



# WA State Infrastructure & Incentive Program Design for MHD ZEVs

Final Presentation to the JTC

January 4, 2024

# Report Structure

- I. Introduction - Purpose of Study
- II. Key Attributes of an Incentive Program
- III. Implementation Plan
- IV. Stakeholder & Industry Engagement
- V. Understanding the MHDV Landscape
- VI. Review of Existing MHD ZEV Incentives
- VII. Review of Existing ZEV Programs in Washington State
- VIII. Policy Gaps & Future Considerations



# I. Introduction

- Purpose of Study
- **2023 – 2025 Fiscal Biennium, Climate Commitment Act Funding**
  - \$120,000,000 of the carbon emissions reduction account—state appropriation is provided solely for implementation of **zero-emission commercial vehicle infrastructure and incentive programs** and for the replacement of school buses powered by fossil fuels with zero-emission school buses, including the purchase and installation of zero-emission school bus refueling infrastructure.
    - (a) Of this amount, \$20,000,000 is for the department to administer an early action grant program to provide expedited funding to zero-emission commercial vehicle infrastructure demonstration projects. The department must contract with a third-party administrator to implement the early action grant program.
    - (b) The office of financial management shall place the remaining **\$100,000,000 in unallotted status until the joint transportation committee completes the medium and heavy-duty vehicle infrastructure and incentive strategy** required under section 204 of this act. The director of the office of financial management or the director's designee shall consult with the chairs and ranking members of the transportation committees of the legislature prior to making a decision to allot these funds.



# II. Key Attributes of an Incentive Program

# Key Elements of Incentive Program

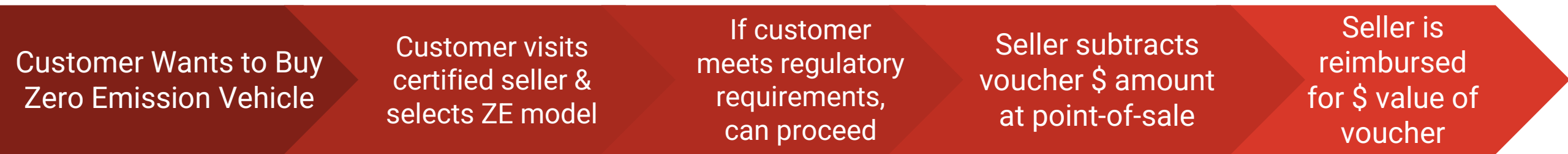


- Third-party administered point-of-sale voucher program for zero-emission MHDV fleets and the infrastructure to support their operation
  - An analysis of voucher programs across U.S. demonstrates as best practice
- Voucher amount plus-ups, or modifiers, for select fleet types, vehicles, or environmental impacts, such as:
- Vehicles domiciled in disadvantaged communities; small, minority-owned businesses and fleets
  - A reduced incentive for secondary market vehicles
- Allow for vouchers to be stackable with other federal, state, or local incentives

It is also recommended that the following innovative approaches be incorporated in the point-of-sale voucher incentive program to greatly enhance the offering by streamlining participation:

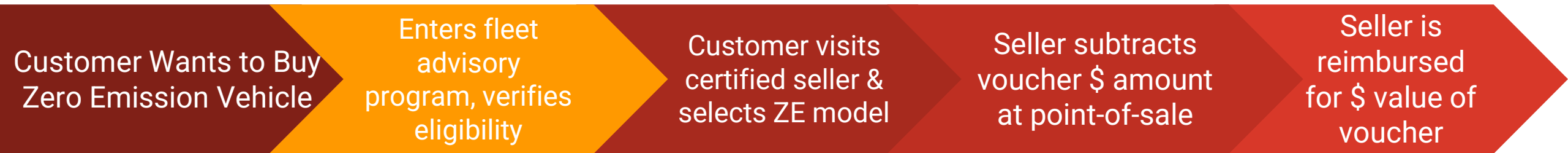
- Develop integrated technical assistance for fleets
- Streamline proactive coordination with utilities
- Develop a single program online portal for fleet applicants that includes on-road and non-road
- Develop a front-end pre-approval process and paperwork verification
- Create an education and outreach effort that targets fleets by sector with customized messaging that is important to each sector

