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

Public Workshop on the Fiscal Year 2016-17 Funding Plan

Sacramento, California
April 4, 2016

Workshop Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 am – 10 am</td>
<td>Introduction and Overview of Project Category Funding Allocations</td>
</tr>
<tr>
<td>10:00 am – Noon</td>
<td>Light-Duty Vehicle Investments (SB 1275)</td>
</tr>
<tr>
<td>Noon – 1 pm</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>1 pm – 2:30 pm</td>
<td>Truck, Bus, and Off-Road Equipment Investments (SB 1204 and AQIP)</td>
</tr>
<tr>
<td>2:30 pm – 4 pm</td>
<td>Very Low Carbon Fuels Incentives</td>
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</tbody>
</table>
Session 1: Introduction and Overview of Funding Allocations

Funding Plan Development Progress

✓ 2 public workshops in December and January
✓ 14 work group meetings in February and March
✓ Discussion document released last week
➢ Today’s workshop
   • Proposed Funding Plan to be released May 20 for 30-day public comment period
   • Board considers Funding Plan on June 23-24
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 very low carbon fuels
- Continue disadvantaged community investment commitments
  - $\geq 50\%$ to benefit disadvantaged communities
  - $\geq 10\%$ in disadvantaged communities

Governor’s 2016-17 AQIP Budget Proposal

- $28.6$ million proposed appropriation to ARB based on projected motor vehicle fee revenues
  - Staff recommends $25$ million project allocation
  - Staff recommends $3.6$ million reserve to address revenue uncertainty
**Priorities for FY2016-17 Funding Plan**

- Meet projected consumer demand for first-come, first-served projects
- Increase funding for light-duty low income/disadvantaged community projects
- Carry forward unfunded projects from FY 2015-16
- Develop and implement new fuel production incentive project
- Develop long-term plan for CVRP and light-duty incentives as required by SB 1275

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**Low Carbon Transportation: Light-Duty Vehicle Allocations (SB 1275)**

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Funding (millions)</th>
<th>Disadvantaged Community Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVRP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remaining 2015-16 Demand: $55M</td>
<td>$230</td>
<td>≥33%</td>
</tr>
<tr>
<td>2016-17 Demand: $175M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pilot Projects to Benefit Disadvantaged Communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EFMP Plus-up (vehicle scrap and replace): $30M</td>
<td>$44</td>
<td>100%</td>
</tr>
<tr>
<td>Car Sharing: $8M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Worker Van Pools for San Joaquin Valley: $3M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased Public Fleet Incentives through CVRP: $3M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financing Assistance for Low-Income Consumers</td>
<td>$6</td>
<td>≥50%</td>
</tr>
</tbody>
</table>
### Low Carbon Transportation: Truck/Bus/Off-Road Allocations (SB 1204)

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Funding (millions)</th>
<th>Disadvantaged Community Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Technology Demonstrations</td>
<td>$59</td>
<td>100%</td>
</tr>
<tr>
<td>Zero-Emission Freight Equipment Pilot Commercial Deployments</td>
<td>$5</td>
<td>≥50%</td>
</tr>
<tr>
<td>Zero-Emission Truck Pilot Commercial Deployments</td>
<td>$18</td>
<td>≥75%</td>
</tr>
<tr>
<td>Zero-Emission Truck Pilot Commercial Deployments</td>
<td>$42</td>
<td>≥75%</td>
</tr>
<tr>
<td>Rural School Bus Pilot</td>
<td>$10</td>
<td>to be determined</td>
</tr>
<tr>
<td>Low NOx Engine Incentives</td>
<td>$23</td>
<td>≥50%</td>
</tr>
<tr>
<td>HVIP</td>
<td>$23</td>
<td>≥50%</td>
</tr>
<tr>
<td>Remaining 2015-16 Demand: $5M</td>
<td>$18</td>
<td>≥60%</td>
</tr>
<tr>
<td>2016-17 Demand: $13M</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Low Carbon Transportation: Fuels

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Funding (millions)</th>
<th>Disadvantaged Community Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low Carbon Fuel Production Incentive Project</td>
<td>$40</td>
<td>to be determined</td>
</tr>
</tbody>
</table>
AQIP: Heavy-Duty and Off-Road Allocations

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Funding (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck Loan Assistance Program</td>
<td>$22</td>
</tr>
<tr>
<td>Agricultural Equipment Trade Up Pilot for San Joaquin Valley</td>
<td>$3</td>
</tr>
<tr>
<td>Reserve for Revenue Uncertainty*</td>
<td>$3.6</td>
</tr>
</tbody>
</table>

*Funding Plan will include contingency provisions for allocating these funds to projects if revenue sufficient.

