

FORUM

M O B I L I T Y

LCFS REFORM IS
CRUCIAL TO ACF
SUCCESS

Electrifying Drayage

Forum Mobility is building a network of charging depots, sited for drayage, in and around California's ports and along routes to common freight destinations.

Success means cleaner air for our communities, a safer climate, and lower cost per mile for truckers.

Why is drayage so important?



Health

Port communities have double the asthma and double the cancer risks in many cases.



The Numbers



30,000 Trucks



Nearly 1b miles per year

Challenges at the Ports of (just) California – Next Decade



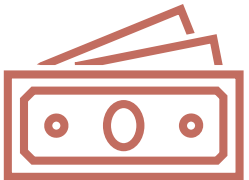
80%
Small
Fleets



3,000 acres of land
needed



2,000MW of
grid capacity



Programs need
to be built for
equity and ease

California's Advanced Clean Fleets:

MHD ZEVs in California:

- 510,000 in 2035
- 1,350,000 by 2045
- 1,690,000 by 2050

Charging Infrastructure Needed

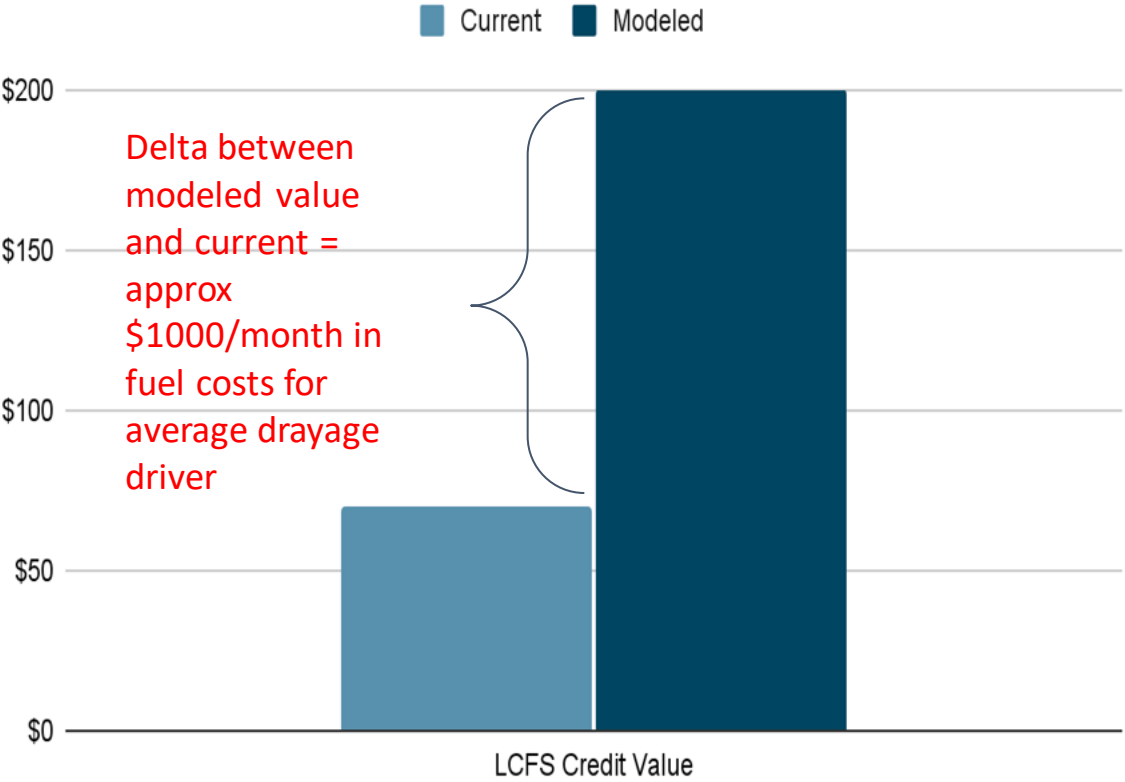
- 157,000 chargers will be needed to support 180,000 medium- and heavy-duty trucks by 2030
- Average install rate of 53 MHD chargers a day through 2030
- 2031-2045: need average install rate of 229 MHD chargers a day

