Vermont Mileage-based User Fee

HOUSE TRANSPORTATION COMMITTEE, JANUARY 28, 2026

PATRICK Ó. MURPHY, STATE POLICY DIRECTOR, VERMONT AGENCY OF TRANSPORTATION

MBUF for EVs in Legislation

- Authorized Agency to apply for federal grant funds, while establishing broad parameters within which to draft a legislative report and implementation plan **(2023 Act 62)**

- Enacted flat fee for plug-in electric vehicles and linked revenue to EV infrastructure funding **(2024 Act 148)**

- Revised outline of MBUF program based on legislative report and set a deadline (January 2027) for mandatory fee for electric vehicles to replace EV infrastructure (flat) fee for BEVs **(2025 Act 43)**

TBD (2026) – Approve statutory framework, including rate-setting formula

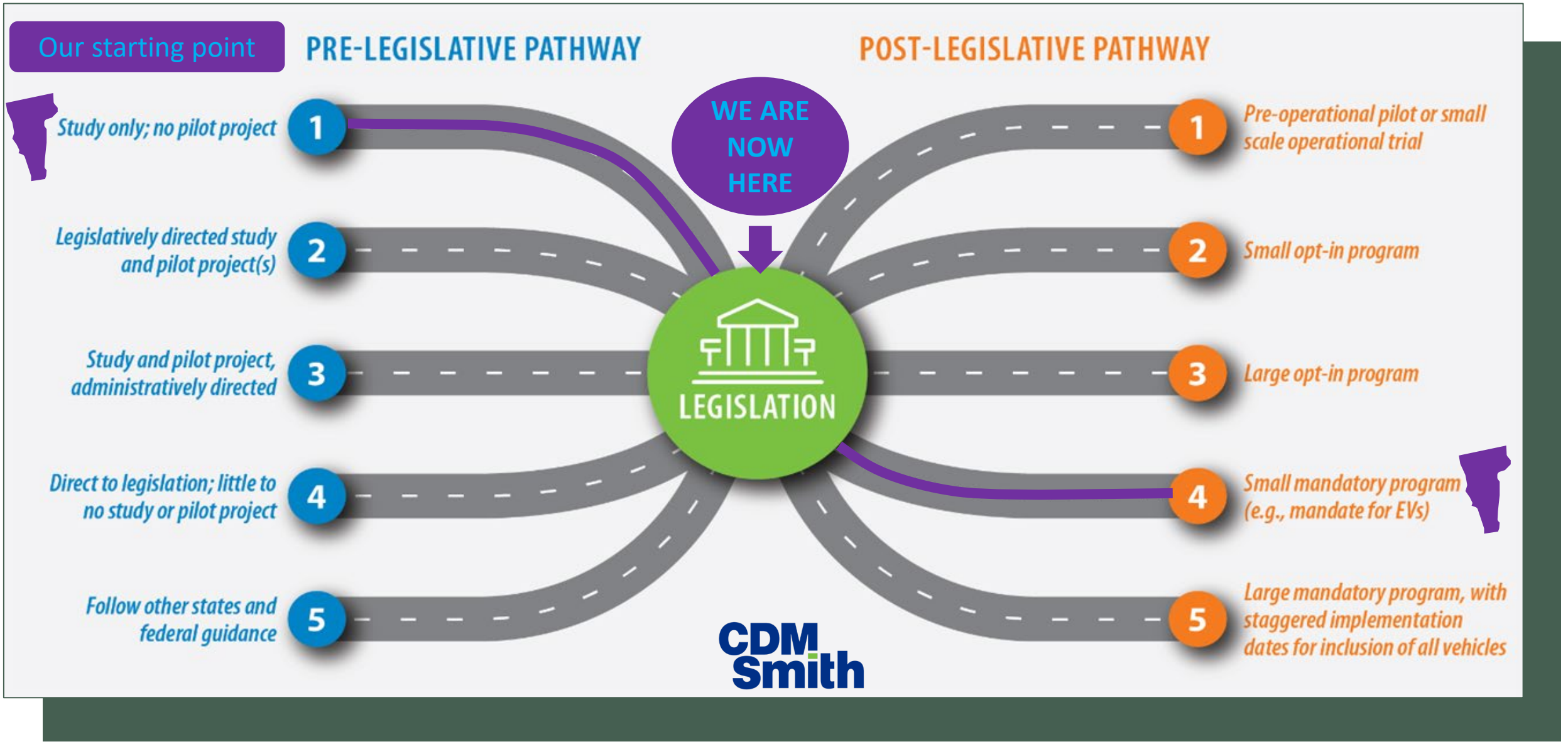
Mileage-based User Fees for Electric Vehicles

Basic Points of Vermont's Program:

- Aligns push for sustainable transportation revenue with state climate goals/requirements
- Cost-effectively utilizes existing annual vehicle safety inspection process with manual odometer reading (avoiding privacy concerns)
- Builds off significant state investment in DMV core system upgrades
- Allows flexible payment options/frequencies and only asks drivers to pay for what they use
- Leverages federal funds for implementation
- Starts small, with time and flexibility to evolve and expand

