

Vermont Electric Vehicle Road Usage Charge Study

Recommendations and Next Steps

PRESENTATION FOR HOUSE TRANSPORTATION COMMITTEE, JANUARY 12, 2022

JOE SEGALE, POLICY, PLANNING AND RESEARCH BUREAU DIRECTOR, VERMONT
AGENCY OF TRANSPORTATION

Impact of Electric Vehicle Adoption on Gas Tax Revenue

| Year | Light Duty Electric Vehicles. Includes All Electric and Plug-in Hybrid Electric | Gas Tax Revenue Loss | Remaining Gas Tax (Total Gas Tax – EV Impact) |
|----------|---|----------------------|---|
| Jan 2022 | 5,729 (Actual) | \$0.56 Million | \$75.4 (Est.) |
| 2025 | 47,500 (CAP) | \$5.3 Million | \$72.1 (Est.) |
| 2030 | 159,200 (CAP) | \$19.1 Million | \$57.1 (Est.) |
| 2050 | 593,000 (CAP) | \$80.1 Million | No estimate available |

CAP - 2025, 2030 and 2050 Electric Vehicles assumed in 2021 Vermont Climate Action Plan

Lost gas tax revenue based on \$139 per All Electric Vehicles and \$55 per Plug-in Hybrid. Share of AEV and PHEV is actual in 2022 and estimated per VEIC planning work for VELCO Long Range Planning.

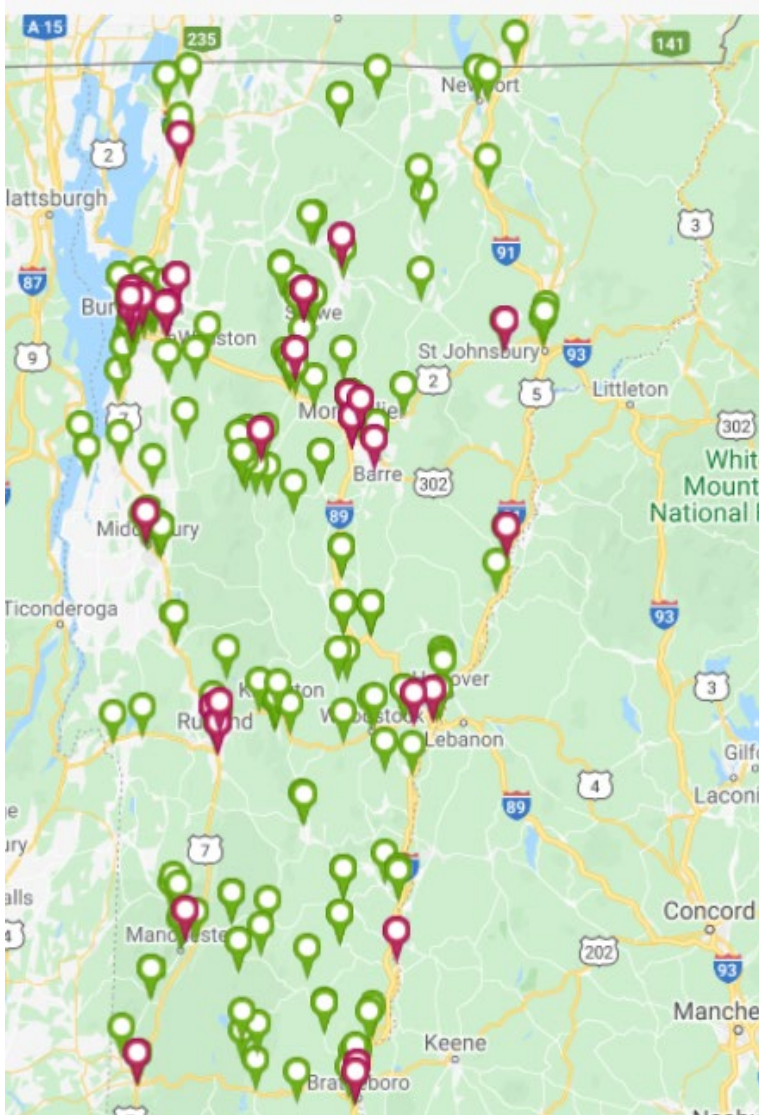
Est.- Estimates for gas tax revenue based on the *General Fund Revenue Forecast Update, Consensus JFO and Administration Forecast – July 2021* which shows an annual decrease of 0.17% between 2017 and 2026

