

Accelerating the Adoption of Electric Transit Buses



Having zero emission medium- and heavy-duty vehicles is critical for Oregon to meet its greenhouse gas reduction goals. The benefits in the battle against the impacts of climate change are significant, but even more so are improvements to local air quality and public health. DEQ is considering adoption of regulations to require more of these vehicles to be zero emission, but right now, the Clean Fuels Program has several new ways to kick start this transition.

The case for electric transit buses

There are many reasons a transit agency would want to change their transit buses to electric. Electric buses eliminate tailpipe emissions and reduce harmful health effects to riders, drivers, and the community. They generally have lower fuel and maintenance costs, are quieter, and reduce greenhouse gases. Electric buses are key to providing a community with equitable transportation options.

Moving from one to many

Many fleets are currently participating in pilot programs where they have bought a single electric vehicle. But how do we get that to turn into 10 or 100 electric buses given their higher initial cost? There are a number of programs that may provide some or all of the costs for an electric bus such as those offered through local utilities, and federal and state grant programs. In addition, the Clean Fuels Program can play a role.

Generating credits in the Clean Fuels Program

Transit agencies are currently eligible to generate CFP credits if they own the chargers used to charge electric buses. Every quarter, the transit agency reports the amount of electricity to DEQ and credits are issued to their account. They can sell these credits and use the revenue to support their electrification activities.

On an individual vehicle level, the rate of credit generation may seem to be a little drop in a very large bucket. In order to accelerate that pace, an eligible fleet manager can now request for DEQ to issue credits in advance of when they would normally be generated. This is called advance crediting.

How does advance crediting work?

The transit agency estimates the number of miles typically driven by the electric bus and the amount of electricity that bus would use over a year. DEQ will work with the transit agency to translate those estimates into the number of CFP credits that are generated in a year. Then that value gets multiplied by up to six years to calculate the number of advance credits that are available to the transit agency.

What happens next?

- Applying for advance credits – DEQ will accept applications at least one time a year.
- Negotiating the agreement – An agreement will formalize the number of advance credits issued and how long the payback period is.
- Selling the credits – Credits can be sold through the Oregon Fuels Reporting System at any time throughout the year.
- Investing the revenue – The revenue can be spent on anything related to electrifying the transit fleet.
- Paying back the advance – The transit agency will submit quarterly reports but instead of generating new credits, its balance will be drawn down.
- Returning to regular credit generation – Once the advance is paid off, the transit agency can continue to generate new credits.

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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

Electric Transit Bus Example

Here is an example of an electric transit bus that drives approximately 40,000 miles per year which uses approximately 88,000 kWh per year to charge. DEQ estimates that the fleet could get \$74,000 dollars through the advance crediting provision over a six-year period.

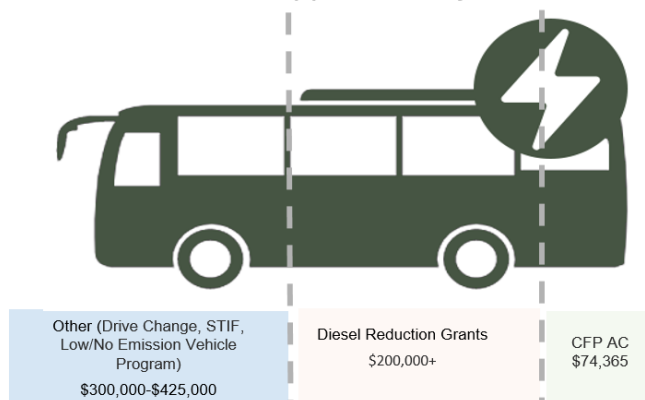
Advance Credits: Transit bus by the Numbers

Year	Estimated			Revenue if credits sold @ \$125
	Miles	kWh	Credits	
2022	40,000	88,000	104	\$13,030.38
2023	40,000	88,000	102	\$12,735.36
2024	40,000	88,000	100	\$12,442.32
2025	40,000	88,000	96	\$12,052.26
2026	40,000	88,000	96	\$12,052.26
2027	40,000	88,000	96	\$12,052.26
			Total:	\$74,364.84

This calculation could vary depending on the source of the transit agency's electricity, the size of the transit bus, and the market price of the credits at the time the transit agency wants to sell their credits.

Example: Electric Transit Bus

The cost of an electric transit bus is approximately \$650,000



If a new electric transit bus costs \$500,000, a transit agency could stitch together multiple funding sources to pay for it including: the federal Low-No Emission Program, the Statewide Transportation Improvement Fund, a utility grant such as the PGE Drive Change or PacifiCorp Electric Mobility grants, the state diesel reduction grant, and CFP advance crediting.

For any additional questions, contact the Clean Fuels Program at OregonCleanFuels@deq.state.or.us

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.