CALIFORNIA
AIR RESOURCES BOARD

Implementation Workgroup Meeting: Fiscal Year 2026-27 Clean Truck and Bus Voucher Incentive Project (HVIP), and Long-Term Heavy-Duty Investment Strategy

August 19, 2026

Agenda:
August 19, 2026

Time*	Topic
1:00 – 1:05 p.m.	Introduction
1:05 – 1:25 p.m.	Long-Term Heavy-Duty Investment Strategy
1:25 – 1:35 p.m.	HVIP Background and Funding Allocation
1:35 - 1:50 p.m.	In-Flight Voucher Request Cap Increase
1:50 – 2:05 p.m.	Bulk Purchase Pathway
2:05 – 2:20 p.m.	Demonstration Vehicle Update
2:20 – 2:35 p.m.	Total Cost of Ownership (TCO) Updates
2:35 – 2:45 p.m.	Overview of Stacking Incentives with HVIP
2:45 – 3:10 p.m.	Additional Implementation Updates
3:10 – 3:55 p.m.	Questions and Discussion
3:55 – 4:00 p.m.	Next Steps and Conclusion

*Each time slot includes time for Q&A's specific to the topic. In addition, there will be 40 minutes at the end for Q&A on all topics.

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Long-Term Heavy-Duty Investment Strategy

Long-Term Heavy-Duty Investment Strategy

Scope

3 Fiscal Year Horizon

FY 2027-28	FY 2028-29	FY 2029-30

Goals

Support healthy communities

Technology & market acceleration

Grow the green economy

Recommendations

Investment Priorities

Funding Need

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Draft FY 2026-27 Heavy-Duty Investment Priorities

	FY 2027-28	FY 2028-29	FY 2029-30
Demos/Pilots	$XXX –$XXX Million ZE Line-Haul Rail, ZE/AT Aviation, AT OGV, ZE/AT Heavy Marine, ZE Heavy Ag/Construction, ZE Heavy Specialty, ZE Ecosystems	$XXX–$XXX Million ZE Line-Haul Rail, ZE/AT Aviation, AT OGV, ZE/AT Heavy Marine, ZE Heavy Ag/Construction, ZE Heavy Specialty, ZE Ecosystems	$XXX–$XXX Million ZE Line-Haul Rail, ZE/AT Aviation, AT OGV, ZE Heavy Marine, ZE Heavy Specialty
Market Momentum	$XXX –$XXX Million ZE Heavy Specialty and Off-Road Equipment, ZE Switcher Rail, ZE Light Marine, Volume ZE Trucks, ZE School/Transit, ZE Ecosystems	$XXX–$XXX Million ZE Heavy Specialty and Off-Road Equipment, ZE Light Marine, Volume ZE Trucks, ZE Switcher Rail, ZE Heavy Ag/Construction, Volume ZE Trucks, ZE School/Transit, ZE Light Aviation	$XXX–$XXX Million ZE Heavy Specialty and Off-Road Equipment, AT Heavy Marine, Volume ZE Trucks, ZE Switcher Rail, ZE Heavy Ag/Construction, ZE School/Transit, ZE Light Aviation
Market Equity	$XXX –$XXX Million ZE Drayage/Small Fleets, ZE Forklifts, ZE School/Transit, Financing Assistance, ZE Ag and Construction	$XXX –$XXX Million ZE Drayage/Small Fleets, ZE Heavy Forklifts, ZE School/Transit, Financing Assistance, ZE Light Marine, ZE Ag and Construction	$XXX –$XXX Million ZE Drayage/Small Fleets, ZE Heavy Forklifts, ZE School/Transit, ZE Light Marine, ZE Ag and Construction
Total Funding	$X,XXX–$X,XXX Million*	$X,XXX–$X,XXX Million*	$X,XXX–$X,XXX Million*

Comments and Questions

Use the raised hand function (#2 if calling in by phone)

Please state your name and affiliation, if any, before asking a question or making a comment

You may also email questions to: cleantransportationincentives@arb.ca.gov

CALIFORNIA HVIP

The Basics: HVIP Guiding Principles

- Accelerate market transformation for the cleanest **advanced technologies**
- Support the **goals** laid out in CARB's Long-Term Heavy-Duty Investment Strategy
- Support CARB **regulations**
- Maintain **simplicity** and a fleet friendly process
- **Drive purchase decisions**
- Avoid market disruptions
- Elevate **equitable** investments
- **Graduate** established technologies

About HVIP

The California Air Resources Board (CARB) launched the **Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)** in 2009 to accelerate the adoption of cleaner, more-efficient trucks and buses.

