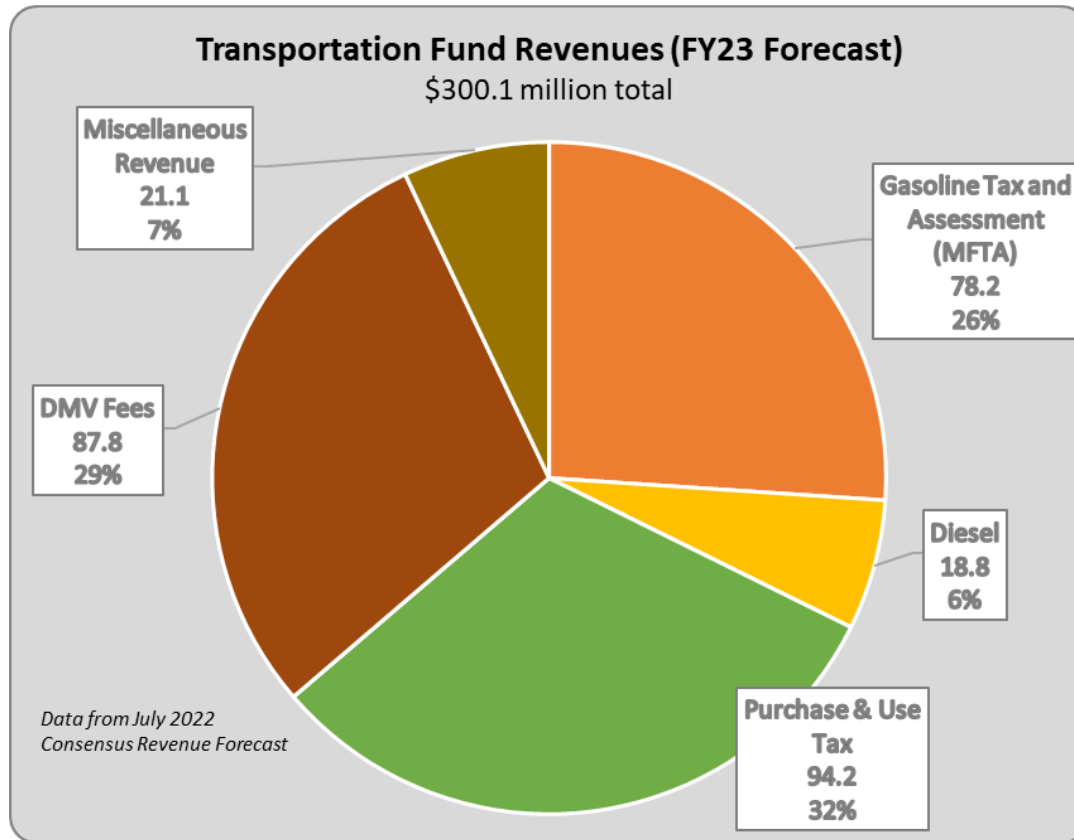
HOUSE TRANSPORTATION COMMITTEE, FEBRUARY 7, 2023

