



**Washington State
Department of Transportation**

CLEAN FUELS PROGRAM - STATE TRANSPORTATION INVESTMENT CREDIT REVENUE GENERATION FORECAST— INITIAL REPORT

October 2022

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Clean Fuels Program Credit Revenue Forecasting Proviso

In 2022, the Washington Legislature passed [ESSB 5974, amending the Clean Fuels Program \(CFP\) and](#) directing the Washington State Department of Transportation (WSDOT), in coordination with the Department of Ecology (Ecology), to immediately begin work on identifying the amount of credit revenues likely to be generated from the state transportation investments funded in an omnibus transportation appropriations act, including the Move Ahead WA transportation package. In addition, beginning November 1, 2022, and annually thereafter, the WSDOT was directed to present a detailed projection of the credit revenues generated under subsection (3) of [RCW 70A.535.050](#) and a preferred reinvestment strategy for the revenues for the following 10-year time period to the joint transportation committee (ESSB 5974).

Section 408 of [ESSB 5974](#) also directed the Department of Ecology to adopt rules that reduce the carbon intensity of transportation fuels used in Washington by 20 percent below the 2017 levels by the year 2038. Section 412 of the [ESSB 5974](#) further requires that the CFP rules allow the generation of credits from state transportation investments funded in an omnibus transportation appropriations act for activities and projects that reduce greenhouse gas emissions and decarbonize the transportation sector. To initiate the rulemaking process, the Department of Ecology filed its preproposal statement of inquiry for possible rule making (CR-101) in July 2021.

Ecology filed its proposed rulemaking notice (CR-102) on July 18th, 2022, with the public comment period closing August 31st, 2022. To meet the legislative mandate for the CFP to start January 2023, Ecology is expected to finalize and file an order to adopt the rule (CR-103) at the end of November 2022. The information in this report is based on the draft rule released for public comment on July 18th, 2022. WSDOT will reassess what transportation investments are credit eligible and update revenue forecasting methodologies once an order to adopt the final rule has been filed.

WSDOT has coordinated with Ecology to assess eligibility under the draft Clean Fuels Program rule of transportation investments identified in subsection (3) of [RCW 70A.535.050](#), worked with

applicable WSDOT programs to identify strategies for forecasting credit revenues, identified resource needs and initiated the process for securing resources to conduct the work.

This report summarizes the eligible credit generating entities in the proposed program, identifies the credit generating entities for credit eligible state transportation investments, outlines the methodology for forecasting credit revenues from select state transportation investments and outlines the process for determining the preferred credit revenue reinvestment strategy. And finally, this report identifies the next steps or actions to be taken.

Investment Eligibility for Credit Generation

Clean Fuels Program credits are generated mainly through the production or transfer of fuel with a lower carbon intensity than the standard set by Ecology. The proposed rule sets requirements for the generation of credits and deficits for transportation fuels. Credit and deficit generating entities are proposed as follows¹:

Liquid fuels

First fuel reporting entities for liquid fuels would be the producer or importer of the liquid fossil fuel. For liquid fuels that are blended alternative and fossil fuels, the first fuel reporting entity would be:

- The producer or importer of alternative fuels for the alternative fuel component.
- The producer or importer of liquid fossil fuels for the fossil fuel component.

When transferring ownership of a given amount of liquid fuel, entities would be able to simultaneously transfer status as a credit or deficit generator, or retain status as a credit or deficit generator.

¹ Ecology July 2022, Publication 22-02-029, Preliminary Regulatory Analyses: (Including the: Preliminary Cost-Benefit Analysis, Least Burdensome Alternative Analysis, Administrative Procedure Act Determinations, Regulatory Fairness Act Compliance) Chapter 173-424 WAC, Clean Fuels Program Rule, Chapter 173-455 WAC, Air Quality Fee Rule

Gaseous fuels

First fuel reporting entities for gaseous fuels would be designated under the proposed rule as follows:

- The first fuel reporting entity for gaseous renewable fuels would be the producer or importer of biomethane or renewable propane.
- For fossil CNG, LNG, L-CNG, and propane, the first fuel reporting entity is the entity that owns the fueling equipment through which the fossil fuel is dispensed to motor vehicles for transportation use.
- The first fuel reporting entity for fossil propane or hydrogen used in forklifts would be the forklift fleet owner.
- The first fuel reporting entity for hydrogen is the entity that owns the fueling supply equipment through which hydrogen fuel is dispensed to motor vehicles for transportation use.