VT Road Usage Charge Concept Evaluated in Study

| Applicability | Fee Mechanisms | Possible Eligible Vehicle Types |
|------------------------|--|--|
| VT Registered Vehicles | <ul style="list-style-type: none">• Flat Fee alone or with• Mileage Based User Fee<ul style="list-style-type: none">• Odometer Based• Wireless Automated Reporting | <ul style="list-style-type: none">• All Electric• Plug-in Electric Hybrid |
| Out of State Vehicles | <ul style="list-style-type: none">• Per Kilowatt Hour Fee at Public Charging Stations | <ul style="list-style-type: none">• All Electric• Plug-in Electric Hybrid |

| Name | Organization | Position |
|-----------------------------|---|--|
| Michele Boomhower, Chair | VT Agency of Transportation | Policy, Planning and Intermodal Development Division Director |
| Wanda Minoli | VT Department of Motor Vehicles | Commissioner |
| Rebecca Sameroff | VT Department of Taxes | Deputy Commissioner |
| Philip Picotte | VT Public Service Department | Utilities Economic Analyst |
| Peter Walke | VT Agency of Natural Resources | Commissioner, Department of Environmental Conservation |
| Dave Roberts | VT Energy Investment Corp (VEIC) | Senior Consultant |
| Chris Jolly | Federal Highway Administration | Planning & Programming Engineer |
| Jim Sullivan | Regional Planning Commissions | Executive Director, Bennington County RPC |
| Gwyn Zakov | VT League of Cities and Towns | Director Public Policy & Advocacy |
| Samantha Hurt | Capstone Community Action | Mileage Smart Program Manager |
| Monica McDonald | Head Start Policy Council | |
| Trish Hendren | The Eastern Transportation Coalition | Executive Director |

Study Advisory Committee



Per kilowatt Hour (kWh) Fee for Out-of-State EVs

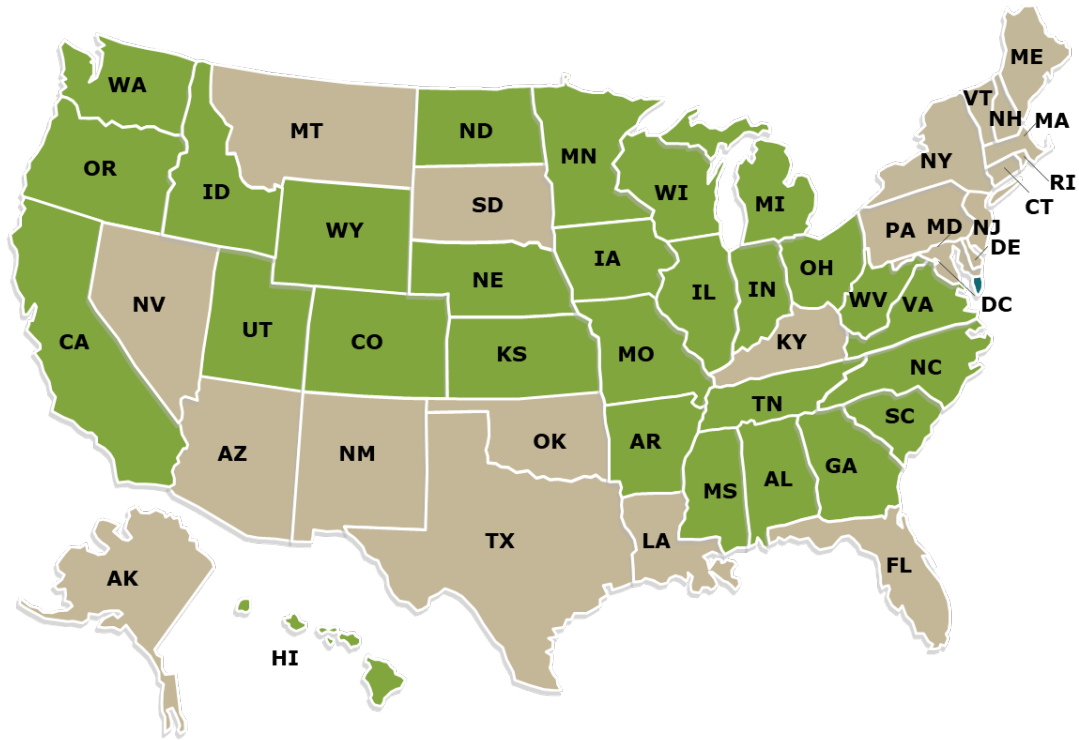
Approx. 15-20% of charging at public charging stations is by Non-VT Residents