# Point of Sale Voucher



# Point of Sale Voucher - Advisory Track

- Fleets seeking technical assistance will complete checklist to prepare for decarbonization
- Process mitigates risk of a fleet being unprepared to transition to zero-emission technology



## Fleet Consultation

- Use-case fit
- Financing & leasing options
- Total cost of ownership
- Insurance options

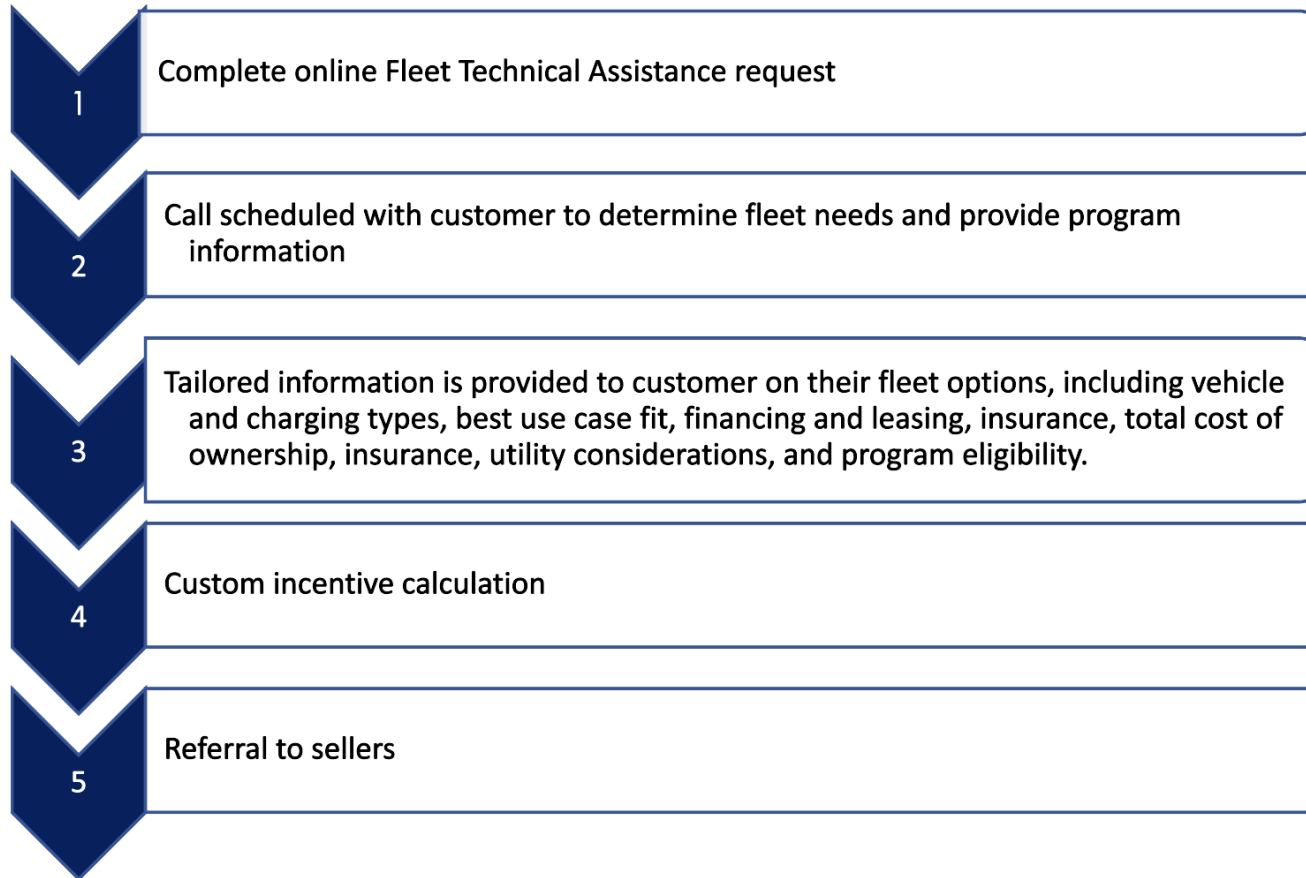
## Eligibility, Verification & Compliance

