Clean Transportation Incentives

For Low Carbon Transportation Investments and the Air Quality Improvement Program

Public Workshop on the Fiscal Year 2022-23 Funding Plan
July 21, 2022
## Today’s Agenda

<table>
<thead>
<tr>
<th>Time*</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 a.m. – 10:20 a.m.</td>
<td>Introduction and Overview of Draft Funding Allocations</td>
</tr>
<tr>
<td>10:20 a.m. – 11:00 a.m.</td>
<td>Long-Term Plans for Light-Duty Vehicle and Clean Transportation Equity Investments</td>
</tr>
<tr>
<td>11:00 a.m. – 12:00 p.m.</td>
<td>Clean Transportation Equity and Light-Duty Projects</td>
</tr>
<tr>
<td>12:00 p.m. – 12:45 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>12:45 p.m. – 1:15 p.m.</td>
<td>Long-Term Heavy-Duty Investment Strategy</td>
</tr>
<tr>
<td>1:15 p.m. – 2:15 p.m.</td>
<td>On-Road Heavy-Duty Vehicles and Off-Road Equipment Investments</td>
</tr>
<tr>
<td>2:15 p.m. – 2:50 p.m.</td>
<td>Open Discussion</td>
</tr>
<tr>
<td>2:50 p.m. – 3:00 p.m.</td>
<td>Summary and Next Steps</td>
</tr>
</tbody>
</table>

*All times are approximate – if a topic concludes early we will proceed with the next item.*
## Funding Plan Development Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Category specific work group meetings</td>
<td>March – July 2022</td>
</tr>
<tr>
<td>Community Engagement</td>
<td>March – October 2022</td>
</tr>
<tr>
<td>Final Workshop</td>
<td>July 21, 2022</td>
</tr>
<tr>
<td>Release proposed Funding Plan</td>
<td>October 2022</td>
</tr>
<tr>
<td>Board Consideration of Proposed Funding Plan</td>
<td>November 2022</td>
</tr>
<tr>
<td>Start implementing projects</td>
<td>December 2022</td>
</tr>
</tbody>
</table>

Additional information available at:
- [Low Carbon Transportation Investments and AQIP](#)
- [Low Carbon Transportation Investments and AQIP Meetings and Workshops](#)
Introduction and Overview of Draft Funding Allocations
Key Priorities for Fiscal Year (FY) 2022-23

Funding Plan

1. Support the State’s climate change, air quality, zero-emission vehicle (ZEV) deployment, and petroleum reduction goals
2. Accelerate the transition to zero-emission
3. Support priority populations by implementing community-driven clean transportation solutions and equitable investments
4. Support economic recovery and job training and apprenticeship opportunities
5. Build on successes of previous investments and incorporate lessons learned
CARB’s Portfolio of Incentive Programs

Community Air Protection Program (AB 617)
Criteria, toxics and greenhouse gases (GHG) reductions for community goals

Air Quality Improvement Program (AQIP)
Criteria pollutant and toxics reductions

Carl Moyer Program
Cost-effective, SIP creditable criteria pollutant emission reductions

FARMER Program
Criteria, toxics and GHG reductions for the ag sector

Low Carbon Transportation
Advance technologies to provide GHG reductions and Priority Populations benefits

VW Mitigation Trust
NOx mitigation and zero-emission
Budget Update

• Legislature approved majority of the multi-year investment for ZEV Deployment in several budget bills signed by the Governor in June 2022
  • $10B over the next five years for CARB, California Energy Commission (CEC), and other state agency partners
  • Includes $1.125B from Proposition (Prop) 98 General Funds for school bus replacement grants to local educational agencies
• Legislature deferred finalizing portion of the light-duty equity and emerging opportunities allocations until later in the session
Budget Update Continued

• Staff will present details included in the May Revise where allocations have been deferred by the Legislature
  • Final appropriations won’t likely match the May Revise
  • Additional public meetings may be scheduled as needed
• Today’s presentation includes a total of $3B for Clean Transportation Incentives, from Greenhouse Gas Reduction Fund (GGRF), General Fund (GF) and Air Quality Improvement Fund (AQIF)
# Clean Transportation Incentives

## Proposed Allocations (millions)

<table>
<thead>
<tr>
<th>Project Category</th>
<th>GGRF</th>
<th>GF</th>
<th>Prop 98 GF</th>
<th>AQIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Transportation Equity Programs</td>
<td></td>
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<td></td>
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<tr>
<td>Established Under Senate Bill (SB) 1275</td>
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<tr>
<td>Vehicle Purchase Incentive Programs</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$76</td>
<td>$430*</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Clean Mobility Investments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>$419*</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Heavy-Duty Zero-Emission</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drayage Trucks, School/Transit Buses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>$280</td>
<td>$1,125</td>
<td>-</td>
</tr>
<tr>
<td>Clean Trucks, Buses, and Off-Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$600</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Emerging Opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>$10*</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>AQIP</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$28.64</td>
</tr>
</tbody>
</table>

