



DEPARTMENT OF
ECOLOGY
State of Washington

Concise Explanatory Statement

Chapter 173-442 WAC

Clean Air Rule

Chapter 173-441 WAC

Reporting of Emissions of Greenhouse Gases

Summary of rulemaking and response to comments

September 2016

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Concise Explanatory Statement

Adoption of Chapter 173-442 WAC Clean Air Rule

and

Amendments to Chapter 173-441 WAC Reporting of Emissions of Greenhouse Gases

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Table of Contents

Tables	ii
Figures.....	ii
List of Acronyms	1
Introduction.....	3
Reasons for Adopting the Rule.....	3
Overview of the Rulemaking Process from September 2015 to May 31, 2016	5
Differences Between the Revised May 31, 2016 Proposed Rule and Final Adopted Rule	7
Comments Received and Ecology’s Responses	13
Ecology’s detailed responses	15
Legal issues	16
Rulemaking process	23
SEPA.....	25
Economic analysis and related documents	29
Environmental Justice issues	43
Other regulatory requirements	46
Rule’s effects	52
Scope.....	58
Definitions.....	59
Applicability (including covered parties, thresholds, and exemptions).....	61
Baselines	76
EITEs	81
General compliance issues.....	88
Compliance options	103
Emission Reduction Units.....	107
Limitations on generating emission reductions	121
Third-party verification.....	129
Registry	132
Reserve.....	133
Other requirements.....	135
Enforcement.....	136
Chapter 173-441 WAC	138
Miscellaneous	140
Comment Summaries.....	143
Form Letters.....	269
Commenter Index – Individual Submissions.....	281
Commenter Index – Faith Action Network Form Letter	287
Commenter Index – Fuse Washington Form Letter	288
Commenter Index – Sierra Club Form Letter	289
Commenter Index – WEC Form Letter	301
Appendices.....	308

Tables

Table 1: Changes Made to Adopted Rule	9
Table 2: Comments Received	13
Table 3: Sample GHG emissions table	66
Table 4: Table MM-1 to Subpart MM of Part 98	92
Table 5: Table MM-2 to Subpart MM of Part 98	94
Table 6: Projects Already Registered on the Climate Action Reserve	117
Table 7: Potential Dairy Digesters	118
Table 8: Renewable Energy Projects	118

Figures

Figure 1: Proportion of Direct Emissions Available in Compliance Periods	124
Figure 2: Lifecycle of Emission Reductions Used for Compliance in the CAR by Two Hypothetical Covered Parties	142

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List of Acronyms

AHRI	Air-Conditioning, Heating, and Refrigeration Institute
ANSI	American National Standards Institute
APA	Administrative Procedure Act
AVERT	Avoided Emissions and Generation Tool
BA	balancing authority
BPA	Bonneville Power Administration
CAA	Washington Clean Air Act
CAFO	Concentrated Animal Feeding Operation
CAR	Clean Air Rule
CARB	California Air Resources Board
CBA	Cost-Benefit Analysis
CERT	Carbon Emissions Reduction Taskforce
CES	Concise Explanatory Statement
CFR	Code of Federal Regulations
CIG	Climate Impacts Group
CNG	compressed natural gas
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
CPP	Clean Power Plan
DOE	U.S. Department of Energy
DOL	Department of Licensing
EFSEC	Energy Facility Site Evaluation Council
EGU	Electricity Generating Units
EIA	Energy Independence Act
EIS	Environmental Impact Statement
EITE	energy intensive and trade-exposed business
EJ	environmental justice
EJAC	Environmental Justice Advisory Committee
EPA	U.S. Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
ERU	emission reduction unit
FUND	Framework for Uncertainty, Negotiation, and Distribution
GDP	Gross Domestic Product
GHE	Grays Harbor Energy Center
GHG	greenhouse gas
GtC	gigaton of carbon
HVAC	heating, ventilation, and air conditioning
ICNU	Industrial Customers of Northwest Utilities
IPCC	Intergovernmental Panel on Climate Change
IPP	independent power producer
IQO	Independent Qualifying Organization
ISO	International Organization for Standardization
IVT	Input Verifier Tool
IWG	Interagency Working Group

LBA.....	Least Burdensome Alternative Analysis
LCFS.....	low carbon fuel standard
LDC.....	local distribution company
MT CO ₂ e.....	metric ton of carbon dioxide equivalent
MWh.....	megawatt hour
NAICS.....	North American Industry Classification System
NERC.....	North American Electric Reliability Corporation
NGD.....	natural gas distributor
NHTSA.....	National Highway Traffic Safety Administration
NPRF.....	non-project review form
NWPCC.....	Northwest Power and Conservation Council
ODS.....	Ozone Depleting Substance
OFM.....	Office of Financial Management
OMB.....	Office of Management and Budget
PPM.....	parts per million
PUD.....	Public Utility District
RCW.....	Revised Code of Washington
REC.....	renewable energy credit
REMI.....	Regional Economic Models, Inc.
RFA.....	Regulatory Fairness Act
RGGI.....	Regional Greenhouse Gas Initiative
RIA.....	regulatory impact analyses
SBEIS.....	Small Business Economic Impact Statement
SCC.....	Social Cost of Carbon
SEPA.....	State Environmental Policy Act
TPA.....	Tri-Party Agreement
TSD.....	technical support document
UNFCCC.....	United Nations Framework Convention on Climate Change
UTC.....	Washington Utilities and Transportation Commission
VRE.....	voluntary renewable energy
WAC.....	Washington Administrative Code
WCI.....	Western Climate Initiative
WELC.....	Western Environmental Law Center
WREGIS.....	Western Renewable Energy Generation Information System
WSPA.....	Western States Petroleum Association
WSU.....	Washington State University
WTE.....	waste-to-energy
ZEV.....	zero emission vehicle

Introduction

The purpose of a Concise Explanatory Statement (“CES”) is to:

- Meet the Administrative Procedure Act (“APA”) requirements for agencies to prepare a CES (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 CES provides information on The Washington State Department of Ecology’s (“Ecology”) rule adoption for:

Title and Chapter: Chapter 173-442 WAC – Clean Air Rule with additional amendments to Chapter 173-441 WAC – Reporting of Emissions of Greenhouse Gases

Adopted date: September 15, 2016

Effective date: October 17, 2016

To see more information related to this rulemaking or other Ecology rulemakings please visit our web site: <http://www.ecy.wa.gov/laws-rules/index.html>.

Reasons for Adopting the Rule

Ecology is adopting this rule to establish greenhouse gas (“GHG”) emission standards. Following these new standards will help reduce GHG emissions and protect human health and the environment. Over the past century, GHG emissions from human activity have risen to unprecedented levels. Higher levels of GHGs in the atmosphere have caused average temperatures to go up and the oceans to become more acidic. Washington has already experienced long-term effects that are consistent with those expected from climate change. Our state faces serious economic and environmental disruption from these changes including:

- An increase in pollution-related illness and death due to poor air quality.
- Declining water supply for drinking, agriculture, wildlife, and recreation.
- An increase in tree die-off and forest mortality because of increasing wildfires, insect outbreaks, and tree diseases.
- The loss of coastal lands due to sea level rise.
- An increase in ocean temperature and acidity.
- Increased death and disease in fish like salmon, steelhead, and trout because of warmer summer water temperatures, lower summer water levels, and river flooding in winter.
- Damaged, ruined, and failed field crops and fruit harvests because of higher temperatures and less water available for irrigation.

Taking actions to reduce GHG emissions, like using cleaner energy and increasing energy efficiency, can also help reduce other types of air pollution. In 2008, Washington's Legislature adopted statewide limits for reducing GHG emissions (RCW 70.235.020) as follows:

- By 2020, reduce overall emissions of GHGs in the state to 1990 levels.
- By 2035, reduce overall emissions of GHGs in the state to 25 percent below 1990 levels.
- By 2050, reduce overall emissions of GHGs in the state to 50 percent below 1990 levels or 70 percent below the state's expected emissions that year.

Consistent with the Legislature's intent to reduce GHG emissions, Ecology is using its existing authority under the Washington Clean Air Act ("CAA") to adopt a rule that limits emissions of GHGs.

In addition to Ecology's statutory authority, King County Superior Court ordered the agency to:

...proceed with the rulemaking procedure to adopt a rule to limit greenhouse gas emissions in Washington state [sic] as directed by Governor Inslee in July 2015, and shall issue the rule by the end of calendar year 2016.

Ecology has appealed the timing requirement of the court's order. This CES is part of the agency's obligations in the rulemaking process. It also fulfills part of the court's order because Ecology cannot adopt a final rule until the CES is completed.

Overview of the Rulemaking Process from September 2015 to May 31, 2016

Ecology began preparing the proposed rule in September 2015. The agency conducted educational webinars and in-person stakeholder meetings in both eastern and western Washington from September through December 2015. Some examples of the stakeholder outreach during that period include:

- Sent emails to interested parties through a variety of listservs.
- Sent a news release to interested parties and various press organizations.
- In October 2015, held four “Sounding Board” public meetings (one daytime, one evening in each of Seattle and Spokane).
- Between July and December 2015, held 44 stakeholder meetings.
- From September through November 2015, held four educational webinars.
- Met with industry stakeholders and obtained their input. Participants included the Association of Washington Business, Northwest Pulp and Paper Association, Boeing, NW Gas Association, Puget Sound Energy, and Avista, among many others.
- Met with environmental stakeholders and environmental justice advocates and obtained their input. Participants included Climate Solutions, Washington Environmental Council, the Union of Concerned Scientists, OneAmerica, and Blue Green Alliance, among others.

Based on this stakeholder feedback, Ecology filed an initial proposed rule on January 5, 2016 and started accepting formal comments from the public at that time. Ecology concurrently and actively sought additional feedback that would help inform and shape the final rule. Ecology staff members met with numerous stakeholders and received helpful and constructive ideas on how to best restructure the proposed rule.

Some of the suggested updates and changes were significant. As a result, Ecology withdrew the January proposal in late February. Doing so allowed Ecology to take additional time for agency review, rule refinement, and more stakeholder feedback. Ecology again met with multiple businesses, trade associations, government entities, environmental groups, the public, and other stakeholders. Ecology continued to receive additional stakeholder recommendations until the revised proposal was filed on May 31, 2016.

Many of the changes suggested by the public and incorporated by Ecology fell into six main categories:

- Better accommodate energy intensive and trade-exposed industries (“EITEs”).
- Recognize early actions already taken by businesses, especially EITEs, to reduce GHG emissions.
- Better accommodate economic growth.
- Strengthen the overall emissions cap for Washington State.

- Generate more GHG emission reductions in Washington State.
- Clarify the relationship between the CAR (“CAR”) and federal Clean Power Plan (“CPP”).

In response to these and other stakeholder comments, Ecology’s May 31, 2016 proposal was a substantial modification from the January proposal.

Ecology has not prepared a formal response or separate CES for the withdrawn January proposal. However, this CES includes copies of the comments submitted to Ecology about the January proposal. These comments are attached as Appendix A. The purpose of including these comments is to provide a complete record in one place. We also hope including this information will help explain the differences between the original (January) and revised (May) proposed rules.

Appendix A refers to some comments as “formal comment” and some as “informal comment.” “Formal comments” are those that Ecology received during the official comment period from January 5–February 26, 2016. “Informal comments” are those that Ecology either received before the start of the formal comment period (before January 5, 2016) or after the original proposal was withdrawn February 26, 2016. All comments received before May 31, 2016 are included in one of these two categories.

Comments received May 31–July 22, 2016 were attributed to the revised rule proposal, even if they did not specifically reference any elements of the May rule package. We address these comments later in this document. We do not address comments submitted after the formal comment period closed July 22, 2016.

Differences Between the Revised May 31, 2016 Proposed Rule and Final 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. We must also state the reasons for the differences between the proposal and the adopted rule.

There are differences between the proposed rule filed on May 31, 2016 and the adopted rule filed on September 15, 2016. Ecology made these changes for the following reasons:

- In response to comments we received.
- To ensure clarity and consistency.

Ecology did not make any changes to the proposed rule that are substantially different from the original proposal. In making this determination, Ecology considered the following factors:

- The extent to which a reasonable person affected by the adopted rule would have understood that the published proposed rule would affect his or her interests.
- The extent to which the subject of the adopted rule or the issues determined in it are substantially different from the subject or issues involved in the published proposed rule.
- The extent to which the effects of the adopted rule differ from the effects of the published proposed rule.

Ecology did not make any revisions to the proposed rule that change who is covered or otherwise affected by the rule. We believe a reasonable person affected by the proposed rule would also be affected by the adopted rule. A reasonable person not affected by the proposed rule would not be affected by the adopted rule. Ecology believes this supports our conclusion that we did not make any substantive changes to the proposed rule.

Ecology did not make any changes to the subject of the adopted rule or issues determined in it. We believe the subject matter of the adopted rule is identical to the subject matter of the proposed rule: establishing GHG emission reduction standards. The issues involved in this subject matter are identical between the proposed and adopted versions of the rule and include:

- Scope
- Definitions
- Applicability
- Baselines
- EITEs
- General compliance issues (timelines, reduction requirements, regulatory orders, etc.)
- Compliance options
- Emission Reduction Units
- Limitations on generating emission reductions

- Third-party verification
- Registry
- Reserve
- Other requirements
- Enforcement
- Confidentiality
- Severability
- Amendments to Chapter 173-441 WAC

Ecology believes this supports our conclusion that we did not make any substantive changes to the proposed rule.

Finally, Ecology considered the extent to which the effects of the adopted rule differ from the effects of the published proposed rule. Most of the changes made to the adopted version of the rule simply clarify Ecology’s original intent. The effects of these changes are consistent between the proposed and adopted versions of the rule. Ecology made many of these changes at the suggestion of stakeholders and other public commenters. We evaluated those changes to determine if they were a “substantial” change. We determined they were not. These changes are:

- Instead of requiring all EITEs to use the production-based efficiency metric, the adopted rule now allows EITEs to choose to be treated as non-EITEs. We made this change at the request of multiple commenters. As this provision merely provides an option, we do not think it rises to the level of a “substantial” change to the rule. See WAC 173-442-020(1)(m)(ii).
- The adopted rule adds an exemption for natural gas distributors selling product that is used as a feedstock to produce another product, such as methanol. We made this change at the request of a commenter and believe it is consistent with the other exemptions listed in the proposed rule. We do not think this change rises to the level of a “substantial” change to the rule. See WAC 173-442-040(3)(a).
- The adopted rule adds clarifying instructions on how to adjust a natural gas distributor’s baseline when other covered parties enter or exit the program. We made this change in response to comments. It clarifies our original intent and does not change requirements. We do not think this change rises to the level of a “substantial” change to the rule. See WAC 173-442-050(3)(c).
- The adopted rule added bounds on the required emission reductions for EITEs. These bounds were not included in the proposed rule. The most stringent reduction requirement for the least efficient EITE facilities will be no more than 2.7 percent per year. The least stringent reduction requirement for the most efficient EITE facilities will be no less than 0.7 percent per year. We made this change at the request of multiple commenters. We believe this clarifies Ecology’s original intent and does not rise to the level of a “substantial” change to the rule. See WAC 173-442-070(3)(b)(i) and (ii).
- The adopted rule added two new protocols that will be accepted for generation of ERUs. These protocols were not listed in the proposed rule. These new protocols are “Landfill Methane Collection and Combustion” and “Nitric Acid Production Project Protocol.”

These provisions were added at the request of commenters. As these provisions merely provide additional options, we do not think they rise to the level of a “substantial” change to the rule. See WAC 173-442-160(7)(d) and WAC 173-442-160(8)(e).

- The adopted rule added another type of accreditation for third party verifiers. This accreditation was not listed in the proposed rule but was requested by a commenter. As this provision merely provides an option, we do not think it rises to the level of a “substantial” change to the rule. See WAC 173-442-220(6)(a)(iii)(E) and WAC 173-441-085(7)(a)(iii)(E).

The following describes the exact changes made to the final adopted rule and explains Ecology’s reasons for making them. Where a change was made solely for typographical or editing purposes (including subsequent renumbering), we did not include it in this section. We did include clarifications made in response to comments.

Table 1: Changes Made to Adopted Rule

Section in Final Rule	Change made	Reason for change
173-442-020(1)(b)	Adds new definition for “allowance”	Stakeholders expressed confusion about the meaning and requested the definition be added
173-442-020(1)(m)(ii)	Adds new option for EITEs to choose to not be treated as EITEs	EITE stakeholders requested the ability to opt out of EITE provisions
173-442-020(1)(n)	Clarifies definition of “ERU” is an emission reduction for accounting purposes	Clarifies meaning
173-442-020(1)(s)	Rewords “aggregate emission reduction limit” as “aggregate emission cap”	Clarifies meaning
173-442-020(1)(t)	Rewords “external program” as “GHG emission reduction program”	Clarifies meaning
173-442-030(1)	Clarifies applicability is triggered by three-year rolling average	Clarifies meaning
173-442-030(3)	Clarifies to indicate emission reduction requirements apply when the average emissions exceed the compliance thresholds listed in Table 1	Stakeholders asked for clarification about when the requirements applied to covered parties
173-442-030(3) Table 1	Adds notation clarifying 2017–2019 compliance year applies for three-year rolling average starting in 2012	Stakeholders asked for clarification about when the requirements applied to covered parties
173-442-040(2)(b)(ii)	Changed wording from final “distribution” to “destination”	Commenters asked for clarification to address concerns about meaning
173-442-040(3)(a)	Adds exclusion for natural gas used to make a product and clarifies that natural gas supplied to voluntary parties is treated the same as other covered parties	Commenters requested additional exclusion applicable to natural gas feedstocks and clarification that voluntary parties are treated the same as other covered parties
173-442-040(4)(a)	Clarifies the referenced “implementation plan” is for the federal CPP	Clarifies original intent
173-442-050(3)(c)	Adds clarifying language allowing for baseline adjustments for natural gas distributors due to entrance or exit of covered parties.	Commenters requested change to prevent double counting emissions

Section in Final Rule	Change made	Reason for change
173-442-060(1)(b)	Adds language clarifying when “Annual decrease” becomes applicable	Commenter requested clarification
173-442-060(2)	Clarifies the contents of a regulatory order	Commenters requested clarification
173-442-070(1)	Clarifies that EITEs must only report their own production data, not production data from other companies in their industry sector	Commenters were confused about whether they were required to produce data for other companies—new wording clarifies original intent
173-442-070(2)	Removes applicability section, now clarified in WAC 173-442-030(3)	Commenters found original wording confusing—removes wording to clarify original intent
173-442-070(2)(c)	Removes obsolete reference	Removed 173-442-070(2) as noted above
173-442-070(3)	Changes terminology from “efficiency reduction rate” to “efficiency improvement rate”	Commenters found the original wording counterintuitive—new wording clarifies original intent
173-442-070(3)(a)(i)(A)	Clarifies that GHG emissions data must be comparable to that reported under Chapter 173-441 WAC or WAC 173-442-070(1)	Clarifies that production data submitted by the facility can be used to calculate the efficiency intensity distribution
173-442-070(3)(b)(i)	Clarifies wording regarding “greater,” places upper bound on required emissions reductions of 2.7% for least efficient facilities, and corrects regulatory reference	Commenters found the original wording confusing or counterintuitive—new wording clarifies original intent and responds to commenter requests to add upper limit
173-442-070(3)(b)(ii)	Clarifies wording regarding “less,” places lower bound on required emissions reductions of 0.7% for most efficient facilities, and corrects regulatory reference	Commenters found the original wording confusing or counterintuitive—new wording clarifies original intent and responds to commenter requests to add lower limit
173-442-070(3)(b)(iii)	Adds clarifying wording and corrects regulatory reference	New wording clarifies original intent
173-442-070(3)(b)(iv)	Clarifies wording regarding “greater,” places upper bound on required emissions reductions of 2.7% for least efficient facilities, and corrects regulatory reference	Commenters found the original wording confusing or counterintuitive—new wording clarifies original intent and responds to commenter request to add upper limit
173-442-070(3)(b)(v)	Clarifies wording and corrects regulatory reference	Commenters found the original wording confusing or counterintuitive—new wording clarifies original intent
173-442-070(4)(b)	Clarifies terminology in Equation 1	Commenters found the original wording confusing or counterintuitive—new wording clarifies original intent
173-442-110(2)	Clarifies that an “activity” may generate ERUs, just like a “project” or “program”	Clarifies original intent
173-442-110(3)	Rewords description of external markets	Clarifies original intent
173-442-140(3)(b)	Rewords nature of ERU possession	Clarifies original intent
173-442-150(1)(e)	Clarifies that ERUs must be in addition to existing reduction requirements and must	Clarifies original intent that ERUs from projects must meet

Section in Final Rule	Change made	Reason for change
	also meet additionality requirements of applicable protocol	requirement of listed protocols where applicable
173-442-150(1)(e)(ii)(C)	Adds language referring to carbon dioxide mitigation standards from an EFSEC site certificate	Clarifies original intent to account for both ways EFSEC standard has been applied
173-442-160(2)(c)	Clarifies that emission reduction projects at a stationary source must not be used to generate ERUs that are already counted	Clarifies original intent to avoid double counting emission reductions for on-site projects
173-442-160(3)(a)(i) 173-442-160(3)(a)(ii) 173-442-160(6)(a) 173-442-160(6)(b) 173-442-160(6)(c) 173-442-160(7)(a) 173-442-160(7)(b) 173-442-160(7)(c) 173-442-160(7)(d) 173-442-160(8)(a) 173-442-160(8)(b) 173-442-160(8)(c) 173-442-160(8)(d)	Clarifies that all protocols must use a version approved no later than September 1, 2016	Clarifies to avoid confusion about which protocols are acceptable
173-442-160(3)(b)	Rephrase terms for commute trip reduction	Clarifies original intent
173-442-160(5)(a)(iv)	Deletes provision	Commenters requested removal of provision requiring use of megawatt hours
173-442-160(5)(c)	Corrects regulatory references	Clarifies original intent
173-442-160(5)(c)(i)(A)	Clarifies applicability to electrical conservation projects	Clarifies original intent
173-442-160(5)(c)(ii)	Adds natural gas efficiency units may remain in therms	Commenters requested use of therms instead of megawatt hours
173-442-160(7)(d)	Adds "Landfill Methane Collection and Combustion" protocol to acceptable list	Commenters requested adding this protocol—consistent with original intent
173-442-160(8)(e)	Adds "Nitric Acid Production Project Protocol" to acceptable list	Commenters requested adding this protocol—consistent with original intent
173-442-170(2)	Clarifies use of allowances to generate ERUs	Commenters found the original wording confusing—new wording clarifies original intent
173-442-170(2)(a)	Clarifies use of allowances cannot exceed limits on percentages in Table 3	Commenters found the original wording confusing—new wording clarifies original intent
173-442-170(2)(a) Table 3	Changes title to add clarity	Commenters found the original wording confusing—new wording clarifies original intent
173-442-170(2)(b)	Clarifies use of allowances by vintage year cannot exceed the percentage limits in Table 4	Commenters found the original wording confusing—new wording clarifies original intent
173-442-170(2)(b) Table 4	Changes title to add clarity	Commenters found the original wording confusing—new wording clarifies original intent
173-442-170(3)	Clarifies requirement to invalidate allowances	Commenters found the original wording confusing—new wording clarifies original intent
173-442-200(3)	Clarifies requirement is for each MT CO _{2e}	Clarifies original intent

Section in Final Rule	Change made	Reason for change
173-442-200(6)(d)(ii)	Adds missing cross reference for EITEs	Clarifies original intent
173-442-220(1)	Removes reference to 173-442-150(2)	Reference obsolete
173-442-220(1)(b)	Removes reference to 173-442-150(2)	Reference obsolete
173-442-220(6)(a)(iii)(E)	Adds additional acceptable accreditation	Commenters asked for expanded accreditation to include omitted program—extends original intent
173-442-240(1)(a)(ii)(C)	Changes terminology in Equation 2	Clarifies original intent
173-442-240(2)	Clarifies terminology regarding aggregate emissions cap	Clarifies original intent
173-442-240(2)(b)	Clarifies retirement options for ERUs	Commenters asked for clarification
173-442-240(2)(c)(i)	Expands data collection requirement	Broadened to offer flexibility to meet original intent
173-442-240(2)(c)(ii)	Removes requirement that purchases apply only to Washington customers	Broadened to offer flexibility to meet original intent
173-442-240(3)(b)(iii)	Adds “activities” to “projects” and “programs”	Clarifies original intent
173-442-240(3)(b)(iv)	Clarifies ERU awards from committee are subject to Ecology approval	Clarifies original intent
173-442-330(1)	Adds provision for whether permit is required	Stakeholders requested clarification to avoid unintended consequence and meet original intent
173-442-340(3)	Deletes provision that violation is for each day	Removed unnecessary reference to daily violations—covered by statutory provisions
173-441-020(1)(f) 173-441-020(1)(h)(i) 173-441-020(1)(j)(ii) 173-441-020(3) 173-441-050(9) 173-441-080(1) 173-441-120 Table 120-1 173-441-120(2)(e) 173-441-120(2)(e)(vii) 173-441-120(2)(h)	Updates 40 C.F.R. Part 98 adoption by reference dates to September 1, 2016 throughout	Provides consistency with statutory requirement
173-441-020(1)	Clarifies distinction between “facility” and “supplier”	Clarifies original intent in response to comments
173-441-050	Clarifies all applicable MT CO ₂ e must be included in the report	Clarifies existing requirement
173-441-085(7)(a)(iii)(E)	Adds additional acceptable accreditation	Requested by commenters
173-441-120 Table 120-1	Adds clarifying language about facility definition	Clarifies in response to comments
173-441-120(2)(h)(ii)	Changes wording from final “distribution” to “destination”	Commenters found the original wording confusing—new wording clarifies original intent

Comments Received and Ecology's Responses

Ecology accepted comments from May 31, 2016 until July 22, 2016. We received a total of 3,179 public comments during the official public comment period. Commenters submitted by mail, email, testimony during public hearings, and through Ecology's web site. The breakdown of each type of comment received is:

Table 2: Comments Received

Method of submission	Number received
Oral comment at in-person public hearing	85
Oral comment at webinar hearing	6
Web site submission	142
Written comment received via email, mail, fax, courier, or hand delivery (includes unique submissions submitted via attachment to a web site submission and written comments submitted at in-person public hearings)	234
Form letters submissions (irrespective of method delivered)	2,712

This section provides comments that we received during the public comment period and our responses. The state's APA, at RCW 34.05.325(6)(a), requires:

“...an agency shall prepare a concise explanatory statement of the rule: ... (iii) Summarizing all comments received regarding the proposed rule, and responding to the comments by category or subject matter, indicating how the final rule reflects agency consideration of the comments, or why it fails to do so.”

The rest of this document fulfills Ecology's obligations under RCW 34.05.328(6)(a)(iii), although we present the information in the reverse order of how it is listed in the rule. First, we present Ecology's responses. We have first grouped notable and frequent comments together by subject matter. We summarize the idea behind each and provide Ecology's detailed response.

We then summarize all comments we received. These summaries are organized first by the method the comment was submitted, then in alphabetical order. Each summary has a corresponding response or a reference to one of the detailed responses mentioned above. Please note that all comments making the same substantive point will refer back to the same detailed response. We have not tried to repeat the same reply for each commenter. Instead, we will direct each commenter to where our reply is located in the document.

Finally, Ecology received four different form letter submissions from multiple commenters. We have not responded to each form letter submitted. Instead, we present the text of each form letter and Ecology's response to the content. The name of each submitter is listed separately at the end of this document.

We have noted each circumstance where we have made a change to the proposed rule in response to comments. When a response to comment does not specifically note a change, we have not made one.

It is important to note that Ecology only responds to substantive comments related to the proposed rule. This CES does not respond to comments that are not “regarding the proposed rule.” This

includes comments and attachments that merely explain or summarize facts or laws. Examples of these types of submissions include explanations about cap-and-trade or similar programs in other jurisdictions and summaries of the economic contribution of certain industries or specific businesses. We also received many comments on how Ecology should plan for or implement the federal CPP, which is a separate process. We have read and considered this information. For comments not directly related to the proposed regulations, we do not provide a direct response unless the submission prompted a change. For all of these comment submissions, Ecology thanks commenters for providing additional information. We have not made any changes to the proposed rule in response to any of these comments unless we specifically say we have done so.

We also note that some comments and supporting documentation had to do with the effects of climate change on humans and the rest of the natural world. Ecology will not respond to these comments individually or detail their contents in this document. We thank the commenters for their submissions. We generally agree with and recognize all the effects of climate change, including species degradation, ocean acidification, increased extreme weather events, and rising sea levels. Again, we have not made any changes to the proposed rule in response to any of these comments unless we specifically say we have done so.

The full original content of each written comment (including website submissions) is in Appendix B. The transcript of each oral comment is in Appendix C through F, depending on which public hearing is applicable.

Ecology's detailed responses

We have grouped Ecology's responses to comments by subject matter. As noted above, the May rule proposal had 17 different subjects. Based on the content of comments, we have added some additional overarching subjects as well. We respond to comments in the following subject matter order:

General/Overarching subjects

- Legal issues
- Rulemaking process
- State Environmental Policy Act ("SEPA")
- Economic analysis
- Environmental Justice ("EJ")
- Other regulatory requirements
- Rule's effects

Rule-specific subjects

- Scope
- Definitions
- Applicability
- Baselines
- EITEs
- General compliance issues (timelines, reduction requirements, regulatory orders, etc.)
- Compliance options
- Emission Reduction Units ("ERUs")
- Limitations on generating emission reductions
- Third-party verification
- Registry
- Reserve
- Other requirements
- Enforcement
- Confidentiality
- Severability
- Comments about Chapter 173-441 WAC
- Miscellaneous

Legal issues

Many comments referenced legal requirements and issues. These comments addressed issues related to Ecology's authority, constitutional rights, the *Foster* litigation, and similar issues. Each title presents a summarized version of the applicable comment, and we respond below each.

Foster Litigation

Response 1

The CAR is in conflict with the order in *Foster*

Ecology's proposed rule is consistent with both the November 19, 2015 and May 16, 2016 court orders. The *Foster* case describes ongoing litigation to require Ecology to establish a rule reducing GHG emissions. Ecology agrees with Western Environmental Law Center's ("WELC's") assessment that the Court "direct[ed] Ecology to promulgate a rule limiting greenhouse gas emissions in Washington by the end of 2016."¹ Ecology's CAR does that, and has been finalized well in advance of the end of the year deadline.

Specifically, the Court found that Ecology has a mandatory duty to adopt rules establishing emission standards for GHGs under the Washington CAA.² The Court further found that "Ecology is not failing to fulfill this obligation given that it is engaging in rulemaking under the directive to establish standards for greenhouse gas emissions" issued by Governor Inslee on July 28, 2015. The Court further recognized that it "does not have the authority to exclude non-science related considerations from this ongoing rulemaking" and specifically denied the *Foster* petitioners' appeal seeking a rule based on "current science."³ The Court later affirmed Ecology's duty to develop a rule to reduce GHG emissions, ordering Ecology to continue the rulemaking per Governor Inslee's July 2015 directive and to issue that rule by the end of 2016.⁴ Ecology's CAR satisfies the Court's directives by establishing emission standards for GHGs and doing so prior to the end of the year.

Response 2

Why did Ecology appeal the order

Ecology has appealed the May 16, 2016 court order. Ecology appealed that order to ensure sufficient time to consider and evaluate all of the comments submitted, and make changes to the rule in response to those comments. Although at the time of the appeal Ecology was in the middle of the rulemaking process and planned to adopt the final rule sometime in September, the adoption date was not guaranteed. Washington law requires that if Ecology were to make a substantial change between the proposed rule and the final rule, Ecology must file either a supplemental notice or do a new proposal, complete with a new public comment period and hearings. Doing this would have added many months to the rulemaking timeline, which would have pushed final rule adoption into 2017. Ecology wanted to preserve the option to make substantial changes to the proposed rule but did not want to risk failing to meet the court-ordered deadline.

¹ Western Environmental Law Center Comment Letter, p. 1

² Order Affirming the Department of Ecology's Denial of Petition for Rulemaking, *Foster, et al. v. Ecology* (King County Superior Court No. 14-2-25295-1 SEA) (Nov. 19, 2015).

³ *Id.*, at 4.

⁴ Order on Petitioners' Motion for Relief Under CR 60(b), *Foster, et al. v. Ecology* (King County Superior Court No. 14-2-25295-1 SEA) (May 16, 2016).

Response 3

***Foster* provided Ecology with additional legal authority for the CAR**

Several commenters stated that the court orders in the *Foster* case provided Ecology with additional legal authority to develop the CAR, or would prevent future administrations from weakening the CAR. Ecology respectfully disagrees that either the November 19, 2015 or May 16, 2016 orders in the *Foster* litigation would have provided additional authority to develop or strengthen the proposed CAR. Ecology further disagrees that the order provided additional protection against changes to the rule by a future administration. As explained in Response 1, nothing in the court orders bind Ecology to specific substantive requirements in developing the CAR. Ecology was only required to finalize a rule that establishes emission standards for GHGs by the end of 2016. By issuing a final rule well in advance of the end of the year deadline, Ecology has fulfilled this obligation.

Ecology lacks statutory authority for the CAR

Response 4

Ecology cannot establish emission standards for entities other than stationary sources under Chapter 70.94 RCW

Ecology's authority to adopt the CAR is provided in the Washington CAA, Chapter 70.94 RCW. RCW 70.94.331 authorizes Ecology to adopt "emission standards" for air pollutants. GHGs are air pollutants. Some commenters take the position that Chapter 70.94 RCW only authorizes the adoption of emission standards for "sources" of emissions, as that term is defined in RCW 70.94.030. Ecology disagrees. "Emission standard" as defined in the Act does include emission standards that apply to sources, but the examples provided in the definition are not exclusive. Emission standards can be applied to other generators of GHG emissions regardless of whether those generators fall within the statutory definition of "source."

In Washington, the combustion of transportation fuels and natural gas generate a significant amount of GHG emissions. Transportation accounts for 46 percent of Washington's overall GHG emissions. Applying emission standards to these high-emitting products is consistent with the goal of Chapter 70.94 RCW of using all known, available, and reasonable methods to reduce, prevent, and control air pollution. It is also an important tool for helping the state meet the GHG reductions in RCW 70.235.020.

Commenters have characterized the application of emission standards to their products as an attempt to "regulate the sale of a commodity" or an attempt to hold distributors and suppliers responsible for the "emissions of their customers." These are inaccurate characterizations. Products that emit GHGs impose costs on society because society must pay to address the harms that arise from climate change. This rule ensures that product distributors and suppliers internalize some of the costs associated with the products they sell. This is a common sense approach and is well within Ecology's authority to adopt emission standards under Chapter 70.94 RCW.

Response 5

Ecology lacks authority to establish "ERUs" as a compliance mechanism

Ecology does not agree that it lacks the authority to establish ERUs as a compliance pathway under the rule. Ecology has authority to establish emission standards under RCW 70.94.331. This authority necessarily includes the authority to establish the means of compliance with such standards. ERUs are one means of compliance with the emission standards established in the rule. They provide flexibility to businesses by giving them more ways to meet their compliance

obligations. For example, without ERUs, stationary sources would be required to meet their entire compliance obligation through emission decreases at the regulated facilities. The use of emission reduction units allows businesses to instead utilize an alternative compliance pathway while decreasing GHG emissions by the allotted amount. This is consistent with legislative direction in Chapter 70.94 RCW to protect air quality while promoting economic development and minimizing compliance costs for businesses.

The CAR raises constitutional issues

Response 6

The CAR violates the dormant Commerce Clause

Ecology respectfully disagrees that the CAR violates the dormant Commerce Clause of the United States Constitution. The dormant Commerce Clause restricts states from implementing regulations or laws that are designed to benefit in-state economic interests by burdening or discriminating against out of state competitors.⁵

Commenters argue that by restricting emission reduction projects (including renewable energy credits from renewable energy projects) to in-state projects for the purpose of generating ERUs, the CAR burdens or discriminates against similar projects that achieve emission reductions out of state. Commenters raise the same argument regarding the CAR's limitation of purchases of out-of-state allowances for compliance over time.

Economic protectionism is not the purpose of restricting ERUs to in-state projects. Rather, the primary purpose of restricting emission reduction projects to in-state projects for the purpose of generating ERUs is to ensure that Ecology has jurisdiction over these projects in terms of potential enforcement actions. It will also facilitate inspection and verification of these projects. Emission reduction projects within the state will also provide significant environmental and health co-benefits, as such projects are typically associated with a reduction in criteria air pollutant emissions such as fine particulate matter. Along these lines, Ecology notes that the market for ERUs exists only as a function of the CAR's regulatory program. ERUs have no intrinsic value outside of that program. When the state creates a market through a state program, the dormant Commerce Clause does not prohibit the state from limiting the benefits of the program to state residents.

These are legitimate reasons supporting Ecology's interests in advancing the environmental goals of the CAR. Ecology has concluded that to the extent the in-state limitation burdens interstate commerce, that burden does not outweigh the benefit of being able to enforce the terms of the CAR.

Response 7

The CAR constitutes an illegal taking

Ecology disagrees that the CAR would constitute a taking of property. As a threshold matter, Ecology notes that businesses are required to comply with a range of regulations, many of which may require businesses to incur costs. The fact that a regulation costs money, however, does not mean that the regulation constitutes a taking.

Washington courts analyze takings cases by first assessing whether a categorical taking has occurred. A categorical taking exists when: (1) government has physically occupied or

⁵ *Dep't of Rev. of Ky. v. Davis*, 553 U.S. 328, 337-38 (2008).

Legal Issues (continued)

appropriated property; or (2) a regulation deprives property of all economic value. For example, although a commenter speculates that “if” the Grays Harbor plant is unable to operate economically, it “could be” the subject of a categorical taking, Ecology has seen no evidence or indication that the plant will not be able to operate economically as a result of the rule.

Absent a categorical taking, courts then consider whether the regulation impinges on a fundamental property interest or whether the regulation is intended to confer a public benefit rather than prevent harm. If the answer to both questions is “no,” then no taking has occurred. The CAR does not impinge on a fundamental property interest because it does not interfere with the right to own or possess property, to exclude others from the property, or to transfer the property to someone else. The rule seeks to prevent harm rather than confer a public benefit because covered parties are required to address the harms associated with their own GHG emissions. For these reasons, Ecology disagrees that the CAR would constitute a taking.

Response 8

The CAR violates the Supremacy Clause because it conflicts with the federal CPP

Ecology disagrees that the CAR might be conflict preempted by the federal CPP. Whether preemption exists is first and foremost a question of congressional intent, and there is a strong presumption against preemption. When preemption is expressed in a federal statute, the scope of preemption is determined in accordance with the statutory language. It is only when there is no express preemption that courts consider whether there is any implied preemption. Conflict preemption is a form of implied rather than express preemption.

The CPP was passed under the federal Clean Air Act which contains an express preemption provision for emission standards. Specifically, section 115 of the Act prohibits states from adopting or enforcing any standard that is less stringent than the federal standards. With that exception, the statute is clear that states are otherwise permitted to adopt or enforce any emission standard or limitation or any requirement related to the control or abatement of air pollution. Since the CAR is not less stringent than the CPP, the CPP does not preempt the CAR.

Ecology also notes that stationary sources required to comply with the CPP will be exempt from the CAR at the beginning of the CPP’s first compliance period, provided that the U.S. Environmental Protection Agency (“EPA”) has approved Washington’s implementation plan and the state plan requires greater GHG emission reductions than required under 40 C.F.R. Part 60, Subpart UUUU. Power plants will therefore not be simultaneously regulated by both the CAR and the CPP. Instead, the CAR will ensure more immediate reductions of GHG emissions from power plants until the CPP becomes effective.

Response 9

ERUs constitute an invalid tax

Ecology disagrees that the ERU Reserve account required by WAC 173-442-240 violates Article VII, section 5 of the Washington Constitution by imposing an invalid tax on covered parties under the CAR. Moreover, Ecology believes this argument is premised on a misunderstanding of the Reserve account, and how it relates to a covered party’s emission reduction requirement.

All covered parties under the CAR must annually decrease their GHG emissions by 1.7 percent of their baseline emissions value. Pursuant to WAC 173-442-240(1)(a)(i)(A), Ecology must allocate two percent of the 1.7 percent annual decrease to the ERU Reserve account (which amounts to 0.034 percent of the covered party’s baseline emissions value). The Reserve account therefore does

not impose an additional reduction requirement on covered parties under the CAR. It merely allocates a portion of the reduction requirement to the Reserve.

As a general matter, taxes are compulsory payments imposed broadly to raise revenue for general public purposes. The CAR is a regulation, not a tax. To the extent the commenter argues that the requirement to reduce GHG emissions constitutes an impermissible tax because covered parties may incur costs in order to meet the requirement, Ecology disagrees. There are many examples of federal and state environmental regulations that require regulated entities to incur the costs of compliance. In this respect, the CAR is no different from other environmental regulations. To the extent that the commenter argues that the requirement is a tax because it is used to achieve broad public benefits rather than mitigate against harms caused by the regulated parties, Ecology again disagrees. Regulated parties are required to decrease a percentage of their own GHG emissions. Regulated parties are not required to mitigate for the GHG emissions of others.

Response 10

The allocation of ERUs to the Environmental Justice Advisory Committee (“EJAC”) constitutes an unlawful delegation

Washington’s unlawful delegation doctrine prohibits the delegation of legislative authority to state agencies. Ecology disagrees that allowing the EJAC to award a certain number of ERUs from the Reserve violates this doctrine. However, Ecology understands the commenter’s concern that Ecology should have a role in all decisions affecting the distribution of ERUs. For that reason, Ecology has amended the rule to give itself approval authority over the award of ERUs by the EJAC.

Chapter 70.235 RCW GHG limits

Response 11

The CAR needs to follow the limits/Ecology is not constrained by the limits

In 2008, the Legislature adopted Chapter 70.235 RCW, which contains provisions on limiting GHG emissions. The statute establishes GHG emission reduction limits for the state, requiring a return to 1990 levels by 2020, cutting 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.⁶ RCW 70.235.040 then directs Ecology to periodically make recommendations to the state Legislature to update these GHG reduction limits.

Ecology determined that the GHG emission reduction limits currently established in state law are the appropriate limits to guide emission reductions in the CAR for the emissions covered by the rule. The CAR covers about two-thirds of the statewide GHG emissions; Ecology concluded it would not be equitable to require entities responsible for two-thirds of the state’s emissions to reduce their GHG emissions by more than their proportional share to meet the statutory limit. The 1.7 percent annual reduction for covered parties will achieve about two-thirds of the 2035 limit, resulting in a projected savings of just under 20 million metric tons of CO₂e per year in 2035 compared to business as usual.

Ecology agrees that we are not restricted by the reduction limits in RCW 70.235.020 in achieving emission reductions under the CAR. However, we have concluded that basing the emission reductions on the limits that are currently in law is a reasonable first step for our initial economy-wide regulation capping GHG emissions.

⁶ RCW 70.235.020.

Response 12

Chapter 70.235 RCW does not require Ecology to take action

Several commenters stated that Chapter 70.235 RCW does not require Ecology to take action to reduce emissions. Ecology is taking action to cap and reduce GHG emissions pursuant to our authority to establish emission standards for air pollutants under the Washington CAA. We are taking this action in recognition of the urgency of the need to reduce GHG emissions and the health and environmental risks posed to Washington by climate change. While the reductions in the CAR are linked to the statutory limits in RCW 70.235.020, that statutory provision is not the legal authority for Ecology to adopt emission standards. Again, the legal authority is in the state CAA.

Response 13

The limits in Chapter 70.235 RCW need to be tightened

Ecology acknowledges that the GHG emission reduction limits established by the state Legislature in 2008 are now outdated and likely need to be tightened. We are in the process of making recommendations on new limits, but have not yet completed our work. In making those recommendations, we are required by law to consult with the University of Washington's Climate Impacts Group ("CIG") regarding climate change science.⁷ We intend to complete that work and make recommendations to the 2017 state legislature for new limits. However, it is important to recognize that the Legislature is under no obligation to act on Ecology's recommendations.

Response 14

Ecology has the legal authority and duty to promulgate science-based emission limits; targeting emission reductions to allow more than two degrees Celsius is unlawful; the CAR must be aimed at 350 ppm and mandate annual reductions of eight percent per year

Ecology agrees that we are not constrained by the emission limits currently set in statute. However, we believe that these limits are an appropriate starting point for the first statewide cap on GHG emissions as they are in the current law and established by the Legislature. Ecology will be making recommendations to the 2017 Legislature to revise the emission limits, however there is no guarantee that the Legislature will act on Ecology's recommendations and change the emission limits. Given this uncertainty and the urgency to take action on climate, Ecology believes it is better to proceed with the current rule than wait until the 2017 legislative session. However, Ecology will be evaluating progress in reducing GHG emissions as a result of this rule, and will revise key aspects of the rule, including emission reductions, as appropriate.

Ecology respectfully disagrees that our decision to use the emission limits currently in statute as the starting point for our CAR is arbitrary and in violation of our mandate under the Washington CAA. In the *Foster* case, in response to being asked to require that Ecology establish a rule according to "current science," the court specifically held that "[n]ow that Ecology has commenced a rulemaking to establish greenhouse [*sic*] emission standards taking into account science and [*sic*] well as economic, social and political considerations, it cannot be found to be acting arbitrarily or capriciously."⁸ Further, the Court found that by developing the CAR, Ecology was satisfying any mandatory duty under the Washington CAA.⁹ Accordingly, the CAR

⁷ RCW 70.235.040.

⁸ Order Affirming the Department of Ecology's Denial of Petition for Rulemaking, *Foster, et al. v. Ecology* (King County Superior Court No. 14-2-25295-1 SEA) (Nov. 19, 2015).

⁹ *Id.*, at 7.

Legal Issues (continued)

establishes clear emission reduction requirements covering approximately two-thirds of overall statewide GHG emissions, including emissions from the transportation sector which is the largest source of GHG emissions in the state.

One commenter also stated that the CAR needed to establish limits sufficient to be protective of water quality and to combat ocean acidification. Addressing water quality standards or regulatory mechanisms to address ocean acidification are beyond the scope of this rule, which is to establish emission standards for GHG emissions in Washington.

Ecology needs independent legislative authority to develop the CAR

Response 15

Ecology should put CAR to referendum

Ecology has developed the CAR under our existing state CAA authority. That law provides us with the authority to establish emission standards to control levels of air pollution, including GHGs. The CAR establishes emission standards for sources or types of emissions as provided by RCW 70.94.331(2)(c). Ecology is not required to obtain additional approval or permission from the state Legislature when developing a rule under existing legal authority. Further, Ecology does not have the legal authority to refer a matter to the voters in a referendum.

Response 16

The legislature did not approve cap-and-trade

Several commenters argue that because the Legislature failed to pass cap-and-trade legislation, Ecology lacks authority to cap and reduce carbon. While the Legislature considered but failed to pass cap-and-trade legislation during the 2014–15 legislative session, this does not impact or undermine Ecology’s authority to establish emission standards for GHG emissions pursuant to the Washington CAA. The CAR is not a cap-and-trade program and lacks key components of a cap-and-trade structure. For example, the CAR does not issue allowances, it does not auction allowances or raise revenues, and it does not otherwise regulate a carbon trading market.

Rulemaking process

Rulemaking process timeline

Response 17

Ecology should delay the CAR because it was developed too quickly without enough opportunity for public participation

Ecology officially began developing the CAR in September 2015. Ecology developed the CAR under the requirements of the Washington APA, which prescribes minimum timeframes for public hearings and public comment periods. In developing the CAR, Ecology has not only exceeded these minimum timelines for public comment it has engaged continuously with stakeholders and provided multiple opportunities for input from the outset of the process. These opportunities include four in-person meetings to discuss initial rule concept and solicit feedback in October 2015; five webinars throughout the rulemaking process; dozens of meetings as well as conference calls with businesses, trade associations, government entities, non-governmental organizations, environmental justice advocates, and environmental groups after issuing the first draft of the rule; and the formal comment period. Ecology has made multiple changes to the CAR directly in response to input received from stakeholders, including significant concepts such as the development of a Reserve to promote a hard cap on emissions while preserving opportunities for growth, and an efficiency pathway for EITEs.

Some commenters raised concerns that the CAR isn't ready to be finalized because stakeholders weren't able to reach consensus on major points. While Ecology values and has actively solicited stakeholder feedback and input, Ecology disagrees with any implication that the only model for successful rulemaking is a consensus approach. Ecology considered all feedback and input received; the resulting rule reflects Ecology's determination of an appropriate framework to cap and reduce GHG emissions.

Response 18

Ecology limited public comment by failing to grant requests for extensions of the comment period

Several commenters expressed disappointment that Ecology did not grant requests to extend the public comment period for the rule. Ecology provided a comment period of more than seven weeks, which exceeds the requirement for a comment period in the APA. Ecology is under a court-ordered deadline to issue a final rule by the end of 2016. Given this hard deadline, Ecology needed to provide sufficient time to consider comments received and make changes to the rule as necessary. Extending the comment period would have compressed the time available for evaluating comments and jeopardized Ecology's ability to make changes and still meet the court-ordered deadline.

Response 19

Ecology limited public comment by failing to hold a hearing in Seattle

Several commenters expressed disappointment that Ecology did not conduct a public hearing in Seattle. Ecology conducted four public hearings for the CAR; two in-person hearings and two webinar hearings. The in-person hearings were conducted in Olympia and Spokane, providing opportunities for in-person public participation on both the west and east sides of the state. The webinar hearings provided greater access for public participation from individuals across the state.

Ecology determined that this approach provided multiple options for public participation across the state.

Response 20

Ecology should not finalize the CAR because climate change isn't real

We understand that not everyone agrees with the scientific consensus on this issue. Ecology respectfully disagrees with the commenters' assertion that climate change is not real. We believe the evidence supporting the reality of climate change is overwhelming. Climate change is a leading threat to human health and the environment, and a top priority for Ecology to address. Both 2014 and 2015 were the warmest years on record globally,¹⁰ and 2016 is well on track to top them.¹¹ According to the Intergovernmental Panel on Climate Change (IPCC), “[h]uman influence on the climate system is clear, and recent anthropogenic emissions of GHGs are the highest in history. Recent climate changes have had widespread impacts on human and natural systems.”¹²

Here in the Pacific Northwest we are particularly vulnerable to the impacts of climate change, and the unprecedented wildfires, loss of snowpack, drought, and ocean acidification we've experienced in recent years is what our future will look like if we fail to take action. While Ecology cannot singlehandedly solve climate change, we can take steps to address our fair share and reduce emissions. Our CAR is a first substantial step in doing that.

¹⁰ Blunden, J. and D. S. Arndt, Eds., 2016: State of the Climate in 2015. Bull. Amer. Meteor. Soc., 97 (8), S1–S275, DOI:10.1175/2016BAMSStateoftheClimate.1

¹¹ See NOAA National Centers for Environmental Information <http://www.ncdc.noaa.gov/sotc/global/201605>.

¹² IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

SEPA

Ecology should have prepared an Environmental Impact Statement (“EIS”)

Response 21

Ecology’s SEPA review was inadequate because CAR will result in significant environmental impacts—an EIS should have been prepared

Ecology completed a SEPA checklist, which is required for a non-project action such as the adoption of a rule. The purpose of the checklist is to provide information identifying environmental impacts from the proposal and to determine whether an EIS is required. Ecology determined there were no probable significant adverse environmental impacts from the proposed rule, so an EIS is not required. Ecology included additional information in a non-project review form/staff report (“NPRF”) for the Responsible Official to consider in this decision-making process.

Ecology has developed a matrix in response to multiple requests for further information on the potential effects from compliance options. Refer to the SEPA Addendum (Appendix B to SEPA Checklist). Please note that the options listed in the Addendum are still subject to all local, state, and federal permitting, including any site-specific SEPA review that may be required.

Response 22

A significant rulemaking requires Ecology prepare an EIS

“Significant” rulemaking is not the same as “significant” under SEPA. A “significant legislative rule” is defined under the APA as “a rule other than a procedural or interpretive rule that (A) adopts substantive provisions of law pursuant to delegated legislative authority, the violation of which subjects a violator of such rule to a penalty or sanction...”¹³ Because the CAR establishes emission standards for GHGs and subjects violators of the rule to penalty, it meets this definition. Accordingly, Ecology has completed the additional requirements mandated by the APA for the CAR, including determining the costs and benefits of a new rule; determining least-burdensome alternatives; coordinating rules with the requirements of state and federal law; and developing an implementation, evaluation, and education plan. However, the APA does not require completion of an EIS merely because a rule is a significant legislative rule.

“Significant” in SEPA is defined under WAC 197-11-794 (also see “Major Action”). Under SEPA, “significant” means a reasonable likelihood of more than a moderate adverse impact on environmental quality. As described in our SEPA analysis, Ecology has concluded that the proposed rule will not cause any significant environmental impacts, and therefore Ecology is not obligated to prepare an EIS. The fact that the proposed rule is a “significant legislative rule” is not relevant to the SEPA determination.

Response 23

SEPA must evaluate regional net emissions from the electric power sector

Although commenters contend the proposed rule will encourage a shift to coal-fired units in other states, Ecology does not believe this is a significant risk. As described in Response 101, Ecology has concluded that there is not a likelihood of an increase in imported power or other shifts in regional power generation as a result of the CAR. Further, to the extent that such shifts in power

¹³ RCW 34.05.328(5)(c)(iii).

are theoretically possible, the duration of such shift would be short term and limited. As previously described, the federal CPP will ultimately be the mechanism for the power sector to meet GHG emission reduction requirements. The CPP allows for a more regional treatment of the power sector instead of a state-specific approach, and Ecology intends to develop a CPP implementation plan that addresses regional emissions from the power sector.

Ecology therefore believes that predictions regarding increases in GHG emissions outside of the state because of CAR are speculative at this time and unlikely to occur. As such, an EIS addressing this point is not required and would not be possible in any event.

Response 24

SEPA must evaluate impacts from reconfiguring of Washington's economy

Ecology disagrees that Washington's economy will be reconfigured as a result of the CAR. In our Final Cost Benefit Analysis ("CBA"), Ecology determined that the costs of the rule depend on how covered parties choose to comply, and over 20 years could range from over \$400 million (using program options such as Renewable Energy Credits) to nearly \$7 billion (using exclusively on-site compliance or purchasing ERUs generated by other parties through on-site compliance). Ecology expects covered parties to incorporate cost-minimizing behavior into their compliance decisions. We also estimated quantified benefits of \$10 billion (calculated using the same discount rate as costs; using alternative rates benefits could be between \$2 billion and \$18.6 billion), which does not include numerous partially-quantified or qualitatively discussed benefits described in the Final CBA. Further, as described in Response 25, Response 62, and Response 102, Ecology estimates that there will be only modest increases in the price of fuels and power associated with the rule. These incremental costs are unlikely to cause major economic shifts. Therefore, an EIS on this topic is not warranted.