- DOT verification
- WSDOT verification
- Motor carrier permit
- Program eligibility (plus-ups/modifiers)

## Utility Considerations

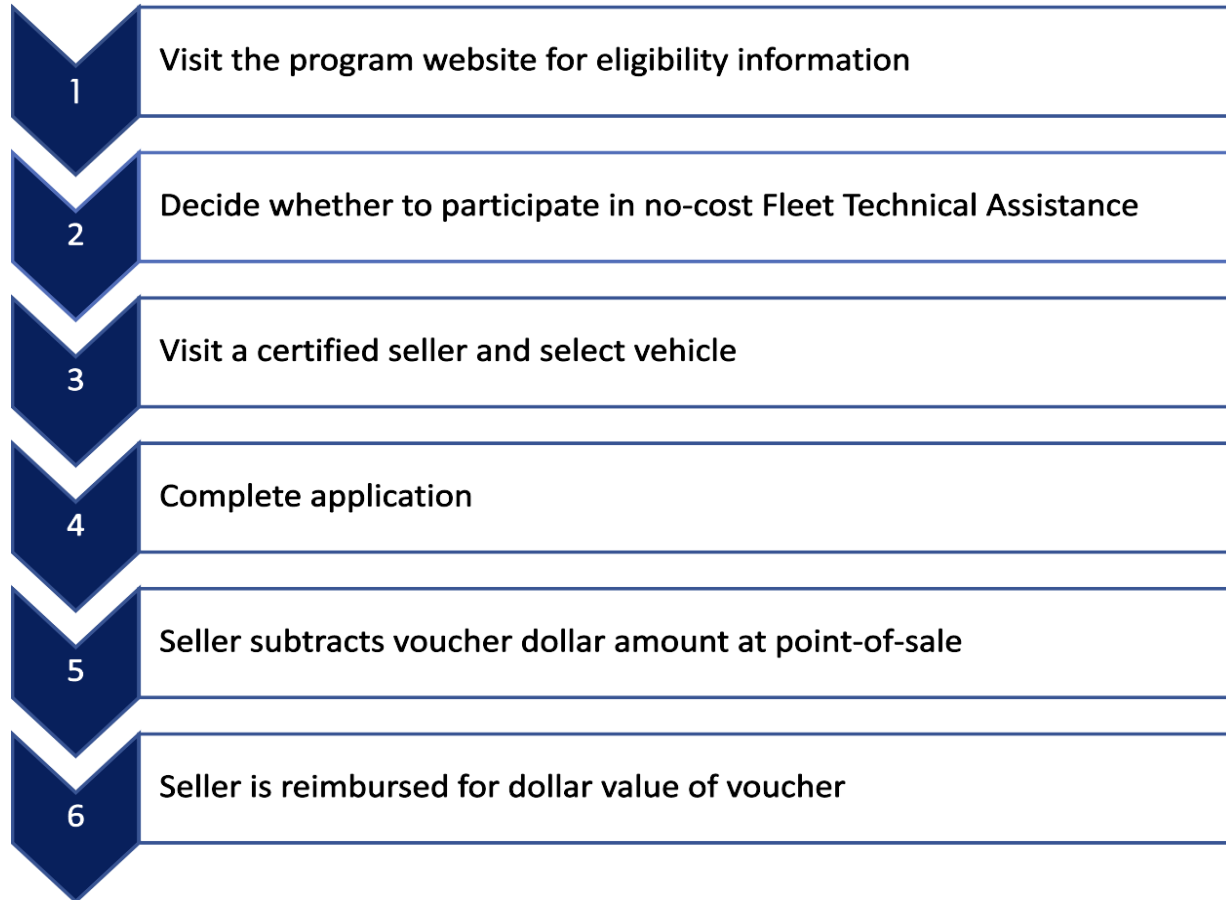
- Site assessment
- Preliminary site plans
- Confirmation of request for service