MBUF Program Comparisons

Program Attributes	Utah	Oregon (Current)	Oregon (Proposed)	Hawaii	Virginia	Vermont (Proposed)
Administrative Model	DOT via single CAM	DOT via multple CAMs/OAM	DOT via multiple CAMs	DOT via DMVs (No CAM)	DMV via single CAM	DMV - no Commercial Account Manager (CAM)
Reporting Options	Telematics/Odo Photo	OBD-II/Telematics/Odo Photo	TBD	Odometer @ annual safety inspection	OBD-II/Telematics	Odometer @ annual safety inspection
Annual Registration Surcharge	EV = $143.25	EV = $115; 40+ MPG = $35	EV = $340; 40+ MPG = $35	EV = $50	EV = $131.88; gas cars vary by MPG	EV = $89; PHEVs = $44.50
Eligible Vehicle Types	EVs	EVs and 20+ MPG	EVs and 20+ MPG	EVs	EVs and 25+ MPG	EVs
RUC Rate	$0.0111/mi	$0.02/mi (5% of 20 mpg fuel tax)	$0.02/mi (5% of 20 mpg fuel tax)	$8 per 1,000 miles ($0.008/mi)	$0.019 for EVs	Subject to legislative approval
RUC Cap	$143.25/yr	N/A	N/A	$50/yr	EVs = $131.88; varies for 25+ MPG cars	N/A
Mandatory/ Voluntary RUC	Voluntary	Voluntary	EVs voluntary until 7/1/27, then mandatory. 20+ MPG Voluntary	Voluntary now but mandatory 7/1/28	Voluntary	Mandatory
RUC Payment Frequency / Method	Quarterly e-wallet	Monthly e-wallet	Monthly e-wallet	Annual with registration	Monthly e-wallet	Monthly, annually, possibly pay-go


Our starting point
PRE-LEGISLATIVE PATHWAY
POST-LEGISLATIVE PATHWAY
WE ARE NOW HERE
LEGISLATION
1
Study only; no pilot project
2
Legislatively directed study and pilot project(s)
3
Study and pilot project, administratively directed
4
Direct to legislation; little to no study or pilot project
5
Follow other states and federal guidance
1
Pre-operational pilot or small scale operational trial
2
Small opt-in program
3
Large opt-in program
4
Small mandatory program (e.g., mandate for EVs)
5
Large mandatory program, with staggered implementation dates for inclusion of all vehicles
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Important Program Distinctions

- Proposed program will begin as mandatory for all battery-electric vehicles
- Program will not be capped, except through default flat fee at 98 percentile for mileage
- Program does not envision a Commercial Account Manager, but will be State-administered
- Program will have been implemented with 80% federal funding

From Initial Road Usage Charge Study:

Table 7. MBUF System Cost Estimates

MBUF Mileage Reporting Method	Capital Costs (estimated)	Operational Costs as a Percentage of Revenue (2030)
Automatic wireless reporting (CAM model)	$2 to 4 million	22% ($2.4 million)
Odometer reporting at vehicle inspections	$1 to 3 million	3.5% ($0.4 million)

Research and Planning Building Blocks from RUC Guide

Stage 1: Research & Planning

- Research Policy & Politics
  - 1 2 3 4 5 6 7 8
- Stakeholder & Public Engagement
  - 9
- Study Organizational Structure & Readiness
  - 10 11
- Demonstrate Possible Approaches
  - 12 13 14 15 16
- Support Official Policy and Legislation Development
  - 17 18

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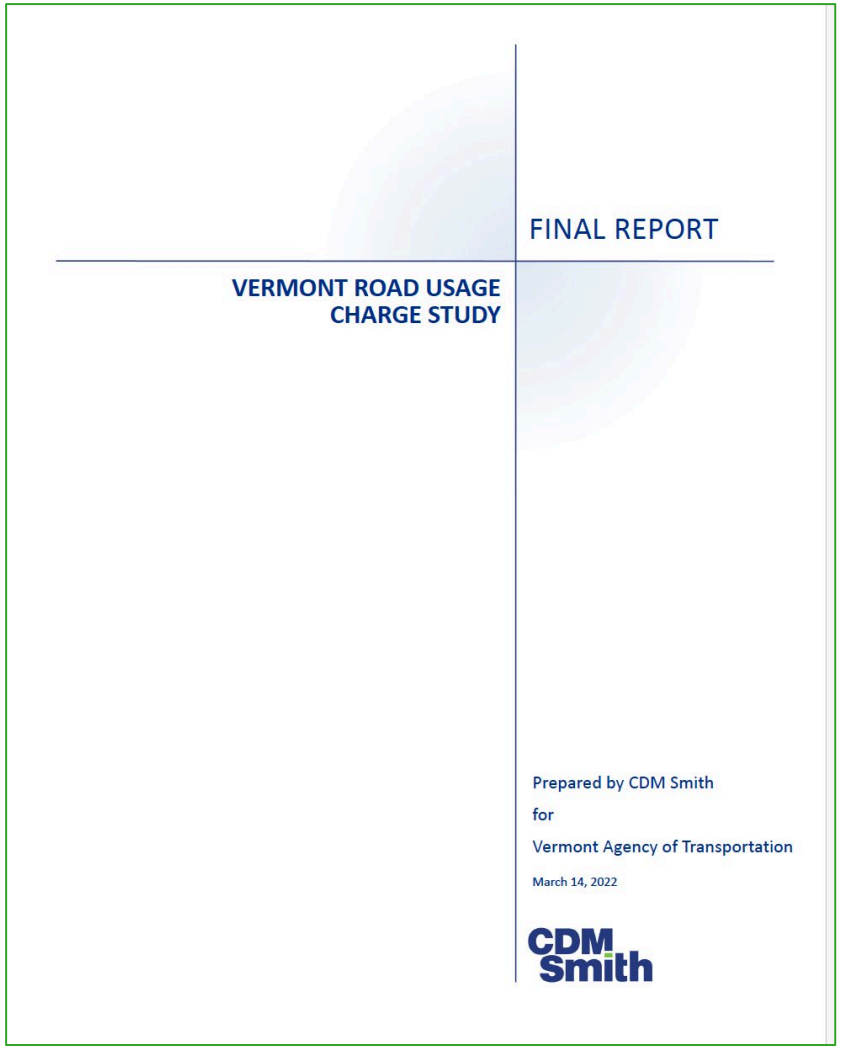
FINAL REPORT

