Low Carbon Transportation Investments and Air Quality Improvement Program (AQIP)

Public Workshop on the Fiscal Year 2016-17 Funding Plan

Sacramento, California
January 27, 2016

Workshop Overview

• Background
• Summary of Governor’s Proposed 2016-17 Budget for Low Carbon Transportation and AQIP
• Light-duty vehicle projects
• Heavy-duty vehicle and equipment projects
• In-state production of low carbon fuels
• Open discussion
Auction Proceeds Investments for Low Carbon Transportation

- Budget appropriations consistent with 3-year Investment Plan
- Priorities in December 2015 Investment Plan
  - Reduce greenhouse gases
  - Continue benefiting disadvantaged communities
  - Maximize health, environmental, economic co-benefits
  - Increase rural community participation
  - Fund integrated projects in communities

ARB Low Carbon Transportation Funding To Date

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Low Carbon Transportation Appropriations to ARB</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>$30M</td>
</tr>
<tr>
<td>2014-15</td>
<td>$200M</td>
</tr>
<tr>
<td>2015-16</td>
<td>$95M</td>
</tr>
<tr>
<td>Total</td>
<td>$325M</td>
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</tbody>
</table>
AQIP

- Created by Assembly Bill (AB) 118 (2007); updated and reauthorized by AB 8 (2013)
- Provides foundation and framework for Low Carbon Transportation investments
  - Many projects initially funded under AQIP
- Annual funding plan guides investments
- Focus on criteria pollutant and toxics projects

Governor’s 2016-17 Low Carbon Transportation Proposal

- $500 million to accelerate transition to low carbon freight and passenger transportation
  - $460 million for low carbon vehicles and equipment
  - $40 million for new low carbon fuels incentive program
- Continue disadvantaged community investment commitments
Governor’s 2016-17 AQIP Budget Proposal

- $28.6 million proposed appropriation to ARB
  - Slightly higher than recent years’ available funding based on higher revenue projections
  - Staff recommends $3+ million reserve to address revenue uncertainty
  - $25 million available to allocate to projects

Key Issues for 2016-17 Funding Plan

- Addressing lower 2015-16 funding level
  - Limited heavy-duty funding in 2015-16
  - Recommend carrying forward unfunded project categories from 2015-16 Funding Plan
- Developing long-term plan for Clean Vehicle Rebate Project (CVRP)
- Developing new fuel production incentive program
Light-Duty Vehicles (SB 1275)

CVRP

- 130,000 rebates, $280 million invested since 2010
  - $75 million allocated for 2015-16 budget cycle
- Demand relatively flat over past year
- Changes in early 2016
  - Income cap
  - Higher rebates for lower income consumers
CVRP Challenges for 2016-17

- Funding for remainder of 2015-16 cycle
  - Waiting list may be needed
  - Complicates launch of higher rebates for lower-income consumers
- Developing long-term plan required by SB 1275
  - 3 year forecast of funding needs
  - Market and technology assessment
  - Assessment of when self-sustaining market is expected
- Not considering other project changes at this time

3-Year Forecast – Initial Projections

![Graph showing initial projected funding needs for next 3 fiscal years by month.](image)
Initial CVRP Funding Recommendations for 2016-17

• $185-225M allocation
  – ~$50M to fulfill 2015-16 demand through September 2016
  – ~$135-175M for October 2016-September 2017
• Income cap and higher rebates for lower-income consumers adds uncertainty to projections
  – Will refine estimates over next 4 months

ZEV Technology and Market Assessment

• Evaluate technology costs through 2023
• Use National Academy of Science Vehicle Cost Summary model (2013)
  – Well-known / accepted model
  – Cost inputs reviewed and updated
• Conduct sensitivity analysis
• Market assessment developed as part of 3-year forecast
Long-Term Sustainability of ZEV Market

- Define a sustainable ZEV market
  - Literature review
  - Evaluate various market indicators
- Consider future adjustments to CVRP
- Evaluate other incentive structures

Pilot Projects to Benefit Disadvantaged Communities

- Designed to increase access to clean vehicles and transportation options for lower income households and disadvantaged communities
2014-15 Disadvantaged Community Projects: $9M Awarded

<table>
<thead>
<tr>
<th>Category</th>
<th>Funding</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFMP Plus-up (car scrap and replace)</td>
<td>$2M</td>
<td>• Launched in South Coast and San Joaquin Valley in Summer 2015</td>
</tr>
<tr>
<td>Increased Public Fleet Incentives</td>
<td>$3M</td>
<td>• Launched in February 2015</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Implemented through CVRP</td>
</tr>
<tr>
<td>Car Sharing</td>
<td>$3M</td>
<td>• Grants awarded for Los Angeles, San Diego, and Sacramento projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Under development, 2016 public launch</td>
</tr>
<tr>
<td>Financing Assistance</td>
<td>$1M</td>
<td>• Grant awarded for Bay Area project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Under development, 2016 public launch</td>
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</tbody>
</table>

Status of 2015-16 Disadvantaged Community Projects

- Funding Plan included $37M for 5 projects
  - Pending appropriation of funding
- ARB received partial appropriation in Sept 2015
  - $10M allocated to continue EFMP Plus-up in South Coast and San Joaquin Valley
- Remaining $27M on hold
  - Public fleets, car sharing, financing assistance, and new project for agricultural worker vanpools in San Joaquin Valley
Initial Recommendations for 2016-17