Addressing Possible Changes to Budget Proposal

- Any changes in May revised Budget proposal would be reflected in proposed Funding Plan
- Any changes in final Budget would be reflected as modifications to proposed Funding Plan at the June Board meeting
- Contingency provisions in Funding Plan would address potential changes after Board adoption

Email questions or comments to coastalrm@calepa.ca.gov
Session 2:
Light-Duty Vehicle Investments

Long-Term Plan for CVRP and
Light-Duty Vehicle Incentives
3-Year Forecast of Funding Needs

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>CVRP</th>
<th>Pilot Projects</th>
<th>Total Funding Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2016-17</td>
<td>$150M - $175M</td>
<td>$50M</td>
<td>$200M - $225M</td>
</tr>
<tr>
<td>FY 2017-18</td>
<td>$175M - $200M</td>
<td>$70M - $90M</td>
<td>$245M - $290M</td>
</tr>
<tr>
<td>FY 2018-19</td>
<td>$205M - $235M</td>
<td>$100M - $130M</td>
<td>$305M - $365M</td>
</tr>
</tbody>
</table>

Funding Projection Method for CVRP

- Data: Registration data, historical CVRP rebates
- Linear extrapolation of data by technology type
  - Assumes past trends continue into the future
  - Low Range: Baseline assuming program continues as usual with no program changes
  - High Range: Incorporates rise in participation that may result from the higher rebates for lower-income consumers
Light-Duty Pilot Projects

<table>
<thead>
<tr>
<th></th>
<th>FY 2016-17</th>
<th>FY 2017-18</th>
<th>FY 2018-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFMP Plus-up</td>
<td>$30</td>
<td>$30 to $40</td>
<td>$40 to $50</td>
</tr>
<tr>
<td>Car Sharing</td>
<td>$8</td>
<td>$20 to $25</td>
<td>$25 to $30</td>
</tr>
<tr>
<td>Agricultural Worker Vanpools in San Joaquin Valley</td>
<td>$3</td>
<td>$3</td>
<td>$3</td>
</tr>
<tr>
<td>Public Fleets Increased Incentives</td>
<td>$3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Financing Assistance</td>
<td>$6</td>
<td>$20 to $25</td>
<td>$35 to $50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$50</strong></td>
<td><strong>$70 to $90+</strong></td>
<td><strong>$100 to $130+</strong></td>
</tr>
</tbody>
</table>

Market and Technology Assessment

- Market continuing to grow
  - 2015 CA ZEV sales: 3.1 percent
  - 35 available models
- Technology improving and costs coming down
  - Technical Assessment Report (TAR) under development; publish in June
  - Mid-Term Review release later this year
  - Historical cost assessment conducted
**BEV Battery Cost Projections for 2018**

![Graph showing projected battery cost for 2018]

**Sustainable ZEV Market**

- Define ZEV sustainable market
  - Broad literature review
  - Evaluate self-sustaining market indicators
- Considering multiple indicators due to dynamic nature of the ZEV market
- Challenges:
  - Market still young
  - Data availability, reliability, and measurability
Diffusion of Innovation: Theoretical Framework

- Widely approved and adopted among Academia
- Appropriate model: integrates well with market assessment
- Expanded version of the theory focuses on high tech products
  - Includes consumer adoption of technologies, including automobiles

Technology Adoption Lifecycle

Transitioning Early Adopters to Early Majority
Sustainable ZEV Market Indicators

• Annual new ZEV sales in CA
• Technology advancement
• Battery/fuel cost or vehicle price
• Vehicle choice diversity
• Secondary ZEV market
• Consumer awareness
• Cost of avoided health impacts for each ZEV
• Consumer’s willingness to pay

Sustainable ZEV Market: Annual ZEV Sales

• The challenge is crossing the chasm and reaching early majority adopters
  – 16 percent of annual new car sales in CA
  – Represents ~200,000 ZEV sales per year
• Current incentive structure needs to be maintained for several years
Transitioning CVRP

- Transition CVRP slowly over next several years
  - Primary approaches:
    - Adjust income eligibility requirements
    - Lower the incentive amount
  - Secondary approaches:
    - Implement an MSRP cap
    - Phase out rebates for lower electric range
- Budget constraints may require changes sooner

