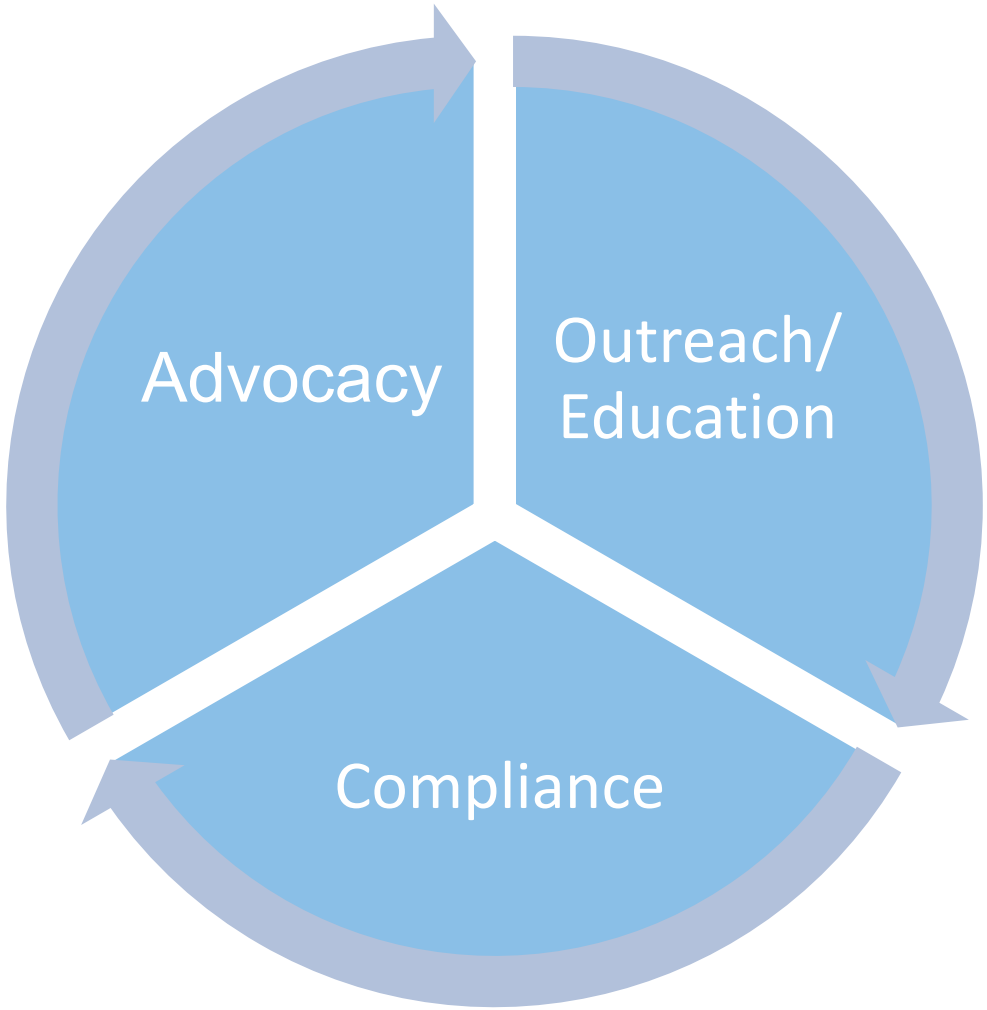
California Transit Association

Zoom to Zero: Fund the Fleet

(Co-Hosted by CALSTART)