Response 25

SEPA ignores fuel substitution impacts from higher natural gas rates

Ecology disagrees that implementation of the CAR will cause fuel switching from natural gas to dirtier fuels such as wood for home heating. Based on additional economic modeling,¹⁴ Ecology estimates that residential natural gas prices will increase by 0 to 0.8 percent in 2020, to 0.3 to 5.6 percent in 2035, and that industrial natural gas prices will increase by 0.1 to 1.4 percent in 2020, to 0.5 to 10.2 percent in 2035 depending on the compliance option chosen. This incremental cost is likely not sufficient to provide incentives to customers to burn wood for home heating. Because the amount is not significant, we cannot presume customers will switch to less environmentally-friendly fuel sources, and consequently, no significant adverse environmental impacts are likely to occur. Therefore, further analysis of this issue in an EIS is not required.

Response 26

Ecology should perform analysis focused on the benefits and adverse environmental impacts that directly result from implementation of Chapter 173-442 WAC

Ecology states on page 4 of the NPRF that we expect GHG emissions reductions in Washington "coupled with those outside of Washington" to mitigate impacts of climate change within Washington State. Ecology has completed a focused analysis on the adoption of the rule and potential effects associated with its compliance options (see SEPA Addendum). Note that

¹⁴ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

SEPA (continued)

establishing a causal relationship between local GHG emissions and local impacts is inherently impossible.

Response 27

SEPA fails to calculate quantity of ERUs needed for example project viability

The CAR provides a variety of ways to comply, ranging from direct emission reductions on-site, to emission reduction projects and purchases of allowances from external carbon markets. As described in more detail in Response 262, Ecology believes there are sufficient options for generating emission reduction units for compliance with the requirements of the proposed rule. Ecology therefore concluded there are no significant impacts warranting an EIS on this topic.

Response 28

Newer data are available than what SEPA relied on

Thank you, we updated the References list.

Response 29

SEPA must analyze the adverse environmental impacts of cement plant closure

Ecology disagrees with the commenters' assertion that the CAR will cause the closure of a cement kiln or of any other industry in Washington. SEPA requires evaluation of probable impacts, alternatives, and mitigation measures. At this time, Ecology does not have any information that indicates it is likely or probable that any individual business will close as a result of the proposed rule, and such conclusions are speculative. Therefore, a further analysis in an EIS of this topic is not required and, because of the lack of data, would not be possible in any event.

However, Ecology is sensitive to the competitive pressures faced by industries. Based on extensive feedback from EITEs, Ecology has developed an alternative compliance pathway for these industries as they are most vulnerable to the effects of global competition and energy pricing. These industries include cement kilns. As described in Response 99, Ecology has concluded that the alternative compliance pathways and other accommodations made for EITE facilities will reduce burden on such facilities, and help to reduce the likelihood of closure by allowing facilities to meet carbon efficiency standards appropriate for their industry while remaining cost-competitive.

SEPA requires evaluation of probable impacts, alternatives, and mitigation measures. At this time, Ecology does not have any information that indicates it is likely or probable that any individual business will close as a result of the proposed rule.

Response 30

SEPA should evaluate emissions from the TransAlta coal-fired facility

The SEPA checklist did not include an evaluation of the emissions from the TransAlta coal-fired facility because that facility is not covered by the CAR. Existing state law specifically exempts the facility from rules requiring additional emissions reductions. RCW 80.80.110 prevents Ecology from regulating the coal-fired power plant in Washington. In addition, Ecology believes it would be counterproductive to cover this facility under the proposed rule. Although TransAlta accounts for about seven percent of Washington's statewide GHG emissions, it is already required by law to close down its operations. Part of TransAlta's coal operations will be closed by 2020 and the rest will be closed by 2025. These reductions will happen faster under existing law than if TransAlta were subject to the CAR.

SEPA (continued)

Since the rule has no effect on the TransAlta facility, a SEPA analysis of emissions from that facility is not required (as there is nothing to evaluate). The premise that CAR will drive up the cost of energy so generators will switch to other sources is speculative and SEPA only requires consideration of probable significant impacts.

The Final Cost Benefit Least-Burdensome Alternative (“LBA”) Analysis (September 2016) evaluates the likely costs of the adopted rule on in-state natural gas generation.

Response 31

SEPA fails to evaluate impacts from future projects

Please see SEPA Addendum (Checklist Appendix B) showing potential projects associated with compliance options. These options are still subject to all local, state, and federal permitting, including any site-specific SEPA.

Economic analysis and related documents

Analysis of price and availability of ERUs

Response 32

Ecology used inappropriate proxies/comparisons for establishing expected ERU prices and should not have relied on prices from voluntary programs

When choosing the best proxy for the price of emission reduction projects Ecology sought to identify price data for projects that best resemble those allowed in the CAR. To recap, projects allowed in the CAR include:

- A variety of project types registered on either the Climate Action Reserve or the American Carbon Registry using the appropriate protocols for those registries.
- Renewable energy projects as represented through the use of Renewable Energy Credits (“RECs”).
- Other types of projects and programs through a variety of approval pathways.

The price data for projects from two GHG compliance regulatory programs that have tapped into the so-called “voluntary” emission reduction market in the past are used as price proxies. Ecology used the Oregon carbon dioxide mitigation standard, which uses emission reductions from the voluntary market for the purposes of compliance, as a price reference given that the CAR also allows voluntary emission reductions to be used for compliance.

In addition, prices for the California cap-and-trade compliance market are also used at a time just before the cap-and-trade market began. This price range is most reflective of potential prices for the CAR because at that time it was the price of the projects themselves that drove prices for those emission reductions, rather than a regulated allowance price floor set by California. Ecology makes the assumption that historical market prices (adjusted to reflect current dollars) for these instruments are a good proxy for the price of projects and programs used to comply with the CAR.

In both of the above programs, projects in the Climate Action Reserve, American Carbon Registry, and similar repositories of project-based emission reductions have formed the foundation for project supply. Given the heavy reliance of the CAR on those same registries, it makes sense to look toward the prices from those bodies as the basis for a price proxy, even if they are frequently referred to as representing the voluntary market rather than the compliance market. Importantly, the price range used in Ecology’s analysis for projects closely mirrors current real-world carbon market trading data for the project registries noted above, thus validating the price range used in the economic analysis for projects.

In summary, Ecology did in fact use price data from compliance carbon programs to form the basis of its assumptions regarding project costs. The programs selected either rely on, at that time the data were derived, or relied on so-called voluntary emission reduction markets through the same registries (or similar) as are envisioned in supplying the CAR into the future. Therefore, Ecology’s use of voluntary market data as a proxy for the price of emission reduction projects in the CAR is appropriate.

Response 33

Ecology should have included additional cost analysis in CBA reflecting likely ERU supply

There are a number of compliance approaches that are available to covered parties without facilities where on-site emissions may be possible. These include market purchases of allowances, purchasing excess ERUs from other covered parties or voluntary participants, and purchase or development of emissions reductions through in-state projects (including RECs). We agree that, as an existing product with a clear path for further development, RECs are a cost-effective, predictable, and viable compliance option. However, we note that the rule does not only create demand for various types of ERUs (shifting demand along the supply curve), but also provides pathways for market entry and development through voluntary participation and project development (shifting the supply curve). We acknowledge that, in early compliance periods, demand growth is likely to exceed supply growth (especially for large long-development projects), and so we have added a sensitivity analysis to the Final CBA to reflect higher project and REC-based ERU prices as the project market is in development.

Response 34

Lack of analysis on ERU availability is arbitrary and capricious

Ecology disagrees. As explained in more detail in Response 262, Ecology has concluded that there are sufficient ERUs available through a combination of RECs, allowances from out of state markets, and projects within the state to meet compliance obligations, at least through the first several compliance periods of the program. The Final CBA has been updated to include discussion of ERU availability.

Ecology recognizes that markets are often dynamic, and will be closely monitoring and evaluating the implementation of the CAR to ensure that there is a sufficient supply of ERUs and that the cost of ERUs does not unreasonably escalate. Ecology could consider a future rule revision in the event there is an unexpected shortage of ERUs.

Response 35

CBA ignored additional market risk factors

Ecology acknowledges that significant growth in availability and development of in-state emissions reduction projects will likely take time, and that their development will be incentivized by the rule as it generates demand for these emissions reductions. The cost-benefit does not determine or assume a likely mix of compliance methods over time, and includes high cost estimates involving no use of in-state projects, reflecting the higher costs of compliance using other methods such as purchases of allowances from out-of-state markets or ERUs from other covered parties. If market attributes and risks as described by the commenter result in reduced availability and increased prices for ERUs generated by in-state projects, compliance costs would approach those associated with higher-cost compliance methods such as on-site emissions reductions or market purchases of allowances, and would be substituted by those compliance methods if the cost of project ERUs grew high enough to exceed them. The Final CBA has been updated to note this information, as well as discuss growth in the real price of ERUs.

Accuracy of projections and estimates

Response 36

Economic analysis overestimates benefits due to use of social cost of carbon

Ecology has concluded that the social cost of carbon estimate is an appropriate basis for estimating benefits associated with the CAR. The Social Cost of Carbon (“SCC”) is an estimate of the dollar

value of the damages and benefits resulting from carbon emissions. It was developed by a federal interagency working group convened by the White House Office of Management and Budget (“OMB”) and the Council of Economic Advisers. It has been subject to input and review by multiple federal regulatory agencies, including the Council of Economic Advisors, the Council on Environmental Quality, the Department of Agriculture, the Department of Commerce, the Department of Energy, the Department of Transportation, the EPA, the National Economic Council, the Office of Energy and Climate Change, the Office of Management and Budget, the Office of Science and Technology Policy, and the Department of the Treasury, and has been used by the EPA as the basis for estimating benefits from federal GHG regulatory programs. This use was reaffirmed in August 2016 by the U.S. Court of Appeals for the Seventh Circuit (see Response 37).

The Final CBA has been updated to provide additional information on the SCC estimates, including alternative discount rates and discussion of what is excluded from the SCC estimates.

Response 37

Global vs. scaled social cost of carbon

Ecology believes our use of the global SCC is the appropriate carbon cost to use in analyses, because of the unique nature of carbon and climate change. This has been reaffirmed at the federal level multiple times:

The Interagency Working Group states in its 2015 revised Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis (in part also addressing Circular A-4):

- Under current OMB guidance contained in Circular A-4, analysis of economically significant proposed and final regulations from the domestic perspective is required, while analysis from the international perspective is optional. However, the climate change problem is highly unusual in at least two respects. First, it involves a global externality: emissions of most greenhouse gases contribute to damages around the world even when they are emitted in the United States. Consequently, to address the global nature of the problem, the SCC must incorporate the full (global) damages caused by GHG emissions. Second, climate change presents a problem that the United States alone cannot solve. Even if the United States were to reduce its greenhouse gas emissions to zero, that step would be far from enough to avoid substantial climate change. Other countries would also need to take action to reduce emissions if significant changes in the global climate are to be avoided. Emphasizing the need for a global solution to a global problem, the United States has been actively involved in seeking international agreements to reduce emissions and in encouraging other nations, including emerging major economies, to take significant steps to reduce emissions. When these considerations are taken as a whole, the interagency group concluded that a global measure of the benefits from reducing U.S. emissions is preferable.
- It then refers back to the 2010 Technical Support Document – Social Cost of Carbon for Regulatory Impact Analysis for further discussion, including the topic of whether it is permissible under law, which we believe is also the case in Washington statutes such as the Washington CAA and the Washington APA:
- As a matter of law, consideration of both global and domestic values is generally permissible; the relevant statutory provisions are usually ambiguous and allow selection of either measure.⁶ [Footnote 6: It is true that federal statutes are presumed not to have

extraterritorial effect, in part to ensure that the laws of the United States respect the interests of foreign sovereigns. But use of a global measure for the SCC does not give extraterritorial effect to federal law and hence does not intrude on such interests.]

- Regarding the 7 to 23 percent scaling to domestic (US) SCC, the 2010 TSD states outright that, “It is recognized that these values are approximate, provisional, and highly speculative. There is no a priori reason why domestic benefits should be a constant fraction of net global damages over time.” The same is true for any output-based scaling to state, region, county, or other geographic level.

In its response to public comments (Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis, July 2015), the IWG responded to support of global SCC:

- The IWG agrees that a focus on global SCC estimates in RIAs is appropriate. As discussed in the 2010 TSD, the IWG determined that a global measure of SCC is appropriate in this context because emissions of most greenhouse gases contribute to damages around the world and the world’s economies are now highly interconnected. To reflect the global nature of the problem, the SCC incorporates the full damages caused by CO₂ emissions and we expect other governments to consider the global consequences of their greenhouse gas emissions when setting their own domestic policies.
- The IWG also agrees that if all countries acted independently to set policies based only on the domestic costs and benefits of carbon emissions, it would lead to an economically inefficient level of emissions reductions which could be harmful to all countries, including the United States, because each country would be underestimating the full value of its own reductions. This is a classic public goods problem because each country’s reductions benefit everyone else and no country can be excluded from enjoying the benefits of other countries’ reductions, even if it provides no reductions itself. In this situation, the only way to achieve an economically efficient level of emissions reductions is for countries to cooperate in providing mutually beneficial reductions beyond the level that would be justified only by their own domestic benefits. By adopting a global estimate of the SCC, the U.S. government can signal its leadership in this effort. In reference to the public good nature of mitigation and its role in foreign relations, thirteen prominent academics noted that these “are compelling reasons to focus on a global SCC” in a recent article on the SCC (Pizer et al., 2014). In addition, as noted by commenters, there is no bright line between domestic and global damages. Adverse impacts on other countries can have spillover effects on the United States, particularly in the areas of national security, international trade, public health and humanitarian concerns.

In its response to public comments (Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis, July 2015), the IWG also responded to concerns regarding domestic damages:

- As stated in the prior section, GHG emissions in the United States will have impacts abroad, some of which may, in turn, affect the United States. For this reason, a purely domestic measure is likely to understate actual impacts to the United States. Also, as stated above, the IWG believes that accounting for global benefits can encourage reciprocal action by other nations, leading ultimately to international cooperation that increases both global and U.S. net benefits relative to what could be achieved if each nation considered only its own domestic costs and benefits when determining its climate policies.

- Further, as explained in the 2010 TSD, from a technical perspective, the development of a domestic SCC was greatly complicated by the relatively few region-or country-specific estimates of the SCC in the literature, and impacts beyond our borders have spillover effects on the United States, particularly in the areas of national security, international trade, and public health. As a result, it was only possible to include an “approximate, provisional, and highly speculative” range of 7 to 23 percent for the share of domestic benefits in the 2010 TSD. This range was based on two strands of evidence: direct domestic estimates resulting from the FUND model, and an alternative approach under which the fraction of GDP lost due to climate change is assumed to be similar across countries. We note that the estimated U.S. share of global damages based on the Nordhaus (2011) study cited by several commenters largely falls within the provisional range offered in the 2010 TSD.
- In conclusion, the IWG believes that the only way to achieve an efficient allocation of resources for emissions reduction on a global basis is for all countries to base their policies on global estimates of damages and will therefore continue to recommend the use of global SCC estimates in regulatory impact analyses. The IWG will also continue to review developments in the literature, including more robust methodologies for estimating SCC values based on purely domestic damages, and explore ways to better inform the public of the full range of carbon impacts, both global and domestic.

On August 8th, 2016, the U.S. Court of Appeals for the Seventh Circuit issued a ruling supporting not only the use of SCC, but the use of global SCC values: *Zero Zone, Inc., et al. v. United States Department of Energy, et al.*, Nos. 14-2147, 14-2159, & 14-2334, ___ F.3d ___, 2016 WL 4177217 (7th Cir. August 8, 2016).¹⁵

- AHRI and Zero Zone next contend that DOE arbitrarily considered the global benefits to the environment but only considered the national costs. They emphasize that the EPCA only concerns “national energy and water conservation.” 42 U.S.C. § 6295(o)(2)(B)(i)(VI). In the New Standards Rule, DOE did not let this submission go unanswered. It explained that climate change “involves a global externality,” meaning that carbon released in the United States affects the climate of the entire world. 79 Fed. Reg. at 17,779. According to DOE, national energy conservation has global effects, and, therefore, those global effects are an appropriate consideration when looking at a national policy. *Id.* Further, AHRI and Zero Zone point to no global costs that should have been considered alongside these benefits. Therefore, DOE acted reasonably when it compared global benefits to national costs.

Additionally, the US EPA and NHTSA have consistently used the global SCC in multiple joint regulatory impact analyses, including:

- “Final Rulemaking to Establish Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, Regulatory Impact Analysis.” EPA-420-R-11-901, August 2011.
- “Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, Regulatory Impact Analysis,” for years 2012–2016. EPA-420-R-10-009, April 2010.

¹⁵ As of the date of publication of this document, this decision is available at <http://media.ca7.uscourts.gov/cgi-bin/rssExec.pl?Submit=Display&Path=Y2016/D08-08/C:14-2159:J:Ripple:aut:T:fnOp:N:1807496:S:0>.

- “Regulatory Impact Analysis: Final Rulemaking for 2017–2025 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards.” EPA-420-R-12-016, August 2012.

Response 38

Ecology used incorrect social cost of carbon discount rates

Based on comments received during this rulemaking, we have updated the Final CBA to include all four SCC streams reported by the Interagency Working Group (“IWG”): 2.5 percent, 3 percent, 5 percent, and the 95th percentile of 3 percent, better representing catastrophic climate change impacts. Thank you for noting that the SCC was entered into the calculations as present value rather than year-of dollars. We have corrected this in the Final CBA, and for each discount rate set of SCC, have followed IWG guidance to apply the corresponding discount rate when calculating present value. We, do, however maintain the assertion that the least analytic risk to Washington State is presented by assuming the lowest discount rate, as discussed in the Preliminary CBA (consistent with Washington State Department of Commerce), and retained in Appendix B to the Final CBA.

Response 39

Four SCC streams

As a result of comments received during the public comment process, we have updated the Final CBA to include all four streams of SCC reported by the IWG: 2.5 percent, 3 percent, 5 percent, and 95th percentile of 3 percent. We maintain the assertion that the least analytic risk to Washington State is presented by assuming the lowest discount rate, as discussed in the Preliminary CBA (consistent with Washington Department of Commerce), and retained in Appendix B to the Final CBA.

Response 40

Ecology improperly discounted future generations

We agree that long-term discount rates (including intergenerational discount rates, which have been argued to be zero) differ from short-term rates, and that discounting on an intergenerational basis encounters the difficulty of discounting not for one’s self, but for others. The economic analyses, however, analyze the impacts of the rule on a 20-year timescale, and the discount rate should not represent intergenerational impacts. Moreover, methodologically, we assert that the lowest discount rate available (2.5 percent) for the SCC carries the least analytic risk (see Appendix B of the Final CBA).

Response 41

CBA ignored costs of transportation conversion to natural gas

We agree that imposing compliance costs on covered parties that produce or import energy or fuels is likely to result in at least some of those costs being passed to energy and fuel consumers in higher prices. Higher prices, in turn, affect the quantity of those energy sources demanded, and the relative price changes for different fuels and electricity alter incentive to substitute across them in all applications, including transportation. We note that under the CAR, this is the case for electricity, natural gas, and traditional petroleum products, with increased prices to all fuel and electricity consumers, rather than exclusively driving consumers of one energy source to use another (*e.g.*, change their transportation fuel type). We have added discussion of fuel and electricity price increases to the Final CBA.

Response 42

Presentation of average total costs is misleading

Ecology did not assume or forecast a most-likely mix of compliance paths, because of the breadth of compliance options available under the rule, and uncertainty about the development speed of ERUs from in-state projects, which out-of-state allowance will be approved, and the degree of voluntary participation in the program. The costs calculated for each compliance method represent high and low likely endpoints of total costs, as if each were the only method used to comply. The likely combination of compliance methods chosen by any given covered party will depend on factors such as relative ERU prices, the ability to comply on-site, and the allowed degree of compliance with allowances in a given year, and will fall between the overall endpoints represented across all compliance methods. We have updated the Final CBA to clarify this issue and represent overall cost ranges rather than averaged summary costs.

Response 43

Higher or increasing real price of ERUs

We acknowledge that the rule creates demand for ERUs that increases over time. While, on its own, this would increase real prices, we expect the price of ERUs to increase based on incentives created by the rule for covered parties, voluntary participants, project developers, and those currently running or considering projects that will qualify as ERU generators. For this reason we had assumed constant real prices in our preliminary analysis. As a result of comments received during the public comment period, we have updated the Final CBA to include sensitivity analysis of additional cost scenarios that include high initial real prices for emissions reduction projects (*e.g.*, due to a slow ramp-up of ERU supply), as well as increasing real prices over time (*e.g.*, due to possible long-run market shocks).

Response 44

On-site unit cost is too low

Costs associated with on-site compliance reflect the costs of purchasing ERUs from other covered parties who are generating ERUs. They also reflect the potential for purchasing from voluntary program participants, though the degree and types of activities generating ERUs is unknown until a program is in place. Individual engineering and process analyses of covered parties (performed by Ecology or by facilities themselves) to determine each party's specific individual means of on-site compliance was not viable for completion during this rulemaking. This is due to issues of access, contracting, and upward reporting bias and verification. Ecology instead relied on Intergovernmental Panel on Climate Change ("IPCC") results, which include worldwide sources that may be more or less carbon-efficient for their industry than covered parties in Washington. Ecology chose the range of on-site emissions reduction costs based on the types of emissions reductions likely to occur at covered party facilities, and lower prices are likely from covered parties able to overcomply (and those participating voluntarily). The Final CBA has been updated to clarify this assumption. For additional information about on-site ERU generation, see Response 252.

For covered parties that are already highly carbon-efficient, the range used may be lower than actual incremental costs, while it may be higher than actual incremental costs for parties that currently have poor carbon efficiency. For parties that are EITEs, costs differences will be mitigated by less-stringent efficiency improvement requirements for highly efficient parties, and more-stringent efficiency improvement requirements for inefficient parties.

Response 45

Inability of some covered parties to comply through on-site reductions

Ecology has acknowledged the difficulties of on-site compliance for petroleum product producers, importers, or natural gas distributors, as there are likely limited or no options for on-site reductions. We estimated costs for on-site reductions based on stationary sources, representing both the price of a covered party's potential own emissions reductions on-site, as well as the price of ERUs that can be acquired from other covered parties or voluntary participants that do have on-site emissions reduction options available. We have clarified the Final CBA to reflect that the "on-site" emissions reduction option is not necessarily the cost of reducing a covered party's own emissions on-site, but also the cost of purchasing ERUs generated by on-site reductions at other covered or voluntary parties that have broader on-site emissions reduction options than the petroleum product or natural gas distributor sectors.

Response 46

CBA underestimates natural gas demand growth

Ecology thanks you for your comment and has updated the Final CBA with a cost estimate that includes higher growth rates for natural gas emissions per Integrated Resource Plans filed with the Washington State Utilities and Transportation Commission ("UTC").

Response 47

Baseline emissions growth for "other" covered parties

We have updated the Final CBA to clarify assumptions made in growth rates for emissions, including conservatively allowing for a small positive growth rate for all other facilities, as the forecast used for all growth rates was only available for industrial emissions, and was in their case less than one percent negative growth in emissions.

Response 48

Ecology's economic analysis falls short of the requirements of the Regulatory Fairness Act ("RFA")

The CBA/LBA and Small Business Economic Impact Statement ("SBEIS") are limited by the scope of what is required in the law. The CBA is limited to the direct impacts of the rule, and the RFA (Chapter 19.85 RCW) requirement for the SBEIS is limited to businesses incurring compliance costs because they are directly covered by the rule, and does not address secondary impacts incurred through market forces, outside of the Washington OFM Input/Output model used in the jobs analysis. While not required to do so, we have considered and added information to the rule file that analyzes the impacts of price changes and passed-on fuel and energy costs,¹⁶ allowing for macroeconomic changes to the state economy. The results of that analysis reflect the impacts of these passed-on price changes and interrelationships between various Washington industries, including agriculture.

Response 49

The compliance costs as projected in the CBA that Ecology undertook is woefully incomplete, if not simply inaccurate, in estimating realistic compliance costs

The CBA/LBA and SBEIS are limited by the scope of what is required in the law. The CBA is limited to the direct impacts of the rule, and the Regulatory Fairness Act (Chapter 19.85 RCW) requirement for the SBEIS is limited to businesses incurring compliance costs because they are

¹⁶ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

directly covered by the rule, and does not address secondary impacts incurred through market forces, outside of the Washington OFM Input/Output model used in the jobs analysis. While not required to do so, we have considered and added information to the rule file that analyzes the impacts of price changes and passed-on fuel and energy costs,¹⁷ allowing for macroeconomic changes to the state economy. The results of that analysis reflect the impacts of these passed-on price changes and interrelationships between various Washington industries, as well as impacts to the state economy as a whole. Regarding specific concerns about cost estimates in the CBA, please see Response 32, Response 33, and Response 44, among others.

Response 50

EITE emission reduction estimates should not be mass-based

Cost estimates for EITEs are based on the assumption that the EITE portion of the program will be implemented according to the objectives set out in the rule. This means that the program would be implemented such that EITE covered parties with carbon efficiency between the 25th and 75th percentile of output-based efficiency would be expected to reduce emissions at the same rate that non-EITE parties will. EITE covered parties below the 25th percentile of efficiency will be expected to improve carbon efficiency to a greater degree (likely in excess of the mass-based rate for non-EITEs), while those above the 75th percentile will have a lesser degree of carbon efficiency improvement required (likely less than that of the mass-based rate for non-EITEs). Ecology does not have access to production rates for future years, so we assumed future production will be similar to production during the baseline period. Without the production rates and carbon efficiency assessments Ecology will be making as part of the implementation required by the rule, we assumed for analytical purposes that a typical EITE party will be in the middle of the efficiency distribution, and will make carbon efficiency improvements in line with the mass-based emissions reductions required for non-EITE covered parties.

Response 51

Secondary impacts of compliance costs

While secondary impacts are not the subject of the CBA or SBEIS, we acknowledge the degree of concern regarding these issues expressed during the public comment period for this rulemaking. Consequently, we have included results from a REMI PI+ analysis describing economy-wide, personal income, employment, and energy price impacts. They build on the averaged employment results of the Washington OFM Input/Output model, by allowing for indirect impacts, refined industry interrelationships, macroeconomic variables, and market adjustments. We have added this information to the Final CBA and Revised SBEIS.

Response 52

Employment impacts: averaged or by year

We have updated the Revised SBEIS to reflect impacts in specific years as well as average employment impacts across all years.

Response 53

The rule's impact on jobs

It is important to keep in mind that the rule's overall impact on jobs in Washington, and the type of jobs they are, depends on how covered parties choose to comply with it. The costs incurred by covered parties are likely to result in job losses in those industries and their suppliers (or, if they

¹⁷ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

are able to pass costs on to their consumers, potentially job losses in industries that purchase their goods and services, such as energy and fuels). Those job losses are potentially mitigated if covered parties comply with the rule by investing in Washington emissions-reduction projects or markets facilitating those projects (such as that for renewable energy credits), reducing their own emissions using local labor and goods, or purchasing emissions reductions from other covered parties or voluntary participants. But the job losses would not be offset at all if covered parties purchase emissions reductions from out-of-state markets.

We have updated the jobs estimates in the SBEIS to reflect updated assumptions about how that offsetting job creation occurs, as well as additional industry interrelationships and market activities, using the REMI PI+ model. This model forecasts¹⁸ that compliance costs could result in net job losses as high as 730 by 2020 and 4,580 by 2035, assuming the highest cost compliance scenario and that 100 percent of energy costs are passed through from energy producers to consumers. These numbers translate to a 0.017 percent decrease in employment from baseline forecast in 2020, and a 0.1 percent decrease in 2035, respectively. However, these projections represent a worst-case scenario; the lowest scenario would have job losses of 430 by 2020 and 3,270 by 2035. What is not reflected in this model is the relationship between jobs and economic, social, and environmental wellbeing, which could be preserved by reducing the impacts of climate change.

Response 54

Rule doesn't impose compliance costs on small businesses, but indirectly affects them

We have clarified, in the Revised SBEIS, that the rule does not cover or impose compliance costs on small businesses, rather than use the term “affect.” This reflects that the rule only covers large businesses, as identified by Ecology during the rulemaking process. This is consistent with the RFA in addressing compliance costs (direct costs, rather than secondary costs passed on to customers or arising as a result of market function). The RFA sets out its requirements in terms of the costs of compliance with the rule (RCW 19.85.040(1): “It shall analyze the costs of compliance for businesses required to comply with the proposed rule adopted pursuant to RCW 34.05.320, including costs of equipment, supplies, labor, professional services, and increased administrative costs.”) Secondary impacts are not considered as part of the SBEIS analysis, but are discussed in the Revised SBEIS and Final CBA for informational purposes, and to address concerns expressed during the public comment process, regarding energy and other indirect price impacts of the rule.

Response 55

Transfer assumptions for compliance costs are incorrect

Ecology made a set of assumptions about the destination of cash flows in its job-impact estimate. Some of those involve transfers of compliance costs to other entities in the state that could be the sellers of ERUs generated through voluntary emissions reductions, overcompliance of covered parties, or development of projects. We have updated those transfer assumptions, as they are included in the REMI analysis cited in the Revised SBEIS and Final CBA, and attempted to clarify the issue of transfers in the language. Purchases from out-of-state allowance markets were assumed to have no in-state transfer destination.

Economics of compliance

¹⁸ Regional Economic Models, Inc., 2016: “Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy.”

Response 56

Costs from on-going GHG reduction projects

It is important to note that an ERU can be generated in numerous ways, and that for each separate metric ton of GHGs that is reduced an ERU can be generated over time. That does mean, for example, that funding an emission reduction project that has high up-front costs but provides a stream of emission reductions, and hence ERUs, over time may make more sense than purchasing individual emission reductions (in the form of carbon credits or converting allowances) from carbon markets.

Response 57

ERUs will be too expensive

Ecology performs its economic analyses for its rules using inflation-adjusted dollars and discount rates. We do not believe the CAR will result in significant impacts to real prices in external markets, based on forecast market credit supply growth and the breadth of the CAR's flexibility in ERU sourcing and development. Ecology has updated the CBA with discussion of ERU market pricing and sensitivity analysis allowing for increasing real prices in the event of demand outstripping ERU supply growth.

Response 58

REC prices may discourage investment in Washington

While we do not assume a specific mix of compliance options used by the covered parties, in our modeled economic scenarios, Ecology expects covered parties to choose cost-minimizing options for compliance, from the various options provided under the CAR. If compliance costs using RECs exceed those of other options, we expect covered parties to instead use other sources of ERUs. We acknowledge that use, specifically, of external markets to meet compliance obligations would result in funds flowing out of state, and have reflected this in our input-output analysis in the SBEIS, as well as in macroeconomic analysis added to the rule file.¹⁹

Response 59

The rule encourages utilities to spend money out-of-state rather than invest in-state

The CAR does not promote or encourage utilities to purchase out of state power or allowances. It provides a wide array of options and choices to reduce emissions and generate ERUs for compliance. Choices include in-state projects; transportation projects and programs; energy efficiency, conservation, renewable energy and RECs; facility improvements, allowances from external multi-sector carbon markets; and obtaining emission reduction units from others. Ecology's economic analysis for the CAR identifies a range of compliance options that are cheaper than purchase of allowances from external carbon markets. Ecology would expect covered parties to choose the options that minimize costs and best fit their business circumstances. Moreover, where improved efficiency can lead to emission reductions, the CAR creates incentive to invest in-state while reducing operating costs. Nothing in CAR directs utilities to purchase power or allowances from out-of-state to comply.

Response 60

Limitations of use of market purchases of allowances

Since Ecology has not assumed an overall compliance path with specific combinations of the various allowable compliance mechanisms, we did not incorporate the rule's limitations on

¹⁹ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

compliance using market purchases of allowances. We acknowledge, however, that when compliance using the market allowance mechanism is lower cost than other compliance options, the limitation on use of allowance markets will increase the costs of compliance relative to what they would be if 100 percent compliance was allowed during periods in which it is more limited.

Response 61

The CAR will result in unacceptable increases in natural gas rates

Ecology estimates²⁰ that residential natural gas prices will increase by approximately 0.0 to 0.8 percent in 2020, to 0.3 to 5.6 percent in 2035, and that industrial natural gas prices will increase by 0.1 to 1.4 percent in 2020, to 0.5 to 10.2 percent in 2035 depending on the compliance option chosen. Ecology has concluded that such a price increase is relatively modest and will not result in unacceptable costs.

Response 62

The CAR will unfairly impact electric customer rates

The CAR establishes one universal set of declining thresholds and a common baseline that determine who is covered by the rule. These criteria apply regardless of location, type of facility or industry and were designed to cover the largest contributors of GHG emissions in Washington, capture a majority of Washington total GHG emissions while also limiting the total number of covered facilities. Any investor-owned utility or public utility power plant that meets the baseline and threshold criteria is covered by the rule.

The CAR provides a wide array of options and choices to reduce emissions and generate ERUs for compliance including facility improvements, in-state projects, energy efficiency and conservation, renewable energy, transportation programs and projects, obtaining ERUs from others, and purchasing of allowances from external carbon markets. This wide array of choices allows covered parties to choose lower cost or least cost compliance options. Ecology would expect covered parties to act in their own best interest and choose compliance options that minimize costs and best fit their business circumstances. Costs of compliance will likely vary across affected power plants and utilities as well as what, if any, portion of those costs may be passed on to customers. If a utility uses additional energy efficiency and conservation approaches to achieve compliance, those approaches can lower energy costs for businesses and individual consumers. As such, any rate impact on customers would be expected to be minimal.

Further, Ecology conducted additional economic modeling to evaluate potential increases in electric rates. As a result of the CAR, Ecology estimates²¹ that residential and industrial electricity prices will increase by 0.1 percent to 1.4 percent in 2020, and 0.5 percent to 9.2 percent by 2035. Ecology has concluded that modest increases in electric customer rates as a result of implementing the CAR are not unfair.

²⁰ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

²¹ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

Response 63

Replacement energy for the least-cost energy being produced will inherently be more expensive and costs for Washington utility customers will increase

Ecology acknowledges that to the extent power producers make choices under the CAR or for other business reasons that shift generation from lower cost to higher cost resources then it is reasonable to expect at least some of those costs would be passed on to utility customers. The wide array of compliance options provided under CAR open the door to many low cost opportunities and we would expect utilities to use any and all lower cost compliance pathways first.

Response 64

Independent power producers are unfairly impacted by the CAR because they do not have captive ratepayers in place to recover the cost of compliance

Ecology understands that independent power producers (“IPPs”), like Grays Harbor Energy Center (“GHE”), sell their power through specific contracts with customers or compete on the spot market and that they do not have a defined customer base like a utility does within its service area. To the extent that compliance with CAR may raise costs for an IPP, those would need to be factored in to its marketing plans and approaches. The CAR does not define how and where power producers market their electricity. It does not “allow” certain power plants to stay on-line or “force” others to go off-line. It sets an emissions cap that reduces over time and provides multiple pathways and a wide array of options for compliance so that individual companies and facilities that face different circumstances can choose best fit, least cost options.

Response 65

It is counterintuitive that Ecology would provide special treatment to efficient EITE entities but not to efficient stationary sources like some power plants

Because of the unique market competitive forces faced by EITEs, the CAR creates an approach based on their facility-specific carbon intensity or efficiency, how they compare to their peers (benchmarking), and provides three different levels of compliance obligation based on whether they are more efficient, less efficient, or on par with their peers in the same industry. The design and intent of CAR is that the majority of EITEs would have the same emission reduction obligation as do non-EITEs, equivalent to 1.7 percent per year. Power plants are not considered EITEs in any existing cap-and-trade carbon program because they do not face the same type of competitive pressure as EITE industries.

Under CAR, power plants are subject to a single gradual emission reduction (equivalent to 1.7 percent per year) beginning in 2017. The CAR does not provide a lower percent reduction compliance obligation for more efficient non-EITE facilities. More efficient facilities however have lower total emissions and consume less fuel for the hours they operate compared to their less efficient peers. For the same operating hours, more efficient plants would need fewer ERUs to comply. Power plants are also able to keep ERUs that are generated when high hydropower years or other circumstances reduce demand for their electricity. EITEs however must release analogous emission credits to the Reserve account and cannot hold them to offset future compliance obligations.

Response 66

Need to start transitioning to clean energy economy and account for damage from CO₂

Ecology agrees that there is value in incentivizing clean energy as well as in avoided damage to the environment. We reflect the value of developing clean energy technologies in our economic analysis assumption that if covered parties comply with the rule by purchasing or developing

emissions reductions from in-state projects (including RECs), compliance costs become transfers to the developers/owners of those projects. We reflect the value of reducing damage done by carbon emissions, by using the SCC to assign a partial value to reducing emissions. Based on comments received, we are also extending the discussion of the value of emissions reductions, to include more discussion of what is not included in the SCC, and what climate change impacts potentially look like in Washington.

Economic reporting

Response 67

Ecology should report about the rule's transaction costs and effectiveness

The benefits of the rule, in terms of emission reductions achieved, will be readily available information through the compliance reports submitted by covered parties. Numerous stakeholders requested that transactions between parties involving ERUs remain confidential. As such, Ecology does not require that the cost details of these private transactions be reported to Ecology. Therefore, Ecology will not be able to produce definitive cost reports, or to provide the kind of broad cost-benefit analysis suggested by some commenters since specific transaction cost data will not be available. That said, Ecology will, to the best of its ability and within the confines of available data, be analyzing the economics of the rule going forward.

Response 68

CBA is wrong that no compliance obligations will occur in 2017

In our analysis, we did not assume that no emissions reductions will occur in 2017; no reductions from baseline will occur, but any positive growth in emissions in 2017 will need to be mitigated. Based on our assumptions of positive baseline emissions growth for natural gas and covered parties excluding power and petroleum product producers, these sectors will have compliance obligations in 2017. Based on assumptions of negative baseline emissions growth for power producers and petroleum product producers, they would not have a compliance obligation in 2017. When total emissions reduction obligations are summed across all covered parties, they result in a net negative emissions reduction (no need to reduce) in 2017, but this does not mean that no covered parties would need to meet a compliance obligation in 2017. The language in the Final Cost-Benefit Analysis has been updated to better communicate this difference.

Environmental Justice issues

Public participation in emission reduction programs

Response 69

Representation/membership on EJAC should be diverse

It is the intent of Ecology to convene an Advisory Committee that reflects environmental justice leadership and the diversity of residents across the state, including broad representation from communities of color.

Response 70

Ecology must create opportunities for public involvement in the implementation of any GHG reduction program

The CAR creates an EJAC whose members are intended to reflect EJ leadership and the racial, economic, and geographic diversity in Washington. This Committee represents an important opportunity for public involvement in the implementation of the CAR. There will also be opportunities for public involvement and comment during subsequent revisions of the CAR. For additional information about CAR public involvement and participation, please see Response 17.

Committee's use of ERUs

Response 71

ERUs awarded by the EJAC will result in double counting

ERUs that already exist, and which are sitting in the Reserve, may be assigned by the EJAC (subject to Ecology approval) either on a one-for-one or two-for-one basis to covered parties. Since the ERUs in question represent emission reductions that have already happened and are sitting in the Reserve, there is an assurance that the emission reductions are real. There is no double-counting of credits because the emission reduction must have occurred for the ERU to have been generated and placed in the Reserve. The overall effect on emission reductions in the program should be neutral.

There is no obligation for the EJAC to award any ERUs if it does not wish to. If the EJAC feels that awarding ERUs to a covered party for use at a facility would displace important co-benefits, there is no need for the EJAC to recommend awarding the ERUs. They may choose instead to recommend awarding the ERUs to a covered party that is working with the developer of a project that could provide important benefits. One example might be a transit provider that agrees to increase service frequency, and who could then package those additional ERUs with whatever ERUs the project itself generates as part of the arrangement with the covered party. Hypothetically the additional ERUs could provide the "tipping point" in terms of making the project happen. If that were the case, the EJAC may decide the overall benefits from that project (including localized air quality benefits) may outweigh the chance that the additional ERUs end up back in that neighborhood in terms of displacing on-site emission reductions.

Response 72

Entities should be required to reduce emissions in disproportionately impacted communities

Washington State does not have the authority to create differential regulatory obligations for covered parties based on assessments of disproportional impact. However, the intent in creating an

EJAC is to strengthen efforts to address concerns in communities with environmental justice considerations

Activities the Committee should undertake

Response 73

The Department should conduct a cumulative impacts analysis to identify Washington State's communities highly impacted by pollution and socio-economic disparity

The CAR is a rule establishing GHG emission standards in Washington. Conducting a cumulative impacts analysis of all pollutants impacting communities is beyond the scope of this rule.

However, the EJAC shall determine the environmental justice criteria used to award Reserve ERUs. At the determination of the Committee, the development of these criteria may include mapping the results in a cumulative impacts analysis to identify Washington State's communities highly impacted by pollution and socio-economic disparity. It is within the scope of the EJAC to use this map as one of the environmental justice criteria used to award Reserve ERUs (with the award subject to Ecology's approval).

Response 74

Expand the Committee's responsibility to evaluate the impact of the rule on highly impacted communities and make recommendations to address disparities, should they persist

At this time, we are not expanding the Committee's official responsibilities, but may consider doing so in a future round of rulemaking.

Response 75

Make additions to WAC 173-442-240 (2)(c)(i) to require stakeholder involvement in the design and operation of renewable energy programs serving Washington customers

Washington State RCW 19.29A.090 directs larger electric utilities to offer their customers a "green power" electricity product. Oversight of these programs is the responsibility of the UTC. Ecology has no role in that oversight. There are existing avenues for stakeholder input into the design of these programs, including specific interests of low income communities through the Office of the Public Counsel.

Recommended rule changes

Response 76

The CAR should ensure that investments create, reach, and sustain benefits and opportunities for highly-impacted communities and workers

Ecology's intent in creating an EJAC is to strengthen efforts to address concerns in communities with environmental justice considerations. The EJAC shall determine the environmental justice criteria used to award Reserve ERUs (with the award subject to Ecology's approval). At the determination of the Committee, these criteria may include identifying Washington State's communities and workers highly impacted by pollution and socio-economic disparity. Ecology hopes this will build upon existing efforts to support overburdened and underserved communities.

Response 77

Projects should include labor standards such as prevailing wages, apprenticeship utilization, community workforce agreements, and domestic content provisions where applicable

Ecology does not have the authority to direct labor standards on wages, apprenticeships, community workforce, and domestic content. However, Ecology is committed to equal

participation in contracting, and making positive efforts to utilize small businesses, minority-owned firms, women's business enterprises, and veteran-owned firms whenever possible. The Agency will ensure this standard is maintained under the CAR.

Response 78

The CAR should require monitoring its impact on local air quality, particularly around existing pollution hot spots, to ensure that it does not create or exacerbate pollution hot spots and result in back-sliding on air and water quality

Ecology is unclear how an entity would comply with the CAR in a way that would increase local criteria air pollutant levels and water pollution. Those entities would still be subject to limitations in their respective air and water permits, regardless of whether they chose to meet their CAR compliance obligations through the purchase of off-site ERUs or by on-site emission reductions.

Community effects

Response 79

Accountability should also pertain to air contamination and be achieved with the participation of highly impacted communities

Health effects from air quality pollution caused by vehicles, outdoor and indoor burning, and industry are outside the scope of the CAR. However, the EJAC may choose to include air quality and environmental health data as part of the environmental justice criteria used to award Reserve ERUs (with the award subject to Ecology's approval).

Response 80

The rule fails to realize the further benefits in health and jobs that could be achieved by requiring emissions reductions in communities home to "sensitive members of the population"

While the CAR does not address benefits in health and jobs for communities with environmental justice consideration, it is within the scope of the EJAC to include these impacts as parts of the environmental justice criteria used to award Reserve ERUs (with the award subject to Ecology's approval).

Response 81

We are concerned that the additional relaxation of compliance requirements for certain entities may reduce the potential for real air quality benefits in highly impacted communities

Increases in carbon pollution may occur in companies that open or expand operations, or if companies choose to achieve required reductions by obtaining ERUs or sponsoring projects that permanently reduce carbon pollution. The Environmental Justice Advisory Committee could choose to identify those communities with environmental justice considerations throughout Washington, including those impacted by air pollution. This type of analysis could be used to provide recommendations on prioritizing certain communities for emission reduction projects beyond the Reserve ERU-directed projects.

While we are not expanding the Committee's official responsibilities, such an expansion of the Committee's official responsibilities could be considered in a future round of rulemaking. Nothing in the CAR relaxes any environmental requirement for existing facilities. The CAR adds additional compliance obligations for GHG emissions.

Other regulatory requirements

Other laws and agreements

Response 82

The CAR conflicts with UTC authority and local distribution companies (“LDCs”) will be unable to pass through compliance costs

Ecology disagrees. Ecology understands that investor-owned utilities’ rates are regulated by the UTC. The recovery of these utilities’ operational costs in rates to utility customers is subject to UTC approval. While utilities may not recover costs incurred without explicit approval of the UTC, compliance costs associated with a regulation are likely to be those considered appropriate for cost recovery as they are part of a regulatory requirement.

Response 83

The CAR is inconsistent with a natural gas LDC’s obligation to serve

Ecology disagrees. Nothing in the CAR would conflict with a natural gas LDC’s obligation to serve or otherwise reduce the availability of natural gas. There are a variety of ways in which a natural gas LDC can meet its compliance obligation, including sponsoring reduction projects, acquiring ERUs from other entities, and acquiring allowances from external carbon markets.

Response 84

The CAR should comply with the requirements of the Paris agreement

The Paris Agreement of the United Nations Framework Convention on Climate Change (“UNFCCC”) aims to keep the increase in global average temperature to well below two degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels.²² As part of that agreement, the United States pledged to reduce emissions by 26 to 28 percent below 2005 levels by 2025.²³ However, the Paris Agreement did not establish legally binding GHG emission reductions. Further, it is not clear what Washington’s fair share of those emission reductions would be.

Governor Inslee is supportive of the Paris Agreement, its goals, and the need to take action to address climate change. To that end, Washington is a signatory of the Under 2 MOU, an international agreement between a total of 135 jurisdictions that have agreed to reduce GHG emissions by 80 to 95 percent, or limit to two metric tons CO₂e per capita, by 2050. These are levels that are in line with international scientific consensus on the limits needed to curb global warming below two degrees Celsius.²⁴

While the CAR is one piece of Washington’s work to address climate change, it is not the only policy or mechanism for achieving GHG emission reductions in Washington. There are many other complementary policies, both regulatory and non-regulatory, that will be ultimately required to address climate change. Examples of such policies already in place include implementing building codes that will result in all new buildings in Washington state being carbon neutral by 2030, initiatives to promote vehicle electrification by installing charging stations and requiring that

²² <http://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>.

²³ <http://www4.unfccc.int/submissions/INDC/Published%20Documents/United%20States%20of%20America/1/U.S.%20Cover%20Note%20INDC%20and%20Accompanying%20Information.pdf>.

²⁴ <http://under2mou.org/wp-content/uploads/2015/04/Under-2-MOU-English.pdf>.

Other regulatory requirements (continued)

20 percent of the vehicles in the state fleet be electric by 2017, and developing a Clean Energy Fund to further promote renewable power and smart grid infrastructure.

Relationship with other states and carbon programs

Response 85

The CAR does not send an appropriate signal to other states

Ecology developed the CAR to reduce GHG emissions in Washington and to start to do our share to address climate change. By reducing GHG emissions, Ecology believes the rule sends an appropriate signal to other states.

Response 86

The CAR should set a price signal for linkage with California and other markets

Ecology has developed the CAR pursuant to its authority under the Washington CAA. While that statute provides Ecology with the authority to set emission standards to cap and reduce GHG emissions, it does not give Ecology clear authority to establish pricing for emission reduction units. Further, while Ecology is supportive of carbon markets being developed in other jurisdictions such as California, the current design of the CAR is a baseline-credit approach, not a cap-and-trade program. In order to pursue full linkage with such programs, Ecology would need to fundamentally change the design of the CAR, and may need additional statutory authority to meet the requirements of those programs.

Response 87

If the final CAR covers the electric power sector, the rule must include a mechanism to ensure it would not require “double-compliance” with California carbon regulations

Utilities or merchant power plants can choose whether or not to directly deliver power into Western Climate Initiative (“WCI”) jurisdictions and if they do, may have to purchase allowances or take other steps to comply with that program. It is also possible for other external carbon regulatory programs to account for the fact that power imported into their jurisdiction has been addressed through regulation. Choices utilities or merchant power companies make can help minimize the potential for regulatory overlap. The movement of electricity from the point of generation to the ultimate consumer involves multiple decisions on a minute to minute basis by the regional balancing authority. In this system, the ability to track the electricity from an originating source to the end user is highly uncertain. In order to minimize potential “power shuffling” to avoid coverage, the CAR doesn’t provide an exemption for exported power.

Relationship with CPP

Response 88

Instead of the CAR, Washington should design a plan and rule to comply with the CPP

Ecology believes that the severity of the threat to Washington’s environment and economy posed by climate change warrants immediate action to reduce GHG emissions from all large contributors in Washington, including power plants. While the power sector is included in the CAR, Ecology recognizes that the Washington power sector faces unique circumstances, and that a more regional approach to regulating GHG emissions from the power sector as provided by the CPP may be more appropriate. The rule therefore transitions the regulation of the power sector from CAR to the CPP at a point where Washington’s implementation plan is approved and that plan begins requiring emission reductions. Because the CPP doesn’t take effect until 2022 at the earliest, Ecology determined it is appropriate to regulate the power sector under the CAR until such time as

Other regulatory requirements (continued)

the CPP is in effect, recognizing the urgency of addressing climate change and Washington's contribution to it.

The CPP is currently subject to litigation. Even though the outcome of legal challenges to CPP is unknown, Ecology believes that the CPP will be upheld and is taking active steps to understand our design options and how they might affect our Washington utilities, ratepayers, economy, and environment. The CPP was structured specifically for reducing carbon emissions from the electricity sector and would provide the foundation for a more comprehensive regional approach to addressing electricity, including issues associated with leakage and imported power. Ecology will develop guidance and, as needed, future adjustments to the CAR before the CPP goes into effect to facilitate a clear and smooth transition from CAR to CPP.

Response 89

Compliance with the CPP should also constitute compliance with CAR

The CAR covers power plants in Washington until the CPP takes effect and emission reductions are required under the state's approved plan. The CAR also states that emission reduction actions taken to comply with CPP would count toward both CPP and CAR compliance. Assuming a final CPP remains consistent with the original rule adopted by EPA, any actions taken to comply with CAR before CPP takes effect would lower the carbon footprint of power plants in Washington and put the state in better position to meet any CPP requirements. Ecology and its sister agencies, the Department of Commerce and the UTC, through an open, substantive public process and routine consultation with EPA will do everything it can to submit a fully approvable CPP plan to EPA.

Response 90

Don't allow the transition to CPP for the power sector in the CAR

No state decisions have been made on the approach or level of emission reduction to be achieved under CPP other than the stated policy in CAR that emissions reductions must exceed the minimums required under the CPP. Decisions will be made through an open, inclusive public process to develop the state's plan under the CPP including an appropriate level of emission reduction. Therefore, it is premature to judge how the CPP will affect power plants in Washington and the relative stringency of the CPP standard compared to what is required in the CAR. In addition, the decision to transition to the CPP for the power sector is based on more than just the in-state standards. Transitioning to the CPP allows the state to meet other climate policy goals, like addressing imported power and generally addressing the power sector under a broader framework that provides more options and the potential for greater overall GHG emission reductions.

Response 91

Power plants should only be regulated under one policy framework

Compatibility with federal regulations and avoidance of duplication or unnecessary burden are important considerations when developing any environmental regulation. Ecology takes these factors into account when adopting or revising regulations. Under the CAR, the power sector will be covered by a single regulatory framework at any time. The language of the rule makes clear that those units that transition to the CPP will be considered to comply with the CAR at the time of the transition.

Response 92

The CPP targets may change due to litigation or other circumstances so it is inadvisable to place a requirement in the CAR that emission reductions must be greater than the CPP

The outcome of the legal challenges to the CPP is uncertain. However, based on the structure and national objectives of CPP as initially adopted, Washington's existing low carbon energy sector, and the closure of coal operations at Centralia under separate state requirements, we don't expect the CPP, if upheld, to create a substantively different compliance outcome for Washington. Using a mass-based approach, initial analysis of the final CPP target as proposed by EPA shows that Washington would not have to reduce its in-state emissions but would be able to substantially increase emissions and/or sell allowances. Ecology believes it is important for each significant contributing sector in Washington to continue to improve its carbon footprint. That's why the CAR requires the state CPP implementation plan to achieve greater reductions than the minimums required by the CPP rules for Washington.

Response 93

If the CAR target is not adjusted, Washington will not be able to sell any of its excess emissions reductions and may even be required to pay for emission reductions

The CAR transitions the regulation of the power sector to the CPP, once the CPP is upheld, Washington's implementation plan is approved, and that plan begins requiring emission reductions. No state decisions have been made on the approach or level of emission reduction to be achieved under CPP other than the stated policy in CAR that emissions reductions must exceed the minimums required under the CPP. Decisions will be made through an open, inclusive public process to develop the state's plan under the CPP including an appropriate level of emission reduction.

Response 94

The lack of coordination between the CAR and CPP contradicts ongoing efforts of Governor Inslee's administration to make Washington's regulatory system more efficient

Ecology recognizes there are benefits to regulating the power sector under CPP including the ability to account for the regional nature of power generation and distribution and to better address imported power. Therefore CAR transitions the regulation of the power sector to the CPP, once the CPP is upheld, Washington's implementation plan is approved, and the implementation plan begins requiring emission reductions. Ecology and sister agencies the Department of Commerce and the Utilities and Transportation Commission have met multiple times and continue to meet regularly to discuss and coordinate on CPP, CAR, and related energy and climate technical and policy questions. That coordination, along with concerns expressed by stakeholders on our initial proposed rule (released in January 2016) on the overlap between CPP and CAR, leakage, imported power and regulatory efficiency for the power sector, prompted changes reflected in the CAR. Ecology believes an efficient, liquid, effective carbon program is one that has sufficiently wide coverage. Excluding the electricity sector while the legal questions around CPP are resolved would remove some of the largest carbon contributors from the program, would lead to inequity in who bears the brunt of reductions and would likely result in a less liquid, less efficient overall system.