VERMONT ROAD USAGE CHARGE STUDY

Prepared by CDM Smith
for
Vermont Agency of Transportation
March 14, 2022

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RUC Feasibility Study

Analysis of viable RUC models which led Agency to the recommended state-administered program model

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 transportation system
- Future funding must be fair where all drivers contribute to transportation system according to use
- Any funding policy must be aligned with Vermont's Climate Action Plan

Road Usage Charge Study – Guiding Principles

Do No Harm

- Revenue neutrality
- Sustained EV uptake

Equitable & Fair

- User pay system
- Users have choices
- Privacy and security data protected
- Equitable cost distribution (rural/urban, income)

Feasible & Efficient

- Ease of administration/minimal government burden
- Enforceable
- Simplicity of compliance and ease of use
- Accurate and system performance

Transparent and Accountable

- Open system
- Accountable oversight

Adaptive for the future

- Integration with other state policies
- Interoperability with other state systems
- Flexible, secure, and scalable

Mileage-based User Fees for Electric Vehicles

Basic Points of Program:

- Aligns push for sustainable transportation revenue with state climate goals/requirements
- Cost-effectively utilizes existing annual vehicle safety inspection process with manual odometer reading (avoiding privacy concerns)
- Builds off significant state investment in DMV core system upgrades
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Framework Outlining Key Policy Decisions

1. **Authorized Agencies**
   Identify organization that should be authorized to develop, implement, and administer an MBUF program, including contracting with third party entities and overseeing program performance.

2. **Subject Vehicles**
   Choose which classes of vehicles whose owners will be initially subject to report and pay an MBUF

3. **Rate Setting**
   Select rate setting approach for subject vehicles to align with policy objectives

4. **User choices**
   Specify methods for reporting and payment options in an MBUF program

5. **Privacy protection & Data security.**
   Identify privacy protection provisions for an MBUF program based on mileage reporting choices and payment choices offered, parties involved and privacy protection laws in Vermont. Identify data security measures and performance metrics for which MBUF program operators manipulating data should be accountable.

6. **Compliance and Enforcement**
   Define approach to achieve compliance and enforcement while balancing accountability, equity and public acceptance.

7. **Evaluation Criteria (Reporting)**
   Specify what should be required for annual reporting on MBUF for the prior fiscal year

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Authorized Agencies

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Questions	Approach
Policy Choices and Options Considered	• Which agencies and partners have a role to play in implementing and administering a RUC program? AOT, DMV, Commercial Account Manager contracted by DMV • Which of these agencies and partners are in a lead or support role? • Which third parties should be contracted to support implementation of an MBUF? No third parties, Existing or new technology and system providers.

Conclusions from RUC feasibility study	• **Three main MBUF approaches were evaluated**:
	  • State-administered odometer-based method via vehicle inspection program
	  • Third party privately-run automated mileage collection w/ state oversight
	  • Combination of above options to support odometer and automated collection
	• **Conclusion:** DMV can access odometer readings already collected for all vehicles during annual vehicle safety inspections to calculate mileage traveled and collect a per-mile fee on vehicle owners at a lower administrative cost than other methods.

Decisions (MBUF bill)	• Design a state-administered MBUF program that leverages odometer-based reporting system through existing vehicle safety inspection program
	• Roles and responsibilities:
	  • DMV will have primary responsibility of administering the MBUF program.
	  • AOT will be responsible for the MBUF program design and implementation in collaboration with DMV
	  • DMV may contract with private system providers and technology providers (This may include existing vendors who are currently operating the DMV system and Vehicle Safety Inspection program)
	  • DMV is authorized to contract with private third parties for collection of MBUF fees and associated penalties
	  • AOT has program oversight and reports evaluation metrics to legislature

Decision Criteria	• Operational feasibility (scalability), Financial feasibility (cost-efficiency), Privacy protection, User adoption (Equity)

MBUF functions under State-operated system

MBUF Function	DMV (FAST System)	Vendor (Parsons)
Identify subject vehicle & owner/lessee	✓ Current – create list of VINs subject to MBUF, enroll in MBUF program at time of registration	
Generate MBUF data for subject vehicle		✓ Current – AVIP system collects and stores odometer data
Access MBUF data	✓ System enhancement– develop API to get odometer data from AVIP system*	
Apply MBUF rates	✓ System enhancement – develop new system processing capability to apply per-mile rate and manage business rules	
Provide invoice to owner/lessee	✓ Current - MBUF could be combined with vehicle registry process and registration fee invoice	
Collect payment	✓ Current - MBUF could be combined with registration fee collection, currently annual/bi-annual**	
Issue acknowledgement of payment	✓ Current	
Enforce payment	✓ Current – MBUF could be combined with vehicle registry enforcement	
Remit revenue to appropriate fund	✓ Current – leverage existing process	