October 3, 2019

Support for ICT Regulation Implementation



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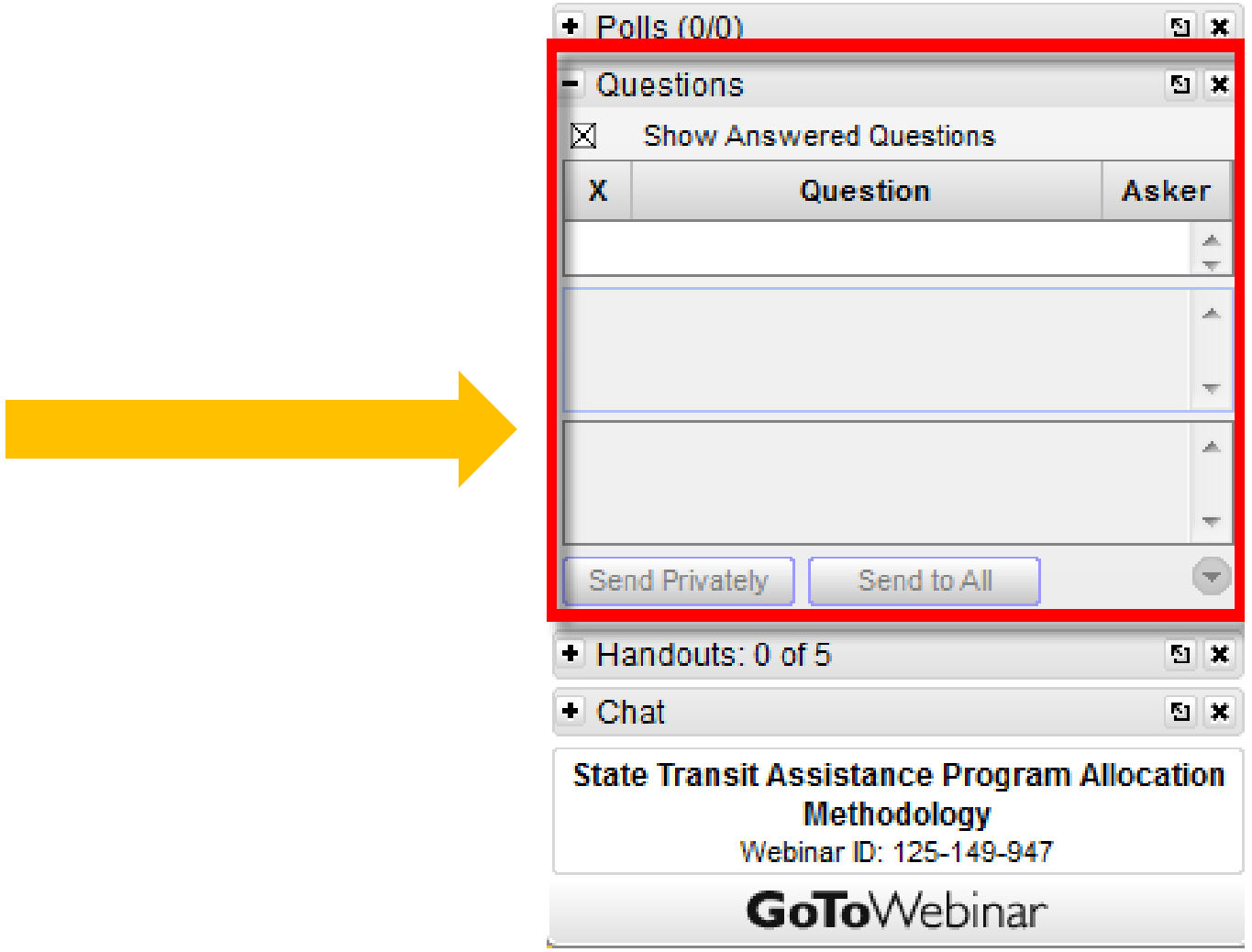

Truck and Bus Voucher Incentives

Tarah Campi
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What is HVIP?

Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project

- **First-come, first-served vouchers** – Immediate discount at sale
- **Dealers learn voucher system** – Fewer complications for fleets
- **Set aside funding for each voucher** – Price certainty
- New and retrofits. No scrappage required.
- 7,000 + vouchers, 1,000 fleets, 9 years

CALIFORNIA HVIP

CALIFORNIA CLIMATE INVESTMENTS
Cap and Trade Dollars at Work

Zero-Emission Transit Bus Voucher Amounts

Bus Length and Bus Type	Base Vehicle Incentive	
	Outside Disadvantaged Community	In Disadvantaged Community
20 ft – 24 ft	$80,000	$90,000
25 ft – 29 ft	$90,000	$100,000
30 ft – 39 ft	$120,000	$135,000
40 ft – 59 ft	$150,000	$165,000
≥ 40 ft. Double Decker Bus	$175,000	$190,000
≥ 60 ft. Zero-Emission Battery- Electric Articulating Transit Bus	$175,000	$190,000
≥ 40 ft. Hydrogen Fuel Cell Electric Bus	$300,000	$315,000

Zero-Emission Truck Voucher Amounts

GVWR (lbs)	Base Vehicle Incentive	
	Outside Disadvantaged Community	In Disadvantaged Community
5,001 – 8,500	$20,000	$25,000
8,501 – 10,000	$25,000	$30,000
10,001 – 14,000	$50,000	$55,000
14,001 – 19,500	$80,000	$90,000
19,501 – 26,000	$90,000	$100,000
26,001 – 33,000	$95,000	$110,000
>33,000	$150,000	$165,000
>33,000 Hydrogen Fuel Cell Truck	$300,000	$315,000

Examples of Eligible Vehicles

Lion Bus

BYD

Phoenix

Motiv

Orange EV

Gillig

Chanje

Motiv

Lightning Systems

GreenPower

Workhorse

BYD

Proterra

Zenith Motors

Motiv Power Systems

Blue Bird

Complete Coach Works

New Flyer Industries

Motiv

www.californiahvip.org

Waitlist Status

- As of **July 23, 2019,** all funds available for HVIP for Fiscal Year 18-19 have been requested, and a waitlist is in effect
- Vouchers can still be requested, however they will not be reviewed or approved until more funds are available
- Additional funds are anticipated to be available in **January 2020**
- Updates will be posted on www.CaliforniaHVIP.org when available

Infrastructure Voucher Enhancements

- **Electric Vehicle Supply Equipment (EVSE):** Up to **$30,000** per battery electric vehicle voucher

  - Covers hardware costs, load management software, energy storage

  - Does not cover labor or utility upgrade costs

- See the EVSE Voucher Enhancement Request Form and other details: www.CaliforniaHVIP.org/Infrastructure/

- EVSE voucher enhancements must be requested within 60 days of the submittal of corresponding vehicle voucher requests.

Proposed Changes to HVIP

The CARB Board will consider the following changes at their Oct. 24 meeting, proposed by CARB staff:

- Graduate 8.9-liter and 11.9-liter natural gas low NOx engines from HVIP
- Graduate hybrid vehicles and hybrid conversions from HVIP
- Discontinue voucher enhancements for infrastructure
- Discontinue all vehicle voucher enhancements except for the disadvantaged community plus-up
- Clarify policies surrounding stacking/combining other State funds with HVIP
- Reinstate fleet limits for zero emission vehicles

Tarah Campi, HVIP Program Manager

HVIP's Toll-Free Hotline
Available Mondays to Fridays, 9 a.m. – 5 p.m.
1-888-HVIP or 1-888-457-4847
or
Email us at: **info@californiahvip.org**

California VW Mitigation Trust

Administered statewide by:

South Coast Air Quality Management District
Bay Area Air Quality Management District
San Joaquin Valley Air Pollution Control District

VW Mitigation Trust Funding for California

$130M Total
$65M in 2019

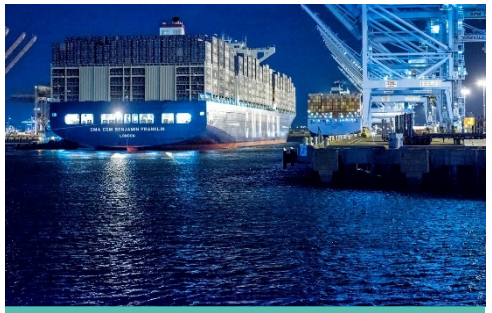
Zero-Emission Transit, School, and Shuttle Bus