**TOTAL: $2,968.64**  
*Appropriations from May Revise that are deferred by Legislature. Final appropriations won’t likely match May Revise. Staff will adjust amounts upon final appropriation.*
Community Engagement

- Held individual meetings with community organizations, community leaders, and labor union representatives
- Staff will continue to meet and follow-up with priority populations throughout the development of the Funding Plan
- Final Funding Plan will include updates on how this information is being considered for inclusion
Summary of Feedback

• Prioritize funding in areas that previously have had low/no funding
• Provide distribution of funding by demographic, including race
• Fund priority populations directly
• Utilize a needs-based model
• Expand outreach/education, case management, application, and language support
• Simplify application process, expedite incentive distribution
• Ensure fleets receiving funding are in compliance with applicable labor laws
• Improve consistency for public meetings by providing in advance relevant meeting information/materials
Funding Plan Development
Next Steps

• Additional public meetings as needed
• Continue one-on-one meetings and follow-up with stakeholders
• Release proposed Funding Plan for public comment October 2022
• Board considers Funding Plan at public meeting on November 18-19, 2022
Comments and Questions

Use the raised hand function (#2 if calling in by phone) or submit your question or comment in the Q&A box on Zoom.

Please state your name and affiliation before asking a question or making a comment.
Long-Term Plans for Light-Duty Vehicle and Clean Transportation Equity Investments
Background

• Second major update as required by SB 1275
  • Major update every three years through January 1, 2023

• Supplemental Report Requirement of the 2018-19 Budget Act
  • Annual updates through January 1, 2030

• In-Depth Update on the Long-Term Plan for Clean Transportation Equity Investments
Light-Duty Vehicle Purchase Incentives

• Covers California’s new and used ZEV Market & ZEV Purchase Incentive Programs
  • Clean Vehicle Rebate Project (CVRP)
  • Financing Assistance programs
  • Clean Cars 4 All (CC4A)
  • Access Clean California
• Future plans to include electric bicycles (e-bikes) incentives
Making Purchase Incentives Better

• Three public workshops held that covered the ZEV market, ZEV technology, building an equitable ZEV market, and the long-term vision of vehicle purchase incentives

• Considering changes to improve consumer experience, increase incentive amounts, increase support for used electric vehicles, increase outreach through community-based organizations, and expand support for e-bikes
Clean Mobility Investments

- Covers multiple mobility-centered projects
  - Clean Mobility Options (CMO) Voucher Pilot Program and regional clean mobility projects
  - Clean Mobility in Schools (CMiS)
  - Sustainable Transportation Equity Project (STEP)
  - New Planning and Capacity Building Grants
- Held three public work groups to solicit input on long-term plan development February to June 2022
- Considering funding demand and community needs to transition from pilot project phase to community-based programs
Making Clean Mobility Investments Better

• Critical project lessons and assessment of community needs are being incorporated into programs
• Exploring additional policy changes across investments to reach more communities, provide meaningful impacts, and develop our clean mobility future
• Refining methods of increasing access based on feedback and desired outcomes and methods to measure and evaluate successes
• Identifying mechanisms to support Sustainable Communities Strategy implementation
Path Forward for Clean Mobility Investments

• Continuing to refine project evaluation, user experience, and data collection through program applications, surveys, and current evaluation contracts

• Analyzing data as appropriate to better understand who is benefitting from investments and how to streamline community-based programs

• Fostering creative ideas for Planning and Capacity Building funding
Comments and Questions

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Clean Transportation Equity and Light-Duty Projects
Overview

• CARB light-duty vehicle investments
  • Vehicle purchase incentives
  • Clean mobility investments

• Goals
  • Achieve GHG reductions and improve air quality
  • Support long-term transformation of the State’s fleet and accelerate ZEV deployment
  • Bring ZEVs and CMOs to priority populations
  • Support complementary community protection efforts
    AB 617 and SB 375
# Metrics of Success

<table>
<thead>
<tr>
<th>Supporting Healthy Communities</th>
<th>Supporting Clean Air Goals</th>
<th>Growing the Green Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$400+ MILLION</strong> PRIORITY POPULATIONS</td>
<td><strong>9.6+ MILLION</strong> GHG REDUCTIONS</td>
<td><strong>$1.2+ BILLION</strong> VEHICLE PURCHASE</td>
</tr>
<tr>
<td>Over $400 million, or over 32 percent, of all vehicle purchase incentive funds have supported clean vehicle purchases benefiting priority populations.</td>
<td>CARB’s light-duty vehicle purchase incentive programs have resulted in a reduction of over 9.6 million metric tons of carbon dioxide equivalent.</td>
<td>CVRP, Clean Cars 4 All, and Financing Assistance programs have funded $1.2 billion toward the purchase of over 475,000 clean vehicles since 2010.</td>
</tr>
<tr>
<td><strong>$2.9+ MILLION</strong> PUBLIC FLEET SUPPORT</td>
<td><strong>48+ MILLION</strong> FUEL USE AVOIDED</td>
<td><strong>1.1+ MILLION</strong> ELECTRIC VEHICLE SALES</td>
</tr>
<tr>
<td>Over $2.9 million in CVRP funds have supported over 700 light-duty electric vehicles for public fleets operating in Disadvantaged Communities, as identified in CalEnviroScreen 3.0.</td>
<td>An estimated 48+ million gallons of fuel use avoided as a result of the clean vehicles funded through CARB’s vehicle purchase incentive programs.</td>
<td>There have been over 1.1 million light-duty electric vehicles sold in California with 42 percent of these purchases supported by CARB’s vehicle purchase incentive programs.</td>
</tr>
</tbody>
</table>
## Draft Project Allocations (millions)