• $40-50M allocation for light-duty projects to benefit disadvantaged communities
• Carry forward and expand unfunded 2015-16 projects
  – Expect largest allocation for EFMP Plus-up
  – Fund public fleet incentives from CVRP allocation
• Request ideas for new pilot projects
• Increase outreach to disadvantaged communities

Heavy-Duty Vehicle and Off-Road Equipment
(SB 1204 & AQIP)
2014-15 Heavy-Duty Projects: $95 million

<table>
<thead>
<tr>
<th>Category</th>
<th>Funding</th>
<th>Status</th>
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<tbody>
<tr>
<td>HVIP</td>
<td>$10M</td>
<td>• 2014-15 funds nearly expended</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• $86M allocated since 2010</td>
</tr>
<tr>
<td>Truck Loans</td>
<td>$10M</td>
<td>• 2014-15 funds expended, program continuing with 2015-16 funds</td>
</tr>
<tr>
<td>Zero-Emission Drayage Truck Demonstration</td>
<td>$25M*</td>
<td>• Project selection made</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pending grant agreement</td>
</tr>
<tr>
<td>Multi-Source Facility Demonstration</td>
<td>$25M*</td>
<td>• Project selections made</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pending grant agreements</td>
</tr>
<tr>
<td>Zero-Emission Truck and Bus Pilot Deployments</td>
<td>$25M*</td>
<td>• Solicitation released October 1, 2015</td>
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<tr>
<td></td>
<td></td>
<td>• Solicitation closes January 29, 2016</td>
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*Includes funds for data collection and analysis

Status of 2015-16 Heavy-Duty Projects

• Funding Plan included $148M for Low Carbon Transportation heavy-duty projects
  – Only $5M for HVIP allocated due to partial budget
  – $143M on hold: zero-emission truck and bus pilot, rural school buses, demonstration projects, and zero-emission freight equipment pilot

• AQIP funding not impacted by budget delay
  – Truck loan program continuing
  – Ag tractor trade up solicitation closed January 25, 2016
  – Low NOx engine incentives to launch in HVIP in 2016
Priorities for Heavy-Duty

- Continue and expand funding for early commercial deployments
- Prioritize demonstration funding to achieve long-term goals and support California Sustainable Freight Action Plan
- Continue disadvantaged community benefit focus
- Consider new Auction Proceeds Investment Plan priorities

Initial Recommendations for 2016-17: Low Carbon Transportation

- $170-200M allocation for heavy-duty and off-road projects
- Carry forward unfunded 2015-16 projects
  - Refine and expand as appropriate
  - Consider incorporating zero-emission truck and bus pilots into HVIP
  - Coordinate demonstration funding with Sustainable Freight pilot project effort
- Ensure some investment in rural areas while meeting disadvantaged community targets
Initial Recommendations for 2016-17: AQIP

• $25M available for projects
• Focus on projects that primarily provide criteria pollutant and toxics benefits
  – Expect largest allocation for Truck Loan Program
  – Scale up agricultural tractor trade-up pilot project
  – Continue funding for low NOx trucks
• Do not have recommended project level allocations yet

In-State Production of Low Carbon Fuels
Low Carbon Fuels Overview

- New budget proposes $40M to incentivize production and use of low carbon fuels
- Would apply to bio-based fuels production in California
- Would complement other State greenhouse gas reduction funding
  - Energy Commission’s AB118 Program
  - Proposed CalRecycle and Department of Food and Agriculture waste diversion and dairy digester funding

Low Carbon Fuels Incentive Goals

- Maintain existing levels of production and stimulate new investment in ultra-low carbon fuels
- Reduce greenhouse gas emissions, criteria pollutants, and air toxics
- Accelerate the transition to low carbon fuels
Summary and Next Steps

$500M Low Carbon Transportation: Range of Potential Project Category Allocations

<table>
<thead>
<tr>
<th>Low Carbon Vehicles and Equipment: $460M proposed in budget</th>
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</thead>
<tbody>
<tr>
<td>Light-Duty Vehicles</td>
</tr>
<tr>
<td>• CVRP – Fulfill 2015-16 demand</td>
</tr>
<tr>
<td>• CVRP – 2016-17 demand</td>
</tr>
<tr>
<td>• Disadvantaged Community Pilots</td>
</tr>
<tr>
<td>Heavy-Duty Vehicles and Off-Road Equipment</td>
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<tr>
<td>State Operations</td>
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| Low Carbon Fuels: $40M proposed in budget                   |

Will refine and develop project level allocations over next several months with public input.
Funding Plan Development Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
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<tbody>
<tr>
<td>Category specific work group meetings*</td>
<td>Feb – March 2016</td>
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<tr>
<td>Final Workshop</td>
<td></td>
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<tr>
<td>- Discussion document with draft project allocations, project details,</td>
<td>April 2016</td>
</tr>
<tr>
<td>and draft long-term plan for CVRP</td>
<td></td>
</tr>
<tr>
<td>Release proposed Funding Plan</td>
<td>May 20, 2016</td>
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<tr>
<td>Board consideration of proposed Funding Plan</td>
<td>June 23-24, 2016</td>
</tr>
<tr>
<td>Start implementing 2016-17 projects</td>
<td>July 2016</td>
</tr>
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*Handout lists preliminary work group meeting schedule

Additional information available at:
http://www.arb.ca.gov/aqip/
http://www.arb.ca.gov/msprog/aqip/meetings/meetings.htm

Comments and Discussion

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