

LCFS (Low Carbon Fuel Standard) Credits

California Electric School Bus Working Group February 1st, 2023 | 11:00 AM PT



February 1, 2023

WORKING GROUP AGENDA

- Intro to Electric School Bus Network
- Guest Speakers:
 - E-Mission Control
 - McKinleyville USD
- Q+A with Speakers
- Summary + Closing





MEET THE TEAM



Jared Schnader Senior Director, Bus Initiative Lead



Michelle Hanson Program Manager, Bus and Innovative Mobility



Juan Espinoza Project Manager



Liza Walsh Associate Project Manager



Chrystal Ales Project Manager







ESB NETWORK

The Electric School Bus Network accelerates nationwide school bus fleet electrification through peer-to-peer networking and dialogue-driven working group meetings for school districts, advocacy organizations, government organizations, and industry representatives. The ESB Network provides access to educational tools, resources, and subject matter experts to help support the electric school bus fleet transition.

In Partnership With:



+ CALIFORNIA HVP



LCFS (Low Carbon Fuel Standard) Credits Overview

- Program Goal:
 - Reduce the lifecycle of Carbon Intensity (CI) by 20% by 2030
- Benefits:
 - Transform and Diversify Fuel Pool
 - Reduce Petroleum Dependency
 - Reduce Emissions
 - Better Air Quality





LCFS (Low Carbon Fuel Standard) Credits Overview

- LCFS is designed to reduce GHG emissions in the transportation sector, which is responsible for about 50 percent of GHG emissions (including industrial sector emissions from refining and crude production), 80 percent of ozone-forming gas emissions, and over 95 percent of diesel particulate matter
- LCFS sets annual carbon intensity (CI) standards, or benchmarks, which reduce over time, for gasoline, diesel, and the fuels that replace them



LCFS Credits and Deficits

- Supplying fuel with a CI that is higher than the benchmark creates deficits
- Fuels with CI that is lower than the benchmark generates credits
 - Each credit or deficit reflects one metric ton of carbon dioxide equivalent
- Suppliers of conventional fuels such as gas and diesel ("regulated parties") must comply by obtaining enough credits to cover their deficits each year
- Other entities ("opt-in parties") can voluntarily participate in the program by supplying lower CI substitute fuels to generate credits to sell to regulated parties





LCFS (Low Carbon Fuel Standard) Credits

Resources:

- LCFS Basics-California Air Resources Board
- LCFS Data Dashboard | California Air Resources Board





e-Mission Control

Who We Are

- We facilitate participation in California's LCFS for owners and operators of zero-emission vehicles and equipment at, retailers, grocers, manufacturers, distribution facilities, municipalities and others.
- We leverage our software solution to eliminate administrative roadblocks of these programs and give fleet operators more visibility into their electric fleets.
- We are a subsidiary of Momentum, one of the world's premier clean energy and transportation strategic advisors.
- Located in Downtown Sacramento near the state capitol and the California Air Resources Board (CARB).

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Our Mission



eMC's mission is to create a world where green transportation is accessible and affordable to all, including individuals, businesses, non-profits, and public agencies.

WHY

We believe in a world where green transportation is accessible and affordable to ALL businesses.

HOW

We do this by creating software tools and platforms that streamline and automate traditionally burdensome government programs.

WHAT

Specifically, we've developed a proprietary system for onboarding electric fleets into clean fuel programs. It requires little to no effort by fleet operators and results in significant financial and environmental benefits.

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Current e-Mission Control Client Partners

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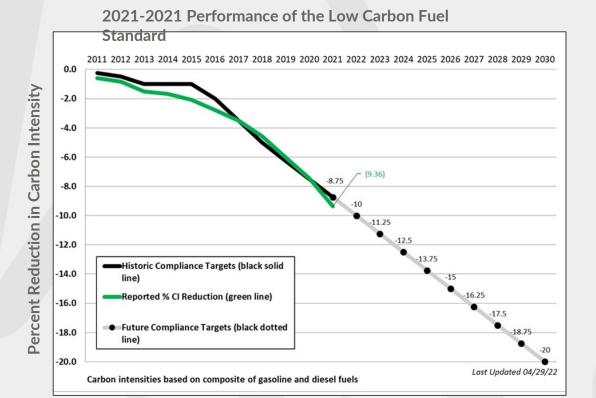


What Is The Low Carbon Fuel Standard?



- The Low Carbon Fuel Standard (LCFS) is Administered by the California Air Resources Board, fully implemented by 2011.
- One of many programs enacted by AB-32, the 2006 Global Warming Solutions Act.
- Specifically targets emission reductions in the transportation sector.
- Currently has a target of **20%** reduction of Carbon Intensity (CI) by 2030.





