



PROPOSED RULE MAKING

CR-102 (June 2024)
(Implements RCW 34.05.320)
Do **NOT** use for expedited rule making

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FILED

DATE: June 16, 2025

TIME: 12:07 PM

WSR 25-13-080

Agency: Department of Ecology AO #23-10

☒ **Original Notice**

☐ **Supplemental Notice to WSR** _____

☐ **Continuance of WSR** _____

☒ **Preproposal Statement of Inquiry was filed as WSR** 24-01-089 ; or

☐ **Expedited Rule Making--Proposed notice was filed as WSR** _____; or

☐ **Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or**

☐ **Proposal is exempt under RCW** _____.

Title of rule and other identifying information: (describe subject) Chapter 173-424 WAC (Clean Fuels Program Rule)

For more information on this rulemaking, please visit: <https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/rulemaking/wac-173-424>

Hearing location(s):

Date:	Time:	Location: (be specific)	Comment:
July 22, 2025	10:00 AM PT	Webinar – register using the following URL: https://waecy-wa.gov.zoom.us/meeting/register/w5PpSWg6SoCTQMtmffQk7Q . Call-in is available via using the registration link or by dialing (253) 215-8782.	We are holding this hearing via webinar. This is an online meeting that you can attend from any computer with internet access. The hearing will follow a presentation and question and answer session hosted by Ecology staff.
July 23, 2025	1:00 PM PT]	Webinar – register using the following URL: https://waecy-wa.gov.zoom.us/meeting/register/SnK4KOWwQi2C4IkQ6t3q5Q . Call-in is available via using the registration link or by dialing (253) 215-8782.	We are holding this hearing via webinar. This is an online meeting that you can attend from any computer with internet access. The hearing will follow a presentation and question and answer session hosted by Ecology staff.

Date of intended adoption: September 30, 2025 (Note: This is **NOT** the effective date)

Submit written comments to:

Name Adam Saul

Address Department of Ecology
Climate Pollution Reduction Program
PO Box 47600, Olympia, WA 98504-7600
Or

Department of Ecology
Climate Pollution Reduction Program
300 Desmond Drive SE, Lacey, WA 98503
Email adam.saul@ecy.wa.gov

Fax N/A

Other Submit written comments online via:

<https://ecology.commentinput.com?id=bS4tQR6WV>

Beginning (date and time) June 16, 2025, 12:00 AM

Assistance for persons with disabilities:

Contact Ecology ADA Coordinator

Phone 360-407-6831

Fax N/A

TTY People with speech disabilities may call TTY at 877-833-6341. People with impaired hearing may call the Washington Relay Service at 711..

Email ecyADACoordinator@ecy.wa.gov

Other [Accessibility & ADA - Washington State Department of Ecology](#)

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The purpose of the proposed rule amendments to the Clean Fuel Standard (CFS) is to expand credit generating opportunities for fuels used in hard-to-decarbonize transportation sectors, increase environmental benefits, streamline reporting and compliance procedures, and make other changes identified during rule development and the first two years of program implementation. The CFS works with the Clean Vehicles Program to reduce pollution from the transportation sector, Washington's largest single source of greenhouse gas emissions.

Proposed rule amendments include:

- Updated requirements regarding the production of low carbon intensity alternative jet fuel, in alignment with Engrossed Substitute Senate Bill 5447 (Chapter 232, Laws of 2023).
- New requirements for electrolysis energy used in the production of alternative jet fuel and alternative marine fuel.
- Third-party verification requirements to improve the accuracy of information used to generate credits and deficits in the program.
- Amended requirements for the use of indirect ("book-and-claim") accounting of low carbon intensity biomethane or electricity, which allows fuel producers to claim renewable electricity delivered to the grid or biomethane injected into a common carrier pipeline under certain conditions. The amendments aim to encourage in-state and regional renewable energy production and maximize local environmental benefits.
- Updated requirements to avoided methane crediting, which grant fuel producers additional credits for capturing methane that would otherwise be released into the atmosphere. The amendments establish new avoided methane crediting periods for biomethane produced from dairy and swine manure and organic waste diverted from landfills.
- Amended requirements related to capacity credits for zero emission vehicle infrastructure, including expanding credit generation opportunities to sites shared by multiple fleets.
- Updated requirements to harmonize the rule with California and Oregon's clean fuel programs.
- Amendments to improve clarity and readability, correct errors, streamline reporting and registration requirements, and make other improvements to program implementation.

The changes are expected to decrease compliance burdens on regulated parties, strengthen stability of the credit market, and ensure the credibility of environmental attributes claimed in the program.

Reasons supporting proposal: This rulemaking is necessary to improve program implementation, ensure the accuracy of data reported in the program, and promote a balanced credit market that incentivizes in-state and regional environmental benefits. Expanding credit generation opportunities for alternative jet fuel and alternative marine fuel will accelerate the adoption of clean technologies in two of the most difficult-to-decarbonize transportation sectors. The addition of a third-party verification program will improve data accuracy and the operation of the credit market.

Capacity credits provide upfront financial incentives for the installation of electric vehicle charging and hydrogen refueling infrastructure. Expanding the applicability to "shared" sites for heavy-duty vehicles aligns with the most prevalent business model for charging infrastructure development in this vehicle class, and will help accelerate deployment of zero-emission fleet vehicles statewide.

Statutory authority for adoption: Chapter 70A.535 RCW, Transportation Fuel – Clean Fuels Program

Statute being implemented: Chapter 70A.535 RCW, Transportation Fuel – Clean Fuels Program

Is rule necessary because of a:

Federal Law?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Federal Court Decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
State Court Decision?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

If yes, CITATION:

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: N/A.

Name of proponent: (person or organization) Department of Ecology

Type of proponent: ☐ Private. ☐ Public. ☒ Governmental.

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting	Adam Saul	Lacey	360-742-7998
Implementation	Abbey Brown	Lacey	360-819-0158

Is a school district fiscal impact statement required under [RCW 28A.305.135](#)? ☐ Yes ☒ No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name N/A
Address N/A
Phone N/A
Fax N/A
TTY N/A
Email N/A
Other N/A

Is a cost-benefit analysis required under [RCW 34.05.328](#)?

☒ Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name Adam Saul
Address Department of Ecology
Climate Pollution Reduction Program
300 Desmond Drive SE, Lacey, WA 98503
Phone (360) 742-7998
Fax N/A.
TTY People with speech disabilities may call TTY at 877-833-6341. People with impaired hearing may call the Washington Relay Service at 711.
Email adam.saul@ecy.wa.gov
Other N/A

☐ No: Please explain:

Regulatory Fairness Act and Small Business Economic Impact Statement

Note: The [Governor's Office for Regulatory Innovation and Assistance \(ORIA\)](#) provides support in completing this part.