$90M Total
$27M in 2019

Zero-Emission Class 8 Freight and Port Drayage Trucks

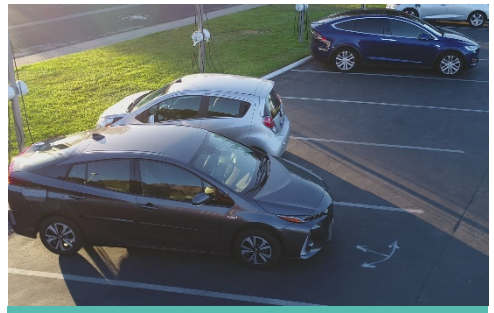
$60M Total
$30M in 2019

Combustion Freight and Marine Projects



$70M Total
$35M in 2019

Zero-Emission Freight and Marine Projects



$10M Total
$10M in 2019

Light-Duty Zero-Emission Infrastructure

Zero-Emission Transit, School, and Shuttle Buses

Administered by

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

Grantee Reporting and Operational Requirements

Inspections	Make old and new engine / vehicle available for inspection
Operations	Operate the “grant-funded” engine / vehicle in accordance with the contract
Payment	Submit request for grant funds AFTER receiving award and completing project
Reporting	Submit annual reports for the term of the contract (expected 3 years)
Scrapping	Scrap an older engine / vehicle and replace it with the “grant-funded” engine / vehicle

Zero-Emission Transit, School, and Shuttle Buses
Key Points

Open to public and private organizations

First Come, First Served

$130M Total Funding
$65M available in 2019

50% of funding to disadvantaged or low-income communities

Zero-Emission Transit, School, and Shuttle Buses
Eligible Projects and Funding Amounts

$65M to Replace Class 4-8 School, Transit and Shuttle Buses

School Buses

Up to $400,000

To replace an eligible school bus with new, commercially-available, zero-emission technology