Subject Vehicles

Questions	Approach

Policy Choices and Options Considered	**Decision & Choices**
	• Which types of vehicles and vehicle operators will be subject to a RUC?
	  • Vehicle class (Light)
	  • PEVs (BEVs and PHEVs), and Alternative Fuel Vehicles
	  • Vehicles above a certain mpg (e.g., 50 mpg)
	  • All new vehicles starting with a certain model year (e.g., 2030)
	  • All vehicles

Conclusions from RUC Feasibility Study	An MBUF should seek to raise an equivalent per mile of the average light-duty vehicle in Vermont pays in gas tax, reflecting average real MPG of such vehicles. This should apply in full to BEVs. PHEVs should either be charged the same rate as BEVs (and receive a credit in gas tax payments) or should be charged a lower rate that corresponds to the difference between average gas tax paid per mile, and that paid by an average PHEV (if such data is readily available for Vermont).
Decision	• Apply MBUF to Light-Duty Battery Electric Vehicles (BEVs) only • MBUF will not be applied to PHEVs. Instead, PHEVs will have higher registration fees
Decision Criteria	Revenue generating potential, Financial sustainability, Flexibility, Equity and revenue neutrality, avoid negative impacts on PEV adoption, economic efficiency, operational feasibility

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Rate setting

Questions	Approach
Policy choices and options considered	• What objectives should the rate reflect? Cost-recovery, achieve target revenue, ensure fairness, sustainability • What attributes should be considered to set the rate? Vehicle/owner attributes • Should adjustments or exceptions be made to the rate? Income-based discounts, mileage exemptions (out-of-state, off-road or private roads) • How are existing vehicle registration fees and registration surcharges impacted? No existing surcharges for EVs currently
Approach used in RUC Feasibility Study (Financial Analysis)	Seven criteria considered for setting MBUF rate. 1. Revenue generating potential: The ability of the rates to raise sufficient net revenues to be worthwhile. 2. Financial sustainability: The potential for the rate schedules to be responsive to changes in vehicle ownership and usage. 3. Flexibility: The rate schedule should be sufficiently flexible to be adapted to changes in policy to meet changing conditions over time. 4. Equity and revenue neutrality: The rates should be broadly commensurate to what other types of vehicle drivers are charged to use the roads, so that those paying any of the three types of fees are not burdened, on average, greater than other drivers. This may consider avoiding imposition of a sudden increase in fees for low-income communities. 5. Avoid negative impacts on PEV adoption: The objective of raising revenue should be balanced by wider policy interest in maintaining growth in adoption of PEV both in ownership and usage. 6. Economic efficiency: The rate structures should not distort economic activity or encourage transportation use decisions that are less efficient than those that apply to other drivers. The rate structures should seek to raise revenue from drivers reflecting their usage of the road system and reflecting their contribution to what is spent. 7. Operational feasibility: Rate structures should be ready for application, precluding opportunities for evasion or fraud.

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Rate setting

Questions	Approach
Conclusions from RUC Feasibility Study (Financial Assessment)	An MBUF should seek to raise an equivalent per mile of the average light-duty vehicle in Vermont pays in gas tax, reflecting average real MPG of such vehicles. This should apply in full to AEVs. PHEVs should either be charged the same rate as AEVs (and receive a credit in gas tax payments) or should be charged a lower rate that corresponds to the difference between average gas tax paid per mile, and that paid by an average PHEV (if such data is readily available for Vermont). Given the seven criteria, an appropriate basis for initially setting MBUF rates for EVs is to establish rates comparable to what equivalent gasoline powered light-duty vehicles pay in state gas tax in Vermont.
Decision	• MBUF rate based on revenue replacement approach, i.e., rates applied will be broadly equivalent to what other types of vehicle drivers are charged to use the roads, so that those paying MBUF are not burdened, on average, greater or less than other drivers. This means that the rate would be based on equivalent revenue collected through the gas tax. The rate may factor administrative costs. • No refunds, credits (as only BEVs involved) • No mileage exemptions due to odometer-based method of mileage collection

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User Choice

Questions	Approach
Policy choices and options considered	• What mileage reporting choices to provide to vehicle owners? Manual, non-location based, location-based automated methods • What service provider choices to offer? State or private
Conclusions from RUC Feasibility study	• Evaluated costs efficiency of different mileage reporting options: Self-reporting (odometer reading), odometer readings collected at Vehicle inspection, automated reporting methods using location-based technology. • Considered feasibility and costs efficiency of two account management options (state-run or privately-run) • Considered equity issues implied with annual lumpsum payments. Payment frequency options should be offered based on capacity of existing vendors and equity considerations (monthly or quarterly payments to allow vehicle owners to absorb costs progressively) **Conclusion.** All mileage reporting and account management options are operationally feasible. However, they have varying cost-efficiencies and equity impacts that must be weighed to decide optimal choices to offer.
Decision	**Mileage reporting choices.** Annual odometer reporting through vehicle safety inspection program deemed technically feasible and most cost efficient. There are no privacy implications by using mileage data already collected by the state, so flat fee need not be offered as an alternative. **Payment choices.** Payment periods and other payment methods and procedures for the payment of the mileage-based user fee shall include the option to pre-pay the anticipated mileage-based user fee in installments on a monthly, quarterly, or annual basis;
Decision Criteria	Technical feasibility, administrative capacity, cost efficiency, Equity