12,000+	2,000+	$1.07 billion
Clean Vehicles Deployed	Fleets Participating	Redeemed Vouchers

HVIP Statistics (Sept. 2025 – July 2026)

- HVIP reopened on September 9, 2025
- In 11 months, requests for 3,634 vouchers totaling $516 million
- 350 redeemed, 3,293 unredeemed

Voucher Category	**Count**	**CARB $**
Standard	2,328	317,211,985
Drayage Set-Aside	914	132,397,202
Public Transit Set-Aside	312	55,885,250
ISEF	79	10,559,126
Public School Bus Set-Aside	1	370,000
TOTAL	**3,634**	**516,463,563**

HVIP Statistics by Vehicle Type (Sept. 2025 – July 2026)

Segment	**Count**	**CARB $**
HD Truck	1,611	237,674,388
MD Truck	820	72,471,910
School Bus	726	134,110,515
Transit Bus	333	59,254,250
Refuse Truck	41	5,865,000
MD Step Van	38	4,655,000
Cargo Van	35	283,500
Shuttle Bus	30	2,149,000
TOTAL	**3,634**	**516,463,563**

HVIP Statistics by Vehicle Class (Sept. 2025 – July 2026)

Weight Class	Count	CARB $
Class 2b	165	1,349,710
Class 3	149	5,631,168
Class 4	108	11,219,518
Class 5	248	22,540,816
Class 6	476	66,043,157
Class 7	149	20,113,653
Class 8	2,339	389,565,543
TOTAL	**3,634**	**516,463,563**

Top 10 OEMs Requested by Fleets (Sept. 2025 – July 2026)

Manufacturer	Count	% of Count	CARB $	% of Funding
Tesla	1,466	40%	216,742,000	42%
BYD	330	9%	62,061,784	12%
Harbinger Motors	232	6%	30,904,856	6%
General Motors	190	5%	5,689,343	1%
Blue Bird	187	5%	39,553,209	8%
IC Bus	150	4%	27,073,702	5%
GILLIG	150	4%	22,488,000	4%
New Flyer of America	116	3%	30,108,000	6%
Workhorse	92	3%	12,018,500	2%
Ford	85	2%	706,210	0.1%
All Others	636	19%	69,117,959	13%

Top 10 OEMs Requested by Fleets (Sept. 2025 – July 2026) Standard HVIP only

Manufacturer	Count	% of Count	CARB $	% of Funding
Tesla	586	25%	87,747,000	28%
BYD	285	12%	54,649,034	17%
Harbinger Motors	229	10%	30,424,856	10%
Blue Bird	186	8%	39,183,209	12%
General Motors	168	7%	5,119,343	2%
IC Bus	150	6%	27,073,702	9%
Workhorse	85	4%	10,898,500	3%
Isuzu Motors	73	3%	6,332,300	2%
Micro Bird	61	3%	6,409,707	2%
Rizon	60	3%	46,354,662	2%
All Others	445	19%	43,019,671	14%

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Currently Available Funding

$29 Million Standard HVIP	$37 Million Innovative Small e-Fleets	$60 Million Drayage Truck Set-Aside
$5 Million Public Fleet Set-Aside	$627,000 Transit Set-Aside	**CLOSED** Zero-Emission School Bus and Infrastructure Project (ZESBI)

+$135.5 million received in FY 2026-27 budget

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Data as of 8/13/2026

Allocation of Additional Funds

Funding Category	Allocation Amount
Zero-Emission School Bus & Infrastructure (ZESBI)	$15 Million
Transit Bus Set-Aside	$40.5 Million
Standard HVIP	$80 Million
Total	**$135.5 Million**

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HVIP Implementation Updates

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In-Flight Voucher Caps

<u>In-Flight Voucher:</u>

A voucher request that has been **submitted but has not** progressed to the **"completed/paid"** voucher stage.

<u>Rolling Cap:</u>

Limits the **maximum number of in-flight vouchers** a purchaser can have at any time. Upon completion of any in-flight voucher, a new one may be submitted.

<u>Per year (annual) cap:</u>

The **maximum** number of **voucher** requests that can be **submitted** in any one **calendar year**.

<u>In-flight, per year:</u>

Limits the number of **in-flight vouchers** an entity may hold on an **annual basis**. (i.e. voucher count may exceed *per year cap* if some vouchers are redeemed in the same calendar year they were submitted)

<table>
<tr><th>Purchaser</th><th>Current Cap</th><th>Proposed Cap</th></tr>
<tr><td>School Bus</td><td>30 per year</td><td rowspan="3">50 in-flight, per year</td></tr>
<tr><td>Transit Bus</td><td>50 per year</td></tr>
<tr><td>Public Entities</td><td></td></tr>
<tr><td>Standard HVIP</td><td rowspan="2">20 in-flight</td><td rowspan="2">50 in-flight</td></tr>
<tr><td>Drayage</td></tr>
</table>

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Bulk Fleet Purchase Pathway

Purpose and Anticipated Outcomes

Purpose:

Establish a formal framework for HVIP-approved dealers and OEMs to propose and facilitate large-scale fleet electrification projects.

