



Concise Explanatory Statement Chapter 173-446 WAC Offsets Rulemaking— ODS Protocol

Summary of Rulemaking and Response to Comments

Washington State Department of Ecology
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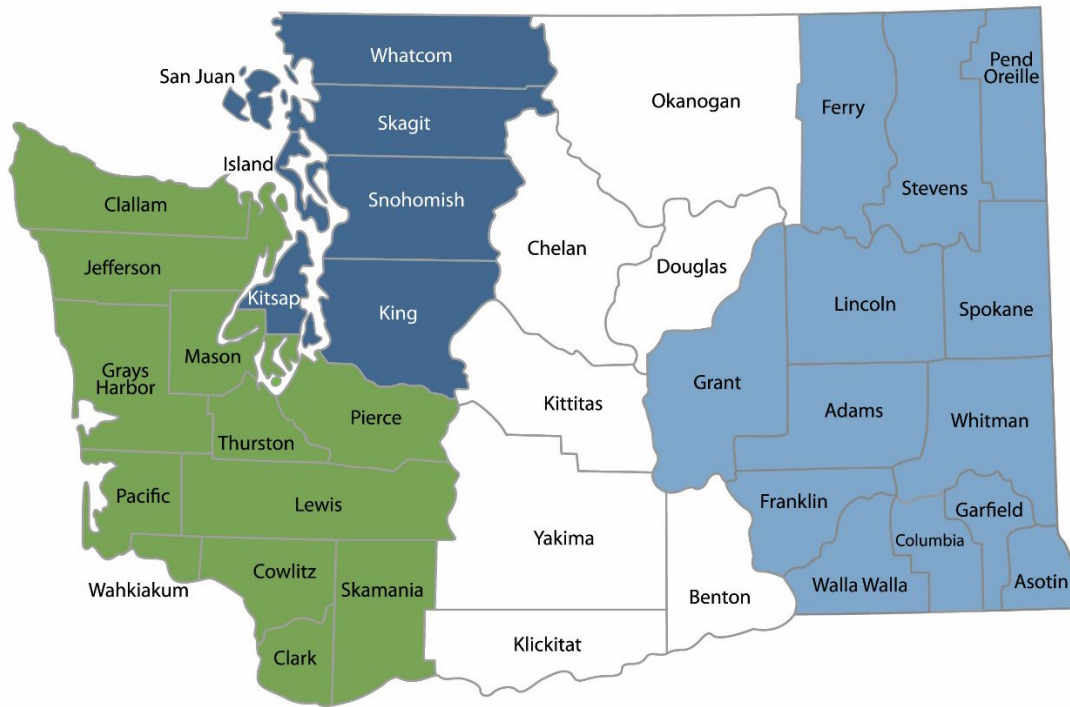
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Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region
360-407-6300

Northwest Region
206-594-0000

Central Region
509-575-2490

Eastern Region
509-329-3400

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	PO Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
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Concise Explanatory Statement

Chapter 173-446 WAC Climate Commitment Act Program Rule (Offsets)

Climate Pollution Reduction Program
Washington State Department of Ecology
Headquarters Office
Olympia, WA

July 2025 | Publication 25-14-043



DEPARTMENT OF
ECOLOGY
State of Washington

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Acronyms and Abbreviations

CARB	California Air Resource Board
CFC	Chlorofluorocarbons
GWP	Global Warming Potential
HFC	Hydrochlorofluorocarbons
HCFC-22	Chlorodifluoromethane, also known as R-22
ODS	Ozone Depleting Substances
RCW	Revised Code of Washington
WAC	Washington Administrative Code

Table of Contents

Introduction1

Reasons for Adopting the Rule2

Differences Between the Proposed Rule and Adopted Rule.....2

List of Commenters and Response to Comments4

Introduction

The purpose of a Concise Explanatory Statement is to:

- Meet the Administrative Procedure Act (APA) requirements for agencies to prepare a Concise Explanatory Statement (RCW 34.05.325).
- Provide reasons for adopting the rule.
- Describe any differences between the proposed rule and the adopted rule.
- Provide Ecology's response to public comments.