(1) Identification of exemptions:

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see [chapter 19.85 RCW](#)). For additional information on exemptions, consult the [exemption guide published by ORIA](#). Please check the box for any applicable exemption(s):

☐ This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.061](#) because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

☐ This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by [RCW 34.05.313](#) before filing the notice of this proposed rule.

☐ This rule proposal, or portions of the proposal, is exempt under the provisions of [RCW 15.65.570](#)(2) because it was adopted by a referendum.

☒ This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025](#)(3). Check all that apply:

- | | |
|---|--|
| <input type="checkbox"/> RCW 34.05.310 (4)(b)
(Internal government operations) | <input checked="" type="checkbox"/> RCW 34.05.310 (4)(e)
(Dictated by statute) |
| <input type="checkbox"/> RCW 34.05.310 (4)(c)
(Incorporation by reference) | <input type="checkbox"/> RCW 34.05.310 (4)(f)
(Set or adjust fees) |
| <input checked="" type="checkbox"/> RCW 34.05.310 (4)(d)
(Correct or clarify language) | <input type="checkbox"/> RCW 34.05.310 (4)(g)
((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |

☐ This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025](#)(4). (Does not affect small businesses).

☐ This rule proposal, or portions of the proposal, is exempt under RCW _____.

Explanation of how the above exemption(s) applies to the proposed rule:

(2) Scope of exemptions: Check one.

☐ The rule proposal: Is fully exempt. (Skip section 3.) Exemptions identified above apply to all portions of the rule proposal.

☒ The rule proposal: Is partially exempt. (*Complete section 3.*) The exemptions identified above apply to portions of the rule proposal, but less than the entire rule proposal. Provide details here (consider using [this template from ORIA](#)): Ecology baselines are typically complex, consisting of multiple requirements fully or partially specified by existing rules, statutes, or federal laws. Where the proposed rule differs from this baseline of existing requirements, it is typically subject to (i.e., not exempt from) analysis required under the Regulatory Fairness Act (RFA; Chapter 19.85 RCW) based on meeting criteria referenced in RCW 19.85.025(3) as defined by the Administrative Procedure Act in RCW 34.05.310. The Small Business Economic Impact Statement (SBEIS) below includes a summary of the baseline for this rulemaking, and whether or how the proposed rule differs from the baseline.

☐ The rule proposal: Is not exempt. (*Complete section 3.*) No exemptions were identified above.

(3) Small business economic impact statement: *Complete this section if any portion is not exempt.*

If any portion of the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

☐ No Briefly summarize the agency's minor cost analysis and how the agency determined the proposed rule did not impose more-than-minor costs. _____

☒ Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses and a small business economic impact statement is required. Insert the required small business economic impact statement here:

This Small Business Economic Impact Statement (SBEIS) presents the: Compliance requirements of the proposed rule; Results of the analysis of relative compliance cost burden; Consideration of lost sales or revenue; Cost-mitigating action taken by Ecology, if required; Small business and local government consultation; Industries likely impacted by the proposed rule; Expected net impact on jobs statewide.

A small business is defined by the Regulatory Fairness Act (chapter 19.85 RCW) as having 50 or fewer employees. Estimated costs are determined as compared to the existing regulatory environment—the regulations in the absence of the rule. The SBEIS only considers costs to “businesses in an industry” in Washington State. This means that impacts, for this document, are not evaluated for government agencies.

The existing regulatory environment is called the “baseline” in this document. It includes only existing laws and rules at federal and state levels.

This information is excerpted from Ecology's complete set of regulatory analyses for this rulemaking. For complete discussion of the likely costs, benefits, minimum compliance burden, and relative burden on small businesses, **see the associated Preliminary Regulatory Analyses document (Ecology publication no. 24-14-039, June 2025)**. We have retained the section numbering from the Preliminary Regulatory Analyses to facilitate cross-referencing with the document for additional information and discussion.

COMPLIANCE REQUIREMENTS OF THE PROPOSED RULE, INCLUDING PROFESSIONAL SERVICES

2.2 Baseline

The baseline for our analyses generally consists of existing laws and rules. This is what allows us to make a consistent comparison between the state of the world with and without the proposed rule amendments.

For this rulemaking, the baseline includes:

- The existing rule: Chapter 173-424 WAC, Clean Fuels Program.
- The authorizing statute: Chapter 70A.535 RCW, Transportation Fuels – Clean Fuels Program.

2.3 Proposed rule amendments

2.3.1 Adding flexibility or clarity

2.3.1.1 Definitions and benchmarks

The proposed rule amendments would add or amend multiple definitions to support other amendments to the Clean Fuels Program, discussed in the other sections of this chapter.

The proposed rule amendments would also add annual carbon intensity benchmarks for hydrogen intended for use in single-fuel vehicles.

These proposed amendments do not have impacts in and of themselves, beyond clarity and beneficial alignment with the California and Oregon clean fuel programs, or facilitation of covered entities' use of the Washington Fuel Reporting System (WFRS). Impacts occur based on where and how these terms and fuels are used throughout the rule. Where each is relevant in the sections below, and in subsequent analysis of costs and benefits, we also account for these definitions and benchmark amendments.

2.3.1.2 Mass balance reporting flexibility

The proposed rule amendments would add specific options and requirements as to how to report gallons transferred in and out of commingled storage tanks or that are commingled in production or transport.

Given baseline requirements to track the carbon intensity of all physical gallons of liquid fuel, and the lack of clarity on allowable methods of tracking carbon intensity for commingled fuels, we expect this proposed rule amendment to add clarity and flexibility for reporters with fuels that are commingled in storage, production, or transport tanks. Adding flexibility to choose mass balance reporting would be a potential cost savings and would be chosen by reporters who have previously defaulted to substitute fuel pathway codes or the fossil baseline carbon intensity when the actual carbon intensity of the fuel has not been able to be determined due to commingled storage. Reporters would do this when the actual carbon intensity of the fuel is lower than the substitute or fossil carbon intensity scores, resulting in additional credits generated. For entities who have already requested Ecology approval to use mass balancing, there would be no change to cost.

As noted above, however, we received feedback from interested parties during development of the proposed rule that they should be able to comply with baseline requirements by mass balancing at the state level rather than the facility level, not tracking physical gallons once they've entered the state system. Ecology determined this approach is not sufficient, however, as it does not sufficiently track the carbon intensity of the fuel as it moves through the state system or is exported outside of the state which results in carbon intensity reporting that is not reflective of what is actually consumed in Washington.