Processed through an **expedited pathway** under HVIP – with an iterative, case-by-case review process.

Concept explored in previous HVIP funding plans and discussed at multiple public stakeholder meetings, reflecting broad interest in reducing administrative barriers for high-volume purchases.

Anticipated Outcomes:

- Streamline voucher redemption for dealers and fleets executing large orders
- Enable faster deployment of clean vehicles across California
- Maintain program integrity and accountability at scale
- Reduce administrative barriers for high-volume ZEV purchases

Eligibility Requirements

Baseline Requirements:

- Minimum 100 vehicles per transaction
- Delivery within 12 months of agreement execution
- Purchasing fleet(s) must be HVIP-eligible
- Proposal must have at least a 25% reduction in the voucher amount per vehicle if the end user fleet is a small business fleet (existing definition in the IM). If the end user is a large fleet, the proposal must have at least a 50% reduction in the voucher amount.
- CARB reviews and approves each proposal on a case-by-case basis

CARB Evaluation Factors:

- Co-Funding: Additional co-funding commitments will be factored into evaluation
- Scrappage: Retiring an existing combustion vehicle may elevate the proposal for priority
- Delivery Timeline: Overall project duration and planned ZEV delivery schedule
- Reduced Voucher: Bulk agreements carry reduced per-vehicle voucher determined by CARB

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Proposed Update to Appendix I: Vouchers for Demonstration Vehicles

Purpose and Anticipated Outcome

The **purpose** of this provision is to allow dealers to obtain vehicles at a reduced cost to:

1) Demonstrate functionality to potential purchasers
2) Provide loaner vehicles to previous HVIP customers if their HVIP funded vehicle needs to undergo repairs
3) Utilize as a test drive vehicle
4) or any combination of the above operations.

Anticipated Outcome:

- Allows for timely test drives for potential purchasers to try out the vehicle.
- Dealers have vehicles on the lot ready for immediate sale.
- Enables HVIP to resemble the diesel buying experience
- Provides purchaser reassurances they will have a comparable loaner vehicle if an issue does arise.

Demonstration Voucher Eligibility

Who Can Apply:

- HVIP approved dealers based in California
  - CA Based dealers that are also ISEF providers are eligible
- Dealer must have the manufacturer's authority to sell the vehicle being requested
- Dealer must be purchasing a new HVIP eligible vehicle

Who Cannot Apply

- HVIP dealers based outside of California
- Vehicle Manufacturers
- Rental Fleets
- Leasing Entities
- ISEF Providers that are not dealers

Demonstration Voucher Limitations

- 10 demo vouchers per rolling 12-month period
  - If vehicle is sold within 12-months of voucher redemption, voucher count will reset
- Maximum of 2 demo vouchers per vehicle model
  - Allows for dealers to have 2 vehicles in 5 models
- Demo vouchers are not eligible for enhancements or stacking
- Vehicles obtained with demo vouchers are not eligible for secondary voucher upon resale
- No voucher extensions

Dealer Responsibilities

- Dealer must display HVIP decal on vehicle.
- Dealer maintains use log and submits to HVIP quarterly
- Log will keep record of:
  - Purpose of Use (demo, test drive, loaner vehicle)
  - Company or person name
  - Contact Info (Email or phone number)
- Dealer <u>is not</u> required to maintain ownership for 3 years

Resale of Demonstration Vehicles

- Dealer is not required to maintain ownership for 3 years
- CARB pre-approval is not required to resell
- Dealer required to report resale within 14 days
- Dealer must ensure buyer has an eligible business operating in California
- Buyer cannot be under common ownership with Dealer
- Buyer must agree to HVIP Terms & Conditions
- Invoice must show voucher amount being passed down to customer
- Base resale price cannot exceed base price the dealer paid to the Manufacturer
- Failure to ensure purchaser is eligible may result in exclusion from program participation

Voucher Amount Evaluation & TCO

HVIP Voucher Amount Methodology

- The methodology used to calculate the revised base voucher amounts incorporate total cost of ownership (TCO) inputs. These inputs, and the revised voucher amounts, target a 3-year payback relative to purchase of a conventional diesel truck.
- CARB annually evaluates the inputs into the HVIP TCO model used to evaluate and determine the appropriate incentive amounts.

