Fiscal Year 2019-20 Funding Plan for Clean Transportation Incentives

Public Workshop
June 13, 2019

Today’s Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 am – 10:30 am</td>
<td>Introduction and Overview of Project Category Funding Allocations</td>
</tr>
<tr>
<td>10:30 am - Noon</td>
<td>Vehicle Purchasing Incentives and Clean Mobility Investments: CVRP &amp; Clean Transportation Equity Projects</td>
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<tr>
<td>Noon – 1pm</td>
<td>Lunch Break</td>
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<tr>
<td>1 pm – 2:30 pm</td>
<td>Heavy-Duty Vehicle and Off-Road Equipment Investments</td>
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Session 1:
Introduction and Overview of Funding Allocations

Funding Plan Development Progress

✓ Kickoff workshop in March
✓ 12 work group meetings – January - June
✓ Discussion Draft Funding Plan released June 7
➢ Today’s workshop
  • Additional work group meetings – June - August
  • Release proposed Funding Plan for 30-day public comment period – by September 18
  • Board considers Funding Plan – October 24-25
$495 Million from Two Separate Sources in Funding Plan

<table>
<thead>
<tr>
<th>Amount</th>
<th>Description</th>
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<tbody>
<tr>
<td>$447 million</td>
<td>Low Carbon Transportation Program funded with Cap-and-Trade Auction Proceeds</td>
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<tr>
<td>$48 million</td>
<td>Air Quality Improvement Program (AQIP)</td>
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Part of CARB’s Larger Incentive Funding Portfolio

- **Low Carbon Transportation**
  - GHG reductions & Priority Populations
  - $447M for FY 19-20
- **Air Quality Improvement Program (AQIP)**
  - Criteria pollutant and toxics reductions
  - $48M for FY 19-20
- **VW Mitigation Trust**
  - NOx Mitigation & zero-emission
  - $423M for 2017+

- **Community Air Protection (AB 617)**
  - Criteria and toxics, & GHG reductions for community goals
  - $230M for FY 19-20
- **Carl Moyer Program**
  - SIP emission reductions
  - $79M for FY 19-20
- **Prop 1B Goods Movement**
  - PM & NOx reductions in goods movement corridors
  - Already Awarded
- **FARMER**
  - Criteria, toxics, and GHG reductions for ag sector
  - $90M for FY 19-20
A Closer Look at Each Funding Source Covered in the Plan

Proposed Low Carbon Transportation Budget

Vehicle Purchasing Incentives and Clean Mobility Investments

- $175 million for CVRP
  - Continues income limits set by Legislature
- $25 million for increased CVRP rebates for low-income applicants
- $65 million for transportation equity projects
  - For EFMP Plus-up, financing assistance, clean mobility options, school bus replacement, etc.
Proposed Low Carbon Transportation Budget

Heavy-Duty Vehicles and Off-Road Equipment
- $182 million for heavy-duty vehicles and off-road equipment
- Continue funding Clean Truck and Bus Vouchers
- Consider funding heavy-duty demonstration and pilot projects

AQIP
- $48 million for projects focused on criteria pollutant and toxic emission reductions
  - Staff proposes allocating full amount to truck loan assistance program
  - Focus on projects that don’t fit under Low Carbon Transportation
Key Priorities for FY 2019-20 Funding Plan

• Support the State’s climate change, air quality, ZEV deployment, and petroleum reduction goals
• Accelerate the transition to advanced technology low carbon freight and passenger transportation
• Increase access to and awareness of clean transportation for priority populations
• Coordinating investments with Sustainable Communities Strategies

AB 1550 Disadvantaged Community and Low-Income Investment Targets

• Staff recommends 50 percent of Low Carbon Transportation funds meet AB 1550 criteria
  • ≥30 percent in disadvantaged communities
  • ≥15 percent in low-income communities or for low-income households
  • ≥5 percent in low-income communities or for low-income households within half a mile of a disadvantaged community
• Staff considers targets as a floor and strives to exceed
Investments Support Multiple Policy Goals

<table>
<thead>
<tr>
<th>Project Categories</th>
<th>Climate Change Scoping Plan</th>
<th>Short-Lived Climate Pollutants</th>
<th>Ozone &amp; PM SIPs</th>
<th>Sustainable Freight</th>
<th>Air Toxics</th>
<th>Petroleum Reduction</th>
<th>Disadvantaged/Low Income Communities</th>
<th>SB 375 Sustainable Communities</th>
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<tbody>
<tr>
<td>CVRP</td>
<td>✓</td>
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<td>Transportation Equity Projects</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>HVIP - Clean Truck and Bus Vouchers</td>
<td>✓</td>
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<tr>
<td>Heavy-Duty Demonstration and Pilot Projects</td>
<td>✓</td>
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<tr>
<td>Truck Loan Assistance</td>
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Next Steps