2.3.1.3 Aligning specified feedstocks with California and Oregon

The proposed rule amendments would add the following types of specified source feedstocks that are nonprimary products of commercial or industrial processes:

- Small-diameter, non-merchantable forestry residues removed for the purpose of forest fire fuel reduction, or forest stand improvement, and from a treatment where non-clear cutting occurred.
- Organic portion of municipal solid waste that is diverted from landfill disposal.
- Corn stover.
- Other feedstocks designated as specified-source at the time of pathway review and prior to certification.
 - Adding specified feedstocks to align with California and Oregon clean fuels programs.

The proposed amendments would align the Clean Fuels Program with the California and Oregon clean fuel programs. This would improve regulatory consistency across jurisdictions and expand potential pathways available for alternative fuels production and credit generation. We do not expect net costs of this proposed amendment, as entities would only be likely to voluntarily participate if they expected a net private benefit.

2.3.1.4 Pathway application flexibility

The proposed rule amendments would add the option of providing a letter from the qualified vehicle owner or the vehicle manufacturer that has an approved energy economy ration (EER) in order to add joint applicants to the EER-adjusted carbon intensity applications.

They would also delineate the process and annual timing for:

- Ecology to propose a draft utility-specific carbon intensity of electricity to state utilities for review.
- Utilities that disagree with their draft carbon intensity to provide information to adjust it.
- Ecology finalizing the utility-specific carbon intensities.

We expect these proposed amendments to result in potential cost-savings of effort on the joint EER applicant's part, if it is easier to obtain a letter from the vehicle owner that has an approved EER, in cases the manufacturer does not have approved-EER.

We also expect the provision of a specific process for revising Ecology's utility-specific carbon intensities to result in added clarity for program participants, as well as improved accuracy of utility-specific carbon intensity values. While the proposed revision process includes a deadline for disagreement documentation, it is overall more flexible and transparent than the baseline rule language that only sets the deadline for Ecology to post final values. This amendment is to codify the current practice in the rule.

2.3.1.5 Clarifying without material impact

The proposed rule amendments would add or amend language in multiple sections to improve clarity and consistency without materially impacting the rule's requirements. This includes, but is not limited to:

- Rewording edits for consistency with terms used in the Washington Fuel Reporting System (WFRS).
- Rewording edits for clarity, without material impact on meaning.
- Using terminology consistently throughout the rule.
- Using terminology that is consistent with terms used in the California and Oregon clean fuel programs.
- Including a column in the Land Use Change Values table that specifies which geographic regions the indirect land use change values apply to. This is consistent with the most recent version of California and Oregon's rules.
- Adding clarifying language consistent with Oregon's clean fuels program, that exempt fuel volumes must be claimed by the end of the regular reporting period for a given quarter, and would otherwise be deemed voluntarily included. This is consistent with existing language in the rule related to correcting a previously submitted report.

As these proposed amendments do not change the meanings or requirements in the rule, they would not result in costs or benefits beyond the benefit of clarity and consistency. This would serve to streamline compliance by covered and opt-in entities, potentially reducing the need for technical assistance or resulting in fewer delays.

2.3.2 Making adjustments to reporting and documentation efforts

2.3.2.1 Exempt use transactions

The proposed rule amendments would clarify that the person reporting the exempt use transaction in WFRS and asserting the exemption is responsible for the accuracy of the submitted information, even if they are not the fuel end user. This person would be subject to the seven-year retention requirement.

In cases where the person asserting the exemption is not the fuel end user, this proposed rule amendment may result in additional costs associated with acquiring and retaining additional records held by end users. Where this occurs, this amendment would also result in the benefit of clarity in who is responsible for both accuracy and records. As the exchange of this information is likely already part of the business relationships involved in fuel sales for purposes of tracking and accounting, we do not expect this change to result in significant costs or benefits over the baseline.

2.3.2.2 Aggregator notifications

The proposed rule amendments would specify that, in order to be excluded from the annual fee for the current year, aggregators must notify Ecology of the withdrawal by March 31st.

This proposed amendment may result in aggregators needing to notify Ecology earlier than they would under the baseline. This would mean making the same effort earlier, with a benefit of being excluded from the annual fee.

2.3.2.3 Designation of electric credit generators

The proposed rule amendments would add requirements for designation of another entity as a credit generator.

These proposed rule amendments are likely to result in additional costs of:

- Adding boilerplate language to contracts.
- Annual notifications.

They would also result in benefits of:

- Clarity in roles and responsibilities, facilitating smooth compliance with reduced risk of delays or missing data or documentation.
- Transparency to market participants in revenue generated from their fuel supply equipment (FSE).

2.3.2.4 Electric utility notifications

The proposed rule amendments would add that the notification to Ecology must be submitted electronically, on the utility's letterhead, and include specific contact information, intent to participate, whether the utility will generate base credits or designate an aggregator, and authorized officer signature.

Depending on how utilities interpret the baseline language, this proposed amendment may result in minor added notification costs of using the specific format and including the required contents. It is also likely to result in benefits of improved program tracking of utility participation, confidence, and administration.

2.3.2.5 Changes in ownership or control

The proposed rule amendments would add requirements for when a change in ownership or control of a registered party occurs.

This proposed amendment is likely to result in incremental notification costs in cases of a change in ownership. It is also likely to result in clarity in the responsibilities of regulated parties, potentially reducing errors and delays in compliance.

2.3.2.6 Inactive registrations

The proposed rule amendments would specify what happens if an account is inactive.

In cases where an account is inactive for four quarters, this proposed amendment would result in costs of potentially needing to re-register, or potentially losing remaining credits in the system. It would also result in benefits of a well-functioning, streamlined program with up-to-date information and in which residual credits are not abandoned. Credits that sit idle under the baseline would instead go to the backstop aggregator, and credit revenues would be spent on further decarbonization. This amendment would also make Washington's program consistent with the California and Oregon clean fuel programs, resulting in regulatory consistency for registered parties across jurisdictions.

2.3.2.7 Registration of fueling supply equipment

The proposed rule amendments would add a requirement for FSE registration, to include the date that equipment became operational. All equipment being registered would be required to be operational at the time of registration, meaning the FSE is fully constructed and available for fueling or charging.

This proposed amendment is likely to result in minor additional registration costs for registering FSE. It would also result in benefits of clearly meeting program goals through registering only equipment that is capable of being used for fueling or charging purposes.

2.3.2.8 Registration of electric transport refrigeration units

The proposed rule amendments would add electric transport refrigeration units (eTRU) to the specification the baseline rule gives to electric cargo handling equipment (eCHE), electric ocean-going vessels (eOGV), and electric ground support equipment (eGSE).

The proposed rule is likely to result in initial, one-time registration costs meeting the new requirements for lasting registration of eTRU FSE. It would also result in a cost-savings of avoiding the costs of needing to repeatedly re-register these FSE under the baseline.

2.3.2.9 Follow-up information requests

This proposed amendment would add that Ecology may request additional documentation or evidence prior to approving FSE registration, and that Ecology may deny the registration if the requested documentation is not provided within 7 days or other deadline that Ecology sets for it.