Transit Buses

Up to $180,000

For a new, commercially-available, battery-electric bus

Up to $400,000

For a new, commercially-available, fuel-cell bus

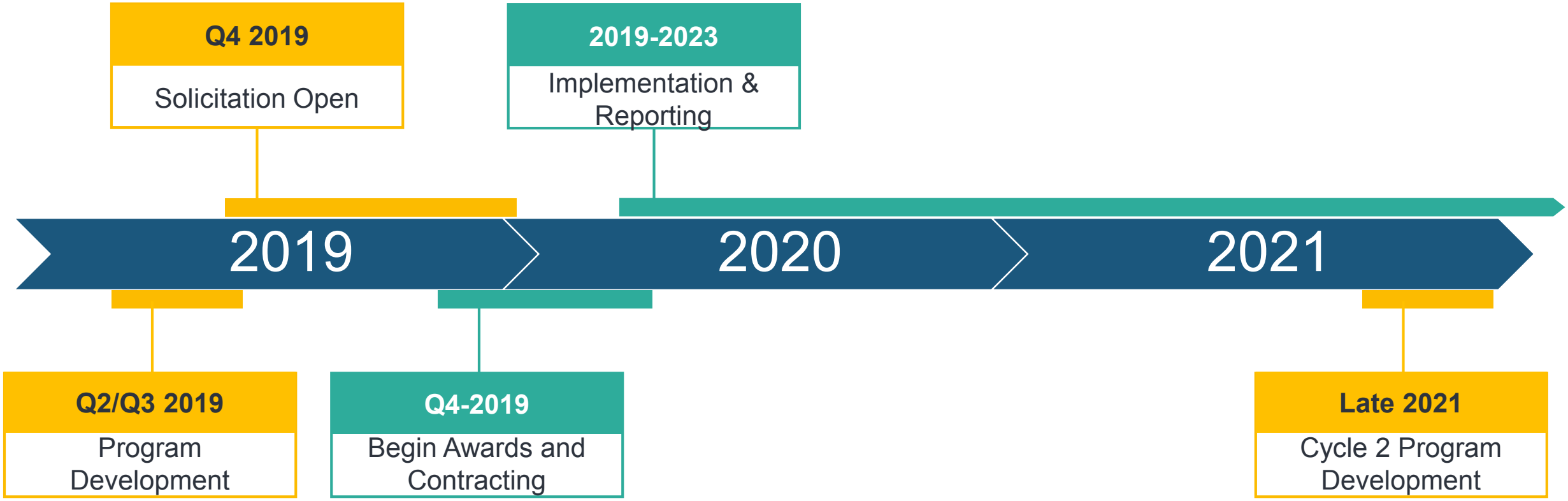
Shuttle Buses

Up to $160,000

To replace an eligible shuttle bus with new, commercially-available, zero-emission technology

- ✓ *Total funding for this category is $130 million, with the initial $65 million increment available in 2019*
- ✓ *No more than 50% of available funds in each increment will be allocated to a single bus category*
- ✓ *Total cost per vehicle must not exceed 75% for non-government owned and 100% for government owned vehicles*
- ✓ *Stacking of VW funds with HVIP and other CARB funds not allowed*

Zero-Emission Transit, School, and Shuttle Buses
Tentative Schedule



Low Carbon Fuel Standard

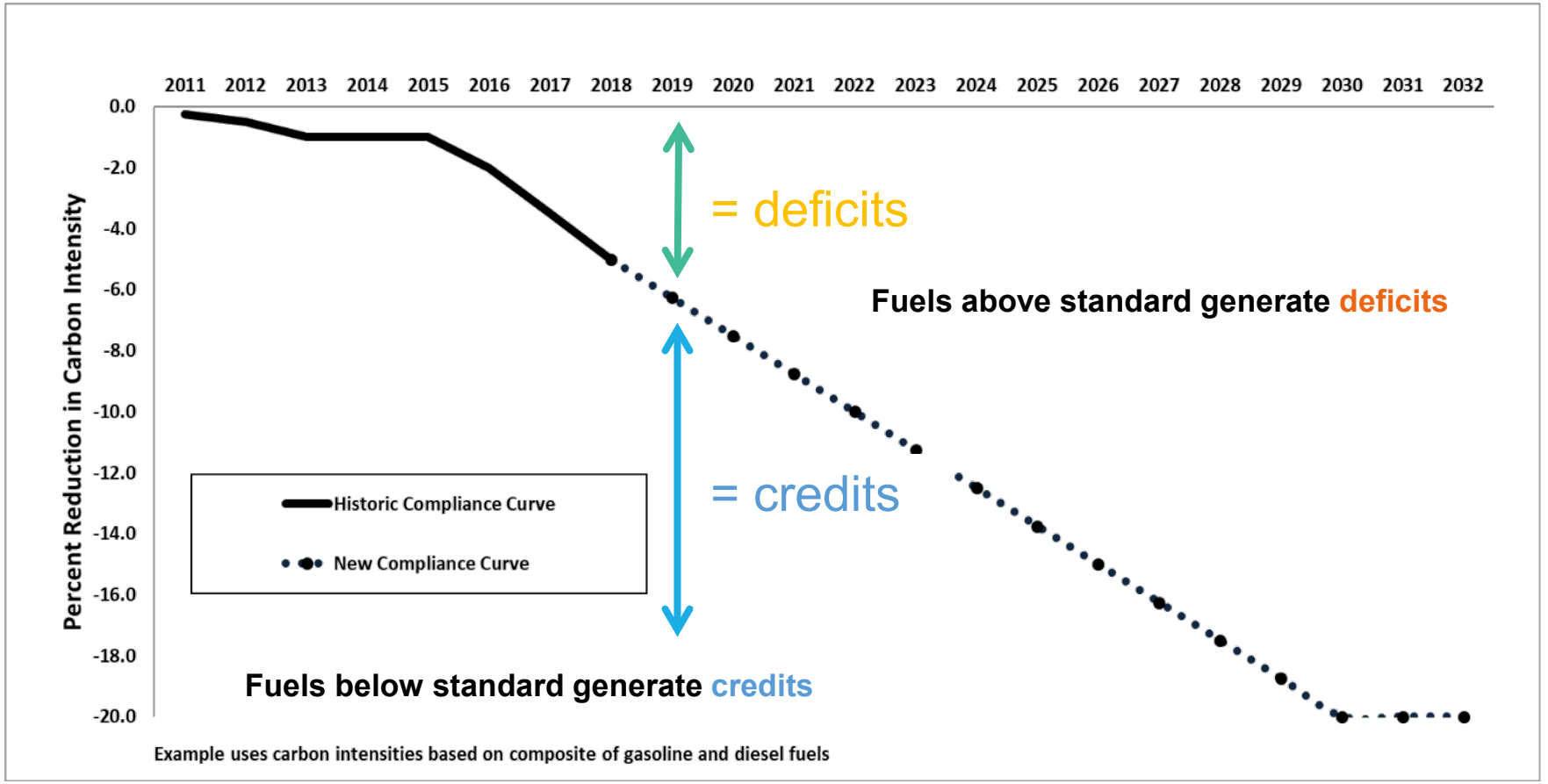
Incentives for Battery-Electric Bus Charging

