



**WEBINAR
SERIES**

Turn E-fleet Charging Into Revenue With LCFS Credits

California's Low Carbon Fuel Standard

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Overview

LCFS 101

- Low Carbon Fuel Standard (LCFS) Marketplace
- Eligible EVs
- CARBs Role

Registration to Revenue

- Step-by-Step Creating LCFS credits for E-Fleets
- Value by Vehicle Type

Comprehensive Planning

- Integrated Management
- Data Driven Decisions
- Funding Opportunities

LCFS MarketPlace: Credits and Deficits

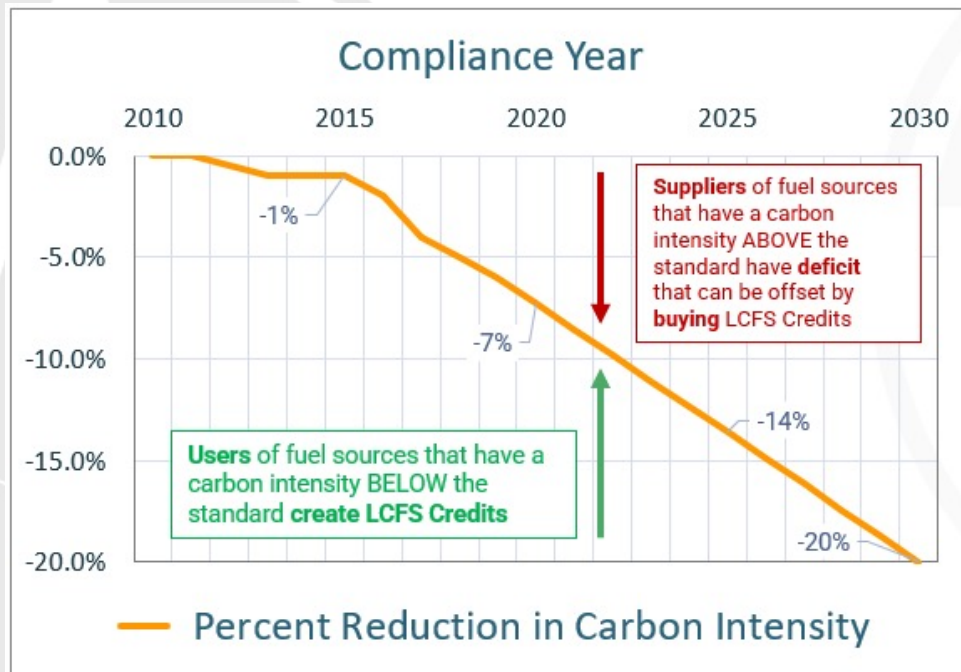
California passed legislation (part of AB32) creating the LCFS program with a focus on reducing GHG emissions for transportation sources, which make up 40% of GHG emissions in CA.

Credits are created by using transportation fuels that are below the standard of Carbon Intensity (see graph).

These **credits are sold** in a regulated marketplace to fuel suppliers that need credits in order to bring their fuel source carbon down to comply with the standard.

CARB **certifies** all credits generated and sets a **maximum credit price** for the marketplace.

Revenue from LCFS Credits from commercial vehicles can be used for your investment in electric vehicles and alternative fuels.



Source: Carbon Intensity Values from CA Air Resources Board, LCFS Regulation
(see Resources at end of presentation)

Eligible Vehicles and Equipment

The LCFS regulations determine the **types of vehicles eligible** for creating LCFS credits.

The amount of credits per vehicle depend on the **vehicle type, fuel type, and amount of energy used.**

Each vehicle type has a specific **ratio** of energy used to LCFS credits based on its engine efficiency and the conventional fuel being replaced.

Low Carbon Fuels like Biodiesel or Renewable Diesel also generate LCFS credits. The credits typically go to the entity that owns the fuel infrastructure.

Common Types of Eligible EVs

- Truck Refrigeration Units
- Fleet Chargers for Cars or Trucks
- EV Chargers For Staff and Public Use
- Heavy-Duty Vehicles
- Forklifts
- Yard Semis
- Cargo Handling Equipment
- Port Equipment

CARB's role in the LCFS program

CARB is responsible for implementing a range of programs all created through legislated targets. They do this through **Incentives (Carrots)** and **Penalties (Sticks)**.