WANDA MINOLI, COMMISSIONER, DEPARTMENT OF MOTOR VEHICLES, AOT

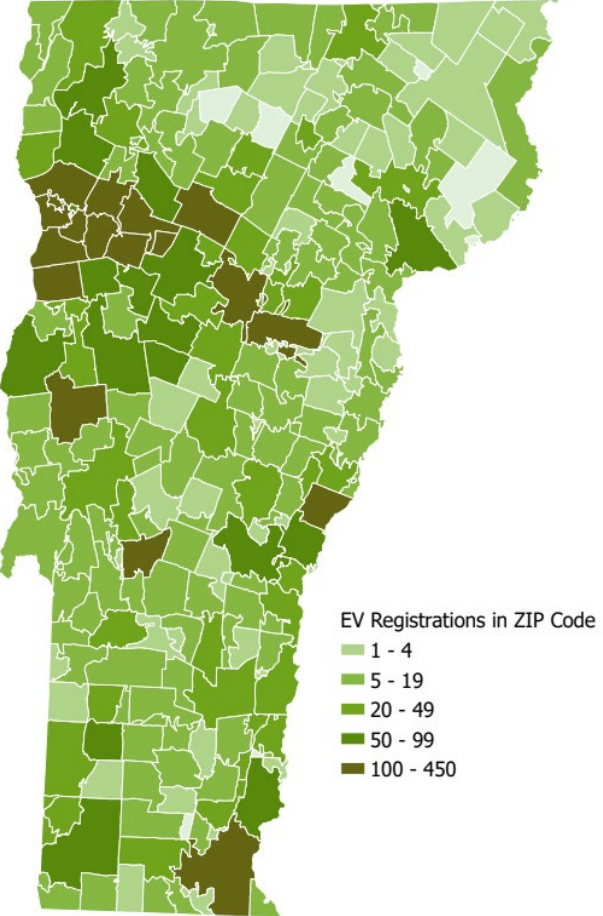
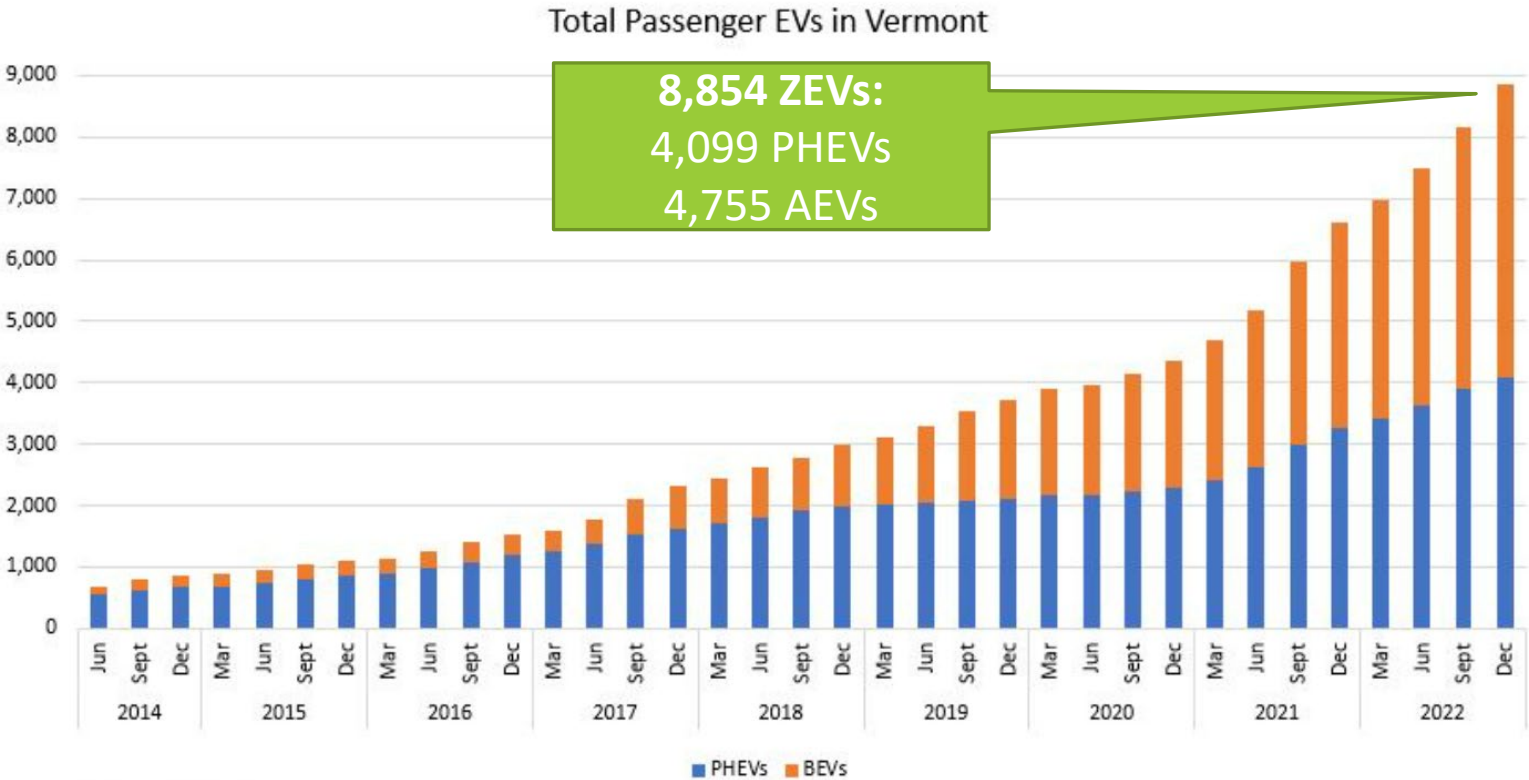
MICHELE BOOMHOWER, DIRECTOR, POLICY, PLANNING, AND INTERMODAL DEVELOPMENT, AOT