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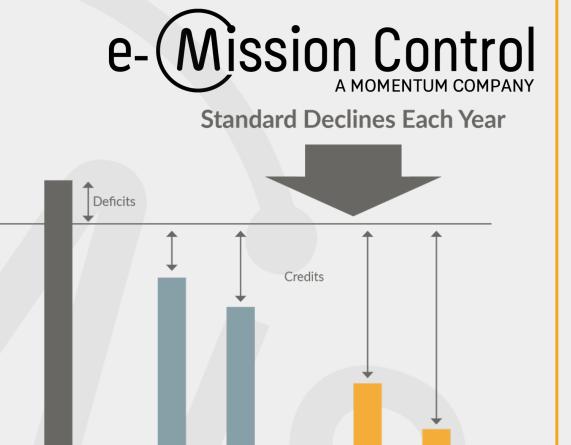
How Do They Work? Deficit Generator vs. Credit Generator

Deficit Generator

 Regulated entities such as oil and gas companies that produce, import, and blend fossil fuels generate credit deficits for emissions related to their operations.

Credit Generator

 Businesses that use low- or zeroemission equipment in their operations generate credits based on the total energy consumption of their electric fleet. Credits are sold to the regulated entities.



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Lower

Gasoline

Higher

Carbon Intensity

info@e-missioncontrol.com

Grid Average Low CI

Electricity

Typical

Low CI

Biofuels



Eligible Electric Equipment





ON-ROAD BATTERY ELECTRIC

OTHER OFF-ROAD BATTERY ELECTRIC

- Electric Buses
- Heavy-Duty Vehicles
- Public Works Vehicles
- Commercial Light-Duty Vehicles
- Drayage Trucks

- eTRU's
- eOGV's
- eMHE

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Fleet Incentive Examples

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| Ð | Operating: | Avoids: | Earns: | Generates: |
|---|--|-------------------------|------------------------|-----------------------------|
| | 1 Electric Transit Bus | 26.8 Metric | \$100 per Metric | \$7,112 in potential |
| | Driven 44,000 miles annually | Tons of CO ₂ | Ton of CO ₂ | LCFS revenue annually |
| 3 | Operating: | Avoids: | Earns: | Generates: |
| | 1 Passenger Electric Vehicle (EV) | 3.9 Metric | \$100 per Metric | \$1,031 in potential |
| | Driven 20,000 miles annually | Tons of CO ₂ | Ton of CO ₂ | LCFS revenue annually |
| | Operating: | Avoids: | Earns: | Generates: |
| | 7 Electric Forklifts & 3 Electric Pallet Jacks | 40.3 Metric | \$100 per Metric | \$8,320 in potential |
| | Using 95,230 kWh annually | Tons of CO ₂ | Ton of CO ₂ | LCFS revenue annually |
| | Operating: | Avoids: | Earns: | Generates: |
| | 1 L2 Charging Station | 8.4 Metric | \$100 per Metric | \$1,598 in potential |
| | Chargring 19,342 kWh annually | Tons of CO ₂ | Ton of CO ₂ | LCFS revenue annually |
| Ð | Operating: | Avoids: | Earns: | Generates: |
| | 1 Electric Public Work Vehicle | 5.8 Metric | \$100 per Metric | \$1,524 in potential |
| | Driven 25,000 miles annually | Tons of CO ₂ | Ton of CO ₂ | LCFS revenue annually |
| 5 | Operating: | Avoids: | Earns: | Generates: |
| | 1 Electric Utility Trucks | 23.7 Metric | \$100 per Metric | \$6,277 in potential |
| | Driven 40,000 miles annually | Tons of CO ₂ | Ton of CO ₂ | LCFS revenue annually |
| | | | | |

All figures are to provide estimates for example purposes and are not meant to be exact. Average LCFS credit value as of July 2022

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How eMC Can Help



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Introduction & Incentive Estimates – Our team will review the LCFS program with you, get an understanding of your fleet, and calculate your projected incentive payments based on your fleet data and operations.



Site Walkthrough – If needed or helpful, an e-Mission Control representative will conduct a site walkthrough to verify equipment and operational information.



Onboarding – We will collect all facility and equipment information and complete the administrative registration processes with CARB.



Reporting – Our team will calculate your data, complete all quarterly and annual LCFS reporting requirements, and LCFS will issue credits.



Monetization – Our experienced financial experts will maximize and transact your credits on the LCFS open market. Once per quarter, **we write you a check**.

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Program Reporting Deadlines



1. An initial enrollment deadline, 45 days into the subsequent quarter.

DEDODTING AND DAVMENT

1. The quarterly fleet and operations reporting deadline, 90 days into the subsequent quarter. This is important for future fleet changes/ updates.