- Request comments by July 12
- Additional work group meetings
- Post proposed Funding Plan for 30 day public comment by September 18
- Board considers Funding Plan at public meeting in Sacramento on October 24-25

Webcast email address: coastalrm@calepa.ca.gov
Session 2:
Light-Duty ZEV Market and Clean Transportation Equity Projects

**Goals**

- CARB light-duty vehicle investments
  - Vehicle purchasing incentives
  - Clean mobility investments
- Support long term transformation of the State’s fleet and accelerate ZEV deployment
- Bring zero-emission options to disadvantaged and lower-income communities and low-income households
- Support complementary efforts (AB 617, SB 375)
Draft Recommended Project Allocations

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Allocation (millions)</th>
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</thead>
<tbody>
<tr>
<td>Vehicle Purchasing Incentives - CVRP</td>
<td>$200</td>
</tr>
<tr>
<td>Clean Vehicle Rebate Project</td>
<td>$175</td>
</tr>
<tr>
<td>• Standard Rebates</td>
<td></td>
</tr>
<tr>
<td>• Rebates for Lower Income Consumers</td>
<td>$25</td>
</tr>
<tr>
<td>Vehicle Purchasing Incentives - Clean Transportation Equity Projects</td>
<td>$10 of $65</td>
</tr>
<tr>
<td>Clean Mobility Options – Clean Transportation Equity Projects</td>
<td>$50 of $65</td>
</tr>
<tr>
<td>Outreach, Community Needs Assessments, Technical Assistance, and One-Stop-Shop</td>
<td>$5 of $65</td>
</tr>
<tr>
<td>Total</td>
<td>$265</td>
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Program Alignment

• Streamline access to clean transportation and mobility options
  • Incentive amounts
  • Income verification
  • Other program requirements
Summary of Long-Term Plans

Light-Duty ZEV Market and Clean Transportation Equity Projects

Long-Term Plan for ZEV Market

• CVRP demand forecast & ZEV market growth rate
  • Three-year projections
  • 2030 forecasting per budget language
• Market and tech assessment
• Market sustainability
  • Research still indicates 16% new car sales as reasonable sustainability target
• Latest research and data analysis
Primary Indicator: Continuous Evaluation of ZEV Market Growth

- California ZEV market share reached 7.8% in 2018
- 40 PEV models available in California
- All-electric vehicle range increased by 56%
- Continuous reduction in battery pack production cost
- Secondary ZEV market emerging and growth is expected
- General ZEV awareness is increasing
- Global market emergence: 5% global vehicle sales in 2023

Long-Term Plan for Transportation Equity

- Transition from pilot phase and apply lessons learned
- Identify pathways to sustainability for Clean Mobility Options projects
- Refine metrics for success and coordinate with academic research
- Continued coordination across projects at state and local levels
- Develop three-year projections
Vehicle Purchasing Incentives

- CVRP
- Clean Cars 4 All
- Financing Assistance

CVRP Project Update

- 308,000 rebates issued since 2010
  - 295,000 Standard Rebates
  - 12,000 Increased Rebates for low-income consumers
  - 200 Increased Rebates for Fleets in Disadvantaged Communities
- 2018-19 CVRP budget
  - Standard rebate funds expended; Waitlist in effect
  - $25 million for low-income rebates; last through Fall 2019
- Monthly application totals have doubled since July 2018
  - Now average 7,000-8,000 rebates issued a month
Draft Funding Allocation

- Governor’s budget $200 million for CVRP
  - $175 million for standard CVRP rebates
  - $25 million for CVRP low-income rebates

Projected Demand
FY 2019-20 Need: $407 Million
**CVRP**

**FY 19-20 Program Changes to Consider**

- Limited-time offer
- One rebate per person
- Shorter application window
- Lowered income cap
- Introduction of a base MSRP cap
- Increased minimum all-electric range requirement for PHEVs
- Reduced rebate amounts for standard rebates
  - Rebate amounts for increased rebates will not change

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**Clean Cars 4 All Project Update**

- $112 million allocated to-date
  - $42 million expended
- Over 4,700 vehicles replaced in South Coast and San Joaquin Valley air districts
- Bay Area AQMD recently launched new program
- Sac Metro AQMD expected to launch program by 2020
Funding Recommendations