<table>
<thead>
<tr>
<th>Project Category</th>
<th>GGRF</th>
<th>GF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Purchase Incentives</td>
<td>$76</td>
<td>$430*</td>
<td>$506</td>
</tr>
<tr>
<td>CC4A – Statewide Expansion</td>
<td>$0</td>
<td>$250</td>
<td>$250</td>
</tr>
<tr>
<td>CC4A – Air District Programs</td>
<td>$60</td>
<td>$50</td>
<td>$110</td>
</tr>
<tr>
<td>Financing Assistance</td>
<td>$0</td>
<td>$110</td>
<td>$110</td>
</tr>
<tr>
<td>Electric Bicycle Incentives Project</td>
<td>$0</td>
<td>$15</td>
<td>$15</td>
</tr>
<tr>
<td>Access Clean California</td>
<td>$5</td>
<td>$0</td>
<td>$5</td>
</tr>
<tr>
<td>California Integrated Travel Project (Cal-ITP)</td>
<td>$0</td>
<td>$5</td>
<td>$5</td>
</tr>
<tr>
<td>Reserve</td>
<td>$11</td>
<td>$0</td>
<td>$11</td>
</tr>
</tbody>
</table>

*Appropriations from May Revise that are deferred by Legislature. Final appropriations won’t likely match May Revise. Staff will adjust amounts upon final appropriation.*
## Draft Project Allocations (millions)

<table>
<thead>
<tr>
<th>Project Category</th>
<th>GF</th>
</tr>
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<tbody>
<tr>
<td>Clean Mobility Investments</td>
<td>$419*</td>
</tr>
<tr>
<td>CMOs (incl. Regional Clean Mobility Pilots)</td>
<td>$126</td>
</tr>
<tr>
<td>Clean Mobility in Schools</td>
<td>$125</td>
</tr>
<tr>
<td>Sustainable Transportation Equity Project</td>
<td>$125</td>
</tr>
<tr>
<td>Planning and Capacity Building</td>
<td>$43</td>
</tr>
</tbody>
</table>

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Vehicle Purchase Incentives To Date

**Access Clean California**
$14M to streamline access to the State’s clean transportation and clean energy consumer-based equity projects

**CC4A**
Over $190M for incentives to replace old vehicles with clean vehicles in certain air districts

**CVRP**
Over $1.6B to support rebates for clean vehicles

**Electric Bicycle Incentive Project**
$10M to support incentives for electric bicycles

**Financing Assistance**
Over $67M for loans and grants to purchase clean vehicles
CVRP

• Rebates Issued Through December 2021:

<table>
<thead>
<tr>
<th>Rebate Type</th>
<th>Rebates Issued</th>
<th>Funding Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Rebate</td>
<td>430,492</td>
<td>$928,096,922</td>
</tr>
<tr>
<td>Increased Rebate</td>
<td>33,268</td>
<td>$140,391,530</td>
</tr>
<tr>
<td>Rebates for Public Fleets in Disadvantaged Communities (DAC)</td>
<td>705</td>
<td>$2,981,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>464,465</td>
<td>$1,071,369,452</td>
</tr>
</tbody>
</table>

• Project Status:
  • **FY 21/22 Multi-Year Allocation:** $525M
    • $515M for CVRP and $10M for e-bikes
    • $352M in CVRP funding remaining as of July 7, 2022
Project Updates

• Plan for phased-in changes in 2022 and 2023
  • First set of changes effective February 24, 2022
    o Decreased income cap and decreased Manufacturer’s Suggested Retail Price cap for smaller vehicle classes

• As of March 16, 2022, Tesla vehicles no longer eligible for CVRP

• Updated Funding Need Projections through FY 2023-24
  • Initial updated projections presented at a public work group held on May 11, 2022
  • Anticipated demand from March 2022 – June 2024
    o Standard & DAC-Fleet Increased: $14M - $93M
    o Lower-Income Increased Rebates: $21M - $78M
    o Partial Estimated Need: $36M - $171M
Draft Recommendation

• Due to a projected surplus based on updated projections, staff is considering the following changes:
  • Defer implementing second phase of changes planned for 2023
  • Increasing lower-income rebate amounts
  • Expanding pre-qualification statewide
  • Including a charge card with every rebate issued