Jordan Ramalingam
LCFS Program, Industrial Strategies Division

Zoom to Zero: Fund the Electric Fleet Webinar Series
October 3, 2019

Low Carbon Fuel Standard (LCFS) History

- State's primary program to promote alternative fuel use
- Original adoption in 2009, amended in 2018 to strengthen targets through 2030
- Goal: Reduce carbon intensity (CI) of transportation fuels 20% below 2010 levels by 2030



Crediting Opportunities for Dispensed Electricity

- Charging of Battery-electric Buses (BEBs) eligible for LCFS crediting under the "Non-Residential EV Charging" category
- The owner of the Fueling Supply Equipment (FSE), as defined in the LCFS, is the default credit generator but can designate another entity on its behalf
- Credits generated are based on measured charging data
- Option to match low-carbon electricity with EV charging for enhanced crediting
- Proceeds from credits generated using electricity pathways must be used to promote transportation electrification and benefit EV drivers and customers

Estimated LCFS Value

Fuel Pathway	Carbon Intensity (gCO_2e/MJ)	Energy Economy Ratio	Estimated LCFS value*		
			$/kWh	$/mile**	$/year***
CA Avg. Grid to BEB	81.49	5.0	0.28	0.56	22,400
Zero-CI Electricity to BEB	0	5.0	0.34	0.68	27,200

** Assumes credit price of $200*
*** Assumes fuel efficiency of 0.5 mile/kWh*
**** Assumes 40,000 mile/year*

CALIFORNIA
AIR RESOURCES BOARD

Key Steps for Generating LCFS Credits for Supplying Electricity

Step 1 Establish account in the LCFS Reporting Tool (LRT)

- In the quarter during which the EV charging takes place
- *Example: For EV charging taking place in Q4, register in the LRT by Dec 31st. Reporting for Q4 occurs Jan-Mar.*

Step 2 Register Fueling Supply Equipment (FSE)

- Ideally by the end of quarter during which EV charging takes place
- *Example: For EV charging taking place in Q4, ideally register the FSE by Dec 31st. Reporting for Q4 occurs Jan-Mar.*