- Staff estimates total funding need of $25 - $35 million for FY 2019-20
  - $70 million still available from previous allocations
  - $40 million not yet awarded in grants
- Staff proposal for FY 2019-20
  - No need for additional funding, instead reallocate $40 million to districts based on need
  - No policy changes

Clean Cars 4 All

- Local project allocated $2.9 million
- Launched December 2015 with $0.9 million, completed December 2018
- 80 advanced technology purchased
  - High interest in PHEVs
- $2 million in expansion funds awarded

Financing Assistance Project Update
Financing Assistance Project Update

- Statewide project allocated $33 million to-date
- Launched in June 2018 with initial $5 million award
  - 404 grants and strong interest in PHEVs and BEVs
  - Majority of applicants earn less than 300% of federal poverty level
  - Large volume of applications from outreach efforts
  - Closed in November 2018
- $28 million additional allocated to cover revamped project

Challenges and Lessons Learned

- Demand for statewide program higher than anticipated
- Outreach can cause demand spikes
- Income verification is time-intensive
- Financial and vehicle education and high-touch case management is key
- Word of mouth, social media, and online referrals vital
- Must leverage existing trust networks
Funding Consideration for FY 2019-20

- Staff estimates funding need of $10 - 12 million
- Considering Policy Changes
- Long term plan
  - HEV phase-out

Clean Mobility Projects

- Clean Mobility Options
- Agricultural Worker Vanpools
- Rural School Bus
- Community Solutions for Clean Transportation Equity Pilot
- Clean Mobility in Schools
Clean Mobility Options Project Update

• Clean mobility options: car share, vanpools, shuttles, ebike share, and first mile / last mile solutions
• Over $46 million allocated to date
• $14.6 million to 6 regional projects
  • Over $35 million in match funds
• $32 million for statewide administrator

Clean Mobility Options for DACs

Project Highlights

• Almost 500 ZEVs have been put into service
• More than 600 ebikes/scooters will be available
• Launching in over 40 communities
Project Highlights, cont.

- Our Community Carshare and BlueLA
  - >230,000 zero-emission miles driven
  - >1,800 participants
  - >17,000 trips
- Making positive impacts on residents
- Increasing access to clean mobility options

Funding Consideration

- $10 - 20 million
- Proposed policy changes:
  - Fund transportation needs assessments
  - Prioritize funding for existing projects
  - Allow funds specifically for mobility enhancements
  - Open grant eligibility to Low-Income Communities and Tribes
Clean Mobility in Schools Project Update

- Help schools in disadvantaged communities deploy clean transportation and mobility options
  - Introduce students, teachers, and staff to advanced clean transportation
  - $10 million allocated in FY 18-19, will be available to 1-2 grantees
  - Solicitation planned to be released later in 2019

Clean Mobility in Schools

Funding Consideration

- $5 - $10 million for FY 19-20
- No policy changes
Agricultural Worker Vanpools Project Update

• Expands access to clean transportation vanpools for agricultural workers
• Serves workers in disadvantaged and low-income communities statewide
• $6 million spent to-date
• 154 hybrid conversion vans in service
• Additional $4.7 million recently awarded to expand

Agricultural Worker Vanpools

Funding Consideration

• Staff proposes $5 - $6 million for FY 19-20
  • Competitive solicitation with option for additional two years
• No policy changes proposed
Rural School Bus Pilot Project Update

- $55 million allocated in past three funding years to North Coast Unified AQMD
  - All Year 1 (FY 16-17) projects under contract
  - Year 2 (FY 17-18) projects undergoing document review and contracting
  - Year 3 (FY 19-20) project review and contracting later in 2019
- High applicant demand
  - Last solicitation received applications for $185 million
  - Over 43 clean buses delivered and in service

Rural School Bus Pilot Project

Funding Consideration

- $5 - $30 million for FY 19-20
- Staff considering two policy changes
  - Require old school bus scrap for all replacements
  - Prioritize compliant buses in ranking or award amount
Community Solutions for Clean Transportation Equity Pilot (CSCTEP)

- New proposed clean mobility pilot project
- Planning grants to improve understanding of communities’ transportation needs
- Implementation block grants to help increase access to community mobility systems
- Eligible applicants: cities, counties, or community-based organizations as lead applicants, representing a broader coalition of partners

CSCTEP Planning Grants

$2 - 2.5 million

- Measures of Success
- Increased understanding of residents’ transportation needs and prioritization of projects accordingly
- High level of engagement with community residents
CSCTEP Implementation Block Grants