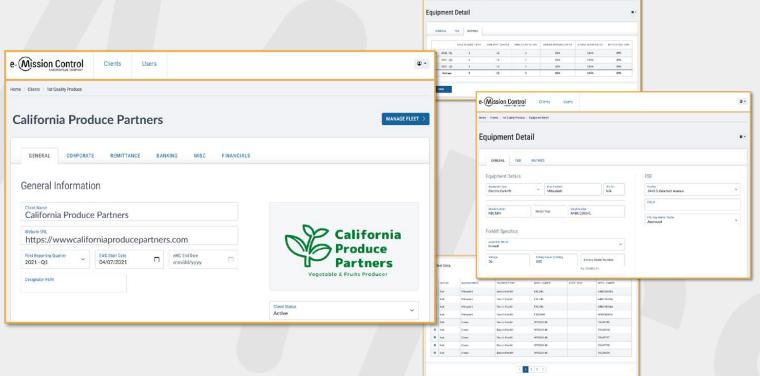
| LCF3 REPORTING AND PATMENT TIMELINE | | | | | | |
|-------------------------------------|--------------------------------|---|------------------------------|--|--|--|
| | Initial Enrollment Deadline | Fleet and Operations Data Reporting Deadline | Incentive Payments Issued | | | |
| Reporting Quarters | | | | | | |
| QUARTER 1 | MID MAY | JUNE | JULY | | | |
| | | | | | | |
| QUARTER 2 | MID AUGUST | SEPTEMBER | OCTOBER | | | |
| | | | | | | |
| QUARTER 3 | MID NOVEMBER | DECEMBER | JANUARY | | | |
| | | | | | | |
| QUARTER 4 | MID FEBRUARY | MARCH | APRIL | | | |
| | | | | | | |

My-eMC Platform

e-Mission Control

- Quickly confirm fleet data quarterly
- Have instant message access to our Partner Success Team
- Easily update contact and facility information
- View and download current fleet data
- Access the most up-to-date clean fuel credit prices and detailed Incentive Summaries
- Receive OEM support through our Strategic Partnership program
- Use the on-road incentive estimator for planning electric fleet expansion

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Incentives for Electrification

Federal

- Alternative Fuel Corridor (AFC) Grants
- Advanced Technology Vehicle (ATV) and Alternative Fuel Infrastructure Manufacturing Incentives
- Community Alternative Fuel Infrastructure Grants
- EPA Clean School Bus Program
- Freight Efficiency and Zero-Emission Vehicle Infrastructure Grants

State

- Low Carbon Fuel Standard
- California's National Electric Vehicle Infrastructure (NEVI) Plan
- Electric Vehicle (EV) Rebate Program
- Bus Replacement Grant
- Heavy-Duty Low Emission Vehicle Replacement and Repower Grants
- Voluntary Vehicle Retirement and Replacement Incentives

Regional

- Carl Moyer
- EnergIIZE
- CORE
- PG&E EV Fleet
- SCE Charge Ready Transport

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• SDG&E Power Your Drive for FLeets

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Contact our team

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P: 1-833-ZeroCO2 (1-833-937-6262) **E:** info@e-missioncontrol.com

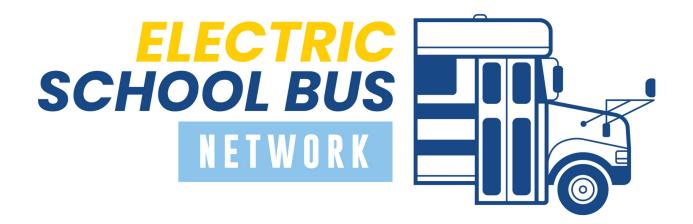
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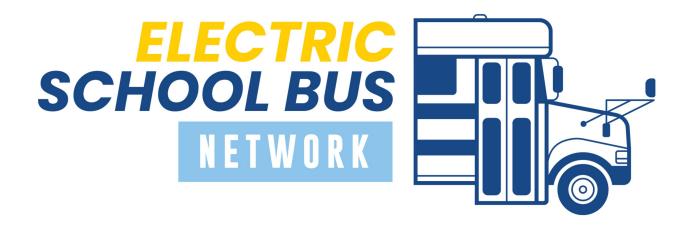
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McKinleyville Unified School District

Speaker: Nelson Vinum, Director of Maintenance & Transportation





Q+A with Speakers



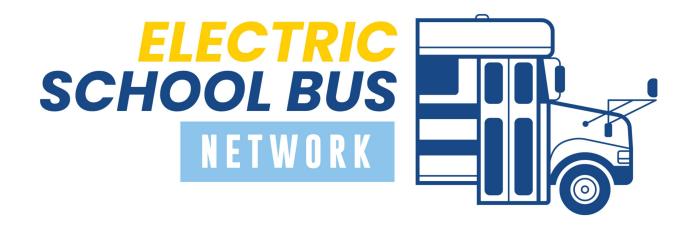


SAVE THE DATE!

- The Thank You Email Will Include:
 - Recording of the meeting
 - Copy of slide deck
- Next Meeting: April 5th, 2023, at 11:00 AM PT
 - Note: You are already registered! Save the date on your calendar.
- Questions?
- Email <u>SchoolBusTeam@calstart.org</u>







Thank You For Your Time!