• Draft allocation: $0M
  • CVRP received a substantial upfront allocation through the Budget Act of 2021 and is intended to fund CVRP through FY 2023-24
Financing Assistance

• Incentives Issued Through June 2022:

<table>
<thead>
<tr>
<th>Incentive Type</th>
<th>Incentive issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Grants</td>
<td>4,900</td>
</tr>
<tr>
<td>Charging Grants</td>
<td>2,900</td>
</tr>
<tr>
<td>Number of Secured Loans</td>
<td>1,500</td>
</tr>
<tr>
<td>Total Fund Spent</td>
<td>$34,000,000</td>
</tr>
</tbody>
</table>

• Program Status:
  • Clean Vehicle Assistance Program reservation list in place as of March 17, 2021, closed to new applications
  • Driving Clean Assistance Program remains open
  • Additional funds allocated for the reservation list and applicants are being served
  • Adoption of need-based model
  • Joint solicitation with Statewide CC4A for the FY 2022-23
Program Updates

- Implementation of needs-based model underway
- Need-based criteria includes:
  - Income level, DAC residency, need for financial counselling or planning, and categorical eligibility
- Prioritizing and reserving funds for applications that meet any of these criteria
- Processing priority applications and providing additional support if needed
- Draft allocation: $110M
Clean Cars 4 All

• Vehicle Replacements to Date:
  • Funded more than 12,000 vehicle replacement projects for lower-income consumers in and near disadvantaged communities

• Program Status:
  • $190M allocated to-date including $75M in FY 2021-22
  • San Joaquin, Sacramento, South Coast and Bay Area programs are open; San Diego is coming soon
Program Updates

• AB 630 Report - Goals and Program Evaluation
  • Set program vision with community and stakeholder input
  • Develop guiding principles for funding allocations
  • Update participant surveys and data collection methodology

• Draft allocation: $110M for District programs*
• Draft allocation: $250M for Statewide program*
  • Joint solicitation with Financing Assistance
  • Expanded access with a needs-based approach

*Appropriations from May Revise that are deferred by Legislature. Final appropriations won’t likely match May Revise. Staff will adjust amounts upon final appropriation.
Electric Bicycle Incentives Project

- Project status:
  - Established as part of the FY 2021-22 Funding Plan
  - $10M allocated to date to get program started
  - The solicitation for a program administrator closed on May 11, 2022
  - Expected project launch is late 2022 or early 2023
Draft Recommendation

• Initial policy recommendations:
  • Limit the price of eligible e-bikes
  • Limit the type of eligible e-bikes
  • Two incentive levels: one for lower income and one for moderate income

• Draft allocation: $15M
Access Clean California

- Program Status:
  - $14M allocated to date
  - Streamlined application platform
  - Outreach partnership network and resource hub
  - Implementation is ongoing and lessons being evaluated for future investment
Program Updates

• Continue implementation and focus on:
  • Increasing participation from priority populations
  • Expanding outreach partner network to fill gaps
  • Developing ‘public option’ for Benefits Finder to complement facilitated-use model
• Funding to be awarded via competitive solicitation
• Draft allocation: $5M
Cal-ITP Payment Issuance Strategy and Demonstrations

• Overview:
  • Effort by California State Transportation Agency, Caltrans, and other partners
  • Strives to make travel simpler and cost-effective for everyone by providing easy and accessible travel planning and payments across California

• Program Status:
  • Payment issuance strategies and associated demonstrations are underway
Draft Recommendation

• Support and expand upon work in progress:
  • Expand demonstration projects to include electric vehicle charging and other mobility options (carshare, bike and scooter share, etc.)
  • Research, data, and lessons learned to improve travel experience and implement scalable solutions
  • Move project from theoretical to a reality to assess costs and benefits

• Draft allocation: $5M
Comments and Questions

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Clean Mobility Investments

- Regional Clean Mobility Projects
- Clean Mobility in Schools
- Planning and Capacity Building
- CMO Voucher Pilot Program
- Sustainable Transportation Equity Project
Clean Mobility Investment Objectives

- Increase access to key destinations
- Reduce GHG emissions and vehicle miles travelled (VMT)
- Identify and address communities’ transportation needs
- Incorporate community-driven decision making
- Make projects financially sustainable
- Prioritize workforce development
- Evaluate projects and report metrics
Clean Mobility Investment Objectives Continued

Streamline application process and simplify requirements

Document and share lessons learned

Assess outcomes and adjust policies to maximize benefits

Direct engagement and outreach in communities

Prioritize investment in priority populations

Balance investments geographically

Make opportunities for new communities to access funding
Metrics for Success

Supporting Healthy Communities and Clean Air Goals

- **2.7+ MILLION**
  - Net Fossil Fuels Use Reductions (GGE)
  - Clean Mobility Investments have resulted in a net fossil fuel use reduction of over 2.7 million gasoline gallon equivalents (GGE).