Alternatives to CVRP

- Effectiveness of incentives difficult to determine when multiple incentives exist
- Value of tax based mechanisms vary; require legislation
- Research supports direct purchase incentive mechanisms
- Bottom line: Maintain current incentive structure
Clean Vehicle Rebate Project

Project Status

• Rebate demand and market continues to grow
  – 140,000 rebates issued at a cost of $300 million
  – Over 35 eligible vehicle models available
• Higher rebates for lower-income consumers and income cap just launched
• Available FY 2015-16 funds exhausted early April
  – Continuing to accept applications
  – $18.75 million additional available after May 2016
    Cap-and-Trade auction
  – Rebates will be issued within 90 calendar days
Projected Demand

Draft Funding Allocation

- Recommended Low Carbon Transportation Allocation - $230 million
  - FY 2015-16 demand (through Sept 2016) – $55 million
  - FY 2016-17 (Oct 2016 – Sept 2017) – $175 million
- Continue funding Increased Public Fleet Incentives as a set aside within CVRP
Recommendations for CVRP Project Criteria

• Expand outreach in disadvantaged communities
• Prioritize rebate payment for lower-income consumers in event of funding shortfall
• Remove neighborhood electric vehicles
  – No CVRP-eligible vehicles currently in California market
• Retain temporary fuel cell electric vehicle provisions
  – Maintain $5,000 rebate level
  – Continue temporary deferral of income cap

Point of Sale and Pre-qualification Consideration

• Hope to implement pre-qualification mechanism during FY 2016-17 cycle
  – Committed to working through implementation challenges
  – Continuing discussion with stakeholders
  – Staff estimates 4-6 months to implement, once a project administrator is selected for FY 2016-17
Solicitation Process

• Amend existing FY 2015-16 grant by $55 million to meet projected demand through September
• FY 2016-17 CVRP/Public Fleet Pilot solicitation
  – Release as soon after start of fiscal year as possible
  – Solicit for project administrator for up to 3 years
  – Expect new grant in place by end of September

Light-Duty Pilot Projects to Benefit Disadvantaged Communities and Lower-Income Consumers
Overview

• Pilot projects employ new strategies to increase access to clean transportation options

<table>
<thead>
<tr>
<th>Project Categories</th>
<th>Allocations Through FY 2015-16 (millions)</th>
<th>Recommended FY 2016-17 Allocation (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFMP Plus-up</td>
<td>$12</td>
<td>$30</td>
</tr>
<tr>
<td>Car Sharing and Mobility Options</td>
<td>$2.8</td>
<td>$8</td>
</tr>
<tr>
<td>Increased Public Fleet Incentives for CVRP-Eligible Vehicles</td>
<td>$2.9</td>
<td>$3</td>
</tr>
<tr>
<td>Agricultural Worker Vanpools in San Joaquin Valley (new for FY 2016-17)</td>
<td>-</td>
<td>$3</td>
</tr>
<tr>
<td>Financing Assistance for Lower-Income Consumers (expand statewide for FY 2016-17)</td>
<td>$0.9</td>
<td>$6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$19</strong></td>
<td><strong>$50</strong></td>
</tr>
</tbody>
</table>

Priorities for FY 2016-17

• Build on and scale up successful projects
• Encourage new project applications
• Fulfill SB 1275 goal to increase disadvantaged community and lower-income consumer access to zero and near-zero emission transportation
• Expand financing assistance opportunities for lower-income consumers statewide
EFMP Plus-up
Current Status

• Higher incentives for lower-income consumers living in or near disadvantaged communities to replace old cars with advanced technology cars
• $12 million awarded to San Joaquin Valley and South Coast air districts
• $2.6 million expended through December 2015
  – ~440 vehicles retired and replaced
  – Replacement vehicles include 20% battery electric, 24% plug-in hybrid, and 56% hybrids

EFMP Plus-up
Recommendations for FY 2016-17

• $30 million allocation
  – $10 million each for San Joaquin Valley and South Coast air districts (supports 1,500 vehicle replacements in each district)
  – $10 million to expand to any other air district that implements a qualifying retirement and replacement program
• No changes to project criteria, such as voucher amounts, recommended
Car Sharing and Mobility Options
Current Status

- Help disadvantaged communities benefit from shared use of cleaner cars, vanpools, and other mobility options
- $2.8 million awarded to 2 projects
  - City of Los Angeles
  - Sacramento Metropolitan air district
- Assist 8,000+ disadvantaged community residents
  - Projects to launch in Summer 2016