Electricity

The proposed rule details entities that are eligible to generate credits for electricity:

- Used to charge an electric vehicle at non-residential locations.
- Used to power fixed guideway vehicles such as light rail systems, streetcars, aerial tram, or transit buses.
- Used as transportation fuel supplied to electric forklifts.
- Supplied to electric transport refrigeration units.
- Supplied to electric cargo handling equipment.
- Supplied to ocean-going vessels.
- Used to charge an electric vehicle at a residence

(Note: Under the proposed rule, "Motor vehicle" means any vehicle, vessel, watercraft, engine, machine, or mechanical contrivance that is self-propelled. Based on this definition, the charging of electrified ferry vessels would be treated as charging an electric vehicle at non-residential location. WSDOT has submitted comments to Ecology to include a separated definition for ferry vessels.)

Under the proposed rule, for residential charging, if an electric utility does not register or designate an aggregator², then the backstop aggregator³ is eligible to claim any base credits that the utility could have generated for the following year. If a backstop aggregator does not register, then the electric vehicle manufacturer is eligible to claim the base credits associated with the electric vehicles that the backstop aggregator could have generated for the following year. Similarly, for nonresidential charging, if the charging equipment owner or service provider and the electric utility do not register or designate an aggregator, the backstop aggregator is eligible to claim base credits.

Additionally, any entity would be eligible to generate incremental credits for improvements in carbon intensity of electricity used for residential EV charging.

Finally, the proposed rule would set requirements for a backstop aggregator. A backstop aggregator would be required to: Be an organization exempt from federal taxation under section 501(c)(3) of the U.S. Internal Revenue Code.

Based on the proposed CFP rule, the following Omnibus Transportation Appropriation Act investments have the potential to generate credits:

² "Aggregator" or "credit aggregator" means a person who registers to participate in the clean fuels program, described in WAC 173-424-140(3), on behalf of one or more credit generators to facilitate credit generation and to trade credits.

³ "Backstop aggregator" means a qualified entity approved by ecology under WAC 173-424-140(3) to aggregate credits for electricity used as a transportation fuel, when those credits would not otherwise be generated.

- Zero emissions vehicle fueling infrastructure (electric and green hydrogen) grants
- Transit infrastructure⁴ grants that result in the conversion to lower carbon intensity fuels (electric, hydrogen or propane fuels).
- Electrification of the state ferry vessel fleet

Availability of credit revenues for re-investment

Based on the proposed CFP rule, the following entities are identified as eligible to generate credits from the Omnibus Transportation Appropriation Act investments:

Table 1. Credit generators by eligible transportation appropriation investment type

Investment Type	Primary Credit Generators	Secondary Credit Generators	Other Eligible Credit Generators
Zero emissions vehicle fueling infrastructure (non-residential)	Owner of electric charging or hydrogen fueling equipment	Utility or designated aggregator	Backstop aggregator
Electrification of transit infrastructure	Transit agency operating the system	Utility or designated aggregator	Backstop aggregator
Conversion of transit infrastructure to hydrogen or propane fuels	Owner of fueling equipment	Designated aggregator	Backstop aggregator
Electrification of the state ferry vessel fleet	WSDOT	Utility or designated aggregator	Backstop aggregator

⁴ Transit infrastructure includes light-duty, medium-duty, and heavy-duty public transportation vehicles and the associated equipment and infrastructure needed to support charging/fueling.

As illustrated in Table 1, several state Omnibus Transportation Appropriation Act investments have the potential to generate credits under the proposed CFP. Of these, only the electrification of the state ferry fleet will generate revenue that the State can reinvest.