Increasing Affordability of Transportation

- **$37+ Million**
  - Travel Cost Savings
  - Clean Mobility Investment dollars spent have resulted in a total cost savings of over $37 million dollars.

Growing the Green Economy

- **~600**
  - Directly Supported Jobs
  - Clean Mobility Investments have resulted in approximately 600 directly supported jobs.

- **200+**
  - Indirectly Supported Jobs
  - Clean Mobility Investments have resulted in over 200 indirectly supported jobs.

- **350+**
  - Induced Jobs
  - Clean Mobility Investments have resulted in over 350 induced jobs.
Investment Gaps Based on Census Tracts and Community Designations
Refining Methodology to Identify Demographics Mobility Investments are Serving

Demographic Composition in Clean Mobility Service Areas

- White: 24%
- Black: 9%
- Native American: 0.20%
- Asian: 12%
- Hawaiian: 0.30%
- Hispanic: 51%
- Two or More: 3.20%
- Other: 0.30%
Clean Mobility Investments

Legend

Clean Mobility Investments Service Areas

9% 19% 18% 22% 32%

Clean Mobility Demographics

Percent Population

Funding

Hispanic  White
African American  Native American
Asian  Pacific Islander

CARB
### Staff’s Proposed Funding Splits (millions)

<table>
<thead>
<tr>
<th>Project Type</th>
<th>$419M in Total Funding*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMOs</td>
<td>$126</td>
</tr>
<tr>
<td>Clean Mobility in Schools</td>
<td>$125</td>
</tr>
<tr>
<td>Sustainable Transportation Equity Project</td>
<td>$125</td>
</tr>
<tr>
<td>Planning and Capacity Building Grants</td>
<td>$43</td>
</tr>
</tbody>
</table>

*Appropriations deferred by Legislature and therefore represents what is included in the May Revise to the 2022 State Budget. Final appropriations may not reflect appropriations included in the May Revise.
Regional Clean Mobility Pilot Projects Overview

Our Community CarShare

Car Sharing and Mobility Hubs in Affordable Housing

Agricultural Worker Vanpools

Valley Air ZEV Mobility Pilot

BlueLA Car Share

Ecosystem of Shared Mobility

Lift Line Paratransit Dial-a-Ride Electric Vehicle Transition Program
Regional Clean Mobility Projects

• $23.9M allocated to date for six projects
• $6M allocated to date for Agricultural Worker Vanpools
• Efforts are underway to maximize community benefits
• Many projects require additional funding and support to become sustainable
• Final reporting is in progress for some projects which will provide critical lessons for future investments
CMO Voucher Pilot Program

- $55.2M in CARB and CEC funds allocated to date
  - 20 mobility projects
  - 24 community transportation needs assessments
  - Technical assistance
- At least $21M available for mobility projects
Draft Recommendation

• Fund approximately 40 mobility projects
• Expand scope from smaller projects to larger projects at higher funding amounts
• Explore options to improve the application process potentially modifying first-come, first-serve component
• Draft allocation: $126M
  • $10M set-side for Regional Clean Mobility Projects
Clean Mobility in Schools

- $34.6M allocated to date
  - Increasing knowledge and adoption of zero-emission options within school communities
  - 3 grants from Fall 2019 solicitation: El Monte, Stockton, and San Diego
  - 1 new project with Twin Rivers School District in Sacramento
- Seeing investments and adoption of zero-emission options beyond CARB’s grant funding

San Diego Unified School District, April 2022
Draft Recommendation

• Expand project eligibility to encompass more project types, such as active transportation infrastructure
• Fund approximately 12 to 15 public school grants
• Support a new solicitation
• Align requirements with STEP
  • Terminology and definitions in the solicitations, requirements of applicants and grantees, timelines, and processes
• Draft allocation: $125M
Sustainable Transportation Equity Project

• $44.5M allocated to date
  - Addressing community transportation needs and increasing access to key destinations while reducing VMT and GHGs
  - 8 Planning and Capacity Building Grants
  - 5 Implementation Grants
  - Technical assistance provided
• Seeing investments across a large suite of clean transportation, land use, and supporting projects

Courtesy of CicLAvia and Brian Feinzimer
Draft Recommendation

• Fund approximately 12 to 15, place-based implementation grants
• Support a new solicitation for implementation grants
  • Expand implementation grant funding eligibility to low-income communities
  • Expand lead applicant eligibility to all Tribal Governments
• Align requirements with CMiS
• Draft allocation: $125M
Planning and Capacity Building Grants

• New funding category adapted from previous outreach, technical assistance, and capacity building
• Develop community-driven projects and provide technical assistance
• Address a broad range of community-identified priorities
  • Needs and equity assessments
  • Transportation-focused project planning
  • Job assistance and workforce development
Draft Recommendation