LCFS REFORM IS CRUCIAL TO ACF SUCCESS

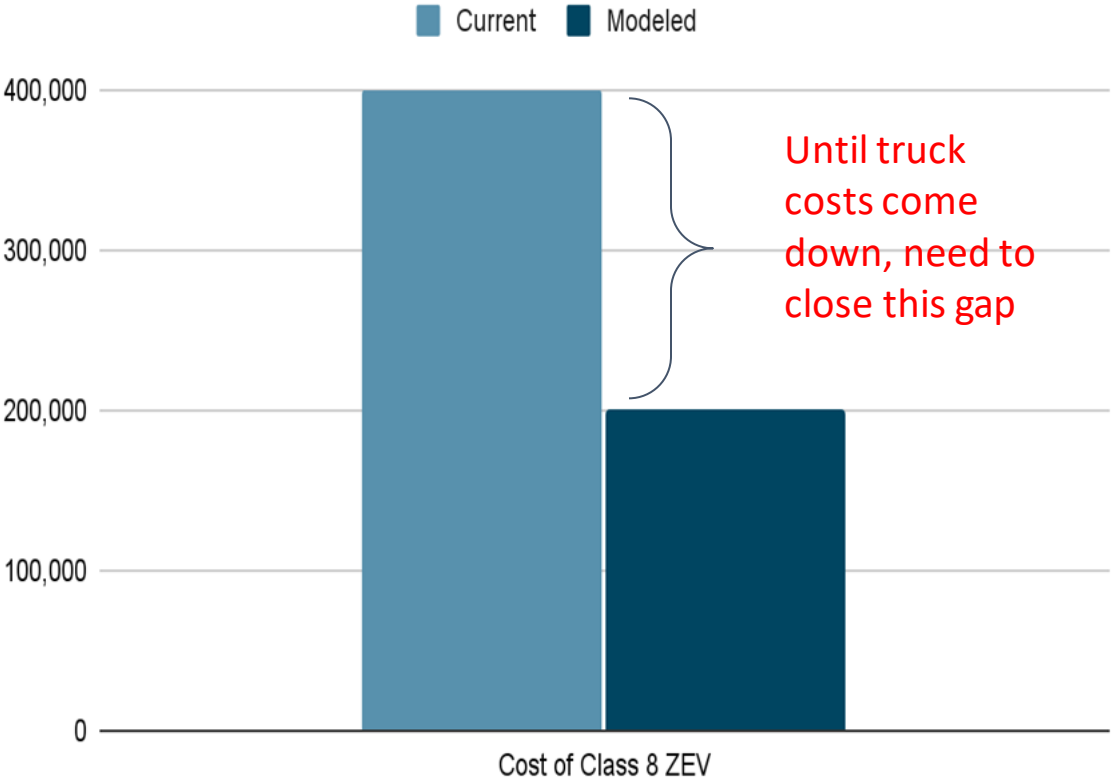
- Every ZEV investment must be cost-effective from day one or will not happen
- LCFS provides ~\$3.5 billion a year; ~80% goes to biofuels
- With ACF, CARB is mandating a transition to zero emission fuels, not low-carbon fuels
- Orienting more funding to support electrification and provide soft landings for small businesses will help chances of successful transition:
 1. Increase credit value
 2. Accelerate charging infrastructure deployment through MHD Fast Charging Infrastructure (FCI) Program