This Concise Explanatory Statement provides information on The Washington State Department of Ecology's (Ecology) rule adoption for:

Title: Climate Commitment Act Program Rule (Offsets)

WAC Chapter(s): 173-446-500 through 173-446-595

Adopted date: July 21, 2025

Effective date: August 21, 2025

To see more information related to this rulemaking or other Ecology rulemakings please visit our website: <https://ecology.wa.gov/About-us/How-we-operate/Laws-rules-rulemaking>.

Reasons for Adopting the Rule

The Climate Commitment Act states that Ecology shall consider adopting offset protocols that make use of aggregation (the grouping of multiple small projects into a single, larger offset project) and cost-effective provisions for monitoring, reporting and verification ([RCW 70A.65.170](#)). The Climate Commitment Act adopted offsets protocols from the California Air Resources Board (CARB) in 2021, including the Ozone Depleting Substances, US Forest, Urban Forestry and Livestock Projects protocols without changes to said protocols. During the public comment period on our initial adoption of [Chapter 173-446 WAC](#), Ecology received 28 comments from organizations, Tribal governments, and individuals recommending offset protocol revisions and additions. Ecology's response to those comments stated the agency's intent to consider new and revised offset protocols in a subsequent rulemaking. The purpose of this rulemaking is to broaden the scope of offset protocols available in the Cap-and-Invest Program. This rulemaking will increase the diversity of offset projects available to Cap-and-Invest Program participants, broadening the scope of possible greenhouse gas reductions in our state. The scope of Ecology's rule proposal filed on February 12, 2025 involves changes and updates to the Ozone Depleting Substances (ODS) protocol.

Differences Between the Proposed Rule and Adopted Rule

RCW 34.05.325(6)(a)(ii) requires Ecology to describe the differences between the text of the proposed rule as published in the Washington State Register and the text of the rule as adopted, other than editing changes, stating the reasons for the differences.

There are some differences between the proposed rule filed on February 12, 2025 and the adopted rule filed on July 21, 2025. Ecology made these changes for all or some of the following reasons:

- In response to comments we received.
- To ensure clarity and consistency.
- To meet the intent of the authorizing statute.

The following content describes the changes and Ecology's reasons for making them.

Rule Changes		
Section	Change	Reason for Change
WAC 173-446-505(3)(c)(i)(L); WAC 173-446-505(3)(c)(ii)(G); Ecology Ozone Depleting Substances Protocol Version 1.0, Section 3.2	Added text: <i>(1) <u>The requirements of WAC 173-446-520(3)(d) and WAC 173-446-520(3)(e) do not apply to ODS projects registered through this protocol.</u></i> "	In response to comment B-1; clarifying requirements for the owners of land on which ODS is extracted, processed, or destroyed.
Ecology Ozone Depleting Substances Protocol Version 1.0, Section 2.2.(c), adopted in WAC 173-446-505(3)(c)	Added text: Section 2.2.(c) <i>"ODS produced for use as feedstocks in the production of other substances are ineligible. ODS with a Point of Origin, as defined in section 6.2, at a manufacturing facility that produces ODS listed in section 2.2.1(b) as a feedstock are ineligible."</i>	In response to comment I-1; clarifying that ODS produced as feedstocks are ineligible for offset credit generation.
Ecology Ozone Depleting Substances Protocol Version 1.0, Section 6.2.(b)(2) and (3), adopted in WAC 173-446-505(3)(c)	Added text: <i>"(3) For species of refrigerant ODS which were ineligible for crediting prior to the adoption of this protocol (HCFC-22) the point of origin for ODS stored in a stockpile as of the adoption date of this protocol is the location of the stockpile. "</i>	In response to comment B-2; characterizing the point of origin for newly eligible stockpiled ODS as the location of the stockpile on the date of rule adoption.

List of Commenters and Response to Comments

Entities who submitted comments:

Name	Affiliation	Comment Number
Beth Porter	Environmental Investigation Agency	I-1
Mary Jane Coombs	ACR	O-1
Sarah Fluharty	Tradewater	B-1
Eric Ripley	A-Gas	B-2

Comments and responses are organized by each individual comment presented verbatim exert with responses for each comment. Comment numbers correlate to the entities listed above.