Car Sharing and Mobility Options
Recommendations for FY 2016-17

- $8 million allocation
  - Award new projects through competitive solicitation
  - Allow existing projects to apply for more funds after highest-ranked new projects are awarded
- Add electric bike sharing as an eligible component
- Goal for regional balance of awarded projects within group of highest ranked project proposals
Increased Incentives for Public Fleets

Current Status

- Increased rebates for government fleets in and near disadvantaged communities to buy CVRP-eligible vehicles
- $2.9 million awarded
  - Project launch in February 2015
  - $2 million expended and 270 vehicle rebates reserved through December 2015

Recommendations for FY 2016-17

- $3 million allocation
  - Select one project administrator to run both CVRP and public fleet pilot via competitive solicitation
- No changes to project criteria recommended
Agricultural Worker Vanpools in San Joaquin Valley

- New project to provide clean transportation for agricultural workers in the San Joaquin Valley
- Recommend $3 million allocation
  - Zero-emission, plug-in hybrid, or hybrid passenger vans, vehicle conversions, and electric vehicle supply equipment to be eligible for funding
  - Award via competitive solicitation or through direct grant agreement with a public entity
  - Public work groups to develop project criteria

Financing Assistance Current Status

- Provides financial assistance to enable lower-income consumers to purchase or lease advanced technology vehicles
  - Financial mechanisms such as loan loss guarantees, interest rate buy-downs, and vehicle cost buy-downs
- $0.9 million award to California Housing Development Corporation for Bay Area project
  - Launched early 2016
Financing Assistance Recommendation for FY 2016-17

- Propose to expand financing assistance for lower-income consumers statewide
- $6 million allocation with two components:
  - $5 million for statewide pilot project
  - $1 million for local-based programs

Session 3: Heavy-Duty Vehicle and Off-Road Equipment Projects
Policy and Statutory Drivers
Heavy-Duty and Off-Road Projects

- State Implementation Plan for ozone attainment
- 2014 Climate Change Scoping Plan
- Sustainable Freight Strategy
- ZEV Action Plan
- Mobile Source Strategy
- Cut Petroleum Use in Half by 2030
- Technology Assessments
- SB 1204

SB 1204: Clean Truck, Bus, and Off-Road Vehicle Technology Program

- Allocates Low Carbon Transportation funds for zero- and near zero-emission vehicle and equipment projects with priority for projects benefitting disadvantaged communities
- Directs ARB to develop guidance through the existing funding plan process and address key requirements
  - Framework developed for FY 2015-16 will be carried over to FY 2016-17
SB 1204: Overarching Vision

• Funding will support evolution of technology advancement (established under AQIP)
  – *Demonstration phase*: Field demonstrations and testing of pre-commercial vehicles and equipment
  – *Pilot phase*: Fund early commercial technologies to encourage production and purchase, bring down costs, and enable technology transfer
  – *Commercialization phase*: Fund vouchers to offset higher initial costs and encourage fleet acceptance
  – *Transition phase*: Expand clean technology adoption to new demographic segments

SB 1204: Early Commercial Truck Deployments

• Allocations meet the 20 percent requirement for early commercial deployment of zero- and near zero-emission heavy-duty truck technology

<table>
<thead>
<tr>
<th>Project</th>
<th>Recommended Low Carbon Transportation Funding (million)</th>
<th>Early Commercial?</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVIP</td>
<td>$18</td>
<td>Yes</td>
</tr>
<tr>
<td>Low NOx Engines</td>
<td>$23</td>
<td>Yes</td>
</tr>
<tr>
<td>Truck Pilot Commercial Deployment</td>
<td>$18</td>
<td>Yes</td>
</tr>
<tr>
<td>Advanced Technology Demonstrations for On-Road Trucks</td>
<td>$30</td>
<td>No</td>
</tr>
</tbody>
</table>

Percentage of truck funding for early commercial deployments: 66%
Approach for FY 2016-17

- Staff recommends carrying over unfunded FY 2015-16 project types
- Staff recommends continuing a comprehensive State funding portfolio approach
  - Alternatively fueled trucks: natural gas funding from Energy Commission
  - Renewable fuels: production incentives from the Very Low Carbon Fuels Incentive Project; facility funding from Energy Commission, Department of Food and Agriculture, and CalRecycle

Advanced Technology Demonstration Projects
Advanced Technology Demonstration Projects

- Accelerate introduction of advanced technologies
  - Validation of pre-commercial technologies breaks down barriers to commercial acceptance
  - Stimulates private investment in advanced technology development
- Reduce GHG and criteria pollutant emissions
- Support disadvantaged community investment commitments