This amendment may result in costs of re-registration if additional information is requested but is not provided by the deadline. Like the proposed amendments related to inactive registrations, it would also result in benefits of a well-functioning, streamlined program with up-to-date and comprehensive information.

2.3.2.10 Fuel transfers

The proposed rule amendments would reorganize the baseline requirements for clarity, describing them separately for transfers where the credit or deficit generation obligation is passed versus is not passed to the recipient. For cases where the obligation is retained by the transferor, the amendments would add a requirement that the product transfer document must include the specific statement: "This transportation fuel has been reported to the Washington Clean Fuels Program for intended use in Washington. If you export this fuel from Washington, you must contact Washington State Department of Ecology via WFRSAdmin@ecy.wa.gov to report the transaction."

The actual change resulting from these proposed amendments, as compared to the baseline, is the requirement to include specific language in the fuel transfer document in cases where the transferor retains credit or deficit generation obligations. In such cases, the amendments would result in minor cost of adding the standard language to document boilerplate. This would result in benefits of transparent obligations and responsibilities, as well as reiteration of requirements for entities that then export the fuel out of state.

2.3.2.11 Exported fuel sales

The proposed rule would delete baseline language specifying that identified recipients are those registered in the Clean Fuels Program.

This proposed amendment could expand the number of recipients identified by registered parties that are position holders that sell fuel below the rack for export. Correspondingly, this would result in better program knowledge of exported fuel recipients to the extent Ecology is not currently aware of them. Knowledge of these recipients of fuel sold below the rack for export would ensure they are aware of the requirements they must meet under the baseline, including registration, which would support comprehensive implementation of the program and meeting its goals.

2.3.2.12 Updated report corrections

The proposed rule amendments would add that the corrections made to quarterly reports, or to quarterly or annual compliance reports, must only be those specified in the request Ecology has approved. If there are additional corrections, the entity would need to submit an additional request after the initial corrections are made. The amendments would also require entities to submit corrections within two days of a request being approved.

These proposed amendments are largely clarifications, but would potentially result in a need for entities to resubmit their correction requests, if they take longer than two days to submit corrections. This would result in a corresponding benefit of an efficient process during which information is up-to-date and potential corrections are completed in a timely fashion. We do not expect this impact to occur frequently, as additional corrections are likely to be identified and specified within a short time of identifying initial corrections.

2.3.2.13 Reporting forklift charging

The proposed rule amendments would remove the baseline language above, to correspond to other proposed amendments that would require metering of forklift charging (see Section 2.3.4).

As other proposed amendments would require metering of forklift charging, and the baseline language above includes the default (without request for an alternative approach) requirement that quantity of electricity measured per FSE must be reported, we do not expect this change to result in costs or benefits. See Section 2.3.4 for discussion of the impacts of requiring metering for forklift charging.

2.3.2.14 Credit transfers

The proposed rule amendments would define two types of credit transfers, based on whether the over-the-counter agreement for the sale or transfer of credits includes delivery up to 10 days (Type 1) versus over 10 days (Type 2) after the transaction agreement.

The amendments would also shorten the time during which credit seller and buyer requirements must be met before a transaction is voided, from 20 days to 10 days.

We do not expect the proposed definition of Type 1 and Type 2 credit transfers to result in significant costs, as this information should be known and readily available as part of the credit transaction agreement. Understanding of the timing of credit delivery would improve Clean Fuels Program planning.

Shortening the time during which seller and buyer requirements must be met would align rule requirements with the existing functions of the WFRS. While this is a change in rule language, taking longer than 10 days without a transaction voiding is not possible under the baseline.

2.3.2.15 Specified source pathway attestation

The proposed rule amendments would add requirements for a feedstock attestation letter. Each entity in the supply chain of a specified source feedstock would need to maintain such attestation letter, and each letter would need to contain specific attestations in the proposed rule.

This proposed amendment would result in additional documentation costs for entities in the supply chain for specified source feedstocks. It would also benefit the program by ensuring the integrity of specified source feedstocks, and the accuracy of the carbon intensity value of fuels produced using such feedstocks. This would align the program with the California and Oregon clean fuel programs.

2.3.2.16 Pathways approved by California or Oregon programs

The proposed rule amendments would add a requirement that applicants using the above process also submit verified annual fuel pathway report or validated pathway application and a positive or qualified positive validation or verification statement for the pathway issued under the California or Oregon verification program.

This proposed rule amendment is to codify the current practice in the program to improve transparent and consistent implementation of the program. This amendment does not incur additional cost as the required documents are expected to be produced for compliance with California or Oregon's clean fuels program. It would result in corresponding benefits of improved program assurances that the carbon intensities being sought are accurate.

2.3.2.17 Use of carbon intensity calculators

The proposed rule amendments would specify that non-liquid fuel producers must provide facility nameplate capacity equivalent to liquid fuels in specific units.

The amendments would also clarify:

- The criteria for classification of Tier 1 versus Tier 2 fuel pathways; and appropriate datasets for use in a fuel pathway application, including period covered, and selection of the subregions of the electricity grid used.
- The application requirements for applicants using the Tier 2 calculator, adding an explicit process to first request approval of their proposed approach to modeling carbon intensity, and Ecology's responsibilities when approving or denying. If denied, applicants would be able to resubmit information to seek an approval.

The additional requirement to provide the equivalent nameplate capacity for non-liquid fuels could result in minor costs of providing this known information, if not already provided as an interpretation of the baseline rule. We expect that this information is already known and accessible, as it is being provided under the baseline. We therefore do not expect this proposed amendment to result in costs.

The specified process for initial approval of Tier 2 methodology before submitting additional application materials may result in reduced repeated work effort for applicants by establishing agreed upon approach and methods for calculating carbon intensity of fuel pathways. Under the baseline, Ecology does not approve applications with inadequate methodology, and the proposed amendment could reduce the need to compile and submit additional information again when reapplying if it would otherwise be submitted with an application that would be denied.

2.3.2.18 Use of renewable electricity products and power purchase agreements

The rule amendment removes the requirements for certification of renewable energy certificates (RECs) by the Western Renewable Energy Generation Information System (WREGIS), as it is not practiced by WREGIS. The proposed rule amendments would require annual fuel pathway reports for applicants using renewable electricity purchased through power purchase agreements or utility renewable electricity products to be submitted by June 30th of each year. This is partly because Ecology calculates the amount of energy used for residential EV charging twice a year, and determines the annual electricity consumption in Q1 and utilities submit their annual fuel pathway reports at the end of Q2 of the next calendar year. The amendments also require these reports to include a verification statement, if the product is subject to third-party verification under the amended rule (see Section 2.3.8). These amendments are related, in that earlier completion of the report would occur before proposed verification deadlines.