Comment I-1

Good morning, I am Beth Porter, B-E-T-H P-O-R-T-E-R speaking on behalf of the Environmental Investigation Agency or EIA. We appreciate this opportunity to submit oral comment on the proposed update to the ODS offsets protocol. EIA is an independent organization working globally to protect the climate, forest, and threatened species. We've undertaken investigations into the illegal trade in ODS and other fluorinated gases such as HFCS and have been closely involved in international and domestic ozone and climate policies with these substances for several decades. We appreciate Washington's efforts to address the refrigerant banks of ODS that are contained in old equipment, foams, and stockpiles. As we know, there is a significant climate mitigation opportunity by curbing these emissions through the improved recovery for reuse, reclamation and destruction of these. However, we do encourage Ecology to not allow credit generation from HCFC-22 at this time. Reuse and reclamation will be key to meeting the servicing needs in the near term, amidst the national phasedown of HFC refrigerants. This is in order to reduce demand for newly produced refrigerants and to afford system operators the time to transition to those sustainable alternatives. We're concerned that creating incentives now for HCFC-22 destruction could pose challenges to bolstering the recovery of these refrigerants in the state. EIA does agree that the appropriate destruction of these substances is a really important aspect of improved life cycle management for refrigerants. As we have expressed in the prior working group on this topic and written comments, there are some challenges with the use of offsets that we see as threatening to undermine the climate gains from these activities. So we urge Ecology to consider how certain controlled substances like R-22 are still being produced as feedstock, even though their production as an end product has been restricted. So we see when a financial incentive for destruction is attached to a substance still in production, there is a risk of creating a reverse incentive. A primary example of this is the clean development mechanism under the Kyoto Protocol, which offered credits for the destruction of HFC-23, a highly potent greenhouse gas and by product of 22 [HCFC-22] production. We saw that this resulted in an increased production of HCFC-22 solely to boost the byproduct for destruction as the credits were more lucrative than the products themselves. Because of this history, these challenges, we encourage Ecology to refrain from allowing credit generation for HCFC-22 destruction at this time. Instead,

we urge the state to pursue other methods to support sustainable proper end-of-life management of these potent gases. We've provided some further details outlining these concerns with additional information and some recommendations for the department in our written comment, and very much continue to welcome discussion on this topic and appreciate Ecology and all that you are doing to try to protect our climate and ozone layer from these substances. Thank you so much for the time today.

Response to Comment I-1

Thank you for your comment. Ecology agrees that it is important to ensure that HCFC-22 (or any other ODS) produced through the feedstock exemption not be destroyed to generate offsets credits and ensure that the destruction of HCFC-22 that otherwise could have been used as feedstock not result in the production of more virgin HCFC-22 as a feedstock.

In response to this comment new language has been added to this protocol:

Section 2.2.(c) ODS produced for use as feedstocks in the production of other substances are ineligible. ODS with a Point of Origin, as defined in section 6.2, at a manufacturing facility that produces ODS listed in section 2.2.1(b) as a feedstock are ineligible.

This revision seeks to ensure that ODS produced at a facility that manufactures eligible ODS as a feedstock cannot be used to generate offset credits in the Cap-and-Invest program.

Your comment also identifies a concern regarding the potential that HCFC-22 (or other ODS) if not destroyed could instead be reclaimed and used as a feedstock in the production of Polytetrafluoroethylene and other products. Ecology has not been able to identify any instances of this occurring in the chemical manufacturing industry. HCFC-22 in a sufficient purity (>99.5%) and quantity to be viable for use as a feedstock appears highly unlikely to be destroyed for the purposes of offset credit generation, because sale for the purposes of feedstock use or reuse in refrigeration systems would attain a significantly higher price. Additionally, because HCFC-22 can be produced for use as a feedstock there is not a clear need for chemical manufacturers to procure this material from the reclaimed market. HCFC-22 that would be financially feasible for destruction is likely to be of a lower purity and in far smaller quantities. We believe the potential for HCFC-22 to be reclaimed to supplant feedstock production is very low. At the same time, the environmental impact of the status quo of HCFC-22 reuse without a significant incentive to destroy the gas is significant. More than 4.8 million pounds of HCFC-22 was reclaimed in 2023 in the United States.² HCFC-22 that is used in equipment or stockpiled will ultimately leak out into the atmosphere unless destroyed. Inclusion of HCFC-22 in this protocol helps to incentivize and fund the destruction of this potent greenhouse gas.