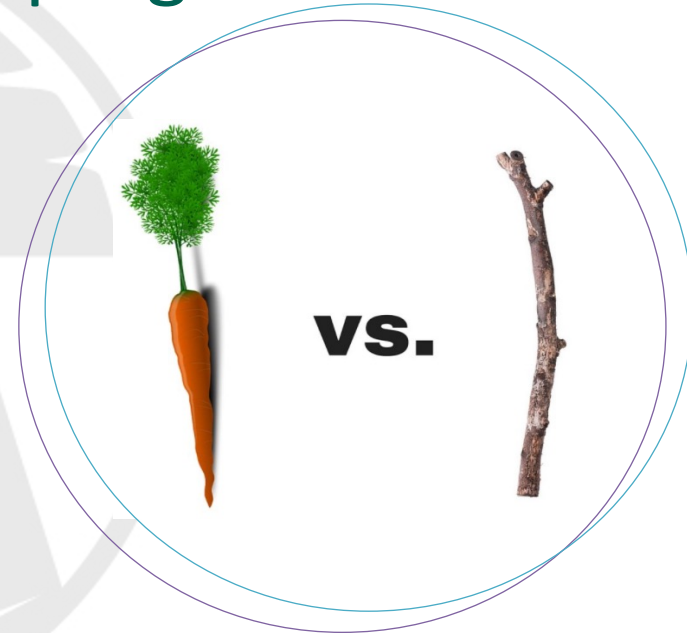
LCFS credits are only applicable to TRANSPORTATION FUEL transactions, not air quality standards.

CARBs role in the LCFS standard includes:

- Creating the regulations ('rules of the game')
- Requiring conventional (high-carbon) fuel producers and importers to participate
- Registering EVs and verifying charging data ('being referee')

CARB role in the LCFS standard does NOT include:

- Funding the program or credit sales (the funds come from Deficit holders that must buy credits to comply with the carbon-fuel standard)
- Requiring credit generators or buyers to use specific technologies



Advanced Clean Fleets, ZE TRU, ZE Forklift, and other Air Quality rules are separate CARB programs

Registration to Revenue

The steps to creating and monetizing LCFS Credits



Register Equipment

Register all electric equipment with CARB including make, model, serial numbers, proof of ownership or lease.



Measure Energy

Track how much energy (in kWh) is used by each registered vehicle.



Enhance Credits

Procure environmental attributes in derivative markets to enhance credit generation for electric fuel (not applicable for biofuel)



Submit Reports

Submit your facility's quarterly reports to CARB with the total energy used by each vehicle combined with the enhanced zero-carbon value.



CARB Verification

CARB reviews the data for completeness and issues LCFS Credits in proportion to the energy use and vehicle type.



Monetize Credits

Sell LCFS Credits in market to entities that need to purchase Credits to comply with the carbon standard

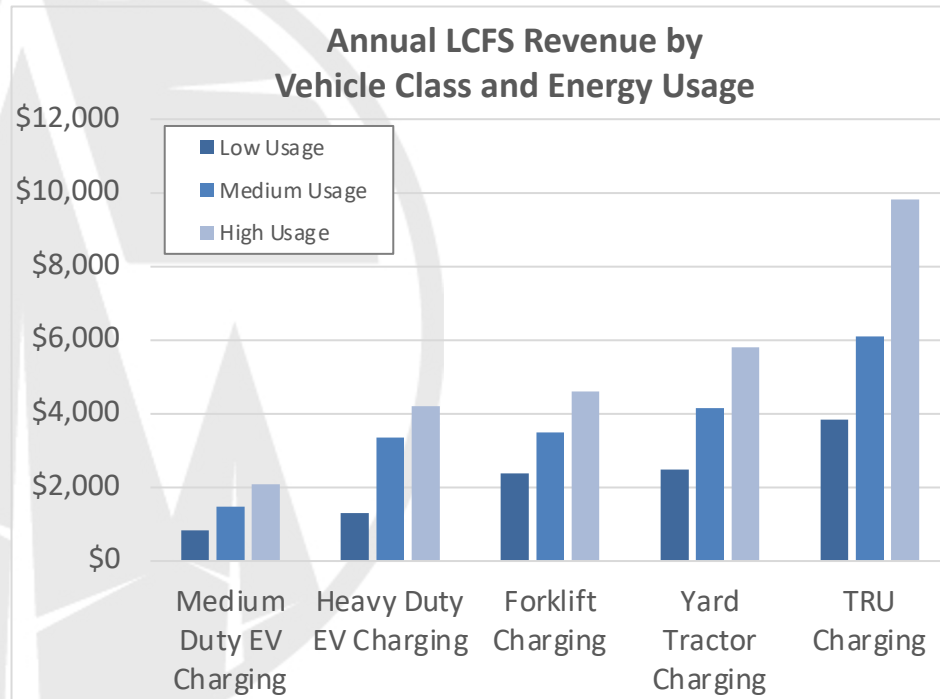
Value of LCFS

With Low Carbon Fuel Standard (LCFS) Credits:

- No downside risk
- Recurring Revenue (not a one-time grant)
- LCFS revenue can be spent on converting to and operating low-carbon fuels (e.g. electricity cost, infrastructure cost, equipment cost, etc.)