Demonstration Project Funding Recommendation

$59 million from Low Carbon Transportation

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Recommended Projects</th>
<th>Recommended Allocation (million)</th>
</tr>
</thead>
</table>
| On-Road Trucks   | • Intelligent Truck Systems & Connected Vehicles  
                  • Advanced Engines/Powertrains  
                  • Zero- and Near Zero-Emission Short & Regional Haul Trucks | $30 |
| Off-Road Freight Equipment | • Zero-Emission Cargo Handling Equipment  
                              • Zero-Emission Ground Support Equipment  
                              • Advanced Port Equipment  
                              • Zero-Emission Locomotive Tenders/Switchers | $18 |
| Off-Road Non-Freight Equipment | • Advanced Technologies & Efficiencies for Agricultural Equipment  
                                  • Advanced Technologies & Efficiencies for Construction Equipment  
                                  • Advanced Technologies for Passenger Transportation | $11 |

Allocations include $2 million to support data collection and analysis.
Additional Potential Project

• If additional funds are available, recommend funding remaining, highest-scoring Multi-Source Facility Demonstration Project applications
  – Solicitation closed Fall 2015
  – Heavily oversubscribed
Freight Equipment Pilot Funding Recommendation

$5 million from Low Carbon Transportation

- Accelerate early commercial deployment of zero-emission technologies in off-road equipment used in freight applications
  - Cargo handling equipment
  - Transport refrigeration units
  - Ground support equipment
  - Supportive fueling infrastructure
- Located at freight related facility
- Benefit disadvantaged communities

Zero-Emission Truck Pilot Commercial Deployment Project
Background

- Truck and Bus Pilot Projects introduced in FY 2014-15 Funding Plan at $25 million
- Additional allocations planned for FY 2015-16 (funding not appropriated)
  - $40 million for buses
  - $20 million for trucks
- Solicitation issued for combined $85 million
  - Closed January 2016
  - Applications received for nearly $290 million

Zero-Emission Truck Pilot Funding Recommendation

$18 million from Low Carbon Transportation

- Fund highest scoring truck applications from combined solicitation
- Accelerate early commercial clean truck deployments
- Help meet SB 1204 early commercial truck deployment requirement
- Benefit disadvantaged communities
Zero-Emission Bus Pilot Commercial Deployment Project

Zero-Emission Bus Pilot Funding Recommendation

$42 million from Low Carbon Transportation

- Fund highest scoring bus applications from combined solicitation
- Accelerate early commercial clean bus deployments
- Benefit disadvantaged communities
Rural School Bus Pilot Project

Rural School Bus Pilot Project Funding Recommendation

$10 million from Low Carbon Transportation

- Enhance turnover of the California school bus fleet to lower carbon options
  - Fuel cell and battery electric (zero-emission)
  - Plug-in hybrid
  - Charging/fueling to support zero-emission and plug-in hybrid
  - Internal combustion engine or hybrid with renewable fuel
- Funding priority to small and medium air districts
- North Coast Unified Air Pollution Control District as administrator
Low NOx Engine Incentives

Funding Recommendation

$23 million from Low Carbon Transportation

- Encourage manufacture and purchase of engines certified to optional low NOx standards
- Implement with HVIP vouchers on a first-come, first-served, statewide basis
  - Up to $15,000 per engine to cover incremental purchase and installation costs relative to a conventional natural gas engine
  - Renewable fuels required for GHG reductions; additional incentive amount to be determined by work group this fall
- $2 million from FY 2015-16 AQIP will be available through HVIP this spring (no renewable fuel requirement)
Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)

Background

- Vouchers for California fleets on a first-come, first-served basis to increase clean truck and bus demand and lower costs
- Up to $95,000 for zero-emission truck or bus
- Up to $30,000 for hybrid truck or bus
- Up to $15,000 for low NOx engine
- Increased voucher amount for zero-emission vehicles that benefit disadvantaged communities
  - Up to $110,000 for zero-emission trucks and buses
- Zero-emission and hybrid conversions now eligible
Status Update

- Since 2010 launch, HVIP has provided about $70 million for advanced technology trucks and buses
  - About 450 vouchers issued for zero-emission vehicles
  - About 2,000 vouchers issued for hybrid trucks

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HVIP Funding Recommendation

$18 million from Low Carbon Transportation

- Meet increased demand
- No changes to current per vehicle voucher amounts
- Help meet SB 1204 early commercial truck deployment requirement
- Benefit disadvantaged communities
Agricultural Equipment Trade-Up Pilot Project in the San Joaquin Valley