# Fleet Technical Assistance Process



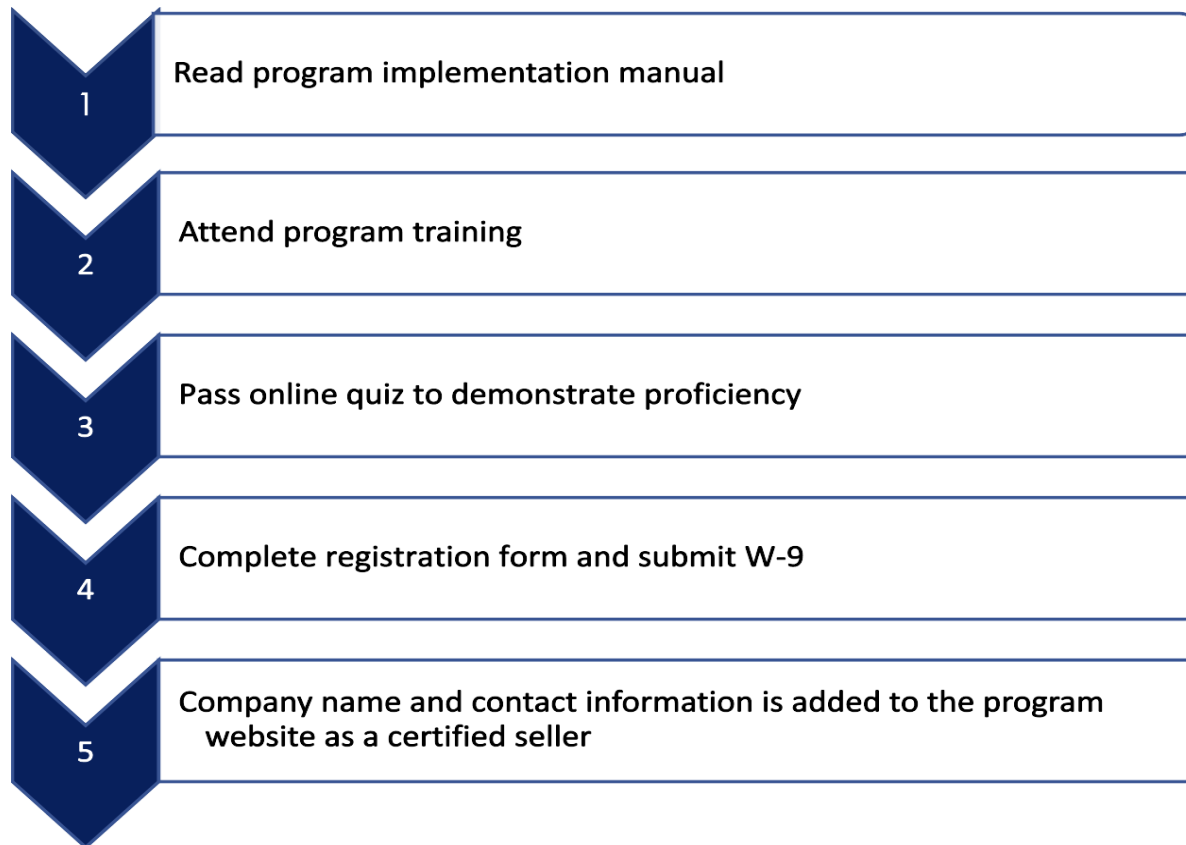


# Enrollment Process for Fleets



# Enrollment Process for Vehicle Seller Certification

Manufacturers, Dealers, Sellers, Vendors



# Vehicle Eligibility

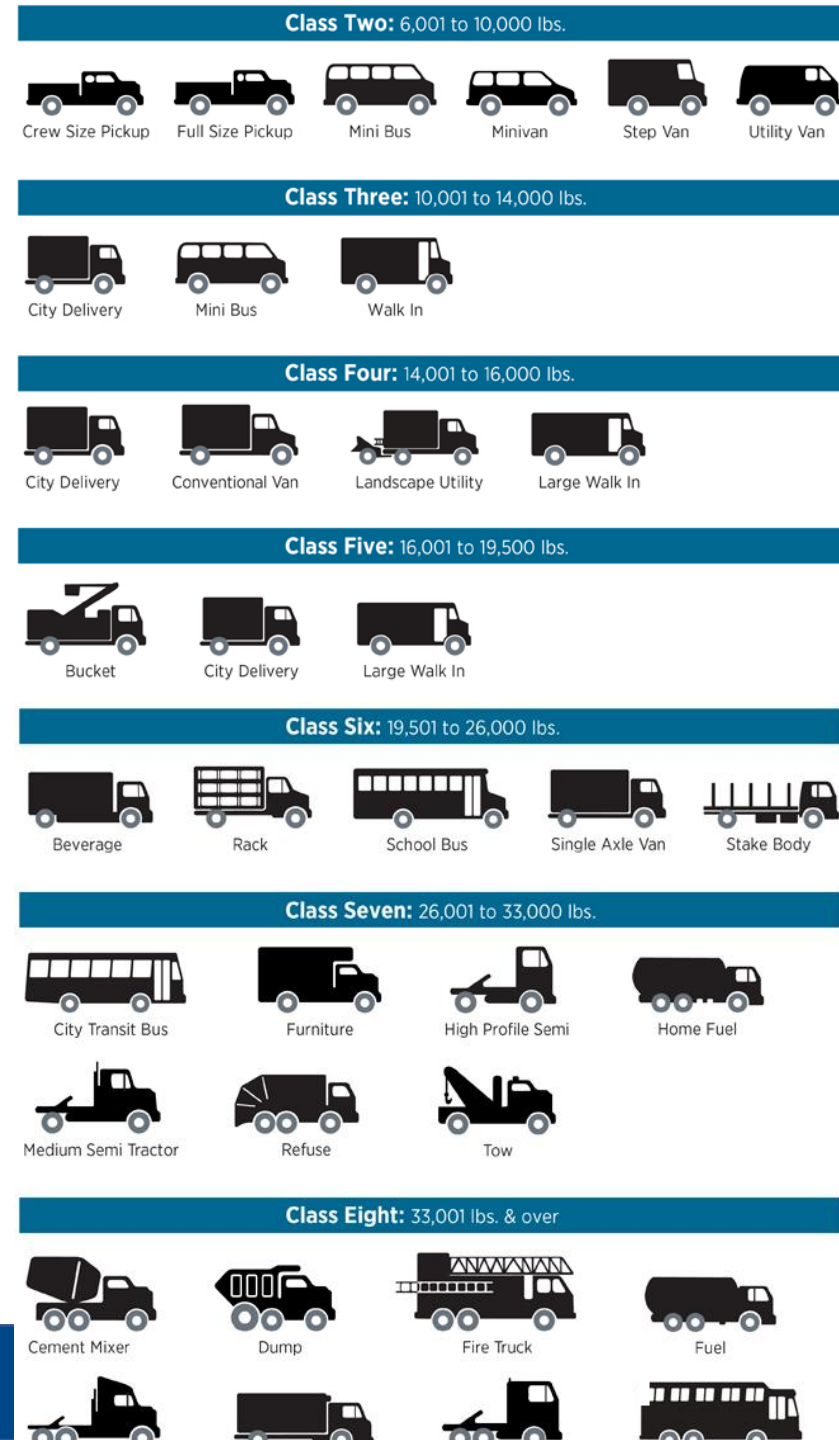
## Eligible Vehicles - Type

- Most on-road vehicles greater than 8500 GVWR
- Zero-emission off-road equipment
- All Zero Emission Technologies eligible
  - Includes battery electric & hydrogen

## Eligible Vehicles - Concurrent Program Eligibility

- Vehicles eligible under California's HVIP model
- OR
- Vehicles eligible under federal Commercial Clean Vehicle Credit program
- OR
- Manufacturers can petition for certification

\*Washington state cannot provide a zero emission powertrain certification\*



# Off-Road Equipment Eligibility

## Eligible Vehicles - Type

- Most commercial and municipal use off-road vehicles

## Eligible Equipment - Concurrent Program Eligibility

- Equipment eligible under California's CORE model
- OR**
- Zero emission equipment eligible for DERA funding
- OR**
- Manufacturers can petition for consideration