PATRICK Ó. MURPHY, SUSTAINABILITY + INNOVATIONS PROJECT MANAGER, AOT

Transportation Funding in Vermont

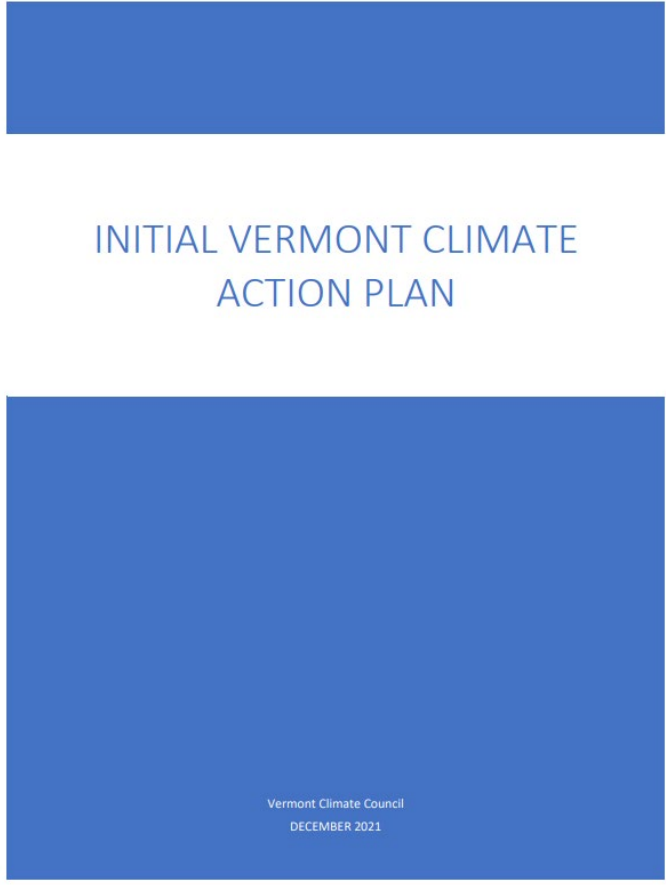
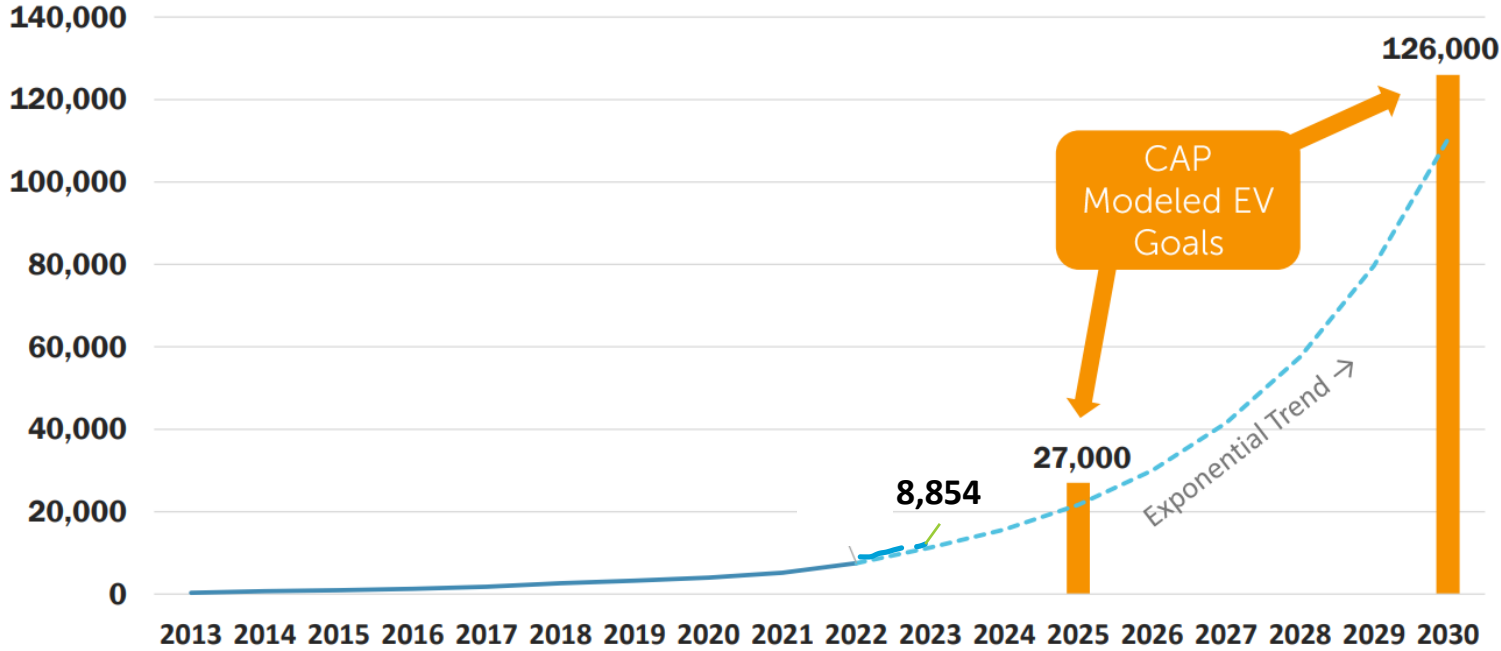


EV Adoption in Vermont



EV Adoption in Vermont

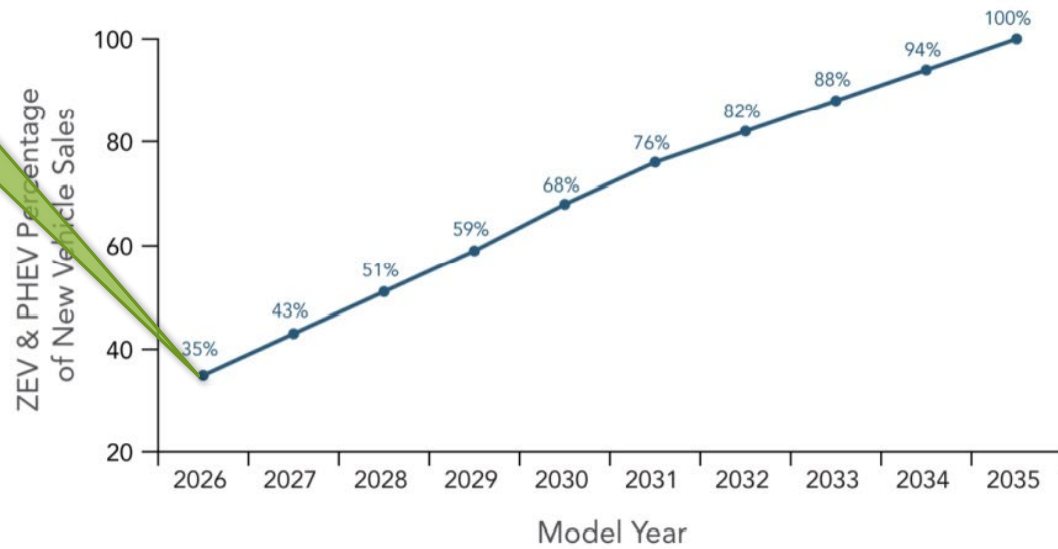
How many vehicles does Vermont need to electrify?