Response 95

Clarify how coverage of generation units will be addressed if a unit within a facility is covered by the CPP, but remaining units are not

The CAR transitions the regulation of CPP covered units to the CPP once that program goes into effect. The remaining components of a facility not subject to CPP would be regulated under the CAR.

Transition from CAR into CPP

Response 96

CAR does not adequately provide for the transition to regulating the electric power sector under the CPP

The CAR transitions the regulation of the power sector from CAR to the CPP once the CPP is upheld, Washington's implementation plan is approved, and the implementation plan begins requiring emission reductions. Ecology will carefully review all of its options under the CPP to make the best choice for Washington that accounts for and balances ratepayer, utility, environmental, and economic considerations and to ensure a smooth transition from CAR to CPP for the power sector. No decisions have been made by the state on the appropriate approach or design for the state's plan under CPP. Decisions will be made through an open, inclusive public process. If CPP is upheld, there will be nine baseload power plants in Washington representing about six percent of the emissions covered by CAR that would move out of CAR to CPP and would have no continuing obligation under CAR. Actions taken to comply with existing state requirements in the Energy Independence Act ("EIA"), emission performance standards, and CO₂ mitigation for new or expanded power plants and the closure of coal operations at TransAlta's Centralia facility would all contribute to CPP compliance. CAR also allows actions taken to comply with the state emissions performance standard and CO₂ mitigation requirements to count toward CAR compliance. ERUs under CAR are a compliance tracking tool and not the same as a tradable allowance as envisioned under CPP. Ecology will develop guidance and, as needed, future adjustments to the CAR before the CPP requirements go into effect to facilitate a clear and smooth transition from CAR to CPP.

Response 97

The rule does not integrate with CPP by allowing for a state measures approach or position Washington to be "trading ready" for the CPP

Ecology presumes that the primary policy decision that commenters are referring to in terms of laying a hypothetical foundation for either a state measures approach or being "trading ready" is to establish an allowance-based system. As discussed in Response 274, Ecology is not implementing an allowance-based system.

The CPP is currently being litigated and subject to a stay, pending the outcome of that litigation. If the CPP is upheld, Ecology will carefully review all of its options under the CPP including state measures and trading ready approaches to make the best choice for Washington that accounts for and balances ratepayer, utility, environmental, and economic considerations and to ensure a smooth transition from CAR to CPP for the power sector. No decisions have been made by the state on the appropriate approach or design for the state's plan under CPP. Decisions will be made through an open, inclusive public process. If CPP is upheld, there will be nine baseload power plants representing about six percent of the emissions covered by CAR that would move out of CAR to CPP and would have no continuing obligation under CAR.

Response 98

Resources Ecology would expend to regulate the electric power sector under CAR during the interim period before a state plan takes effect would do little to aid CPP compliance

Actions taken under CAR prior to transition to CPP could lower the carbon emissions from existing Electricity Generating Units ("EGUs") or generate additional RECs in Washington. Such actions would reduce the carbon footprint of the Washington electricity sector and aid in achieving the objectives of the CPP. The many emissions tracking and project-based reporting aspects of the

Other regulatory requirements (continued)

CAR would also assist Ecology in laying the quantitative foundation for preparing, and implementing, an implementation plan for the CPP. Therefore, the two regulations are harmonious in both their impacts on the power sector and in how Ecology will need to plan and implement them.

Rule's effects

The CAR fails to appropriately address leakage/out-of-state advantage

Response 99

The CAR fails to address leakage concerns for EITE industries

Ecology agrees that leakage²⁵ is a concern in any carbon program that directly or indirectly places an additional cost on GHG emissions from industry. These additional costs could potentially provide incentives for industries to relocate out of state to areas where such costs are not incurred. These shifts could theoretically result in increases in global GHG emissions if the relocated industries use dirtier fuel or now have an increased transportation footprint as a result of the move. As a result, many carbon regulatory programs include special provisions to address industries that are particularly vulnerable to competition.

Ecology met many times with Washington industries to develop an alternative approach for achieving emission reductions from EITE industries —those industries that are most susceptible to leakage—by creating efficiency targets instead of requirements for mass-based reductions. See WAC 173-442-070. Cement kilns, pulp mills, and aluminum smelters are classic examples of EITE industries, and Ecology has included them in the alternative approach. Based on feedback received, Ecology also included industries in this approach that have not been considered as EITEs by other programs, including aerospace manufacturers. Ecology has concluded that this energy-efficiency approach will substantially mitigate against leakage as it allows EITE industries to vary their production without increasing their compliance obligation—a key comment and concern that the industries articulated to Ecology as we developed the CAR.

Ecology understands that some industry sectors have GHG emissions that result from the chemical processes to manufacture their product. An example of this can be found in the cement industry, as carbon dioxide is created by the chemical reaction to make cement. These “process emissions” will always be associated with these products, and no change in efficiency at the facility will reduce the emissions. The alternative approach Ecology developed for EITEs does not exempt or otherwise address process emissions as it is focused on energy-efficiency. Other carbon programs typically include process emissions, and develop alternative approaches to address leakage. Ecology considered excluding, but ultimately determined to include, process emissions for coverage under the CAR consistent with other carbon programs. See also Response 153. Ecology will continue to work with EITE industries, including those that have substantial process emissions, and will evaluate changes in approach in future rule revisions in the event of evidence of leakage in EITE sectors.

Response 100

The CAR fails to address leakage concerns from the waste sector

Several commenters have articulated that landfills are vulnerable to leakage as the costs imposed by compliance with the CAR will require them to increase their tipping fees to a degree that many of their customers would choose to ship their waste to out-of-state landfills with lower tipping fees.

²⁵ Leakage is a term frequently used in carbon programs. It describes a shift in manufacturing or production within the state to outside the state in response to additional costs resulting from the state's carbon program. For example, an in-state pulp mill with additional compliance costs resulting from a carbon program could choose to relocate out of state where the carbon program is not in effect. The carbon emissions with producing pulp would then not be covered by the carbon program, resulting in a “leakage” of emissions.

Rule's effects (continued)

Ecology does not believe this to be a likely scenario, given the estimated costs for compliance with the CAR, and the multiple opportunities for compliance available to landfills, including enhanced methane capture. However, Ecology will continue to work with landfills and the waste sector to evaluate alternative approaches in the event of evidence of leakage in this sector.

Response 101

The CAR fails to address leakage concerns from the power sector

Commenters have also raised the concern of leakage in the power sector given that imported power is not covered by the CAR. Further, as described in Response 112, there are particular challenges with addressing imported power.

As described in Response 88, the power sector will ultimately be addressed by the implementation plan for the CPP, which allows for a more regional treatment of the power sector in reducing GHG emissions. Ecology has concluded that the risk of leakage from the power sector in the interim period before the CPP takes effect is minimal. However, Ecology will monitor implementation of the CAR and evaluate alternative approaches in the event that there is evidence of leakage in the power sector. Please see Response 88 for more information about the legal proceedings and stay.

Response 102

The CAR provides an advantage to out of state truckers

A commenter stated the concern that the CAR will provide an advantage to out of state truckers, under the assumption that the CAR will cause increases in fuel prices in Washington. Ecology has determined that this scenario is unlikely. Ecology has estimated²⁶ that the likely increase of fuel prices resulting from compliance with the CAR is minimal, with motor fuel price increases ranging from \$0.00 to \$0.01 per gallon in 2020, to \$0.01 to \$0.09 per gallon in 2035, based on 2015 fuel prices, depending on the compliance option chosen.²⁷ Such an incremental increase in fuel prices is unlikely to provide a substantial competitive advantage to out-of-state truckers.

Response 103

The CAR will cause fuel switching

Ecology disagrees that implementation of the CAR will cause fuel switching. Based on additional economic modeling, Ecology estimates²⁸ that residential natural gas prices will increase by 0.0 to 0.8 percent in 2020, and 0.3 to 5.6 percent in 2035; industrial natural gas prices will increase by 0.1 to 1.4 percent in 2020, and 0.5 to 10.2 percent in 2035 depending on the compliance option chosen as a result of compliance with the CAR. These incremental costs are likely insufficient to provide incentives to cause residential customers to switch to burning wood for home heating or for industrial customers to switch to dirtier fuels.

CAR's impacts on the electric generation sector

²⁶ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (chapter 173-442 WAC) Costs on the Washington State Economy."

²⁷ Note that this economic analysis did not factor in price impacts from future demand of motor fuels, and the projected price increases are relevant to average 2015 fuel prices.

²⁸ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (chapter 173-442 WAC) Costs on the Washington State Economy."

Response 104

CAR will make it virtually impossible to site new natural gas power plants in Washington

The CAR does not prohibit or limit the addition of new gas electricity generation. The CAR provides specific mechanisms that accommodate new facilities, including power plants, by establishing a Reserve of emission reduction units to cover the initial operating emissions and remove disincentives for new facilities to be built in Washington. Once a baseline has been established for the new facility, it will start on a gradual compliance pathway equivalent to 1.7 percent reduction annually from its baseline. Utilities or others wanting to develop new power plants in Washington can plan for and incorporate CAR obligations into the location, design, and operational characteristics of the plant as well as into their business models. As described in the CAR, actions taken to comply with existing state emission performance standards and CO₂ mitigation requirements for power plants also count toward compliance with CAR.

Response 105

The CAR will affect the reliability of the power system

As a balancing authority ("BA"), Bonneville Power Administration ("BPA") has the authority to direct any generator to modify its output as needed for reliability within its BA. Peak, the western reliability coordinator, has authority to order a BA operator to take corrective action when the operator is in violation of NERC standards which can result in dispatch orders to a gas-fired generator. In recent records, neither BPA nor Peak has issued a directive to increase fossil fuel generation at any power plant in Washington for grid stability. For example, Clark PUD has not been directed to operate for reliability reasons throughout its 20 year operating history. If such directives were to occur, they would be of short-term duration. Given that this is a theoretical possibility and has not been used in recent years, the CAR does not provide a reliability exception or exemption. If this becomes an on-going issue in the future, Ecology can reconsider and potentially modify its rule.

Response 106

A perverse message is sent to owners of gas-fired generating facilities: the more you help transition us away from coal and support renewables, the more we will penalize you

The CAR does not limit the operation of in-state natural gas power plants. The CAR sets an emissions cap that reduces over time and provides multiple pathways and a wide array of options for compliance. Power plants have access to the full suite of compliance options and carbon markets identified in the CAR including energy efficiency, renewable energy, external carbon market allowances, in-state projects, RECs, facility improvements, and obtaining emission reduction units from others. As noted in the Northwest Power and Conservation Council ("NWPPCC") 7th Power Plan, natural gas generation will likely increase in the Pacific Northwest to offset some coal generation expected to go offline, to gap fill for additional intermittent renewable energy, and to ensure adequate power availability. As more renewables are added, more natural gas electricity generation would likely be directed to integration of renewables and less to continuous baseload operation. Although this will vary across individual electricity generating units, the net result should be less reliance on fossil fuel generation and more reliance on renewables and lower carbon emissions from the electricity sector in Washington.

Response 107

CAR would discourage or preclude Washington's natural gas generators from running

The CAR does not limit the operation of in state natural gas power plants. The CAR sets an emissions cap that reduces over time and provides multiple pathways and a wide array of options for compliance so that individual companies and facilities that face different circumstances can

choose options that best fit their needs. Power plants have access to the full suite of compliance options and carbon markets identified in the CAR including energy efficiency, renewable energy, external carbon market allowances, in-state projects and RECs, facility improvements, and obtaining emission reduction units from others. Given these options, and the requirement that the investor-owned utilities pursue least-cost options, it seems unlikely that the price signals from the CAR would be high enough to stop utilities from running their natural gas plants to meet their power needs.

Response 108

Exempting the state's only coal plant while placing natural gas power plants under a cap may cause leakage

The CAR exempts the TransAlta Centralia coal power plant because that facility is required to cease coal operations under separate statutory requirements. See also Response 125. The CAR does place requirements on in-state natural gas power plants until the CPP goes into effect. At that time the regulation of the power sector including the Centralia coal facility would transition to CPP and the EGUs would have no remaining compliance obligation under CAR. Further, Ecology conducted additional economic analysis²⁹ regarding potential increases in electricity rates as a result of the CAR. That analysis concluded that residential and industrial electricity rates could increase by 0.1 to 1.4 percent in 2020, the date when the first unit at the Centralia plant is required to cease operation. Ecology does not believe that such an increase in electricity rates is sufficient to promote increased use of the Centralia power plant prior to coverage by the CPP.

Response 109

The CAR makes it more difficult to integrate renewable resources into the power system

Both the CAR and the CPP create incentives to develop new renewable energy. The CAR encourages increased use of renewable energy by allowing it to count for compliance as long as it is additional to existing state requirements of the EIA. A number of forms of renewable energy are intermittent and therefore need to be balanced with power to ensure adequate power availability and reliability. As more renewables are added, more fossil fuel electricity generation would likely be directed to integration of renewables. Although this will vary across individual electricity generating units, the net result across the power sector should be less reliance on fossil fuel generation and more reliance on renewables and lower carbon emissions from the electricity sector in Washington.

Response 110

Allow power purchase agreements for Centralia's electric generation to be replaced with in-state generation by giving away half of the plant's emissions as ERUs for five years

Ecology has not included this mechanism in its rule. The Centralia coal power plant will cease operation under separate statutory requirements. These requirements were established in statute in 2008. Before CAR goes into effect in 2017 utilities will have had a bit less than 10 years to plan for and accommodate for the complete shutdown of Centralia's coal-fired units. Nothing in CAR prevents utilities from using in-state generation to compensate for the shutdown of Centralia. Even if discounted at 50 percent, and depending on actual operation of the Centralia coal facility, its closure would result in several million metric tons of annual GHG emissions reductions. This would dwarf the compliance obligations established under CAR and/or CPP for the entire

²⁹ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

Washington power sector, including covering potential increases in in-state generation used to offset the Centralia plant.

Response 111

Regulating the electric power sector under CAR will discourage certain emission reduction measures in the transportation sector

Ecology disagrees. Ecology conducted supplemental economic analysis showing that any increases in electricity prices will be small even in the worst case scenario. Ecology estimates³⁰ that electricity prices will increase by 0.1 to 1.4 percent in 2020, and 0.5 to 9.2 percent in 2035 depending on the compliance option selected. Such modest increases would still make electricity a much cheaper fueling option for vehicles than petroleum fuels, and will provide direct operating cost savings to motorists.

Electricity imports and exports

Response 112

The CAR should include imported electricity

Numerous commenters recommend including coverage for imported electricity in the rule. Doing so would involve unique challenges because the emissions from out-of-state power plants occur outside of Washington. Because electricity can follow multiple paths across the grid, often unpredictably, it is extremely challenging to be in a position to state with full confidence that a given electron that is delivered in Washington was derived from a certain power plant in another state. There is no system in place in Washington (or the Western power grid) that tracks all electricity from its source to its destination. Some commenters suggest using NERC e-tags (North American Electric Reliability Corporation) as a tool. These are often, but not always, used to schedule power delivery from one utility to another. However, these tracking mechanisms are not always used for power that comes into Washington. In addition, these tags are not based on geography, but rather grid systems which don't always neatly fit into the boundaries of state lines. Therefore, using e-tags would be problematic.

Washington also has a broad reporting system that estimates the power sources used by Washington customers, the fuel mix disclosure process run by the Department of Commerce.³¹ While useful in understanding aggregate power sources and associated GHG emissions for the state, it was not designed as a regulatory mechanism intended to be used for "tracking back" emissions to their sources for the purposes of GHG regulation. Moreover, not all utilities in Washington are required to fully disclose the sources of their power.

In the cap-and-trade bill proposed by Governor Inslee that did not pass the Legislature, a similar system to that used in California was suggested, in which the deliverer of electricity into the state was responsible for the emissions associated with that power. Given the difficulties tracking imported electricity, as noted above, implementation of such a system in Washington appears problematic.

A key reason that Ecology proposes to transition to the CPP is so that there is a mechanism in place, beyond the CAR, to address imported electricity. With the challenges noted to putting in

³⁰ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

³¹ <http://classic.commerce.wa.gov/Programs/Energy/Office/Utilities/Pages/FuelMix.aspx>.

place a mechanism for addressing imported electricity in the CAR, this transition to the CPP is the most logical way to deal with imported electricity.

Voluntary Renewable Energy Markets

Response 113

The proposed rule should support and encourage voluntary renewable energy (“VRE”)

Ecology has put in place a framework in the rule to allow concerns about effects on the VRE market to be addressed through future implementation guidance. As acknowledged by some commenters, because the program is not an allowance-based cap-and-trade program design, there are significant challenges to putting in place a “like for like” allowance set-aside program as found with other programs such as those in California or the Northeastern states Regional Greenhouse Gas Initiative (“RGGI”). Nonetheless, the proposed framework in this rule should allow for an analogous type of program that is consistent with the broad policy construct put in place by the aforementioned programs.

Ecology notes that no program—including those in California and in the RGGI states—can absolutely guarantee the type of regulatory surplus that some commenters seek. Instead, those programs, and the intent of what is proposed here, is to provide some level of assurance to the VRE market that purchases are going “above and beyond” what is required by law or regulation. Moreover, it is important to note that not all customers of VRE are necessarily seeking those types of assurances.³² Ecology is confident that market confidence in the VRE market can be maintained with implementation of the CAR.

Finally, changes to the rule language were made to allow for a robust consideration of options as implementation guidance is developed for this portion of the rule. Some commenters were concerned that the existing language may foreclose opportunities to address all aspects of the VRE market. The changes should provide a greater level of comfort to interested parties that a full range of options can be considered in the implementation process.

³² For a broader discussion of these issues please see, “Voluntary Renewable Energy Market: Issues and Recommendations,” July 27, 2010, from the Western Climate Initiative archive (www.westernclimateinitiative.org).

Scope

Overall program cap

Response 114

In addition to establishing emission standards, there should be an overall statewide cap on emissions which should cover new sources

The sum of the baseline GHG values for all covered parties forms the basis of a statewide aggregate emissions cap. Any covered GHG emissions from new sources or expansions at existing covered parties that meet the applicability standards of this rule would have to fit under the cap. All existing covered parties contribute to a Reserve account. Any new emissions would be offset by retiring ERUs from the Reserve.

Definitions

Curtailment

Response 115

Curtailment provisions should apply to the power sector as well

Washington is a very hydropower-dependent state. Normal power sector operations would trigger the curtailment provisions, and curtailment is designed for non-normal operation. We do not anticipate permanent shutdowns in the power sector before the CPP provisions take effect. We will continue to track this issue and can address it in future rulemakings if problems arise.

Response 116

Curtailment provisions should be mandatory, not optional for sources that meet the definition

Curtailment is established by definition in the rule, not a petition process. Therefore, Ecology makes that determination. Sources that reduce emissions but do not curtail production would be allowed to continue to participate in the program.

Response 117

Curtailment provisions do not contain references to economic hardship or partial shutdowns

The reasons for curtailment are not important when applying this provision, all are treated equally. Partial curtailments can be difficult to quantify and assess. The CAR places a compliance obligation on total facility emissions, not unit level emissions.

Response 118

How does curtailment relate to the Reserve

Permanent closures and curtailment can be difficult to distinguish until some time has passed. The CAR treats them the same instead of attempting to differentiate. The goal is to discourage leakage by removing the incentive to shut down for profit or to reduce emissions, but to provide assistance to a curtailed facility when restarting.

A covered party's compliance obligation pauses for any year they meet the criteria for curtailment. The obligation resumes when the facility restarts. During the curtailment period, either temporary or permanent, ERUs equivalent to the paused reduction requirement will go into the Reserve. This maintains the overall cap and does not reward a facility for shutting down.

If a curtailed facility restarts, it gets fifty percent of its ERUs that were allocated to the Reserve during the calendar year prior to restart. This prevents large potential gains from a long curtailment, but still provides an incentive to restart. Processes are often inefficient both economically and from a GHG emissions efficiency perspective during a restart. The ERUs from the Reserve can help offset those inefficiencies and return the facility to operation and participation in CAR.

Response 119

Clarify interaction of WAC 173-442-130, 173-442-160 & 173-442-240(1)(a)(ii)

The commenter's assumption that emission reductions from curtailment generate ERUs is correct, although ERUs generated from curtailment are inborn to the Reserve per WAC 173-442-240(1)(b). Ecology believes it is appropriate for language regarding curtailment and ERU generation to reside

Definitions (continued)

under WAC 173-442-240 because WAC 173-442-160 concerns activities and programs that generate ERUs. Ecology does not see curtailment as an activity or a program performed by a covered entity for the sole purpose of reducing GHG emissions or meeting compliance obligations. Furthermore, ERUs generated from curtailment are not held by the covered party that underwent curtailment. Rather, they go to the Reserve that is managed by Ecology.

The definition of EITEs is flawed

Response 120

Ecology failed to analyze exposure

Ecology has defined EITEs by North American Industry Classification System (“NAICS”) code; the list corresponds to the types of facilities Ecology has concluded are vulnerable to global competition and to fluctuations in energy pricing. While Ecology did not conduct an independent evaluation of the degree of trade exposure for each facility type covered by the definition, the list of facilities covered is similar to the lists in other programs that recognize the need to treat EITE facilities in a way that minimizes trade exposure, including California and Europe.

Response 121

Refineries should be included in the definition of EITE

Several commenters requested that petroleum refineries be treated as EITE industries. A notable difference between California and Ecology’s definition is that Ecology does not define refineries as EITE. Given that the bulk of GHG emissions in Washington state are from transportation, Ecology determined it important to ensure that the program is structured to place an appropriate price signal on fuel, and that requiring a 1.7 percent reductions in emissions on an annual basis from refineries is the better way to accomplish this under the current rule. While other programs like California have designated refineries as EITE, Ecology notes that the Waxman-Markey legislation that would have established a national cap-and-trade program deliberately excluded refineries from the EITE definition.³³

Ecology has therefore concluded that refineries should not be included in the definition of EITE.

Response 122

Landfills and waste-to-energy (“WTE”) facilities should be included in the definition of EITE

Ecology received several comments that landfills and the WTE facility in Spokane be treated as EITE industries as they are vulnerable to competition from out of state landfills. As explained in Response 100, Ecology has concluded that there is not a significant risk of leakage or trade exposure for the waste sector. Further, the efficiency-based alternative compliance pathways for EITEs in the CAR likely would not be applicable to the waste sector. While Ecology will consider different approaches for the waste sector in the event there is evidence of significant leakage, we have concluded that facilities in the waste sector are not to be treated as EITE industries.

³³ See American Clean Energy and Security Act of 2009 (H.R. 2454 of the 111th Congress).

Applicability (including covered parties, thresholds, and exemptions)

Rule coverage/covered parties

Response 123

The CAR does not include a sufficient number of covered parties

The CAR was designed to capture the largest contributors of GHG emissions in Washington and cover the majority of total Washington GHG emissions. It covers approximately two-thirds of the GHG emissions in the state. Lowering the threshold to bring in more entities would not substantially increase the amount of GHGs covered, but would greatly increase the number of entities covered and the burden of the rule. For example, decreasing the threshold for coverage from 100,000 MT CO₂e per year to 25,000 MT CO₂e per year would only result in a one percent increase in emissions covered, while subjecting many smaller entities to the requirements of the rule. While Ecology has exempted some categories of entities from the rule, we have done so because those entities are covered through some other mechanism (*e.g.*, the Centralia Power Plant). Please refer to Response 139 for additional details regarding rule coverage.

Response 124

The CAR should include emissions from agriculture

Ecology has determined that it is appropriate to exempt emissions from the agricultural sector from coverage by the CAR at this time. GHG emissions from the agricultural sector account for just over 5 percent of overall statewide GHG emissions. While the total contribution from agriculture is not insignificant, it is spread across hundreds of individual agriculture operations. Including these facilities would greatly increase the number of entities covered and the administrative burden of the rule. It also means that the agricultural sector is far from the top contributor of GHG emissions in this state.

At this time Ecology is not including emissions from the agricultural sector for coverage under the CAR. The reason for this is two-fold: 1) currently the protocols for estimating GHG emissions from agricultural practices are not well developed, and there is a high degree of uncertainty regarding specific emission factors and other assumptions that would be used to estimate emissions; and 2) Ecology concluded that emissions from individual farms would be far below the 70,000 to 100,000 MT CO₂e per year threshold for coverage under the CAR.

Response 125

The rule should include the TransAlta coal power plant in Centralia

The CAR exempts the TransAlta Centralia coal power plant because that facility is required to cease coal operations under separate statutory requirements. The combustion of coal for power generation is required to end in 2020 for one unit of the plant, and the other unit must stop in 2025. Under RCW 80.80.110, the Legislature prohibited state agencies from imposing any additional GHG limits on the Centralia plant because of these specific requirements. Emissions from the Centralia plant are therefore not included in the CAR. Taking a broader look, TransAlta is part of the overall “cap and reduce” strategy under which the CAR falls. But in the case of this plant, it must reduce its GHG emissions from its coal operations to zero. So, while the CAR may not include TransAlta, the law requiring that the plant stop burning coal to generate power is a vital part of the state’s overall climate strategy and it will produce a significant drop in emissions by 2025.

Response 126

The CAR must regulate transportation emissions

The CAR does regulate emissions from transportation. Under the rule, fuel producers and suppliers of fuel in Washington State are covered by the rule if the fuel they supply results in emissions exceeding 100,000 MT CO_{2e} per year starting in 2017. Importers of fuel to Washington are subject to the rule starting in 2020. Fuel producers and importers covered by the rule will have to decrease the emissions associated with their fuel by 1.7 percent per year.

The commenters argue that Ecology's rule ignores the "back end" of the problem by failing to address "emissions from combustion of fossil fuels by vehicles." This is inaccurate. Ecology, per legislative directive, has already adopted the strictest national GHG emission standards for motor vehicles when it adopted the California clean car standards in 2005. The federal Clean Air Act preempts the State's authority to do anything more in regards to tailpipe emissions. However, the regulation of transportation fuels is a valid and effective way to decrease transportation emissions and Ecology has therefore opted to include transportation fuels in the regulatory program.

Several commenters argued that ERUs generated under commute trip reduction programs are non-additional and therefore should not be allowed as compliance tools. We disagree. Due to the significance of transportation emissions in Washington State, Ecology believes it imperative to provide incentives for projects that will ultimately reduce transportation emissions, including commute trip reduction programs. Please refer to Response 275 for more details regarding double counting and additionality.

Several commenters ask Ecology to impose a tax on vehicle miles traveled, to provide credits to public transit users, and to fund transit projects as a way of achieving emission reductions in the transportation sector. Ecology is establishing the CAR under our Washington CAA Authority. The state CAA does not authorize Ecology to impose a tax on vehicle miles traveled under this statute, or to provide credits to public transit users. Ecology also lacks the ability to provide wide-scale funding for transit projects.

Response 127

Include natural gas emissions from small sources

Natural gas distributors are included and cover natural gas emissions from smaller homes, businesses, and organizations.

Response 128

Limit exemptions in petroleum products and natural gas sectors, specifically include fugitive emissions

Exemptions for natural gas distributors are mainly to prevent double counting of emissions.

Petroleum product producers and importers have exemptions designed around products that either do not result in emissions, or a large and unquantifiable amount of those emissions occur out of state.

Some fugitive emissions in these sectors are included in stationary source protocols when applicable and available.

Response 129

Which petroleum products are included in the program/limit product coverage to those in the Department of Licensing program

Covered GHG emissions are reported GHG emissions under WAC 173-441-120 minus any exemptions as specified in WAC 173-442-040.

WAC 173-442-020(1)(i)(ii) states that the Suppliers of Petroleum Products, 40 CFR Part 98, Subpart MM, source category listed in WAC 173-441-120 is the basis for the petroleum product producer and importer categories. A complete list of reported product types is adopted from 40 CFR Part 98 Subpart MM, Tables MM-1 and MM-2. Both tables and more explanation are included in Response 199. WAC 173-442-040(2)(a) lists all product types that are reported under WAC 173-441-120 that are exempt from Chapter 173-442 WAC. It is more concise and consistent with other sections of the rules to include the shorter exemption list.

Limiting the program to the products suggested by the commenter would result in a 25 percent reduction in scope. Ecology met with the Western States Petroleum Association (“WSPA”) and went over Table MM-1 in detail. We have evaluated the products on the list and only included those that we concluded are GHG emitting products. Subpart MM methods account for uses as intermediates and Chapter 173-442 WAC allows adjustments for exports.

The commenter also argues that inclusion of some products would lead to double counting. Washington’s GHG reporting program tracks GHG emissions resulting from combustion of petroleum products at facilities that are covered parties under CAR. The numbers below are worst case scenarios as it assumes all petroleum products come from other Washington covered parties with a compliance obligation for those products.

Currently about 108,000 MT CO_{2e} per year comes from liquid petroleum product combustion at Washington facilities. Over 60 percent of those emissions are from a single facility, which is not projected to have a compliance obligation until 2032 (and that facility is currently converting to natural gas). The refineries themselves are the next largest consumer, and tracking net emissions at the refinery gate prevents double counting in this case. All reported uses of gaseous petroleum products occurs at the refineries, therefore net reporting at the refinery gate prevents double counting. Worst case scenario shows about 30,000 MT CO₂ potentially double counted.

No active Washington facilities report the combustion of petroleum coke. CO₂ emissions associated with aluminum processes at active Washington smelters are about 350,000 MT CO₂. A single Washington refinery produces over two million MT CO₂ worth of petroleum coke a year. Double counting is not severe, even if all aluminum CO₂ process emissions come from Washington refineries. Producers would still be able to subtract out any emissions associated with exported coke.

In total, the worst case potential for double counting is less than 400,000 MT CO₂ per year.

The commenter points out in their letter that Washington refineries produce 47.6 thousand barrels of jet fuel per day that is consumed in Washington, excluding exports. This equates to over seven million MT CO₂ per year in emissions that are currently exempt under WAC 173-442-040. The exemption is based on there not being enough information to determine the percentage of emissions that occur out-of-state using publically available data or the tracking systems in the GHG reporting program. However, the commenter’s letter indicates they have data on export

Applicability (continued)

quantities for these products. The commenter does not provide information about residual fuel oils No. 5 and No. 6, but producers gain similar benefits from the exclusion of those fuels. Ecology acknowledges that some double counting will occur, but that petroleum product producers and importers experience a net benefit due to the inclusions and exclusions of products in Chapter 173-442 WAC.

Response 130

Include/exclude federal and military sources

Federal and military sources are not exempt from the program. They must comply with the CAR if they meet the applicability standards established in the rule. A list of potential covered parties and their estimated covered GHG emissions is available here:

http://www.ecy.wa.gov/programs/air/permit_register/ghg/PDFs/WA_GHG_Reporting_Data_2012-2014.pdf

Commenters point out that future cleanup efforts will result in significant emissions increases at the Department of Energy Hanford site and that those emissions should be exempted. The Department of Energy is currently reporting emissions at well below CAR threshold levels and will not have a baseline established until their GHG emissions increase to a level where they would become a covered party under CAR. They will be treated like any other party with increasing GHG emissions. Once they become a covered party, reductions will be relative to project conditions at that time, not relative to current conditions. ERUs will be retired from the Reserve to offset this increase to maintain the aggregate cap. The CAR provides multiple compliance pathways, including methods that do not require on-site reductions. For those reasons we do not believe the CAR will impact cleanup efforts at Hanford.

For clarity, emissions associated with mobile sources (cars, trucks, construction equipment, etc.) are the responsibility of the petroleum product producers or importers that provide the products, not the responsibility of stationary sources. Federal and military sources would be treated like any other source in this regard. Emissions associated with jet fuel are exempt from the program because the emissions often occur out of state and tracking mechanisms are not currently able to account for the in-state percentage of use.

Response 131

Manure management should be included

The CAR is designed to be an economy-wide GHG emissions reduction program. All sectors with quantifiable and verifiable GHG emissions have been included. The Washington Legislature directed Ecology to base our GHG reporting program on EPA's GHG reporting program. EPA adopted the manure management source category in their rule, but does not require the sector to report or provide a method to report. They do not maintain or update the manure management protocols, which reduces their quality.

Ecology requires manure management facilities in Washington to report their GHG emissions. This is done in a nonstandard method because EPA's reporting tool is not available for these facilities. The methodologies used to calculate these emissions are good enough for informational purposes, but are not as rigorous as protocols for other sectors and we believe are insufficient to assign and track compliance with a regulatory program such as CAR. The largest manure management facility currently reporting GHG emissions in Washington only emits about 27,000 MT CO₂e per year, well below the CAR threshold. There are some cases where these facilities

Applicability (continued)

could be included in CAR as ERU providers, which would encourage GHG emission reductions in the sector.

Response 132

Should eliminate the “buffer” between 50,000 and 70,000 MT CO₂e for reporting

The 50,000 MT CO₂e level only exists for parties already in the program. It is designed to prevent parties from oscillating in and out of the program and to provide certainty that reductions are lasting. Reduction pathways level off at 70,000 MT CO₂e beginning in 2035, so parties would not be required to reduce emissions to the 50,000 MT CO₂e level. They would continue to participate in the CAR to ensure on-going compliance. Parties with actual emissions at that level will likely be net ERU generators.

Need to clarify applicability

Response 133

“Covered party” is confusing—are all parties required to reduce GHG emissions or do they only have requirements after triggering applicability

A covered party is any:

- Stationary source located in Washington;
- Petroleum product producer in Washington or importer to Washington; or
- Natural gas distributor in Washington.

A covered party only has an obligation to reduce their GHG emissions if they trigger the applicability requirements in WAC 173-442-030.

Response 134

Need to clarify when applicability is triggered

Commenters expressed confusion about when the threshold applied to a covered party. We have clarified the text to have applicability triggered by a covered party’s three calendar-year rolling average of their covered GHG emissions, beginning with calendar year 2012. This applies to both EITE covered parties and non-EITEs.

Response 135

When do requirements begin for a source that triggers applicability at a non-standard time

A category 2 covered party becomes subject to CAR when their three-year rolling average covered GHG emissions are greater than or equal to a compliance threshold in WAC 173-442-030(3) Table 1. This could occur at year one, two, or three of a compliance period. We have changed applicability language to make this clearer.

For example:

A party with covered GHG emissions in the table below must demonstrate compliance with their emission reduction requirement in the compliance report due for the 2020 through 2022 period. That is, their compliance obligation begins with year 2021 when their rolling average emissions reaches 95,000 MT CO₂e. There is no compliance report due for the 2017 through 2019 period because their emissions fall below the compliance threshold in WAC 173-442-030(3) Table 1.

Table 3: Sample GHG emissions table

	Emissions (MT CO ₂ e)	Three-year Rolling Average	Table 1 Threshold
2012	85,000	NA	100,000
2013	90,000	NA	100,000
2014	95,000	90,000	100,000
2015	88,000	91,000	100,000
2016	85,000	89,333	100,000
2017	90,000	87,667	100,000
2018	88,000	87,667	100,000
2019	98,000	92,000	100,000
2020	90,000	92,000	95,000
2021	100,000	96,000	95,000

Response 136

Does the threshold apply to individual parties or collections of sources

The compliance threshold applies to individual parties, not collections of sources. Covered parties and covered emissions refer back to groupings established in WAC 173-441-120. That section clearly specifies the definitions of reporting groupings and when the threshold is applied to a single fence line facility or to a statewide network of activities.

Units or collections of units are combined into a single covered party for reporting and compliance purposes. This also applies to electric generating units.

Voluntary parties

Response 137

Voluntary participation weakens the program and should not be allowed

The program's threshold means that in most cases voluntary participants will be too small to have a significant impact on the program. We expect few if any will choose to participate, but believe that the value of expanding participation to all parties willing to reduce their GHG emissions is worthwhile and helps the state meet its statutory GHG limits. For that reason, Ecology concluded that allowing for voluntary participation can strengthen rather than weaken the program.

Response 138

Voluntary parties should have a reduction pathway just like covered parties

Reduction requirements for voluntary parties are based on the difference between the baseline GHG value and actual emissions, they do not have a reduction pathway. They are not required to participate, so any verifiable reductions are counted. They also have specific opt-out provisions that provide transparency and are allowed to reenter the program. These conditions are designed to encourage voluntary participation.

Compliance thresholds as proposed

Response 139

Why was the threshold set at this value/threshold should be lower/more sectors should be included

The CAR was designed to cover the largest contributors of GHG emissions in Washington and capture a majority of Washington total GHG emissions, while also limiting the total number of covered facilities and companies. Reporting and compliance regulations frequently use thresholds

Applicability (continued)

to establish who has to comply with a program. This is a balance between getting as much emissions in the program as possible while limiting the regulatory burden on small sources and the administrative burden associated with regulating numerous small sources.

The CAR covers large emitters from those sectors where it is possible to accurately measure emissions. Accurately measuring emissions for certain other sectors is not possible because there is not a well-defined and high quality method for measuring that activity. An example is the amount of GHGs released from gastric processes in livestock, which are highly variable depending on animal type, feed, environmental conditions, etc. Other times the emissions are so spread out that they are difficult to measure or assign to a specific organization or person. An example is emissions from leaking air conditioners in personal vehicles or home HVAC systems.

Washington's Legislature established a statewide GHG reporting program based on EPA's GHG reporting protocols and standards. We have implemented our compliance program accordingly. EPA has methodologies for a wide variety of GHG emissions types, including: power plants, fuels used in on-road vehicles, industrial plants, landfills, and much more. We have included all GHG emissions types implemented by EPA's program, some of which are not included in other GHG reduction programs.

Washington's GHG reporting threshold is 10,000 MT CO_{2e}. The CAR threshold starts at 100,000 MT CO_{2e} and declines parallel to the reduction pathway to 70,000 MT CO_{2e}. The higher CAR threshold results in a very small difference in covered emissions, but reduces the organizations that must comply by about half. This is partially due to the fact that the organizations below 70,000 MT CO_{2e} simply emit far less than those over the threshold. Most of the emissions in-between come either from wood combustion, which is exempt by law, or from natural gas combustion. Natural gas distributors are responsible for GHG emissions at industrial facilities not covered by the CAR, so those emissions remain in the program even with the higher threshold.

As mentioned above, the CAR includes emissions from natural gas combustion at homes, commercial businesses, and small industrial and power sources through the inclusion of natural gas distributors. We also include petroleum product producers and importers. This means most other smaller stationary source emissions and transportation emissions are part of the program, including: home heating fuels, personal or commercial vehicles, trucking, rail, ferries, agricultural vehicles, and other petroleum based emissions. Regulating the organizations that provide large volumes of GHG emitting products such as natural gas and petroleum products allows Ecology to cover our largest contributors of emissions, even though those emissions are very spread out, by covering a smaller number of parties.

We cannot know the final coverage of the program until the baseline period is complete, but we have good estimates based on GHG reporting data and other sources. The state's total GHG emissions are about 92 million MT CO_{2e}. We expect the CAR to cover about 62–63 million MT CO_{2e}, or about 68 percent of the total. Most of the CAR covered emissions come from either petroleum product producers and importers (63 percent of covered emissions) or natural gas distributors (11 percent of covered emissions).

Some of the non-covered emissions can be calculated. The Centralia Power Plant accounts for about 7 percent of statewide GHG emissions. The facility is exempt because it is set to cease operation at a pace faster than prescribed by CAR and because state law prohibits state agencies from imposing additional GHG regulations on the plant. Some forms of aviation and marine

Applicability (continued)

emissions (about 10–15 percent of statewide GHG emissions) are exempt because we do not have the ability to accurately track when these aircraft and marine vessels exit the state. The CAR focuses on emissions that occur in Washington, so their inclusion would overestimate GHG emissions. That leaves less than 15 percent of statewide emissions unaccounted for. Much of this is due to differences between how the statewide total is calculated compared to the results from adding together emissions from individual parties. Part of this is emissions from imported electricity. Switching the power sector to compliance under the CPP in future compliance periods will help capture those emissions.

Threshold beyond 2035

Response 140

The Emissions Threshold Arbitrarily Does Not Continue To Decrease After 2035

The emissions threshold for coverage under the program is designed to lower over time, from 100,000 MT CO₂e in 2017 to 70,000 MT CO₂e in 2035. As described in Response 123, reducing the threshold further likely would not result in substantially more coverage of state GHG emissions under the rule. Ecology is being neither arbitrary, nor is it acting illegally in establishing the threshold this way.

Specific exemptions requested

Response 141

Exempt natural gas used as a feedstock from a natural gas distributor's compliance obligation

We have added “or other use” to the natural gas distributor exemption to facilitate this possibility. It will be dependent on verifiable data availability.

Response 142

Landfill GHG emissions protocols are flawed/landfills should be exempt from CAR

The CAR is designed to be an economy-wide GHG emissions reduction program. All sectors with large quantifiable and verifiable GHG emissions have been included. Municipal and industrial landfills have been calculating and reporting their emissions to Ecology since 2012 and EPA since 2010. Washington has designed CAR to meet our emissions profile and landfills account for a significant portion, over one million MT CO₂e, of CAR covered GHG emissions. Ecology has evaluated the protocols and believes the methodologies are robust enough to include in this program.

The CAR is not based on other existing GHG reduction programs. Commenters correctly point out that landfills are not part of California's cap-and-trade program. Several other sectors, such as aluminum production and electronics manufacturing are also not in California's program, but are included in CAR. While California exempts landfills from cap-and-trade, they have regulated GHG emissions from landfills since 2010. Ecology is regulating emissions from many sectors, including landfills, under a common program instead of different sector specific programs. This increases overall flexibility and compliance options.

Landfills are not unique in being covered by other GHG reduction policies at the federal, state, or local level. Like other sectors, if a party reduces emissions on-site for any reason, those reductions will show up in their GHG reports and be eligible for ERUs. CAR and other programs complement each other, they are not in conflict.

Applicability (continued)

Most sources in the GHG reporting program do not directly measure their GHG emissions. A few power plants and industrial facilities use continuous emissions monitors, but the rest use a measured value that is entered into emissions calculations that determines the source's GHG emissions. Most sectors offer a variety of measurement and calculation methods of varying accuracy. For example, combustion emissions can be calculated by multiplying quantities of fuel combusted by default national emissions factors, by multiplying fuel use by various site-specific emissions factors based on periodic fuel testing, or by continuous monitors.

Landfill protocols are similar. A measured value, waste disposed in the landfill, is entered into a series of equations to calculate methane emissions. The party can choose to use standard waste compositions, on-site operating characteristics, and emissions factors, or they can customize their report to account for facility specific criteria. Information is also collected about what happens to the gas after it is generated. Collection and destruction efficiencies are part of the equations and can lower reported GHG emissions by over 90 percent. Few source categories account for emissions collection and this presents a significant source of potential reductions. CO₂ emissions resulting from on-site combustion of captured methane are not included in the protocols, allowing for more credit than would exist under a direct measurement. CO₂ that is part of fugitive landfill gas is also exempt from reporting.

Landfill operators will have a variety of methods available to reduce GHG emissions on-site in a measurable way. Multiple diversion techniques can reduce the amount of organic waste deposited. Collection systems or destruction device efficiencies can be improved. Landfill cover type can be changed. Some of these methods, such as increased landfill gas recovery, can even lead to additional revenue streams.

Landfills differ from most emissions sources in that the GHG emissions from an activity (placing waste into the landfill) may take years to reach the atmosphere. Landfills' production is more accurately described as the total waste contained in the landfill as opposed to the waste accepted in any given year. An open landfill's emissions will increase with time if waste is added faster than the decay rate. A closed landfill will also continue to emit GHGs at a declining rate. This is a fundamental part of the landfill business model and the sector has a long history of complying with environmental regulations involving legacy emissions and impacts including air emissions, water quality standards, and land use impacts.

Other sectors covered by CAR are like landfills and have GHG emissions tied to their business model. Those sectors also provide essential products and services. Other sectors also have parties that are in the process of increasing production. CAR was designed to include a variety of compliance options for sources that are not able to reduce GHG emissions on-site enough to meet their compliance obligation without shutting down.

Response 143

Landfill gas facilities that generate electricity should be exempt and failing to do so conflicts with pre-existing statutory requirements

One commenter asserts that landfill gas facilities that generate electricity should be exempt, and that failing to do so conflicts with Chapters 19.285 and 70.235 RCW. Ecology disagrees. Nothing in these statutes is in conflict with our authority under Chapter 70.94 RCW to establish emission standards for GHGs.

Applicability (continued)

The CAR establishes a cap on carbon emissions from stationary sources, petroleum fuel suppliers, and natural gas suppliers. Landfills are stationary sources, so are included in the rule. The objective of the rule is to reduce GHG emissions in the state. Stationary sources that emit greater than the emission threshold for coverage under the program are required to reduce their emissions at a rate of 1.7 percent each year through a variety of compliance mechanisms. Ecology has concluded that there is no reason to treat landfills that emit greater than the threshold for coverage under the CAR different from other stationary sources.

RCW 70.235.030(3) pertains to information required to be submitted to the Legislature regarding the development of “a regional multisector market-based system to limit and reduce emissions of GHG consistent with the emission reductions established in RCW 70.235.020(1).”³⁴ The provision further establishes that the directors of Ecology and the Department of Commerce submit a series of information and recommendations to the Legislature by December 1, 2008.³⁵ The commenter cites one of these provisions requiring “[r]ecommendations regarding the circumstances under which generation of electricity or alternative fuel from landfill gas and gas from anaerobic digesters may receive an offset or credit in the regional multisector market-based system or other strategies developed by the department....”³⁶

Nothing in this provision is in conflict with the CAR. First, this provision is regarding efforts for Washington to join in the cap and trade program being designed by the WCI, of which Washington was at the time a member. Since the time of this provision, Washington has left the WCI. While some members of the WCI have since developed a cap-and-trade program, the CAR is not a part of it. While the CAR establishes a multisector cap on carbon, it is not regional in nature. Further, while there are some market elements in the CAR, Ecology is not regulating the market in any way, and transactions would be conducted between individual entities without Ecology’s involvement. Therefore, Chapter 70.235.030 RCW is not relevant to the CAR.

Even if the CAR qualified as a regional multisector market-based system within the meaning of RCW 70.235.030, it is in no way in conflict with the CAR’s treatment of landfill gas. On its face, the statute requires recommendations about how the generation of electricity or alternative fuel from landfill gas may be credited by a date certain. It does not require or mandate a particular treatment of landfill gas, and does not require that the generation of electricity from landfill gas be credited. Had the Legislature intended this treatment of landfill gas, they could have done so by specifically declaring emissions associated with the combustion of landfill gas as carbon neutral, much as they did for the emissions associated with the combustion of woody biomass.³⁷

The commenter also cites language in the EIA as support that the generation of electricity from landfill gas must be considered as a GHG emission credit. The provisions the commenter cites are definitions of “nonpower attributes,” “renewable energy credit,” and “renewable resource.” Again, nothing in these definitional terms is in conflict with CAR. Although the definitions refer to “benefits associated with the on-site capture and destruction of methane” through landfill gas collection systems “which *may be* separately marketable as GHG emission reduction credits,”³⁸

³⁴ RCW 70.235.030(1)(a).

³⁵ RCW 70.235.030(3).

³⁶ RCW 70.235.030(3)(f).

³⁷ See RCW 70.235.020(3).

³⁸ See RCW 19.285.030(15)(b).

(emphasis added) and also define landfill gas as a renewable resource,³⁹ nothing in these definitions requires that the combustion of landfill gas be treated as a GHG credit.

Ecology also disagrees that landfill gas that generates power is treated differently from dairy digesters. The CAR allows for dairy digesters – facilities that collect manure, capturing and burning methane that otherwise would be released to the atmosphere – to generate emission reduction units. To qualify, the facilities must not otherwise be required by law or regulation, and meet other tests identified in protocols specific to this project type. Similarly, a project to capture and combust landfill gas could qualify to generate emission reduction units provided it is not otherwise required by law or regulation, meets similar tests in one of the two applicable project protocols noted in the rule, and that the emission reduction would not already be reflected in the greenhouse gas reports submitted by the landfill. The H.W. Hill Landfill Gas Power Plant is an existing project – as such the emission reduction benefits it provides from methane recovery on-site are already reflected in the greenhouse gas reports submitted by the landfill. However, as noted previously, the project is also a renewable energy project. Therefore, it could generate RECs which could be eligible to generate ERUs if those RECs are used in a manner that is above and beyond the renewable energy requirement of the Energy Independence Act.

Response 144

The CAR should exempt biofuels

Ecology is including biofuels under the CAR because biofuels, like petroleum-based fuels, generate GHG emissions when they are burned. Ecology concurs that the GHG footprint of biofuels is less than that of petroleum-based fuels after taking into account lifecycle emissions from the production of these fuels. However, as explained in Response 165, the CAR is a direct mass-based emission standard, and does not consider lifecycle emissions.

Ecology has concluded that exempting biofuels from coverage under the CAR would effectively render them carbon-neutral for purposes of the rule, and provide a potential intensity-based compliance pathway for petroleum fuel suppliers and importers. While the lifecycle GHG emissions of biofuels are less than those for petroleum-based fuels, biofuels still generate GHG emissions and are not carbon neutral.

Response 145

Biogenic CO₂ emissions should/should not be exempt

Ecology disagrees that RCW 70.235.020 should be read to exempt all biogenic emissions from GHG regulation. RCW 70.235.020 contains an explicit exemption for the “industrial combustion of biomass in the form of fuel wood, wood waste, wood by-products, and wood residuals.” It does not include any other exemptions, which indicates the Legislature’s intent that only the industrial combustion of woody biomass is to be excluded.

The CAR is based on the state CAA and reduces actual GHG emissions. It is not a program that looks at the lifecycle of emissions. Combustion of biofuels, biogas, biomass, and other biogenic materials emit GHGs including carbon dioxide, methane, and nitrous oxide using the same chemical processes that occur when combusting fossil fuels. Differences in energy and carbon content of the fuels mean that each combustible material, biogenic or fossil, emits GHGs at different rates. These differences are accounted for by using emissions factors specific to each product.

³⁹ See RCW 19.285.030(21).

Biogenic CO₂ emissions are sometimes considered “carbon neutral” despite the fact that the emissions warm the atmosphere the same as CO₂ emitted from fossil fuels. One of the arguments is that the emissions are offset by biological growth that uses carbon in the atmosphere to make plants. These are the same chemical processes that originally made fossil fuels, it just occurs on a different timeline. Also, plants do not preferentially use CO₂ that originally came from biogenic sources. The most favorable situations occur when it is assumed that harvests occur in steady state offsetting emissions. Even in these cases the offset is indirect, one to one attribution is difficult, and alternative land uses that could sequester more carbon should be considered.

The CAR uses EPA reporting protocols for petroleum product producers and importers. The protocols were designed for petroleum products. Source category definitions are set in such a way that most biofuels are effectively excluded from reporting (see 40 CFR Part 98.390). Imports and exports are by definition limited to Table MM-1 products, which do not include biofuels. A producer may be required to report biofuels in some cases if it co-processes them at the refinery. Ecology is not aware of this occurring in Washington. Therefore, while biofuels are not exempt from CAR compliance, in most cases biofuels will not have a compliance obligation under the program.

CO₂ from biogenic combustion at stationary sources would be included, but those emissions are a small part of the program. Biofuels account for less than 100 MT CO₂ per year. Biogas covered under the CAR accounts for less than 100,000 MT CO₂ per year. The actual compliance burden associated with not exempting biogenic emissions is minimal.

Response 146

Exempt/do not exempt emissions from woody biomass

RCW 70.235.020 contains an explicit exemption for the “industrial combustion of biomass in the form of fuel wood, wood waste, wood by-products, and wood residuals.” Ecology has exempted those CO₂ emissions accordingly. Ecology does not have the authority to override the statutory exemption.

Response 147

Waste-to-Energy facilities should be exempt

The CAR is designed to be an economy-wide GHG emission reduction program. All sectors with large quantifiable and verifiable GHG emissions have been included. WTE facilities generate GHG emissions from combustion, therefore they are included in this program. Landfills are also included in CAR, which provides for consistent treatment across solid waste management facilities under the regulation.

Response 148

Municipal utilities should be exempt

Under the Clean Air Rule, covered parties are being asked to decrease greenhouse gas emissions associated with their own activities, not the activities of others. This is no different than other pollution control requirements that are applied to regulated parties in order to diminish or eliminate any environmental harm that may flow from the regulated party’s activities.

The CAR is designed to be an economy-wide GHG emissions reduction program. All sectors with large quantifiable and verifiable GHG emissions have been included. To the extent that the commenter believes that municipal utilities should be exempt from regulation, Ecology disagrees.

Applicability (continued)

Chapter 70.94 RCW applies broadly to any “person” which is defined to include public corporations and municipalities. “Persons,” including landfill operators, are already required to report their GHG emissions to the Department of Ecology.

Response 149

The CAR should exempt natural gas LDCs from coverage

Several commenters assert that regulation of natural gas LDCs under the CAR means that such entities are being held responsible for the emissions of others. Ecology disagrees. Under the CAR, covered parties are being asked to decrease GHG emissions associated with their own activities, not the activities of others. This is no different from other pollution control requirements that are applied to regulated parties in order to diminish or eliminate any environmental harm that may flow from the regulated party’s activities. Ecology disagrees that natural gas LDCs should be exempt from coverage. Ecology acknowledges that LDCs are already required to employ cost-effective conservation measures which can reduce GHG emissions. However, there are still significant GHG emissions associated with the combustion of natural gas within Washington.

In order to achieve statewide GHG emission reductions, Ecology has concluded that it is appropriate to include the natural gas LDCs for coverage under the CAR.

Response 150

The power sector should be exempted from the CAR

The power sector is a key contributor to GHG emissions. Hydrological conditions and weather affect emissions in the power sector so those emissions vary year to year, but in recent years emissions associated with the use of electricity have represented between 16 to 20 percent of Washington’s emissions. The intent of the CAR is to put in place an economy-wide program that, among other goals, helps to achieve Washington’s GHG reduction limits. Removing a sector from any GHG regulation that is responsible for up to one-fifth of Washington’s emissions will not help accomplish that goal.

As noted in more detail in Response 88, the CAR transitions the regulation of the power sector from CAR to the CPP once the CPP is upheld, Washington’s implementation plan is approved, and that plan begins requiring emission reductions. So at that time the power sector will not be subject to regulation under the CAR.