$18 - 22.5 million

• Measures of Success
  • Reduction in Vehicle Miles Traveled and greenhouse gas emissions
  • Increase integration of transportation options
  • Increase in clean transportation choices
  • Increase accessibility to destinations
  • Mode shift from owning vehicles
  • Improve public health

Senate Bill 350 and Outreach

• $5 - 10 million to support implementation of SB 350 Guidance Document Recommendation
• Expand community transportation needs assessments
• Develop an outreach plan/roadmap
• Provide technical assistance
• Continue to develop One-Stop-Shop Pilot
One-Stop-Shop Pilot Project Update

- Allocated $5 million in FY 2017-18
- Coordinate community-based outreach and education
- Develop single application for CARB’s Clean Transportation Equity Projects
- Limited launch anticipated July 2019
- Statewide launch anticipated late 2019

Challenges and Lessons Learned

- Technological barriers to program integration
- Additional resources needed for equity project administrators
- Building partnerships and trust is critical for success
- Highlight: tribal government outreach pilot project
Building Partnerships for Equity

Session 3:
Heavy-Duty Vehicles and Off-Road Freight Equipment
Investment Priorities for 2019-20
Heavy-Duty and Off-Road Projects

• Support strategies in CARB’s climate change and air quality plans to meet long-term goals
• Support California Sustainable Freight Action Plan
• Support Sustainable Communities Strategies
• Maximize disadvantaged community benefits and support SB 350 study
• Consistent with 3-year strategy for heavy-duty and off-road investments
• Coordinate with other funding sources

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

• Guide Low Carbon Transportation investments
• Zero- and near zero-emission vehicle and equipment projects
• Priority for projects in disadvantaged communities
• Support evolution of technology advancement
• Requires 20% of truck funding for early commercial deployment
Update to the Three-Year Investment Strategy for Heavy-Duty Vehicles and Off-road Equipment

Three-Year Investment Strategy for Heavy-Duty Vehicles and Off-Road Equipment

• Roadmap based on beachhead concept
• Annual updates
  • Technology status
  • Three-year funding priorities
• Major updates and new additions
  • Metrics of Success
  • Off-Road Integration
  • Infrastructure
Key Outcomes

- Off-road integration into existing beachheads
- New additions to metrics of success
- Technology statuses updated
- Infrastructure: early assessment
- Draft for comment

THREE-YEAR HEAVY-DUTY STRATEGY INVESTMENT PLAN UPDATE

<table>
<thead>
<tr>
<th>Demos</th>
<th>FY 2020-21</th>
<th>FY 2021-22</th>
<th>FY 2022-23</th>
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<tbody>
<tr>
<td></td>
<td>$60-$85 Million*</td>
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<tr>
<td>Focus: ZE/PHEV HD</td>
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<td>Regional Delivery, ZE/Hybrid Ag-Construction Equipment, ZE/Hybrid Heavier Cargo Handling Equipment, ZE/Hybrid Marine</td>
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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.

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<tr>
<td><strong>Commercial</strong></td>
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<td>$420-$580 Million*</td>
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<td>Focus: ZE Delivery, ZE Transit, Low NOx Linehaul Trucks, Ground Support Equipment, ZE/Hybrid Heavier Cargo Handling Equipment</td>
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<td><strong>Total Funding</strong></td>
<td>$610-$940 Million*</td>
<td>$670-$995 Million*</td>
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**Heavy-Duty Demonstration and Pilot Projects**

*CARB*
Heavy-Duty Demonstration Project Updates

- **POLB**: Off-Road $5M
- **POLA**: Off-Road $1M
- **CTE**: Off-Road $7M
- **BAAQMD**: Off-Road $3M
- **GTI**: On-Road $5M
- **Calstart**: On-Road $7M
- **SBCTA**: Multisource $9M
- **POLA**: Multisource $15M
- **POLB**: Sustainable Terminals $50.0M
- **SJVAPCD**: Off-Road $1M
- **BAAQMD**: Off-Road $3M
- **Calstart**: On-Road $7M

Approximately $106M invested in FY 14/15 and FY 16/17

Truck and Bus Pilot Commercial Deployment Project Updates

- **Sunline Transit**: Fuel Cell Electric Buses $13M
- **City of Porterville**: Battery Electric Buses $10M
- **CTE**: Fuel Cell Electric Buses $22M
- **SMAQMD**: ZE school buses with local districts $7M
- **SJVAPCD**: Battery Electric Delivery Trucks with Ameri Pride $7M
- **SJVAPCD**: Battery Electric Step Vans with USPS $5M
- **BAAQMD**: Electric Delivery Trucks with Goodwill $3M