EV Adoption in Vermont

Vermont's Low and Zero Vehicle Regulation

The new regulation accelerates requirements that automakers deliver an increasing number of zero-emission light-duty vehicles each year beginning in model year 2026. Sales of new ZEVs and PHEVs will start with 35% that year, build to 68% in 2030, and reach 100% in 2035.



35% of new vehicle sales by 2026

INITIAL VERMONT CLIMATE ACTION PLAN

Vermont Climate Council
DECEMBER 2021

Private sector also leading: trends in auto industry point to rapid increase in EV adoption

BUSINESS > AUTOS

Toyota is going big on EVs, with plans to spend \$35 billion and roll out 30 models by end of decade

The Japanese automaker intends to accelerate its shift into electric cars.

The Dallas Morning News

BUSINESS

Honda to spend billions on Fayette County battery plant

Honda has picked Fayette County for a \$3.5 billion battery plant it is developing with South Korean battery maker LG.

The Columbus Dispatch

G.M. will spend \$7 billion on Michigan plants to further its electric-vehicle aims.

The automaker will build a battery plant and overhaul an existing factory to produce electric pickup trucks, creating 4,000 jobs.

The New York Times

CHRYSLER

Stellantis, Samsung to invest \$2.5B, create 1,400 jobs at Indiana EV battery plant

Detroit Free Press

BUSINESS

Ford Fortifies EV Bet With Four New Factories in Tennessee and Kentucky

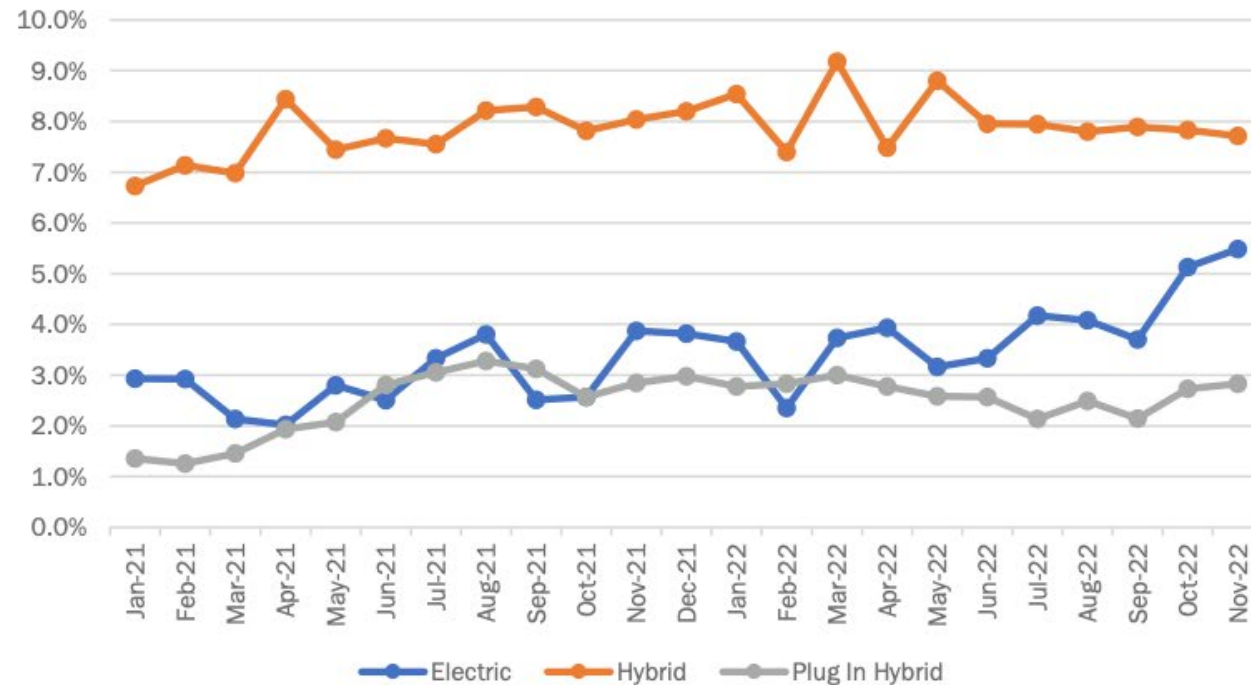
Combined \$11.4 billion investment with SK Innovation aims to accelerate electric push, create 11,000 new jobs