Response 151

The electric power sector already is doing its fair share to reduce emissions and shouldn’t be required to do more

Ecology appreciates the efforts of the power sector to reduce emissions. Energy sector economics, regulatory factors, and business decisions unrelated to CAR are likely to continue to reduce emissions from the power sector. These changes should assist in compliance with CAR and ultimately CPP. The CAR establishes a common set of criteria that determine who is covered by the rule. These criteria apply regardless of location, type of facility, or industry and were designed to cover the largest contributors of GHG emissions in Washington, capture a majority of Washington total GHG emissions while also limiting the total number of covered facilities. The CAR also establishes specific levels of emission reduction from a given covered party’s baseline. If the power sector is, as a whole, exceeding what it needs to do to meet the rule, then the power sector may benefit from the opportunities available to provide emission reductions to others, or by implementing emission reduction projects.

Response 152

The CAR should exempt the Invenergy's Grays Harbor facility from coverage

Ecology received comment that the Grays Harbor generating facility should be exempted from coverage as it is the most efficient natural gas generating facility in the state, and that a failure to do so would be capricious and arbitrary. Ecology respectfully disagrees. The purpose of the CAR is to cap and reduce GHG emissions within the state of Washington. While Ecology acknowledges that the Grays Harbor facility is an efficient natural gas power plant, it is still a significant emitter of GHG emissions. The CAR applies to all power plants within the state that trigger the emissions threshold; the Grays Harbor facility emits approximately 600,000 to 650,000 metric tons of CO₂e per year, well over the emissions threshold. Ecology finds no reason to exempt the Grays Harbor facility or treat it differently from any other facility that meets the CAR emission threshold.

Response 153

Process emissions should be exempted

The CAR is designed to be an economy-wide GHG emissions reduction program. All sectors and emissions types with large quantifiable and verifiable GHG emissions have been included. Process emissions, such as cement or steel related emissions, have been reported to Ecology since 2012 and EPA since 2010.

One idea discussed during the stakeholder process was potentially exempting some process emissions as a way of helping EITE covered parties. This approach would only help a few sources. Further, process emissions are typically covered in other carbon programs. The site-specific rate-based program in WAC 173-442-070 will provide assistance to a greater number of covered parties and had wider support during the stakeholder process. Combined with the Reserve, this method provides relief while maintaining an inclusive emissions profile and an overall cap. The process emissions exemption does not meet the criteria and was not included.

The CAR was designed to include a variety of compliance options for covered parties that are not able to reduce GHG emissions on-site enough to meet their compliance obligation. Typically sources with process emissions are EITE covered parties and therefore have a rate-based compliance pathway that is not dependent on production levels.

Response 154

Exempt emissions from new or expanding sources

Exempting new or expanding sources would be inconsistent with an economy-wide GHG reduction program. It would also place existing covered parties at a competitive disadvantage. The rule includes several provisions to minimize the burden on new and expanding sources in a fair way, including: allowing for baseline adjustments, production based adjustments to EITE covered parties' rate-based reduction requirements, and using the Reserve to account for growth.

Response 155

Exempt the most efficient EITE covered parties

The CAR is a GHG emissions reduction program and requires all applicable covered parties to reduce their emissions. The EITE output-based pathway will assign lower GHG emissions reduction targets to EITE covered parties that Ecology can demonstrate are in the top 25 percent most efficient in their sector. This does not exempt the source, but can reduce their reduction requirements by more than half, as low as 0.7 percent per year.

Response 156

Instead of the current pathway, pulp and paper EITE covered parties should be exempt if 70–80 percent of their total GHG emissions come from combusting woody biomass

CO₂ emissions from the combustion of woody biomass are already exempt from CAR. This would essentially give the facilities double credit for the exemption. The thresholds for woody biomass use proposed in this comment are already met by most of Washington’s pulp and paper sector, effectively exempting the entire sector. This is not consistent with an economy-wide GHG emissions reduction program. Ecology believes the current EITE provisions are sufficient and equitable.

Baselines

Early actions

Response 157

Ecology should award credit for early actions

Ecology has not awarded credit for actions that occur in the past because the intent of the rule is to ensure new emission reductions that make progress toward Washington’s emission reduction limits. Simply recognizing emission reductions that have already happened in the past does not help Washington make additional progress towards meeting its limits.

That said, there are some instances where the rule recognizes “early action.” For example, top performing EITEs that are more efficient and have taken early action will have lesser reduction requirements making it easier to comply.

Another change to the rule language has been made to recognize that the carbon dioxide standard placed on the Grays Harbor natural gas power plant by the Washington State Energy Facility Site Evaluation Council (“EFSEC”) was put into effect not under Washington’s carbon dioxide mitigation standard (Chapter 80.70 RCW), but rather by a largely equivalent EFSEC order as part of the site certificate process. Therefore the language has been generalized to emphasize it is the standard itself which is relevant, regardless of whether it was put into effect by the statute or an EFSEC order which preceded the statute. One unique aspect is that because the structure of that order requires annual payments to the Climate Trust (an EFSEC-approved Independent Qualifying Organization, or “IQO”), there is potentially overlapping emission reduction activity between this standard and the CAR. The result of the language change in the rule is to allow future (2017 and forward) payments to the Climate Trust to acquire CAR-applicable emission reductions which can be used simultaneously to meet the applicable EFSEC standard as well as the CAR. However, emission reductions must still meet CAR requirements, so this modification would not allow for non-CAR emission reduction types (*e.g.*, sequestration). Nonetheless, it is recognized that this is in effect providing some partial recognition for early action.

Problems with proposed baseline calculations

Response 158

Baseline provisions in the proposed rule fail to reward early actions or account for production or process changes/let us choose our baseline

Any reduction program must start with a reference point. In this case it is the baseline. Ecology chose a fixed historic baseline from 2012–2016 to be consistent and fair for all covered parties. We used the maximum five years of available data to average out variations across all sectors and from year to year.

Ecology must have access to a robust, complete, comparable, and verifiable dataset for any year in the baseline period. Washington’s GHG reporting program began with the 2012 emissions year. Some, but not all, Washington organizations with a CAR compliance obligation reported their GHG emissions to EPA beginning with the 2010 emissions year. The 2010–2011 EPA GHG reports often use different reporting methodologies and Ecology has limited access to those datasets. Other voluntary GHG reporting programs have existed for even longer, but coverage is even more limited, the differences in methodologies greater, and the information is less available.

Baselines (continued)

Washington's statutory reduction limits reference 1990 emissions. Reliable, verifiable, and comparable covered party specific GHG emissions data do not go back that far. We realize many organizations have taken steps to reduce their emissions since 1990, but there is no fair and quantifiable way to account for those reductions. The goal of the program is to continue to reduce GHG emissions, therefore it is more important to have a robust and consistent starting point.

The baseline period must be independent of any compliance period. CAR compliance obligations begin with the 2017 emissions year. Therefore, 2016 is the latest possible baseline year for many sources. Setting the end of the baseline period too close to the start of the compliance period can result in organizations delaying emissions reduction projects to minimize their overall obligation. This rule was finalized in September 2016, which leaves only a few months in the baseline period to alter emissions.

The goal of CAR is to reduce GHG emissions from a fixed point as equitably as possible. This means having a common baseline period whenever data are available. New or heavily modified sources will need baseline periods set at a later date when accurate information is available. All other sources with reported GHG emissions averaging at least 70,000 MT CO₂e per year during the standard baseline period will use that baseline period. Sources between 70,000 and 100,000 MT CO₂e GHG emissions will have a baseline before they have a compliance obligation. This gives them time to plan for their future obligation and establishes a fair and consistent reference point for reductions. This baseline period combines with a declining threshold based on actual emissions to discourage emissions increases and potentially incentivize early reductions. EITE covered parties need a gap between their baseline period and compliance period to provide time to conduct the site-specific analysis that establishes their rate-based reduction requirements.

Commenters have pointed out both during the stakeholder process and in comment letters examples of how specific years in this period do not fit typical or projected emissions rates and should be excluded from the baseline. Exclusion requests range from specific years for all parties or a sector to allowing each party to choose a given number of years, or even a single year, within the period to use as their baseline.

Ecology understands that no year or group of years will accurately reflect the average emissions for all covered parties. However, any specific year that we would exclude may benefit some parties while negatively impacting others. Allowing parties to pick years, or even worse a single year, from within the period would result in significantly less overall emissions reductions as parties would preferentially select high production years and lower their long term reduction requirements. It is important to have a consistent baseline period for as many parties as possible to maintain the integrity of the program.

An alternative way of minimizing the impact of an unfavorable year is to make the averaging period as long as possible. This makes the average baseline value more reflective of actual past emissions rates. For example, the power sector has one unfavorable year (2012) averaged in with four more favorable years. This accurately reflects the measured emissions cycle for the sector where large variation is common due to water availability for hydropower. Using the most recent five years of data, starting with the 2012 emissions year is beneficial in this case as 2011 was also a high water year.

Baselines (continued)

Ecology has set the baseline period from 2012 through 2016, the maximum number of years with complete, consistent, and available data. Averaging GHG emissions over this five year period will give the most accurate value of past emissions possible.

The baseline period is designed to reflect past emissions, not project future emissions trends as the goal of a mass-based reduction program is to change the long term emissions trajectory. However, the rule does include some provisions to help covered parties with increasing emissions trends comply with the program while maintaining overall reductions.

EITE covered parties are subject to a rate-based reduction pathway. Their reduction requirements will be adjusted if their production increases relative to their baseline period. An equivalent amount of ERUs will be retired from the Reserve to maintain the integrity of the overall cap. Conversely, if production is reduced, the extra ERUs go to the Reserve instead of the EITE covered party. Also, non-EITE stationary sources can request a baseline value adjustment if they make qualifying expansions on-site and the Reserve would compensate for any increased emissions.

Response 159

Baseline concerns specific to petroleum products

For petroleum producers and importers, Ecology chose a fixed historic baseline of 2012–2016 to be consistent and fair for all covered parties. We used the maximum five years of available data to average out variations across all sectors.

We acknowledge the use of a baseline could cause difficulties if demand for petroleum products increases, but that is not a concern that is unique to petroleum product producers or importers. The commenter's own letter points out that total demand has actually been stable and projections based on mandated fuel economy standards indicate demand may decrease over the duration of this program.

The proposed dynamic fuels obligation proposed by the commenter is essentially a rate-based program. The purpose of the CAR is to achieve real, verifiable GHG emission reductions on a mass basis. The Reserve allows us to implement a rate-based program for EITE covered parties because they only account for about seven percent of the program's emissions. Applying a rate-based approach to petroleum products, which account for over 60 percent of the program's covered emissions, would overwhelm the Reserve and prevent the entire program from achieving its mass-based reduction targets.

Determining a baseline for exports is unique because exports have not previously been reported at the state level. As noted above, reporting GHG emissions associated with exports is voluntary. Of course, petroleum product producers and importers with a compliance obligation will have an incentive to account for their exports to reduce their compliance obligation. If an organization wants to account for exports during a compliance period, they must also account for exports during the baseline period. Importers have a delayed entry, so they can report baseline imports and exports simultaneously.

Producers have existing EPA data at the refinery rack, but will need to also report export data if they want to decrease their compliance obligation by subtracting out exported products. Ecology provides various options for obtaining this information. Ecology will accept a complete, verifiable Subpart MM record for the 2012–2016 baseline period. This can be done by combining existing

Baselines (continued)

company records and EPA refinery level subpart MM information from the originating refinery or refineries. Department of Licensing (“DOL”) records can be used to inform this process, but due to the differences in scope, point of regulation, and content between DOL-based reporting and subpart MM reporting, DOL records would not be definitive on their own and would need to be combined with other records.

Otherwise Ecology will use standard methods established in the reporting program to establish a best estimate of exports. These methods are not “punitive” as the commenter suggests. The analysis will be “conservative” only when gaps in the record exist.

One option would be to do this using the producer’s complete, verifiable Subpart MM 2017–2019 report to establish an average export rate for each product. That information can then be used to adjust the producer’s 2012–2016 report. This uses real data and removes the requirement to report past actions, but would delay assigning the baseline GHG value and reduction pathway until all data is submitted. Producers would have significant control over this process.

The other option would be Ecology using the agency’s best estimate of the producer’s export rate. The producer’s involvement in this process would be encouraged, but Ecology could proceed without the producer if necessary. This result would likely be cruder than the other two methods, but data sources exist, including Washington Research Council data, Department of Commerce information, and company records.

Response 160

Natural gas distributors’ compliance obligation should be adjusted or eliminated when variability occurs due to stationary sources that use their gas enter or exit the program

Ecology has added language to the rule clarifying that a natural gas distributor’s baseline, and therefore their compliance obligation, can be adjusted to account for other covered parties entering or leaving the program. Ecology has not changed the requirement that LDCs will have the compliance obligation for emissions associated from natural gas unless another covered party has the compliance obligation for that gas.

Response 161

Which baseline adjustment method is preferred

The method will be determined on a case by case basis to reflect source specific conditions.

Response 162

Baseline adjustments should not apply retroactively

Ecology intends that adjustments may apply retroactively in some cases. Adjustments such as those included in the regulation are often retroactive since the baseline value is a static value based on past emissions.

Response 163

Are there mechanisms to increase baselines due to increases in production

No. However, the rate-based program for EITE covered parties addresses some of these concerns in a different manner.

Baselines (continued)

Response 164

In WAC 173-442-070 (3)(b)(i) and (ii), change references to “WAC 173-442-060(1)(a)” to “WAC 173-442-060(1)(b)”

We are revising the rule text to make this clearer.

The CAR should evaluate lifecycle GHG emissions or carbon footprints

Response 165

The CAR should take into account the lifecycle emissions or carbon footprint of a manufacturer

The CAR establishes emission standards for GHGs for direct emissions within the state. It does not look at lifecycle emissions or the carbon footprint of the manufacture of products as those emissions are not direct emissions within Washington State.

Ecology acknowledges that certain products can contribute to overall lower GHG emissions on a global basis (*e.g.*, silicon for solar panels or aluminum components to lightweight aircraft). However, it is difficult to quantify the actual emissions reduced from using those products, or whether emissions were in fact reduced. Therefore Ecology has concluded that the direct emissions approach in the CAR is the appropriate mechanism for achieving emission reductions.

EITEs

Response 166

The ability to plan for and meet the CAR is uncertain or cost-prohibitive for EITEs

In our understanding, most if not all Industrial Customers of Northwest Utilities (“ICNU”) members classify as EITE industries. The CAR establishes a carbon intensity or efficiency approach for EITEs. This approach requires an understanding and technical analysis of the industrial processes, energy use and efficiency of each EITE facility in Washington, then benchmarking it to national peers in the same sector and setting an efficiency improvement compliance path. The three-year delay for EITE compliance allows the time, working closely with each company, for this case-by-case analysis and compliance path setting to occur with reasonable lead time so that facilities can plan for and assess their compliance options before they enter the program in 2020. For non-EITE facilities, baselines and thresholds in the rule clearly define who is covered; and compliance obligations and timing and available compliance pathways are specifically spelled out. These elements of the rule have been widely discussed with stakeholders including ICNU and its members throughout the rule development process.

Should allow changes in benchmarks

Response 167

EITEs should be able to change their benchmark as conditions change

As designed, the rate is fixed and not subject to change in the future. Market effects and production method changes will be reflected in the production rates used to set the emission requirements for each compliance period. As the emissions intensity to produce the end products goes down, it should be easier for the EITE party to comply.

Some adjustments could be made if methodologies or the content of the source’s annual GHG report change. Ecology believes adjustments due to certain changes such as facility boundaries, ownership, or included units are already covered in the rule. Those changes would result in a change in the annual GHG reports for the facility or facilities. This would allow a baseline adjustment under WAC 173-442-070(2)(c)(ii). We believe this provides enough flexibility for Ecology to respond appropriately as market conditions change and don’t think additional changes to the rule are needed.

Response 168

Provisions to help EITEs actually hurts some

We believe that the emission reductions for an average efficiency EITE party will be similar to what would have been required were it to be a non-EITE party.

Top performing EITEs will have lesser reduction requirements making it easier to comply. The least efficient EITE covered parties will have to reduce their GHG emissions at a faster rate. This requirement is to encourage the below average performer to improve its efficiency to become more competitive and reduce emissions. Below-average performers have more opportunities to reduce emissions and reduce emission intensity than the above average performers in its sector. This should tend to make their products more cost competitive over time.

Reduction requirements are also production dependent for EITE covered parties. EITEs with increased production relative to their baseline period will benefit from the EITE process.

Mass-based GHG emission limits will be lower for situations where production has decreased relative to the baseline period. This may be a temporary or permanent condition for a given source. However, their limits on an efficiency basis would remain consistent. This adjustment is symmetrical to the adjustment for growing sources and necessary to maintain overall reductions. This also reduces the risk of leakage by removing an incentive to move production out of state.

Ecology has changed the rule to give EITE covered parties the choice to opt-out of the EITE pathway if they think the mass-based approach is preferable.

Response 169

EITE covered parties should be able to opt-out of the output-based approach

Ecology is adding a onetime opportunity for an EITE to opt-out of the WAC 173-442-070 process and into the WAC 173-442-060 process.

Additional clarification

Response 170

Clarify “output-based baseline”

The output-based baseline is the source’s average emissions divided by their average production over the baseline period. It is compared to other sectors, which form the efficiency intensity distribution, to determine the efficiency improvement rate. It is also used to convert the EITE’s rate-based requirement to MT CO₂e each compliance period.

EITE emission reduction pathways

Response 171

Make the EITE option available to everyone

As further explained in Response 120, Response 121, and Response 122, the CAR provides an alternative compliance option for EITE entities because of the unique challenges they face from global competition, the concerns regarding leakage of manufacturing, and their vulnerability to price shocks from energy pricing. Ecology has determined that other covered parties in the CAR do not face the same risks.

Further, getting reliable mass reductions from a rate-based program is only possible because of the Reserve, which needs a reliable source of mass reductions. EITE covered parties comprise about seven percent of covered emissions under CAR. Expanding the rate-based option to all facilities or sources would exceed the capacity of the Reserve under any realistic contribution rate.

Response 172

The EITE pathway punishes efficient sources and early action

The CAR is a GHG emissions reduction program and requires all applicable covered parties to reduce their emissions. The EITE output-based pathway allows eligible sources to reduce their emissions on an efficiency basis instead of a mass basis, which can result in significantly lower compliance obligations particularly for growing facilities. Top performing EITEs that are efficient and have taken early action will have lesser reduction requirements, making it easier to comply.

EITEs (continued)

Reduction programs must have a reference point. EITE covered parties have a similar timeframe for their reference point as non-EITE covered parties. The baseline section of this CES discusses the rationale and impacts of that process.

However, once the initial reference is set, it is continually adjusted for EITEs to account for production and focus on efficiency. Ecology will evaluate each EITE covered party to determine how efficient they were compared to their peers during the baseline period. Early action will help these sources demonstrate they are more efficient during this process. The most efficient sources will be allowed to reduce their emissions at a slower pace than average efficiency sources, potentially reducing their compliance obligation by more than half. The least efficient sources will be required to reduce their emissions faster.

Response 173

EITE covered parties should have a compliance obligation beginning with the first compliance period

The phase in of the EITEs provides Ecology time to use a site-specific analysis to develop the emission intensity distributions for the covered EITE parties and establish their emission reduction requirements.

Response 174

Delaying EITEs to the second compliance period is undermined by including the electric power sector in the first period

The CAR establishes a carbon intensity or efficiency approach for EITEs. This approach requires an understanding and technical analysis of the industrial processes, energy use and efficiency of each EITE facility in Washington, then benchmarking it to national peers in the same sector and setting an efficiency improvement compliance path. Working closely with each company, the three-year delay for EITE compliance allows for this case-by-case analysis and compliance path setting to be completed with reasonable lead time so that facilities can assess and plan for their compliance options before they enter the program in 2020.

Power plants are not considered EITEs in any existing carbon market cap-and-trade programs such as WCI and EU ETS. Their product, electricity, is not a global trade exposed commodity. Power plants therefore become regulated beginning in 2017. Regardless of when compliance obligation begins, the CAR provides a wide array of options and choices to reduce emissions and generate ERUs for compliance including facility improvements, in-state projects, energy efficiency and conservation, transportation programs and projects, obtaining ERUs from others and purchasing of allowances from external carbon markets. Ecology would expect covered parties to operate in their own best interest and choose compliance options that minimize costs and best fit their business circumstances. Costs of compliance will likely vary across affected power plants and utilities as well as what, if any, portion of those costs may be passed on to customers. If a utility uses additional energy efficiency and conservation approaches to achieve compliance, those approaches can be designed to lower energy costs for businesses and individual customers.

Response 175

EITE covered parties should not have a compliance obligation until the third compliance period

The phase in of the EITEs provides Ecology time to use a site-specific analysis to develop the emission intensity distributions for the covered EITE parties and establish their emission reduction

requirements. We believe the three-year delay will be sufficient. Delaying longer unnecessarily undermines the goals of the program.

Response 176

Compliance should be based on current emission intensity and current production, not on historic production

We did consider the suggestion that the EITE compliance requirement be based on current production rates. This was discounted, in that the EITE facilities would be placed in the difficult position of not knowing their compliance requirement until after the close of the compliance period. Thus, we will retain the approach to utilize the production rates from the prior compliance period to determine the compliance requirement for the current compliance period. This allows us to inform the covered EITE parties of their compliance obligation early enough in the compliance period to allow them to be able to plan for it and comply.

Sectors

Response 177

Comparisons are sector specific. How are sectors defined? Subsectors should be allowed to account for site-specific conditions

Sector will be defined during the individual EITE's output-based baseline assessment. This will allow Ecology to account for site-specific processes and products. The decision will likely be informed by NAICS codes, but not necessarily defined by them. Ecology will ultimately make the determination on which facilities the covered party is compared to, but the covered party will be involved during this process and have an opportunity to provide input.

Response 178

Will facilities that are under the CAR threshold be included in the sector sample for EITE covered parties' site-specific analysis/what is the geographic limitation of the sector sample

The default geographic limitation would be United States, but it would be dependent on data availability. Global comparison is possible, or trade association data may be geographically limited.

It is possible that smaller facilities either inside or outside of Washington may be included in a sector sample used to establish an EITE covered party's requirements, but those facilities would not go through the level of review needed to set their own standard. Smaller facilities would only be used in the sample if they were sufficiently similar to the EITE covered party being evaluated.

Response 179

What production data will be used/what am I responsible for submitting

This will vary depending on the sector. Some source categories are already reporting production data to Ecology under Chapter 173-441 WAC. Those data elements may or may not be the final production metric used for WAC 173-442-070. The specific types of production data will be set during the site-specific analysis and input from EITE covered parties will be factored into that decision.

An EITE covered party is only responsible for submitting data for their operations. They are not responsible for submitting data for other facilities in their sector. We have made edits to the rule to clarify this.

Response 180

Where will Ecology get sector benchmarking data

Ecology will make use of any reliable data source that it can access to collect production data and emissions data necessary to generate the distributions. The list in the rule identifies potential sources of data.

Response 181

How will benchmarking work for EITEs that have multiple products

Ecology intends to work with the industries in each sector to help define the appropriate production measure to use in this process.

Ecology will work to find available or alternate sources of production information. If production information is not available or there are not enough members of a sector to produce a statistically significant distribution, we have an alternative process to set emission reduction requirements in WAC 173-442-070(3)(b)(v).

Response 182

Can process inputs or variables such as combustion metrics like heat/steam use or facility surface area be used instead of a production metric

Some commenters have indicated that their process is too unique to assign them to a sector for efficiency analysis. Others comment that production is not a valid method of accounting for their process. Either way, they state they would not be able to complete the efficiency benchmarking process.

Sector-specific production data reporting requirements will be established individually for each EITE covered party and sector as part of the individual EITE output-based baseline assessment. This may be based on production data currently reported under Chapter 173-441 WAC or may be a new reporting requirement. Ecology will ultimately make the determination on which production metric is used, but the covered party will be involved during this process and have an opportunity to provide input.

Combustion-related GHG emissions are often calculated using fuel use or other input data. Basing an efficiency metric on the inputs to the emissions equations would be problematic. Using other non-production values could, depending on the specifics, be contrary to the goals and methods established to make an efficiency based program. Non-variable metrics would make the rate-based approach too similar to a mass-based approach. Ecology will evaluate each EITE covered party separately to determine a metric that is reasonable and still fits the process and goals of this pathway.

If there are not enough comparable facilities in the sector to produce a meaningful efficiency distribution, the process in WAC 173-442-070(b)(3) would be used. This would set the source's reduction rate at an equivalent to the rate for non-EITE parties. The production value would then be used to translate their rate-based requirement to a value in MT CO₂e each compliance period. Using production data to translate a party's rate-based requirement into MT CO₂e is only relative to that specific party, which would minimize many of the concerns.

Response 183

Benchmarking should factor in use of hydropower, transportation/imports, or other indirect emissions

The benchmarking process will be site-specific and involve input from the source. The scope of the analysis will be set during that process.

Response 184

What happens if appropriate production data or sector sample size cannot be obtained

WAC 173-442-070(3)(b)(v) specifies that if the EITE covered party fully participates in the site-specific analysis but there is not enough data to complete the process, the EITE is assigned the standard reduction rate.

WAC 173-442-070(3)(b)(iv) specifies that if the EITE covered party does not provide the necessary information to complete the site-specific analysis, the EITE is assigned the faster reduction rate. This is intended to prevent EITE parties manipulating their rate by not fully participating in the site-specific analysis. Examples would include failure to submit annual GHG reports, not providing site-specific production data, or other forms of non-compliance with Chapters 173-441 or 173-442 WAC.

Efficiency improvements

Response 185

There need to be limits on how high or low Ecology can set the efficiency improvement rate for non-average EITE covered parties

Ecology has modified the rule to establish these limits. All efficiency improvement rates must be within one percentile point of the average rate. The minimum efficiency improvement rate for “top performers” will be 0.7 percent per year and the maximum for “under performing” EITEs will be 2.7 percent per year.

Response 186

How will Ecology establish the specific efficiency improvement rate

We understand the newly established limits to the efficiency improvement rate will minimize this concern, but uncertainty about the specific value of the rate remains. “Top performers” rate could be 0.7 percent to 1.69 percent per year and the rate for “under performing” EITEs could be 1.71 percent to 2.7 percent per year. Ecology will need to complete the site-specific analysis for most if not all EITE covered parties before setting the specific rates. The goal is that the overall rate across all EITEs will be around 1.7 percent per year.

Response 187

Do not allow efficiency improvement rates lower than 1.7 percent

Only the top 25 percent most efficient EITE covered parties as compared to their peers qualify for this provision. Typically this means the source has already taken significant action to lower their GHG emissions. Ecology has modified the rule to establish limits which will ensure that at least some reductions will be required. The minimum efficiency improvement rate for “top performers” will be 0.7 percent per year.

Response 188

Do not allow efficiency improvement rates higher than 1.7 percent

Only the bottom 25 percent least efficient EITE covered parties as compared to their peers qualify for this provision. Typically this means the source has more options to lower their GHG emissions than their peers. Ecology has modified the rule to establish limits to the rate. The maximum efficiency improvement rate for “under performing” EITEs will be 2.7 percent per year.

Response 189

The process for setting the efficiency improvement rate should be more detailed and/or subject to stakeholder involvement

Stakeholders requested a site-specific analysis for EITE covered parties. It will be difficult to assess the exact emission improvement rate until Ecology completes its assessment of the source. Input from parties will be included in this process.

Ecology has modified the rule to establish limits to the efficiency improvement rate. All efficiency improvement rates must be within one percentile point of the average rate. The minimum efficiency improvement rate for “top performers” will be 0.7 percent per year and the maximum for “under performing” EITEs will be 2.7 percent per year.

Response 190

EITEs should be able to appeal Ecology’s determinations under WAC 173-442-070

The site-specific EITE analysis will include input from the EITE covered party. We believe this will minimize the need for petition or appeal. Nothing in this rule limits standard appeal processes.

Ecology is adding a onetime opportunity for an EITE to opt-out of the WAC 173-442-070 process and into the WAC 173-442-060 process.

Response 191

Correct or simplify Equation 1

We have reviewed the equation and believe that the equation is correct and expressed as simply as it can be without separating each portion of the right side of the equals sign to its individual components. We agree that the ER value should be expressed as a decimal value and have changed the rule accordingly. (Please see Response 192 for an explanation of the change from “RR” to “ER” in this formula.)

Response 192

“Efficiency reduction rate” as used seems confusing or the opposite of what was intended

Ecology has changed the term “efficiency reduction rate” to “efficiency improvement rate” and made other changes to clarify and correct this issue. EITEs are required to become more efficient over time. Also, the most efficient sources reduce their emissions slower than average, while the least efficient group must reduce emissions faster than average.

Confidentiality

Response 193

Production data should be kept confidential

Ecology will use our standard confidentiality practices as established under RCW 70.94.205 and Chapter 42.56 RCW. We understand the sensitivity of some of these data elements and plan to work to minimize confidentiality concerns whenever possible.

General compliance issues

Emission reduction pathways

Response 194

WAC 173-442-060(1)(b) should be subsequent to the first calendar year

Ecology has made this clarifying change.

The CAR should require additional emission reductions and follow best available science

Response 195

Best available science requires annual emission reductions between three and ten percent

The CAR is one piece of Washington’s work to address climate change. It was never intended to serve as the sole policy for achieving GHG emission reductions in Washington. There are many other complementary policies, both regulatory and non-regulatory, that will be ultimately required to address climate change. Examples of such policies already in place include implementing building codes that will result in all new buildings in Washington State being carbon neutral by 2030, initiatives to promote vehicle electrification by installing charging stations and requiring that 20 percent of the vehicles in the state fleet be electric by 2017, and developing a Clean Energy Fund to further promote renewable power and smart grid infrastructure.

Even if the CAR were the sole policy to achieve GHG emission reductions, it is not clear to Ecology that there is a scientific consensus regarding the annual percentage reduction that Washington State must meet in order to address climate change. Many commenters stated that the best available science requires an annual reduction in GHG emissions of eight percent per year in Washington. Ecology respectfully disagrees. First, the eight percent annual reduction number referred to by commenters appears to come from the work of one scientist, Dr. James Hansen. While Dr. Hansen is a well-known and distinguished climate scientist, his work provides one perspective and it is unclear that it represents the majority of scientific opinion on the GHG emission reductions required. Second, Dr. Hansen’s work modeled the GHG emission reductions required on a global basis to stabilize the climate. It is unclear whether Washington State’s fair share of that reduction should be eight percent per year, especially given the fact that Washington’s power sector is one of the cleanest in the U.S., and many of our industries are leaders in efficiency.

Finally, even if Ecology were to agree that the current state of science requires Washington State to reduce its GHG emissions by eight percent per year, and the CAR were the only policy to achieve GHG emission reductions, science is not the only consideration that Ecology must weigh in rulemaking. For example, we are required by the Washington APA to also consider costs and burden on entities affected by the rule.⁴⁰ This need to balance considerations beyond science was recognized by Judge Hill of the King County Superior Court in litigation regarding this rule. There, the Court recognized that it “does not have the authority to exclude non-science related considerations from this ongoing rulemaking” and specifically denied the petitioners’ appeal

⁴⁰ See RCW 34.05.328(1)(d)-(e).

General compliance issues (continued)

seeking a rule based on “current science.”⁴¹ Judge Hill further held that “[n]ow that Ecology has commenced a rulemaking to establish greenhouse [gas] emission standards taking into account science and *[sic]* well as economic, social and political considerations, it cannot be found to be acting arbitrarily or capriciously.”⁴²

Response 196

An annual reduction of 1.7 percent is insufficient

Ecology determined that the GHG emission reduction limits currently established in state law are the appropriate limits to guide emission reductions in the CAR. Those limits require a return to 1990 levels by 2020, cutting 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.⁴³ The CAR covers about two-thirds of the statewide GHG emissions; a 1.7 percent annual reduction for covered parties will achieve about two-thirds of the 2035 limit, resulting in a projected savings of just under 20 million metric tons of CO₂e per year in 2035 compared to business as usual.

Response 197

Market-based systems don’t reduce GHG emissions

Ecology disagrees. While the CAR is not a cap-and-trade program, it does contain some market mechanisms, including the ability to use and trade emission reduction units. By requiring emission reductions of 1.7 percent per year, the CAR will achieve just under 20 million metric tons of CO₂e reductions per year by 2035. This is a real and substantial reduction in Washington’s GHG emissions, which are currently around 92 million metric tons of CO₂e per year.

Response 198

Cap-and-trade doesn’t benefit local communities

While the CAR is not a cap-and-trade program, it does contain some market mechanisms, including the ability to use and trade emission reduction units. The ability to use emission reduction units for compliance is a key design element of the rule, as it allows covered entities a wide variety of approaches so that they can comply in a less burdensome way while still achieving emission reductions. The use of emission reduction units is also essential for indirect emitters, (*e.g.*, petroleum fuel suppliers and natural gas distributors) to meet their compliance obligations, as these entities have no direct control over the emissions associated with petroleum fuel and natural gas combusted in the state.

Commenters refer to the co-benefits associated with direct emission reductions at facilities, and are concerned that a rule that fails to mandate emission reductions at the facility creates local air quality impacts. Ecology disagrees. First, it is important to note that only stationary sources such as power plants, landfills, and other industrial facilities have any ability to make direct reductions of GHG emissions. As noted above, indirect emitters, which constitute approximately three-quarters of the emissions covered by the CAR, do not control the amount of fuel or gas burned, and so cannot make direct emission reductions. Second, there is a limit to the emission reductions that many stationary sources can make on-site, especially for facilities with processes that generate GHG emissions from the chemical processes used to manufacture product, such as aluminum smelters and cement kilns. Finally, while Ecology recognizes that reductions in direct GHG

⁴¹ Order Affirming the Department of Ecology’s Denial of Petition for Rulemaking, *Foster, et al. v. Ecology* (King County Superior Court No. 14-2-25295-1 SEA) (Nov. 19, 2015), at 4.

⁴² *Id.*, at 9.

⁴³ RCW 70.235.020.

General compliance issues (continued)

emissions provide reductions in criteria air pollutants, the failure to require direct emission reductions at a facility does not result in adverse air quality impacts. There are air quality regulations and permits in place to protect against air quality impacts.

GHG reporting requirements for petroleum product producers, importers, and exporters

Response 199

Ecology lacks the legal authority to require GHG reporting from petroleum product producers, importers, and exporters and that the reporting established by the CAR is too onerous for the petroleum companies to implement

Under current state law, transportation fuel suppliers are required to report their GHG emissions under WAC 173-441-130. The CAR doesn't regulate transportation fuel suppliers. Rather, it regulates petroleum product producers, importers, and exporters, as those terms are defined in EPA regulations. *See* 40 CFR 98.390. While there is some overlap between these two categories, they are different in at least the following ways:

- Programmatic origins.
- Regulated parties.
- Scope of covered emissions, products, and fuels.
- Point of regulation.
- Reported data elements, methodologies, and calculations.

Programmatic origins

Transportation fuel supplier reporting is based on DOL fuel tax data used to fund highway programs and public airports. Because fuel usage is associated with GHG emissions, this system may be used to approximate GHG emissions, but design issues and the lack of precision prevent it from being a source of verifiable and accurate GHG emissions for a regulatory emissions reduction program.

Petroleum product producer, importer, and exporter reporting, which is included in the CAR, is based on the Environmental Protection Agency's (EPA) 40 CF Part 98 Subpart MM reporting. RCW 70.94.151 directs Ecology to adopt EPA GHG reporting rules consistent with 40 CFR Part 98 and for organizations greater than or equal to 10,000 MT CO₂e per year of GHG emissions to report those emissions to Washington using those methods. Reporting under Subpart MM produces a verifiable dataset that can be used as the foundation for a regulatory program, as demonstrated by its use in California's cap and trade program.

Regulated parties

Fuel supplier reporting under the DOL system requires position holders at various points in the supply chain to report their emissions. All five of Washington's refineries supply enough eligible on-road transportation fuels to be mandatory reporters under the DOL system, but there are many other "transportation fuel suppliers" who also report under the DOL system. All of Washington's refineries also meet the definition of "petroleum producer" under Subpart MM, which defines producer as a refinery that produces petroleum products through the distillation of crude oil. Despite this overlap, however, "transportation fuel supplier" and "producer" are not synonymous.

General compliance issues (continued)

Ecology does not have enough information to know how many organizations are brought into GHG reporting only due to their imports as the DOL program defines “imports” as activities outside the bulk transfer system (*i.e.*, through pipeline or vessel), thus excluding most fuels brought into the state under this category. These fuels are tracked with other volumes within the bulk transfer system. Therefore refineries, pipeline importers, and position holders that neither produce nor import fuels often have the same designation. In contrast, the definition of “importers” under Subpart MM includes imports that occur both in and outside the bulk transfer system.

Petroleum product producers, importers, and exporters all are currently required to report GHG emissions to EPA if their emissions are greater than or equal to 25,000 MT CO₂e or more, which is well below the CAR threshold. Under the CAR, petroleum producers in Washington will be required to provide to Ecology the same exact information that they currently provide to EPA. Producers will not need to collect any additional data or do any additional calculations in order to report under the CAR. Reporting obligations of importers and exporters will be based on reporting to EPA, but will not be identical because of the differences in national and state boundaries. Ecology has addressed these differences by making reporting voluntary for exporters and by giving importers an extra compliance period to begin reporting before having a CAR compliance obligation.

Ecology expects fewer entities will report under the CAR than under the DOL reporting system. Specifically, there will be “transportation fuel suppliers” who report under the DOL system who will not need to report under the CAR because they neither produce nor import petroleum products. These types of transportation fuel suppliers are often broker firms with little physical presence, many of which are located out of state. They are also generally smaller businesses than the refineries and their parent companies.

Because there is some overlap between the two categories of reporters, Ecology is discontinuing the GHG reporting fee for transportation fuel suppliers as part of this rulemaking. This will reduce compliance costs for organizations that report under both WAC 173-441-120 and WAC 173-441-130.

Scope of covered emissions, products, and fuels

The types of fuels covered by DOL based reporting are quite limited. DOL based reporting covers only gasoline, diesel, ethanol, and biodiesel used for taxable on-road purposes and jet fuel and aviation gasoline under very limited circumstances. Jet fuel is exempt from CAR because it is primarily used for long distance transportation, *i.e.* transportation out-of-state. Many transportation fuels are not reported under the DOL system, including fuels used for off-road, rail, and local marine purposes. As the name implies, transportation fuel suppliers also do not report non-mobile fuels and products such as: home heating oil, propane, and stationary diesel. However, these petroleum products are covered by the CAR because inclusion of these products is essential to facilitate an economy-wide program and to maintain regulatory fairness since natural gas distributors are covered by the CAR.

Tables MM-1 and MM-2 below show the products included in the Subpart MM reporting program. The Subpart MM dataset includes all products that come from refined petroleum, not just fuels. Gasoline and other products are reported as multiple sub-products. This allows for the application

General compliance issues (continued)

of more accurate emission factors,⁴⁴ which can make significant differences in attributable GHG emissions when multiplied by the very large volumes of products used in the state. This level of precision not only helps to accurately quantify GHG emissions, but is also an essential part of accurately tracking production, which can be used for a variety of efficiency metrics. Chapter 173-442 WAC excludes the following products in this table from being included in a covered party's compliance obligation:

- Kerosene-type jet fuel.
- Residual fuel oil No. 5 (navy special).
- Residual fuel oil No. 6 (a.k.a. bunker C).
- Petrochemical feedstocks: Naphthas (< 401 °F).
- Petrochemical feedstocks: Other oils (> 401 °F).
- Lubricants.
- Waxes.
- Asphalt and road oil.

Table 4: Table MM-1 to Subpart MM of Part 98

Default Factors for Petroleum Products and Natural Gas Liquids

Products	Column A: Density (metric tons/bbl)	Column B: Carbon Share (% of mass)	Column C: Emission Factor (metric tons CO₂/bbl)
Finished Motor Gasoline			
Conventional—Summer			
Regular	0.1181	86.66	0.3753
Midgrade	0.1183	86.63	0.3758
Premium	0.1185	86.61	0.3763
Conventional—Winter			
Regular	0.1155	86.50	0.3663
Midgrade	0.1161	86.55	0.3684
Premium	0.1167	86.59	0.3705
Reformulated—Summer			
Regular	0.1167	86.13	0.3686
Midgrade	0.1165	86.07	0.3677
Premium	0.1164	86.00	0.3670
Reformulated—Winter			
Regular	0.1165	86.05	0.3676
Midgrade	0.1165	86.06	0.3676
Premium	0.1166	86.06	0.3679
Gasoline—Other	0.1185	86.61	0.3763

⁴⁴ Emission factors are standardized values used to convert a measured value (such as gallons of gasoline) into metric tons of GHG emissions.

General compliance issues (continued)

Products	Column A: Density (metric tons/bbl)	Column B: Carbon Share (% of mass)	Column C: Emission Factor (metric tons CO ₂ /bbl)
Blendstocks			
CBOB—Summer			
Regular	0.1181	86.66	0.3753
Midgrade	0.1183	86.63	0.3758
Premium	0.1185	86.61	0.3763
CBOB—Winter			
Regular	0.1155	86.50	0.3663
Midgrade	0.1161	86.55	0.3684
Premium	0.1167	86.59	0.3705
RBOB—Summer			
Regular	0.1165	86.05	0.3676
Midgrade	0.1165	86.06	0.3676
Premium	0.1166	86.06	0.3679
RBOB—Winter			
Regular	0.1165	86.05	0.3676
Midgrade	0.1165	86.06	0.3676
Premium	0.1166	86.06	0.3679
Blendstocks—Other	0.1185	86.61	0.3763
Oxygenates			
Methanol	0.1268	37.48	0.1743
GTBA	0.1257	64.82	0.2988
MTBE	0.1181	68.13	0.2950
ETBE	0.1182	70.53	0.3057
TAME	0.1229	70.53	0.3178
DIPE	0.1156	70.53	0.2990
Distillate Fuel Oil			
Distillate No. 1			
Ultra Low Sulfur	0.1346	86.40	0.4264
Low Sulfur	0.1346	86.40	0.4264
High Sulfur	0.1346	86.40	0.4264
Distillate No. 2			
Ultra Low Sulfur	0.1342	87.30	0.4296
Low Sulfur	0.1342	87.30	0.4296
High Sulfur	0.1342	87.30	0.4296
Distillate Fuel Oil No. 4	0.1452	86.47	0.4604
Residual Fuel Oil No. 5 (Navy Special)	0.1365	85.67	0.4288
Residual Fuel Oil No. 6 (a.k.a. Bunker C)	0.1528	84.67	0.4744
Kerosene-Type Jet Fuel	0.1294	86.30	0.4095
Kerosene	0.1346	86.40	0.4264
Diesel—Other	0.1452	86.47	0.4604
Petrochemical Feedstocks			
Naphthas (<401 °F)	0.1158	84.11	0.3571
Other Oils (>401 °F)	0.1390	87.30	0.4450
Unfinished Oils			

General compliance issues (continued)

Products	Column A: Density (metric tons/bbl)	Column B: Carbon Share (% of mass)	Column C: Emission Factor (metric tons CO ₂ /bbl)
Heavy Gas Oils	0.1476	85.80	0.4643
Residuum	0.1622	85.70	0.5097
Other Petroleum Products and Natural Gas Liquids			
Aviation Gasoline	0.1120	85.00	0.3490
Special Naphthas	0.1222	84.76	0.3798
Lubricants	0.1428	85.80	0.4492
Waxes	0.1285	85.30	0.4019
Petroleum Coke	0.1818	92.28	0.6151
Asphalt and Road Oil	0.1634	83.47	0.5001
Still Gas	0.1405	77.70	0.4003
Ethane	0.0579	79.89	0.170
Ethylene	0.0492	85.63	0.154
Propane	0.0806	81.71	0.241
Propylene	0.0827	85.63	0.260
Butane	0.0928	82.66	0.281
Butylene	0.0972	85.63	0.305
Isobutane	0.0892	82.66	0.270
Isobutylene	0.0949	85.63	0.298
Isobutylene	0.0936	85.63	0.2939
Pentanes Plus	0.1055	83.63	0.3235
Miscellaneous Products	0.1380	85.49	0.4326

Table 5: Table MM-2 to Subpart MM of Part 98

Default Factors for Biomass-Based Fuels and Biomass

Biomass-based fuel and biomass	Column A: Density (metric tons/bbl)	Column B: Carbon Share (% of mass)	Column C: Emission Factor (metric tons CO ₂ /bbl)
Ethanol (100%)	0.1267	52.14	0.2422
Biodiesel (100%, methyl ester)	0.1396	77.30	0.3957
Rendered Animal Fat	0.1333	76.19	0.3724
Vegetable Oil	0.1460	76.77	0.4110

Transportation fuel suppliers report approximately 29.5 million MT CO₂ per year to Ecology using DOL methods. Using DOL data, we can roughly estimate aviation emissions that would be excluded from the CAR to be about 0.5 million MT CO₂ per year. The net CAR covered emissions under the DOL reporting system would be a little over 29 million MT CO₂ of transportation fuels. This number appears to greatly underestimate the emissions associated with petroleum products in Washington.

To determine the viability of DOL-based reporting for the purposes of CAR, Ecology compared the emissions reported under the DOL-based reporting system with publically available EPA GHG reports for Washington's five refineries. To account for exports, Ecology used publically available information on Washington refinery export volumes and product types, and Ecology used

General compliance issues (continued)

aggregated data from the Department of Commerce to account for the majority of imports. Most of the export information came from the same Washington Research Council reports that the WSPA quotes in its comments about leakage. According to this rough estimate, which conservatively uses basic emission factors and categorizations to fill in gaps in the publically available data sets, and after adjusting for exports, approximately 39–40 million MT CO₂ of emissions are generated per year by combustion of the fuels covered by the CAR. This is 10–11 million MT CO₂ more than reported under the DOL-based system.

Almost all of the additional 10–11 million metric tons of CO₂ come from the different scopes of the two reporting programs. According to these estimates, transportation fuel suppliers account for only about three-fourths of the petroleum products used in the state as compared to emissions associated with producers and importers under Subpart MM that are covered by the CAR.

Point of regulation

The DOL-based transportation fuel supplier reporting program requires reporting of fuel transactions throughout the state. The complicated series of transactions can be simplified to be roughly “at the rack.”⁴⁵ As pointed out above, DOL-based reporting covers many parties, about half of which are out-of-state organizations conducting commodity trades in Washington that do not actually affect volumes of fuel or GHG emissions in Washington because they neither produce nor import products into Washington.

In contrast, subpart MM reporting requires organizations that produce or import products to report the associated GHG emissions. This decreases the number of covered parties and places the compliance obligation on those most responsible for the products’ use in Washington.

Having producers report at the refinery gate allows the product to be tied directly to the stationary source processes and emissions. This not only is more logical than making a broker responsible for the emissions, but allows for various efficiency metrics and comparisons like those the refineries have requested when petitioning for EITE status. Refineries use complicated processes to refine crude oil. Different amounts of energy are used to produce different products. Two refineries could produce similar total volumes of products or refine similar volumes of crude, but have very different efficiencies based on the ratios of products made.

Most, but not all of Washington’s petroleum products come from our five refineries. The rest is imported by pipeline, barge, or to a lesser extent, rail or truck. Imports are typically used to meet eastern Washington’s demand. Imports need to be included to get a full and fair picture of Washington’s GHG emissions. Subpart MM importer reports will follow existing EPA importer reports, just adjusted for state borders instead of national borders.

This border adjustment is consistent with how Ecology adapts EPA reports to Washington borders for other sectors. Electrical transmission and distribution systems have been converting national level EPA GHG reports to state level GHG reports to Ecology using similar methods since 2012. There is no reason to believe that Washington’s refineries cannot do what electrical transmission and distribution systems have been doing for the last four years.

⁴⁵ “The rack” applies to one point in the fuel distribution system. Refined fuel is first supplied by the producer to a bulk storage facility called a terminal. Terminals have structures called “racks” that deliver fuel to nonbulk means of transport, such as a fuel tank trucks or railcars. The fuel is then transported by nonbulk means to gas stations, and the gas stations sell the fuel to the end customer.

General compliance issues (continued)

Washington is a net exporter of refined petroleum products. WAC 173-442-040(2)(b) allows petroleum product producers and importers to subtract out any verifiably reported exports from their compliance obligation. Exporter reporting provisions were deliberately crafted to mirror imports, but made voluntary to not impose a burden on organizations unless they want to participate. The goal is to track and account for the petroleum products that are used in Washington.

Most exports come from the five refineries. The majority of exports are within the bulk transfer system. Companies must already keep detailed ownership records for products transferred in a pipeline to facilitate retaining ownership of the mixed commodity upon extraction from the pipeline. Transfers by vessel, rail, or truck have records associated with where the product was loaded, the owner of the product at that time, and the destination. In most cases, product volumes must already be tracked when crossing state lines, so combining existing product tracking with existing Subpart MM data should not be difficult for parties that opt for voluntary exporter reporting.

Ecology acknowledges that this process may be more complicated when ownership of the product is transferred to another party before it leaves Washington. Most of these transactions likely result in the product staying in Washington or the first purchaser exporting the product. However, smaller volumes could transfer ownership multiple times before potentially leaving the state. In a worst case scenario the ultimate exporter would be allowed to report the GHG emissions associated with those exports, generate ERUs based on those exports as a voluntary participant, and transfer those ERUs to the producers as either a condition of sale or a separate transaction.

Ecology has engaged with Western States Petroleum Association throughout the stakeholder process, requesting they provide specific language to address this issue. Unfortunately, WSPA has declined to assist in developing rule language. WSPA has instead rejected the Subpart MM reporting methodology and has declined to engage with Ecology about other possibilities. As a result, Ecology has crafted rule language that allows for future collaborations with stakeholders, including WSPA. In particular, WAC 173-442-050(2)(d)(ii) allows for an extended period or alternate methods to calculate GHG emissions associated with exported products.

Reported data elements, methodologies, and calculations

DOL based reporting consists of an annual report that only includes the following:

- Identifying information.
- Parent company information.
- NAICS code.
- Year.
- Aggregate CO₂ emissions (MT).
- Aggregate biogenic CO₂ emissions (MT).
- Signature.

The report contains no information about fuel types, quantities, transactions, or geographic data. Reporters enter fuel quantities into an Excel calculation tool developed by Ecology, but they do

General compliance issues (continued)

not submit the tool to Ecology. This is done to protect confidentiality as any information Ecology receives directly from DOL retains confidentiality status, but any information directly reported to Ecology has no special protection. Therefore, the reports submitted to Ecology are unverifiable and constitute an insufficient data source for a regulatory emissions reduction program. If Ecology were to use DOL-based reporting as the basis for CAR, the direct reports would have to be significantly expanded in detail to enable verification. This would remove the existing confidentiality protection.

Ecology receives a supplemental monthly data file from DOL. This file is used to perform a high level cross check of directly reported data by calculating emissions based on volumes of fuel. While it contains more information than the direct dataset, it also is not sufficient for verification. Historically, the file contains:

- Identifying information.
- Year.
- Product code.
- Gallons of fuel.

Ecology now has over three years of data from transportation fuel reporting. Program wide totals approximately match between the directly reported numbers and the supplemental monthly DOL data, but significant, persistent differences between the data mean the supplemental monthly DOL data has minimal value in verifying the direct reports. Differences include:

- Total GHG emissions for a given organization are routinely different, often by a million metric tons or more. The source for this discrepancy is unknown. This large discrepancy demonstrates the unreliability of the DOL reporting information as the foundation for a regulatory program.
- DOL taxes all on-road fuels at the same rate (\$0.494 per gallon as of July 1, 2016). Therefore, DOL does not require detailed or consistent reporting by product code. For example: diesel and biodiesel are taxed at the same rate, so some organizations report all gallons as diesel, others specify biodiesel. Codes for blends do not yet exist and labeling of biofuels is poorly enforced. This has little to no impact to the highway tax system, but has major repercussions for GHG accounting. For example, total statewide biodiesel usage using the DOL dataset is nonsensical and does not reflect real world conditions due to very large year to year changes and frequent statewide totals that are negative.
 - 2012: negative 5 million gallons
 - 2013: 27 million gallons
 - 2014: negative 2 million gallons

In contrast, the Subpart MM reporting system is custom built for GHG reporting and facilitates GHG reduction programs, which is why it is used as the data framework for California's cap and trade program.

Tables MM-1 and MM-2 referenced above show that 70 products are included in the report. Ecology exempts eight of those products from coverage under CAR. Many of the petroleum products can be blended with biofuels. Subpart MM allows tracking of the percent of each product that comes from a petroleum feedstock, down to a single percentage point. This expands the

General compliance issues (continued)

accuracy of product tracking from only about five CAR-eligible product types under DOL reporting to effectively hundreds under Subpart MM. More accurate product information leads to more accurate GHG emissions calculations, which is significant in a reduction program tracking emissions at the metric ton level.

Subpart MM tracks all products as either an input or an output. This avoids double counting by automatically subtracting out the emissions associated with an input. Commenters give examples of how double counting can result when Refinery A produces an intermediate product, sells it to Refinery B which processes it into a different product, then sells or exports that final product. As explained below, under Subpart MM reporting, emissions from the intermediate product would not be counted twice.

In those cases Refinery A would have an obligation for emissions from the intermediate, a product they sell and profit on. If Refinery A exports the product, they would have no compliance obligation for the product.

When Refinery B buys the intermediate, the emissions from the intermediate are subtracted from Refinery B's compliance obligation, such that Refinery B's compliance obligation for emissions from the intermediate is a negative number. If Refinery B then sells in Washington a final product made from the intermediate, the emissions from that final product are added back to Refinery B's compliance obligation. However, since Refinery B's compliance obligation for emissions from the intermediate was a negative number to start with, when Refinery B's compliance obligation for its product is added back, Refinery B's compliance obligation nets out to zero.⁴⁶ If Refinery B exports the final product, then the emissions from that product are exempted. Just like in the DOL-based system, GHG emissions may be tracked more than once, but there is a net single compliance obligation for any given carbon molecule.

Unlike the DOL reports, Subpart MM reports contain additional GHG related data fields specific to GHG calculations. Subpart MM reports include information on calculation and sampling methodologies and any product-specific measurements such as heating value, density, or carbon share. Reports also contain basic information on crude oil and other feedstocks. These additional data elements are foundational for accurate and complete verification of emissions.

Subpart MM was designed for petroleum products. Source category definitions are set in such a way that most biofuels are effectively excluded from reporting (see 40 CFR Part 98.390). Imports and exports are by definition limited to Table MM-1 products, which do not include biofuels. A producer may be required to report biofuels in some cases if it co-processes them at the refinery. Ecology is not aware of this occurring in Washington, therefore Subpart MM effectively exempts biofuels from CAR compliance as requested by many commenters including petroleum producers and importers, biofuels organizations, and the environmental community. Inherent and widespread inaccuracies in biofuel reporting under the DOL system would preclude exempting biofuels if we relied on DOL-based reporting since emissions from biofuels cannot be accurately separated from fossil fuel emissions.