Increasing LCFS credit value: cost parity with diesel

Credit Values Used In ACF TCO Analysis



Price of Class 8 Daycab used by CARB in ACF TCO Analysis



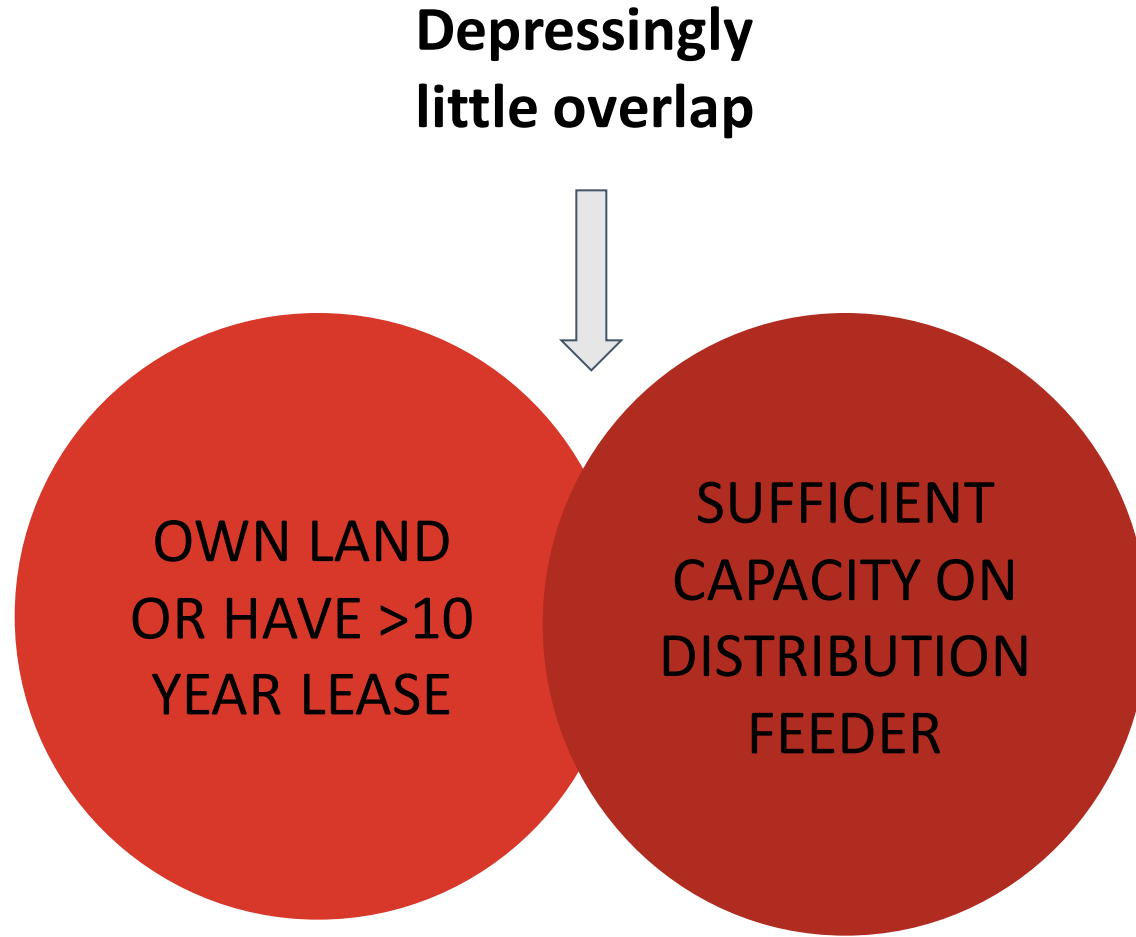
Issue #1: Support for efforts that increase credit values

- Staff has proposed several measures that would increase credit values:
 - New goal of minimum 30% Carbon Intensity reduction by 2030
 - Inclusion of a ratchet mechanism to provide price stability
 - We also encourage CARB to institute an immediate acceleration and “step-down” in 2024 to restore credit price viability.
- These are good! Do them, please.

Issue # 2: Accelerating Charging Infrastructure Deployment

- CA needs to install 157,000 chargers to support 180,000 MHD BEVs by 2030
 - That's a total of 7.6 GW worth of chargers
 - Requires an average install rate of ~50 chargers a day, every day, through 2030
- How does Fast Charging Infrastructure (FCI) help?
 - LCFS Infrastructure Credits provide a bridge revenue stream for fueling stations until ZEVs become more commonplace.
 - Our investors require a percentage of charging slots to be contractually reserved before we can break ground - and FCI can play that role
 - FCI can significantly accelerate deployment, removing 'lack of infrastructure' obstacle.

Why are 3rd Party Depots Important?



- Many fleets and owner/operators will not be able to charge trucks where currently domiciled
 - Drayage is 80% independent owner-operator
 - Over 50% of warehouses are > 5 year leases
- Third-party depots are sited on freight routes, in places where power is available.
- This increases speed of deployment, and by maximizing utilization of existing grid infrastructure, reduces overall ratepayer costs of electrification.

What do truckers need from depots?



- A guaranteed charging spot so truck is ready to go at beginning of duty cycle
- A secure facility (trucks are worth \$400k+, cargo can be more)
- Schedulable mid-route top-offs
- Takeaway: these conditions require controlled access that 3rd party depots can provide, and traditional 'truck stops' can not

Site Access

- **Recommendation: site must be open to at least two different fleet companies**
- Reasoning:
 - Multi-fleet EV charging hubs can provide a "public" solution for fleet operators
 - MHD vehicles and business models are fundamentally different from LD - charging depots must be able to deliver guaranteed + schedulable charging times
 - For these fleets, security and safety of vehicles and their cargo as well as guaranteed availability of charging is imperative, and may require gates and/or fencing.

Analogous to Community Solar

- Shared infrastructure that multiple entities invest in, and share the benefits from
- Will be a major way small fleets are able to access charging

Equitable & Accessible Requires Offsite + Onsite

This transition cannot happen exclusively “behind the fence.” Equitable access requires planning for charging infrastructure for those that cannot install their own.

3rd Party Truck Depot



Onsite “Behind Fence”



Third-party infrastructure and third-party capital increase accessibility to the zero emission solutions



abrowning@forummobility.com

510.520.0630



@forum_zev



[linkedin.com/company/forum-mobility](https://www.linkedin.com/company/forum-mobility)