THE WALL STREET JOURNAL

EV Adoption in Vermont

HYBRID AND ELECTRIC VEHICLES

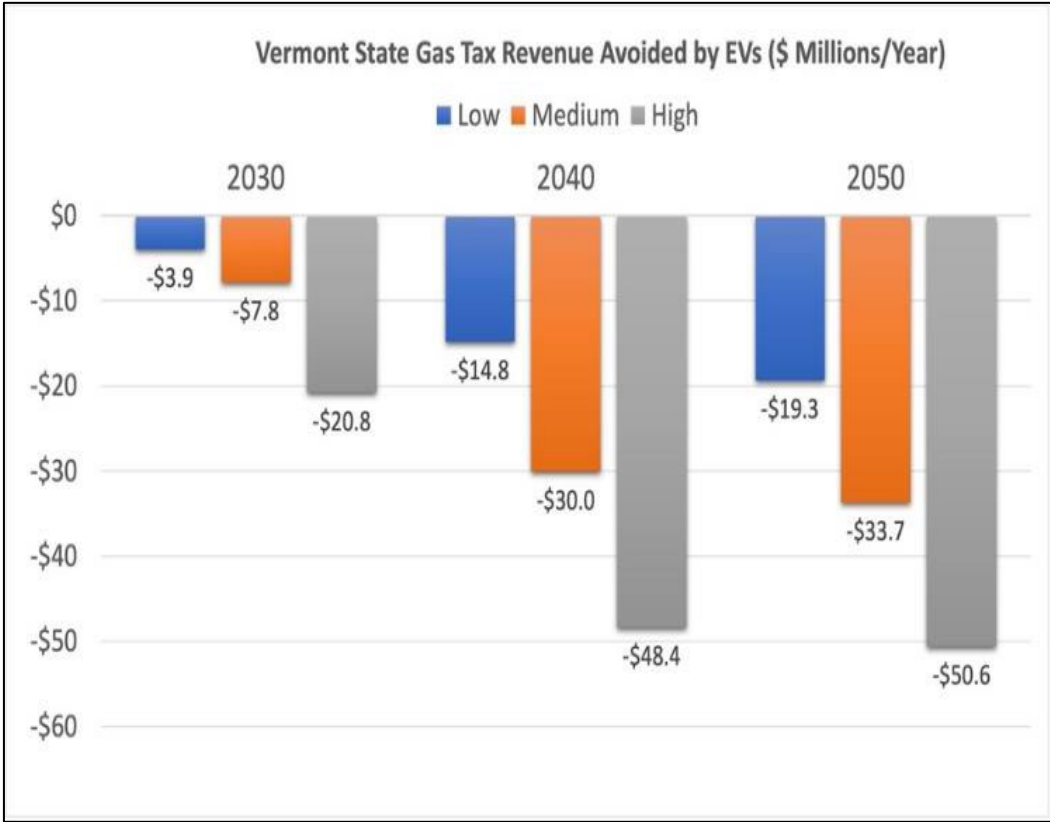
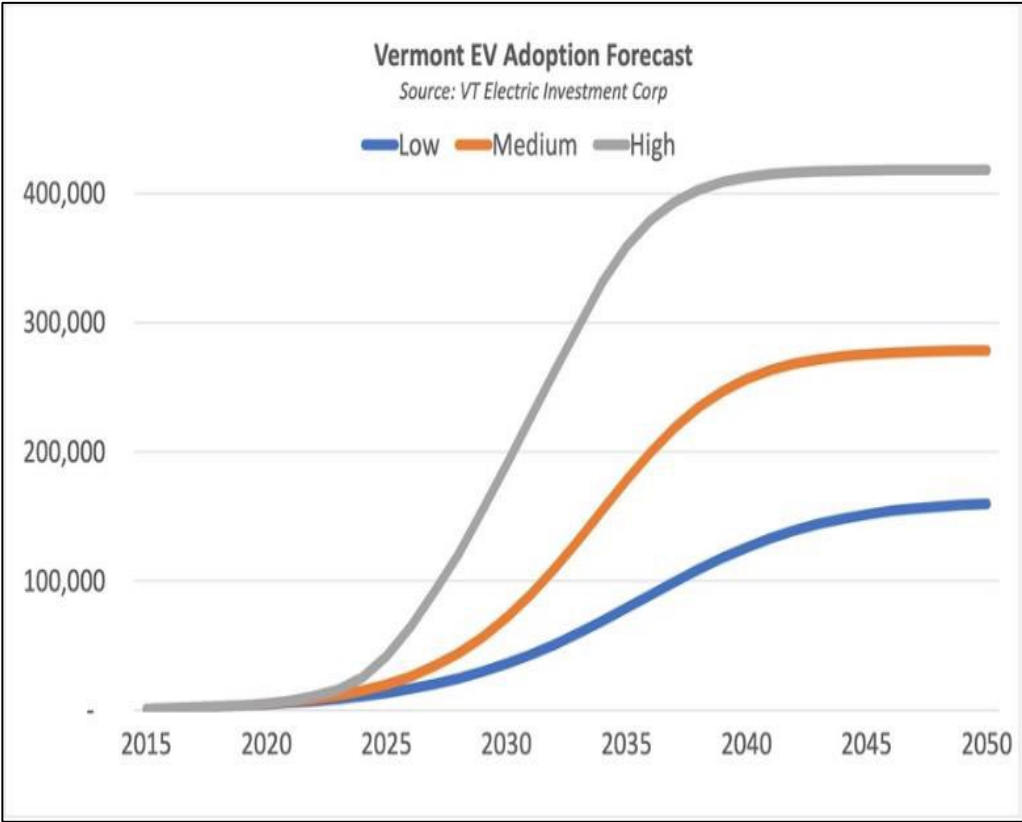
**Estimated Alternative Powertrain Market Share
(includes hybrid and electric vehicles)**