The requirement for reporting in the annual fuel pathway report is part of the baseline. The amendment would establish the deadline for submitting the annual fuel pathway report. These amendments would result in potential costs associated with earlier submittal of annual fuel pathway reports, if they would otherwise be submitted in the second half of a calendar year under the baseline. They would also result in minor costs of submitting existing third-party verification reports, if the entity is subject to third-party verification (see section 2.3.8 for discussion of third-party verification requirements). Benefits would include consistent and comprehensive reporting accounting for verification requirements.

2.3.3 Redistributing potential credit generation

2.3.3.1 Amending designation of fuel exporters

The proposed rule amendments would clarify contradictory rule text and simplify designation of the entity responsible for reporting exports of fuel as the entity holding the title of the fuel as it crosses the Washington border.

This proposed amendment would resolve unclear rule text and align with current implementation of the rule. This is technically a change in written rule requirements, which could conceptually result in a potential shift in who is required to report (though not changing aggregate costs through redistribution). Because of the contradictory baseline language, however, Ecology must make a choice to be able to implement this part of the rule and law, and given that Ecology would continue to need to do so under the baseline, we do not expect this amendment to result in real impacts beyond clarity.

2.3.3.2 Encouraging use of Pacific Northwest renewable electricity

The proposed rule amendments would delete inapplicable language related to WREGIS, as it does not function as a certification body. They would also phase in a requirement that beginning January 1, 2026, RECs must be generated from facilities located in Washington, Oregon, or Idaho that started operations January 1, 2019 or later, or from efficiency improvements after that date. Amended language would clarify that eligible RECs from hydroelectric generation would also need to meet the requirements of the Clean Energy Transformation Act.

Starting in 2026, these proposed amendments would result in entities seeking to lower carbon intensity based on retired RECs only being able to use RECs generated from facilities in Washington, Oregon, or Idaho. This would shift demand for RECs from their baseline distribution to increased demand for Pacific Northwest RECs, resulting in constrained applicable REC supply and increased prices for those RECs. This could affect the distribution of credits across participating entities, depending on their choices resulting from changes in REC supply or prices. Benefits would include alignment with statewide emissions reduction targets and renewable electricity generation goals.

2.3.3.3 Reporting electric fueling of eTRU

The proposed rule amendments would define the FSE owner as the fuel reporting entity and credit generator.

This amendment would not result in aggregate costs as compared to the baseline, as it would redistribute reporting burden and credit generation across entities (if they are different owners). As the FSE owner may have better access to relevant data and information, this amendment could result in an aggregate reporting cost savings. Additionally, since the FSE owner would be more likely to be making decisions about additional investments in FSE capacity, this amendment could create more incentive for FSE owners to enter the market or make additional investments.

2.3.4 Requiring metering of forklift charging

The proposed rule amendments would remove the option of requesting approval of an alternative method of calculating the quantity of electricity used in electric forklifts.

This proposed amendment would result in some facilities needing to install metering for charging of electric forklifts, if they could use an alternative method under the baseline. We note that Ecology guidance implementing the baseline rule has specified a phase-out of the use of alternative measurement or estimation methods after 4 quarters per facility, so facilities may already be planning for this change. Benefits would include accurate measurement of electricity used for forklift charging, consistent with measurement requirements for other vehicle fueling. This would reduce the risk of the program either over-providing or under-providing associated credits.

2.3.5 Shifting potential program participation

2.3.5.1 Alternative jet fuels and alternative marine fuels

The proposed rule amendments would add specific reporting parameters for alternative jet fuel and alternative marine fuel using electrolytic hydrogen as process energy.

This proposed amendment would add circumstances in which a utility-specific carbon intensity for electrolytic hydrogen used as process energy can be reported in the Clean Fuels Program. We note that these fuels are eligible under the baseline, and the proposed amendment would adjust the carbon intensity accounting options available to their producers. While costs of meeting the new requirements related to approval and documentation would result from these amendments, we do not expect any net costs of this amendment. This is because entities would only choose to participate and use this utility-specific carbon intensity option if they expected a net benefit. Consideration of net benefit would account for associated costs of meeting the requirements in the amendment and associated benefits of being able to use a lower carbon intensity and therefore generate additional credits.

2.3.5.2 Book-and-claim pipeline-injected biomethane

The proposed rule amendments would add a section to the carbon intensity requirements, specifying requirements for book-and-claim accounting for pipeline-injected biomethane.

They would allow indirect accounting of biomethane injected to a common carrier pipeline if it is used as transportation fuel, to produce electricity using a fuel cell for electric vehicle charging, to produce alternative jet fuel, alternative marine fuel, or renewable diesel, or to produce hydrogen used in fuel cell vehicles. Indirect accounting could be applied to biomethane used for these purposes if requirements for temporal matching, sourcing, and documentation are met (in addition to existing recordkeeping and reporting requirements).

These proposed rule amendments could result in new biomethane production increasingly located along the specified pipelines over time. This may result in more biomethane injected into the common carrier pipeline over time, displacing fossil natural gas.

They would also align requirements for biomethane used as a feedstock for alternative jet fuel with standards in California, where this requirement becomes effective in 2046. The delayed compliance timeline for this biomethane would also serve to support decarbonization efforts in the aviation sector. This sector is currently difficult to decarbonize, due to a lack of viable low- or zero-emissions alternatives to current jet technologies, requiring the use of lower-emissions drop-in fuels to decrease greenhouse gas emissions. Current alternative jet fuel production is a developing industry, and fuels are produced in small quantities compared to other biomethane-derived fuels.

Benefits of this set of proposed rule amendments would include ensuring emissions reductions are happening in Washington, on timelines that are viable for fuel producers including those producing biomethane used as a feedstock for alternative jet fuel production, in support of Clean Fuels Program efficacy and Washington receiving the benefits as well as the costs of the program.

2.3.5.3 Avoided methane from livestock and organic waste

The proposed rule amendments would add a section establishing specific criteria for the generation of avoided methane credits from biomethane production from the above operations. They would establish an up to 15-year avoided methane crediting period for project that began operating in or after 2023, while gradually decreasing credit amounts and timelines for facilities that began operations before 2023.

The amendments would also grant avoided methane credits for generating biogas from organic material that would have otherwise been disposed of at a landfill, and allow for avoided methane credit generation from incremental biomethane production at an existing facility, if the avoided methane emission is additional from the start date of the program in 2023.

The amendments also establish that avoided methane credits will be calculated against any legal or regulatory requirement for the destruction of biomethane. While no such requirement currently exists for biomethane generated from dairy and swine operations, a future regulation could reduce the amount of avoided methane credits available.