Factors Contributing to LCFS Revenue

- Amount of Energy Used for Charging (the More you Charge, the More you Earn)
- LCFS Marketplace Values (\$/Credit is not fixed)
- Type of EVs being charged
- Right to claim credits depends on vehicle and fuel type



Values based on current market pricing, and range of typical vehicle energy usage

Data

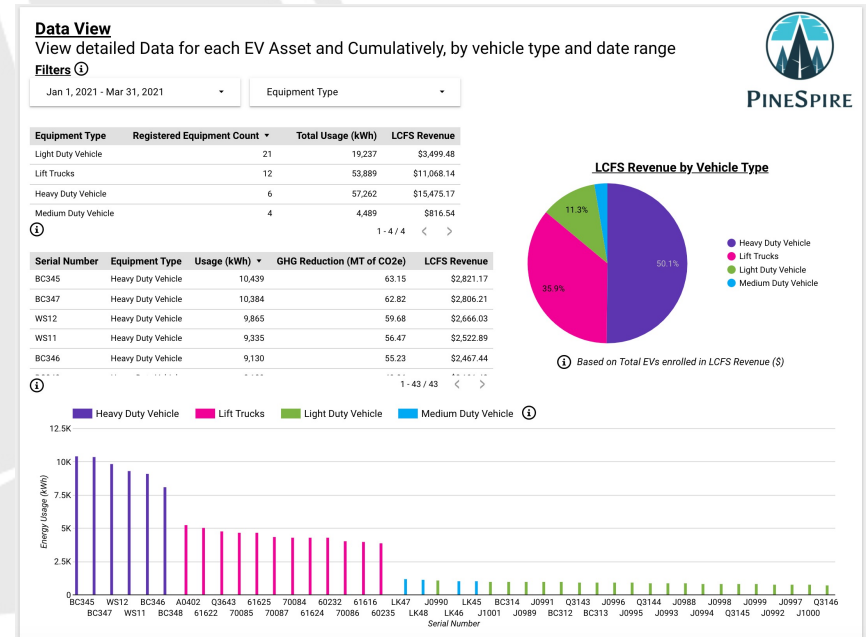
As part of creating LCFS credits, you will generate Charger and Location Specific Data on your Low Carbon Energy Usage and Carbon-Emission Reductions

This Data can be used to for:

- Air Quality Compliance Reporting (DOORS, upcoming ZEV requirements)
- WAIRES reporting (South Coast AQMD)
- Return on Investment Analysis
- Marketing and Sustainability Initiatives

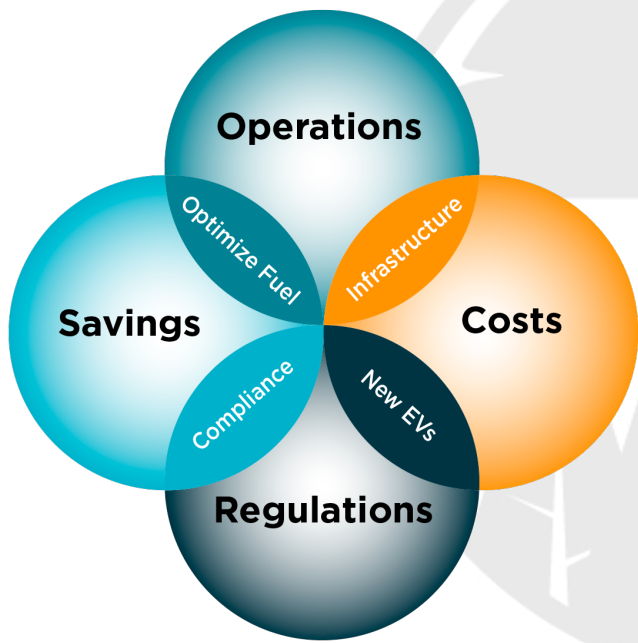
When selecting EV or EV Charging technologies:

- Verify the data is accessible for your purposes
- Read the fine print for retaining LCFS credits



Comprehensive Fleet and Fuel Planning

Fuel conversion is coming. Working across departments and integrating management tools will lead you to a comprehensive Plan.



PLAN COMPONENTS

- Operations** need to plan for staff training, adjustments to facility layout, and smart fuel cost optimization
- Costs** include electrical infrastructure upgrades and capital cost of new equipment
- Savings** include new revenue streams, incentive eligibility, reducing compliance work, and adding to your brand's marketing
- Regulations** will define timelines, dictates equipment changes, and creates costly compliance work.

Funding Opportunities

With a Fleet and Fuel Plan, and Data from LCFS credits, you can be prepared to make the most of grant and funding opportunities

- Identify ways to stack revenue sources including grants, tax credits, and LCFS Revenue
- Alerts for specific grants in your area, based on your fleet needs
- Maintaining organized data on your current vehicle energy and operational usage to support technical portions of grant applications
- Staff to lead grant application, resources on EV and technology expertise



Tax Credits



Air Quality
District Grants



VW Mitigation
Trust



Utility
Infrastructure



Check For
Other Grants



Ryan Huggins
PRINCIPAL

Thank You

PineSpire brings our customers turnkey LCFS services with reliable revenue and accessible expertise.

Ryan Huggins

Principal

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Resources

California Air Resources Board

- [Low Carbon Fuel Standard \(home page\)](#)
- [Low Carbon Fuel Standard Regulation \(full text\)](#)

[Zero Emission Truck Refrigeration Unit \(TRU\) Rule](#)

[Zero Emissions Forklift Rule](#)

[South Coast Air Quality Management District WAIRE Rule](#)

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