**Market Share by Engine Type
(YTD '22 thru November)**

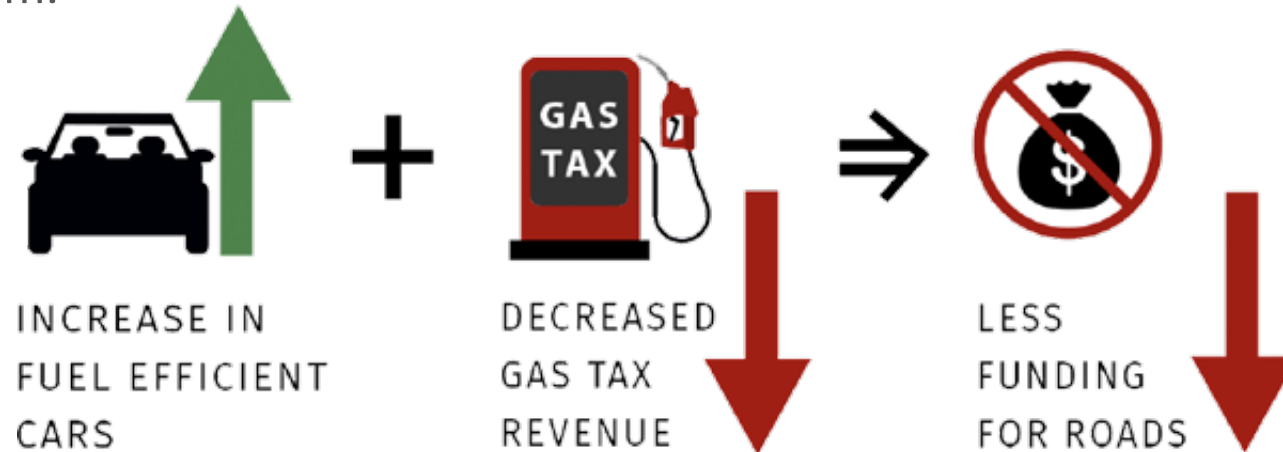
	YTD '21	YTD '22	
Hybrid	7.7%	8.1%	↑
Electric (BEV)	2.8%	3.9%	↑
Plug In Hybrid (PHEV)	2.4%	2.6%	↑

Potential Revenue Losses due to Electrification



What is a road usage charge?

A **road usage charge** is a fee on vehicle use of the public road system.



Examples:

Chicago Congestion

- A mileage-based user fee (MBUF)
- An annual flat fee
- A per kilowatt hour fee

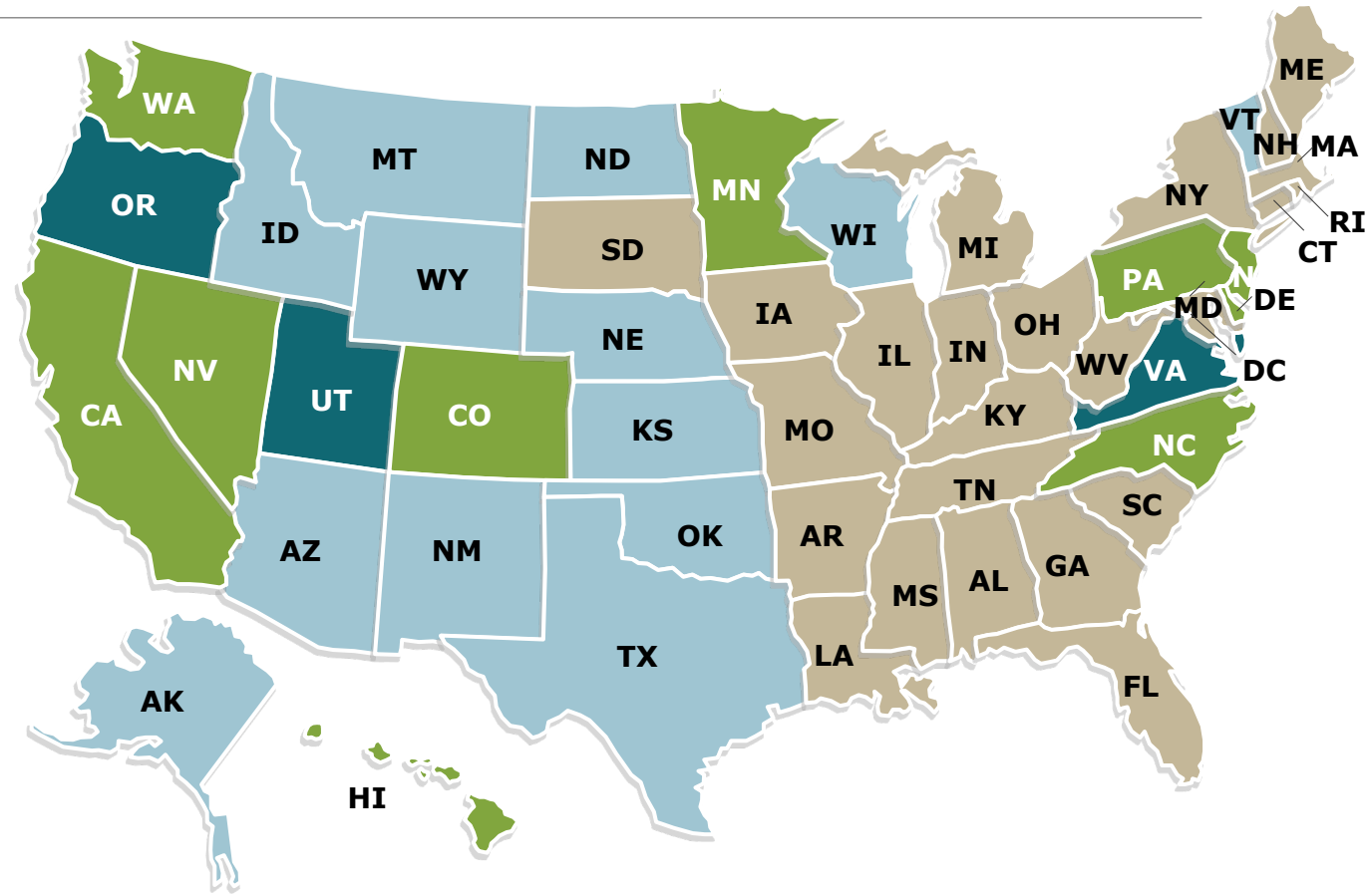
Basis of MBUF: A roadway consumption tax, with distance, stated in miles, as the measure of consumption.