• Fund approximately 75 to 180 small- and large-scale, community-led planning and capacity building projects
• Support a new solicitation or expand existing programs
• Improve understanding of localized transportation needs and prepare communities to implement clean transportation and land use projects
• Draft allocation: $43M
Workforce Training and Development

- $4.78M allocated to date
- Implementing SB 350 recommendations to maximize economic opportunities in priority communities
- Focusing on partnerships and policies that increase training and connections to good quality clean transportation jobs
- Exploring opportunities to bridge critical gaps in program access for at-risk youth and adults
- Maximizing investments that address community-identified needs and support economic recovery
Program Updates

• Leverage existing investments to support zero-emission technology access, education, and awareness

• Consider where CARB-incentivized ZEV deployment is occurring and where more needs to be done to support broader clean transportation investments

• Strengthen workforce development guidance and requirements across clean transportation projects based on program outcomes and community needs

• **Draft allocation: $0M**
  • Projects are ongoing and future funding is anticipated through Clean Mobility Investments
Comments and Questions

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## Funding Plan Development Schedule

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Additional information available at:
- [Low Carbon Transportation Investments and AQIP](#)
- [Low Carbon Transportation Investments and AQIP Meetings and Workshops](#)
Break
Return at 12:45 p.m.
Long-Term Heavy-Duty Investment Strategy
Long-Term Heavy-Duty Investment Strategy

- Annual three-year investment strategy for Clean Transportation Incentives
- Roadmap for transforming the heavy-duty transportation sector
- Outlines priorities for investment
- Includes annual report on the State’s school bus fleet
Key Elements of Long-Term Heavy-Duty Investment Strategy

• Beachhead strategy discussion
• Technology status snapshots
• Market readiness indicators
• Metrics of success
• Industry examples / case studies
• Three-year recommendations for investments
Market Readiness Indicators

Production Capacity – Is this technology in commercial production, or is it limited to prototypes, retrofits, and upfits? Is commercial production significant?

Cost Parity – Is the total cost of ownership (TCO) of this technology comparable to internal combustion alternatives (without incentives)?

Cost Parity with Incentives – When factoring in available incentive programs (e.g., HVIP, CORE), is the TCO of this technology comparable to internal combustion alternatives?

Duty Cycle Applicability – Can this technology sufficiently meet the range, payload capacity, and power requirements of common duty cycles within this application?

Infrastructure – Is appropriate charging/refueling infrastructure commercially available? Does it face challenges such as cost, permitting, utility connection/coordination, and/or electricity/fuel prices?

Workforce/Service Network – Are professional technicians capable of repairing and/or maintaining ZEVs readily available?
Metrics of Success

Supporting Healthy Communities

58 PERCENT

**DAC VOUCHERS**
Fifty-eight percent of vouchers in HVIP have funded vehicles deployed in Disadvantaged Communities, as identified in CalEnviroScreen 3.0.

63 PERCENT

**FLEET SUPPORT**
Sixty-three percent of vouchers were given to small or public fleets (public entities with <$15 million annual revenue or fewer than 50 people).

Supporting Technology Evolution

12 THOUSAND

**JOBS CREATED**
The incentive dollars spent through HVIP have created nearly 3,000 jobs from HVIP funding and spurred close to 9,000 jobs from private investment, totaling almost 12,000 jobs.

222 MILLION

**MILES TRAVELED**
There were 222,066,801 cleaner-than-diesel miles traveled in California by HVIP-funded vehicles between 2010 and 2021.

Growing the Green Economy

197 VEHICLES

**MANUFACTURERS**
There are 43 HVIP and CORE-eligible manufacturers offering 197 vehicles.

NEARLY $900 MILLION

**VEHICLE PURCHASE**
HVIP and CORE have funded $896+ million toward the purchase of over 11,300 vehicles and pieces of equipment since 2010.
### LONG-TERM HEAVY-DUTY INVESTMENT STRATEGY UPDATE*