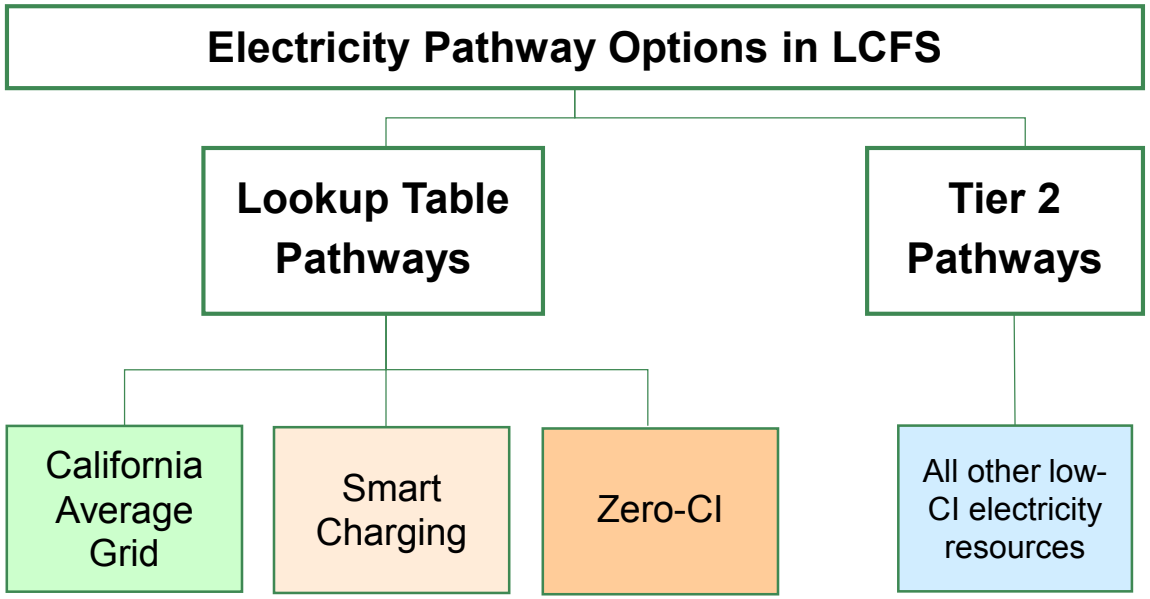
Step 3 Identify and apply for a fuel pathway (Carbon Intensity) to use for reporting

- Simplified default carbon intensities for California grid or zero-carbon electricity, or can apply for customized pathway (see next slide)

Step 4 Complete quarterly reporting for credit issuance

- Data upload deadline (45-day after end of quarter); quarterly report submission deadline (90-days after end of quarter)
- Credits are issued after the reporting deadline
- *Example: For EV Charging taking place in Q4, upload data by mid-Feb and submit final report by March 31st. Credits will be issued on April 1st.*

Electricity Pathway Options



- No application required
- Readily available

- Simple and quick application process
- Ideally apply before end of quarter during which EV charging takes place

- Slightly more involved application process
- Time depends on pathway complexity
- Ideally apply two-three quarters in advance

- Plan sufficiently ahead of time to ensure a desired pathway is available for reporting
- Refer Guidance on Book-and-Claim Accounting for Low-CI Electricity https://www.arb.ca.gov/fuels/lcfs/guidance/lcfsguidance_19-01.pdf

THANK YOU

CARB

Fund the Electric Fleet: The Carl Moyer Program

4th Webinar
October 3, 2019

CARB

What is the Moyer Program?

- Provides incentives ($94M this year) for compliant fleets to achieve early or extra emission reductions:
  - Emission Reductions must be permanent, surplus, quantifiable, & enforceable
  - Project grant award is based on cost-effectiveness
- Moyer Source Categories include:
  - On-road vehicles, off-road vehicles and equipment such as locomotives and marine vessels, and Infrastructure
- Air districts implement the Program:
  - Select projects based on local priorities
  - Perform outreach and assist with application process.

Moyer funding can help support ZE Transit Buses

- Replacement of internal combustion buses with zero-emission buses
- Up to $80K depending on usage and emissions of baseline bus

- Fleet size caps:
  - 80% for fleets of 10 or less,
  - 50% for fleets of 10+

For any Moyer project, there is a 15% applicant cost share which is waived if the fleet is a public fleet.