# Non-Eligible Vehicles

## \*\*Suggested Non-Eligible Vehicles and Program Users

- School Districts / School Buses
  - Policy Suggestion: WA legislature should invest additional funding into school bus ZE transition through other funding sources.
  - Policy Suggestion: Include small amounts in early stages to serve as local match for federal grant programs.
  - School districts will still be able to access fleet advisory services
- Transit Agencies
  - Keep and improve funding in WSDOT Green Transportation Capital Program
  - Transit agencies will still be able to access fleet advisory services
  - Buses built and operated primarily for commercial use are still eligible

# Vehicle Voucher Amounts

Vehicle voucher amounts consistent with HVIP funding levels

| GVWR (lbs.)   | Vehicle Class | Incentive Amount |
|---------------|---------------|------------------|
| 8,501-10,000  | Class 2b      | \$7,500          |
| 10,001-14,000 | Class 3       | \$45,000         |
| 14,001-16,000 | Class 4       | \$60,000         |
| 16,001-19,500 | Class 5       | \$60,000         |
| 19,501-26,000 | Class 6       | \$85,000         |
| 26,001-33,000 | Class 7       | \$85,000         |
| 33,001+       | Class 8       | \$120,000        |

| Modifier Type                    | Amount Above Base |
|----------------------------------|-------------------|
| Class 8 Drayage                  | + 25%             |
| More Impacted Environmental Risk | + 15%             |
| Small or minority-owned fleet    | + 25%             |
| In-Use Converted/Remanufactured  | - 50%             |
| Used Vehicle                     | - 50%             |
| EV Charging and Infrastructure   | + 50%             |



# III. Implementation Plan to Establish a MHD ZEV Incentive Program

# Goals & Considerations

The following goals were developed for the incentive program building on consultations with legislators, agency staff, and sector stakeholders.

- **Goal 1: Accelerate MHD ZEV Market Adoption:** Speed up the uptake of ZEVs within the commercial sector.
- **Goal 2 – Achieve Equitable Access:** Ensure all communities can access ZEV options.
- **Goal 3 – Lower Financial Barriers:** Reduce the economic hurdles preventing commercial fleets from adopting ZEVs.
- **Goal 4 – Include Infrastructure Support:** Facilitate the development of necessary charging and fueling infrastructure for MHD ZEVs.
- **Goal 5 – Offer Fleet Advisory Services:** Provide expertise and guidance to fleets transitioning to ZEVs.
- **Goal 6 – Develop Pre-Approval Process:** Streamline the ZEV incentives application process to facilitate easier access for fleets.



# Implementing a MHD ZEV Incentive Program

Goal: Grow MHD ZEV market in Washington State

Objective:

- Spend incentive money before end of biennium
- Demonstrate value of incentive program to accelerating MHD ZEV deployment

**Phase 1** - Establish Incentive Program to Kick Start MHD ZEV Market in WA (2023-26)

Year 1: move quickly → launch with success

Year 2-3: refine program, add additional elements

**Phase 2** - Explore Novel Market Acceleration Tactics (2027-33)

**Phase 3** - Evaluate, Assess, Revise (2033-Onward)

# Implementation Plan

## Phase 1 - Establish Incentive Program to Kick Start MHD ZEV Market in WA (2023-26)

### Phase 1.a – Planning

Months 1-10 (10 months total)