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Privacy protection & Data security

Questions	Approach
Policy Choices and Options considered	Build in privacy protections into an MBUF system through policy choices and technical requirements: • A flat fee could be offered as an alternative to MBUF for users who are concerned about sharing odometer information • A privacy law can require destruction of location data after a designated period and prohibit use of data aside from MBUF without express user permission.
Conclusions from Feasibility Study	• Since mileage data are currently being collected at annual vehicle inspections and are included on inspection reports, the chosen MBUF implementation approach will not increase the amount of information being collected. Furthermore, as odometer readings do not include precise location information, there are no concerns about needing to protect sensitive user information. • The primary technical means of ensuring privacy is through enacting robust data security measures, requiring that every actor in the MBUF system—both the state and private vendors—have robust information technology security practices.
Decisions	• The program should include agency oversight of account management, including privacy protection of personal information and access and auditing capability of financial and other records related to administration of the mileage-based user fee.

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Compliance & Enforcement

Questions	Approach
Policy choices and options considered	• Which measures to encourage short and long-term compliance and discourage noncompliance with reporting and payment requirements? preventive, reactive measures, soft or punitive approach • What preventive measures can be designed into the experience? Proactive, educational approach, inform about audits and penalties • What enforcement measures to apply to different levels of non-compliance? Soft consequences, severe consequences, graduated or immediate enforcement • What equity considerations when enforcing requirements? Designing for ease of compliance, avoid harsh penalties, progressive enforcement
Recommendations	• Tie enforcement for non-payment of MBUF to the vehicle and not to the driver (e.g., apply vehicle-registration hold instead of driver license suspension)
Decisions	• Include a process for the collection of an unpaid MBUF • Include penalty procedures for the owner or lessee of a BEV registered in Vermont to pay the MBUF, which shall include mailing correspondence prior to the imposition of monetary penalties or the refusal to register a BEV for which the MBUF has not been timely paid; • The Commissioner may, at the Commissioner's discretion, refuse to register a BEV for which a MBUF is owed. • Whenever any person fails to pay the MBUF or associated penalty, the Attorney General shall, upon the request of the Commissioner, enforce the payment on behalf of the State in any court of the State or of any other state of the United States or of any province of Canada.

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Program Evaluation (Reporting)

Questions	Approach
Policy choices and options considered/ Recommendations	A program can evaluate any range of performance categories. For MBUF, relevant categories include revenue, user compliance, agency compliance, cost of administration, customer service, distributional impacts, and scalability. • **Revenue**. Perhaps most important, this category assesses the effectiveness of the MBUF program in generating revenue for transportation investment as a replacement for the existing fuel tax. ***Example metrics:*** *Gross revenue generated; revenue generated per vehicle.* • **User compliance**. Compliance supports the central revenue objective: higher compliance rates lead to higher revenue yield. User trust in the road charge system creates a virtuous cycle of compliance that sustains revenue over the long term. Measuring compliance and trust involves both analysis of revenue trends and direct interaction with customers. ***Example metrics:*** *tax gap (revenue expected minus revenue collected), customer understanding of reporting and payment requirements (e.g., measured through surveys), customer adherence to reporting and payment requirements.* • **Agency compliance.** Enabling legislation will specify certain processes and limitations for the implementing agency. The agency must comply, most importantly as relates to protecting privacy and securing data collected from motorists. ***Example metrics:*** *compliance with privacy and data security requirements, accuracy of road charge customer invoicing and fee collections.*

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Program Evaluation (Reporting)

Questions	Approach
Policy choices and options considered/ Recommendations	A program can evaluate any range of performance categories. For MBUF, relevant categories include revenue, user compliance, agency compliance, cost of administration, customer service, distributional impacts, and scalability. • **Cost of administration**. Efficient administration further supports the objective to maximize net revenue. Evaluating cost of administration for the agency can assess overall performance and pinpoint issues by examining cost categories. • **Customer satisfaction**. Customer satisfaction correlates with user compliance and, therefore, with revenue. Providing a positive customer experience can improve the rates of voluntary compliance while reducing administrative costs by eliminating the need for some customer interactions. Evaluation involves review of customer interaction data, customer interviews, and review of customer processes. • **Distributional impacts**. An MBUF program can have important impacts on road users, particularly low-income drivers, including the potential for unintended consequences. Evaluation in a live program can measure impacts, isolate possible areas for concern, and identify mitigation approaches. ▪ **Scalability**. In the early years of a small-scale road charge program, policymakers and program managers must consider opportunities to scale the program, that is to grow it to cover more vehicles, at low cost while preserving high quality customer service and agency compliance to maximize revenue. Evaluation can improve agency readiness for scaling.