We want to acknowledge the example you provided regarding prior programs to incentivize the destruction of HFC-23. Prior analysis of the unintended impacts of HFC-23 crediting in the 2010s is one of the reasons Ecology believes that crediting for HCFC-22 destruction is only now appropriate that U.S. production and import of the refrigerant has been phased out (effective January 1, 2020).

Finally, thank you for the recommendation to pursue other methods to support sustainable proper end-of-life management of these potent gases. While creation of other end-of-life management

² [Summary of Refrigerant Reclamation Trends | US EPA](#)

programs is outside the scope of this offset rulemaking in the Cap-and-Invest program, Ecology is engaged in the implementation of complementary end-of-life management through [WAC 173-443](#).

Comment O-1

Subject: Comments on proposed Compliance Offset Protocol Ozone Depleting Substances Projects Version 1.0

Dear Mr. Wildish:

Having served as an approved Offset Project Registry for the Department of Ecology’s Climate Pollution Reduction Program Compliance Offset Program since 2023 and for the California Air Resources Board (CARB’s) Cap-and-Trade Program Compliance Offset Program since 2012, ACR has significant experience with Compliance Offset Protocols and the Climate Commitment Act Program Rule. ACR has also developed its own methodologies for accounting the GHG emission reductions from the destruction of ozone depleting substances (ODS). We appreciate the opportunity to provide comments on the proposed Compliance Offset Protocol Ozone Depleting Substances Projects Version 1.0, released February 12, 2025, which is adapted from CARB’s Ozone Depleting Substances Projects Protocol dated November 14, 2014. ACR supports many of the proposed changes, including expanding eligibility to include the destruction of HCFC-22, adjusting the scope of invalidation to align with the project activities, and other clarifications.

ACR recommends that the Department of Ecology consider aligning with the project emissions accounting in ACR’s Destruction of Ozone Depleting Substances and High-GWP Foam version 2.0 published in 2023 (ODS Methodology), which does not include substitute emissions. Substitute emissions were removed from ACR’s ODS Methodology for the following reasons:

1. The destruction of ODS is not the determining factor in a user switching to a different refrigerant in new or retrofitted equipment. Substitution of ODS is a result of old equipment reaching end-of-life and newer equipment—equipment that does not or cannot use ODS—replacing it. The user switches to different equipment and a different refrigerant based on factors related to the age of the old equipment, including reduction in energy costs, improved features, better functionality, or other demand drivers.
2. Including substitute emissions would overestimate the project emissions. The current without-project scenario for ODS is “no destruction” due to the high cost of destruction and no legal mandate to do so. ODS can be used to service existing equipment or stored indefinitely in the U.S. and Canada, and both scenarios result in release to the atmosphere. Since voluntary destruction of ODS is not common practice, it can be inferred that ODS recovered from decommissioned or retrofitted (to use non-ODS refrigerant) equipment will either be reused to recharge other existing equipment or stored. This means, in the without-project scenario, both the recovered ODS and replacement refrigerant will be in existence even after a non-ODS refrigerant replaces the ODS.

For these same reasons, we recommend that the Department of Ecology remove substitute emissions from the proposed Compliance Offset Protocol Ozone Depleting Substances Projects

Version 1.0. Thank you for the opportunity to comment. We look forward to continuing to partner with you throughout the protocol adoption process and would be happy to answer any questions about the quantification concerns expressed above.

Sincerely,

Jessica Bede

ACR Managing Director

Response to Comment O-1

Thank you for your comment. RCW 70A.65.170(2)(b) directs Ecology to ensure that offset projects: “Result in greenhouse gas reductions or removals that: (i) are real, permanent, quantifiable, verifiable, and enforceable and (ii) are in addition to greenhouse gas emission reductions or removals otherwise required by law and other greenhouse gas emission reductions or removals that would otherwise occur;” WAC 173-446-020 defines “additional”, in the context of offsets credits as “greenhouse gas emission reductions or removals that exceed any greenhouse gas reduction or removals otherwise required by law, regulation or legally binding mandate, and that exceed any greenhouse gas reductions or removals that would otherwise occur in a business-as-usual scenario.” In order to ensure that offset credits are additional Ecology believes inclusion of substitute emissions factors as a deduction to the amount of credits issued remains warranted in the Cap-and-Invest offsets program. While the quantity has significantly declined over time, nearly 400,000 lbs of chlorofluorocarbon (CFC) were reclaimed in 2023³, indicating, presumably, a shrinking but still existent market for the gas in refrigeration equipment. When CFCs are removed from equipment and destroyed a logical assumption is that the equipment is either being retrofitted or replaced with a system that uses an HFC refrigerant. The destruction of CFCs and conversion to HFC systems yields many environmental benefits – including use of a lower Global Warming Potential (GWP) substance, avoiding the ozone depleting potential of CFCs, and improving energy efficiency of the system. However, while HFCs typically have a lower GWP than the CFCs they replace, they too are potent greenhouse gases. Ecology believes that including the emissions associated with this substitution is appropriate to ensure that the baseline used for credit issuance through this protocol reflects a conservative business-as-usual scenario.

