

Oregon Clean Fuels Program

Item B: Additional Opportunities for Credit Generation

November 2nd, 2016
Portland, Oregon

Purpose

- The purpose of this agenda item is to consider how increasing the supply of credits can contain costs.
- The purpose of these slides are to focus on how to accurately create incentives for electricity being used in transportation.
- The program is intended to help commercialize any and all lower-carbon alternatives to gasoline and diesel, so accurately accounting for the energy provided by those alternatives in new and existing uses is important for the success of the program.

HB 1547 (2016)

“The Legislative Assembly finds and declares that: Transportation electrification is necessary to reduce petroleum use, achieve optimum levels of energy efficiency and carbon reduction, meet federal and state air quality standards, meet this state’s greenhouse gas emissions reduction goals described in ORS 468A.205 and improve the public health and safety;”

- Section 20 (2)(a)

Electricity issues

- Residential charging of electric vehicles
 - DEQ continues to work with the state's utilities regarding their participation in the program.
 - For the investor-owned utilities, DEQ is collaborating with the Public Utilities Commission in their implementation of HB 1547.
 - For the municipal utility districts and co-ops, DEQ is working on developing guidance to assist in the calculation of utility-specific carbon intensity values as provided for in the current rules. In many cases, these utilities use more zero-emitting resources for their electricity and thus would have lower carbon intensity values.
 - For individual home owners, DEQ is working on developing guidance that clarifies when and if they can participate in the program.

Electricity issues

- Non-residential electric vehicle charging
 - DEQ is working on developing guidance that clarify the methodology to calculate credit generation when both on-site renewable generation and grid power are being used by electric charging stations.

Public Transit

- Supporting alternative fuels for mass transit will help the state by reducing diesel particulate emissions, driving electrification outside of light-duty, single occupancy vehicles, and helping the state meet its climate goals.
- TriMet and Lane Transit District (LTD) have electric buses on order, with LTD getting their first one before the end of the year.
- Rough, preliminary estimates are that electric buses would each generate about 20-35 credits per year.

Light Rail & Streetcar

- DEQ plans to add provisions to allow for credits to be generated from electricity being used to propel light rail and streetcars.
- If Oregon adopts California's methodology and EERs for light rail and streetcars, our rough estimate based on 2014 data is that the MAX system would generate at least 12,000/yr, and Portland Streetcar around 400-500/yr.

Light Rail & Streetcar

- California's methodology for crediting fixed guideway mass transit systems includes an additional credit for system expansions after their program's baseline year of 2010.
- The additional credit assumes the new light rail or streetcar service displaces diesel use and emissions from buses that would otherwise be serving that area.
- DEQ is considering adopting this methodology with applicability to any expansions put in service after its baseline year.

Transit point of regulation

- For electric transit, including buses, DEQ believes it makes sense to explicitly designate the transit agency as the default credit generator for their vehicles.
- DEQ invites comments on who those credits should waterfall to if the transit agency tells the agency it does not wish to participate in the program.

Additional EERs

Oregon Department of Environmental Quality Table 8 – 340-253-8080 Oregon Energy Economy Ratio Values for Fuels Used as Diesel Substitutes	
Fuel/Vehicle Combination	EER Value Relative to Diesel
Diesel fuel or biodiesel blends	1.0
Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG) (Spark-Ignition Engines)	0.9
Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG) (Compression-Ignition Engines)	1.0
Electricity, Battery Electric Vehicle or Plug-In Electric Vehicle	2.7
Hydrogen or Fuel Cell Vehicle	1.9

The CFP currently has a single EER for light duty vehicles and a single EER for electric medium and heavy duty vehicles.



Current California EERs

Table 4. EER Values for Fuels Used in Light- and Medium-Duty, and Heavy-Duty Applications.

<i>Light/Medium-Duty Applications (Fuels used as gasoline replacement)</i>		<i>Heavy-Duty/Off-Road Applications (Fuels used as diesel replacement)</i>	
<i>Fuel/Vehicle Combination</i>	<i>EER Values Relative to Gasoline</i>	<i>Fuel/Vehicle Combination</i>	<i>EER Values Relative to Diesel</i>
Gasoline (incl. E6 and E10) or E85 (and other ethanol blends)	1.0	Diesel fuel or Biomass-based diesel blends	1.0
CNG/ICEV	1.0	CNG or LNG (Spark-Ignition Engines) CNG or LNG (Compression-Ignition Engines)	0.9 1.0
Electricity/BEV, or PHEV	3.4	Electricity/BEV, or PHEV* Truck Electricity/BEV or PHEV* Bus Electricity/Fixed Guideway, Heavy Rail Electricity/Fixed Guideway, Light Rail Electricity/Trolley Bus, Cable Car, Street Car Electricity Forklifts	2.7 4.2 4.6 3.3 3.1 3.8
H2/FCV	2.5	H2/FCV H2 Fuel Cell Forklifts	1.9 2.1

*BEV = battery electric vehicle, PHEV = plug-in hybrid electric vehicle, FCV = fuel cell vehicle, ICEV = internal combustion engine vehicle.

Additional EERs

- The data for the electric bus EER dates back to 2014, and only covers two models of electric buses.
- DEQ plans to work with the transit agencies purchasing electric buses to determine if the California EER is appropriate for the models they are purchasing, and if California's EERs for Light Rail and Trolley Bus/Cable Car/Street Car are appropriate for the light rail and streetcar systems we have in the state.

Next Steps

- Written comments are due next Friday, November 11th to Oregoncleanfuels@deq.state.or.us
- DEQ will review oral and written public comments. Comments submitted following the deadline will be reviewed but may not be reflected in the materials for the next meeting.

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.