

Low Carbon Fuel Standard Workshop:

LCFS Credits for Off-Road Electric Transportation

August 5, 2009

California Environmental Protection Agency



Air Resources Board



Staff Will Evaluate LCFS Credits for Off-Road Electric Vehicles

- Work with industry, utility and environmental stakeholders, as directed by Board Resolution 09-3, to evaluate the feasibility of generating credits for electricity use in off-road transportation sources, such as:
 - New categories and applications of electric forklifts, and
 - Other similar electric use for off-road vehicles and equipment



Benefits of LCFS Credit for Off-Road Electric

- Promote use of lower carbon intensity fuels for off-road transportation
- Encourage development and use of electric technologies
- Diversify fuel pool
- Reduce GHG emissions

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Eligibility for LCFS Credit

- Not eligible:
 - Alternative marine power, or “cold ironing”
 - Electric Transport Refrigeration Units, or TRUs
 - Port Cargo Handling equipment
 - Lawn and garden equipment
 - Electric golf carts
 - Existing forklift, scrubber, sweepers use (including food warehouses and confined spaces)
- Eligible :
 - Forklifts
 - Scrubbers, Sweepers
 - Other electric applications may be considered

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Industry Estimates of Potential Credits

Potential GHG displaced (MMTCO₂e) in 2020

Forklifts	0.05 - 1.81
Truck Stop Electrification	0.20 - 0.57
Sweepers, Scrubbers	<u>0.04 - 0.21</u> 0.29 - 2.59

Source: TIAX, LLC (2008). Electric Transportation and Goods Movement Technologies in California: Technical Brief. Revised September 2008.

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Staff Seek Additional Information

- Data on current and projected future off-road electric use
- How to quantify electric usage to determine LCFS credits: metering options, estimation techniques
- How to identify and encourage new electric applications for forklifts and similar off-road transportation?
- We would appreciate feedback by August 31, 2009

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Contacts

- **Contacts:**

Susan Solarz, Air Pollution Specialist; (916) 323-2790;
email: ssolarz@arb.ca.gov

Jing Yuan, Air Pollution Engineer; (916) 322-8875;
email: jyuan@arb.ca.gov

Renee Littaua, Manager, Fuels Section; (916) 322-6019 ;
email: rlittaua@arb.ca.gov