⁴⁶ This explanation assumes the CO₂ emission factors for the intermediate and the final product are the same. If the emission factors are different, Refinery B's compliance obligation will increase or decrease depending on that difference.

General compliance issues (continued)

All five of Washington's refineries have been reporting this information to EPA since at least 2012. It takes these organizations more time and effort to remove their Subpart MM producer emissions from their existing reports that it would take to just submit them to Ecology. In fact, two of the producers that have commented against Subpart MM reporting, US Oil and BP, voluntarily submitted complete Subpart MM reports to Ecology with their 2015 GHG reports in spring of 2016. BP also recently resubmitted its 2014 GHG report adding the Subpart MM dataset. These reports confirm Ecology's conclusions on Subpart MM reports' content, functionality, and availability.

Using the voluntarily submitted Subpart MM reports and an approximate export factor of 50 percent (Washington Research Council) we can roughly calculate BP and US Oil's baseline GHG emissions from production, excluding any imports and exports. BP would have a baseline of about 12.5 million MT CO₂ and US Oil's baseline would be about 1.5 million MT CO₂. Reported values under DOL- based reporting would result in baselines of 6.4 million MT CO₂ for BP and 1.2 million MT CO₂ for US Oil. These significant differences are a result of the differences in scope of covered products, point of regulation, and GHG emissions calculation accuracy.

Report submission

Response 200

Allow other methods of submitting reports

Reports are submitted electronically in a format specified by the agency and must be signed. Reports cannot be submitted by email or mail. The submissions are complicated and need to be submitted in a standardized format for inclusion in our database.

WAC 173-442-360 contains contact information for other forms of communication including "requests, notifications, and communications."

Response 201

Clarify report format

Compliance reports must be submitted electronically. Ecology will develop the system for report submittal and guidance documents and release more information when it is available. The first compliance reports are not due until 2020 or 2021.

Demonstrating compliance, compliance periods, and regulatory orders

Response 202

Clarify what and how ERU records should be kept

Ecology is currently working to design and implement the procedures and protocols related to WAC 173-442-120. As such, Ecology is not able to provide a detailed explanation at this time. However, Ecology anticipates that ERU-related records will be stored in an online database accessible by the covered party responsible for generating the ERU, third party verifiers, and Ecology. Ecology will notify covered parties and other relevant stakeholders when ERU records procedures are established.

Ecology believes that the term "records" in WAC 173-442-210(4) clearly refers to compliance reports and associated documentation (*e.g.*, contracts or transaction documentation).

Response 203

Fix language to avoid perceived timing trap

Correction requirements for compliance reports established in WAC 173-442-210(5) do not create a compliance trap. If a covered party has not reported an error in a compliance report after the 45-day cutoff, WAC 173-442-210(6) would give Ecology the responsibility for determining that an error exists. Ecology would work with the covered party to make corrections to the compliance report.

Response 204

Clarify how corrections of older reports will work

WAC 173-442-210(5)(c) allows a covered party to request that the most recent compliance report be reopened for corrective edits and subsequent resubmittal. WAC 173-442-210(6) specifies that Ecology is exclusively responsible for determining if compliance reports contain errors after the 45-day period in which covered parties may request a revision to a compliance report. Ecology will work with the covered party to make corrects to the compliance reports.

Response 205

Clarify how to resolve differences of opinion whether error has occurred

Per WAC 173-442-210(6), Ecology will have the final say in determining if a compliance report contains errors.

Response 206

Clarify meaning of “denial of compliance report”

The “denial of a compliance report” would occur if Ecology denied, not accepted, a compliance report submitted by a covered party as complete due to the reasons listed in WAC 173-442-210(6)(b). Subsection (6)(a) states that Ecology will be responsible for determining whether a compliance report contains errors that warrant the denial of a compliance report. The reasons for denying a report (Section 210(6)(b)) are consistent with those in WAC 173-441-085(6), Third-party verification.

Response 207

Electronic submission issues

WAC 173-442-210(8)(a) does not refer to the system itself, but to the reports and is meant to clarify that Ecology is not responsible when a covered party fails to submit a compliance report (even when there may be submittal issues that may seem to be out of the hands of the person submitting the report). Ecology currently sends confirmation after receiving and reviewing GHG emissions reports from parties required to submit reports under Chapter 173-441 WAC. Ecology will mirror this practice when receiving and reviewing compliance reports and notify covered parties when compliance reports contain errors or are not received prior to the dates specified in Table 5, WAC 173-442-250.

Response 208

Remove redundancy between WAC 173-442-220(5) and 173-442-210(5)

Ecology has noted this comment.

Response 209

Clarify submission methods of reports

Ecology is currently developing the format(s) for compliance reports and, once the format(s) is/are completed, Ecology will add clarifying language to Chapter 173-442 WAC or provide that information through implementation guidance.

Response 210

Clarify whether compliance periods are fixed three-year blocks

Compliance periods are fixed three-year blocks starting in 2017.

Response 211

Clarify when regulatory orders are issued for non-EITE covered parties

Regulatory orders are issued prospectively to the non-EITE parties. The order contains the baseline emissions rate for the covered party and its compliance requirements through 2035.

Given the number of non-EITE sources, we believe that these orders can be issued by January 30, 2018. Table 1 in WAC 173-442-030(3) establishes 2017 through 2019 as the first compliance period, so the second year of this period would be 2018.

Response 212

Regulatory orders should be issued before the compliance period

Issuing regulatory orders in early 2018 will not affect covered parties' ability to comply with the CAR. The reduction requirement for the first year of the first compliance period for a non-EITE party is meeting the baseline emissions (*see* WAC 173-442-060(1)(a)). Meeting the emission reduction requirements for each compliance period is the primary measure of compliance.

The program starts in 2017, the non-EITE baseline emissions includes the 2016 emissions, and we will not receive the inventory information to complete the baseline until the middle of 2017. Ecology requires time to develop the regulatory orders for the non-EITE parties, and we believe we can develop and issue those orders by January 30, 2018. Similarly, Ecology needs time to develop the emission intensity distributions for the EITE parties before it can issue the regulatory orders for those parties.

Response 213

How often will regulatory orders be issued

Non-EITE covered parties will be issued a single regulatory order when they enter the program. They will only get a new regulatory order if their GHG reduction requirement changes.

For covered EITE parties, there will be a new regulatory order issued for each compliance period. This is due to the different method to set the emission reduction requirements between EITE and non-EITE parties.

The regulatory orders will include the baseline GHG emissions value for the covered party.

Response 214

Delete WAC 173-442-330, it is unnecessary

The proposed rule contemplates that all covered parties subject to this rule's requirements would receive a regulatory order that incorporates all of the compliance requirements under this rule, not merely the emission rate that must be met for each compliance period. Some of the covered parties

General compliance issues (continued)

such as fuel distributors and natural gas distribution companies are not “stationary sources.” This section addresses only the inclusion and implementation of this regulatory order in an Air Operating Permit for those sources that are otherwise required to have air operating permits.

Response 215

Ecology should not have sole jurisdiction over the regulatory order as it may threaten EPA approval of the state’s Title V program

The requirements of this rule apply statewide and include stationary sources that operate in only one location and other entities (such as motor vehicle fuel distributors and natural gas local distribution companies) that operate in multiple counties and permitting authority jurisdictions. Determining and enforcing compliance is properly done statewide for this diversity of covered parties. State-only compliance and enforcement allows for consistent application of the requirements in all locations of the state. This approach also does not place an undue burden on the resources of the small permitting authorities with limited staff.

This approach follows the model used by EPA for Title IV (Acid Rain) permits. EPA requires those permits to be incorporated within an air operator permit, but receives compliance reports directly from the power plant and retains enforcement of noncompliance exclusively to itself.

A review of the applicable federal regulation, federal guidance, and state law does not indicate a conflict that could endanger the ability of the state and local authorities from retaining a federally approved permitting program. The terms of 40 CFR 70.6(b)(2) and WAC 173-401-625(2) explicitly contemplate and allow for Air Operating Permits (Title V permits) to contain terms and conditions that are not based on the federal Clean Air Act and are enforceable only by the state and local permitting authorities. The only requirement is that these terms and conditions must be clearly identified as such in the Air Operating Permit. Ecology intends to draft the regulatory orders to meet this requirement and include all requirements of the Clean Air Rule that apply to the sources.

Response 216

Clarify the connection between reevaluation of emissions and new source review permitting

As the commenter notes, many of the changes listed could be subject to new source review permitting. This was intentional on our part as these are the types of actions by a covered party that could change its GHG emissions upward or downward.

As drafted the rule requires the non-covered or future covered parties to determine if the changes from the listed actions would result in an increase in GHG emissions that would subject the facility to the requirements of this rule.

This evaluation is not part of the new source review process done by the air quality permitting authority and issuance of a new source review permit does not require the review. The permitting authority may choose to such a review for its own purposes, but is not a required under the permitting rule or this rule.

However, noting that an Air Operating Permit (Title V) permit holder undergoing a new source review action would need to document that they met this requirement as part of its annual compliance certification.

Compliance options

Response 217

“Emission reduction pathway” implies an annual requirement but the compliance obligation is on a three-year basis

The rule does not establish an annual emissions limit. The emission reduction pathway refers to the “annual reduction requirement” as outlined in WAC 173-442-060 and WAC 173-442-070. This is the annual calculation of the slope of a covered party’s requirement. The application of the emission reduction pathway or the emission reduction requirement in the regulatory order results in a limit for each three-year compliance period. This is compared to the party’s actual covered GHG emissions for the period to establish their compliance obligation for the three-year compliance period.

Ecology should delay implementation

Response 218

There is not enough time between rule finalization and the start of the program

Several commenters have raised equity concerns regarding the fact that the CAR program starts on January 1, 2017, only a few months after rule finalization. Ecology disagrees that the program is beginning too soon. First, the compliance obligation for covered parties is established from their baseline emissions, which are average GHG emissions from 2012–2016. The emissions data for 2012–2015 have already been reported to Ecology and are known by parties covered under the rule; Ecology concludes it is unlikely that calendar year 2016 GHG emissions would substantially change the baseline. Second, covered parties have no compliance obligation under the rule until 2020. When the program starts in 2017, parties subject to the rule will have to register with Ecology, and will have the option of registering ERUs. But nothing is required until the compliance report in 2020.

Response 219

The CAR isn’t ready to be implemented

Ecology disagrees that the CAR is being finalized prematurely. Ecology has concluded that the CAR is an appropriately targeted first step in an economy-wide rulemaking to cap and reduce carbon. The rule only covers the largest emitters in the state, covers about two-thirds of statewide emissions, and exempts or delays certain entities from coverage where there is uncertainty or concerns with data quality. We have determined that the current framework in the rule will achieve significant GHG reductions in a way that does not unreasonably burden covered entities.

Several commenters have stated that the rule language frequently lacks clarity or is confusing. Ecology made many changes to the rule text in response to comments clarifying rule language.

Ecology recognizes the urgency of the need to take action to address climate change. Accordingly, we have been working diligently to establish a rule to take effect January 1, 2017. Given the risks imposed by climate change, we do not believe it is appropriate to continue to wait to begin implementing the rule. However, Ecology is committed to continuing to work with stakeholders as we implement the rule, and is planning on developing further implementation guidance for specific elements of the rule, as well as subsequent rule updates and revisions to develop and refine protocols and other elements.

Ecology should not delay implementation

Response 220

The proposed rule illegally delays compliance and contradicts Ecology's own findings that urgent action is needed to draw down GHG emissions

Ecology disagrees that the CAR delays compliance. The regulatory program begins in 2017 and over 80 percent of total covered emissions (about 55 percent of the state's total GHG emissions) are included in the first compliance period, including the emissions from petroleum fuels produced and combusted in the state, emissions from natural gas burned in the state, and emissions from power plants and landfills. The remainder of the covered parties that meet the threshold will be included in the second compliance period: these are petroleum fuel importers and EITEs. Ecology decided to include these groups in the second compliance period rather than the first because we need time to develop 1) the reporting data for fuel importers, who currently do not report EPA Subpart MM data to us, and 2) a separate compliance pathway for EITE industries based on efficiency improvements so that we can mitigate the risks of trade exposure and losing business to out of state competitors.

We understand and agree with the commenter that there is an urgency to taking action, which is why we will begin the program in 2017. We note that several other commenters complained that our rulemaking process was too fast and compliance begins too soon. Because of the urgency of the problem, and because Ecology had sufficient time to obtain stakeholder input and consider all public comments on the rule, Ecology disagrees with the suggestion of other commenters that the process was too fast and that compliance begins too early.

The CAR needs an off-ramp

Response 221

The CAR should include an off-ramp for economic hardship

The January 2016 version of the CAR proposal included a provision granting relief from the CAR requirements in the event of extreme economic hardship. That provision was stricken from the May 2016 version of the rule proposal in response to comments from the regulated community that the provisions were unworkable and of no value. Ecology remains interested in developing an avenue for relief as a result of economic hardship, and would consider incorporating specific ideas for accommodating this in a future rulemaking.

Response 222

The CAR should include an off-ramp for electricity reliability concerns

Ecology has concluded that a specific safety valve or off-ramp provisions providing relief from the CAR requirements for electricity reliability concerns is not warranted at this time. Several comments stated that a safety valve was needed to address reliability concerns in the power sector. However, with the various compliance options available, plants will never be required to curtail generation to meet their compliance obligation. Some commenters further assert that they should not be accountable for emissions resulting from generation required as a result of a reliability order to preserve grid stability. However, as discussed in Response 105, Ecology has concluded that such events will rarely occur, and that in the event they occur they will be short-term. Ecology therefore determined that a safety valve for reliability is not necessary.

Response 223

The CAR should include an off-ramp for difficulties in installing technologies to reduce emissions

Other commenters requested a safety valve in the event of difficulties in technologies installed to reduce GHG emissions. The CAR provides a variety of alternative compliance mechanisms and does not require covered parties to comply by reducing direct emissions at the site. Covered parties can use emission reduction units to meet all or part of their compliance obligation; these emission reduction units can come from projects in-state or from allowances purchased from external carbon markets. It is therefore not necessary to have an exemption or safety valve for technical considerations.

Response 224

The CAR should include an off-ramp in the event that a new carbon initiative or national carbon program is established

Ecology received comments that the CAR should contain an off-ramp provision providing relief from compliance in the event that Initiative 732 is passed, or there is a new national carbon rule. Ecology has determined that such a provision is not necessary at this time. It is unclear whether Initiative 732, which would establish a carbon tax in Washington, will be adopted by Washington voters. In the event Initiative 732 is adopted, Ecology would evaluate its impacts and consider appropriate changes to the CAR. Regarding a national carbon program, currently no such program has been proposed or is under consideration by the federal government. In the event such a program were finalized, Ecology would similarly evaluate its impact and consider changes to the CAR.

Response 225

The CAR should include an off-ramp in the event there is not sufficient availability of ERUs or ERUs reach certain cost thresholds

Commenters have asked Ecology to provide an off-ramp granting relief from the CAR in the event there is not sufficient availability of emission reduction units or the price of allowances from external carbon markets exceeds certain thresholds. Ecology has determined that such a provision is not necessary. As discussed in Ecology's Response 262, Ecology has determined that there will be sufficient options to generate emission reduction units, through a combination of projects (including RECs), voluntary participants, and allowances from external markets. However, Ecology recognizes that markets are often dynamic, and will be closely monitoring and evaluating the implementation of the CAR to ensure that there is a sufficient supply of emission reduction units and that the cost of emission reduction units does not unreasonably escalate.

Response 226

The CAR should include an off-ramp in the event there are significant impacts to low-income customers

Commenters have asked that Ecology include off-ramp provisions in the event compliance with the CAR causes undue economic hardship to low income customers of natural gas and power. Ecology's economic analysis⁴⁷ projects relatively minor cost increases as a result of the CAR, with power prices estimated to increase by 0.1 to 1.4 percent in 2020, and 0.5 to 9.2 percent by 2035 depending on the compliance option chosen. Similarly, residential natural gas prices are projected to increase by 0.0 to 0.8 percent in 2020 and 0.3 to 5.6 percent in 2035. This translates to an

⁴⁷ Regional Economic Models, Inc., 2016: "Macroeconomic Impacts of the Clean Air Rule (Chapter 173-442 WAC) Costs on the Washington State Economy."

General compliance issues (continued)

average annual increase in household electricity costs of \$1.15 to \$16.15 in 2020, and \$5.77 to \$106.15 in 2035, and an average annual increase in residential natural gas costs of \$0 to \$2.55 in 2020 and \$0.96 to \$17.86 in 2035. Ecology has concluded that these projected price increases will not result in economic hardship to low income customers, and so has not included such an off-ramp. However, Ecology will closely evaluate implementation of the CAR and will consider changes in the event that compliance costs unreasonably escalate.

Response 227

The CAR should provide an alternative compliance payment and variance

Ecology has developed the CAR pursuant to its authority under the Washington CAA. While that statute provides Ecology with the authority to set emission standards to cap and reduce GHG emissions, it does not provide clear authority for Ecology to accept payments in lieu of other compliance mechanisms. Ecology has therefore not provided an option for compliance by payment. See Response 221 regarding variances or an offramp due to the cost of compliance.

Compliance Pathways

Response 228

Ecology needs to provide a broad array of compliance choices for covered entities

The CAR provides a diverse menu of options for compliance with the rule including the ability to make reductions on-site at facilities or through changes in processes or production, the ability to obtain emission reductions from others in the program, the ability to tap into GHG emission reduction programs in other jurisdictions, and the ability to obtain emission reductions from emission reduction projects and programs by either implementing projects or programs or working with existing carbon markets that provide those emission reductions.

Response 229

The CAR fails to provide an attainable compliance pathway for natural gas LDCs

Ecology does not agree that the compliance pathways available for LDCs are unattainable. Nothing in the CAR mandates that natural gas LDCs control or restrict their customers' use of gas as a means of compliance. Instead, the rule provides for the use of emission reduction units to satisfy compliance obligations. Emission reduction units can be generated in a variety of ways, including additional energy efficiency or conservation measures, other emission reduction projects, or by purchasing allowances from approved external carbon markets. The ability to comply with the rule using emission reduction units provides flexibility to businesses by giving them a variety of ways to meet their compliance obligations. While the rule limits the availability of allowances from out of state markets to be used as emission reduction units over time, there are many other ways to generate emission reduction units, including through emission reduction projects in Washington (including RECs).

Emission Reduction Units

ERU fundamentals

Response 230

The definition of ERU is unclear or incomplete

The definition of “Emission Reduction Unit” has been modified in the rule to better clarify its role and meaning.

Response 231

Difference between ERUs, offsets, and allowances

Many commenters were confused by the difference between an allowance and an ERU. A definition of allowance has been added to the rule. Simply put, an ERU is equivalent to one metric ton of CO₂e that is not emitted into the air. An allowance is the right to emit one metric ton of CO₂e into the air. Therefore, the two are not equivalent and are, in fact, conceptually the opposite of each other. For more detail see the later section on how allowances are used in the CAR for an explanation of how this relationship functions in order for the removal of allowances from other programs to generate an ERU in the CAR.

An offset can mean several things. Generally, in recent years, when people refer to an offset they mean an “offset credit” from a regulatory cap-and-trade program. In this context an offset means a reduction or removal from outside of the “cap” of a cap-and-trade program. In other words, an emission reduction or removal project that occurs in an economic sector other than what is covered by the overall emissions limitation (the “cap”). Typically this means either carbon sequestration (in the form of forestry or agricultural soils) or methane reduction (from landfills or dairy farm operations). Historically the term “offset” meant any form of an emission reduction or removal project, regardless of where in the economy that project came from. The term is still used today for broader consumer uses, typically where programs are offered to take responsibility for one’s overall “carbon footprint.” Rather than compound the confusion as to what an “offset” is, Ecology has chosen to refer to emission reduction projects and programs using those terms, rather than calling them “offsets.” This makes particular sense since offset credits from regulatory programs in California and Quebec are not a compliance option in the final rule.

Response 232

Once ERUs are generated those using them should be held harmless for discrepancies

There are no procedures or protocols in the CAR for invalidating ERUs once they have been generated. In other words, once an emissions reduction has met all the criteria necessary to have an ERU generated that ERU is considered to be a valid and fungible accounting instrument until such time that it either reaches its expiration date (based on the 10-year clock) or is retired for program purposes.

Response 233

Implications of the vintage year assigned to an emission reduction unit

The vintage year “stamp” applied to ERUs is important only in terms of the expiration limit for ERUs. It provides no other functional limitation in terms of the uses of ERUs. ERUs derived from allowances do have some additional factors that are discussed in the section concerning the use of allowances.

Response 234

Implications for “retirement,” “withdrawal,” and “expiration” of an ERU are unclear

Some commenters were confused as to how ERUs move and are used within the CAR. There are several instances where an ERU can be “withdrawn,” meaning that it is moved from a holding account for the covered party to be used for something, or that it is moved from an account controlled by Ecology for some purpose. When ERUs are used for compliance, or for another purpose as stated in the rule, ERUs will be retired, meaning that that will be placed out of service and will no longer be valid. Because ERUs can only exist for ten years there are situations where an ERU may expire, that is, will be considered no longer valid because it has persisted beyond its allowable time.

The ERU Marketplace and Other Carbon Markets

Response 235

ERUs should be “owned” by covered parties or by other entities

Emission reduction units are equivalent to one ton of carbon dioxide equivalent (CO₂e). They are not owned by covered parties. Rather, they are an accounting mechanism for covered parties to track emission reductions obtained from other entities (*e.g.*, emission reduction projects, emission reductions from other covered parties, allowances from external markets, etc.). The value of emission reduction units will vary with the demand for them for compliance with the CAR since Ecology is not controlling or otherwise regulating the market for emission reduction units.

Response 236

Should not restrict ERU generation and banking to participants

Because ERUs are accounting mechanisms and are not owned by any entity, it would not be possible for third parties to hold onto and transfer ERUs. Since ERUs are accounting mechanisms used to demonstrate compliance, they reside only in the accounts of covered parties or in accounts managed by Ecology. As noted in the rule, there is a role for third parties to facilitate the transfer of ERUs from one covered party to another but at no time during this process would the third party actually hold the ERU.

Several commenters asked for clarification as to whether utilities (or other entities) that are not covered by the rule would be in a position to provide emission reductions to other parties. As with most other forms of emission reductions, they would, although that would be an arrangement that would have to be negotiated between a non-covered utility and a covered utility. Any contract or agreement between the utilities would have to clearly transfer the rights of the emission reductions from the efficiency or conservation project to the covered party. The major difference between this and a renewable energy project is that for renewable energy there is a clear commodity that can be transferred, in the form of a REC, whereas with an efficiency or conservation project it is the more general emission reduction itself for which the transfer of emission reduction rights would need to be established. Once the rights to that emission reduction have been secured, the covered party could then generate an ERU as a representation of that emission reduction and use that ERU in any of the ways allowed by the CAR. Implementation guidance will more clearly establish how the records should be secured for this type of arrangement.

Response 237

The role of third parties should be expanded in the program

There is significant confusion among many commenters as to the role of third parties, *i.e.*, brokers or other non-compliance entities interested in providing liaison services or in acquiring ERUs for

trading. Ecology does envision a significant role for third parties in the broader carbon marketplace, with some specific roles in the operation of the CAR.

There is a substantial role for third parties in acquiring, brokering, trading, or otherwise facilitating the large number of emission reduction instruments that can generate ERUs. In particular there are numerous emission reductions on the market in various forms of carbon credits, offsets, and other project-based emission reductions. Most of these exist on a project registry, such as the Climate Action Reserve or the American Carbon Registry. There is no limitation on third parties in obtaining or otherwise moving these emission reductions throughout the universe of parties affected by the CAR. Eventually, in order to generate an ERU, the emission reductions would have to move to a covered party in the CAR. But there is a substantial “pre-compliance” marketplace for these types of emission reductions.

In a similar vein, there is a robust market for RECs in which third parties are highly involved. Again, there is no limitation on third parties working in these markets, obtaining these instruments, and providing them to covered parties who would be eligible to generate ERUs with these instruments. So there is a similar “pre-compliance” marketplace for these reductions.

To help with conceptualizing the role of third parties please see the ERU flowchart (Figure 2) found on page 142142, in which one can see how these “pre-compliance marketplaces” can be utilized to boost the efficiency of the overall market. This figure shows how transactions can occur between parties with existing emission reduction instruments—like carbon credits and RECs—before they are used to generate an ERU for compliance with the CAR. It also shows how third party brokers can work in this “pre-compliance” marketplace, while also working as potential facilitators between covered parties to transfer ERUs from one to another.

Response 238

Unclear how ERUs and emission reduction projects interact with existing project registries

If an emission reduction is coming from a project other than an energy or transportation project, it likely will be measured, verified, and come to fruition as a “carbon credit” (or similar variant) on a project registry like the Climate Action Reserve or the American Carbon Registry. Once that emission reduction has been approved and posted in one of those registries a number of different outcomes can result. That emission reduction in the form of a credit can be traded, sold, or otherwise exchanged from one party to another, or by a third party like an emissions broker. Eventually that emission reduction can find its way to a covered party in the CAR. Or it can simply be obtained directly by a covered party in the CAR.

Either way, once a covered party has secured the emission reduction (most likely in a form that exists on one of the project registries) the covered party can generate an ERU with that emission reduction. At that point the ERU exists solely within the Ecology registry compliance system. The ERU can be transferred from one covered party to another, but can’t “leave” the Ecology registry since only covered parties can be assigned ERUs and these ERUs are used solely to track compliance with the CAR. In short, project registries can supply the “raw” emission reductions—which can be traded or exchanged like any other commodity—and those emission reductions can be obtained by a covered party in the CAR who can then “refine” those emission reductions into the uniquely specific accounting mechanism that is an ERU under the CAR. Once that emission reduction becomes an ERU, however, it can’t go back. It exists solely in the registry system maintained by Ecology for the purposed of tracking compliance with the CAR.

The entire process, based on hypothetical compliance scenarios, is illustrated in the ERU flowchart at Figure 2 found on page 142. This shows how existing project registries are used to “feed” the demand for ERUs in the CAR.

Response 239

Creation of ERU market may jeopardize existing carbon markets

Ecology disagrees and believes that the CAR will most likely increase demand for carbon credits, helping, not hindering, existing and developing carbon markets. Because one of the most important ways that ERUs are generated is by having existing carbon markets provide the necessary emissions reductions, a likely result of the CAR is that these existing markets (and the existing infrastructure in the form of well-established project registries) will be strengthened, not hurt, by the existence of the CAR. Moreover, because the CAR relies on the same type of criteria for its emission reductions, along with robust verification protocols and other critical foundations for the quality of the emission reductions in the program, the CAR should amplify demand throughout carbon markets for quality emission reductions at a time when worldwide demand has been lagging.

Criteria for Emission Reductions

Response 240

Emission reduction projects do not achieve real reductions and are difficult to verify

The CAR requires that emission reductions used for the program meet key criteria for quality that are very similar to those criteria used in other types of GHG reduction programs. The CAR requires that emission reductions be real, permanent, verifiable, enforceable, and meet key tests of “additionality,” *i.e.*, a level of assurance that the emission reduction goes beyond what is normally required or what would have happened but for the program. Because of the unique nature of the CAR there is some variation in the application of these criteria but, taken together, they provide a high level of assurance that emission reductions in the program are indeed real and meet other key tests of quality. Moreover, the CAR takes an extra step in requiring that emission reductions be verified by third parties. These third parties—either verification firms or other state agencies—help ensure that the emission reductions in the program are of the high quality expected in top-tier emission reduction programs.

Response 241

Need a concrete and measurable threshold for permanence

Some commenters suggest that Ecology use a definition for permanence that does not require emission reductions to be permanent, *i.e.*, that allows for the possibility of a reversal in which the emission reduction is re-emitted at some point in time. Ecology is aware that some GHG reduction programs do craft a definition for permanence that does not require the emission reduction to be permanent. However, in light of the exclusion of sequestration as a compliance option in the CAR, the most logical definition for permanence is the most literal use of the term. Therefore, the definition is based on the concept that the emission reduction is non-reversible.

Response 242

Questions about why exemptions are granted for “additionality” in some cases

The application of additionality in this rule is more nuanced than that found in other program designs, where it may be more straightforward to draw lines about what is or is not additional, *i.e.*, would not have happened but for this rule. It has also clearly been challenging for many commenters to understand the difference between the program design in this rule and program

designs found with GHG cap-and-trade programs in other states and provinces, notably that in California and Quebec.

Had Ecology included an absolute prohibition on any emission reduction that was not additional in its purest sense (would not have happened but for this rule) no emission reduction projects or programs would have been allowed from any covered sector (energy, transportation, industrial, etc.) and only emission reductions from agriculture could have been incorporated (recognizing that many commenters have asked for precisely this prohibition). For reasons discussed elsewhere Ecology does believe that it is critical to allow emission reductions in the CAR to occur in covered sectors, particularly transportation.

Incorporating emission reductions in covered sectors also raises additional challenges in that there are some regulatory frameworks that are so broad, or are so complex in their interweaving within the sector, that it becomes essentially impossible to say whether a given emission reduction activity or program would or would not have happened but for this rule. If the end result of a rule or law—whether it be federal or state—is that any emission reduction within that sector could be linked to that rule or law, with no clear threshold or other mechanism to make a clear additionality determination, then it effectively precludes any emission reduction activity from being able to be counted within that sector. For that reason the additionality exemptions listed in WAC 173-442-150(1)(e)(ii) are included, to provide more clarity and to allow some emission reduction to occur in covered sectors, regardless of whether they meet the tests of additionality for the rest of the rule.

Note the contrast with a law like EIA in which there are clear thresholds in the form of standards where determination of what actions fall above or below those standards is possible. There are additional elements of the EIA that can complicate the analysis but conceptually it is possible to make a determination as to regulatory additionality of that law, *i.e.*, what is put in place by regulation and what may be additional to that regulation.

The carbon dioxide mitigation standard for new power plants (Chapter 80.70 RCW) is included in the list of additionality exemptions for two reasons. First, one can argue that its reach is similarly broad in its effect so as to make it effectively impossible to discern what emission reductions would be required under the standard and what would be required under CAR. Second, when the standard was established there was language put in place to suggest that there was a general intent for the standard not to be additional to future GHG regulation. Thus, the exemption recognizes that intent.

Response 243

Additionality and new EPA requirements for landfills

Ecology is aware that there are other broad, sector-wide regulatory regimes either in development or that were very recently put into place. Most notably, a broad suite of landfill regulations were just finalized by EPA. Ecology was, and is, following those developments but in order for a rule put into effect by Ecology to reference another regulation that regulation must be final. Practically speaking, Ecology must have also had the time to fully consume and analyze the implications of the new rule. As such, Ecology was not able to consider whether EPA's new landfill regulation might be a logical addition to the list of additionality exemptions. Ecology will examine the rule for possible future modifications to the CAR. The same can be said for additional sector-focused EPA action in the future.

Types of Projects and Programs

Response 244

Include more protocols or project types in general

Numerous commenters make requests for a wide variety of projects, programs, or other types of emission reduction activities that are not explicitly listed in the rule with a protocol or process. There is nothing in the rule that would prevent emission reduction projects or programs that fall under the broad categories listed (*e.g.*, energy, transportation, industrial, waste, livestock and agricultural) from being approved through a variety of methods. Those include:

- The addition of new protocols over time. As new protocols are developed, either through the applicable registries (*e.g.*, American Carbon Registry) or through other means, they can be added to the rule through rulemaking. Note that Ecology also has the ability to add new registry protocols to the rule (*e.g.*, the Verified Carbon Standard is beginning to branch out and incorporate project types that may mirror those allowed by the CAR).
- Independent Qualified Organization (IQOs), which are providers of emission reductions recognized by EFSEC and which have historically provided emission reductions for the Washington carbon dioxide mitigation standard for new power plants, are allowed more flexibility in the rule to provide emission reductions through a variety of means.
- The general category of “Ecology approved emission reductions” provides a mechanism to potentially capture a wide variety of different emission reduction pathways. Guidance on how this category would or could work will be forthcoming as part of the implementation guidance for the rule.

It is the hope and expectation that more protocols, with more specificity for Washington, can be incorporated into the CAR rule over time. That process will take time but, as noted above, there are other avenues to bring in emission reductions without protocols in the meantime.

Changes to the rule language were made to clarify that Ecology intends to allow emission reductions from any approved version of an emission reduction protocol to be able to generate ERUs, up to the protocol date noted in the rule. So it is now clear that older protocols used to generate emission reductions can be used to generate ERUs, and not just the most recent version of any given protocol. Because of legal limitations against incorporating future versions of protocols that do not yet exist into rules, the rule will need to be updated to modify that date and ensure that emission reductions from projects using the most recent version of protocols can qualify, and that is Ecology’s intent in the future.

Response 245

Include sequestration

Ecology strongly supports addressing climate change through all the means available to Washingtonians. That includes sequestration activities. However, by definition, sequestration into trees and soils, or into geological formations, is not an emission reduction. It is the temporary removal of carbon dioxide from the atmosphere. The CAR is focused on real, permanent emission reductions and, as such, does not include sequestration activities in the menu of options available to demonstrate that real, permanent emission reductions have been achieved.

Note that emission reduction projects in the agricultural sector are included in the rule, such as those from methane management and from certain soil fertilizer management practices that reduce nitrous oxide emissions. In general, Ecology has taken a broad viewpoint on emission reductions

Emission Reduction Units (continued)

so as to include these types of activities. But, as noted, sequestration activities are not emission reductions.

As with other aspects of this rule, Ecology has the ability to reexamine this focus on emission reductions, rather than emission removals, in the future.

Response 246

Ecology failed to consider and must require carbon sequestration in the CAR

It is unclear to Ecology whether there is scientific consensus as to whether an additional 100 gtC must be sequestered through reforestation and soil protection measures globally, and if so, whether the appropriate share for Washington is the 9.4 million metric tons of CO_{2e} per year cited by the commenter. However, as stated in our Response 1, Ecology must balance multiple considerations in developing rules, including economic impacts, and is not restricted solely to scientific considerations. Further, as we point out in our Response 84, the CAR is not the sole policy to address climate change in Washington. Finally, mandating levels of reforestation, sequestration, and soil protection likely falls outside Ecology's authority under the Washington CAA, and is outside the scope of the CAR.

One commenter argues that Ecology's Concentrated Animal Feeding Operation ("CAFO") permit is insufficient to accomplish soil sequestration. The CAFO permit is aimed at protecting state waters from discharges of pollutants arising from CAFO operations. The permit is issued under Ecology's authority to implement the federal Clean Water Act and the state Water Pollution Control Act. The comment period for the CAFO permit closed on August 31, 2016. That permit is beyond the scope of the CAR.

Response 247

Include transportation electrification

Ecology encourages and supports electrification of the transportation sector. The CAR specifically identifies transportation activities as acceptable for creating ERUs. The list of transportation options in WAC 173-442-160(3) are not exclusive and do not preclude or limit other types of transportation projects or programs, including vehicle electrification and charging infrastructure, that measurably reduce carbon pollution even where accounting protocols have not been identified or developed. At the time the rule was written no protocols that were "plug and play" for Washington existed, therefore Ecology was not able to directly reference an electric vehicle protocol. Methodologies to improve clarity and consistency in calculating emission reductions from transportation projects and programs are important future tools that will be developed over the course of 2017 and beyond to further emission reductions from the transportation sector.

Response 248

Include alternative fueled vehicles

Similarly to the electrification of the transportation sector, Ecology is highly interested in other protocols affecting the transportation sector, including alternative fuel protocols for compressed natural gas ("CNG") vehicles. Again, without a "ready to go" protocol that could be directly referenced there was nothing for the rule to reference but that does not mean that Ecology does not agree with the importance of eventually incorporating this type of emission reduction activity.

Response 249

Transportation projects should be a priority, including transit and commute programs

Ecology agrees that transportation projects should be a priority given that transportation GHG emissions are about 46 percent of Washington's GHG emissions portfolio. For that reason Ecology has chosen to include the option for emission reductions to occur from programs, projects, and activities in the transportation sector, even given the concerns about "double counting" (addressed in Response 275).

Response 250

Include Ozone Depleting Substance ("ODS") Destruction Protocols

Ecology is interested in adapting ODS protocols for use in Washington and believes that it is likely that existing protocols can be adapted in the short-term to make this happen. As such, it is the expectation of Ecology that one or more ODS destruction options will be available quickly for covered parties to utilize.

Response 251

Include California Air Resources Board ("CARB") protocols for identical project types as those from other registries

Inclusion of CARB offset protocols (and any other external GHG cap-and-trade program offset credits) will be considered in future rulemakings after discussions with California or the appropriate program. Note that many of these emission reductions will be registered in an intermediary project registry first (*e.g.*, Climate Action Reserve) so those emission reductions may be used for Washington instead of California if so desired. Existing offset credits from California are not eligible at this time.

Response 252

Allow landfill emission reduction projects to generate ERUs

There are numerous protocols included in the rule to allow landfills to generate ERUs, subject to various tests of additionality. In doing so the covered landfill can generate ERUs for its own facility compliance or market the emission reductions to others. However, if the emission reduction in question is reflected in their GHG reporting in addition to the applicable project protocol, the landfill cannot double count by seeking credit for that same reduction. Only the ERU from the reporting data would be generated in that case.

Response 253

Don't include more than one protocol for a project type

The acceptance of multiple protocols for the same types of emission reduction programs is by design. Ecology understands this is a different practice than allowance-based cap-and-trade programs have taken, but at this early stage of the program the focus is on allowing emission reductions from multiple pathways so long as those pathways meet certain quality standards. Ecology notes that California, for example, also provides for emission reductions to come from multiple registries, and that the registries found in this rule match California's list of acceptable project registries. Over time, if the selection of one protocol over another for the same activity proves problematic, Ecology can rectify the situation in future rulemaking.

Response 254

Allow a broader range of renewable energy

The use of renewable energy to generate ERUs is fundamentally similar to other types of projects that are used within the CAR. A unique difference, however, is that renewable energy projects

have access to a well-established and highly credible tracking mechanism that is an environmental commodity in and of itself. This commodity, the REC, is already in use for other programs in Washington, most notably the Energy Independence Act and Green Power (*i.e.*, voluntary renewable energy) programs. This commodity is also tracked throughout the west using the Western Renewable Energy Generation Information System (“WREGIS”). By basing the renewable energy component of the CAR on the use of this instrument, Ecology is able to provide high level of assurance that regulatory additionality can be maintained, that no double counting can occur, and that tight integration can be assured with Washington’s existing renewable energy regulatory programs.

Because renewable energy is simply another type of project under the CAR the reasons that RECs must be derived from in-state renewable energy projects are identical to the reasons for the in-state limitation that is discussed elsewhere.

One point of confusion among some commenters has been the role of incremental hydropower efficiency in the rule. The list of eligible renewable resources mirrors that included in the renewable energy standard in the Energy Independence Act. This includes incremental hydropower efficiency that is allowed under the Act. However, it is required that incremental hydropower efficiency be registered in WREGIS so that clear additionality can be established and consistent tracking ensured (the same as with other forms of renewable energy).

Response 255

Allow less energy efficiency and conservation to be counted

The clear language and policy intent of the CAR establishes that energy efficiency must be additional to that required under the EIA to count toward compliance. Some commenters have asked that CAR require a higher standard than that required by the EIA. The determination of what constitutes additional can be complicated and refined accounting methodologies would be necessary. In essence, this would require moving toward a protocol-based approach for conservation rather than relying simply on the EIA conservation targets as a threshold. Ecology, with the Department of Commerce and the Washington Utilities and Transportation Commission, will review options and make a determination as to whether to develop a more detailed conservation protocol over the course of 2017.

Response 256

Measure energy efficiency and conservation with different units or for longer time periods

In response to stakeholder requests, and after further conversations with Washington’s energy agencies, a conversion option for natural gas efficiency based on therms has been added in the rule. The original intent was to promote consistency in application and ease of use between electric and natural gas efficiency. This change should ease administration for the natural gas sector and does not materially affect the end result, assuming similar assumptions.

Conservation and efficiency data for use in generating ERUs for the CAR are derived from those data collected by the UTC and Department of Commerce. If UTC and/or Department of Commerce were to modify their data collection and recording requirements to allow for multi-year savings then it is Ecology’s understanding that the current rule language would allow for those data reported in a new format to translate over and generate ERUs. However, it is not Ecology’s intent to create an alternate data reporting structure for energy efficiency and conservation. Rather, in order to ensure consistency across agencies and with existing law and rule around conservation and energy efficiency Ecology plans to continue to rely on Department of Commerce and UTC as

the appropriate data repositories for the foundational energy data. As such, when those agencies switch to multi-year savings data collection Ecology will be able to as well.

Response 257

Change the way that emission reductions are awarded to renewable energy and energy efficiency

Ecology appreciates the long-standing debate among energy and climate policy experts as to what the best representative avoided emissions rate should be for energy efficiency and conservation, as well as renewable energy. Ecology also believes that best research specific to Washington and the Northwest has historically come from the Northwest Power & Conservation Council (NWPPCC) and the state energy offices and commissions. The majority of that research and modeling has pointed to the marginal resource⁴⁸ for the region falling in the range of emissions associated with a natural gas plant. Ecology is aware that EPA reports (eGRID-based) and AVERT point to a higher marginal rate. However, those tools and reports tend to utilize a larger geographical area that does not necessarily incorporate assumptions about what resources are actually providing energy to Washington customers. As such, those estimates are higher but don't necessarily provide the most accurate picture of what resources would be the marginal resource in the Northwest.

Ecology does appreciate that estimates of avoided GHG emissions change over time as new models are developed, model runs are refined, and as the fleet of power plants in the region improves over time with technological and regulatory changes. For that reason it is likely that the avoided emission rate will be examined in future rulemakings and modified as appropriate over time.

Response 258

Include more detail on combined heat and power

Ecology intends to evaluate and include a protocol or methodology for combined heat and power into the CAR in the near future through a rulemaking process.

Response 259

Provide ERUs to Washington electric utilities for early retirements of out-of-state coal-fired electric generating units

Currently, only in-state emission reduction projects are allowed in the CAR. Emission reductions at out-of-state coal plants would occur out-of-state. When power plants transition to be covered under the CPP, there will be an alternative mechanism to bring in imported power and facilitate a regional solution.

Response 260

Offset protocols and projects should be transparent and have public involvement

Ecology agrees that the manner in which offset protocols, or the general methodologies by which emission reductions will be incorporated into the program, should be done in a public manner with significant public involvement. Ecology intends to adopt future protocols into the rule through the formal rulemaking process, which will guarantee extensive public input and all of the considerable guarantees of public involvement that the Washington rulemaking process puts into place. It is possible that in the future Ecology may, by rule, put in place an alternative process that provides the same level of opportunity for public input and engagement but can move more nimbly based

⁴⁸ In this context the marginal resource means what kind of generation would have otherwise served the electric load that is being avoided because of the renewable energy or energy efficiency project.

on the core foundation in the CAR for emission reductions a wide variety of project and program types.

Availability of Projects, Programs, and ERUs

Response 261

No appropriate opportunities to generate ERUs

If a party covered under the rule believes that they lack sufficient opportunities to generate ERUs by reducing their own emissions, there are multiple other compliance options available for obtaining the ERUs necessary to meet any compliance obligation and comply with the rule.

Response 262

Supply of available projects for earning emission reductions is questionable

Ecology believes that there are sufficient opportunities available to meet program needs in the short term through projects and programs located in the state. Moreover, Ecology believes that the emission reduction market will grow over time, expanding opportunities for covered parties to obtain emission reductions. Ecology used professional judgement, state agency expertise, and widely available data sources to provide context for the range of ERU-generation opportunities available to covered parties. Examples of data sources include information from the Energy Information Administration, Washington Department of Agriculture, WSU Energy Extension, Climate Action Reserve, American Carbon Registry, and the State of California.

As an illustration of some of the possible sources for ERUs, both immediately and into the future, consider the following examples:

Projects Already Registered on the Climate Action Reserve

A number of emission reduction projects already exist in Washington that are providing emission reductions to both voluntary and compliance carbon markets. The following projects are currently listed on the Climate Action Reserve and, as such, would be able to provide emission reductions that could be used to generate ERUs, either now or in the future as any existing commitments may be modified.

Table 6: Projects Already Registered on the Climate Action Reserve

Project Name	Project Type	Total Number of Offset Credits Registered
Rainier Biogas, LLC	Livestock Gas Capture/Combustion	3,101
Farm Power Rexville Regional Digester	Livestock Gas Capture/Combustion	71,610
Farm Power Lynden Anaerobic Digester	Livestock Gas Capture/Combustion	30,426
Sudbury Road Landfill Gas Destruction Project	Landfill Gas Capture/Combustion	32,087
George DeRuyter & Sons Dairy	Livestock Gas Capture/Combustion	131,618
Vander Haak Dairy	Livestock Gas Capture/Combustion	3,639
Lenz Composting	Organic Waste Composting	28,522
Farm Power Lynden Anaerobic Digester	Livestock – ARB Compliance	22,901
Edaleen Cow Power, LLC	Livestock Gas Capture/Combustion	17,053
Washington Beef LLC Greenhouse Gas and Solids Reduction Project	Organic Waste Digestion	58,293

Emission Reduction Units (continued)

Project Name	Project Type	Total Number of Offset Credits Registered
Cedar Grove Composting	Organic Waste Composting	128,445
Cedar Grove – Maple Valley OWC Composting Project	Organic Waste Composting	250,643

Dairy Digesters

Ecology asked the Department of Commerce for some estimates on the potential for dairy digesters to produce emission reductions. These are illustrative, given certain assumptions, and are cumulative. Note that these should be additional to the projects already registered in, for example, the Climate Action Reserve as listed above. The results are below (with assumptions in the footnotes):

Table 7: Potential Dairy Digesters

Dairy Digesters	2020	2030
New digesters with no existing commitment for emission reductions	400,000 MT CO _{2e} ⁴⁹	1,000,000 MT CO _{2e} ⁵⁰

Renewable Energy

Close to ten million MWh of renewable energy project production may be available in Washington at this time for CAR compliance (see below). A large portion of this will likely be used for Washington Energy Independence Act compliance. However, a significant portion will likely be free for use in the CAR in the short term, and may be free in the longer term as well depending on how utilities choose to structure their REC portfolios in terms of out-of-state RECS being used for the EIA and in-state RECs being used for CAR compliance. Even assuming that large quantities of this renewable energy is used for EIA compliance that still frees up potentially millions of ERUs for use in the CAR.

Table 8: Renewable Energy Projects

Facility	Fuel	MWH
Qualco – Qualco	Biogas	6,222
Port Townsend Paper	Biomass	32,055
Weyerhaeuser Longview WA	Biomass	225,043

⁴⁹ From WA Department of Agriculture Dairy Nutrient Management Program, [Washington Dairies and Digesters](#) and the WA Department of Commerce Energy Office, Senior Energy Policy Specialist Peter Moulton, *Roadmap for Biogas Development in Washington State*. Washington has eight operating on-farm digesters, and up to ten in development that could yield credits over the next five years. The Yakima Basin project, with 7–8 digesters and pipeline injection in Outlook-Granger and Sunnyside, would manage manure from ~40,000 cows (roughly half the cows in the Yakima Basin). Two smaller projects, accounting for another 2,000 cows, are in development in Whatcom and Snohomish counties. Current literature estimates 4–5 MT CO_{2e} per cow per year, with biogas yields doubling if the manure is co-digested with agricultural and food processing wastes. The estimate for 2020 is based on 40,000 cows at 10 MT CO_{2e} per cow per year.

⁵⁰ Craig Frear, formerly with WSU and now with Regenis, [estimated](#) the number of dairy cows statewide that could be economically included in digester projects to be ~100,000. The estimate for 2030 is based on 100,000 cows at 10 MT CO_{2e} per cow per year.

Emission Reduction Units (continued)

Facility	Fuel	MWH
Longview Fibre	Biomass	275,734
WestRock (WA)	Biomass	338,203
Cosmo Specialty Fibers Plant	Biomass	103,555
Cedar Hills	LFG	22,682
LRI LFGTE Facility	LFG	36,677
Roosevelt Biogas 1	LFG	151,659
West Point Treatment Plant	OBG	16,881
Kettle Falls Generating Station	WDS	320,249
Darrington	WDS	18,992
SDS Lumber Gorge Energy Division	WDS	5,820
Sierra Pacific Aberdeen	WDS	122,131
Sierra Pacific Burlington Facility	WDS	159,064
NPI USA Cogeneration Plant	WDS	7,573
Big Horn Wind II	Wind	103,866
Big Horn Wind Project	Wind	431,826
Coastal Energy Project	Wind	16,270
FPL Energy Vansycle LLC (WA)	Wind	343,021
Goodnoe Hills	Wind	186,746
Harvest Wind Project	Wind	236,025
Hopkins Ridge Wind	Wind	362,253
Juniper Canyon I Wind Project	Wind	307,443
Linden Wind Energy Project	Wind	132,595
Lower Snake River Wind Energy Project	Wind	732,789
Marengo Wind Plant	Wind	436,657
Nine Canyon	Wind	211,208
Palouse	Wind	293,563
Sagebrush Power Partners	Wind	253,803
Swauk Wind LLC	Wind	11,215
Tucannon River Wind Farm	Wind	758,197
Tuolumne Wind Project	Wind	333,606
Vantage Wind Energy LLC	Wind	237,043
White Creek Wind Farm	Wind	483,372
Windy Flats Wind Project	Wind	621,861
Wild Horse	Wind	609,963
Snohomish PUD Solar Express	Solar	1,411
Boulder Community Solar	Solar	511
Mason County PUD 3–Johns Pr Bldg D Solar Project	Solar	182
Little Falls #4	Hydro	4,862
Long Lake #3	Hydro	14,197
Rocky Reach Hydroelectric Facility	Hydro	47,756
Priest Rapids Fish Bypass	Hydro	401,349
Wanapum Fish Bypass	Hydro	5,571

Emission Reduction Units (continued)

Facility	Fuel	MWH
Lower Baker Incr. Hydro Project	Hydro	103,365
Snoqualmie Falls Incr. Hydro Project	Hydro	18,904
Woods Creek Hydroelectric Project	Hydro	1,053
Mossyrock Incremental Hydro	Hydro	46,758
Cushman No 2 Incremental Hydro	Hydro	18,000
Lagrande No. 6 Incremental Hydro	Hydro	3,300

The above are intended to be illustrative of the kind of potential supply of ERUs that exists now, and that can be expected to be maintained into the near future. Ecology is aware that supply and availability of ERU generation opportunities is vitally important to this program.

Therefore, while Ecology does believe that there are sufficient ERU opportunities available to meet program needs in the short term (as illustrated above with some examples) Ecology will be routinely evaluating those conditions and any conditions affecting ERU supply and will consider future adjustments to the program if necessary to ensure an adequate supply of ERUs.

Role of Allowances from Cap-and-Trade Programs

Response 263

Why a compliance pathway for the use of allowances is included

Ecology provided the option of buying allowances from external carbon markets as a compliance pathway for several reasons. First, numerous stakeholders representing diverse viewpoints have asked for the ability to tap external cap-and-trade markets throughout the process of developing this rule. Second, Ecology has in general worked to provide a wide array of compliance means for those affected by the rule. Third, by allowing access to these external instruments it provides an effective price ceiling for the program since the allowance prices in these external programs are generally well understood with the ability to forecast those prices with a relatively high degree of confidence. Fourth, interactions with other programs external to Washington has been a long-standing goal of Washington climate policy in recognition of the necessary global response to the global problem of climate change.

Response 264

How the use of allowances translates into an ERU

The use of allowances from existing multi-sector, GHG cap-and-trade programs represents a unique emission reduction activity. Key to understanding this activity is the fact that it is the action of taking those allowances out of service permanently from their original markets that causes the emission reduction to occur. It is not the mere fact of obtaining an allowance. Instead, allowances must be obtained through other programs or through the secondary market, and then retired or permanently taken out of service, in accordance with the system or protocol those other programs devise. When that fact is sufficiently demonstrated to Ecology, an ERU will be issued or assigned.

Limitations on generating emission reductions

Response 265

Limits on the use of allowances

Tapping into external cap-and-trade GHG programs entails some level of responsibility to respect the conditions of those markets and to minimize any potential harms, whether real or perceived, that might result. As a result, certain limits on the use of allowances to generate ERUs from applicable markets were put in place in the rule. The text in the rule has been clarified to assist in understanding those limits. First, an overall limit on the number of allowances that can be used to generate ERUs for the CAR is established to ensure that the impact on an external program's supply of allowances for its program is minimal. Second, the portfolio of those allowances that can be used to generate ERUs is required to reflect a roughly consistent supply stream from across the vintage years of the allowances in question. In short, allowance limits are established to minimize both the overall impacts on demand for allowances from external GHG reduction programs, as well as to ensure that any demand from those programs is spaced out over time so that there is no last-minute "rush" for allowances at the end of the compliance period for the CAR.

This concept is put into effect in the text of the rule, at WAC 173-442-170, in Tables 3 and 4. Table 3 provides an upper limit on the number of allowances that can be used in a compliance period to generate ERUs. Table 4 takes that upper limit and further stratifies it by vintage years. In short, Table 3 provides guidance on how many total allowances can be used in a compliance period, and Table 4 provides further guidance on how those allowances must be distributed by vintage year.

Using a numeric example, a covered party has a compliance obligation of 100 for the first compliance period (2017–19). Table 3 says for that first compliance period, 100 percent of that obligation can be met with ERUs generated from allowances. The covered party chooses to pursue that option. When looking to acquire those 100 allowances, Table 4 further delineates that no more than 35 percent of those allowances may come from vintage year 2017, 40 percent from 2018, and 40 percent from 2019. The covered party chooses to take 35 allowances from vintage year 2017, 35 from 2018, and 30 from 2019 for a total of 100 allowances. The 100 allowances do not exceed the upper bound of usage for that compliance period (100 percent) and are spread out (in terms of their vintage year notation) over the compliance period as required. Note that the percentages in Table 4 add up to over 100 percent to allow covered parties some room to adjust which vintage years within a compliance period they wish to acquire and use to generate ERUs.

Too many restrictions generating and using ERUs

Response 266

The ten-year lifetime for emission reduction units should be extended

The ten-year period of ERU availability strikes a balance between ensuring that emission reductions are not needlessly hoarded by parties while also providing the necessary flexibility to covered parties to bank for uncertainty in future years. Borrowing is available to parties through the use of a three-year compliance period, so that provides additional flexibility.