Moyer can help support Charging

Maximum funding per project

- 50% for all projects
- 60% if the project is publicly accessible
- 65% if there is a solar or wind component supplying at least 50% of the total generated power
- 75% if the project is both publicly accessible AND has a solar or wind component

Contacts:

- Please contact local air districts regarding eligibility:
  http://www.arb.ca.gov/msprog/moyer/air_district_contacts.htm

- CARB Contact: Nancy.Noble@arb.ca.gov

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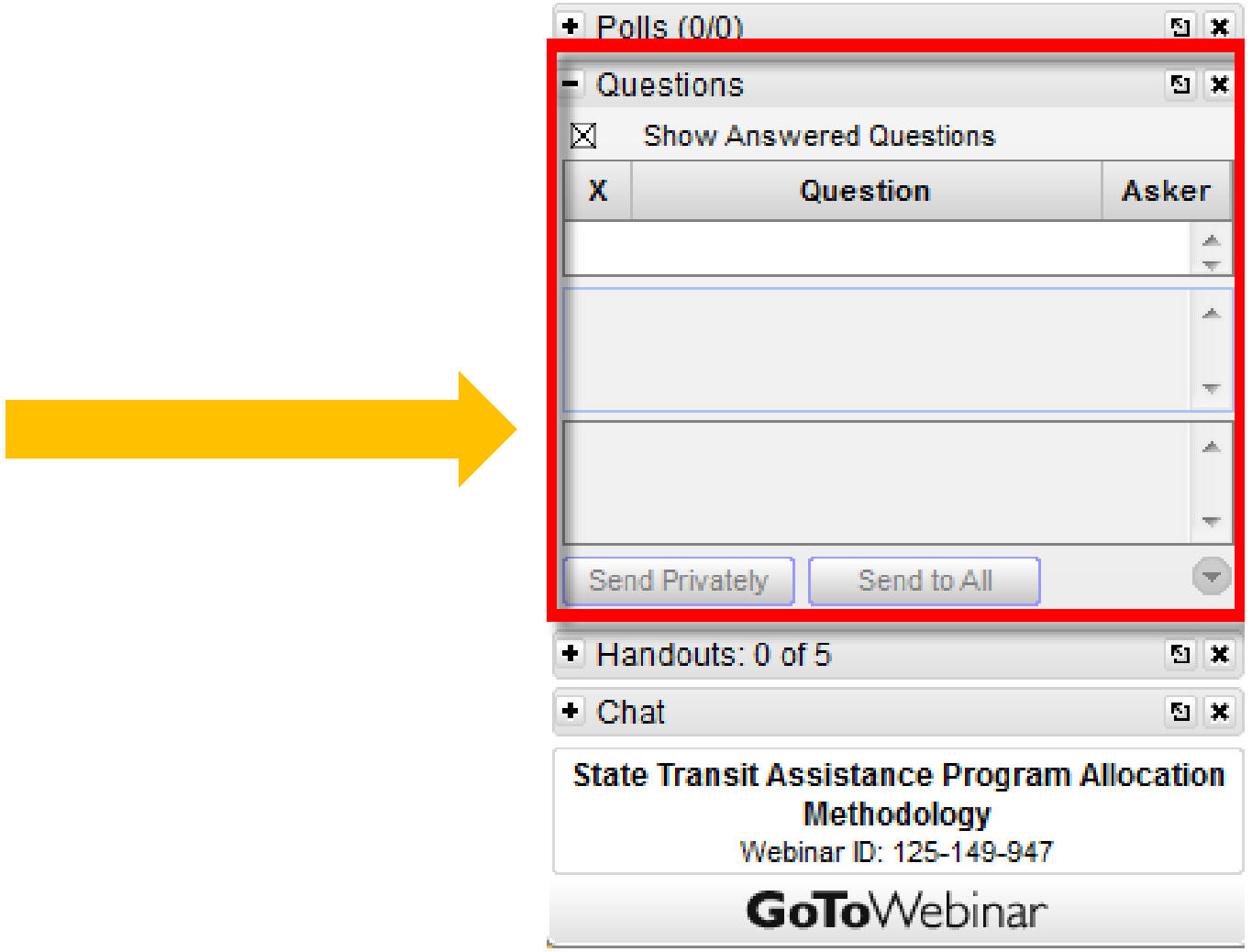

Contact Us

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