Ecology believes that use of a substitute emissions factor is also appropriate for crediting of HCFC-22. Because HCFC-22 was phased out of production much more recently than CFCs, refrigeration systems that use this material remain common. Ecology believes that the most reasonable assumption related to the extraction and destruction of HCFC-22 is that it was replaced, via a system replacement or retrofit, with an HFC.

Ecology believes that destruction of CFCs and HCFC-22 can be presumed to marginally increase the production of HFCs by increasing demand for lower GWP alternatives. As long as refrigerants with significant GWP remain the most likely substitute for destroyed CFCs and

³ <https://www.epa.gov/section608/summary-refrigerant-reclamation-trends>

HCFC-22, use of substitute emissions factors is warranted in offset crediting in the Cap-and-Invest program.

However, we agree that continual review and reconsideration of substitute emissions factors is appropriate due to continual adoption of lower GWP substitutes. Ecology has not adopted revisions to substitute emissions factors in this protocol due to a lack of available data. Ecology agrees that the substitute emissions factors in this protocol may overestimate the emissions of the most logical substitute substance, thus under-estimating the true emissions reductions of the projects. Due to these data limitations Ecology's adopted protocol states that:

“Ecology may approve alternate values for 10-year Cumulative Emissions Rates and Substitute Emissions listed in Table B.1. or Table B.2.

In order for Ecology to approve the use of alternative values the proposed alternative values must reflect a conservative business-as-usual scenario as defined by WAC 173-446-510(1)(d)(i), and be supported by official published data, industry studies, project level information, or published methodologies in the voluntary or compliance offset market. Alternative values must be based on publicly available information or information that can be made publicly available.”

Ecology intends to consider alternative substitutes emissions factors for these substances, as available. If alternative substitute emissions factors are identified that meet the additionality requirements of [RCW 70A.65.170\(2\)\(b\)\(ii\)](#) and a conservative business-as-usual scenario as defined by [WAC 173-446-510\(1\)\(d\)\(i\)](#), Ecology may approve the use of an alternative set of substitute emissions factors without a subsequent rulemaking.

Comment B-1

Dear Jordan,

This letter reflects Tradewater's comments on the Department of Ecology Compliance Offset Protocol Ozone Depleting Substances Projects Version 1.0 draft. We are honored to have been part of the ODS Protocol Working Group hosted by Ecology last year and excited to see some of the proposed revisions in the new draft protocol.

Please find our comments in the table below:

Revision	Tradewater Comments	Comment label
GWP values were changed from AR4 to AR5	Tradewater continues to support the change from AR4 to AR5. However, Tradewater does not support changing GWP values of destroyed ODS to AR5 without also changing to AR5 the GWP of refrigerants counted in the substitute emissions calculations. If both changes are not made at the	B-1.1