HVIP Voucher Amount Methodology

How CARB calculates standard and small business voucher levels

Standard Vouchers

- Designed to achieve a three-year payback vs. a conventional diesel truck
- Price data drawn from HVIP invoices, published price digests, and contractor research
- Sparkspread calculations capture the difference in diesel vs. ZEV fueling costs
- CARB sets voucher levels to cover 3-year cost parity between a ZEV and an ICE vehicle

Target: 3-year cost parity, ZEV vs. ICE

Small Business Vouchers

- Developed from current market conditions and prior small business voucher amounts and demand
- Considers small fleet purchase decision factors, not just price.
- Aims to cover the difference needed to move a small fleet to a new zero-emission truck
- Often bridges the gap between a used truck and a new truck

Target: closing the used-to-new truck gap

TCO Inputs

- Electricity and diesel fuel costs incorporated through the SparkSpread Factor
  - **SparkSpread = (Diesel fuel cost × diesel fuel economy) – (Electricity cost × ZEV fuel economy)**
- Sales tax and federal excise tax
- ZEV and ICE vehicle cost
- Infrastructure costs are excluded from TCO given that other incentive programs account for and fund these improvements
- Insurance costs are currently not included in our analysis due to lack of comprehensive data. We invite input on those costs for future updates

Updates for 2026 TCO Modeling

- Updated recommendation for fuel costs in TCO model

Truck Type	Diesel Price ($/gal)	Electricity Price ($/kWh)	Diesel MPG	EV kWh/mile	Spark Spread ($/mile)
Class 2b/3	$6.47	$0.24	10.10	1.05	$0.389
Class 4/5/6	$6.47	$0.24	9.15	1.25	$0.41
Class 7/8	$6.47	$0.24	6.00	1.95	$0.468

- Currently collecting data on ZEV pricing for the past year and collecting comparable ICE truck pricing for the updated analysis
- Please contact us if you have any additional data points or analysis that would be helpful

Stacking Other Incentive with HVIP

Incentive Source	Public Entity (any fleet size)	Small Business (≤ 20 vehicles)	Large Business (≥ 21 vehicles)
Federal Incentives	√	√	√
Port Incentives	√	√	√
VW Mitigation	√	√	√
Carl Moyer	√	√	X
Clean Fuel Rewards (CFR)*	√ Small Fleet Only	√	X
Air District, Local, Municipal, Utility	√	√	√
Low Carbon Transportation Investments (LCTI)	X	X	X
Clean Mobility Options (CMO)	√	√	√

*CFR can only be stacked for small fleets purchasing class 8 trucks

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Maximum Grant Amount

Purchaser	Policy
Public Entity	HVIP voucher amount cannot exceed 100% of the base vehicle price. HVIP and all stacked incentives* cannot exceed 100% of the out-the-door vehicle cost.
Private Fleet	HVIP and all stacked incentives* cannot exceed 90% of the base vehicle price.

*All external incentives must be listed on the final invoice

Additional Implementation Updates

Clarification of Incentives vs Funding	• All external incentives should be disclosed on the purchase order. Funding sources, such as sources of revenue should not be included. • All additional sources included on the invoice will count towards the maximum allowable grant amount.
Allowing LOI for all public purchasers	• Currently, the IM only allows for transit entities to use a letter of intent (LOI) in lieu of a purchase order. • We are expanding this option to all public purchasers.
Improvements to the voucher process	• Earlier this year, we met with dealers and OEMs to hear about their experiences processing vouchers. Changes were made to the voucher processing system (VPC) as a result. • These changes have no impact to the purchaser.
Preparation for implementation of vehicle testing	• Using the SAE J1634 - Short Multi-Cycle Range and Energy Consumption Test plus Steady State (SMCT+) • Phase-in testing based on vehicle class starting with classes 4-6 • Aiming to implement this requirement early 2027
Discussion: How to ensure ZEV Longevity	• We are looking for feedback on policy or procedures that we could implement beyond vehicle testing to ensure OEMs are available to provide maintenance and support for the life of the vehicle.

Comments and Questions

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Next Steps

Upcoming Events
- September 15, 2026
  Evening Community Meeting
- November 18, 2026
  Ride and Drive event – Fresno Ca

HVIP Standard
- November 2, 2026
  (Tentative)
  Post updated Implementation Manual (IM)
- November 2, 2026
  (Tentative)
  Release new funds

Innovative Small E-Fleets (ISEF)
- November 2, 2026
  (Tentative)
  Post updated Implementation Manual (IM)

Contact Us

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