1. **WSDOT hires staff to oversee the Incentive Program’s third-party administrator**
  - a. Approx. 2 FTE
2. **Determine if there are new pieces of legislation that will impact the Incentive Program launch**
  - a. No legislative changes are anticipated at this time
3. **Issue an Incentive Program third-party administrator RFP and hire the third-party administrator**
  - a. To speed up the program launch, include Fleet Technical Assistance Program administration as part of the Incentive Program third-party administrator RFP
  - b. Develop a marketing, education, and outreach plan
  - c. Ensure local participation in the plan’s creation and implementation
  - d. Develop a customer journey map to ensure each fleet customer touchpoint is streamlined as much as possible
  - e. Develop a strong fleet customer segmentation component of the plan
    - i. Understand which fleet customers are ready now to gain quick success upon the Incentive Program’s launch
    - ii. Target best use cases like local and regional day delivery, and family-owned fleets
  - f. Allocate funding to effectively communicate possible changes once launched, to host informational fleet customer workshops, and to host at least one MHDV test drive event per year
  - g. Create a workforce development component of the plan to increase literacy of technical skills
    - i. Develop a curriculum and list of skills needed
    - ii. Develop a Seller Certification program based on industry best practices

# Implementation Plan

## Phase 1 - Establish Incentive Program to Kick Start MHD ZEV Market in WA (2023-26)

### Phase 1.a Planning Cont'd.

5. Allocate maximum funding amounts to off-road equipment and on-road vehicles as general categories. Further segmentation by vehicle type, Class, etc. is recommended for future rounds of funding once the demand in Washington is better understood.
6. Develop an evaluation plan with metrics and milestones to inform staff of the Incentive Program's progress.
7. Develop processes and procedures for incentive processing that allow staff and the third-party administrator to be nimble if program changes to streamline the effort as needed.
8. Develop a plan to thoroughly test all online customer interface technology and implement the plan prior to launch.

# Implementation Plan

## Phase 1 - Establish Incentive Program to Kick Start MHD ZEV Market in WA (2023-26)

### Phase 1.b – Launch

Months 11-18 (8 months total)

1. Launch all online customer interface technology
2. Launch the Marketing, Education, and Outreach Plan with a call-to-action driving customers to sign up on the Incentive Program website
3. Launch the Fleet Tech Program --
  - a. Time-saver: While building the fleet technical assistance service function, a fleet that already has an understanding of ZEV operation can opt out of fleet technical assistance and proceed directly to a voucher request. Fleets who do want or need support will get technical assistance at launch of the Fleet Tech Program.
4. Launch the evaluation plan (month 16)
  - a. Retest all online customer interface technology
  - b. Review the customer journey map to ensure processes and procedures are streamlined for each customer touchpoint – make improvements where needed
  - c. Communicate Incentive Program changes to fleet customers if they will be impacted by the changes
  - d. Understand any legislative changes impacting the Incentive Program
  - e. Communicate results of metrics and milestones to staff and third-party administrator
  - f. Determine how future funding should be allocated between vehicle categories and classes

# Implementation Plan

## **Phase 2** - Explore Novel Market Acceleration Tactics (Months 24+)

- Report describes tactics for future considerations

## **Phase 3** - Evaluate, Assess, Revise (Annually)

- Review the evaluation plan for necessary changes
- Launch an evaluation of the plan each year
  - The Legislature meets annually and can also evaluate the program's success at this time.

# IV. Stakeholder & Industry Engagement

Consultation with Legislators  
Coordination with Staff Work Group  
Industry Engagement & Outreach  
Case Studies

**Key Takeaways from Stakeholder Engagement**

# IV. Stakeholder & Industry Input

- Methodology
- Consultation with Legislators
- Coordination with Staff Work Group
- Industry Engagement & Outreach
- Industry Case Studies
- Key Takeaways from Stakeholder Engagement

# Stakeholder Engagement

## 22 Focus Groups

- 10/17: School buses
- 10/23: Off-road equipment - ports/airports
- 10/30: Utilities - Puget Sound Energy
- 11/03: Utilities - Public Utility Districts
- 11/07: Long-Haul Trucking
- 11/08: City of Seattle Drayage Driver Advisory Council
- 11/09: Public Agency
- 11/09: Staff work group
- 11/13: Dealership and finance meeting 2
- 11/15: Transit - buses
- 11/15: Small/mid-sized business operating MHD vehicles
- 11/17: Agriculture and farming equipment
- 11/27: Minority owned businesses operating MHD vehicles
- 11/30: Zero-emission refueling
- 12/07: Off road equipment - railroad | 1 - 2:30 p.m.
- 12/13: Agriculture and farming equipment | 1 - 2:30 p.m.