These amendments would incentivize new and additional methane capture and renewable natural gas (RNG) production from dairy and swine manure, and from organic waste diverted from landfills. Methane capture projects occurring directly as a result of CFS incentives would receive the most generous incentives. This provision is intended to establish additionality by verifying that the highest level of credits are allocated towards projects creating new environmental methane reduction benefits for Washington.

Extension of crediting to organic material that would have otherwise been disposed of at a landfill would better incentivize the reduction in landfill methane emissions as well as dairy and swine methane emissions.

While there would be costs associated with program participation using these pathways, we expect that entities will only choose to participate if they expect a net benefit, accounting for costs of participation and expected credit generation. Additional credit generation opportunities would also benefit the public and environment through incentivizing greenhouse gas emissions reductions.

2.3.6 Adjusting credit and deficit calculations

2.3.6.1 Switching to continuous review of carbon intensities

The proposed rule amendments would replace the baseline requirement with a requirement to regularly review the carbon intensities used in the Clean Fuels Program.

This amendment would allow Ecology greater flexibility in ensuring that carbon intensities reflect the most up-to-date science and lifecycle analysis models. While this could mean that the carbon intensities that underlie calculation of credits or deficits change more frequently, it could also result in reduced risk of going longer periods allowing over-generation or under-generation of credits or deficits relative to the actual lifecycle emissions associated with fuels and pathways.

2.3.6.2 Adjustments to pathway carbon intensity calculator tiers

The proposed rule amendments under WAC 173-424-600(5) would:

- Add ethanol from corn kernel fiber cellulose and naphtha to Tier 1.
- Move renewable propane, renewable naphtha, and alternative jet fuel produced from conventional feedstocks from Tier 2 to Tier 1.

These proposed amendments would reduce costs associated with use of the carbon intensity calculators for the fuel pathways moved or added to Tier 1, as they may not go through public review process. The resulting carbon intensity values may not be impacted.

2.3.6.3 Adjustments in cases where operating and certified carbon intensities differ

The proposed rule amendments under WAC 173-424-610(9)(l) would establish requirements for handling cases in which the verified operational carbon intensity is found to be greater than the certified carbon intensity.

The proposed rule under WAC 173-424-610(9)(m) allow fuel producers to generate additional credits through credits true up if the operational carbon intensity of the fuel they produce is found to be lower than the certified carbon intensity of the fuel through the annual fuel pathway report.

Generally, we must analyze the impacts of proposed rules by assuming accurate compliance with requirements. That makes it difficult to assess the impacts of this proposed amendment in a way that is comparable to other impacts, as it is inherently based on exceeding their certified carbon intensity. Holding this assumption consistent across this analysis, this proposed amendment would have only the benefits of creating disincentive for exceeding from certified carbon intensities, as the rule amendment provides opportunity to true up credits if the operational carbon intensity of fuel is below the certified carbon intensity. Correcting for such inconsistencies in trueing up credits and deficits brings the program back into balance with actual carbon intensities associated with fuel pathways.

2.3.6.4 Adjustment for geothermal pathway carbon intensity

The proposed rule amendments under WAC 173-424-620(6) would instead require renewable electricity generating facilities using geothermal resources to file a Tier 1 or Tier 2 fuel pathway application to determine the relevant carbon intensity.

This proposed amendment would result in costs of using and filing a pathway application using the relevant calculator. If it results in non-zero carbon intensity (e.g., due to process emissions), this could reduce the credits available to the electricity generator. This amendment would generate benefits of ensuring carbon intensities associated with geothermal electricity pathways accurately reflect their actual emissions.

2.3.7 Modifying ZEV capacity crediting

The proposed rule amendments would reorganize requirements related to ZEV capacity crediting, retaining multiple baseline requirements and aggregate credit pools, but adjusting certain requirements.

We expect the general reorganization proposed for these requirements to result in no impact beyond the changes identified above. This is because we do not expect (under the baseline or proposed rule) significant participation of light- and medium-duty hydrogen refueling infrastructure, which is the category eliminated under the proposed amendments.

For heavy-duty hydrogen refueling infrastructure (HD-HRI), we expect the proposed amendments to result in:

- Potential costs of earlier application completion or reapplication. Benefits of consistent tracking of applications and up-to-date information.
- Reduced costs (benefits) of reduced reporting frequency for costs borne and revenues received per station.
- Potential increased participation through shared refueling stations. As this participation is voluntary, we expect entities to choose to participate only if their expected benefits from credit generation exceed costs of compliance. The public and environment would also benefit from increased incentives to generate credits.
- Potential increased participation due to increased capacity eligibility. As this participation is voluntary, we expect entities to choose to participate only if their expected benefits from credit generation exceed costs of compliance. The public and environment would also benefit from increased incentives to generate credits.

For light- and medium-duty fast charging infrastructure (LMD-FCI), we expect the proposed amendments to result in:

- Potential costs of earlier application completion or reapplication. Benefits of consistent tracking of applications and up-to-date information.
- Additional minor application costs of including all onsite FSE drawing from the same power source that are not eligible for LMD-FCI credits.
- Reduced costs (benefits) of reduced reporting frequency for costs borne and revenues received per station.
- Increased diversity and distribution of charging sites across more applicants due to the credit cap per applicant. Impacts on the types of available connectors due to removal of the connector requirements is likely to be mitigated by limiting individual applicants to 20 percent of the credit pool. Individual applicants reliant on the connector requirements for approval of additional crediting may receive fewer credits.
- Potential increased participation through shared refueling stations. As this participation is voluntary, we expect entities to choose to participate only if their expected benefits from credit generation exceed costs of compliance. The public and environment would also benefit from increased incentives to generate credits.
- Minor avoided opportunity costs for the first quarter and incurred opportunity costs for the last quarter of the shifting 5-year capacity crediting timeframe.
- Due to proposed changes to the cumulative credit generation value based on capital expenditures, increased initial opportunity for credit generation, counterbalanced by potential to receive fewer credits later because that limit does not change over time with changes in capital expenditures. This also allows for greater transparency up front for credit generators to set expectations for capacity credit generation over time.

For heavy-duty fast charging infrastructure (HD-FCI), we expect the proposed amendments to result in:

- Potential costs of earlier application completion or reapplication. Benefits of consistent tracking of applications and up-to-date information.
- Potential increased access and participation for HD-FCI charging providers, due to the addition of shared refueling stations and the transition to a separate credit pool for HD-HRI and HD-FCI.