Response 267

Including the option for emission reduction projects and programs (or “offsets”) provides environmental benefits while reducing costs and is important for the program

As previously noted, the inclusion of an option for emission reduction projects is functionally necessary in order for the program to provide a plausible compliance pathway for the majority of the emission reductions necessary in the program. Ecology agrees with commenters who also note that emission reduction projects provide a range of other benefits including capturing emission reduction possibilities in sectors that aren't covered by the cap, adding price stability to the program, and bringing with them a wide range of potential co-benefits.

Response 268

Should not place any restrictions on emission reduction projects from out-of-state

Ecology chose to put in place an in-state limit on the projects and programs that may generate ERUs for three primary reasons:

- Doing so ensures a level of enforceability for the program that would not otherwise be possible. By having projects and programs physically or geographically located in the state, Ecology can be assured that state and local governments have the ability to enforce the nature and operations of projects and programs in a manner that can make sure that the emission reductions that result from those programs or projects are real. It also aids in the verification of those emission reduction projects. Without this level of assurance, Ecology may be forced to look toward other methods of enforceability, including invalidation of ERUs (which is not part of the current rule).
- There are numerous environmental and social co-benefits to locating emission reduction projects and amplifying emission reduction projects in-state. Many of those co-benefits are directly consistent with Ecology's mission, including the improvement in air quality, water quality benefits, improvements in localized health conditions, and so forth. These co-benefits would not be realized by residents in Washington unless the emission reduction projects and programs were located in-state.
- This program is premised on the concept of Washington doing its part to help reduce global GHG emissions. Although climate change is unique in that a reduction in GHGs in one part of the globe has the same effect on climate as a reduction in another location that fact does not alter the need for all global parties, including Washington, to do their part. Focusing the program in a manner that helps ensure that Washington does indeed do its part, through actions within its own borders, is consistent with this basic premise.

For additional information, refer to Response 6. Ecology is aware that supply and availability of ERU generation opportunities is vitally important to this program. Therefore, while Ecology does believe that there are sufficient ERU opportunities available in the short term to meet program needs (as outlined elsewhere) Ecology will be constantly evaluating those conditions and the in-state limitation can be re-examined in the future if necessary.

Response 269

Multi-sector requirement is too restrictive or unclear

Some commenters assert that it is arbitrary for Ecology to limit the type of allowances that can be used to generate ERUs to those from multi-sector GHG reduction programs. Ecology disagrees. Programs similar in scope to the CAR have similar features and mechanisms to ensure confidence that the allowances in those programs result in reductions in GHG emissions that are of similar quality and scope to those in the CAR.

Ecology chose to limit any potential sources for allowances to external GHG reduction programs that are of substantially similar scope and ambition to that of the Washington CAR. In particular, given the importance of transportation to Washington’s GHG emission portfolio, it is important that sector be part of the coverage of a multi-sector program that provides allowances for use in the CAR to generate ERUs. Details on how allowances would generate ERUs from these programs, and the policies and procedures involved with dealing with external GHG reduction programs, will be part of implementation guidance for the CAR.

Not enough restrictions on how emission reductions are generated or counted

Response 270

Ecology should not allow emission reduction projects to substitute for on-site reductions or, if allowed, then place a limit on how much compliance can be met in this fashion

Ecology has chosen to allow companies to reduce their emissions through the use of emission reduction projects or programs (commonly called “offsets” or “carbon credits”) because when devising a rule Ecology must provide a means for those regulated by the rule to comply. Some regulated by this rule have the ability to reduce their “on-site” emissions because they are located at a facility, and typically there are emissions associated with that facility (*e.g.*, because of on-site combustion or industrial processes). These types of regulated parties do have some ability to reduce their emissions directly, *i.e.*, through modifications, changes in processes, and so forth at their facilities.

The second type of emissions—where the regulated party has no ability to directly control how much is emitted—are called indirect emissions. Because these regulated parties can’t control how their product will be used—and how much emissions will result—the only way they have to acquire the emission reductions necessary to address the GHG emissions associated with their product is to obtain those emissions elsewhere in the economy. Moreover, because the majority of emission reductions required are not from entities that are able to reduce their own emissions, it is critical to have a system in place that provides multiple options to obtain those emission reductions from elsewhere.

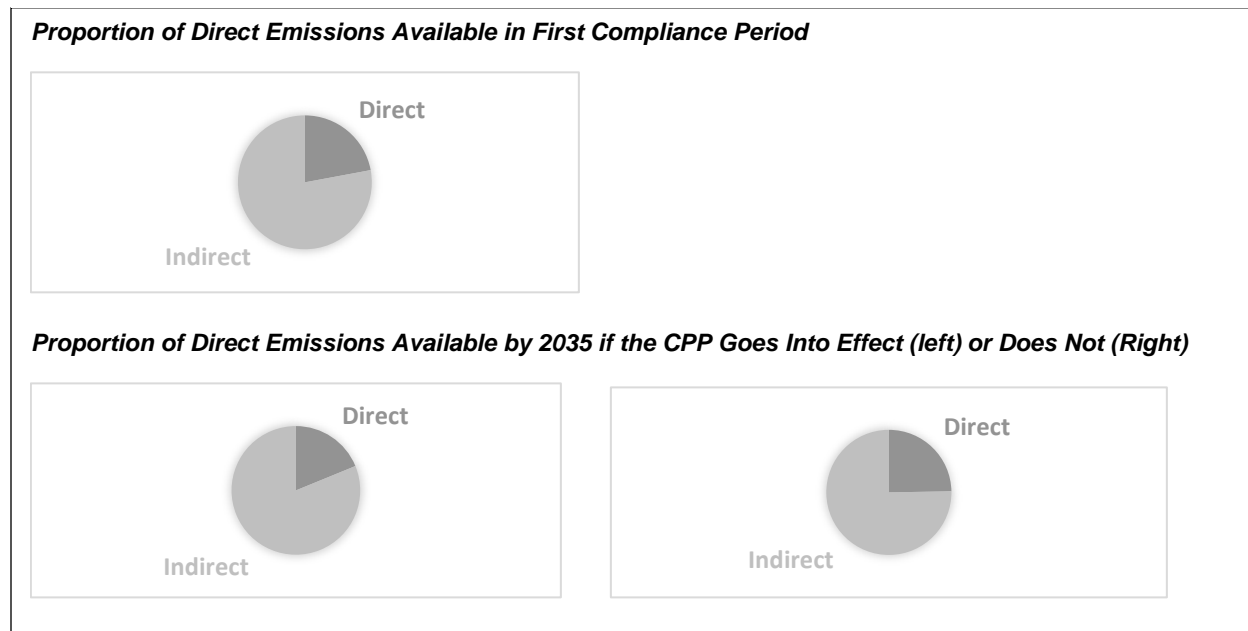
The extent to which the CAR is reliant on being able to find emission reductions from sources other than those that directly emit is made clear in Figure 1. The pie charts show that, depending on what happens with the federal CPP, the reductions required in the CAR that come from entities that directly emit their emissions represents only between one-quarter to one-fifth of the total emission reductions required in the program. Put another way, roughly 75–80 percent of the emission reductions required in the program need to be acquired by entities that lack ability to reduce those emissions directly, instead relying on downstream users of their products to reduce those emissions.

Limitations on use of allowances (continued)

The fact that the large majority of emission reductions come from entities that are not able to reduce their own on-site emissions makes it problematic to place limits on the use of emission reduction projects within the program. Ecology endeavors to put in place regulations for which there is a plausible way to comply. If Ecology were to tell those with responsibility for the indirect emissions that they have no other option but to cut their production and distribution of natural gas, or to cut production of petroleum fuels like gasoline or diesel, the rule would provide no plausible means of compliance to these covered parties. Moreover, in the case of natural gas, the utilities that supply natural gas are required by law to provide what is needed; they can't just simply cut distribution.

In the case of the large refineries, even if they could curtail production and ration their fuel production the end result may have no impact on GHG emissions. Since the regulation ends at the state's border, residents may drive long distances to fuel up (burning even more fuel in the process). More fuel would likely be imported (which may be compensated to some degree with other mechanisms in the rule). Rationing of fuel would hit low-income and communities of color

Figure 1: Proportion of Direct Emissions Available in Compliance Periods



the hardest as they tend to have fewer options for mobility than the general public. On the other hand, if those covered by the rule have the opportunity to help put in place projects and programs that help reduce demand for these fuels in the first place there can be a real and lasting supply and demand effect which will result in reduced emissions.

Response 271

The Excessive Role Envisioned for Allowances Would Impose Costs and Deny Benefits to Washingtonians

The CAR only allows projects based in Washington State to generate ERUs. The rule does allow covered parties to purchase allowances from out of state carbon markets—upon Ecology's approval—and convert those to ERUs to meet their compliance obligation. The percentage of the compliance obligation that can be met using out of state allowances decreases over time. Ecology concluded that allowing access to allowances from external markets can provide a less burdensome way for covered entities to meet their obligations, especially in the beginning years of the program.

Ecology disagrees this system is excessive and believes that allowances from programs approved by Ecology can help entities covered by the CAR meet their compliance obligations and reduce GHG emissions in a cost-effective manner. An allowance issued by carbon markets such as California is equivalent to one metric ton of CO₂e. Those allowances are then either issued to covered entities, or auctioned; entities covered under the market must acquire enough allowances to meet their GHG emissions. Because allowances translate to a one metric ton measure of CO₂e, and carbon pollution is a global problem, Ecology concluded that buying and retiring an allowance from an appropriate carbon market would be equivalent to a metric ton of CO₂e reduction. Purchasing allowances from other carbon markets is one of several pathways available to covered entities to meet their compliance obligations.

WELC commented that “Ecology’s focus should be in requiring polluters to install the technology needed to minimize the pollution.”⁵¹ This demonstrates a fundamental misunderstanding of the CAR and the pathways for entities to comply. While some covered entities will be able to make improvements in efficiencies or switch fuels to reduce emissions, there will be a limit to what they can achieve. Unlike the case for criteria air pollutants such as sulfur dioxide or particulate matter, there is no scrubber or technology control for carbon dioxide. Further, fuel producers and suppliers are responsible for the GHG emissions from fuels and natural gas burned in vehicles, industries, and homes. There is no technology these entities could install to reduce GHG emissions. This is why Ecology has deliberately created a variety of ways in which entities can comply and meet their obligation.

We also note the LBA analysis assesses the costs of complying exclusively on-site. It is more burdensome, based on the higher costs of on-site emissions reductions reflected in the CBA, as well as the limited ability of some fuel suppliers to reduce emission on-site and comply with the rule. We have clarified the LBA discussion to reflect this. Additionally, the LBA does not compare the costs and benefits of the alternatives (as the CBA does for rule content), but is based on achieving the goals and objectives of the authorizing statute. Imposing the additional burden of on-site-only compliance would not achieve emissions reductions to a greater degree, and in cases where on-site emissions reductions are limited or not available, may reduce the efficacy of the program if emissions reductions are not achieved at all.

Response 272

The use of emission reduction projects (or “offsets”) for compliance is new and untested

The use of emission reduction projects or programs to mitigate GHG emissions is the oldest and one of the most established types of GHG regulatory programs in the United States. This policy framework already exists in Washington (Chapter 80.70 RCW) and has been used to mitigate the carbon dioxide emissions of certain power plants in Washington since the early 2000s. Many of the same concepts apply to the CAR, although in this case applied economy-wide across the state.

The CAR utilizes the strong foundation that has been developed in ensuring that emission reduction projects meet the robust criteria found with other climate protection programs, including the Washington carbon dioxide mitigation standard. Emission reductions from projects and programs must be real, permanent, verifiable, enforceable, and meet specific tests of additionality. The CAR also relies on well-established and well-regarded emission reduction project programs

⁵¹ WELC Comment Letter, p. 35.

that are internationally recognized for the quality of the emission reductions that they certify, most notably the Climate Action Reserve, the American Carbon Registry, and the Climate Trust.

Response 273

Should not allow companies to pollute locally and buy their way into compliance from out-of-state

Ecology recognizes the concerns of many that the CAR may not do enough to encourage on-site, direct emission reductions at certain key facilities which have localized impacts on communities. The ability for covered parties to purchase allowances, and then to convert those allowances into ERUs for use in the CAR, has been balanced with the desire of many stakeholders to look toward Washington first for emission reductions. As noted, there are limits on the ability of covered parties to use allowances to generate ERUs that decline over time. Allowances from other cap-and-trade programs also increase in price over time, and are already potentially the highest cost option for those covered in the program. So the economics will likely favor finding those emission reductions closer to home. Even if the economic incentive doesn't work out that way, the hard limits on using allowances to generate ERUs will phase in over time.

Allowing emission reduction projects and programs in covered sectors

Response 274

Ecology should issue allowances and use an allowance-based program design

Ecology is establishing the CAR pursuant to our authority under the Washington CAA. We embarked on this approach after legislation that would have fully authorized Ecology to establish an allowance-based cap-and-trade program was not successful.

Ecology may have legal authority to establish an allowance-based system. However, Ecology lacks clear legal authority to auction allowances or otherwise charge for them under our existing CAA authority. Since a key advantage of an allowance-based system is the ability to set a price signal, and Ecology may lack the ability to do so through the traditional mechanisms, Ecology determined that the significant additional administrative burdens associated with an allowance-based system do not merit an allowance-based approach. In terms of GHG emission reductions, the benefits of an allowance-based approach are no greater than the benefits of the approach that Ecology has chosen to implement. In short, Ecology's approach will result in meaningful GHG emission reductions without the added administrative burden of tracking individual allowances.

Response 275

The program design should not allow "double counting" of emission reductions

A large number of commenters have requested that Ecology correct what has been labelled by many as "double counting." This phenomenon occurs in any GHG reduction system based on a cap (including allowance systems) in which emission reduction projects or programs occur in capped sectors. In the case of the CAR, virtually the entire state's economy that contributes to GHG emissions (all emitting sectors but agriculture) have been capped or, put another way, about 93–94 percent of Washington's emissions fall into capped sectors of the economy. For all intents and purposes for the discussion below, all sectors for which a GHG cap is feasible are included.

As has been discussed elsewhere, the program structure of the CAR requires that an emission reduction occur in order for an emission reduction unit to be credited. However, when an emission reduction occurs as a result of a project or program in a capped sector two things happen. One, the project or program generates an emission reduction, which is real and measurable and credited to

Limitations on use of allowances (continued)

the entity which causes the project or program to happen (and potentially can be transferred elsewhere). Two, the overall emissions in that economic sector relevant to the project or program drop by the amount of that emission reduction. However, in some cases (and particularly with transportation emissions), it can be difficult if not impossible to provide credit to any one entity for that emission reduction since it occurs sector-wide. These two effects happen simultaneously.

As an example, if a program happens in the transportation sector that reduces demand for petroleum fuels, the results of that program may be measurable and an entity can say they reduced X gallons of gasoline which resulted in Y less emissions from the transportation sector. However, when the total emissions of that sector are reported through the GHG reporting program, which will happen by reporting the total amount of fuel being provided for use in Washington, that same program will result in X gallons not being reported, and Y less emissions showing up for the entire sector. However, it is not at all clear which entities will end up reporting that they produced X fewer gallons, and were responsible for Y fewer emissions, because at the end of the day it is consumers of fuel who make the decisions as to where, how much and who they purchase from (and the distributors of that fuel make the decision who supplied those customers). So, there is no clear way to attribute the sector-wide emission reduction, even though it occurs concurrently with the program-specific emission reduction that kicked off this chain of events.

Because Ecology has no plausible choice other than to allow emission reduction projects and programs, given that the majority of emission reductions needed in the program come from entities responsible for indirect emissions and those entities are not able to reduce their own emissions, Ecology has two options:

- Allow emission reduction projects and programs in covered sectors including the transportation sector, which is Washington's largest contributor to the state's GHG emissions, recognizing this may lead to some double counting. The transportation sector is responsible for about 46 percent of GHG emissions in Washington.
- Prohibit emission reduction projects and programs from occurring in the transportation sector (and other covered sectors), and thus severely constrict emission reduction options in all sectors except agriculture and, to some extent, industry. This option would require most, if not virtually all, emission reductions to occur out-of-state (which is not currently allowed in the CAR).

As noted previously allowing emission reductions to occur in covered sectors, notably the transportation sector, does lead to the so-called "double counting" effect (although the actual crediting of emission reductions to covered parties is often less than two-for-one, as the previous example noted). Some commenters have indicated that they would prefer the second option, even if that meant making minimal progress toward reducing transportation emissions in Washington. Ecology respectfully disagrees, and believes that making progress toward reducing transportation emissions in Washington is arguably the most important goal any large-scale climate policy should have given the magnitude of transportation GHG emissions in Washington.

Importantly, there are specific provisions in the rule that can mitigate or eliminate this "double counting" effect. In cases where ERUs may be generated in the industrial or waste sectors by projects that result in direct emissions reductions at the emitting facility and that are reflected in the GHG reporting program, there is a provision in the rule that allows only one ERU to be generated and credited. Note that this is a specific case where even though the two ERUs are conceptually created simultaneously, the fact that they are created at the same physical location

Limitations on use of allowances (continued)

allows the GHG reporting framework to capture that “moment,” and correct accordingly. The bottom line is that in the industrial and waste sectors there is a mechanism in place in the rule to address this issue.

Discussed elsewhere, but noted here as well, is the fact that the Reserve mechanism includes a provision for retiring ERUs to cancel out any “double counting” effect contingent on the supply of ERUs available. Therefore, there is a mitigation measure for Ecology to utilize as necessary. Finally, a key sector where double counting could occur is the electricity sector. This is most likely to occur in situations where energy efficiency and renewable energy projects are utilized by utilities that also own the power generation that is supplying the power that is offset by those same projects. However, when the federal CPP goes into effect the power sector will transition to being regulated by the federal CPP. Therefore, a self-correcting mechanism is built into the rule, which is triggered once power plants transition to coverage under the CPP.

Response 276

The language in regards to the Reserve addressing double counting is insufficient

As suggested by several commenters, the language in the sections of the rule dealing with the Reserve and addressing situations where accounting issues may arise when projects or activities in covered sectors occur has been expanded. Please see Response 293 and Response 298 for more discussion.

Response 277

Clarify or remove language regarding how projects at reporting facilities interact

The language in WAC 173-442-160(2)(c) has been clarified to make clear that when a project is implemented on-site at a facility that is reporting its GHG emissions that project is not eligible to receive ERUs if an ERU is also being granted as a result of reduced emissions at the facility.

Third-party verification

Verification procedures

Response 278

Third party verification should not/should be required

Third party verification is essential to ensure emissions reductions are real and to protect economic investments made by covered parties.

Response 279

What are the goals of the verification programs in Chapter 173-441 vs. Chapter 173-442 WAC

The procedures are similar but the content of the report is different. Chapter 173-441 WAC verification focuses on GHG emissions by the source and the content of the annual GHG report. Chapter 173-442 WAC verification focuses on the covered party's ERU balance and overall compliance with the program. Rule language is often parallel to make the programs similar.

Response 280

Can the same verification company be used by a covered party for annual GHG reports and a compliance report/can they combine the site visit

Yes, the same verification company can be used by a covered party for annual GHG reports and a compliance report for those same years. Nothing explicitly prohibits a combined site visit. If the verifier can perform the necessary activities by the required deadlines, then a single visit is permitted.

Response 281

Can the same verification company be used for a compliance report that uses ERUs that were verified by the same verification company

Once an ERU is certified it is equivalent to any other ERU. The Chapter 173-442 WAC verifier would be able to work on the project.

Response 282

What is the purpose of "other forms of noncompliance with this chapter"

The statement is consistent with its meaning and is a common provision in regulations. Chapter 173-441 WAC contains requirements that must be met. Noncompliance with any of those requirements could trigger this provision.

Conflicts of interest

Response 283

Reasons for including conflict of interest provisions

Conflict of interest provisions are essential to insure the third party is truly independent and their review is unbiased. We have used standard conflict of interest provisions found in similar programs such as California.

Response 284

Clarify the conflict of interest provisions in WAC 173-441-085(7)(c)(ii), particularly “any services”

This provision does include third party verification services. A covered party can hire the same verifier for up to six consecutive years. Afterwards when hiring a new verification body the covered party cannot hire a different body that employs the same people that worked on their last verification. This prevents the same individuals continuously providing verification while changing verification bodies in name only.

The provision is designed to prevent a conflict of interest and ensure the third party is truly independent, so it does apply to all services, even if not directly related to Washington’s GHG programs.

Response 285

Conflict of interest provisions in WAC 173-442-220(6)(b) mean the six-year limit may not align with three-year compliance periods

A covered party may use the same verification body for up to two compliance periods of three years each for a total of six years. If the start of the six-year window does not align with the beginning of a compliance period, then the verification body may not be used for both compliance periods.

Need for verification

Response 286

A significant change in source, which would trigger full verification, should be defined as the addition of any GHG source at a facility that causes an increase in emissions greater than 10 percent, not 25 percent

It is not uncommon for a source to have changes in GHG emissions greater than 25 percent from year to year. A value of 25 percent is also used in other programs, such as California. Nothing prohibits more frequent full verification. The source and verifier can work with Ecology to determine site-specific significance if the value is less than 25 percent.

Response 287

Clarify whether projects that have already been verified and have generated emission reductions through an external registry program need an additional verification under CAR to generate ERUs

Projects would be subject to any verification criteria, procedures, or methods that are part of the protocols, processes, or methodologies applicable for the type of emission reductions. Verification will be simpler and cheaper if the content was previously verified. Nothing prohibits the same verification body from performing the verification.

Verification standards

Response 288

Is a reasonable level of assurance required for all verifications or just less intensive verifications

Full verification includes all aspects of less intensive verification. Verification standards are found in WAC 173-442-220(3) and apply to both full verification and less intensive verification. Chapter

Third-party verification (continued)

173-442 WAC uses International Organization for Standardization (“ISO”) 14064-3:2006 protocols.

Response 289

Define verification standards for the verification of ERUs and Compliance Reports (if applicable)

The verification standards in Chapter 173-442 WAC are deliberately different from those in Chapter 173-441 WAC as the verification programs evaluate different things. Chapter 173-442 WAC uses ISO 14064-3:2006 protocols.

Response 290

What is an “adverse verification statement”/“positive verification statement”

Adverse verification statement is defined in WAC 173-441-085(3). A positive verification statement would be a certification that the annual GHG report does not contain an adverse verification statement.

Response 291

Change the list of available program accreditations in WAC 173-441-085 Section (7)(a)(iii) and WAC 173-442-220(6)(a)(iii) to include or exclude various programs

The purpose is to demonstrate professional experience with GHG verification techniques. Ecology is the final certifier of third party verifiers for Washington’s GHG programs.

Inclusion in WAC 173-441-085(7)(a)(iii) or WAC 173-442-220(6)(a)(iii) does not guarantee certification, it is just one of the standards that must be met before certification is achieved. Ecology will not certify an organization with a listed accreditation that does not demonstrate sufficient abilities to verify Washington reports. Also, Ecology can approve other GHG verification standards if needed.

Ecology will continue to evaluate this list as we establish more detailed verification body training and certification programs. Public input is welcome during this process.

We are adding accredited ISO 14064 registrars to the list during this rulemaking. However, for the reasons explained above, we are not limiting accreditation programs to only include those from American National Standards Institute, as was suggested by more than one stakeholder.

Registry

Tracking emission reductions

Response 292

Ecology should implement a clear and transparent tracking registry

Ecology is in the process of developing a registry system that is functionally similar to the compliance tracking system used in the California system. Despite the term “registry” used in the rule, it is best to think of it more as an accounting compliance tracking system than a project or offset registry as is found through programs like the Climate Action Reserve or the American Carbon Registry. Once the rule is final Ecology will be working directly with Climate Action Reserve and the American Carbon Registry to ensure that there is an ability to move emission reductions from those systems to the Ecology system. Ecology feels that an electronic tracking system is preferable to the paper system suggested by some commenters.

Reserve

Contribution rate

Response 293

How was the Reserve rate established/appears to not be sufficient to meet the uses of the Reserve/what happens if there are not enough ERUs in the Reserve

Any calculation of the Reserve contribution rate involves projecting how a new and complex program will function years in the future. There are many complex variables, including: final baseline GHG values, actual GHG emissions during compliance periods, EITE covered party production rates, expansions at existing stationary sources, new covered parties, curtailment, economic trends, as well as the various uses of Reserve ERUs. Ecology's understanding of these factors will improve over time, but the initial contribution rate has to be a best estimate. We know that we may have to adjust the rate as we learn more about the program. Any adjustment will require rulemaking which is part of our stated goal to continuously review and amend the regulation as needed (WAC 173-442-320(1)).

The Reserve is filled with ERUs contributed by covered parties. In most cases, increasing the size of the Reserve means increasing the compliance obligation of the covered parties. With so many unknowns, Ecology decided to take a precautionary approach early in the program and keep the contribution rate low until we know how large the Reserve really needs to be.

The CAR is a cap and reduce program, not an allowance-based system. Covered parties are required to surrender ERUs based on the difference between their actual GHG emissions and their GHG reduction pathway, not their total GHG emissions. This means the Reserve only needs to be large enough to cover a fraction of total emissions. Both contributions and withdrawals from the Reserve will begin small and grow over time as GHG reduction pathways decline. The Reserve will also carry over ERUs from year to year, acting as a bank and smoothing out demand. Ecology will have advanced notice of trends before Reserve ERUs are needed because of the delay between reporting and compliance deadlines.

Ecology estimated Reserve contributions for the first few years of the program based on projected baselines using 2012–2015 reported data. We accounted for different entry dates due to EITE status, petroleum product importers, and threshold. EITE covered parties were assumed to have production levels consistent with their baseline period. Changes due to curtailment and increases from new or expanded sources are more difficult to predict, but we examined a few different scenarios. Using the contribution rate in the rule, we expect a small but net positive Reserve account that grows each year through the first two compliance periods. The Reserve should be enough to meet at least the first three priorities for that time period per WAC 173-442-240(4). After the program has been running for a few years we will have more information to help make any needed contribution rate adjustments.

Response 294

Does the 1.7 percent reduction include the Reserve contribution or is that an additional two percent

The 1.7 percent reduction does include the Reserve contribution. Two percent of this value goes into the Reserve. EITE covered parties contribute to the Reserve based off of the difference

Reserve (continued)

between their rate-based requirements and requirements that would have been in place if they were on a mass-based pathway. WAC 173-442-240 was changed to clarify this issue.

Response 295

How does the Reserve work with EITE covered parties

For EITE covered parties the Reserve is used to translate their rate-based obligation into a mass-based limit that fits under the aggregate cap. If the EITE covered party has lower production than their baseline period the party will have a compliance obligation that is lower than it would have had under a mass-based program. The difference in ERUs goes into the Reserve. In the opposite case where current actual production is higher than baseline production an amount of ERUs equivalent to the difference are retired from the Reserve to maintain the overall cap.

Response 296

The Reserve should keep ERUs generated from curtailment separate from other ERU sources

Ecology has already taken steps to minimize leakage due to curtailment. We believe it is appropriate to have a single Reserve account.

Curtailment provisions are designed to minimize leakage by reducing the opportunity to profit by moving production out of state. Without curtailment, a party could shut down a Washington source, move all emissions out of state, and continue to sell ERUs to other Washington sources. Placing the ERUs in the Reserve removes much of the incentive. The amount of ERUs going to the Reserve is based on the reduction pathway of the source. By pausing the reduction pathway we minimize the amount of ERUs going to the Reserve.

Response 297

Are electric generating units eligible to receive Reserve ERUs

Electric generators are not EITEs and are not eligible for curtailment, therefore they cannot receive ERUs from the Reserve for those purposes. Qualifying new or modified sources are eligible to have ERUs from the Reserve retired to offset their emissions increases.

Prioritization

Response 298

The Reserve should be designed to accommodate all needs so prioritization is unnecessary

Many commenters express concern over the ability of the Reserve to address all of the stated uses of the Reserve, and prefer that there be a guarantee that all needs of the Reserve will be met without a prioritization of those needs. However, given the impossibility of predicting with 100 percent accuracy all the needs and market dynamics of the program going forward, it is not possible to guarantee with absolute certainty that all needs of the Reserve will be met. Therefore, a prioritization is the most honest way to convey Ecology's intent and the process by which Reserve uses will be addressed.

Ecology is aware that the Reserve rate will need to be adapted over time. Future rulemakings will undoubtedly include modifications to the Reserve to assist in ensuring that the stated uses of the Reserve can be met adequately. With specific reference to the voluntary green power market, Ecology has stated its intent to continually assess the voluntary green power market in cooperation with the state's energy agencies.

Other requirements

Program review

Response 299

The CAR should be reviewed every 3–5 years or provide a clause for periodic review

Ecology intends to closely monitor and evaluate how the CAR achieves its objectives as it is implemented. This will include periodic rule revisions and updates to ensure that the rule functions as intended, incorporating and adjusting for new state and national carbon programs as necessary, and ensuring that emission reductions are achieved. Ecology has therefore determined that there is no need for a clause requiring a specific period to review the rule.

Response 300

The CAR should have a sunset date

Ecology disagrees. While the CAR currently provides for GHG emission reductions through 2035 and beyond, it is unclear that the reduction requirements should end at a specific point in time. It is also likely that the CAR will be revised in the future to incorporate changes in response to lessons learned from implementation, additional programs being developed, etc. Ecology therefore has determined that including a sunset date in the CAR is unnecessary at this time.

Enforcement

General enforcement comments

Response 301

Clarify timing of enforcement

Ecology expects covered parties to verify their emissions and obtain ERUs during the compliance period, not retroactively. Ecology staff will be available to assist covered parties in questions regarding emissions, ERUs, and other aspects of the CAR to ensure that covered parties are aware of their compliance obligations.

Response 302

Enforcement provisions are too strict/exceed Ecology's authority/each metric ton should not be a separate violation.

Ecology disagrees that the penalty provisions in WAC 173-441-090 and WAC 173-442-340 exceed our statutory authority. RCW 70.94.431 (1) provides that "any person who violated any of the provisions of [Chapter 70.94 RCW]...or any of the rules in force under such chapters may incur a civil penalty in an amount not to exceed ten thousand dollars per day for each violation. Each such violation shall be a separate and distinct offense, and in the case of a continuing violation, each day's continuance shall be a separate and distinct offense." As a regulation established under Ecology's authority under Chapter 70.94 RCW, the use of the penalty authority under RCW 70.94.431 is appropriate. Under the construct of the CAR, covered parties are required to meet their compliance obligations, defined as having a sufficient number of ERUs to meet their reduction requirement at the end of the compliance period. Ecology considers each ERU that a covered party is short a separate violation of the CAR.

Several commenters have remarked that this construction of the penalty provisions for the CAR is overly punitive and differs from the penalty provisions of other regulations established under Washington CAA authority. Ecology disagrees. It is important to note that the penalty provisions in the CAR are maximum amounts; they are not necessarily a starting point for any penalty that Ecology would issue. Ecology would first work with any covered party encountering difficulty in meeting their compliance obligation, and only issue penalties as a last resort and in accordance with the penalty guidance used by the Air Quality Program. It is not Ecology's intent to assess penalties as the first step in the enforcement process. However, Ecology believes it appropriate to clarify to covered parties the full extent of our penalty authority in the event of noncompliance to provide a strong incentive to comply with the requirements of the CAR.

Response 303

When will violations for not surrendering ERUs begin

ERUs must be submitted to Ecology for retirement by the compliance report deadline.

Response 304

A company making a correction to their annual GHG report, following WAC 173-441-085(5) should not be subject to penalties

Ecology retains enforcement discretion. Ecology may choose not to pursue enforcement or pursue enforcement at a level less than the maximum depending on the circumstances of the violation. Correcting a violation would certainly be factored into this decision.

Enforcement (continued)

Response 305

Ecology should make clarifying changes to the enforcement provisions

We have clarified the provisions by removing the language about each day being a separate violation. This language is unnecessary given existing statutory authority.

Response 306

Remove the redundancy and potential conflicts between WAC 173-441-090 and WAC 173-442-340

WAC 173-441-090 and WAC 173-442-340 are two separate processes. Ecology does not see a conflict.

Chapter 173-441 WAC

Response 307

What is the relationship between “facilities” and “suppliers”

Facility refers to any source covered under WAC 173-441-120. Supplier refers to any source covered by WAC 173-441-130. We have added clarifying language to the definitions.

Response 308

What does “producer” mean

A petroleum product producer is a petroleum refinery.

WAC 173-442-020(1)(i)(ii) states that the Suppliers of Petroleum Products, 40 CFR Part 98, Subpart MM, source category listed in WAC 173-441-120 is the basis for the petroleum product producer and importer categories. WAC 173-441-120 also adopts Subpart MM and adopts specific language in subsection WAC 173-442-120(2)(h)(i) stating that petroleum refineries and importers and exporters of petroleum products are subject to reporting. Petroleum refinery is defined as any facility engaged in producing petroleum products through the distillation of crude oil. Refiner is defined as the owner or operator of a petroleum refinery.

Response 309

“Final distribution” is confusing

This term comes from Chapter 173-441 WAC. It means the final destination of the product. It does not necessarily mean where the product is actually combusted or oxidized. For liquid products used in transportation, this often means the location where the product was placed into the device where the product is combusted or oxidized (*i.e.*, the fuel tank of a vehicle).

For example, gasoline pumped into the tank of a car in Spokane would have a final distribution in Washington even if the car drove across state lines using that product. Conversely, if the same car had additional gasoline pumped into its tank in Idaho for the return trip, that product would have a final distribution outside of Washington.

It appears that the term “distribution” as used in the rule is causing confusion, so Ecology has changed this term to “final destination” in both rules. This is consistent with terminology used in California’s GHG reporting program.

Response 310

What is the meaning of WAC 173-441-050(3)(d)(vii)

This is an existing requirement added during the previous rulemaking. If a reporter uses the EPA Input Verifier Tool (“IVT”) to generate their report, then they are required to submit the IVT XML file to Ecology as part of their report.

Response 311

How does WAC 173-441-086(1)(d) work with WAC 173-441-086(4)

Ecology certifies that verification bodies are permitted to participate in Washington’s program, but retains final review of all reports (WAC 173-441-085(8)). Agency review of verification statements is a standard and essential part of third party verification. This is consistent with WAC 173-441-086. Subsection (4) already does what the commenter seems to request, if the source can

correct their report to a level that satisfies Ecology, then the assigned emissions level can be corrected.

Response 312

Define “emissions level”

Emissions level is a quantity of GHG emissions in units of CO₂e.

Response 313

Five working days is not enough time to provide data

WAC 173-441-086 is generally triggered when a covered party is already noncompliant and is an early step in correcting the violation. This information should already be part of the party’s or verifier’s records. Five working days is used in other similar programs, such as California, for this purpose.

Response 314

Small GHG emitters should not pay for costs to administer CAR program

Ecology believes a simple, transparent, predictable reporting fee is important. Extra reporting costs will be necessary for smaller sources that are not covered parties to make sure they are below the CAR threshold. Non-CAR sources will not have to conduct third party verification which means their reporting costs will be significantly lower than CAR sources.

This fee only applies to reporting costs and does not include CAR-specific work such as ERU tracking or compliance reports.

Miscellaneous

Response 315

The CAR needs to protect against ocean acidification

While reducing GHG emissions globally will ultimately reduce ocean acidification, addressing regulatory mechanisms to address ocean acidification are beyond the scope of this rule, which is to establish emission standards for GHG emissions in Washington.

Response 316

Ecology must regulate emissions from new and retrofitted buildings

One commenter states that the CAR must also regulate emissions from new and retrofitted buildings. As the commenter points out, Chapter 19.27A RCW establishes energy efficiency standards for residential and non-residential buildings in Washington State. The State Building Code Council is charged with developing and implementing the Washington state energy code.⁵² Ecology has no authority to independently establish building code standards.

Further, almost all of the GHG emissions from the residential and commercial sectors will be covered by the CAR. For example, the great majority of GHG emissions from the residential sector are from burning natural gas, propane, home heating oil, or using electricity. The CAR covers emissions from natural gas as the natural gas LDCs are obligated for those emissions. Similarly, emissions from propane and home heating oil will be covered by the obligation of the fuel producers and suppliers. Finally, emissions from power produced within the state will be covered by the obligation of the power plants. The only emissions that will not be covered by the CAR are emissions associated with imported power.

Response 317

Instead of the CAR, Ecology should establish a comprehensive framework to reduce Washington's share of emissions in a way to reach a concentration of 350 PPM

Several commenters offered a variety of alternative policies that Ecology should pursue to address climate changes instead of finalizing the CAR. The comments appear to be aimed to development of a comprehensive statewide GHG reduction plan. The suggestions do not appear to relate to the CAR itself. For that reason, the comments are beyond the scope of this rule.

Having said that, and as we have previously responded, the CAR is only one piece of the State of Washington's climate portfolio. It is an important tool in achieving GHG emissions reductions. However, it is not, nor was it intended to be, the sole mechanism to reduce emissions. Washington is taking action in many areas, both regulatory and non-regulatory, and is one of the leading states in taking action to address climate change.

Many of the items commenters listed are outside the scope of Ecology's authority. For example, forest management programs fall under the purview of the Washington Department of Natural Resources, and administering Washington's renewable portfolio standard—a standard that is already established by law and would require the Legislature to change—is administered by the UTC and the Department of Commerce.

⁵² RCW 19.27A.020(1).

Miscellaneous (continued)

Another example of something outside of Ecology's authority is the suggestion to implement a zero emissions vehicle ("ZEV") standard. As noted previously, the federal Clean Air Act limits states ability to adopt motor vehicle emission standards. States are generally preempted from adopting or enforcing their own standards, with one exception. Due to historic air pollution problem associated with transportation pollution, California is authorized to adopt and enforce its own standards if the federal EPA grants California a waiver from the federal standards. Once California has received a waiver, other states may adopt the California standards. Washington has adopted the California standards, making Washington's motor vehicle emission standards among the strictest in the nation. Washington has not, however, adopted California's ZEV goals. Were the Legislature to change the law to allow Ecology to adopt the ZEV goal, we would be required by the federal Clean Air Act to adopt the ZEV mandate prescribed by California. That mandate currently requires that 15 percent of new vehicle sales in 2025 be zero emission vehicles, although California is in the process of revising these goals.

There are political barriers restricting Ecology's ability to implement other items. For example, Ecology is well-acquainted with low carbon fuel standards ("LCFS") having studied their suitability in Washington state for many years. Last year, Ecology developed a draft regulation that would have implemented a LCFS in Washington. Unfortunately the state legislature passed a budget that would have severely impacted funding for the state transportation package in the event that Ecology proceeded with the rulemaking. Specifically, the budget would have required that monies allocated for multimodal transportation projects would instead be re-allocated for road projects. Since development of multimodal transportation is a critical strategy for decreasing GHG emissions, it would not have been prudent to proceed with a LCFS and risk loss of funding for these important projects. The CAR does, however, address emissions from transportation fuels through another mechanism that does not run the risk of losing multimodal transportation funding.

However, some of these items are already being addressed by other state agencies. For example, Washington already has a Clean Energy Fund in place since 2013, which is administered by the Department of Commerce.⁵³ The Clean Energy Fund enables a mix of projects to support development, demonstration, and deployment of clean energy technologies. Washington also has one of the more progressive building codes in the U.S., and will require all new buildings in Washington to consume 70 percent less energy by 2030.⁵⁴

Response 318

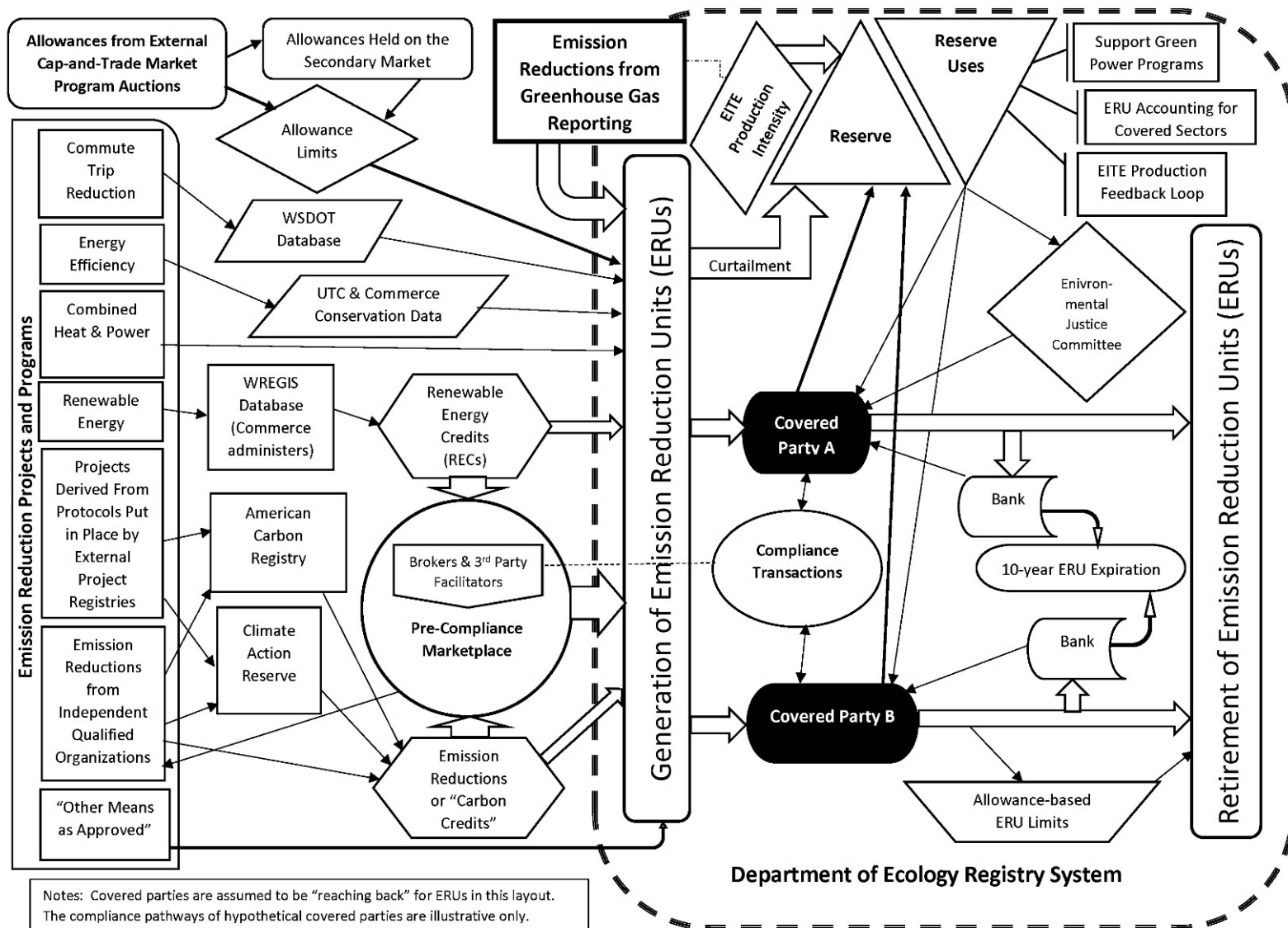
Ecology should recommend to the legislature several key policies

Commenters' suggestions regarding recommendations that Ecology should make to the state Legislature regarding renewable energy, green building standards, energy grid storage, and other topics are all beyond the scope of this rulemaking.

⁵³ See <http://www.commerce.wa.gov/growing-the-economy/energy/clean-energy-fund/>.

⁵⁴ RCW 19.27A.160.

Figure 2: Lifecycle of Emission Reductions Used for Compliance in the CAR by Two Hypothetical Covered Parties



Comment Summaries

Each comment Ecology received is briefly summarized below, along with Ecology’s response (or a notation where to find the detailed response). Comments are presented in alphabetical order, grouped by the method the comment was submitted. In cases where the same commenter submitted identical comments using more than one method, we have tried to only present the comments a single time. However, where multiple submissions differed slightly, we included both versions.

Summaries of oral comments received at in-person public hearings

Ecology held two in-person public hearings: July 12, 2016 in Spokane and July 14, 2016 in Olympia. A total of 85 people provided official comment at these two hearings: nine at the July 12th hearing in Spokane and 76 at the July 14th hearing in Olympia.

July 12, 2016 Spokane public testimony summarized comments – see Appendix D for a complete transcript:

Commenter name	Comment Summary	Ecology Response
Ackerman, Laura	<i>Representing Lands Council</i>	Thank you for your comment
	<i>Large number of people are harmed by carbon emissions</i>	Thank you for your comment
	<i>Children bear greater burden from climate change</i>	Thank you for your comment
	<i>Can't allow loopholes in law</i>	Please see Response 139
	<i>Need legislative work on air pollution</i>	Please see Response 15
Beggs, Breean	<i>Spokane City Council member</i>	Thank you for your comment
	<i>Residents are concerned with climate change</i>	Thank you for your comment
	<i>Spokane already taking steps to address</i>	Thank you for your comment
	<i>Burden needs to be shared equally, not based on political exemptions</i>	Please see Response 147
	<i>1.7% per year is probably not enough</i>	Please see Response 195 Please see Response 196
	<i>Need to increase reductions</i>	Please see Response 196
	<i>Best way is to expand sources and cover more producers</i>	Please see Response 139
	<i>Use good data, be transparent, and spread burden fairly and creatively</i>	Please see Response 260 Please see Response 292
Calvert, Jennifer	<i>Must reduce our dependence on fossil fuels</i>	Thank you for your comment
	<i>CAR is good step towards making needed changes</i>	Thank you for your comment
	<i>Must insist that legislators work together to ensure real emission reductions</i>	Thank you for your comment
	<i>If there's no world left, businesses go away anyway</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Druffel, Pauline</i>	<i>Energy prices have been kept artificially low</i>	Thank you for your comment
	<i>Alternative energy becoming more common and price going down</i>	Thank you for your comment
	<i>CAR should have even higher reduction requirements</i>	Please see Response 195 Please see Response 196
<i>Pederson, Matthew</i>	<i>Representing Republic Services</i>	Thank you for your comment
	<i>Operator of Roosevelt Regional Landfill in Klickitat County</i>	Thank you for your comment
	<i>Landfills do not fit the intent of the proposed CAR</i>	Please see Response 142
	<i>Forcing landfills to comply with CAR will result in leakage</i>	Please see Response 100 Please see Response 122
	<i>Landfills have been significant "positive" and are ahead of other sectors</i>	Please see Response 142
<i>Simmons, Scott</i>	<i>City of Spokane Public Works Director</i>	Thank you for your comment
	<i>Combustion at WTE does create CO₂ but no technology can reduce levels</i>	Please see our discussion of landfills at Response 142 and Response 147 for our analysis on this issue
	<i>Buying credits will be expensive</i>	Please see Response 57
	<i>Question if buying credits is appropriate use of public funds</i>	Please see Response 148
	<i>If we close WTE facility and landfill, that garbage goes somewhere else</i>	Please see Response 100 Please see Response 122
	<i>Carbon footprint would actually go up if closed facilities</i>	Please see Response 100 Please see Response 122
	<i>Should exempt WTE facility and give credits for carbon-reducing activities</i>	Please see Response 147 Please see Response 252
<i>Spiegel, Jessica</i>	<i>Representing Western States Petroleum Association</i>	Thank you for your comment
	<i>Deeply concerned about lack of transparency on this rulemaking</i>	Please see Response 17
	<i>Draft lacks specificity and detail</i>	Ecology has added definitions, clarified language, and added more specificity to parts of the rule
	<i>Lacks key definitions and concepts spread out over various sections</i>	Thank you for your comment
	<i>No analysis of ERUs or allowances</i>	Please see Response 262
	<i>Rule has been rushed and needs more time before ready</i>	Please see Response 17
	<i>EITEs need better evaluation</i>	Please see Response 120 Please see Response 121
	<i>Use of Subpart MM is problematic</i>	Please see Response 199

Commenter name	Comment Summary	Ecology Response
Waldref, Amber	<i>Spokane City Council member</i>	Thank you for your comment
	<i>Spokane WTE facility contributes to emission reductions</i>	Please see Response 252
	<i>WTE facility should be exempt from CAR and should generate credits</i>	Please see Response 147 Please see Response 252
Wilson, Dan	<i>Representing United Steelworkers Local 338</i>	Thank you for your comment
	<i>Leakage is big concern</i>	Please see Response 99 Please see Response 100 Please see Response 101
	<i>Concerned about lack of detail in some portions of draft</i>	Ecology has added definitions, clarified language, and added more specificity to parts of the rule
	<i>Thinks CAR will help reduce GHGs and still preserve jobs</i>	Thank you for your comment

July 14, 2016 Olympia public testimony summarized comments – see Appendix E for a complete transcript:

Commenter name	Comment Summary	Ecology Response
Albert, Donna	<i>Actions needed to fulfill statute are different than ones that will fix problem</i>	Please see Response 11
	<i>Ecology has failed to update statutory goal</i>	Please see Response 12
	<i>State has no well-coordinated plan for achieving 100% carbon-free energy</i>	Thank you for your comment
	<i>Science-based rule needed at 7-8%</i>	Please see Response 195 Please see Response 196
	<i>Concern about future generations</i>	Thank you for your comment
	<i>Make 8% reduction a goal, whether or not it can be realized</i>	Please see Response 195 Please see Response 196
Amundson, Bruce	<i>On behalf of Washington Physicians for Social Responsibility</i>	Thank you for your comment
	<i>Climate change is threat to human health</i>	Thank you for your comment
	<i>CAR must be strongest possible rule</i>	Please see Response 195
	<i>Need to prevent double-counting</i>	Please see Response 275
	<i>Need to ensure CAR coordinates with CPP and facilities follow stricter CAR</i>	Please see Response 90 Please see Response 91
	<i>Need aggressive emission reduction targets with an aggregate cap</i>	Please see Response 114
	<i>Must be based on best current science</i>	Please see Response 14 Please see Response 195 Please see Response 196

Commenter name	Comment Summary	Ecology Response
Bali, Chrisha	<i>Missing voices of folks of color, low-income communities, and homeless</i>	Please see Response 17 Please see Response 70
	<i>Expand role and autonomy of EJ committee</i>	Please see Response 73 Please see Response 74
	<i>Ensure EJ committee contains members of color</i>	Please see Response 69
Brockway, Abby	<i>Delusional to think this is a good first step</i>	Thank you for your comment
	<i>Need at least 8% now, more in future</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Lead abatement program is good example how industry can change</i>	Thank you for your comment
	<i>Concern about future generations</i>	Thank you for your comment
	<i>Must adopt 8% reduction even though you think you cannot</i>	Please see Response 14 Please see Response 195 Please see Response 196
Brown, Sheila	<i>We are allowed to pollute and we allow powerful interests to destroy planet</i>	Thank you for your comment
	<i>We all united after Pearl Harbor, we need to do so again</i>	Thank you for your comment
	<i>Must have extraordinary courage in extraordinary times</i>	Thank you for your comment
	<i>Problem will not go away</i>	Ecology agrees
Calkins, Jennifer	<i>In the middle of a catastrophe</i>	Thank you for your comment
	<i>Ecology has authority to create stronger rule – 8% or greater</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Doing rule for 10% would be even better</i>	Please see Response 195 Please see Response 196
	<i>Court order also gives authority</i>	Please see Response 3
	<i>Must base on real science</i>	Please see Response 14 Please see Response 195
	<i>We need to convert from fossil fuels and it is possible to do</i>	Thank you for your comment
Carruthers, Cathy	<i>Eliminate double counting because of ERUs from covered sectors</i>	Please see Response 275
	<i>Don't allow covered sectors to generate ERUs without reducing the Reserve</i>	Please see Response 275
	<i>CAR will likely increase CO2 emissions from power sector</i>	Please see Response 101
	<i>Ask utilities to report out-of-state generation based on NERC-e tags</i>	Please see Response 112