	same time, Ecology will unnecessarily (and inaccurately, from a carbon accounting perspective) reduce the credit yield for ODS destruction projects. We understand Ecology is waiting for the 2025 EPA Vintaging Model before it will revise the substitute emissions factors. Given this, we propose the GWPs remain at AR4 levels until which time the updated Vintaging Model is received and the AR5 GWPs and substitute emissions GWPs can be pushed out at the same time.	
Allow credit generation from R-22	Tradewater continues to support making R-22 eligible. However, we urge Ecology to consider removing substitute emissions and moving to a full release model following the ACR 2.0 methodology. Unless the model is changed in this way, it may not be financially feasible for project developers to destroy R-22 under the Ecology protocol.	B-1.2
Allow credit generation from medical aerosols and unused solvents	Tradewater continues to support this revision. The language in Section 2.2(c)1, however, is confusing. Unused solvents, by definition, are not “listed as hazardous waste under EPA CFR 261 subpart D.” (That CFR provision only applies to “spent” CFCs.) Therefore, it is superfluous and confusing to include the second sentence that reads “Unused solvents listed as hazardous waste under EPA CFR 261 subpart D are not eligible under this methodology.” We ask that it be removed.	B-1.3
Section 3.2(d) on Landowner Consent	Language has been added requiring consent to Ecology’s jurisdiction from landowners if “any portion of the offset project is located on land over which the state of Washington does not have jurisdiction.” Tradewater remains uncertain on how this should be applied to ODS projects. For example, if a project developer acquires over 500lbs of material (incurring Point of Origin requirements) from someone in the state of Kentucky, is that land considered an offset project location subject to this provision? Would we need consent from that landowner to be regulated under WA law? If yes, this would pose major barriers to including material from outside of WA in Ecology projects, and therefore severely reduce the number of ODS credits available in the WA compliance market. If this is not the intended application of this new clause, we suggest	B-1.4

	clarifying the language to make clear what land is applicable, such as clarifying this only applies to land falling within the project boundaries as outlined in Figure 4.1 (i.e. only destruction facilities). Without clarification on this clause, we also anticipate significant verifier confusion. This will cause unnecessary back and forth during verification.	
Section 3.4.2(b)	Tradewater recommends clarifying this section. It maintains ODS sourced from the federal government is not eligible under the Ecology protocol, yet Section 2.2.1 (d) grants conditional eligibility for some federal material. Lack of clarification here could cause confusion with the verifiers and project developers.	B-1.5
Substitute Emissions	While Tradewater urges Ecology to update AR5 GWP and substitute emission values in tandem, per our comments above, we would also like to reiterate our previous recommendation to remove substitute emissions entirely. On this point, we would like to join and adopt the position and explanation in the letter submitted to Ecology by the American Carbon Registry on April 2, 2025.	B-1.6

Thank you for accepting our comments and please don't hesitate to reach out with any questions.

Regards,

Sarah Fluharty

Director of US Programs

Tradewater

Response to comment B-1.1

Thank you for your comment. As you note, an updated version of the substitute emissions factors in the EPA Vintaging Model was not available within the timeframe of this rulemaking. As such, the substitute emissions factors for CFCs are not revised in this updated version of protocol. Ecology agrees that the substitute emissions factors in this protocol may overestimate the emissions of the most logical substitute substance, thus underestimating the true emissions reductions of the projects. Further, we note that the substitute emissions factors in this protocol

are based on AR4 emissions factors, rather than AR5. Due to these data limitations Ecology's adopted protocol states that:

"Ecology may approve alternate values for 10-year Cumulative Emissions Rates and Substitute Emissions listed in Table B.1. or Table B.2.

In order for Ecology to approve the use of alternative values the proposed alternative values must reflect a conservative business-as-usual scenario as defined by WAC 173-446-510(1)(d)(i), and be supported by official published data, industry studies, project level information, or published methodologies in the voluntary or compliance offset market. Alternative values must be based on publicly available information or information that can be made publicly available."

Ecology intends to consider alternative substitute emissions factors for these substances, as available. If alternative substitute emissions factors are identified that meet the additionality requirements of [RCW 70A.65.170\(2\)\(b\)\(ii\)](#) and a conservative business-as-usual scenario as defined by WAC 173-446-510(1)(d)(i), Ecology may approve the use of an alternative set of substitute emissions factors outside of the rulemaking process.

Response to comment B-1.2&B.1-6

Thank you for your comment. [RCW 70A.65.170\(2\)\(b\)](#) directs Ecology to ensure that offset projects: "Result in greenhouse gas reductions or removals that: (i) are real, permanent, quantifiable, verifiable, and enforceable and (ii) are in addition to greenhouse gas emission reductions or removals otherwise required by law and other greenhouse gas emission reductions or removals that would otherwise occur;" In order to ensure that offset credits are additional Ecology believes inclusion of substitute emissions factors as a deduction to the amount of credits issued remains warranted in the Cap-and-Invest offsets program. While the quantity has significantly declined over time, nearly 400,000 lbs of CFCs were reclaimed in 2023⁴, indicating, presumably, a shrinking but still existent market for the gas in refrigeration equipment. When CFCs are removed from equipment and destroyed a logical assumption is that the equipment is either being retrofitted or replaced with a system that uses an HFC refrigerant. The destruction of CFCs and conversion to HFC systems yields many environmental benefits – use of a lower Global Warming Potential (GWP) substance, avoiding the ozone depleting potential of CFC's, and improving energy efficiency of the system. However, while HFCs typically have a lower GWP than the CFCs they replace, they too are potent greenhouses gases.