An **annual flat fee** is collected at vehicle registration.

Where are mileage-based user fees happening in US?

Mileage-based user fee

- Manual reporting of odometer reading, and/or
- Automatic reporting of actual miles driven via technologies installed or embedded in vehicle.
- Payment made to government agency and/or private account manager.



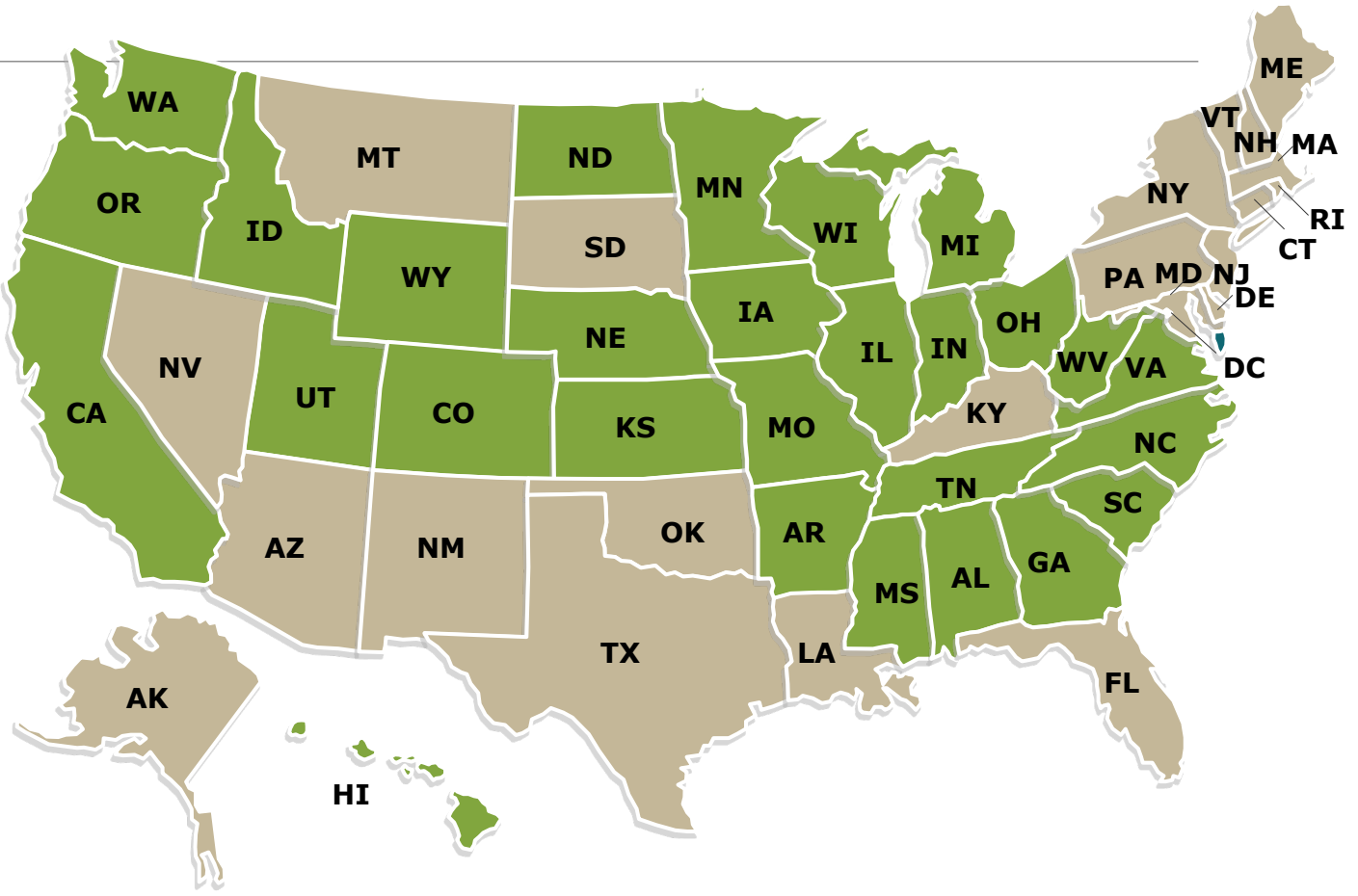
3 Enacted programs **13** Pilots/demonstrations **13** Research