Approximately $80M invested from FY 14/15 and FY 16/17
ZANZEFF Projects Update

- POLB: Sustainable Terminals, $50.0M
- GTI: Zero Emissions for California Ports, $5.8M
- CTE: Fuel Cell Hybrid Delivery Van, $4.3M
- CTE: Next Generation Fuel Cell Delivery Van, $5.8M
- City of San Francisco: ZE from Farm to Table, $4.6M
- SJVAPCD: Frito Lay Diesel-Free Freight Facility, $15.4M
- SCAQMD: Volvo Green Heavy Transport, $44.8M
- SJVAPCD: ZE & NZE Enabling Freight Project, $22.6M
- POLA: ZE Freight "Shore to Store", $41.1M

Approximately $200M invested in FY 17/18 and FY 18/19

HVIP Update

1 of 2

- $446 million invested since 2010
- Continue to help meet SB 1204 early commercial truck deployment requirement
- Help meet AB 1550 disadvantaged community investment goals
  - 52% of HVIP funding has been in DACs
- Interactive data tool available at: https://www.californiahvip.org/
HVIP Update
2 of 2

Total- 7,194 vouchers
• Hybrid- 2,626 vouchers
• ZEV- 2,500 vouchers
• Low-NOx Engine- 1,873 vouchers
• ePTO- 195 vouchers
• EVSE- $12 million

Truck Loan Assistance Program

• About $107 million State contribution to date
  • Leveraged to provide about $1.4 billion in financing
  • 23,200 trucks, exhaust retrofits and trailers
  • Additional demand generated by SB1 requirements may eventually surpass available funding
Other Heavy-Duty Projects Underway

- Clean Off-Road Equipment Voucher Incentive Project (CORE)
  - Grantee selected; expect to commence fall of 2019
- Diesel Filter Replacement Project
  - Grant executed; work group and program start summer 2019

Draft Project Allocations:
Heavy-Duty Vehicles and Off-Road Equipment

<table>
<thead>
<tr>
<th>Project Category</th>
<th>Allocation (millions)</th>
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<td>Clean Truck and Bus Vouchers (HVIP including Low NOx Engines)</td>
<td>$182</td>
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<td>Heavy-Duty Demonstration and Pilot Projects</td>
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<td><strong>Total</strong> ($182M Low Carbon Transportation/$48M AQIP)</td>
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Clean Truck and Bus Vouchers: HVIP and Low NOx Engine Incentives

Background

- HVIP Incentives encourage and accelerate the deployment of cleaner advanced technology
- Vouchers for California fleets on a first-come, first-served basis to lower the cost of clean trucks and buses
- Funding amounts intended to offset some or all of incremental costs
- No scrap required
HVIP Incentives Funding Consideration

• Projected demand for FY 2019-20 is $185 - 280 million
• Will not meet demand even with full $182 million allocation
• Incorporating significant changes to HVIP could reduce demand to between $133-228 million
• Options to be discussed at July work group meeting

Potential Changes to HVIP Project Criteria

1 of 2

• Transition out school buses and shuttle buses using the 8.9-liter low NOx engine
• Disallow stacking with other State incentive funding
• Reinstate fleet limits
• Incorporation of zero-emission powertrain certification
Potential Changes to HVIP Project Criteria 2 of 2

- Eliminate some plus-ups
- Eliminate some vehicle/technology categories
- Eliminate the infrastructure enhancement
- Others?

Heavy-Duty Demonstration and Pilot Projects
Background

• Demonstration Projects
  • Accelerate the introduction of advanced technologies
  • Feed the innovation pipeline
  • Help cover the costs of technology development

• Pilot Projects
  • Support larger-scale deployments
  • Seed promising next markets
  • Focus on manufacturing design, user acceptance, and support

Draft Funding Recommendation

Heavy-Duty Demonstration and Pilot Projects

• $30 – 50 million
• Work group meeting in July to discuss this
Truck Loan Assistance Program

Background

• Provides financing assistance to truckers subject to the In-Use Truck and Bus Regulation for purchasing newer trucks
• Helps small fleets (10 or fewer trucks)
• Incremental recapture of funds in place
Truck Loan Assistance Program Draft Funding Allocation

$48 million from AQIP

- Funds from previous fiscal years will ensure continuous funding until FY 2019-20 funds are available

Strategies to ensure sustainability of program

- Analyze data to more accurately determine future demand expected by truck turnover requirements
- Search for funding to meet anticipated demand

Next Steps

- Request comments by July 12
- Post proposed Funding Plan for 30 day public comment on September 18
- Board considers Funding Plan at public meeting in Sacramento on October 24-25
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