Agenda

- Review of heavy duty regulations
  - Advanced Clean Trucks
  - Advanced Clean Fleets
  - Heavy Duty Inspection and Maintenance Program
- Truck Incentives
- Open Discussion
Advanced Clean Trucks (ACT) Approved June 2020

Manufacturer ZEV Sales
- Must sell zero-emission trucks as a percentage of annual sales

Large Entity Reporting
- One time reporting in April 2021
- Vehicle, usage, and home-base characteristics

ACT Regulation [https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks](https://ww2.arb.ca.gov/rulemaking/2019/advancedcleantrucks)
Zero-emission vehicles as a percentage of annual sales*
- 300,000 by 2035
Minimum tractor sales
Fleets report data April 2021

What it means for West Oakland:
More zero-emission truck options for fleets to buy

<table>
<thead>
<tr>
<th>Model Year</th>
<th>Class 2b-3</th>
<th>Class 4-8</th>
<th>Class 7-8 Tractors</th>
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</thead>
<tbody>
<tr>
<td>2024</td>
<td>5%</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>2025</td>
<td>7%</td>
<td>11%</td>
<td>7%</td>
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<tr>
<td>2026</td>
<td>10%</td>
<td>13%</td>
<td>10%</td>
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<tr>
<td>2027</td>
<td>15%</td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td>2028</td>
<td>20%</td>
<td>30%</td>
<td>20%</td>
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<tr>
<td>2029</td>
<td>25%</td>
<td>40%</td>
<td>25%</td>
</tr>
<tr>
<td>2030</td>
<td>30%</td>
<td>50%</td>
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<tr>
<td>2031</td>
<td>35%</td>
<td>55%</td>
<td>35%</td>
</tr>
<tr>
<td>2032</td>
<td>40%</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>2033</td>
<td>45%</td>
<td>65%</td>
<td>40%</td>
</tr>
<tr>
<td>2034</td>
<td>50%</td>
<td>70%</td>
<td>40%</td>
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<tr>
<td>2035+</td>
<td>55%</td>
<td>75%</td>
<td>40%</td>
</tr>
</tbody>
</table>

* Partial credit for plug-in hybrids with minimum all electric range
Proposed Advanced Clean Fleets Rule

- Transition to zero-emission trucks and buses from 2023 to 2045
  - Drayage trucks
  - Public fleets
  - High priority private and federal fleets
- Recognition for using zero-emission fleets
- Board consideration December 2021

Advanced Clean Fleets webpage: https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets
Public Fleets

- Applies to cities, counties, special districts, state agencies*
- Percent of vehicle purchases must be zero-emission
  - 50% for 2024-2026 model year
  - 100% for 2027 model year onwards

*Low-population counties excluded until 2027

What it means for West Oakland:
Less pollution from local government truck yards and maintenance activities
Drayage Trucks Overview

- Applies to trucks entering intermodal seaports or railyards
- Beginning in 2023, any truck added to the CARB Drayage Truck Registry must be zero-emissions
- Legacy drayage service ends when engine model is 13 years old or 800,000 miles, whichever comes last (no more than 18 years)
- Complete transition to zero-emissions by 2035

What it means for West Oakland:
No pollution from tractors that go to the ports and railyards by 2035
Private and Federal Fleets Overview

- Applies to high priority private and Federal fleets
  - > $50 million revenue or more than 50 trucks

<table>
<thead>
<tr>
<th>Zero-Emission Fleet Percentage</th>
<th>10%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box trucks, vans, two-axle buses, yard trucks</td>
<td>2025</td>
<td>2028</td>
<td>2031</td>
<td>2033</td>
<td>2035</td>
</tr>
<tr>
<td>Work trucks, day cab tractors, three-axle buses</td>
<td>2027</td>
<td>2030</td>
<td>2033</td>
<td>2036</td>
<td>2039</td>
</tr>
<tr>
<td>Sleeper cab tractors and specialty vehicles</td>
<td>2030</td>
<td>2033</td>
<td>2036</td>
<td>2039</td>
<td>2042</td>
</tr>
</tbody>
</table>

What it means for West Oakland:
Less pollution from delivery, work, and garbage trucks in the neighborhoods sooner, and from all other truck types later
Private and Federal Fleets Overview (Cont’d)

- US Postal Service – West Oakland distribution center
- Day cab semi trucks – Zero-emission transition starts in 2027
- 100% zero-emission by 2039 for day cabs semi trucks
Heavy-Duty Vehicle Inspection and Maintenance Program

- SB 210 (Leyva; Statutes of 2019) directs CARB to develop and implement a new, comprehensive HD I/M program
  - Maintain low emissions throughout a vehicle’s life
  - Ensure emissions control systems are functioning properly
- Applicable to all HD non-gasoline vehicles operating in California
  - Limited exemptions (zero emission vehicles exempt)
- Gasoline HD already in BAR’s Smog Check Program
Proposed HD I/M Program Structure

- Require periodic vehicle inspections
  - On-board diagnostic (OBD) checks for 2013+ MY engines
  - Retain smoke opacity testing for pre-2013 MY engines

- Support with roadside emissions measurement and new enforcement mechanisms
  - Compliance certificate required to operate in CA
  - Link HD I/M compliance to DMV registration
  - Enhanced field enforcement/inspections with CHP
HD I/M Program Development Next Steps

- Multiple public workshops/workgroup meetings since 2019
- Most recent workgroup meetings in February and March 2021 to discuss draft program concepts and draft regulation language
- Next HD I/M workgroup meeting expected in June 2021
- CARB Board Hearing date: December 9-10, 2021
- Program implementation: Phase-in starting in 2023

https://ww2.arb.ca.gov/our-work/programs/heavy-duty-inspection-and-maintenance-program
Incentives are available for zero-emission trucks

- Zero-emission focus
- First-come, first-served
- Available statewide
- Up to $150,000 for zero-emission trucks
- Additional incentive in disadvantaged communities
- 100 eligible truck and bus models
- www.californiahvip.org

- Available statewide
- Up to $200,000 for zero-emission trucks
- Back-up applications accepted now
- More funding available in 2022
- www.aqmd.gov/vw

Other options include Carl Moyer Program, Community Air Protection Program, local funds, others
Support to 94607 so far

4 hybrid trucks, 7 zero-emission yard trucks, 3 zero-emission shuttle buses

Online searchable results: www.californiahvip.org/impact/
Help us build a new incentive model

- More zero-emission truck options than ever before
- Smaller fleets and owner-operators face unique challenges
  - Lessons learned from our traditional incentives can help us build a new incentive model
- A few barriers and opportunities
  - Familiarity with zero-emission trucks / how they work
  - Purchase / lease price
  - Infrastructure hardware cost and location
  - Fuel (charging) cost and demand charges
  - Insurance and maintenance
  - All of these have a solution
- Looking for more input from small fleets and communities
Questions/Direction?

- ACF/ACT – Tony Brasil  tony.brasil@arb.ca.gov
- HD I/M – Bob Nguyen  bob.nguyen@arb.ca.gov
- Incentives
  - Peter Christensen  peter.christensen@arb.ca.gov
  - Hope Cupples  hope.cupples@arb.ca.gov
Example of Voluntary ZEV Fleet Hiring

Voluntary ZEV Partner
(Grocery, tech, manufacturer, etc.)

Check database for fleets to hire

CARB Certified ZEV Fleet Database

Report ZEV % to CARB

ZEV Partner hires CARB Certified ZEV Fleets

CARB Certified ZEV Fleets