- More flexibility for applicants due to removal of the limit on effective simultaneous power rating. We expect that most sites will be shared fleet vehicle stations where the site is making regular decisions about how to allocate power while fleets are charging. HD-FCI has a limit of 10 MW cumulative power rating, and under the proposed amendments a site would be able to choose the power rating they apply for each charger. This would allow them the opportunity to allocate their 10 MW across more chargers, but receive fewer credits per charger.
- Minor avoided opportunity costs for the first quarter and incurred opportunity costs for the last quarter of the shifting 5-year capacity crediting timeframe.
- Due to proposed changes to the cumulative credit generation value based on capital expenditures, increased initial opportunity for credit generation, counterbalanced by potential to receive fewer credits later because that limit does not change over time with changes in capital expenditures. This also allows for greater transparency up front for credit generators to set expectations for capacity credit generation over time.
- Increased relative incentive for higher power rating chargers, due to the modified capacity calculation. While this would not affect the total credits available, it would potentially shift more credits for higher-powered chargers to be received sooner (making them more likely to recoup investment). This could, in turn, incentivize participation by entities that would otherwise not choose to apply due to economic timing factors.

2.3.8 Adding third-party verification requirements

The proposed rule amendments would add third-party verification requirements for entities that generate more than 6,000 credits or deficits annually. These entities would be required to have third-party verification of their quarterly and annual compliance reports. Third-party verification would also be required for pathway applications and annual reports.

Verification would be required beginning in 2027 for operational data from 2026 for fuel transactions data 2025 and 2026 for fuel pathway reports.

These proposed rule amendments are likely to collectively result in:

- New costs to pathway applicants and holders generating over 6,000 credits or deficits annually, for third-party verification services for fuel pathway applications and annual fuel pathway reports.
- New costs to responsible regulated parties, credit generators, and aggregators generating over 6,000 credits or deficits annually, for third-party verification services for quarterly and annual reports.
- New costs of annual third-party verification to regulated parties submitting crude oil quarterly and annual volumes reports.
- New costs of annual third-party verification to credit generators submitting annual carbon sequestration project reports.
- Application and maintenance costs for verifiers. This includes a conflict of interest evaluation performed by both the verifier and responsible entity.
- Benefits of assurance that the data and reports receiving third-party verification are accurate and complete. This benefits the program and public by assuring the program is accurately assigning deficits and credits to program participants, and no entity is gaining advantage in the program based on inaccurate information. This, in turn, benefits the public and environment by ensuring the program is meeting the goals and objectives of the statute to reduce the aggregate carbon intensity of fuels used in the state.

QUANTIFIABLE COSTS OF COMPLIANCE

The following sections provide estimates of costs and benefits (cost-savings presented as negative numbers) that our analysis was able to quantify. For full discussion of costs and benefits, including qualitatively discussed impacts, see the Preliminary Regulatory Analyses for this rulemaking.

COSTS OF COMPLIANCE: EQUIPMENT

Proposed amendments (Discussion section)	20-year Present Value Cost Low; millions of \$	20-year Present Value Cost High; millions of \$
Requiring metering of forklift charging (3.2.4)	\$0.487	\$18

COSTS OF COMPLIANCE: SUPPLIES

Compliance with the proposed rule, compared to the baseline, is not likely to impose additional costs of supplies.

COSTS OF COMPLIANCE: LABOR

Proposed amendments (Discussion section)	20-year PV Cost Low; millions of \$	20-year PV Cost High; millions of \$
Designation of electric credit generators (3.2.2.3)	\$0.021	\$0.021
Change in ownership (3.2.2.5)	\$0.009	\$0.009
Inactive registrations (3.2.2.6)	\$0.155	\$0.155
Registration of eTRU (3.2.2.8)	\$0.013	\$0.013
Fuel transfers (3.2.2.10)	\$0.012	\$0.012
Pathway attestation (3.2.2.15)	\$0.058	\$0.058
Aggregator notifications (4.2.2.2)	-\$0.049	-\$0.049
Registration of eTRU (4.2.2.8)	-\$0.058	-\$0.058

COSTS OF COMPLIANCE: PROFESSIONAL SERVICES

Proposed amendments (Discussion section)	20-year PV Cost Low; millions of \$	20-year PV Cost High; millions of \$
Adding third-party verification (3.2.8)	\$107	\$367

COSTS OF COMPLIANCE: ADMINISTRATIVE COSTS

Where applicable, Ecology estimates administrative costs (“overhead”) as part of the cost of labor and professional services, above.

COSTS OF COMPLIANCE: OTHER

Proposed amendments (Discussion section)	20-year PV Cost Low; millions of \$	20-year PV Cost High; millions of \$
Encourage use of PNW renewable electricity (3.2.3.2)	\$28	\$28
Modifying ZEV capacity crediting (3.2.7)	\$0.303	\$0.303
Modifying ZEV capacity crediting (4.2.7)	-\$0.874	-\$0.874

COMPARISON OF COMPLIANCE COST FOR SMALL VERSUS LARGE BUSINESSES

We calculated the estimated per-business costs to comply with the proposed rule amendments, based on the costs estimated in Chapter 3 of this document. In this section, we estimate compliance costs per employee.

Across the various groups of businesses affected by the proposed rule amendments, the average affected small business likely to be covered employs between about five and 26 people. The largest ten percent of affected businesses employ an average of between 1,855 and 14,997 people. Based on cost estimates in Chapter 3, we estimated the following compliance costs per employee.

Table 1. Compliance costs per employee

Business size category	Low	High
Small businesses	\$50.40 cost-savings	\$810.85 cost
Largest 10% of businesses	\$0.17 cost-savings	\$13.97 cost

We conclude that the proposed rule amendments are likely to have disproportionate impacts on small businesses (though in cases where a cost-savings occurs, small businesses would receive a disproportionately larger benefit as well), and therefore Ecology must include elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

MITIGATION OF DISPROPORTIONATE IMPACT

The RFA (19.85.030(2) RCW) states that:

“Based upon the extent of disproportionate impact on small business identified in the statement prepared under RCW 19.85.040, the agency shall, where legal and feasible in meeting the stated objectives of the statutes upon which the rule is based, reduce the costs imposed by the rule on small businesses. The agency must consider, without limitation, each of the following methods of reducing the impact of the proposed rule on small businesses:

- Reducing, modifying, or eliminating substantive regulatory requirements;
- Simplifying, reducing, or eliminating recordkeeping and reporting requirements;
- Reducing the frequency of inspections;
- Delaying compliance timetables;
- Reducing or modifying fine schedules for noncompliance; or
- Any other mitigation techniques including those suggested by small businesses or small business advocates.”

We considered all of the above options, and the goals and objectives of the authorizing statutes. We limited compliance cost-reduction methods to those that:

- Are legal and feasible.
- Meet the goals and objectives of the authorizing statute (see Chapter 6).