Commenter name	Comment Summary	Ecology Response
Castle, Truman	<i>Too much influence from industry on Legislature and Ecology</i>	Thank you for your comment
	<i>Industry is driving 1.7% number</i>	Thank you for your comment
	<i>Weak rule sends message to other states, as would a strong rule</i>	Please see Response 85 Please see Response 196
	<i>Oil safety by rail report good example of Ecology bias and propaganda</i>	Thank you for your comment
	<i>Should base rule on science</i>	Please see Response 14 Please see Response 195 Please see Response 196
Connon, Alec	<i>CAR should address moral reality of climate change</i>	Thank you for your comment
	<i>Governor, Ecology, and Legislature must be held accountable</i>	Thank you for your comment
Cornell, Cheri	<i>Executive Director of CoolMom.org</i>	Thank you for your comment
	<i>Climate action is a moral imperative</i>	Thank you for your comment
	<i>Intergenerational equity is important</i>	Please see Response 40
	<i>Going slowly on reducing carbon emissions is wholesale generational theft</i>	Thank you for your comment
	<i>CAR is decent start, but can do better</i>	Thank you for your comment
	<i>Must base on best available science – need 8%</i>	Please see Response 14 Please see Response 195
	<i>Need to reach beyond CAR to bring more tools to fight climate change</i>	Please see Response 317
D'Angelo, Chiara Rose	<i>CAR should address moral reality of climate change</i>	Thank you for your comment
	<i>Consider timber sequestration ERUs in CAR</i>	Please see Response 245
D'Angelo, Debra	<i>Acknowledge lack of representation of indigenous people/persons of color</i>	Please see Response 17
	<i>Need to have 8% reduction rate</i>	Please see Response 195 Please see Response 196
	<i>Don't allow double-counting ERUs</i>	Please see Response 275
	<i>Don't let industry/big money interests taint CAR</i>	Thank you for your comment
Davidson, Todd	<i>Thanks to Ecology for tackling hot potato</i>	Thank you for your comment
	<i>Need to push for environmental justice</i>	Please see Response 73
	<i>Draft CAR is much too weak</i>	Please see Response 195
	<i>Needs to cover 90% of all emissions</i>	Please see Response 123
	<i>Status quo is insanity</i>	Thank you for your comment
	<i>Stop regulating pollution as if it is polluters who have superior rights</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>de Vargas, Sally Jo Gilbert</i>	<i>Fasting is act of purification and self-sacrifice</i>	Thank you for your comment
	<i>Don't give up on 8% reduction goal</i>	Please see Response 195
	<i>Children are leading the way but adults need to make the decisions</i>	Thank you for your comment
<i>Deppe, Christine</i>	<i>Concern about future generations</i>	Thank you for your comment
	<i>Washington should be climate policy leader</i>	Please see Response 85 Please see Response 317
<i>Deppe, Marco</i>	<i>Concerned for future</i>	Thank you for your comment
	<i>CAR is too little, too late</i>	Please see Response 195
	<i>Need a lifestyle change</i>	Thank you for your comment
	<i>Need to keep temperature increase below 1.5° and CO₂ below 350 ppm</i>	Please see Response 14 Please see Response 317
	<i>We are running out of time</i>	Thank you for your comment
<i>Deppe, Sarah</i>	<i>8 years old</i>	Thank you for participating
	<i>Loves the planet – likes grass, flowers, trees, playgrounds, and her friends</i>	Thank you for your comment
	<i>Doesn't want kids to have to wear masks to play outside</i>	Thank you for your comment
<i>Deppe, Tim</i>	<i>10 years old</i>	Thank you for participating
	<i>CAR isn't strong enough</i>	Please see Response 196
	<i>Only asking for 1.7%, but needs to be 8%</i>	Please see Response 195
	<i>Future generations rely on getting this right</i>	Thank you for your comment
<i>Drake, Barb</i>	<i>Our children can't wait anymore</i>	Thank you for your comment
	<i>It is Ecology's duty to get this right</i>	Thank you for your comment
	<i>Time for more studies is over</i>	Thank you for your comment
	<i>CAR must be based on best available science</i>	Please see Response 14 Please see Response 195
	<i>Draft CAR is gross violation of duty and legalizes dangerous levels of CO₂</i>	Please see Response 14 Please see Response 196
<i>Fain, Athena</i>	<i>Adults are supposed to take care of kids, but we aren't doing that</i>	Thank you for your comment
	<i>Concern about future generations</i>	Thank you for your comment
	<i>Think about what you are doing and how it will affect future generations</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Foster, Michael</i>	<i>We went without food so our children won't have to</i>	Thank you for your comment
	<i>1.7% reduction isn't enough – Ecology knows we needed 6% in 2013</i>	Please see Response 195 Please see Response 196
	<i>Each need to commit to making personal changes</i>	Thank you for your comment
	<i>Stop buying products of corporations who own our government</i>	Thank you for your comment
	<i>Each of us needs to commit to 8-10% reduction in our own lives</i>	Thank you for your comment
<i>Gersdorf-Duncan, Sierra</i>	<i>Concerned about long-term effects of climate change</i>	Thank you for your comment
	<i>Concerned about future generations</i>	Thank you for your comment
	<i>Need to fix mistakes of greedy oil companies</i>	Thank you for your comment
	<i>Already have technology, just need to make the switch</i>	Thank you for your comment
<i>Hanika, James</i>	<i>Concern about future generations</i>	Thank you for your comment
	<i>Need to ensure sustainable way to produce protein</i>	Thank you for your comment
<i>Hawes, Forrest</i>	<i>CAR has too many compromises</i>	Please see Response 139
	<i>Increase third party verification for EITE facilities</i>	Please see Response 278
	<i>Issue report on if CAR meets RCW 70.235.040</i>	Please see Response 11 Please see Response 67
<i>Heege, Caroline</i>	<i>Concerned about future generations (wrote a song)</i>	Thank you for your song and your comment
<i>Henderson, Stew</i>	<i>Think everyone is on the same side and rule is result of democratic process</i>	Thank you for your comment
	<i>Some decisions shouldn't be democratic – should just make right decision</i>	Thank you for your comment
	<i>Need to base answers on science</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>We can help climate change through our actions, like turning down lights</i>	Thank you for your comment
	<i>Should be able to cut energy usage 10-20% without hurting economy</i>	Thank you for your comment
<i>Hiss, Joe</i>	<i>Need to keep air and water clean to protect other species</i>	Thank you for your comment
	<i>Keep taking care of our neighbors</i>	Thank you for your comment
<i>Hodgin, Richard</i>	<i>Find the courage within ourselves to act</i>	Thank you for your comment
	<i>Concerned for future generations</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Jones, Nathaniel</i>	<i>Agree with Governor that closing Colstrip is important step in struggle</i>	Thank you for your comment
	<i>No greater threat to environment than climate change</i>	Thank you for your comment
	<i>Rule should be applauded, but much more is needed</i>	Please see Response 195 Please see Response 196
	<i>Rule is important first step</i>	Thank you for your comment
	<i>Need to see tangible results and we have more to do</i>	Thank you for your comment
<i>Jorgensen, Walter</i>	<i>Good that we're doing a rule</i>	Thank you for your comment
	<i>CAR reductions aren't enough – needs to be full 8%</i>	Please see Response 195 Please see Response 196
	<i>This is not the best we can do</i>	Please see Response 195
<i>Kaminski, Azmyth</i>	<i>Air is precious resource</i>	Thank you for your comment
	<i>Need to listen to science</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Concerned about future generations</i>	Thank you for your comment
	<i>Don't let industry dictate our regulations</i>	Thank you for your comment
<i>Kaminski, Robert</i>	<i>Current climate science is staggering</i>	Please see Response 195 Please see Response 196
	<i>We have substantially overcommitted our carbon budget</i>	Thank you for your comment
	<i>Industry is committing ethical crimes against us and future generations</i>	Thank you for your comment
<i>Keller, Jennifer</i>	<i>Thanks to Ecology for starting process</i>	Thank you for your comment
	<i>Need to make real changes</i>	Thank you for your comment
	<i>Concerned for future generations</i>	Thank you for your comment
	<i>1.7% should be a floor, not a ceiling</i>	Please see Response 196
	<i>Need to base on current science</i>	Please see Response 14 Please see Response 195
<i>Kidde, Andrew</i>	<i>Need a stronger rule</i>	Please see Response 139
	<i>Don't worry about being sued, worry about climate change</i>	Thank you for your comment
	<i>Must adopt a science-based rule</i>	Please see Response 14 Please see Response 195
<i>Koski, Jessica</i>	<i>Climate change is moral imperative</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>The proposed CAR has potential to be critically important tool</i>	Thank you for your comment
	<i>Unfortunately, the current draft of the rule allows utilities to comply with CPP</i>	Please see Response 90
	<i>Federal targets are so abysmal that this guarantee is effectively meaningless</i>	Thank you for your comment
	<i>At best, CPP does nothing for Washington – could lead to more pollution</i>	Please see Response 90
	<i>Please ensure CAR only exempts utilities if exceeding requirements in CPP</i>	Please see Response 90
	<i>Current target of 1.7% annual reductions is grossly inadequate</i>	Please see Response 196
	<i>We need ambitious goals based on the best available science</i>	Please see Response 14 Please see Response 195
<i>Laine, Kelen</i>	<i>Representing voices in Uganda</i>	Thank you for your comment
	<i>Must do the right thing here to protect others elsewhere</i>	Thank you for your comment
<i>Langhans, Sue</i>	<i>Some feel they can't do anything because of the fossil fuel industry</i>	Thank you for your comment
	<i>Ecology has legal duty to protect the public interest for common benefit</i>	Please see Response 1
	<i>Must base decisions on best climate science</i>	Please see Response 14 Please see Response 195
	<i>Must do everything we can for the planet</i>	Thank you for your comment
<i>Lenander, Sue</i>	<i>Planet is dying and don't want more children brought into the world to suffer</i>	Thank you for your comment
	<i>Need to protect children already here</i>	Thank you for your comment
<i>Linnet, Cynthia</i>	<i>Climate change is the existential threat of our time</i>	Thank you for your comment
	<i>We are already seeing the ravages of climate change</i>	Thank you for your comment
	<i>Our kids won a great victory in the courts</i>	Thank you for your comment
	<i>The CAR does not begin to satisfy the court's decision</i>	Please see Response 1
	<i>The CAR only decreases emissions by 1% a year when 8% is needed</i>	Please see Response 195 Please see Response 196
<i>Locasio, Gillian</i>	<i>Current rules give unfair advantage to biggest polluters</i>	Thank you for your comment
	<i>Ecology under great deal of political pressure and it shows</i>	Thank you for your comment
	<i>CAR is nowhere good enough</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Tired of rules that bow to corporate profits</i>	Thank you for your comment
	<i>Need a science-based rule that mandates 8% reductions</i>	Please see Response 14 Please see Response 195
	<i>No double-counting</i>	Please see Response 275

Commenter name	Comment Summary	Ecology Response
	<i>Must include and cap agricultural emissions</i>	Please see Response 124
	<i>We cannot afford to wait</i>	Thank you for your comment
<i>Lockhart, Alice</i>	<i>Court ruling was a great opportunity – please use it wisely</i>	Please see Response 3
	<i>Science-based rule needed with at least 8% reduction requirement</i>	Please see Response 14 Please see Response 195
	<i>We should be aiming high and not just focusing on low-hanging fruit</i>	Thank you for your comment
	<i>Should show leadership for other states</i>	Please see Response 85
<i>Lou (no last name given)</i>	<i>Hydrogen and fuel cell proponent</i>	Thank you for your comment
	<i>Northwest is a hydrogen dessert</i>	Thank you for your comment
	<i>Ecology should encourage hydrogen and fuel cell uses wherever practical</i>	Thank you for your comment, but this is outside the scope of the current rulemaking
<i>Luckey, Nicole</i>	<i>Representing Invenergy, LLC</i>	Thank you for your comment
	<i>CAR as written now threatens their ability to operate</i>	Please see Response 64 Please see Response 106 Please see Response 107 Please see Response 152
	<i>Need to transition to cleaner energy, which they are part of</i>	Thank you for your comment Please see Response 152
	<i>They use most efficient technology on the market</i>	Thank you for your comment Please see Response 65
	<i>Perverse incentive to use less efficient out-of-state suppliers instead of them</i>	Please see Response 101 Please see Response 107
	<i>Should focus on CPP instead of CAR for power sector or exempt IPPs</i>	Please see Response 88 Please see Response 89 Please see Response 91 Please see Response 152
<i>Mandell, Gabriel</i>	<i>14 years old</i>	Thank you for participating
	<i>CAR falls massively short of what is needed</i>	Please see Response 195
	<i>Science-based rule needed – 8%</i>	Please see Response 14 Please see Response 195
	<i>Only covers 2/3 of industries and doesn't start until 2020</i>	Please see Response 123
	<i>Limit or don't allow offsets</i>	Please see Response 270
	<i>Ecology not following law and court order</i>	Please see Response 1

Commenter name	Comment Summary	Ecology Response
	<p><i>Ecology is supposed to meet with kids, but hasn't</i></p>	<p>Ecology believes that the commenter is referring to the May 16, 2016 order issued by the King County Superior Court in the <i>Foster</i> litigation. That order required that Ecology and the petitioners confer to discuss timing of Ecology making a recommendation to the state legislature to revise the greenhouse gas emission limits currently in law. Specifically, the order required that “[t]he Parties shall confer within the next sixty (60) days to determine when such a recommendation should be presented to have the best possibility of affecting the legislature on these matters.” The order did not require Ecology to meet or confer with petitioners regarding the Clean Air Rule.</p> <p>Through our counsel, Ecology made numerous attempts to confer with petitioners, both in person and by phone conference over the course of several weeks. This included offering to meet on dates and times that petitioners’ counsel initially offered as acceptable. Unfortunately, petitioners’ counsel declined all dates and times that Ecology offered, and finally elected to confer with Ecology by mail. We were also willing to meet with petitioners to discuss their concerns about the rule, and offered such a meeting through petitioners’ counsel. Such a meeting would have been separate and apart from the court order, which was limited to a conference on the timing of the recommendation of greenhouse gas limits to the legislature. Unfortunately, petitioners’ counsel failed to take Ecology up on that offer.</p>
	<p><i>Violates their constitutional rights</i></p>	<p>Please see Response 1</p>

Commenter name	Comment Summary	Ecology Response
	<i>Want to know why Ecology appealed the court order</i>	Please see Response 2
	<i>Strengthen rule, follow science, and be bold example for other states</i>	Please see Response 14 Please see Response 195 Please see Response 85
<i>Mandell, Valery</i>	<i>Petitioned Ecology two years ago – here today asking for same thing</i>	Please see Response 1
	<i>Government prioritizes profits of dirty energy companies over rest of us</i>	Thank you for your comment
	<i>Ecology has been given gift by court order – use it</i>	Please see Response 3
	<i>Need real rule that aligns with science</i>	Please see Response 14 Please see Response 195
	<i>CAR should honor our children</i>	Thank you for your comment
<i>Mangaliman, Jill</i>	<i>Representing Front and Centered</i>	Thank you for your comment
	<i>Need specific definition of sensitive communities</i>	Ecology is developing the CAR pursuant to the state Clean Air Act. The statute states that “[i]t is the intent of this chapter to secure and maintain levels of air quality that protect human health and safety, including the most sensitive members of the population, to comply with the requirements of the federal clean air act, to prevent injury to plant, animal life, and property, to foster the comfort and convenience of Washington’s inhabitants, to promote the economic and social development of the state, and to facilitate the enjoyment of the natural attractions of the state.” RCW 70.94.11. The term “sensitive members of the population” is neither defined by the statute, nor has Ecology defined the term in subsequent air quality regulations. Ecology has chosen, at this time, to not define “sensitive members of the population,” and it is beyond the scope of this rule for Ecology to conduct a cumulative impacts analysis and monitor highly impacted communities. However, it is within the scope of the Environmental Justice Advisory Committee to conduct a

Commenter name	Comment Summary	Ecology Response
		cumulative impacts analysis that defines “sensitive members of the population” and maps sensitive populations across the State. This analysis of highly impacted communities would be part of the environmental justice criteria the EJAC defines and uses to award reserve ERUs (pending Ecology approval). At this time, we are also not expanding the EJAC’s official responsibilities (e.g., to advising on implementation of the Clean Air Rule), but may consider doing so in a future round of rulemaking.
	<i>CAR should include EJ analysis of cumulative impacts</i>	Please see Response 73
	<i>Agriculture should not be exempt</i>	Please see Response 124
	<i>Draft CAR falls short</i>	Please see Response 195
	<i>Purchasing out-of-state allowances doesn’t reduce emissions</i>	Please see Response 263
Marcus, Lisa	<i>Thank Governor and Ecology for their efforts</i>	Thank you for your comment
	<i>Even 8% is nowhere near enough</i>	Please see Response 195
	<i>Need to take a risk and protect our air and water and resources we need</i>	Please see Response 196 Thank you for your comment
Marsh, Robert	<i>1.7% annual reduction isn’t enough</i>	Please see Response 196
	<i>Should base on current climate science</i>	Please see Response 14
	<i>Basing reduction on 2008 statute is negligent</i>	Please see Response 195 Please see Response 11 Please see Response 13
Mazza, Patrick	<i>Must break free from business-as-usual</i>	Thank you for your comment
	<i>Need annual reductions of 8%</i>	Please see Response 195
	<i>Need a climate rule that drives transformation</i>	Thank you for your comment
	<i>Must save future generations</i>	Thank you for your comment
Meier, Randy	<i>Worried about our children’s future</i>	Thank you for your comment
	<i>Too much inaction since court ruling</i>	Please see Response 1
	<i>Corporate greed is reason for inaction</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>Ecology has buckled to big business and released inadequate rule</i>	Thank you for your comment
	<i>Refuse to sit by while short-term profit outweighs climate solutions</i>	Thank you for your comment
Miller, Anne	<i>Need to protect our children</i>	Thank you for your comment
	<i>Need courageous leaders who will make moral decisions</i>	Thank you for your comment
	<i>Science-based rule needed</i>	Please see Response 14 Please see Response 195
Miller, Fred	<i>Kids he works with think CAR is stupid</i>	Thank you for your comment
	<i>Has too many loopholes</i>	Please see Response 228
	<i>Our laws must comply with the laws of physics and atmospheric chemistry</i>	Thank you for your comment
Olson, Court	<i>If you can't do something right, don't do it at all</i>	Thank you for your comment
	<i>Ecology has authority to enact 8% reduction</i>	Please see Response 14 Please see Response 195
	<i>CAR should cover more emissions, including agriculture</i>	Please see Response 124 Please see Response 139
	<i>Expand the rule's scope and make rule stronger</i>	Please see Response 139
	<i>Please explain why Ecology appealed court order</i>	Please see Response 2
Perk, David	<i>Echo comments about legal authority and Ecology doing more</i>	Please see Response 3
	<i>Ecology employees should work harder</i>	Thank you for your comment
Rasmussen, James	<i>Account for local emissions in sensitive communities</i>	Please see Response 79
	<i>Consider timber sequestration ERUs in CAR</i>	Please see Response 245
	<i>Matter is issue of climate justice</i>	Thank you for your comment
	<i>Should have held a hearing in Seattle</i>	Please see Response 19
Rivkis, Grace	<i>12 years old</i>	Thank you for participating
	<i>Science-based rule needed</i>	Please see Response 14 Please see Response 195
	<i>Need at least 8% per year</i>	Please see Response 14 Please see Response 195
	<i>Ecology not following court order</i>	Please see Response 1
	<i>Concern about future generations</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Rogers, Andrea</i>	<i>Ecology already has legal authority through CAA</i>	Please see Response 14
	<i>Cannot morally or ethically support CAR</i>	Thank you for your comment
	<i>CAR is too weak and not based on science, will prevent better rule in future</i>	Please see Response 139 Please see Response 195
	<i>Science-based rule needed</i>	Please see Response 14 Please see Response 195
	<i>Concern about future generations</i>	Thank you for your comment
	<i>Ecology has authority to enact 8 percent reduction</i>	Please see Response 14
<i>Rumansila, Elena</i>	<i>Want my kids to be able to play outside without a mask</i>	Thank you for your comment
	<i>CAR doesn't reduce emissions enough</i>	Please see Response 139 Please see Response 195
	<i>Need at least 8%</i>	Please see Response 195
	<i>Should not exclude any industries, especially agriculture and fossil fuels</i>	Please see Response 124 Please see Response 139
<i>Scavezze, Barb</i>	<i>CAR must respect court ruling</i>	Please see Response 1
	<i>Need to add agriculture to the rule, starting with large producers</i>	Please see Response 124
	<i>Please cover all significant carbon polluters as soon as possible</i>	Please see Response 139
	<i>Lower threshold at a faster rate – 2035 much too late</i>	Please see Response 139
	<i>Set target reduction of 8% and based on current science</i>	Please see Response 14 Please see Response 195
<i>Schmidt-Pathmann, Philipp</i>	<i>We need strong leadership</i>	Thank you for your comment
	<i>Need to take strong action, like was doing for landfills in Europe</i>	Thank you for your comment
<i>Schoettler, Joanne</i>	<i>No double-counting</i>	Please see Response 275
	<i>Need 8% reduction rate</i>	Please see Response 14 Please see Response 195
	<i>Need to deal with agriculture and stop eating meat</i>	Please see Response 124
	<i>Concerned for future generations</i>	Thank you for your comment
<i>Scilletta, Alex</i>	<i>1.7% isn't enough</i>	Please see Response 196
	<i>Need to start transition to clean energy sources</i>	Please see Response 66
	<i>CAR should help transition</i>	Please see Response 66
	<i>Can't afford to be so short-sighted</i>	Thank you for your comment
	<i>Concern about future generations</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>Need to have a better law that relies on data</i>	Please see Response 195
Shimeall, Nancy	<i>Humans have changed the world – we're responsible</i>	Thank you for your comment
	<i>CAR can be a groundbreaking rule</i>	Thank you for your comment
	<i>Stand firm against pushback from corporations, polluters, Legislature</i>	Thank you for your comment
	<i>Change is hard but necessary</i>	Thank you for your comment
	<i>Need at least 8% reduction</i>	Please see Response 14 Please see Response 195
Stair, Ruchi	<i>Why are we letting climate catastrophe happen when we know it's coming</i>	Thank you for your comment
	<i>Need to do whatever it takes</i>	Thank you for your comment
	<i>Set a bold goal to protect future generations</i>	Thank you for your comment
Strevey, Emma	<i>Token 1.7% reductions aren't enough</i>	Please see Response 196
	<i>Science-based rule needed at 8%</i>	Please see Response 14 Please see Response 195
	<i>Concern about future generations</i>	Thank you for your comment
Tanowitz, Wendy	<i>Living in unprecedented times</i>	Thank you for your comment
	<i>Challenge everyone to reduce their carbon footprint by 10% per year</i>	Thank you for your comment
Treadway, Carolyn	<i>Air is our most fundamental resource</i>	Thank you for your comment
	<i>Governor and Ecology have worked hard, but can do much more</i>	Thank you for your comment
	<i>1.7% inadequate, need 8% reduction</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Need to cover more sources</i>	Please see Response 139
Vance, Jo	<i>Ecology should draw on moral imagination, clarity, and strength</i>	Thank you for your comment
	<i>Base CAR on best climate science</i>	Please see Response 14 Please see Response 195
	<i>No time to waste</i>	Thank you for your comment
Voget, Rich	<i>Sick and tired of perverse lack of political will</i>	Thank you for your comment
	<i>Already have technology to get to zero emissions</i>	Thank you for your comment
	<i>Concerned about future generations</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>Need more aggressive reduction targets based on best science</i>	Please see Response 14 Please see Response 195
Voli, Carlo	<i>Need fearless action</i>	Thank you for your comment
	<i>Should not allow offsets</i>	Please see Response 270
	<i>CAR should cover military emissions</i>	Please see Response 130
Watt, Mary	<i>Thank Ecology and all participants today for the work they've done</i>	Thank you for your comment
	<i>We need bold action now to avoid climate change disaster</i>	Thank you for your comment
	<i>Need to reduce carbon emissions by at least 8% per year</i>	Please see Response 14 Please see Response 195
West, Rusty	<i>Ecology has constitutional obligation to protect natural resources</i>	Please see Response 1
	<i>Rule must be based on best available science</i>	Please see Response 14 Please see Response 195
	<i>Need to be morally courageous and stand on right side of history</i>	Thank you for your comment
Wilson, Bea	<i>Current CAR won't succeed in reducing levels where they need to be</i>	Please see Response 139
	<i>Ecology has duty to protect the public interest in natural resources</i>	Please see Response 1
	<i>Must base rule on best climate science</i>	Please see Response 14 Please see Response 195
	<i>Concerned about future generations</i>	Thank you for your comment
Witt, Jill MacIntyre	<i>CAR falls short of meeting targets based on best available science</i>	Please see Response 14 Please see Response 195
	<i>Should be set based on science not fossil fuel industry</i>	Please see Response 14 Please see Response 195
	<i>Need sense of urgency to act, time is not on our side</i>	Thank you for your comment
Woodward, Mikala	<i>I'm here because I have 2 children I love more than I ever thought possible</i>	Thank you for your comment
	<i>I spend a lot of time fending off my fear and despair about the world</i>	Thank you for your comment
	<i>I am here to ask for that rule based on science and based on love</i>	Please see Response 14 Please see Response 195
Woolley, Deborah	<i>Need visionaries and trailblazers</i>	Thank you for your comment
	<i>Science-based rule needed even if it won't withstand challenge</i>	Please see Response 14

Commenter name	Comment Summary	Ecology Response
		Please see Response 195
	<i>Washington should be climate policy leader</i>	Please see Response 85 Please see Response 317

Summaries of oral comments received at webinar hearings

Ecology held two webinar hearings: July 7, 2016 and July 15, 2016, both using WebEx Event service. A total of six people provided official comments at these two hearings: two during the July 7th hearing and four on July 15th.

Oral comments are summarized below and are listed in alphabetical order by last name of speaker. Organization names, when provided, are cross-referenced in the Commenter Index at the end of this document.

July 7, 2016 webinar public testimony summarized comments – See Appendix C for a complete transcript:

Commenter name	Comment Summary	Ecology Response
<i>Brewer, Gretchen</i>	<i>Technical issues with webinar may prevent some participation</i>	Thank you. This is helpful information for Ecology to have for future public meetings. Ecology is trying to use technology to help provide expanded opportunities for public participation. Reports from participants about ease of use and availability (or lack thereof) are extremely helpful to us in making decisions about future webinar formats.
	<i>Biogenic CO₂e should be included, even wood waste</i>	Please see Response 145
	<i>Cap-and-trade doesn't help affected communities</i>	Please see Response 198
	<i>Need limits on credits</i>	Please see Response 265
	<i>Port Townsend Paper should be covered earlier</i>	Please see Response 220
	<i>1.7% not enough</i>	Please see Response 196
<i>Humphreys, Alec</i>	<i>Not based on best science</i>	Please see Response 14 Please see Response 195
	<i>1.7% is ridiculous</i>	Please see Response 196
	<i>State's hands are tied but state didn't do a good job</i>	Thank you for your comment

July 15, 2016 webinar public testimony summarized comments – See Appendix F for complete transcript:

Commenter name	Comment Summary	Ecology Response
<i>Foster, Michael</i>	<i>What is Ecology's thinking on our fair share?</i>	Please see Response 11 Please see Response 195
	<i>Companies trying to be more efficient should reduce as quickly as possible</i>	Please see Response 50
	<i>Want to know more about tiered approach for EITEs</i>	Please see revisions to WAC 173-442-070
	<i>Want to know what temperature rise would be if everyone reduced 1.7%</i>	Ecology does not calculate results based on degrees, so we are unable to answer this question
	<i>Want to know what path – in degrees – companies are on</i>	Ecology does not calculate results based on degrees, so we are unable to answer this question
	<i>Please explain in formal record why 1.7% instead of higher amount needed</i>	Please see Response 196
	<i>Please explain in formal record where 1.7% limitation is found in statute</i>	Please see Response 11
	<i>Please explain in formal record how 19 sites can emit 2/3 of our emissions</i>	Please see Response 139
	<i>Please write in formal record the actual percent of state's emissions covered</i>	Please see Response 139
	<i>Please explain in formal record why not update emissions targets</i>	Please see Response 13
	<i>Record needs to show steps Ecology taken to update scientific targets</i>	Please see Response 13
<i>Please explain when plan was supposed to go into effect</i>	We are unsure what this comment means	
<i>Heller, Miles</i>	<i>Representing Tesoro</i>	Thank you for your comment
	<i>Will follow up with additional written comments</i>	Thank you for your comment
	<i>2017 implementation date is just too soon</i>	Please see Response 218
	<i>Many gaps and unanswered questions in draft CAR</i>	Please see Response 219
	<i>Isn't fair to require obligation for firm in 2017 when not determined until 2018</i>	Please see Response 218
	<i>Reporting issues are a problem – especially Subpart MM portion</i>	Please see Response 129
	<i>Using DOL reporting instead fixes some inequity issues</i>	Please see Response 129
<i>McPherson, William</i>	<i>Thank Ecology for its efforts</i>	Thank you for your comment
	<i>President of the Unitarian Universalist Voices for Justice</i>	Thank you for your comment
	<i>World's carbon budget will be exhausted by 2030</i>	Thank you for your comment
	<i>We need much more ambitious rate for emission reductions</i>	Please see Response 195
	<i>Ecology should analyze and report effect of CAR on CO2 tonnage per person</i>	The CAR requires actual GHG reductions on a mass basis. This is easily converted to a per capita basis. Ecology will not change the rule in response to this comment, but will consider the suggestion and may incorporate a per capita summary in future reports if we believe it will be helpful or informative.

Commenter name	Comment Summary	Ecology Response
Whittaker, Rod	<i>Representing Washington Refuse and Recycling Association</i>	Thank you for your comment
	<i>Solid waste industry already making great strides to reduce emissions</i>	Thank you for your comment
	<i>CAR is not a good fit for landfills</i>	Please see Response 142
	<i>Cap-and-trade programs usually exempt landfills</i>	Please see Response 142
	<i>Landfills create innovative energy projects</i>	Please see Response 143 Please see Response 252
	<i>Landfill emissions cannot be directly measured</i>	Please see Response 142
	<i>Will follow up with written comments</i>	Thank you for your comment

Summaries of comments received via web site submission

Commenters had the option to submit written comments through Ecology’s web site. This option also allowed commenters to submit attachments. The comments addressed below include those submitted via Ecology’s web site that either did not include an attachment, included an attachment that duplicated the web-based comment, or included an attachment that was additional supporting documentation. For comments that were submitted through Ecology’s web site but were *only* submitted via an attachment, please see the section for “Detailed written comments” below. Comments addressed in this section are those that were shorter and those that spoke to just one or two substantive points.⁵⁵

Web site submissions are summarized below and listed in alphabetical order by last name.

Commenter name	Comment Summary	Ecology Response
Abramson, Mary	<i>Greatly disappointed in the Governor and Ecology</i>	Thank you for your comment
	<i>Do you choose corporate sponsors over living things</i>	Thank you for your comment
	<i>“Wake Up and act like the divine beings you innately are!”</i>	Thank you for your comment
Bajzarowicz, Janusz	<i>Composting materials such as yard waste is a natural process</i>	Thank you for your comment
	<i>Should not include composters dealing with these natural type feedstocks</i>	Please see Response 145
	<i>Should be included in the protocols for GHG emissions credits</i>	Please see Response 260
Baker Blagg, Merna	<i>Please continue to produce power from renewables</i>	Thank you for your comment
	<i>Included poem</i>	Thank you for your comment
Barnoski, Robert	<i>Support actions to reduce emissions</i>	Thank you for your comment

⁵⁵ We note that multiple commenters submitted the same comment multiple times via the web site. We have considered each commenter’s duplicate submissions as a single comment and have only included them once.

Commenter name	Comment Summary	Ecology Response
	<i>Support development of clean energy alternatives</i>	Please see Response 317
<i>Bean, David</i>	<i>Patrick Mazza speaks for me</i>	Thank you for your comment
	<i>No to oil sooner rather than later</i>	Thank you for your comment
<i>Berg, Ericka</i>	<i>Current science says we need 8% per year</i>	Please see Response 14 Please see Response 195
	<i>CAR only reduces 1.7% per year</i>	Please see Response 196
	<i>Please revise to reflect this science</i>	Please see Response 14 Please see Response 195
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 270
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126
	<i>Utilities should be held to the stronger CAR requirements instead of CPP</i>	Please see Response 90 Please see Response 91
<i>Bishop, Scott</i>	<i>“What they said:” web link to Climate Solutions website article dated July 11, 2016 “Washington makes progress on reducing emissions, more work to be done”</i>	Thank you for your comment
<i>Bizeau, Paul</i>	<i>CPP rule under court-ordered stay, so no sense wasting money to comply</i>	Thank you for your comment
	<i>Washington State does not have a carbon emissions problem</i>	Please see Response 20
	<i>TransAlta will soon be retired</i>	Please see Response 125
	<i>CAR is unconstitutional – needs legislative action, not executive order</i>	Please see Response 4 Please see Response 6 Please see Response 15 Please see Response 16
	<i>Allowances/ERU requirement is essentially a tax on businesses</i>	Please see Response 9
	<i>CAR is illegal means of redistributing business income</i>	Please see Response 9
	<i>CAR will have negligible effect on emissions</i>	Please see Response 139
<i>Bohl, Coral</i>	<i>CAR needs to be stronger</i>	Please see Response 14 Please see Response 195
	<i>Concerned for future generations</i>	Thank you for your comment
<i>Bone, Margaret W.</i>	<i>CAR falls far short of what is needed and legally mandated</i>	Please see Response 1 Please see Response 14

Commenter name	Comment Summary	Ecology Response
		Please see Response 195
	<i>Concerned for future generations</i>	Thank you for your comment
	<i>Reductions need to be 5-8% a year – anything less is unconscionable</i>	Please see Response 14 Please see Response 195
	<i>Thank you for the hard work</i>	Thank you for your comment
<i>Boyd, Stephen</i>	<i>My neighborhood is periodically affected by Port Townsend Paper's stench</i>	Thank you for your comment
	<i>Thank you for noting this</i>	We have noted this in the record
<i>Bremer, John</i>	<i>Many negative effects of climate change</i>	Thank you for your comment
	<i>Compromise with the fossil fuel industry would be suicidal</i>	Thank you for your comment
	<i>Halfway measures are killing us and destroying future generations</i>	Thank you for your comment
<i>Briggs, Robert</i>	<i>CAR doesn't reduce enough</i>	Please see Response 14 Please see Response 195
	<i>Not based on sound science – need 8% per year</i>	Please see Response 195
	<i>People of Washington want our state to lead</i>	Please see Response 85
	<i>Rule proposal should be rejected and replaced with one commensurate with the scale of the problem</i>	Please see Response 139 Please see Response 317
<i>Brockway, Abby</i>	<i>Delusional to think this is a good first step</i>	Thank you for your comment
	<i>Need at least 8% now, more in future</i>	Please see Response 195
	<i>Lead abatement program is good example how industry can change</i>	Thank you for your comment
	<i>Concern about future generations</i>	Thank you for your comment
<i>Brown, Sheila</i>	<i>Must include agriculture and vehicle emissions</i>	Please see Response 124 Please see Response 126 Please see Response 139
	<i>I am shocked that you have done so little</i>	Thank you for your comment
<i>Burdick, John and Karolyn</i>	<i>A new report from the United Nations says that 2016 is the hottest year yet</i>	Thank you for your comment
	<i>CO2 levels have reached 400 ppm</i>	Please see Response 14
	<i>Ecology must act to reverse this disastrous trend</i>	Please see Response 317
<i>Caplow, Diana</i>	<i>It is clear that global warming has already begun</i>	Thank you for your comment
	<i>Free carbon in the atmosphere needs to be contained</i>	Thank you for your comment
<i>Carlson, Joel</i>	<i>Global warming fossil fuels must stay in the ground</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>Must very quickly switch to renewable energy including solar</i>	Thank you for your comment
	<i>Fossil fuel vehicles must be eliminated</i>	Please see Response 126 Please see Response 317
	<i>Wood construction sequesters a lot of carbon</i>	Please see Response 245
	<i>Many trees must be planted and animal agriculture eliminated</i>	Please see Response 124 Please see Response 245 Changing the nature of agriculture is beyond the scope of this rulemaking
	<i>Must stop cutting trees for firewood</i>	Thank you for your comment
<i>Carr, Timothy</i>	<i>Definitely a step in the right direction</i>	Thank you for your comment
	<i>I would like to see some support for a carbon tax</i>	Thank you for your comment
<i>Castle, Carol</i>	<i>I support the new clean air rule</i>	Thank you for your comment
	<i>Our habitats are already suffering from the impacts of carbon pollution</i>	Thank you for your comment
	<i>We need to act now</i>	Thank you for your comment
<i>Castle, Truman</i>	<i>Indefensible that Ecology does not insist on following the science</i>	Please see Response 14 Please see Response 195
	<i>My sense is that industry clout is driving this</i>	Thank you for your comment
	<i>Shameful – there should be no compromise</i>	Thank you for your comment
<i>Chapin, David</i>	<i>Should use latest climate science</i>	Please see Response 14 Please see Response 195
	<i>Pleased that the draft rule covers natural gas electricity plants</i>	Thank you for your comment
	<i>Must ensure CPP reductions requirements are at least as strong as CAR</i>	Please see Response 90
<i>Cornell, David</i>	<i>This expresses support for Chapter 173 the Clean Air Rule</i>	Thank you for your comment
	<i>It is essential to pass this in order to progress towards stabilizing climate</i>	Thank you for your comment
	<i>We need to do this to progress on developing alternative sources of energy</i>	Please see Response 317
<i>Cosgrove, Michael</i>	<i>Need more aggressive emissions reduction targets</i>	Please see Response 194
	<i>Need to base on best available science</i>	Please see Response 14 Please see Response 195
	<i>Need to fix double-counting</i>	Please see Response 275
	<i>Reserve account provisions still need work</i>	Please see Response 293
<i>Costa, Valerie</i>	<i>Draft CAR not only lacks in leadership it's a vote for global death sentence</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>Time for diplomacy is over</i>	Thank you for your comment
	<i>1.7% annual reductions are wholly inadequate</i>	Please see Response 196
	<i>Need an 8% annual decrease</i>	Please see Response 14 Please see Response 195
	<i>Some of the biggest polluters won't begin reductions until 2020</i>	Please see Response 220
	<i>Offsets don't address the problem and shouldn't be a solution in this rule</i>	Please see Response 270
	<i>Revise this rule to meet science based targets</i>	Please see Response 14 Please see Response 195
<i>Crandall, Heather</i>	<i>Please support clean air in Washington</i>	Thank you for your comment
	<i>"That seems like a dumb thing to have to ask for. I am sorry. I want clean air."</i>	Thank you for your comment
<i>CT (no additional name given)</i>	<i>Take care of our amazing place in the Universe</i>	Thank you for your comment
	<i>Concerned for future generations</i>	Thank you for your comment
<i>Daugherty, John</i>	<i>Need to decide if you are fighting the root causes of climate change or not</i>	Thank you for your comment
	<i>Should propose significant emission reductions</i>	Please see Response 196
	<i>Should require us to stretch our thinking about how we must change</i>	Thank you for your comment
	<i>Exempting agriculture and trucking is absurd</i>	Please see Response 124 Please see Response 139
	<i>Set the bar higher for everyone and then lead us to find ways to achieve goal</i>	Thank you for your comment
	<i>Live up to your name</i>	Thank you for your comment
<i>Derooy, Beth</i>	<i>Washington should lead the way on climate change</i>	Please see Response 85
	<i>Business as usual is ill-advised</i>	Thank you for your comment
	<i>Be creative and courageous</i>	Thank you for your comment
	<i>Go for the 8% reduction – 1-3% is not enough</i>	Please see Response 14 Please see Response 195
<i>Deseck-Piazzon, Dianna</i>	<i>Please follow court's order to base CAR on best available science</i>	Please see Response 1 Please see Response 195
	<i>A 1% reduction is clearly inadequate</i>	Please see Response 196
	<i>6-8% is necessary</i>	Please see Response 14 Please see Response 195
<i>Deshmane, Atul</i>	<i>I work in the fuels industry</i>	Thank you for your comment
	<i>I would add additional companies to the list</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Diaz, Astrid</i>	<i>1.7% annual reduction isn't enough</i>	Please see Response 196
	<i>We realistically need around 8% to have a future</i>	Please see Response 14 Please see Response 195
	<i>Need to base on current science</i>	Please see Response 14 Please see Response 195
<i>Dinh, Arielle</i>	<i>Don't be afraid, there are many more industries that will support you</i>	Thank you for your comment
	<i>Time is running out</i>	Thank you for your comment
	<i>(Provides lyrics to "Time" by Freddie Mercury)</i>	Thank you for your comment
<i>Donaldson, Lynne</i>	<i>Purchased an all-electric vehicle to commute with</i>	Thank you for your comment
	<i>Disappointed to see that I am charged \$100 fee to license it</i>	Thank you for your comment
	<i>I don't think this is fair</i>	This fee was passed by the Washington State Legislature and is a transportation-related fee, not an environmental fee. Ecology does not have the authority to address this fee in the proposed rule. You can contact your legislators about requesting changes to the electric car fee.
<i>Duncan, Brian</i>	<i>I support strong CAR</i>	Thank you for your comment
	<i>Need protective limits and should be broadly applied</i>	Please see Response 14
	<i>Base on best current climate science</i>	Please see Response 14 Please see Response 195
	<i>Thank you for standing with future generations</i>	Thank you for your comment
<i>Eachus, Ann</i>	<i>Needs to be based on the current science</i>	Please see Response 14 Please see Response 195
	<i>Need at least an 8% real reduction in carbon emissions</i>	Please see Response 14 Please see Response 195
<i>Eachus, James</i>	<i>The 1.7% rule is so close to doing nothing that you might as well do nothing</i>	Please see Response 196
	<i>Climate problem is serious, and this is not a serious effort to address it</i>	Please see Response 11
	<i>The public prefers regulatory solutions over tax solutions</i>	Thank you for your comment
<i>Eulberg, Lois</i>	<i>I am appalled at this weak CAR</i>	Thank you for your comment
	<i>Need to base this real on current science and law</i>	Please see Response 195
	<i>Ecology has a constitutional obligation to protect natural resources</i>	Please see Response 1

Commenter name	Comment Summary	Ecology Response
	<i>Need to reduce by 8-10%, not 1.7%</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>This rule can be national model for all states or it can bow to corporate rule</i>	Please see Response 85
<i>Faris, Janice and Larry</i>	<i>"Enough already! Fix the clean air rule now!"</i>	Thank you for your comment
	<i>The planet is dying but state wants to give stakeholders more time to pollute</i>	Thank you for your comment
<i>Finkelstein, Ellen</i>	<i>"This is an urgent situation ... these kids can't wait."</i>	Thank you for your comment
	<i>Draft CAR is not sufficient</i>	Thank you for your comment
	<i>Emission reductions must be 8% not 1.7% per year</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Offsets and carbon trading must be enforced not simply encouraged</i>	Please see Response 301 Please see Response 302 Please see Response 303
	<i>All carbon emissions must be included, not 2/3 of them</i>	Please see Response 128 Please see Response 139 Please see Response 145 Please see Response 242 Please see Response 243
	<i>Must be targeted to 350 ppm</i>	Please see Response 14 Please see Response 317
	<i>It is our duty to protect future generations</i>	Thank you for your comment
<i>Finley, Andrea</i>	<i>Please support a meaningful and ambitious CAR</i>	Please see Response 14
	<i>Must be based on science</i>	Please see Response 14 Please see Response 195
	<i>Protect our children's right to a healthy environment</i>	Please see Response 1
	<i>Need to mandate annual greenhouse gas reductions between 6 and 8%</i>	Please see Response 14 Please see Response 195
	<i>Ecology only proposing 1.7% annual reduction, and will likely be even less</i>	Please see Response 196
	<i>Please support a CAR that mandates meaningful, measurable action</i>	Thank you for your comment
<i>Finley, Scott</i>	<i>Please support a meaningful and ambitious CAR</i>	Please see Response 14
	<i>Must be based on science</i>	Please see Response 14 Please see Response 195
	<i>Protect our children's right to a healthy environment</i>	Please see Response 1

Commenter name	Comment Summary	Ecology Response
	<i>Need to mandate annual greenhouse gas reductions between 6 and 8%</i>	Please see Response 14 Please see Response 195
	<i>Ecology only proposing 1.7% annual reduction, and will likely be even less</i>	Please see Response 196
	<i>Please support a CAR that mandates meaningful, measurable action</i>	Thank you for your comment
Gainer, CJ	<i>Someone needs to stand up and do the people's bidding, not big companies</i>	Thank you for your comment
	<i>Stop the flow of pollution in our air and water</i>	Thank you for your comment
	<i>Listen to the science</i>	Please see Response 14 Please see Response 195
	<i>8% and nothing less</i>	Please see Response 14 Please see Response 195
	<i>Stop the greed and stop killing our planet</i>	Thank you for your comment
Grove, Dan	<i>CAR should be dramatically strengthened</i>	Please see Response 14
	<i>Need much stronger reductions in carbon pollution than currently proposed</i>	Please see Response 196
	<i>Washington could and should be a leader in reducing CO₂ emissions</i>	Please see Response 85
	<i>Massive problem for coming generations</i>	Thank you for your comment
	<i>We should be working very, very hard to reduce the impact</i>	Thank you for your comment
	<i>Please ensure this standard is at least 4% reduction in gross CO₂ emissions</i>	Please see Response 195
Grunewald, James	<i>Current CAR is inadequate</i>	Please see Response 14
	<i>We face an unprecedented crisis</i>	Thank you for your comment
	<i>Must be based on the latest science</i>	Please see Response 195
	<i>Washington State can lead the effort to save our planet for our children</i>	Please see Response 85
	<i>Rewrite the rule to guide our state to real reductions</i>	Please see Response 195 Please see Response 196
	<i>Don't rely primarily on carbon offsets</i>	Please see Response 267 Please see Response 271
	<i>Thank you for hearing the concerns and needs of future generations</i>	Thank you for your comment
Hanski, Kathryn	<i>We need a much stronger CAR</i>	Please see Response 14
	<i>Needs a requirement of a yearly 6-10% reduction in carbon emissions</i>	Please see Response 14 Please see Response 195
	<i>Needs to apply to all emitters in the state</i>	Please see Response 139
Haught, Lunell	<i>You have ample evidence of the importance of clean air and water</i>	Thank you for your comment
	<i>Air quality is a competitive advantage</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Heath, Elizabeth</i>	<i>When there is the will, solutions are found</i>	Thank you for your comment
	<i>Get to work and come up with solutions</i>	Thank you for your comment
	<i>Don't just cite the obstacles; use your creativity to craft answers</i>	Thank you for your comment
<i>Hendrikson, Lars</i>	<i>Make the CAR as strong as legally possible</i>	Please see Response 14
	<i>An 8% per year reduction in greenhouse gases is the minimum amount</i>	Please see Response 14 Please see Response 195
	<i>Must be supported by science</i>	Please see Response 14 Please see Response 195
	<i>A 10-12% decrease per year is better</i>	Please see Response 14 Please see Response 195
<i>Herrera, Martin</i>	<i>We need a stronger climate rule</i>	Please see Response 14
	<i>Must have science-based carbon limits</i>	Please see Response 195
	<i>Need a wide range of policies and initiatives to back it up</i>	Please see Response 317
	<i>Need a commitment to move to 100% renewable energy</i>	Please see Response 317
	<i>Need to change the dialogue and the context</i>	Thank you for your comment
	<i>Need to move beyond the business as usual assumptions</i>	Thank you for your comment
<i>Need to honestly address what we must do to protect our children's world</i>	Thank you for your comment	
<i>Hodgin, Richard</i>	<i>Must find the courage within ourselves to act</i>	Thank you for your comment
	<i>Concerned for future generations</i>	Thank you for your comment
<i>Holm, Patricia A.</i>	<i>Thank you Gov. Inslee for rule will not require legislative approval</i>	Thank you for your comment
	<i>Most people in Washington now believe that climate change is real</i>	Please see Response 20
	<i>Must increase the percentage reduced to 8% rather than the 1.7%</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Industry may sue so you might as well make it a statement worth fighting</i>	Thank you for your comment
	<i>Small incremental steps at this point in history make no sense</i>	Thank you for your comment
	<i>Need to include agriculture even though difficult</i>	Please see Response 124
	<i>We can't wait for other states to lead first</i>	Please see Response 85
	<i>Need fewer exceptions especially for trade associated with fossil fuels</i>	Please see Response 126 Please see Response 128 Please see Response 139
	<i>Now is the time to be a bit bold and do what is right</i>	Thank you for your comment
<i>Thank you</i>	Thank you for your comment	

Commenter name	Comment Summary	Ecology Response
<i>Holstein, John</i>	<i>Must strengthen the CAR</i>	Please see Response 14
	<i>Our generation is the last chance</i>	Thank you for your comment
	<i>Must eliminate double-counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 270 Please see Response 271
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126 Please see Response 139
	<i>Utilities should be held to the stronger requirements of CAR instead of CPP</i>	Please see Response 90
<i>Hornig, Charles</i>	<i>Other governments will follow us in developing carbon reduction rules</i>	Please see Response 85
	<i>1.7% annual reduction is considerably lower than the 6% needed</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Need a more robust rule that better reflects the science</i>	Please see Response 14 Please see Response 195
	<i>Need programs to reduce carbon emissions by vehicles</i>	Please see Response 139
<i>Horwitz, Matthew</i>	<i>Revise the proposed CAR what is needed</i>	Please see Response 14
	<i>Current draft language comes nowhere near what must be done</i>	Please see Response 195 Please see Response 196
<i>Humphreys, Alec</i>	<i>Thank you for the time, effort and hard work</i>	Thank you for your comment
	<i>Still several flaws CAR</i>	Thank you for your comment
	<i>Should be based upon scientific projections</i>	Please see Response 14 Please see Response 195
	<i>Should be created under the power of the court, rather than executive order</i>	Please see Response 1 Please see Response 3
	<i>Deeply concerned about the double counting mechanism from use of offsets</i>	Please see Response 275
	<i>Also concerned about dependence on offsets as main source of reductions</i>	Please see Response 270
	<i>CAR should cover more sectors including agriculture</i>	Please see Response 124 Please see Response 139
	<i>Not having public hearing in Seattle excluded many voices</i>	Please see Response 19
	<i>Delay rule until there has been a more inclusive public engagement process</i>	Please see Response 17
<i>Must be stronger and more equitable</i>	Thank you for your comment	
<i>Hunter, Rhonda</i>	<i>Thank you for your leadership</i>	Thank you for your comment
	<i>Need to establish far more aggressive reduction targets</i>	Please see Response 195

Commenter name	Comment Summary	Ecology Response
		Please see Response 196
	<i>Don't allow carbon offsets from covered sectors</i>	Please see Response 270
	<i>Protect integrity of cap by setting aside credits to allow for new growth</i>	That is the purpose of the Reserve Please see Response 114
	<i>Please complete robust rule to protect future generations</i>	Thank you for your comment
<i>Irvine, Linda</i>	<i>Fully support regulating carbon pollution</i>	Thank you for your comment
	<i>Strengthen the rules</i>	Thank you for your comment
	<i>Establish more aggressive reduction targets based on best available science</i>	Please see Response 14 Please see Response 195
	<i>Do not allow carbon offsets to come from covered sectors</i>	Please see Response 270
	<i>Require more onsite emission reductions</i>	Please see Response 45 Please see Response 270
	<i>Protect integrity of the cap by setting aside credits to allow for new growth</i>	That is the purpose of the Reserve Please see Response 114
<i>Isaac, Carol</i>	<i>Please make the CAR stronger</i>	Please see Response 14
	<i>Concerned about future generations</i>	Thank you for your comment
<i>Kastner, John</i>	<i>All government agencies should abide by court rulings</i>	Please see Response 1
	<i>Flouting court orders is an invitation to anarchy</i>	Please see Response 1
	<i>Should reduce greenhouse emissions by 8% as ordered</i>	Please see Response 1 Please see Response 14 Please see Response 195
<i>Klapstein, Annette</i>	<i>Must be based on the scientific standards</i>	Please see Response 14 Please see Response 195
	<i>Our children's future is at catastrophic risk</i>	Thank you for your comment
<i>Klein, Charna</i>	<i>Air is our most precious resource</i>	Thank you for your comment
	<i>Many are finding it increasingly difficult to breathe as air quality declines</i>	Thank you for your comment
	<i>Do everything to improve our air and reduce emissions</i>	Thank you for your comment
<i>Koenig, Tiffany</i>	<i>I demand a constitutional CAR based on the best available science</i>	Please see Response 1 Please see Response 14 Please see Response 195
	<i>Don't allow special interests to derail this important step forward</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
Lucky, Orion	<i>Industrial corporations are polluting the watershed on a massive scale</i>	Thank you for your comment
	<i>Create a stronger CAR based on real climate science</i>	Please see Response 14 Please see Response 195
Landrum, Jerry	<i>Please choose the strongest 8% per year carbon reductions</i>	Please see Response 14 Please see Response 195
Lange, Marc	<i>The cost of the 2004 clean air requirements that were ignored</i>	Thank you for your comment
	<i>Led to loss of 5% of the Owner/Operator fleet</i>	Thank you for your comment
	<i>Increased fuel consumption, loss of down, failure of emission-related items</i>	Thank you for your comment
	<i>Engine life shortened by up to 70%</i>	Thank you for your comment
	<i>Clean air was paid for owner/operator without compensation</i>	Thank you for your comment
	<i>Best engines made was in 2003, 15 years later we are just recovering</i>	Thank you for your comment
	<i>It destroyed an industry – the cost you don't care to calculate or know</i>	Please see the economic analysis section starting on page 29 for information about cost calculations (Response 102 specifically addresses fuel prices)
	<i>It is one reason we are not recovering in our industry</i>	Thank you for your comment
	<i>There are better ways than mandates</i>	Thank you for your comment
	<i>The people with the least practical hands-on knowledge make the choices (Also included picture of his truck)</i>	Thank you for your comment
Locascio, Gillian	<i>Protect our children and our future</i>	Thank you for your comment
	<i>This rule is too weak</i>	Please see Response 14
	<i>Our Climate cannot take "incremental" solutions</i>	Thank you for your comment
	<i>Too little too late is no better than nothing at all</i>	Thank you for your comment
	<i>Must have science-based rule that reduces emissions by 8%</i>	Please see Response 14 Please see Response 195
	<i>We can and must do better for our children</i>	Thank you for your comment
	<i>Thank you to the young people who have been leading the charge</i>	Thank you for your comment
Lockhart, Alice	<i>Thanks for what has been done so far</i>	Thank you for your comment
	<i>We are looking for historic leadership and we know you can do it</i>	Thank you for your comment
	<i>Use current science that says we need 8% per year carbon reduction</i>	Please see Response 14 Please see Response 195
	<i>We can no longer afford to wait</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
Luchessa, Scott	<i>Washington's emissions from the transportation sector are significant</i>	Please see Response 126 Please see Response 139
	<i>We are running out of time to make meaningful reductions</i>	Thank you for your comment
	<i>Provide more meaningful reductions of at least 8% a year</i>	Please see Response 14 Please see Response 195
Lyons, Zachary	<i>Same content as WEC form letter</i>	Please see Ecology response to WEC form letter
Mandell, Randy	<i>Similar content as WEC form letter</i>	Please see Ecology response to WEC form letter
	<i>CAR standards are inadequate</i>	Please see Response 14
	<i>Sets a weak, overly industry-friendly precedent</i>	Thank you for your comment
	<i>Make more aggressive reductions consistent with best available science</i>	Please see Response 195
	<i>Needs 8% per year reductions, not 1.7% over just 60% of emissions</i>	Please see Response 14 Please see Response 139 Please see Response 195 Please see Response 196
	<i>Using offsets as the primary source of emission reductions limits impact</i>	Please see Response 270
	<i>Double counting of reductions is very real problem</i>	Please see Response 275
	<i>Ability to use offsets to meet 100% of obligation means no on-site reductions</i>	Please see Response 270
	<i>More work needed to Reserve</i>	Please see Response 293 Please see Response 298
	<i>Finally, the draft rule relies on limited authority</i>	Please see Response 3
<i>Ecology has duty and authority to make a much stronger rule</i>	Please see Response 14	
Manzo, Stephanie	<i>Our environment is the result of committed people making sound decisions</i>	Thank you for your comment
	<i>Good environment leads to thriving people and economy</i>	Thank you for your comment
	<i>Please continue this good work</i>	Thank you for your comment
Marcus, Elisabeth (Lisa)	<i>I am very concerned about global warming</i>	Thank you for your comment
	<i>At hearing in Olympia, very few people from the most impacted communities</i>	Please see Response 17
	<i>Please hold future hearings in Seattle</i>	Please see Response 19
	<i>It is clear CAR is compromise to try to avoid law suits by corporate interests</i>	Thank you for your comment
	<i>Horrendously insufficient at 1.7% a year to achieve the state's goal</i>	Please see Response 196
	<i>I commend Governor Jay Inslee for responding to legislative inaction</i>	Thank you for your comment
<i>Need much more aggressive emissions reduction targets</i>	Please see Response 14	