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Next Phase after Legislation: Setup Building Blocks

- Analyze Authoring Legislation
  - 19 20 21
- Administrative Rules & Activities
  - 22 23 24 25
- System Design
  - 26 27 28 29 30 31 32 33 34
- Vendor Procurement
  - 35 36 37
- System Implementation & Testing
  - 38 39
- Organizational Design & Staffing
  - 40 41 42 43 44
- System Launch
  - 45 46

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26 System Needs Assessment

27 Concept of Operations

28 System Design Documents

29 Customer Service Req's

30 Customer Ser

31 Customer Se

32 Establish Bu

33 Determine E

34 Program Eval

MBUF program model chosen for set-up

State administered odometer-based system leveraging DMV and Vehicle Inspections (similar to Hawaii)

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Building Blocks Used by State

VERMONT

RESEARCH & PLANNING

RUC Feasibility Study
Analysis of viable RUC models (incl. revenue and cost assessment)

We are here

SETUP

MBUF program model

State administered odometer-based system leveraging DMV and Vehicle Inspections (similar to Hawaii)

Transition strategy

Contemplate other technology-based methods similar to UT, OR, and VA

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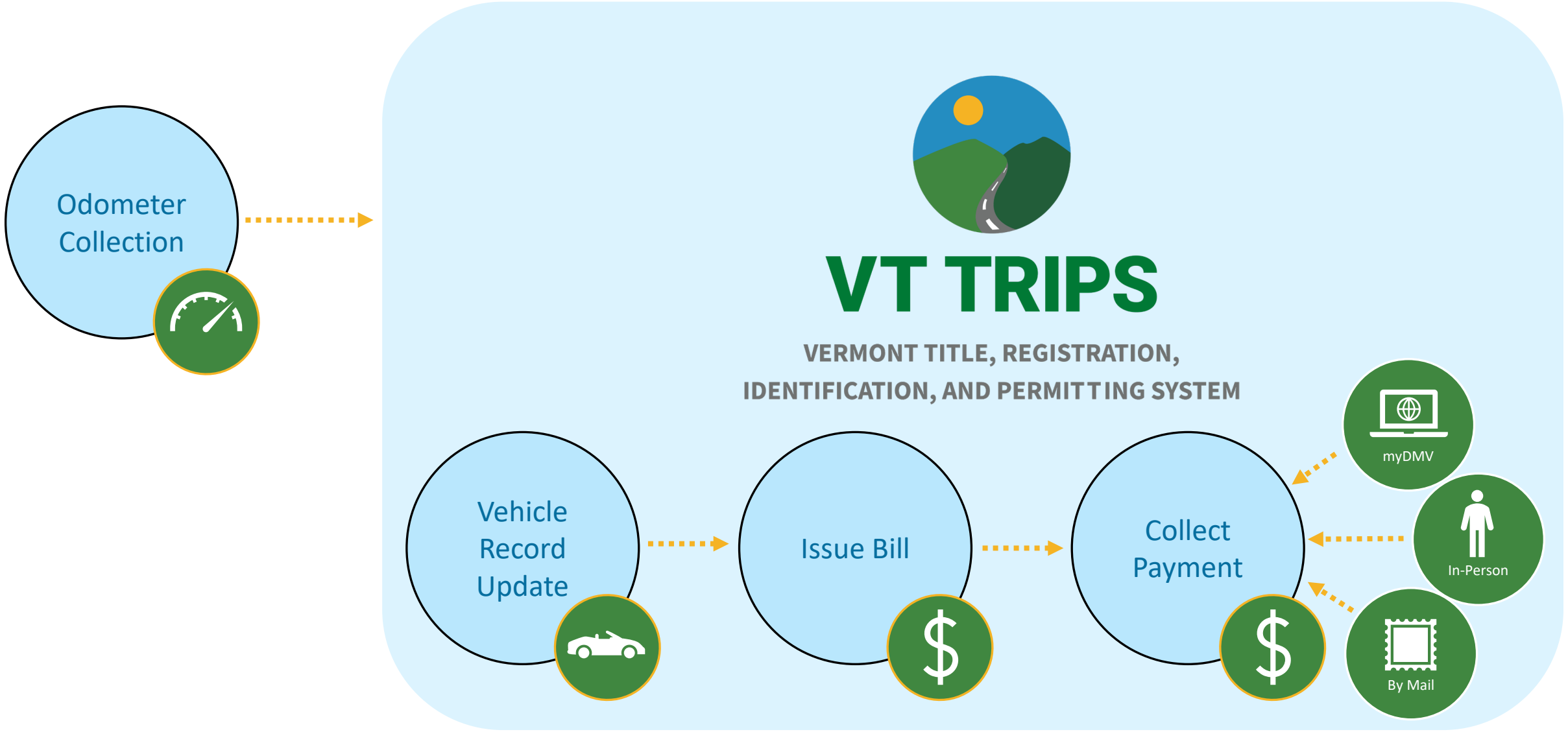
System Setup



Public Outreach and Education

1 Funding the Future Starts with Education

Education is a vital component of bridging the gap in understanding about transportation funding. Components of the Coalition's most recent work were strategically designed to inform stakeholders and the general public about this key issue, including the limitations of the existing fuel tax model and information about alternative funding mechanisms. *Impactful insights include:*

Customized Outreach is Critical

Tailored, multi-tiered campaigns boosted communication effectiveness. North Carolina's AdvaNCe Transportation Together campaign used a layered strategy anchored by its website to expand reach, shown in the graphic on the right.

Pilots Prove Feasibility and Reduce Concerns

Pilots built trust and eased participant concerns across states. Key stakeholder pilots uncovered perspectives on transportation funding, increased awareness about alternative funding solutions, and provided firsthand experience demonstrating how MBUF could work in each state.