## 12 One-on-One Industry Interviews

- 10/12: Earth Finance
- 11/10: Peninsula Trucking
- 11/10: Ryder
- 11/10: Lynden Transport
- 11/13: Mercer Logistics
- 11/13: Hogland Trucking
- 11/14: AAA Washington
- 11/14: Stryder Motorfreight
- 11/20: Oak Harbor Freight
- 11/20: Fastway Freight
- 11/21: DKS Associates

### Plus:

- Staff Work Group meetings
- Legislator meetings
- Partnerships with regional organizations





# Stakeholder Feedback

- **Barriers to Purchasing MHD ZEVs**

- Vehicle cost
- Infrastructure
- Weight of BEV technology
- Range
- Insurance
- Existing technology does not match current needs, duty cycles

- **Point-of-Sale Voucher Programs (Voucher Incentive Program (VIP)) Work**

- Proven, effective tool for getting more MHD ZEVs on the road
- Existing VIP programs put too much financial risk on vendors, makes vendors responsible for implementing state-level policies
- Third Party Administrator is best option for implementation
- “Plus Ups” on base voucher amount encourage equity in program outcomes

- **Program should be easy to use**

- Future users want centralized place to get information, apply to program
- Users want stackability between state, local, and federal programs
- OEMs and vendors want coordination between WA and CA programs (ex. vehicle eligibility)

# Stakeholder Feedback Continued

- **General lack of information or understanding about what this transition will look like**
  - Legislators want a roadmap to ZE technology adoption
  - Fleet advisory programs are key to helping all fleets transition
  - Targeted, sector-based outreach leveraging trusted, established partners is needed to share information
  - Future users want place to send, review, and process data related to MHD ZEV deployment
- **Equity should be centered in transition**
  - Ensuring benefits of emissions reductions benefit most burdened communities
  - Enable both small and large fleets to access incentives and make the transition
- **Secondary Market Incentives for ZEVs are needed**

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# V. Understanding the MHDV Landscape

- Background
- Purpose of Study
- Medium- and Heavy-Duty Vehicles
- State of MHD ZEV Technology in 2023
  - Battery Electric and Hydrogen Fuel Cell Technology
  - Infrastructure Needs
- Market Overview of MHDVs in Washington State
  - Impact of MHDVs on Emissions in Washington State
- Role of Incentive Program
- Goals of Study

# VI. Review of Existing MHD ZEV Incentives

- Tools to Incentivize ZEV Adoption
  - Grants
  - Point of Sale Voucher
  - Tax Credits
  - Third Party Financing
- Policies and Regulations
  - Federal
  - California (ACT & ACF)
- Incentives & Grants
  - California; Colorado; Hawaii; Massachusetts; New Jersey; New York, New York City; Quebec; British Columbia; Canadian Federal
- Key Takeaways from Evaluating Existing Programs

# VII. Review of Existing ZEV Programs in Washington State

- State-Level Policies and Initiatives
- State Grant Programs & Incentives
- Evaluation of Clean Fuel Passenger Vehicle Tax Exemption
- Local Programs & Incentives
- Key Takeaways from Evaluating WA Programs

# VIII. Policy Gaps & Future Considerations

- MHD ZEV Insurance
- Supply Chain Issues
- Secondary Market Development
- Incentive Funding as Local Match
- Stackable Scrappage Incentives
- Additional Recommendations on School & Transit Fleets
- Infrastructure Considerations
- Next Steps

# Timeline

- October
  - Research
  - Hosting Focus Groups
  - Consultation with Legislators
  - Consultation with Staff Work Group
- November
  - Finalize Research
  - Begin drafting report
  - Hosting Focus Groups
- December
  - Host Final Review Focus Group
  - Initial Draft of Report due to Staff Work Group
  - Finalize Draft Report
- January 2024
  - **Presentation to JTC - January 4, 1:30 p.m. on TVW**
  - Final Report due to JTC
  - Presentations to the Washington State Legislature





Thank you!

Please send feedback & further comments to [mhdzev@pnwr.org](mailto:mhdzev@pnwr.org)!