Would generate less than \$5,000 per year under current conditions.

Technically feasible but many details to be resolved

Need more information to determine If/when revenue generation would be worth the effort

VT Registered EVs - Flat Fee Option



28 Enacted programs

| Vehicle Type | U.S. Range ¹ | U.S. Average ¹ | VT Estimates ² |
|-------------------------|-------------------------|---------------------------|---------------------------|
| All Electric | \$50-\$225 | \$127 | \$139 |
| Plug-in Electric Hybrid | \$30-\$200 | \$85 | \$55 |
| Gas Hybrid | \$20-\$100 | \$58 | Not estimated |

1. Courtesy of Utah Department of Transportation
2. Preliminary from VT Road Usage Charge Study

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



VT Registered EVs – Mileage-Based User Fee Options

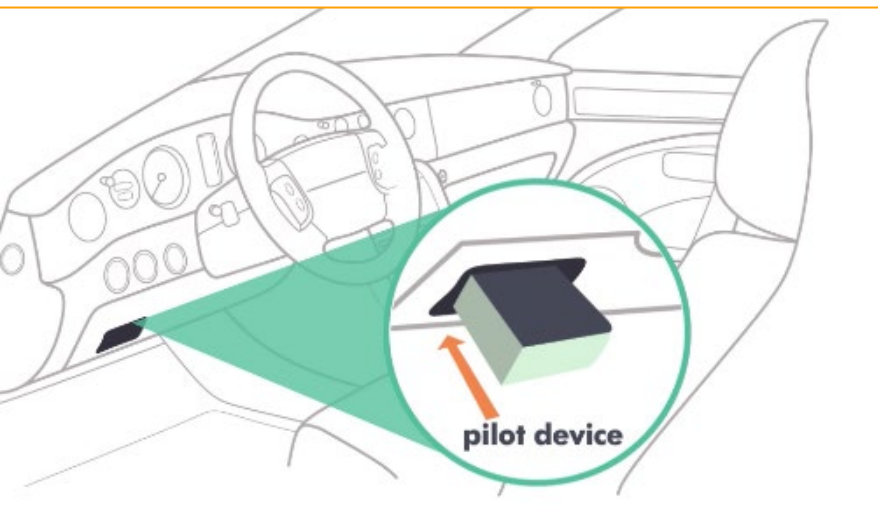


Odometer reporting

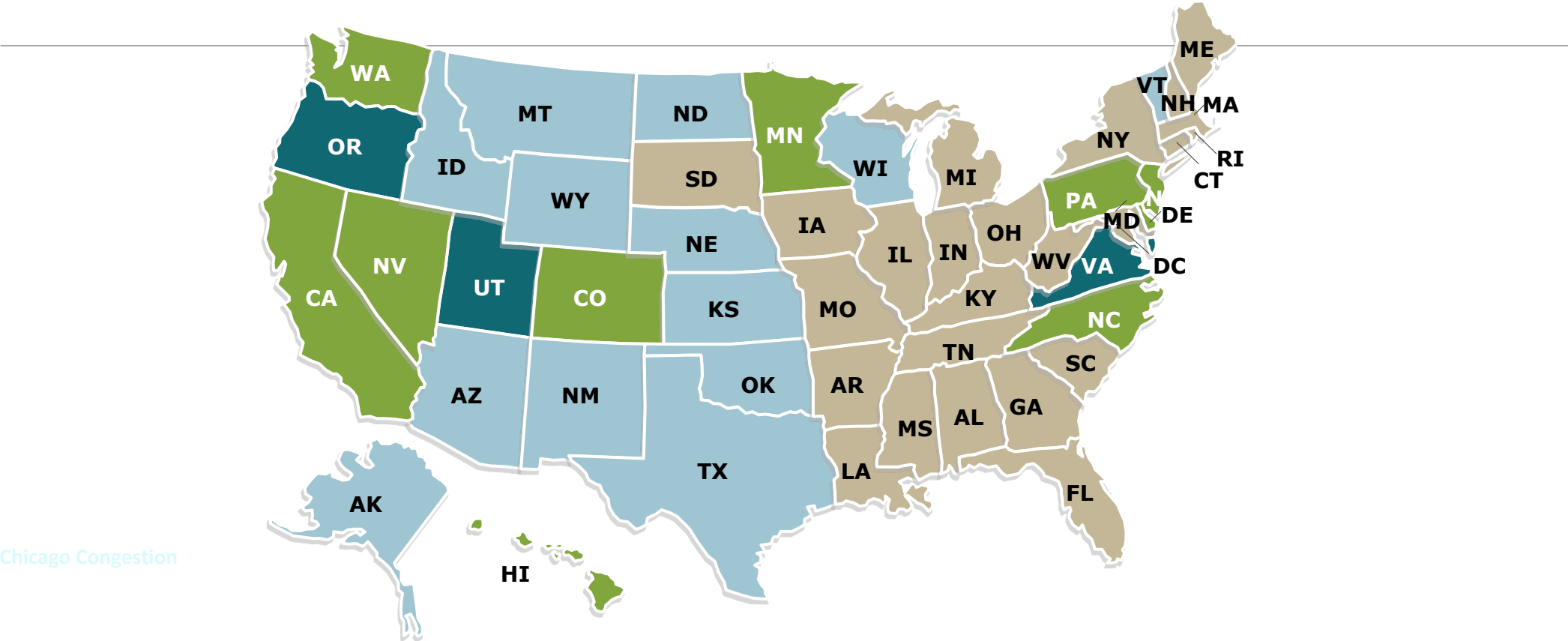
- Self-reporting by vehicle owner; or
- Use of data reported at annual vehicle inspection

Real Time Wireless reporting (With or without location)

- On-Board Plug-in Devices (OBD-II)
- Smartphone app
- Native automaker telematics



Where are mileage-based user fees happening in US?



3 Enacted programs **13** Pilots/demonstrations **13** Active research

Recommendation
– Assess Fee
Based on
Odometer
Readings
Collected at
Annual Vehicle
Inspections

Builds off existing system

More equitable than a flat fee

Less expensive than using wireless on-board mileage reporting devices

Protects privacy

Apply to All Electric and Plug-In Hybrid Vehicles

Inspection- Based Odometer MBUF System Assessment and Design

DMV Business Process Integration

- Organizational capabilities
- Integration with existing systems
- Alignment with current IT initiatives

Technology Assessment

- Odometer collection and validation
- Identifying applicable vehicles
- Invoicing and payment collection
- Data exchange specifications

Consumer Engagement

- How to collect mileage when vehicles change hands or are damaged
- Frequency of payments

Next Steps

2022 Conduct System Assessment

2023 Seek legislative approval for
Electric Vehicle Mileage
Based User Fee

2024 Earliest possible
Implementation

Contact

Joe Segale, P.E./PTP

Policy, Planning and Research Bureau Director
Policy, Planning & Intermodal Development Division
Vermont Agency of Transportation

802.477.2365

Joe.segale@vermont.gov