Agricultural Equipment Trade-Up Pilot Funding Recommendation

$3 million from AQIP

- Build upon FY 2015-16 project currently in grant agreement phase
- Two-step transaction
  - Owner of Tier 0 or Tier 1 diesel engine scraps it in exchange for previously used and reconditioned Tier 2 or Tier 3 engine
  - Owner of the Tier 2 or Tier 3 engine from above receives incentive to purchase new Tier 4 engine
- Fund 40 to 60 equipment transactions
- Evaluate suitability as a new, eligible Carl Moyer incentive type
Truck Loan Assistance Program

Background

- Provides financing assistance to truckers subject to the In-Use Truck and Bus Regulation for purchasing newer trucks or exhaust retrofits
- About $73 million State contribution to date
  - Leveraged to provide about $594 million in financing
  - 9,300 trucks and trailers
  - 570 exhaust retrofits
- Helps small fleets
Truck Loan Assistance Program
Funding Recommendation

$22 million from AQIP

- Meet growing demand and reduce funding gap
- Contribution rates reduced starting January 2016
- Consider additional options to improve leverage and slow rate of expenditure

Session 4:
Very Low Carbon Fuels Incentive Project
Project Overview

- 2016/17 Budget for Low Carbon Transportation & Fuels included $40 million for a New Very Low Carbon Transportation Fuels Program
- Would Be Used to Incentivize In-State Production
- Would Provide Additional Incentives for:
  - Use of In-State Feedstocks
  - Use of These Fuels in Disadvantaged Communities

Investment Goals

- Increase volume of very low carbon fuels produced and used in California.
- Reduce GHG emissions and the criteria pollutants and air toxics emissions.
- Help accelerate transition to the use of very low carbon fuels.
- Fulfill related goals.
- Support vehicles and equipment that do not yet have commercially available zero-emission technology options.
Supports Other Planning Efforts

- Reducing Greenhouse Gas Emissions and Other Pollutants
  - AB 32 Scoping Plan
  - Mobile Source Strategy
  - California Sustainable Freight Action Plan
  - Vision for Clean Air
  - Short-Lived Climate Pollutant Strategy
  - Low Carbon Fuel Standard
- Expand Supply of Cleaner Energy Sources
  - Low Carbon Fuel Standard & Renewable Fuel Standard
  - Bioenergy Action Plan
- 50% Reduction in Use of Petroleum

Complementary State Programs

<table>
<thead>
<tr>
<th>California Energy Commission</th>
<th>CalRecycle</th>
<th>California Department of Food &amp; Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biofuel Production and Supply</td>
<td>Organics Grant Program</td>
<td>Dairy Digester Research and Development Program</td>
</tr>
<tr>
<td>Up to $6 million each</td>
<td>Up to $3-4 million each</td>
<td>Up to $3 million each</td>
</tr>
<tr>
<td>$25 million available (proposed FY 16/17)</td>
<td>$61 million available (proposed FY 16/17)</td>
<td>$35 million available (proposed FY 16/17)</td>
</tr>
</tbody>
</table>
Very Low Carbon Fuels Incentive Project Proposal

• Per Gallon Production Incentive
• Eligibility
  – In State Production
  – Certified Fuel Pathway
  – Carbon Intensity 40% or Less of Comparable Petroleum-Based Fuel
• Additional Incentives
  – In State Feedstocks
  – Use in Disadvantaged Communities

Draft Base and Additional Incentive Proposal

<table>
<thead>
<tr>
<th>Range of proposed incentives for production of very low carbon transportation fuels ($/gallon)</th>
<th>Amount per GGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base incentive to vary depending on carbon intensity of fuel pathway</td>
<td>$0.10 - $1.00</td>
</tr>
<tr>
<td>Additional incentive for use of in-state feedstock</td>
<td>$0.20 - $1.00</td>
</tr>
<tr>
<td>Additional incentive for use of fuels in disadvantaged communities</td>
<td>$0.20 - $0.50</td>
</tr>
<tr>
<td>Total Range of Possible Incentives</td>
<td>$0.10 - $2.50</td>
</tr>
</tbody>
</table>
Work Group Discussions

Work Group will convene to provide input on key issues:
• Incentive Amounts
• Disadvantaged Communities Component
• Project Implementation

Next Steps

• Planning and Program Design
• Project Implementation- Subject to Legislative Approval of Program
• Future Updates
• Develop Timeline for Program
• Long-Term Investments