The state is also investing in ZEV fueling infrastructure (such as the EV chargers that are installed at many state office buildings) through other funding mechanisms, which will also potentially generate revenue for the state to invest.

Advance crediting

In section WAC 173-424-550 of the draft rule, WSDOT and other public entities that are implementing projects and programs to be funded through the omnibus transportation appropriations act are eligible to apply for advance credits, provided that the projects and programs decarbonize the transportation sector and are eligible to generate credits.

This includes investments in medium and heavy-duty vehicles, light-duty vehicles if they are part of a program to fully electrify its fleet within a 15-year time period, electrification of the state ferry fleet and other types of investments that Ecology may identify. Ecology may advance no more than six years of credits for any single investment or program. Advance credits must be “paid back” through actual credit generation within a payback period that may not exceed nine years. The issuance of advance credits each year is capped at five percent of the total number of deficits generated in the prior compliance year.

Credit Revenue Forecasting Methods

Diagram 1 (below) provides an outline of the steps and initial information sources WSDOT will use to forecast credit revenues. Initially, WSDOT will be working with limited data from early adopter projects to estimate infrastructure cost and energy/fuel dispensed. Because of the limited data, WSDOT anticipates providing a forecasted range of revenue generation. WSDOT will also assess if there are out of state sources of information to better estimate infrastructure costs.

Credit Revenue Forecasting Process

Step 1 - Identify investment value per credit eligible investments from the Omnibus Transportation Appropriation Act.

Step 2 - Determine amount of equipment programmed or forecasted to be installed based on funding level. Factor inflation into estimate.

- For zero-emission fueling infrastructure, use ZEV grant program data for EV and hydrogen fueling infrastructure investments. Potentially supplement with infrastructure cost data from Oregon and California.
- For transit electrification, use early adopter data from Public Transportation grant programs.
- For ferries electrification, use programmed investments from updated state ferries electrification plan.

Step 3 - Determine forecasted total kilowatts of electricity or megajoules of hydrogen fuel dispensed per year per site or grant recipient program.

- For zero-emission fueling investments, use 2019 ZEV grant program data on energy/fuel dispensed and forecasted adoption rates of zero emissions vehicles.
- For low carbon transit investments, use early adopter data from Public Transportation grant programs.
- For ferries electrification, use programmed investments from updated state ferries electrification plan.

Step 4 - Use Clean Fuels Program credit calculating methodologies to determine forecasted credits.

Step 5 - Work with Ecology to determine advance crediting.

Step 6 - Estimate forecasted revenue based on credit market.

Reinvestment Strategy Development

To develop a preferred reinvestment strategy for credit revenues from state transportation investments funded through omnibus transportation appropriation acts, WSDOT will evaluate the use of multiple criteria in the selection/prioritization process. Criteria could include the magnitude of the project benefits, the certainty of success, cost-effectiveness, and readiness to proceed.

Next Steps

WSDOT has identified the following as next steps for credit revenue forecasting:

- Update assessment of credit eligible investments funded through omnibus transportation appropriation acts based on final CFP rule.
- Assess consultant support needs for implementing work, including:
 - Developing cost benefit methodology that can be used to compare GHG reduction benefits of different types of infrastructure investments and determine most impactful investments for decarbonizing the transportation sector,
 - Facilitation across WSDOT divisions to reach agreement on reinvestment strategy, and
 - Drafting the 2023 and 2024 reports.
- Collect data from early adopters in the Zero Emissions Vehicle Infrastructure Partnership grants and Public Transportation transit grant programs to understand the cost range of infrastructure and energy/fuel dispensing rates.
- Coordinate program development and implementation with state agency partners, including the Electric Vehicle Coordinating Council.
- Update Ferry System Electrification Plan and determine energy economy ratio for ferry vessel and terminal electrification.

- Seek FTE for ongoing management of credit revenue forecasting and reinvestment prioritization work. WSDOT will be submitting a decision package seeking funding to support this work.