We addressed the specific options listed in the RFA in the following ways:

- We could not reduce, modify, or eliminate substantive regulatory requirements, as these are set in statute, where the program created by the statute regulates entities based on their fuel types and volumes.
- The proposed rule amendments would reduce reporting frequency for ZEV capacity credit generators reporting costs borne and revenues received per station. We identified that the program could still meet the goals and objectives of the statute with less frequent reporting of this information. This was not possible for other proposed amendments, as the contents and frequency of reports was necessary for effective program function and to align the timing of rule requirements with the statute (e.g., the statute structures activities such as deferrals in terms of quarters).
- The rule does not address inspections. While they are not inspections, site visits are a part of third-party verification. The proposed rule amendments mitigate some of these costs through:
 - Opportunities to defer third-party verification.
 - Opportunities for less-intensive verification.
 - Flexibility in the number of site visits, based on their necessity in each case and the expertise of verification providers.
- The proposed rule amendments include a phase in time for significant new requirements like third-party verification.
- As part of this rulemaking, Ecology identified that clarified and more stringent disincentives were necessary to maintain program integrity.

Finally, we note that the transportation fuels industry and industries that may undertake clean fuel production may have correlation between their production volumes and employment. To the extent small businesses are more likely to incur smaller costs (or, in this case, even up to receiving cost-savings), or large businesses are more likely to incur larger costs, disproportionate impacts may be naturally limited by this correlation.

SMALL BUSINESS AND LOCAL GOVERNMENT CONSULTATION

We involved small businesses, organizations representing them, and local governments in its development of the proposed rule amendments, using:

- Clean Fuels GovDelivery listerv. Multiple notices sent about the rulemaking throughout late 2023 and 2024.
- One-on-one meetings with: Coalition for Renewable Natural Gas; Twelve Benefit Corporation; SkyRNG; American Biogas Council; Forum Mobility; FirstElement Fuel; POET; RPMG (Renewable Products Marketing Group); Clean Fuels Alliance; Electric Vehicle Charging Association; evReality; evGo.
- Informal public workshops, presentations, and listening sessions held on the following dates with various attendees, including from small businesses and local governments: February 22, 2024; February 28, 2024; May 2, 2024; May 8, 2024; June 12, 2024; September 9, 2024; September 12, 2024; September 26, 2024; December 5, 2024; December 11, 2024.

NAICS CODES OF INDUSTRIES IMPACTED BY THE PROPOSED RULE

The proposed rule amendments likely impact the following industries, with associated NAICS codes. NAICS definitions and industry hierarchies are discussed at <https://www.census.gov/naics/>: 1121 Dairy cattle and milk production; 1122, Hog and pig farming; 2211, Electric Power Generation, Transmission and Distribution; 2213, Sewage treatment facilities; 3241, Petroleum and Coal Products Manufacturing (includes jet fuels); 3251, Basic Chemical Manufacturing; 3361, Motor Vehicle Manufacturing (includes electric vehicle manufacturing); 4247, Petroleum and Petroleum Products Merchant Wholesalers; 4251, Wholesale Trade Agents and Brokers; 4451, Grocery and Convenience Retailers; 4471, Gasoline Stations; 4811, Passenger airlines and cargo air transport; 4883, Marine cargo handling; 4921, Couriers and Express Delivery Services; 5419, Other professional, scientific, and technical services (includes credit aggregators); 5622, Solid waste landfills; Electric vehicle charging companies (no current NAICS available specific to this work); Electric or hydrogen vehicle fleet owners (various possible NAICS; multiple types may own a fleet).

CONSIDERATION OF LOST SALES OR REVENUE, IMPACT ON JOBS

Businesses that would incur costs could experience reduced sales or revenues if the proposed rule amendments significantly affect the prices of the goods they sell. The degree to which this could happen is strongly related to each business's production and pricing model (whether additional lump-sum costs would significantly affect marginal costs), as well as the specific attributes of the markets in which they sell goods, including the degree of influence each firm has on market prices, as well as the relative responsiveness of market demand to price changes. Finally, overall shifts in economic activity in the state, including competition within markets and attributes of the labor market simultaneously adjust in response to changes in compliance costs.

Similarly, employment within directly impacted industries, other industries in Washington, the labor market within and outside of the state, and in the state as a whole will also adjust in response to a change in costs.

We used the REMI E3+ model for Washington State to estimate the impact of the proposed rule amendments on directly affected markets, accounting for dynamic adjustments throughout the economy. The model accounts for variables including but not limited to: inter-industry impacts; price, wage, interstate and international trade, and population or labor market changes; and dynamic adjustment of all economic variables over time.

We modeled costs and benefits based on each type of expenditure and who those funds would be transferred to. Most of these transfers were between additional production labor in affected industries and labor income (in cases where more or less labor time would be spent), while others were purchases of equipment or services such as third-party verification. Additionally, we captured the local impacts of a shift to RECs produced in the Pacific Northwest as spending on solar power plant operations and maintenance (a relatively conservative assumption compared to more labor-intensive renewable sources such as wind), and reflected verification's support of ensuring a portion of the program's intended reductions in greenhouse gas emissions and local emissions of fine particulates as an improvement in the amenities of the state (attracting higher wage labor).

Results

Modeled results indicated a net increase in jobs across the state: initially 346 to 392 jobs (full-time employee equivalents) growing to over a thousand jobs total across all sectors in the state. Most private sector job growth was found to be in construction and real estate, followed by food and retail trade, as well as engineering services and electric power generation. Some sectors were modeled to experience job losses of between one and nine jobs over time, in sectors such as health and personal care, air transportation, and agriculture.

Similarly, modeled results indicated a net increase in output across the state: initially \$64 million to \$70 million, growing to over \$100 million per year total across all sectors in the state. Most private sector output growth was found to be in the same sectors that would experience employment growth, above. Again similarly to trends modeled for employment, some sectors were modeled to experience output losses of between \$1 million and \$8 million per year, in sectors such as healthcare, air transportation, and agriculture.

The above impacts are driven by increased economic activity across sectors, driven largely by spending on contracted services such as third-party verification, equipment and installation, and local REC development. These become wages and revenues to sectors providing equipment and services. Additional spending on labor that becomes personal income is also a contributor to increased economic activity. This increase in economic activity across sectors and to the labor force subsequently supports other sectors across the entire state economy.

Inputs to the model reflected annual real costs and benefits for only those variables for which we were able to estimate quantified, monetized impacts. This means the model results do not capture the value of impacts we were not able to monetize in this analysis, including aspects such as growth in regional fuel production from dairy and swine farms, or shifts in participating biomethane producers and production.

While not a requirement of the RFA, we also considered model findings related to price levels over time, by looking at results for consumption commodity prices. The model did not estimate any impact to overall prices (across all consumption commodities) under either low-cost or high-cost assumptions. It did, however, indicate minor impacts of 0.01 percent to 0.02 percent (one one-hundredth to one fiftieth of a percentage point, compared to their levels under the baseline) in price indexes for commodities such as fuels, air and water transportation, and electricity.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

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Date: 6/16/2025

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