<table>
<thead>
<tr>
<th></th>
<th>FY 2023-24</th>
<th>FY 2024-25</th>
<th>FY 2025-26</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demos</strong></td>
<td><strong>$XX-$XX Million</strong>&lt;br&gt;Focus: ZE Construction Equipment, ZE Heavier Cargo Handling Equipment, ZE Line-Haul and Switcher Rail, ZE Marine, ZE Aviation</td>
<td><strong>$XX-$XX Million</strong>&lt;br&gt;Focus: ZE Construction and Mining Equipment, ZE Heavier Cargo Handling Equipment, ZE Line-Haul Rail, ZE Marine, ZE Aviation</td>
<td><strong>$XX-$XX Million</strong>&lt;br&gt;Focus: ZE Construction and Mining Equipment, ZE Heavier Cargo Handling Equipment, ZE Line-Haul Rail</td>
</tr>
<tr>
<td><strong>Pilots</strong></td>
<td><strong>$XXX-$XXX Million</strong>&lt;br&gt;Focus: ZE Ag-Construction-Heavier Cargo Handling Equipment, ZE/Hybrid Marine, Strategic Range Extenders, ZE Facilities/Communities/Corridors</td>
<td><strong>$XXX-$XXX Million</strong>&lt;br&gt;Focus: ZE Ag-Construction-Heavier Cargo Handling Equipment, ZE Switcher Rail, ZE/Hybrid Marine, Strategic Range Extenders, ZE Facilities/Communities/Corridors</td>
<td><strong>$XXX-$XXX Million</strong>&lt;br&gt;Focus: ZE Longer Range Trucking, ZE Ag-Construction-Heavier Cargo Handling Equipment, ZE/Hybrid Marine, Strategic Range Extenders, ZE Facilities/Communities/Corridors</td>
</tr>
<tr>
<td><strong>Commercial</strong></td>
<td><strong>$XXX-$XXX Million</strong>&lt;br&gt;Focus: ZE Drayage, ZE Long-Haul Trucks, ZE Transit, ZE Heavier Cargo Handling Equipment, ZE/Hybrid Marine, ePTOs, ZE Small Fleets</td>
<td><strong>$XXX-$XX,XXX Million</strong>&lt;br&gt;Focus: ZE Drayage, ZE Long Haul Trucks, ZE Transit, ZE Heavier Cargo Handling Equipment, ZE/Hybrid Marine, ePTOs</td>
<td><strong>$XXX-$XX,XXX Million</strong>&lt;br&gt;Focus: ZE Drayage, ZE Long Haul Trucks, ZE Transit, ZE Heavier Cargo Handling Equipment, ZE/Hybrid Marine, ePTOs</td>
</tr>
<tr>
<td><strong>Total Funding</strong></td>
<td><strong>$XXX-$X,XXX Million</strong>*&lt;br&gt;<strong>$X,XXX-$XXX Million</strong>*&lt;br&gt;<strong>$X,XXX-$X,XXX Million</strong>*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The vehicle and equipment types listed in the table above are a prioritized selection of the project types that CARB would invest in, given sufficient available funds. These focus areas are identified following the strategy laid out in this document and take into consideration a wide number of factors. This is not an exhaustive list of technologies or applications that Low Carbon Transportation would fund and indeed funding numbers are inclusive of a much broader set of vehicle and equipment investments CARB hopes to make.*
Heavy-Duty Investment Priorities for FY 2022-23

- Expand focus on equity goals
- Support progress towards meeting state climate and federal air quality targets
- Accelerate deployment of zero-emission technologies as described in Executive Order N-79-20
- Coordinate with California Pollution Control Financing Authority (CPCFA) to implement SB 372
- Identify emerging or next generation technologies
- Continue to develop metrics of success
Comments and Questions

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Please state your name and affiliation before asking a question or making a comment.
On-Road Heavy-Duty Vehicle and Off-Road Equipment Investments
# Heavy-Duty Trucks, Buses, and Off-Road Freight Equipment

<table>
<thead>
<tr>
<th>Pre-Commercial Stage</th>
<th>Early Market Entry</th>
<th>Market Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demos and Pilots</strong></td>
<td><strong>Deployment Incentives</strong></td>
<td><strong>Fleet Turnover Incentives</strong></td>
</tr>
<tr>
<td>Low Carbon Transportation <em>(Demos and Pilots)</em></td>
<td>Low Carbon Transportation <em>(HVIP, CORE)</em> VW Mitigation CAPP</td>
<td>VW Mitigation Moyer CAPP FARMER</td>
</tr>
</tbody>
</table>
Investment Priorities for Heavy-Duty On-Road and Off-Road

• Continue support for existing incentive projects
• Expand support for financial assistance and non-financial incentives for ZEVs
• Focus on small fleets and underrepresented communities
• Support regulatory efforts
Nearly $900M Invested to Date

CORE Investments

HVIP Investments

Legend:
- No Data
- $1 - $11,048,268
- $11,048,269 - $31,297,621
- $31,297,622 - $328,630,016
## Draft Heavy-Duty and Off-Road Equipment Allocations (millions)

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Technology Demonstration and Pilots</td>
<td>$75*</td>
</tr>
<tr>
<td>Clean Truck and Bus Vouchers (HVIP)</td>
<td>$1,705</td>
</tr>
<tr>
<td>Clean Off-Road Equipment Voucher Incentive Project (CORE)</td>
<td>$230</td>
</tr>
<tr>
<td>Truck Loan Assistance</td>
<td>$28.64</td>
</tr>
<tr>
<td>Zero-Emission Truck Loan Pilot</td>
<td>$5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,043.64</strong></td>
</tr>
</tbody>
</table>

*Includes $10M for Emerging Opportunities as described in the May Revise, which has not yet been approved by the Legislature. If this funding is not included in the final State budget, staff will adjust the allocations accordingly.
Advanced Technology Demonstration and Pilots

• Projects accelerate the introduction of advanced technologies
• Wide array of on and off-road projects have been funded
• Over 30 heavy-duty and demonstration and pilot projects funded
• Heavy focus on emerging zero-emission operations in all sectors
Draft Recommendations