Ecology believes that use of a substitute emissions factor is also appropriate for crediting of HCFC-22. Because HCFC-22 was phased out of production much more recently than CFCs, refrigeration systems that use this material remain common. In our view that most reasonable assumption related to the extraction and destruction of HCFC-22 is that it is replaced, via a system replacement or retrofit, with an HFC.

Ecology believes that destruction of CFCs and HCFC-22 can be presumed to marginally increase the production of HFCs, by increasing demand for this lower GWP alternative. Ecology believes

⁴ <https://www.epa.gov/section608/summary-refrigerant-reclamation-trends>

that as long as refrigerants with significant GWP remain the most likely substitute for destroyed CFCs and HCFC-22, use of substitute emissions factors are warranted in offset crediting in the Cap-and-Invest program.

As stated above Ecology agrees that continual review and reconsideration of substitute emissions factors is appropriate due to continual adoption of lower GWP substitutes. Ecology has not adopted revisions to substitute emissions factors in this protocol due to a lack of available data. As such, Ecology agrees that the substitute emissions factors in this protocol may overestimate the emissions of the most logical substitute substance, thus under-estimating the true emissions reductions of the projects. Due to these data limitations Ecology's adopted protocol states that:

"Ecology may approve alternate values for 10-year Cumulative Emissions Rates and Substitute Emissions listed in Table B.1. or Table B.2.

In order for Ecology to approve the use of alternative values the proposed alternative values must reflect a conservative business-as-usual scenario as defined by WAC 173-446-510(1)(d)(i), and be supported by official published data, industry studies, project level information, or published methodologies in the voluntary or compliance offset market. Alternative values must be based on publicly available information or information that can be made publicly available."

Ecology intends to consider alternative substitute emissions factors for these substances, as available. If alternative substitute emissions factors are identified that meet the additionality requirements of [RCW 70A.65.170\(2\)\(b\)\(ii\)](#) and a conservative business-as-usual scenario as defined by [WAC 173-446-510\(1\)\(d\)\(i\)](#), Ecology may approve the use of an alternative set of substitute emissions factors outside of the rulemaking process.

Response to comment B-1.3

While much of U.S. EPA CFR 261 subpart D pertains to only spent solvents, which are already ineligible in the protocol, it appears possible that certain unused solvents could be considered hazardous waste if it meets the criteria per U.S. EPA 261.33. While only a narrow, and perhaps implausible set of circumstances could result in unused solvents being considered hazardous waste, Ecology believes it is appropriate to retain and revise this prohibition in the unlikely event otherwise eligible material meets this criteria.

Response to comment B-1.4

Thank you for your comment. This provision was not newly introduced in this rulemaking. It was included in the rule when Ecology adopted protocols from the California Air Resource's Board (CARB) by reference in the Cap-and-Invest program rule. Reflecting your comment Ecology has clarified this provision, as it relates to ODS projects by adding the following text to the protocol in section 3.2 (d) of this protocol, as well as the corresponding sections in the prior version of the ODS protocol which Ecology adopted by reference:

- 1. The requirements of WAC 173-446-520(3)(d) and WAC 173-446-520(3)(e) do not apply to ODS projects registered through this protocol.*

Response to comment B-1.5

Ecology clarified with the commenter that this comment was based on a prior version of the protocol. The language referred to in this comment is not present the version of the protocol proposed in February 2025.

Comment B-2.1

Submitted by Eric Ripley, A-Gas

In preparation for the approval of the ODS protocol revision (fingers crossed), we are analyzing our R22 acquisition data for ODS that we would like to destroy under the Washington program. We have isolated a number of ISO tanks that contain R22 and I think there will likely be other developers that have a similar situation that I will describe below.