Where are annual flat fees happening in US?

Annual flat fee

Billed and collected by government agency as part of vehicle registration.

Chicago Congestion



28 Enacted programs

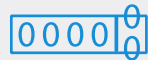
*Per National Conference of State Legislatures 12/1/2020

MBUF collection systems in the United States

Three MBUF collection systems have undergone extensive system development.

As of 2021, only the odometer reading system and the account-based open system have proven viability.

State odometer reading system



State annually collects odometer readings and issues invoice for MBUF

Where tested

Washington, Hawaii

Pay-at-the-pump system



MBUF collected along with fuel purchase at fuel pump

Where tested

Oregon, California

Account-based open system



State sets standards for private entities to collect MBUF periodically based on real-time mileage reporting

Where applied

Oregon, Utah

Road Usage Charge Study

Road Usage Charge Advisory Committee and subcommittees convened stakeholders several times in Fall 2021 to consider impacts of a variety of policy scenarios and alignment with shared goals:

- Vermont needs to develop long-term, sustainable revenue to maintain our roads and bridges
- Future funding must be fair where all drivers contribute to the maintenance of the road network
- Any funding policy must be aligned with Vermont's Climate Action Plan



MBUF in Vermont

Road Usage Charge Study Advisory Committee recommended in its final report a mileage-based user fee for plug-in electric vehicles:

- Best opportunity to align sustainable transportation revenue and climate goals
- Cost-effectively utilizes existing inspection process with odometer reading
- Flexible payment options/frequencies
- Fairness: drivers only pay for what they use
- Avoids privacy concerns of reporting devices
- Federal money can be leveraged to assist with implementation



MBUF + Flat fee in Vermont

Mileage-based User Fee for All-Electric Vehicles (AEVs)

- Create new fee based on annual miles traveled for AEVs as collected at the annual vehicle inspection, with rate to approximate equivalent gas tax (**\$0.013/mile --\$150/yr**)
- Vehicle owners pay on a selected frequency (monthly, annually) to a third-party account manager
- DMV to ensure compliance with MBUF program through existing policies and practices

Flat Fee for Plug-in Hybrids (PHEVs):

- Use existing “other specialized fuels” language for 1.75 x registration fee for PHEVs
- 1.75 X \$76 annual registration fee (**\$57 additional fee** vs. \$72 estimated in report)

RUC Study Advisory Committee Survey

What is your initial reaction to introducing mileage-based user fees for fully electric, plug-in hybrid electric, or other highly fuel-efficient Vermont registered vehicles?	Percent	Count
Very Supportive	30%	116
Somewhat Supportive	30%	116
Somewhat Opposed	15%	58
Very Opposed	22%	85
No Opinion	2%	9
Total	100%	384

Mileage-based User Fee vs. Cost of Ownership

Estimated annual savings

The annual cost comparison shown below is based on the above cost and efficiency information combined with estimated annual vehicle use of 12,000 miles per year.

Gasoline Vehicle: \$1,795 a year



Electric Vehicle: \$830 a year



EV savings over 5 years

Savings add up! The following cost and savings estimates are based on the information provided above multiplied over 5 years. Think of all the things you could do with potential savings like this!

Gasoline Vehicle: \$8,975 over 5 years



Electric Vehicle: \$4,148 over 5 years



Estimated Annual MBUF payment

\$965

Switch to electric and save big on fuel. Estimated annual savings.

\$150

Fees designed to achieve parity with gas tax for fossil-fueled vehicles –i.e. no net-costs or savings

\$4,827

Switch to an EV and your 5 year savings could look like this.

\$750

The Road Ahead

The MBUF Assessment is evaluating how Vermont can build a cost-effective system. AOT is considering:

- Implementation and long-term operational/staffing costs
- System design and processes
- Rate-setting, rulemaking elements
- Transition timeline
- Federal grant application to US DOT



Strategic Innovation for Revenue Collection (SRIC)

Authorized by IJA:

To test the design, acceptance, equity, and implementation of user-based alternative revenue mechanisms, including among—

- (i) differing income groups; and
- (ii) (ii) rural and urban drivers, as applicable.

FEDERAL SHARE.—The Federal share of the cost of a pilot project carried out under this section may not exceed **80 percent** of the total cost of a project carried out by an eligible entity that has not otherwise received a grant

Current Project Implementation Cost Estimate: \$3.5 million



Project & Federal Grant Timeline



*USDOT announcement of Federal SIRC grantees varies from cycle to cycle. January 2024 may be an optimistic date

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