- Draft project categories:
  - Green zones
  - Zero-emission rail
  - Zero-emission capable commercial harbor craft
  - Port vehicles and equipment
  - Zero-emission aviation with ground support equipment
  - Off-road construction and agricultural equipment
- Draft allocation: $75M
Clean Truck and Bus Vouchers (HVIP)

- Provides first-come, first-served vouchers for zero-emission heavy-duty vehicles
  - ~11,400 vouchers issued since inception, totaling $845M
- Reopened March 30, 2022
  - $272M requested within 24 hours
  - 70% of voucher requests have been in disadvantaged communities
  - 63% of the fleets that requested vouchers run 100 vehicles or fewer
  - Includes set-asides to support the deployment of zero-emission drayage trucks, zero-emission transit buses, and zero-emission school buses
- Innovative Small e-Fleets set aside to support small fleets will open this summer
Draft Recommendations

- Retain fleet size limits with minor modifications
- Require vehicle to grid functionality for school buses
- Adjust eligibility criteria for the public-school bus set-aside
- Modify voucher amounts
Refuse is Ready for Zero-Emission

- Sector is well suited for electrification
- 12 zero-emission refuse truck models from 7 manufacturers currently HVIP eligible
- Direct benefits to communities
- Voucher enhancement for early adopters
Draft Recommendations Continued

Draft Funding Set-Asides (millions)

<table>
<thead>
<tr>
<th>HVIP Voucher Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>$265</td>
</tr>
<tr>
<td>Public Transit Buses</td>
<td>$70</td>
</tr>
<tr>
<td>Public School Buses</td>
<td>$135</td>
</tr>
<tr>
<td>Local Educational Agency School Bus Replacement Grants</td>
<td>$1,125</td>
</tr>
<tr>
<td>Drayage Trucks</td>
<td>$75</td>
</tr>
<tr>
<td>Innovative Small e-Fleets</td>
<td>$35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,705</strong></td>
</tr>
</tbody>
</table>
Clean Off-Road Equipment Vouchers

• Provides vouchers for commercial ready zero-emission off-road equipment
• Includes a wide-range of zero-emission off-road models from numerous manufacturers
• ~500 vouchers issued since inception, totaling ~$71M
• 75% of CORE vouchers have been deployed to priority populations
• Program expanding into other heavy-duty off-road vehicles, equipment, vessels, and commercial landscaping equipment for small business or sole proprietors
• Program relaunch: Summer 2022
Draft Recommendations

• Small business and DAC prioritization
• Adjust voucher amounts to maximize impact
• Review current and other zero-emission equipment
  • Offers owners a variety of products
  • Support new technologies
• Zero-emission refueling support
• Draft allocation: $230M
Truck Loan Assistance Program

- Helps small-fleet owners affected by regulations secure financing for newer trucks
- $214M in contributions has been leveraged into over $2.6B in financing for approximately 37,600 loans
- Additional funding needed to support demand throughout calendar year 2023
- Draft allocation: $28.64M
Zero-Emission Truck Loan Pilot

- New project that combines financing for heavy-duty ZEVs and charging infrastructure
- CARB and CPCFA to partner with CEC in supporting Medium- and Heavy-Duty fleets transitioning to ZE
  - Infrastructure support from the CEC
- Better understand needs of small fleets transitioning to zero-emission
- Draft allocation: $5M
Comments and Questions

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Open Discussion
Comments and Questions

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Summary and Next Steps
## Clean Transportation Incentives

### Proposed Allocations (millions)

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<th>GGRF</th>
<th>GF</th>
<th>Prop 98 GF</th>
<th>AQIF</th>
</tr>
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<tr>
<td><strong>Clean Transportation Equity Programs</strong>&lt;br&gt;Established Under SB 1275</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle Purchase Incentive Programs</td>
<td>$76</td>
<td>$430*</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Clean Mobility Investments</td>
<td>-</td>
<td>$419*</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Heavy-Duty Zero-Emission</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drayage Trucks, School/Transit Buses</td>
<td>-</td>
<td>$280</td>
<td>$1,125</td>
<td>-</td>
</tr>
<tr>
<td>Clean Trucks, Buses, and Off-Road</td>
<td>$600</td>
<td>-</td>
<td></td>
<td>-</td>
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<tr>
<td>Emerging Opportunities</td>
<td>-</td>
<td>$10*</td>
<td></td>
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<tr>
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**TOTAL $2,968.64**

*Appropriations from May Revise that are deferred by Legislature. Final appropriations won’t likely match May Revise. Staff will adjust amounts upon final appropriation.*
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Additional Information

• Clean Transportation Equity and Light-Duty Projects
• On-Road Heavy-Duty Vehicle and Off-Road Equipment Investments
• Funding Plan Development
  • Low Carbon Transportation Investments and AQIP
  • Low Carbon Transportation Investments and AQIP Meetings and Workshops
Contact Us

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