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Strategic Innovation for Revenue Collection (SIRC)

Authorized by 2021 Investment Infrastructure and Jobs Act (IIJA):

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

Strategic Innovation for Revenue Collection (SIRC)

Task 1: Project Management	$375,000
Task 2: System Implementation	$2,250,000
Task 3: Public Outreach and Education	$862,500
Task 4: Policy Analysis and Transition Strategy	$262,500
Total	**$3,750,000**

(80% federally-funded)

Major Grant Deliverables:

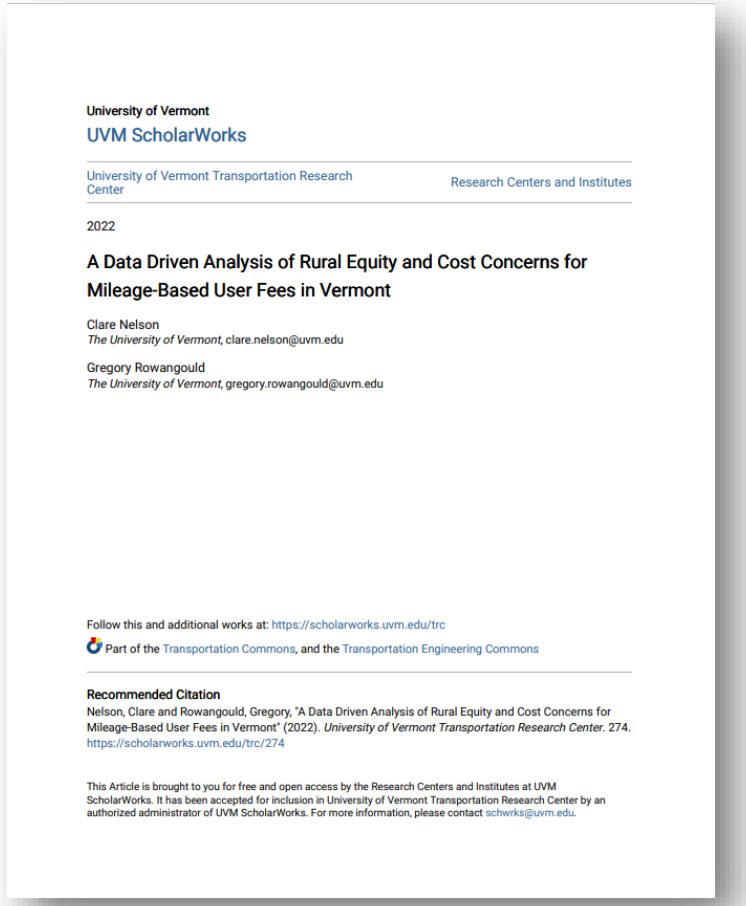
- Implementation of MBUF for electric vehicles – January 2027
- Final Report with transition strategy by Fall 2028

Impacts of MBUF

University of Vermont Transportation Research Center study investigated the geographic and demographic impacts of move to a mileage-based user fee (MBUF) generally:

- Most Vermont households would see minimal difference from gas tax burden to mileage-based user fee
- Rural and lower-income households would be least impacted, while urban and higher-income households would see greater increases
- MBUF would be more progressive/less regressive than gas tax, and much more so than a high flat fee, supporting the findings of prior studies but with a much more robust data set

A Data Driven Analysis of Rural Equity and Cost Concerns for Mileage-Based User Fees in Vermont (uvm.edu) (2022)



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2022

A Data Driven Analysis of Rural Equity and Cost Concerns for Mileage-Based User Fees in Vermont

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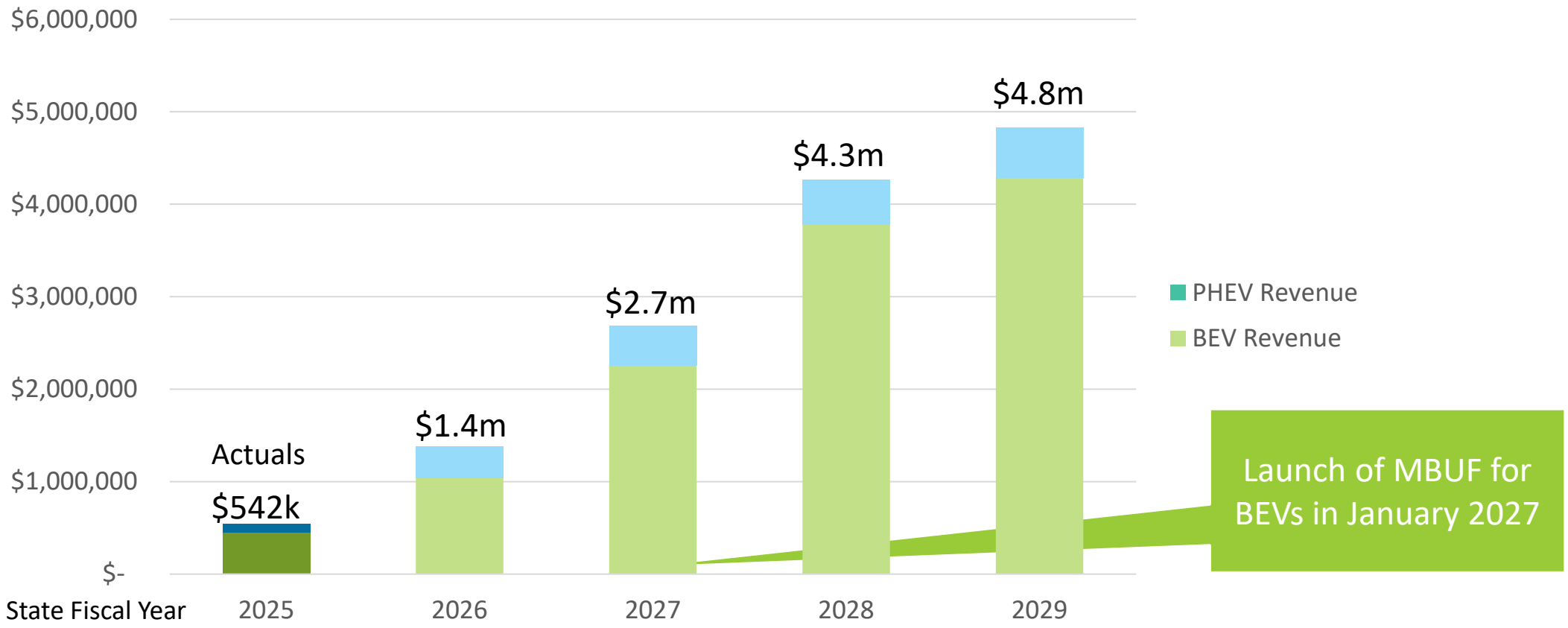
Revenue Projections (EV infrastructure fee + MBUF)