We've collected significant amounts of R22 mainly for resale. When we reclaim this gas, we store this in bulk quantities in ISO tanks and then will eventually fill smaller tanks from these ISOs for packaging and distribution. It is common that we will only have requisite point of origin details for a portion of the gas that is included in these ISO tanks. For the portion of gas that we have point of origin details on, we'd like to be able to transfer that mass to a different ISO tank and then we'd destroy all of the contents of the ISO tanks for which we hold point of origin documentation per protocol requirements. This is a mass balance approach and I think is logical particularly for a situation like this where R22 has never been eligible in a compliance market before.

This said, there is a section of the proposed revision that is a carry over from previous ARB versions that would likely disqualify this scenario. That is section 6.2(c)(4) which states:

When ODS is added to a single container which is part of a stockpile and a portion of the ODS is subsequently removed from the container, the ODS removed must be considered the ODS stored the longest (i.e., first-in, first-out method).

The issue here is that, the ODS stored the longest in a particular ISO may not be the gas that we have point of origin details for (i.e. we know when an ISO tank was filled but lack acquisition details on some of the gas that goes into each ISO). I'm not sure when/by whom that particular section of the methodology is used and don't think it should be used to penalize a situation like this where a mass balance approach would be reasonable.

[Comment submitted by Eric Ripley, A-Gas via email 5/1]

Comment B-2.2

Submitted by Eric Ripley, A-Gas

Thanks for taking the time to raise the issue with us about the point of origin (PoO)/mass balance approaches today. Below is what we mean by a "mass balance" accounting method (which would be in lieu of a first in/first out – FIFO- method) as well as proposed language regarding stockpile eligibility as of the publication date of the methodology.

On mass balance accounting, we are referring to an approach where gas that is accompanied with sufficient PoO documentation is comingled in the same stockpile/vessel as gas that does not contain sufficient PoO information. We would propose that we be allowed to remove a quantity of gas that is contained within the vessel that corresponds to the amount of gas for which we have sufficient PoO information (this differs from FIFO or molecule for molecule in that we know the mass associated with gas that has PoO documentation but we have technically lost chain of custody on those molecules once the gas was comingled with gas for which we do not possess PoO information). On R22, we will be in this position as we have several ISOs of gas that we could destroy (or sell) but, within each ISO, we only have PoO information on some of the gas contained within the ISO and the overall stockpile of R22. We'd like to be able to destroy at least the amount of gas that we have PoO information for currently but we'd need to employ a mass balance approach to do so.

For new gases that are not currently eligible but that will be eligible in an upcoming version of the methodology (for instance, R-22), I would propose the following language for any such gas that is held in stockpile currently (i.e. in advance of the publication date of the methodology):

For ODS that was not eligible prior to the publication of version XX of this methodology, the point of origin for such ODS stored in a stockpile, as of the publication date of version XX, is the location of the stockpile.

[Comment submitted by Eric Ripley, A-Gas via email 6/11]

Response to comments B-2.1 and B-2.2

Thank you for your comment. Ecology agrees that requiring Point of Origin documentation for stockpiles of a refrigerant that is newly eligible for destruction through this protocol presents barriers to project development. The Point of Origin documentation required for a stockpile of a gas would likely not be collected if the gas was originally intended for reclamation and resale. Requiring documentation of stockpiling since January 1, 2023 for R-22, a newly eligible substance, would require a project proponent to be tracking and collecting information on that stockpile in order to comply with a protocol that had not yet been developed. Reflecting this barrier to project development, Ecology added additional language to section 6.2(b) of the protocol to state:

“For species of refrigerant ODS which were ineligible for crediting prior to the adoption of this protocol (HCFC-22) the point of origin for ODS stored in a stockpile as of the adoption date of this protocol is the location of the stockpile.”

This change aligns with existing approaches in the voluntary carbon market. ACR's Destruction of Ozone Depleting Substances and High-GWP Foam Version 2.0 defines the Point of Origin for stockpiled ODS as the location of the stockpile as of the publication date of the methodology. ACR's methodology applies this definition to all stockpiled ODS including CFCs and HCFCs. Because Washington's Cap-and-Invest program has issued offset credits for the destruction of CFCs through the prior version of this protocol, Ecology believes a more narrow definition is warranted – applying only to the substances, namely HCFC-22, that are newly eligible through this protocol revision.