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Setting a Flat Fee

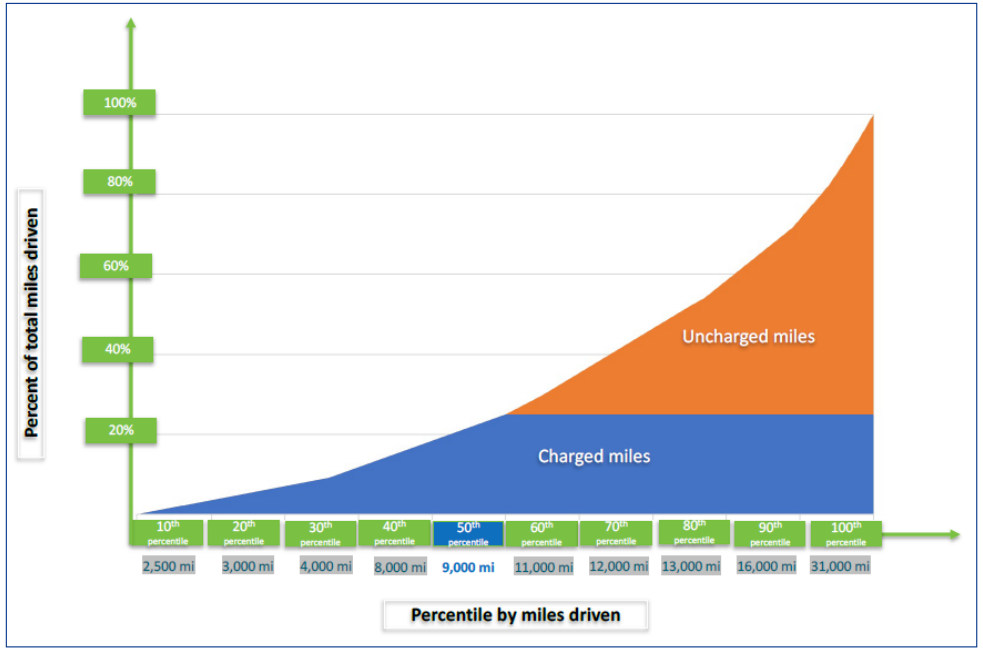

Figure 5. Annual Flat Fee of $117, Set at 50th Percentile of Driving

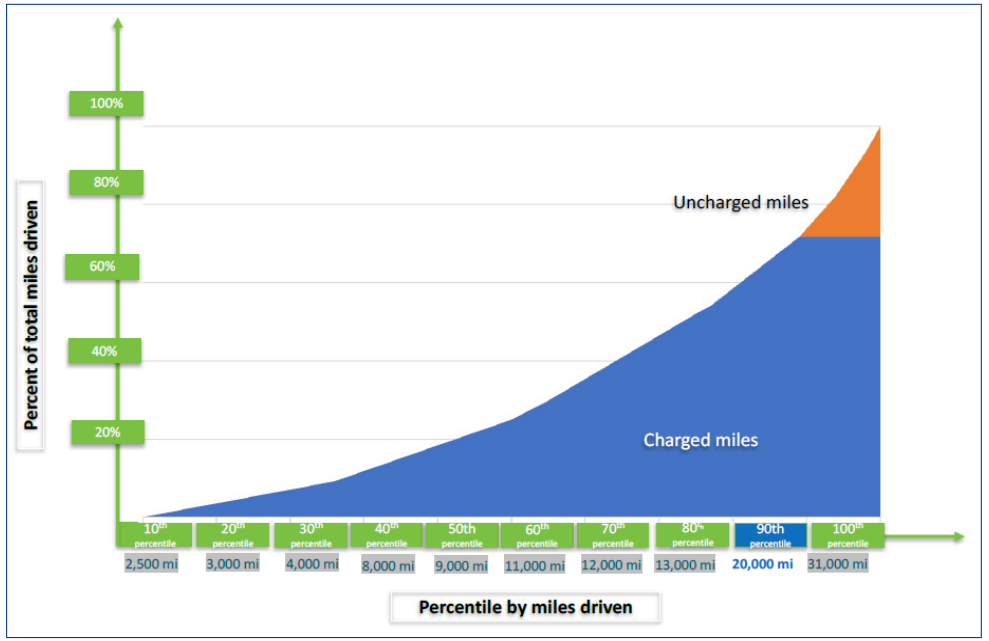

Figure 6. Annual Flat Fee of $260, Set at 90th Percentile of Driving