Commenter name	Comment Summary	Ecology Response
		Please see Response 195
	<i>Need to target all sectors</i>	Please see Response 139
	<i>Need to be consistent with best available widely accepted science</i>	Please see Response 14 Please see Response 195
	<i>Need to be 8% this year and up by a percent every year to follow</i>	Please see Response 14 Please see Response 195
	<i>No offsets as the primary source of emission reductions</i>	Please see Response 270
	<i>Reserve needs to be structured properly</i>	Please see Response 293 Please see Response 298
	<i>Must be stronger</i>	Please see Response 14
	<i>Protect future generations</i>	Thank you for your comment
<i>Martinez, Priscila</i>	<i>We need to take better care of what is left of our environment</i>	Thank you for your comment
<i>Mayers, Marilyn</i>	<i>Adopt rigorous scientifically sound standards</i>	Please see Response 14 Please see Response 195
	<i>Must apply to agriculture and industry alike</i>	Please see Response 124
	<i>We cannot wait</i>	Thank you for your comment
<i>McDonald, Rachel</i>	<i>Must be based on current climate science</i>	Please see Response 14 Please see Response 195
	<i>Need 8% reduction in carbon emissions annually</i>	Please see Response 14 Please see Response 195
	<i>Future generations will not have the ability to act boldly</i>	Thank you for your comment
	<i>Must meet their moral obligation to protect air quality for our children</i>	Thank you for your comment
<i>McGee, Debra</i>	<i>It is important that we keep the planet's heating to 1.5 degrees</i>	Please see Response 84
	<i>"Please make the best choice to protect our air!"</i>	Thank you for your comment
<i>Michel, Morgan</i>	<i>Need to base on the best current science</i>	Please see Response 14 Please see Response 195
	<i>Inalienable moral right to an environment they can live in</i>	Thank you for your comment
	<i>Must reduce emissions now by at least 8% a year</i>	Please see Response 14 Please see Response 195
	<i>You are entrusted to ensure our safety and well-being</i>	Thank you for your comment
	<i>This is not a case of political reality, but of scientific and moral reality</i>	Thank you for your comment
	<i>Provide a CAR that guarantees our children a livable future</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>Do your job</i>	Thank you for your comment
Miller, Fred	<i>Proposed CAR far too lenient</i>	Please see Response 14
	<i>Need to address many more pollutants</i>	Please see Response 139
	<i>Farms are large facilities – include all over 40 head of cattle</i>	Please see Response 124
	<i>Timeline is far too lax</i>	Please see Response 220
	<i>Targets should be more robust because science isn't exact</i>	Please see Response 11 Please see Response 13 Please see Response 14
Montez, Heidi	<i>We need a very strong and very clear CAR with no loopholes</i>	Please see Response 14
	<i>Need to quickly and aggressively transition to a sustainable, clean economy</i>	Please see Response 317
	<i>Washington has the opportunity to lead the way</i>	Please see Response 85
Northwest Energy Coalition	<i>Concurs with the Department of Commerce's comment</i>	Thank you for your comment
	<i>Concerned the CAR may diminish energy efficiency targets in I-937</i>	Please see Response 255
	<i>Should allocate proportional share/allow ERUs to be generated over baseline</i>	Please see Response 65
Nguyen, Deana	<i>We need a clean air rule based on current science</i>	Please see Response 14 Please see Response 195
Norman, Nancy	<i>Need stronger CAR</i>	Please see Response 14
	<i>Appreciate the effort to curb carbon pollution through this rule, but it is flawed</i>	Thank you for your comment
	<i>Re-write the rule using science that returns us to a path to 350 PPM</i>	Please see Response 14 Please see Response 195
	<i>1.7% reduction proposed in the rule does not get us to there</i>	Please see Response 196
Obey, Doug	<i>No content in online submission – contact info only</i>	None
Osgood, Margaret	<i>There are many broken systems that we work with, through and for</i>	Thank you for your comment
	<i>The choices we make now define the world tomorrow</i>	Thank you for your comment
	<i>Inspire our children</i>	Thank you for your comment
	<i>We have to make changes for the better – it is essential</i>	Thank you for your comment
Pallant, Joseph	<i>All major carbon offset systems include forest carbon offsets</i>	Thank you for your comment
	<i>Should include forest carbon emissions reductions/removals for credits</i>	Please see Response 245

Commenter name	Comment Summary	Ecology Response
<i>Pan, Eliza</i>	<i>Reductions fall substantially far short</i>	Please see Response 195 Please see Response 196
	<i>1.7% emissions cuts from large polluters, eventually cover 2/3 of emissions</i>	Please see Response 196
	<i>Thus the overall yearly pollution reduction is more like 1%</i>	Please see Response 139
	<i>Loopholes in the draft rule actually allow double-counting</i>	Please see Response 275
<i>Parks, Sharon</i>	<i>CAR must be strengthened in line with the Paris agreements</i>	Please see Response 84
	<i>This is a moral issue we cannot fail to meet with intelligence and courage</i>	Thank you for your comment
<i>Perk, David</i>	<i>Thank effort made to date</i>	Thank you for your comment
	<i>Hope that Ecology will withdraw CAR as currently drafted and improve it</i>	Please see Response 11
	<i>Washington State is uniquely positioned to show leadership</i>	Please see Response 85
	<i>Ecology uniquely empowered by the State courts</i>	Please see Response 3
	<i>Should be consistent with current science, aggressive and thorough</i>	Please see Response 14 Please see Response 195
	<i>The scope as stated appears to be incomplete – agriculture is omitted</i>	Please see Response 124 Please see Response 139
	<i>Delaying coverage until 2020 is inappropriate</i>	Please see Response 220
	<i>The ramp described by the table does not decline rapidly enough</i>	Please see Response 123
	<i>50,000 MT CO₂e ceiling is too high</i>	Please see Response 123 Please see Response 132
	<i>Manure management should be included in CAR</i>	Please see Response 131
	<i>Industrial combustion of biomass is overly broad</i>	Please see Response 145 Please see Response 146
	<i>Additional categories below 70,000 MT CO₂e/year are needed</i>	Please see Response 139
	<i>An annual reduction of 1.7% is woefully inadequate</i>	Please see Response 196
	<i>Forestry sequestration is not sufficiently defined</i>	Please see Response 245
	<i>The acceptance of CTR surveys is suspect</i>	Please see Response 126
<i>Combined heat and power activities section is vague and incomplete</i>	Please see Response 258	
<i>Peterson, Lea-Anne</i>	<i>I support our environment in total</i>	Thank you for your comment
	<i>I do not support double count of carbon offset</i>	Please see Response 275
<i>Peterson, Rhonda</i>	<i>Draft rule is too lenient</i>	Please see Response 14
	<i>Need to be at least 8% per year, not 1.7%</i>	Please see Response 14 Please see Response 195

Commenter name	Comment Summary	Ecology Response
		Please see Response 196
	<i>All carbon emitters need to be covered, and with no offsets or trading</i>	Please see Response 139 Please see Response 270 Please see Response 271
<i>Piazzon, Gary A.</i>	<i>Please follow court order to use the best available science</i>	Please see Response 1
	<i>1% is hardly significant when the science says 8%</i>	Please see Response 14 Please see Response 195
<i>Piel, Sofia</i>	<i>It is urgent that our carbon emissions be reduced by 6-8%</i>	Please see Response 14 Please see Response 195
	<i>Governor Inslee is not standing behind his claims to be "green governor"</i>	Thank you for your comment
	<i>We cannot wait any longer to take action</i>	Thank you for your comment
<i>Poirier, Hanna</i>	<i>Take a walk somewhere the air smells sweet</i>	Thank you for your comment
	<i>Remember something you forgot because of bills or business</i>	Thank you for your comment
	<i>Think, why has it been so long since I felt like it was a joy just to breathe?</i>	Thank you for your comment
<i>Pruitt-Hamm, Bruce</i>	<i>Strengthen the rule</i>	Please see Response 14
	<i>8% is needed, not 1.7%</i>	Please see Response 14 Please see Response 195 Please see Response 196
<i>Quayle, Annette</i>	<i>Uphold the court ruling and set rigorous limits on carbon emissions</i>	Please see Response 1
	<i>We need courageous leadership on this issue</i>	Thank you for your comment
<i>Rathbone, Bruce</i>	<i>Make the CAR stronger</i>	Please see Response 14 Please see Response 195
	<i>Need to significantly reduce global warming pollution</i>	Thank you for your comment
	<i>Use this opportunity to be a climate leader</i>	Please see Response 85
	<i>Should set an overall cap to ensure that total emissions decline over time</i>	Please see Response 114
	<i>Should achieve real emission reductions beyond business as usual</i>	Please see Response 139
	<i>Should require offset credits used are limited and meet strict standards</i>	Please see Response 270
	<i>Must only count offsets once</i>	Please see Response 275
	<i>Must prevent polluting industries from profiting unfairly from the program</i>	Please see Response 118
	<i>Give industries incentives to reduce their emissions or get out of business</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
<i>Rathbone, Lora</i>	<i>Make the CAR stronger</i>	Please see Response 14 Please see Response 195
	<i>Need to significantly reduce global warming pollution</i>	Thank you for your comment
	<i>Use this opportunity to be a climate leader</i>	Please see Response 85
	<i>Should set an overall cap to ensure that total emissions decline over time</i>	Please see Response 114
	<i>Should achieve real emission reductions beyond business as usual</i>	Please see Response 139
	<i>Should require offset credits used are limited and meet strict standards</i>	Please see Response 270
	<i>Must only count offsets once</i>	Please see Response 275
	<i>Must prevent polluting industries from profiting unfairly from the program</i>	Please see Response 118
	<i>Give industries incentives to reduce their emissions or get out of business</i>	Thank you for your comment
<i>Richmond, Linda</i>	<i>Need to improve draft CAR</i>	Please see Response 14
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 270 Please see Response 271
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126 Please see Response 139
	<i>Utilities should be held to the stronger requirements of CAR instead of CPP</i>	Please see Response 90
	<i>Not holding hearings in Seattle excluded the voices of front line communities</i>	Please see Response 19
<i>Ripley, Theresa</i>	<i>I am from Oregon, but your air blows our way</i>	Thank you for your comment
	<i>I understand you are defying court order</i>	Please see Response 1
	<i>1.7 emission reduction is not getting the job done</i>	Please see Response 196
<i>Roberts, Michael</i>	<i>What is the plan when CO₂ is proven in future to not cause climate change</i>	Please see Response 20
	<i>Science is not currently settled on this scientific point</i>	Please see Response 20
	<i>Enacting such punitive taxation is disingenuous</i>	The CAR is not a tax – please see Response 9
	<i>Science is not complete on this point</i>	Please see Response 20
	<i>In my opinion, this is politically motivated rulemaking</i>	Thank you for your comment
<i>Robinson, Laura</i>	<i>Cut emissions to 8% a year as climate scientists have suggested</i>	Please see Response 14 Please see Response 195
	<i>Time for true action</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
Rose, Chiara	<i>We should implement a fair CAR</i>	Thank you for your comment
	<i>No double counting of Carbon Offsets</i>	Please see Response 275
	<i>Base all emission targets off of best available science</i>	Please see Response 14 Please see Response 195
	<i>Should administer reductions before 2020</i>	Please see Response 220
	<i>Need to move to 350 ppm as soon as possible</i>	Please see Response 14
	<i>Ecology should be brave in the face of corporate lawsuits</i>	Thank you for your comment
	<i>Moral and physical realities are more important than the “political” reality</i>	Thank you for your comment
	<i>Animal agriculture represents 51% of all greenhouse gas emissions</i>	Ecology does not believe the science supports this conclusion. Our best estimate is that all agriculture combined accounts for approximately 5% of GHG emissions in Washington
	<i>Need to include the military industrial complex in our state emission targets</i>	Please see Response 130
Rose, Maggie	<i>Please empower the EPA</i>	Thank you for your comment, but this is outside the scope of this rulemaking. Ecology does not have any authority over EPA.
Rudnick, Deborah	<i>Need strong, effective, science-based emission reductions</i>	Please see Response 14 Please see Response 195
	<i>1.7% reduction per year does not come close</i>	Please see Response 196
	<i>Base this rule on the science of what is needed</i>	Please see Response 14 Please see Response 195
	<i>I am confident our innovative and strong economy can meet this challenge</i>	Thank you for your comment
Rutherford, Robert	<i>The science shows we need 350 ppm</i>	Please see Response 14 Please see Response 195
	<i>Huge carbon reductions are a must</i>	Thank you for your comment
	<i>Government has to show courage and leadership</i>	Thank you for your comment
Sacks, Bert	<i>Please do the maximum possible to limit CO₂ emissions</i>	Please see Response 14
	<i>This is a very difficult mission and everybody and everything is affected</i>	Thank you for your comment
	<i>This will take as much political will as possible</i>	Thank you for your comment
Sacks, Ivy	<i>Please do the maximum possible to limit CO₂ emissions</i>	Please see Response 14

Commenter name	Comment Summary	Ecology Response
	<i>This is a very difficult mission and everybody and everything is affected</i>	Thank you for your comment
	<i>This will take as much political will as possible</i>	Thank you for your comment
<i>Schmidt-Pathmann, Philipp</i>	<i>How we manage waste affects our carbon footprint</i>	Thank you for your comment
	<i>Landfilling is one of the largest CO₂ producers despite landfill industry claims</i>	Thank you for your comment
	<i>Exporting so called 'recyclables' to countries like China is not sustainable</i>	Thank you for your comment
<i>Schramm, Jenifer</i>	<i>We are already in amelioration rather than avoidance</i>	Thank you for your comment
	<i>Doing all you can is still too little, but at least do that</i>	Thank you for your comment
<i>Scott, Nolen</i>	<i>Your children and grandchildren will hold you responsible</i>	Thank you for your comment
<i>Segal, Joyce</i>	<i>1.7% Reduction in GHG every 3 years is way too small</i>	Thank you for your comment. The proposed rule actually requires a reduction equivalent to 1.7% annually or approximately a 5% reduction every three years.
	<i>Canada has pledged a 30% reduction by 2030 – USA needs to do better</i>	Thank you for your comment
<i>Sherman-Peterson, Deejah</i>	<i>You cannot, you must not kick this can down the road any longer</i>	Thank you for your comment
	<i>CAR still woefully insufficient to achieve the reductions necessary</i>	Please see Response 14 Please see Response 195
	<i>Must use current and best available science to set reduction goals</i>	Please see Response 14 Please see Response 195
	<i>Unfortunately, our state legislators are not doing their job</i>	Thank you for your comment
	<i>We are relying on you to craft the strongest rules now</i>	Thank you for your comment
<i>Sherman-Peterson, Ron</i>	<i>1.7% per year reduction is not enough</i>	Please see Response 196
	<i>Need to require a full 8% reduction per year statewide</i>	Please see Response 14 Please see Response 195
	<i>Need to base your requirements on valid current science</i>	Please see Response 14 Please see Response 195
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 275
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126
	<i>Utilities should be held to the stronger requirements of CAR instead of CPP</i>	Please see Response 90

Commenter name	Comment Summary	Ecology Response
Shimeall, Nancy	<i>The draft rule must go even further</i>	Please see Response 14
	<i>Use climate scientist James Hansen's research and recommendations</i>	Please see Response 195
	<i>Must reduce emissions by 8% starting in 2017</i>	Please see Response 14 Please see Response 195
	<i>Draft rule's 1.7% starting in 2020 is simply too little and too late</i>	Please see Response 196
	<i>CAR is a vital step toward leading us to climate recovery</i>	Thank you for your comment
	<i>Do what is morally right: reduce emissions by 8% starting in 2017</i>	Please see Response 14 Please see Response 195
Skanderup, Kristi	<i>We need you to lead on climate</i>	Thank you for your comment
	<i>Base the targets on what is required by science, not what is politically easy</i>	Thank you for your comment
	<i>We appreciate your leadership on this during this critical time</i>	Thank you for your comment
Sosin-Rocha, Madeleine	<i>You are last generation of policy makers that can put us on a path to stability</i>	Thank you for your comment
	<i>Please improve the CAR</i>	Thank you for your comment
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 275
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 139
	<i>Utilities should be held to stronger requirements of CAR instead of CPP</i>	Please see Response 90
<i>Lack of Seattle hearing excluded voices of front line communities</i>	Please see Response 19	
Squires, Storey	<i>Why not us in Washington, and why not now?"</i>	Thank you for your comment
	<i>Livable future for those who are children now may cost us some money</i>	Thank you for your comment
	<i>In our hearts, we all want to do right by these kids</i>	Thank you for your comment
	<i>Thank you for everything you are doing to help leave a legacy of clean air</i>	Thank you for your comment
Stair, Sherri	<i>Thank you for drafting the Clean Air Rule</i>	Thank you for your comment
	<i>Expand focus to include more industries such as agriculture and dairy</i>	Please see Response 124
	<i>Sustainable farming practices are a necessary part of the solution</i>	Thank you for your comment
	<i>We all need to do our part</i>	Thank you for your comment
	<i>We need a more realistic annual reduction: 8% per year</i>	Please see Response 14 Please see Response 195
	<i>Please represent the citizens of Washington with courage</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
Stewart, Deborah	<i>Your carbon emission reduction proposal is woefully inadequate</i>	Thank you for your comment
	<i>We need annual reduction of 8% or more</i>	Please see Response 14 Please see Response 195
	<i>Negligent if we do not pass a more stringent requirement</i>	Please see Response 1
Stocker, Karen	<i>I feel grateful to the parents and grandparents</i>	Thank you for your comment
	<i>I feel so much love for the children and their marvelous bright attorney</i>	Thank you for your comment
	<i>We adults can and must go ahead with this use of power for caring</i>	Thank you for your comment
	<i>It's time to waken out of the trance and just do the right thing</i>	Thank you for your comment
	<i>As our government considers how to do the right thing, I will be send prayers</i>	Thank you for your comment
Sullivan, Terry	<i>We are past the point for modest incremental solutions</i>	Thank you for your comment
	<i>We are in an emergency situation</i>	Thank you for your comment
	<i>Lack of political courage will be castigated by generations to come</i>	Thank you for your comment
Swackhammer, Chuck	<i>A 10% reduction per year is not too much</i>	Please see Response 14 Please see Response 195
Taylor, Brenna	<i>CAR must produce stronger annual carbon dioxide emissions reductions</i>	Please see Response 14
	<i>Must use the most current science to determine the level of reduction</i>	Please see Response 195
Terry, Doris	<i>We all need to breathe clean air - STOP All the outdoor burning</i>	Thank you for your comment
	<i>People are NOT burning dry wood...they are burning garbage</i>	Thank you for your comment
Thompson, Steve	<i>Coal, oil and gas corporations have been irresponsible</i>	Thank you for your comment
	<i>The fossil fuel industry could choose to be good neighbors</i>	Thank you for your comment
	<i>Since they are not making that choice, please revise the CAR</i>	Thank you for your comment
	<i>When we should be making the world better, we are living lobbyist rules</i>	Thank you for your comment
	<i>We don't know where the tipping point lies but do know that it is coming fast</i>	Thank you for your comment
	<i>So count all fossil fuel contributions</i>	Please see Response 123 Please see Response 139
	<i>Require a minimum 8% annual reduction in carbon emission</i>	Please see Response 14 Please see Response 195
Thornberg, Lace	<i>Let's harness the minds of the brilliant people who live in our state</i>	Thank you for your comment
	<i>Washington can be a leader on this critical issue</i>	Please see Response 85

Commenter name	Comment Summary	Ecology Response
<i>Throop, Dean</i>	<i>Public comments are your farce</i>	Thank you for your comment
	<i>The truth is this is unneeded</i>	Please see Response 20
	<i>This is going to be expensive</i>	Please see Response 49. Ecology has conducted economic impact analyses of the rule. These analyses estimate the costs and benefits of the rule. These analyses are posted on Ecology's website.
	<i>Just gives Ecology power to harm small companies and small towns</i>	Please see Response 54. Ecology conducted a small business economic impact statement on the rule. This statement can be found on Ecology's website.
<i>Todd-Mandler, Connie</i>	<i>We need stronger laws for cleaner air now</i>	Thank you for your comment
<i>Tong, Jonathan</i>	<i>Our children have constitutional right to a safe and healthful future</i>	Please see Response 1
	<i>Please join us in doing everything you can to reduce carbon emissions</i>	Thank you for your comment
	<i>We need to reduce our dependence on fossil fuels</i>	Thank you for your comment
	<i>Need to develop ways to conserve energy and use greener energy sources</i>	Please see Response 317
	<i>Let's base our energy policies on science, not politics</i>	Please see Response 14 Please see Response 195
<i>Townsend, Patricia</i>	<i>As a scientist, I am highly knowledgeable of the impacts of climate change</i>	Thank you for your comment
	<i>Please make the rule stronger to require more restrictions on CO₂ emissions</i>	Please see Response 196
<i>Travena, John</i>	<i>Must count all emissions as they all contribute to climate change</i>	Please see Response 123 Please see Response 139
<i>Treadway, Roy</i>	<i>Clean air and with low carbon emissions is a right of all</i>	Please see Response 1
	<i>Please write a much stronger rule, decreasing emissions much more quickly</i>	Please see Response 196
	<i>For the sake of all and of our children, be courageous</i>	Please see Response 14 Please see Response 195
<i>Tuftt, Margaret</i>	<i>I find it sad that a 1.7% per year emissions reductions would be considered</i>	Please see Response 196
	<i>We supposedly have a "green" governor, but would not know it by his actions</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
	<i>These young people deserve real action that addresses our climate</i>	Thank you for your comment
<i>Turner, Rachell</i>	<i>The rule should be based on the current science</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>An 8% reduction is necessary now</i>	Please see Response 14 Please see Response 195
	<i>There should be no industry exemptions</i>	Please see Response 139
	<i>All polluters should be held accountable for their actions</i>	Please see Response 139
	<i>Double-counting reductions is undermining the rule before it takes effect</i>	Please see Response 275
	<i>We need an 8% reduction now</i>	Please see Response 14 Please see Response 195
<i>Vincin, Robert</i>	<i>Lower CO₂ Re-start Cycle via 2-4% of vegetation that converts to soil carbon</i>	Thank you for your comment
<i>Weise, Daniel</i>	<i>Science requires a steeper reduction in emissions than those proposed</i>	Please see Response 14 Please see Response 195
	<i>Should make the emissions reductions targets at least twice as steep</i>	Please see Response 196
	<i>No carbon offsets – the atmosphere can't afford them</i>	Please see Response 270 Please see Response 271
<i>Wilson, Bea</i>	<i>We need climate action now that will return to 350 ppm CO₂ levels</i>	Please see Response 14 Please see Response 195
	<i>1.7% reduction will not reduce emissions that are needed</i>	Please see Response 196
<i>Wood, Tana</i>	<i>This is bad rule, adds to bureaucracy and solves nothing</i>	Thank you for your comment
	<i>Underlying premise is fatally flawed – we did not create and we cannot stop it</i>	Please see Response 20
	<i>Science has totally failed us in this</i>	Thank you for your comment
	<i>Scientists should have been solving issues that will come as climate warms</i>	Thank you for your comment
	<i>We can't stop this and our efforts and money are criminally misspent</i>	Thank you for your comment
	<i>Please, use some common sense and look again</i>	Thank you for your comment
<i>Worster, John</i>	<i>Carbon taxes are costly, not needed, and just about controlling business</i>	The CAR is not a tax – please see Response 9
	<i>Global warming has been largely debunked</i>	Please see Response 20
	<i>Do not enact this job killing policy</i>	Thank you for your comment

Commenter name	Comment Summary	Ecology Response
No name provided	<i>Particulates from fossil fuels that are emitted everyday go into my lungs</i>	Thank you for your comment
	<i>Even though I walk and ride transit, my money goes for more roads</i>	Thank you for your comment
	<i>It is nonsensical</i>	Thank you for your comment
No name provided	<i>Need to improve draft CAR</i>	Thank you for your comment
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 270 Please see Response 271
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126
	<i>Utilities should be held to the stronger requirements of CAR instead of CPP</i>	Please see Response 90
	<i>Not holding hearings in Seattle excluded the voices of front line communities</i>	Please see Response 19

Summaries of written comments

Finally, commenters had the opportunity to submit written comments as a stand-alone document. These comments were submitted to Ecology in a number of ways: by mail, email, hand-delivery, or as an attachment to a web site submission. Comments addressed in this section are those that were longer and those that spoke to multiple subject areas, concerns, or suggested changes.

Comments are summarized below and are listed in alphabetical order by the name of the person submitting. If the comments were submitted on behalf of an organization, the comment is alphabetized by the organization's name, not the signer's name. Comments that were submitted on behalf of multiple organizations are alphabetized by the first signing organization's name and are cross referenced in the index.

Commenter name	Comment Summary	Ecology Response
3Degrees	<i>Company is buyer and seller of RECs</i>	Thank you for your comment
	<i>Washington REC market is significant</i>	Thank you for your comment
	<i>Bedrock principle: only the REC owner can claim renewable attributes</i>	Thank you for your comment
	<i>Applauds Ecology for responding to previous input from stakeholders</i>	Thank you for your comment
	<i>Even new rule still allows double-counting</i>	Please see Response 275
	<i>Recommends ERUs come from reducing emissions cap for covered parties</i>	Please see Response 113
	<i>ERUs must come from energy excluded from facility's emissions profile</i>	Please see Response 113
	<i>Should state that adequacy of reserve account will be assessed each year</i>	Please see Response 293
	<i>Reserve account should not be prioritized – make clear all needs will be met</i>	Please see Response 298

Alcoa	<i>Alcoa has two smelters in Washington now, but only one operating</i>	Thank you for your comment
	<i>Alcoa significant contributor to state's economy</i>	Thank you for your comment
	<i>Company been leader on GHG emission reductions for more than 20 years</i>	Thank you for your comment
	<i>Company was founding partner of Western Climate Initiative</i>	Thank you for your comment
	<i>Alcoa smelters have already met statutory goal of 25% below 1990 levels</i>	Thank you for your comment
	<i>Alcoa smelters also already met 2050 goal of 50% below 1990 levels</i>	Thank you for your comment
	<i>Aluminum helps enhance transportation and sustainable future</i>	Please see Response 165
	<i>Draft rule would increase costs and uncertainty</i>	Please see Response 99
	<i>EITEs are especially susceptible to leakage</i>	Please see Response 99
	<i>Agrees with AWB comment submission</i>	Please see responses to AWB's comments
	<i>Should allow subcategorization within sectors for EITEs</i>	Please see Response 177
	<i>ERUs relinquished to reserve should be from of closure not curtailment</i>	Please see Response 118
	<i>Need a safety valve or other provision for economic hardship</i>	Please see Response 221
Alliance for Jobs and Clean Energy	<i>Emissions reductions should be based on best available science</i>	Please see Response 14 Please see Response 195
	<i>Review program effectiveness every 3-5 years</i>	Please see Response 299
	<i>Include program revision flexibility</i>	Please see Response 299
	<i>Set overall statewide cap</i>	Please see Response 114
	<i>Overall cap should cover new entities</i>	Please see our discussion of the Reserve
	<i>CAR should go beyond other state and federal policies</i>	Thank you for your comment
	<i>Need to address double counting</i>	Please see Response 275
	<i>Don't allow Washington credits to be used to avoid reductions in other states</i>	Thank you for your comment
	<i>Get rid of phase-in for EITEs</i>	Please see Response 173
	<i>EITE flexibility should only be based on evidence</i>	Please see Response 120
	<i>Need to address leakage</i>	Please see Response 99
	<i>Include imported fuels and emissions from imported electricity</i>	Please see Response 101 Please see Response 112 Please see Response 126 Please see Response 127
	<i>CAR should preclude windfalls to entities that curtail operations</i>	Please see Response 118
	<i>Don't allow voluntary participants</i>	Please see Response 137 Please see Response 138
	<i>CAR should result in improved air quality in highly impacted communities</i>	Please see Response 72
	<i>Ecology should conduct cumulative impacts study</i>	Please see Response 73
	<i>Covered parties should be incentivized to help Washington communities</i>	Please see Response 76
<i>CAR should incorporate renewable energy, efficiency, and other standards</i>	Please see Response 292	
<i>Shouldn't allow 100% of obligation to be covered by offsets</i>	Please see Response 270	

	<i>Offsets need specific criteria</i>	Please see Response 240
	<i>Need to address various EJ concerns</i>	Please see Response 76
	<i>Need to ensure accurate accounting, monitoring, and verification of ERUs</i>	Please see Response 240
<i>Alter, Jennifer</i>	<i>HR at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Thank you for your comment
	<i>Please rethink your approach</i>	Thank you for your comment
<i>American National Standards Institute</i>	<i>Introduction to ANSI ISO 14065 Accreditation Program</i>	Thank you for your comment
	<i>Standard requires impartiality, competence, and confidentiality</i>	Thank you for your comment
	<i>Consistency is vital in promoting best practices and providing support</i>	Thank you for your comment
	<i>Accreditation allow demonstration of QA system and verification process</i>	Thank you for your comment
	<i>ANSI process has 21 accredited bodies</i>	Thank you for your comment
	<i>Many mandatory and voluntary reporting bodies accept ANSI verification</i>	Thank you for your comment
	<i>CAR allows five pathways, but only ANSI consistent with global programs</i>	Thank you for your comment
	<i>CA system limited to CARB-specific methodologies</i>	Thank you for your comment
	<i>The Climate Registry requires verification must maintain ANSI accreditation</i>	Please see Response 291
	<i>“Other GHG verification program” catchall provision not clearly defined</i>	Please see Response 291
	<i>CAR should require ANSI only</i>	Please see Response 291
<i>Anderson, Glen</i>	<i>CAR needs to be much, much stronger</i>	Please see Response 195
	<i>Climate disruption is extremely serious and we are in urgent danger</i>	Please see Response 20
	<i>Base emissions reduction targets consistent with best available science</i>	Please see Response 195
	<i>Using offsets can lead to double-counting and may fail to meet goals</i>	Please see Response 275
	<i>Offsets may mean no emissions reductions on-site</i>	Please see Response 270
	<i>Offsets don’t help fenceline communities</i>	Please see Response 270
	<i>Adding a reserve account good, but more work needs to be done</i>	Please see Response 298
	<i>Based on limited authority and cannot be the comprehensive solution</i>	Please see Response 195
	<i>Even with the limitations, CAR could still be a stronger than this draft reflects</i>	Please see Response 195
	<i>Thank you for your hard work</i>	Thank you for your comment
<i>Anderson, Theodore L.</i>	<i>Need to base rule on science – need 8% annually</i>	Please see Response 14 Please see Response 195

	<i>No moral or a legal justification for Washington State failing to do its part</i>	Please see Response 1
	<i>This is an urgent matter– we may already be entering a state of climate crisis</i>	Please see Response 20
	<i>State government should respond accordingly</i>	Thank you for your comment
	<i>Thank you for considering this comment</i>	Thank you for your comment
Andrews, Cate	<i>Concerned about emissions coming from military flight operations</i>	Please see Response 130
	<i>Believes Whidbey Island, Fairchild, and JBLM all over CAR threshold</i>	Please see Response 130
	<i>Should comply with the Paris accords and mandate an accounting</i>	Please see Response 84
Ash Grove Cement Company	<i>Supports submission from AWB</i>	Thank you for your comment
	<i>Ash Grove is largest US-owned manufacturer, 8 US locations, zero foreign</i>	Thank you for your comment
	<i>First received Energy Star rating in 2006, most recent in 2016</i>	Thank you for your comment
	<i>Makes significant contribution to Washington state economy</i>	Thank you for your comment
	<i>Manufactures about 1/3 of cement used in Washington, rest mostly imported</i>	Thank you for your comment
	<i>Making cement has two sources of CO₂ – decarbonization and fossil fuels</i>	Thank you for your comment
	<i>60% decarbonization – no physical way to reduce that as inherent to process</i>	Please see Response 153
	<i>40% fossil fuels, but 98% of their electricity comes from hydro</i>	Thank you for your comment
	<i>If Ash Grove Seattle shut down, global CO₂ would rise 327,000 tons annually</i>	Please see Response 99
	<i>CAR SEPA didn't take leakage into account</i>	Please see Response 29
	<i>Pennies/ton difference in final cost can be significant</i>	Thank you for your comment
	<i>If costs go up, plant will probably close</i>	Thank you for your comment
	<i>Requests excluding process emissions that can't be reduced or controlled</i>	Please see Response 99
	<i>Must address leakage</i>	Please see Response 99
	<i>Shouldn't require EITEs to benchmark – data not available</i>	Please see Response 184
	<i>Ash Grove Seattle competing against China manufacturers, not Florida</i>	Please see Response 99
	<i>Even CAR flexibility for “existing benchmarking info for sector” doesn't help</i>	Please see Response 169
	<i>Cement industry does not have agreed upon production or product measure</i>	Please see Response 179
	<i>Strongly object to language punishing EITEs if they can't provide data</i>	Please see Response 184
	<i>Benchmarking supposed to help EITEs but may actually hurt them</i>	Please see Response 168
	<i>Either get rid of -070 provisions or make -060 an option for EITEs in 2020</i>	Please see Response 169
	<i>Need to account for carbon from power source (hydro vs coal)</i>	Please see Response 183
	<i>If benchmarking to be used, need to account for transport for imports</i>	Please see Response 183
	<i>Should make baseline 2012-2014 so not penalized for recent efficiencies</i>	Please see Response 158
	<i>Banked ERUs for EITEs should not expire</i>	Please see Response 266
	<i>Need offramp in case I-732 passes</i>	Please see Response 224
	<i>Need safety valve in program (e.g., price cap)</i>	Please see Response 221
	<i>Attachments: Production Costs and Transport Costs for Importing Cement</i>	Attachments acknowledged

Association of Washington Business	<i>Ecology usually has better stakeholder involvement, but didn't this time</i>	Please see Response 17
	<i>Ecology lacks statutory authority to adopt the CAR</i>	Please see Response 4
	<i>RCW 70.235 doesn't authorize adoption of a GHG reduction program</i>	Please see Response 12
	<i>RCW 70.94 only covers direct emissions sources, not distributors/producers</i>	Please see Response 4
	<i>Ecology not authorized to accept emission credits</i>	Please see Response 5
	<i>CAR violates the Dormant Commerce Clause of the US Constitution</i>	Please see Response 6
	<i>CAR conflicts with obligations of natural gas companies to fill customer need</i>	Please see Response 83
	<i>CAR will impair the ability of EITEs to compete in the world economy</i>	Please see Response 99
	<i>CAR's determination and treatment of EITE Industries is flawed</i>	Please see Response 120 Please see Response 121 Please see Response 122 Please see Response 169
	<i>A hardship threshold must be defined for EITEs</i>	Please see Response 221
	<i>The provisions of WAC 173-442-070 do not work for all EITEs</i>	Please see Response 169
	<i>Production data sought is unclear and likely unobtainable</i>	Please see Response 184
	<i>Production data should be protected from disclosure</i>	Please see Response 193
	<i>Baselines should adjust for early action and energy efficiency</i>	Please see Response 158
	<i>Sector and efficiency calculation provisions are unclear and subjective</i>	Please see Response 177
	<i>How to calculate benchmarks for sites that change or have multiple products</i>	Please see Response 167 Please see Response 181
	<i>Data will be insufficient to make a defensible efficiency determination</i>	Please see Response 184
	<i>How to establish efficiency determination if no data available</i>	Please see Response 184
	<i>Efficiency rate should adjust to reflect market or production changes</i>	Please see Response 167
	<i>Should not allow Ecology to assign punitive efficiency reduction rates</i>	Please see Response 188
	<i>Equation 1 should be simplified</i>	Please see Response 191
	<i>Facilities should be allowed to opt out of the EITE treatment</i>	Please see Response 169
	<i>Applicability of compliance obligations should be delayed beyond 2020</i>	Please see Response 17 Please see Response 218
	<i>CAR must provide a safety valve or other cost containment mechanisms</i>	Please see Response 221
	<i>Ecology should consider alternative compliance opportunities</i>	Please see Response 153 Please see Response 156 Please see Response 169
	<i>Petroleum refineries should be included in the list of EITEs</i>	Please see Response 121
	<i>Ecology violated SEPA by failing to prepare an EIS</i>	Please see Response 21
	<i>Compliance with the CAR will result in significant environmental impacts</i>	Please see Response 21
	<i>The environmental impacts of the CAR must be analyzed in an EIS</i>	Please see Response 21
	<i>SBEIS does not analyze compliance costs to Washington businesses</i>	Please see Response 49
<i>Ecology cannot show that the benefits of the CAR exceed its costs</i>	Please see Response 36	
<i>The CBA shouldn't compare local costs with global benefits</i>	Please see Response 37	

	<i>Ecology misapplied the social cost of carbon to overstate CAR's benefits</i>	Please see Response 36
	<i>Ecology's method to estimate the net present value of benefits is incorrect</i>	Please see Response 38
	<i>Ecology severely understated the costs of the CAR</i>	Please see Response 49
	<i>Specific provisions should be revised to a "least burdensome alternative"</i>	Please see Response 48
	<i>Eliminate the prohibition against acquisition of ERUs from third parties</i>	Please see Response 237
	<i>Eliminate the phase-out of allowances from external programs</i>	Please see Response 265
	<i>Eliminate the limits on use of allowances based on the vintage year</i>	Please see Response 265
	<i>Specify objective standards for an EITE's efficiency reduction rate</i>	Please see Response 186
	<i>Exempt process emissions from EITEs from regulation under the CAR</i>	Please see Response 153
	<i>Prevent duplicative/conflicting reporting schemes for petroleum fuel suppliers</i>	Please see Response 199
	<i>Normalize short term variations in fuel supplier market share</i>	Please see Response 199
	<i>Petroleum suppliers reporting requirements are unlawful and burdensome</i>	Please see Response 199
	<i>Reporting by fuel suppliers should be exclusively on data reported to DOL</i>	Please see Response 199
	<i>Requiring fuel suppliers to report beyond DOL data violates RCW 70.97.151</i>	Please see Response 199
	<i>Proposed reporting scheme would result in inaccurate/burdensome reporting</i>	Please see Response 199
	<i>ERU contributions to Reserve are an invalid tax under the state Constitution</i>	Please see Response 9
	<i>ERU allocation from EJ committee is unlawful delegation</i>	Please see Response 10
<i>Association of Western Pulp and Paper Workers</i>	<i>Need to develop a "CO₂ Footprint" label to inform consumers</i>	Please see Response 165
	<i>Without labels, Washington manufacturers will suffer and CO₂ will rise</i>	Creation of a labeling system is outside the scope of this rulemaking.
	<i>Without labels, leakage will occur</i>	
<i>Austell, Carey</i>	<i>Plant Manager at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>Process emissions" cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
<i>Avista</i>	<i>330,000 customers in eastern Washington, northern Idaho, and Oregon</i>	Thank you for your comment
	<i>Agrees climate change needs to be addressed, but CAR is not the way</i>	Thank you for your comment
	<i>CAR exceeds Ecology's authority and is arbitrary and capricious</i>	Please see Response 4
	<i>CAR is attempt to regulate the sale of a commodity – natural gas</i>	Please see Response 4
	<i>CAR interferes and is inconsistent with natural gas company's obligations</i>	Please see Response 83
	<i>Restricting services in order to reduce emissions is not permissible by law</i>	Please see Response 83
	<i>CAR undermines role of natural gas in improving air quality</i>	Please see Response 103

	<i>CAR fails to reconcile with other requirements on natural gas companies</i>	Please see Response 82
	<i>Retail customers would be responsible for transport customers' emissions</i>	Please see Response 83
	<i>Lack of a rational compliance pathway is arbitrary and capricious</i>	Please see Response 229
	<i>Limits on out-of-state allowances is a flaw in proposal</i>	Please see Response 265
	<i>Must be cost-effective or UTC won't approve rate recovery</i>	Please see Response 82
	<i>Other reduction methods like CTR/digesters won't produce enough offsets</i>	Please see Response 262
	<i>Rule should say CHPs are not subject to regulation and are exempt</i>	Please see Response 258
	<i>ERUs are only way they can comply, but limits get tighter as years pass</i>	Please see Response 265
	<i>REC prices will go up as demand increases</i>	Please see Response 57
	<i>Ecology not shown data that RECs will be available as needed</i>	Please see Response 262
	<i>By limiting to in-state projects, violates Dormant Commerce Clause</i>	Please see Response 6
	<i>CAR was procedurally flawed and violates APA standards</i>	Please see Response 17
	<i>Not giving extension in second rulemaking round limited participation</i>	Please see Response 18
	<i>SEPA review was insufficient and didn't account for fuel-switching impacts</i>	Please see Response 25
	<i>Will lead to increased costs</i>	Please see Response 61 Please see Response 62
	<i>Electric companies will reduce production in Washington at gas-fired plants</i>	Please see Response 107
	<i>Companies will increase production out-of-state at coal-fired plants</i>	Please see Response 101
	<i>Economic analysis is problematic – overestimates benefits, lowballs costs</i>	Please see Response 36 Please see Response 49
	<i>If Covered Party falls below threshold, gas company stuck with the obligation</i>	Please see Response 160
	<i>Reserve should also cover addition of new gas customers</i>	Please see Response 160 Please see Response 293
	<i>Verification requirements are unnecessarily burdensome</i>	Please see Response 278
	<i>Protocols for ERU acceptance are missing – inherently risky to business</i>	Please see Response 244
	<i>Ecology should eliminate natural gas companies as regulated source</i>	Please see Response 149
<i>Bachelder, Karen</i>	<i>Governor and Ecology must step up and be leaders in protecting air quality</i>	Thank you for your comment
	<i>State is now proposing a Clean Air Rule that is woefully inadequate</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>8% decrease is needed to begin any serious climate recovery</i>	Please see Response 195
	<i>Rule does not hold major polluters accountable or cover all polluters</i>	Please see Response 123
	<i>Should include industrial agriculture</i>	Please see Response 124
	<i>Should cover all businesses as soon as possible, not starting in 2020</i>	Please see Response 173
	<i>Our environment is in crisis – stop doing “business as usual”</i>	Thank you for your comment
	<i>Please revise to make a real difference on the path to climate stability</i>	Thank you for your comment

<i>Bagley, Charles and Nancy</i>	<i>We commend the Governor and Ecology for taking the initiative</i>	Thank you for your comment
	<i>Final target for State emissions reductions should be 40%, not 30%; give Covered Parties until 2041 to achieve higher result</i>	Please see Response 13 Please see Response 196
	<i>Defer voluntary parties until 2020</i>	Please see Response 137
	<i>Every ERU should be recorded on paper in at least one location</i>	Please see Response 292
	<i>Good to have standards for verification but change verifiers every 3 years</i>	Please see Response 283
	<i>Covered parties should post sign at facility informing public</i>	We do not believe this requirement is needed at this time.
	<i>Thinks equation in WAC 173-442-070 appears to be incorrect</i>	Ecology staff members reviewed your proposed equation and example and were able to replicate your results using the example values you provided. However, Ecology believes the example values in your example are not realistic and are the reason for the negative values resulting from your example. Because the RR value is an annual reduction rate, you are correct that an 80% of baseline reduction each year for eight years would result in a negative pathway using the equation. However, this is not a realistic expectation. Recalculating with a more realistic value for RR results in positive values for the duration of the program. Regarding the annual reductions and proposed changes to the calculation formulas, we agree that you are correct that the RR value should be expressed as a decimal value. Please see Response 191
	<i>Rule needs clarification in a number of locations</i>	Rule clarified in numerous locations
<i>Please correct who/whom error</i>	Although agree with your statement that Ecology should use proper standard English grammar, Ecology is trying to write regulations in plain English to make them easier to understand. The current phrasing is the clearest way to communicate the intended message.	

	<i>Integration with CPP unclear, especially implementation plan part</i>	Please see Response 96
	<i>How to prevent gaming the system, especially regarding curtailments</i>	Please see Response 118
	<i>Throughout the entire document Ecology is often not capitalized</i>	The rule is correct as written. Regulations in Washington State follow the typesetting guidelines issued by the Office of the Code Reviser in "Instructions on Style for the Washington Administrative Code (WAC)," most recently updated in 2009. These guidelines dictate that the names of Washington State agencies are not capitalized in regulations unless at the beginning of a sentence. The guidelines can be found at http://leg.wa.gov/CodeReviser/Documents/InstructionsOnStyle.pdf
<i>Baker, Bruce</i>	<i>Destroying futures of our children because we are afraid of Big Oil</i>	Thank you for your comment
	<i>Many industries will support a stronger Clean Air Rule</i>	Thank you for your comment
	<i>Time is running out – extreme and severe harm is coming</i>	Thank you for your comment
	<i>CAR is too little, too late</i>	Thank you for your comment
	<i>Must reduce emissions at least 8 percent per year</i>	Please see Response 14 Please see Response 195
	<i>No exceptions for anyone</i>	Please see Response 123
<i>Beemer, Gregory</i>	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
<i>Bekkers, Vicki</i>	<i>Make the strongest rules possible and go beyond minimum recommendation</i>	Please see Response 195 Please see Response 196
	<i>We are on a path to disaster for future generations</i>	Thank you for your comment

	<i>Please be courageous and do what's right. Thank you.</i>	Thank you for your comment
<i>Benton PUD</i>	<i>Utility in Kennewick serving 50,000 customers</i>	Thank you for your comment
	<i>Concurs with Washington PUD Association comments</i>	Thank you for your comment
	<i>Concerned with cost implications to utility and customers</i>	Please see Response 62
	<i>Need to harmonize CAR and CPP</i>	Please see Response 88
	<i>TransAlta is excluded – not fair treatment</i>	Please see Response 108
	<i>SEPA analysis should include CO₂ emissions from TransAlta over time</i>	Please see Response 126
	<i>Need to clarify regulatory transition to the CPP</i>	Please see Response 96
	<i>Eligible sources for ERUs are arbitrary</i>	Please see Response 244
	<i>Electric vehicle charging stations should generate ERUs</i>	Please see Response 247
	<i>CAR encourages utilities to spend money out-of-state</i>	Please see Response 59
	<i>Concerned about how CAR will affect Agrium, their large customer</i>	Thank you for your comment
<i>Black Hills Audubon Society</i>	<i>Supports CAR</i>	Thank you for your comment
	<i>Urge stronger rules</i>	Thank you for your comment
	<i>Owe it to future generations to reverse GHG concentrations</i>	Thank you for your comment
<i>Black, Megan</i>	<i>CAR does not encourage biofuels</i>	Please see Response 144
	<i>Biofuels cycle carbon already in the atmosphere – no net carbon gain</i>	Please see Response 144
	<i>We must have fungible fuels and biofuels are the ultimate solution</i>	Please see Response 144
	<i>Don't add regulatory costs to this already expensive yet sensible solution</i>	Please see Response 144
<i>Bliss, Rodger</i>	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>"Process emissions" cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
<i>Boeing</i>	<i>Supports AWB comments</i>	Thank you for your comment
	<i>Serious concerns about proposed rule</i>	Thank you for your comment
	<i>Committed to reducing GHG emissions</i>	Thank you for your comment
	<i>International solution is best way to achieve meaningful reductions</i>	Thank you for your comment
	<i>Ecology should support federal programs implementing international efforts</i>	Thank you for your comment
	<i>Avoid Washington-only efforts</i>	Thank you for your comment

	<i>Boeing contributes significantly to Washington economy</i>	Thank you for your comment
	<i>Boeing has prioritized efforts to maximize GHG emission reductions</i>	Thank you for your comment
	<i>Played an integral role in reducing worldwide CO₂ emissions</i>	Thank you for your comment
	<i>New 777X airplane is 20 percent more efficient than current 777</i>	Thank you for your comment
	<i>Energy management program focused on improving facility performance</i>	Thank you for your comment
	<i>Leader in biofuel development</i>	Thank you for your comment
	<i>As EITE, aircraft manufacturing must be protected from economic disruption</i>	Thank you for your comment
	<i>EITEs must be shielded from cost impacts</i>	Thank you for your comment
	<i>Needs safety valve or cost containment provision</i>	Please see Response 221 Please see Response 225
	<i>CAR penalizes Boeing for being efficient and voluntary action</i>	Please see Response 158
	<i>Ecology should be encouraging Boeing to build wings here, not discouraging</i>	Please see Response 99
	<i>CAR may lead to leakage</i>	Please see Response 99
	<i>CAR penalizes use of previously permitted manufacturing capacity</i>	Thank you for your comment
	<i>Rule imposes real costs of company but not their competitors</i>	Please see Response 99
	<i>Emission standards should be based on technology available to limit GHGs</i>	Thank you for your comment
	<i>Boeing must have a viable compliance pathway – rule only has aspirations</i>	Please see Response 261
	<i>All four compliance pathways in rule are unavailable to Boeing</i>	Please see Response 261
	<i>Biofuels aren't as clean as natural gas, GHGs go down but particulates go up</i>	Thank you for your comment
	<i>May not be enough ERUs to meet demand, especially at reasonable price</i>	Please see Response 262
	<i>Can't use existing out-of-state allowance markets</i>	Please see Response 265
	<i>Rule must allow output-based metrics to assure viable compliance pathway</i>	Please see Response 182
	<i>Model changes, disruptions, weather and other factors affect emissions</i>	Please see Response 158
	<i>Other programs have limits normalized to amount of energy required</i>	Thank you for your comment
	<i>Rule needs to be narrow and targeted, but is neither one</i>	Thank you for your comment
	<i>Ecology needs to assure regulated community the rule is viable</i>	Please see Response 219
	<i>Rule is too complicated and ultimate impacts poorly understood</i>	Please see Response 219
	<i>Should not move forward at this time</i>	Please see Response 17 Please see Response 218
	<i>Rule imposes unwarranted costs on Boeing and ignores accomplishments</i>	Ecology disagrees. Please refer to the economic impact analyses conducted for this rule.
<i>Boyd, Stephen</i>	<i>My neighborhood is periodically affected by Port Townsend Paper's stench</i>	Thank you for your comment
	<i>Thank you for noting this</i>	Thank you for your comment
<i>BP</i>	<i>Major contributor to Washington's economy</i>	Thank you for your comment
	<i>Deep disappointment in the rulemaking process to date</i>	Please see Response 17

	<i>None of our proposed recommendations to improve the rule was accepted</i>	Please see Response 17
	<i>More important that the CAR be done right rather than done quickly</i>	Please see Response 17
	<i>Supports the comments from the Western State's Petroleum Association</i>	Please see responses to WSPA's comments
	<i>The rule appears unfinished and is missing key data points and definitions</i>	Please see Response 219
	<i>Rule contains multiple confusing, embedded references to other statutes</i>	Please see Response 219
	<i>Rule requires significant reading between the lines by regulated parties</i>	Please see Response 219
	<i>Won't even know baseline until well into the program's first compliance year</i>	Please see Response 159
	<i>Strongly urge Ecology to take the time to get the regulation right</i>	Thank you for your comment
	<i>Doesn't analyze sectors for their susceptibility to impacts from trade</i>	Please see Response 120
	<i>Process for determining EITEs is political and not objective</i>	Please see Response 120
	<i>Trade exposure of the refining industry is well documented</i>	Please see Response 120 Please see Response 121
	<i>Request Ecology release evaluation criteria in designating EITEs</i>	Thank you for your request
	<i>If no analysis done, request one be done with input from affected sectors</i>	Thank you for your comment
	<i>Using Subpart MM instead of DOL reporting violates RCW 70.94.151</i>	Please see Response 199
	<i>Proposed reporting system will result in inaccurate state-wide accounting</i>	Please see Response 199
	<i>CAR will impose a significant and unnecessary reporting burden on refiners</i>	Please see Response 199
	<i>CAR disadvantages the state's most efficient plants</i>	Please see Response 199
	<i>CAR gives free pass for first 3 years to importers but not producers</i>	Please see Response 199
	<i>Should have same compliance timeline for all fuel suppliers</i>	Please see Response 199
	<i>Fuel suppliers who act to fill fuel shortfalls might risk their historic baseline</i>	Please see Response 159
	<i>Limits on use of ERUs not captured in economic analysis</i>	Please see Response 60
	<i>Offsets are good</i>	Please see Response 267
	<i>Recommend removing the geographic limit on the generation of offsets</i>	Please see Response 268
	<i>Suggest Ecology rethink its limits on the generation and use of ERUs/Offsets</i>	Please see Response 268
	<i>Troubled by how the regulation restricts the important role of third parties</i>	Please see Response 237
	<i>Not appropriate to compare the cost of offsets in the voluntary market</i>	Please see Response 32
	<i>Has been no analysis of the volume of ERUs available in Washington</i>	Please see Response 262
	<i>Not possible to estimate price until the volume for sale is estimated</i>	Please see Response 33
	<i>Cost estimate based on studies that included only stationary sources</i>	Please see Response 44
	<i>Need to revise Cost-Benefit Analysis</i>	Please see Response 33 Please see Response 44
Bradley, Dave	<i>Should adopt a final CAR in 2016</i>	This document is part of that final rule adoption
	<i>Implementation will be challenging</i>	Thank you for your comment
	<i>CAR is only first step – should not be viewed as last or only step</i>	Thank you for your comment

	<i>CAR reductions are only part of state's efforts to combat climate change</i>	Thank you for your comment
	<i>Proposed reduction is improvement over status quo, but needs strengthening</i>	Please see Response 169
	<i>Should establish clearly defined framework for reviewing/updating CAR</i>	Please see Response 299
	<i>Rulemaking process was well designed and implemented</i>	Thank you for your comment
	<i>CAR is sound framework for reducing emissions in Washington</i>	Thank you for your comment
	<i>Support proposal to apply CAR to natural gas and petroleum fuel distributors</i>	Thank you for your comment
	<i>Support exempting some types of emissions</i>	Thank you for your comment
	<i>Threshold is OK, but could go lower</i>	Please see Response 139
	<i>Emission reduction rate OK, but needs to be strengthened in future</i>	Please see Response 196
	<i>Should use multiple performance metrics to evaluate effectiveness</i>	Please see Response 299
	<i>Updated reduction rates should be consistent with goals set by legislature</i>	Please see Response 13
	<i>Updated reduction rates should reflect other consistent Ecology policies</i>	Thank you for your comment
	<i>Should consider likely net benefits of rule</i>	Thank you for your comment
	<i>Provides extensive detail for each recommendation/ observation</i>	Thank you for your comment
Brown, Elyce	<i>"Stand up for Life."</i>	Thank you for your comment
	<i>Make CAR strong enough to keep CO₂ levels in scientifically established limit</i>	Please see Response 14 Please see Response 195
Carr, Mary M.	<i>Establish aggressive emission reductions based on best available science</i>	Please see Response 14 Please see Response 195
	<i>Don't allow carbon offsets to come from sectors already covered by cap</i>	Please see Response 275
	<i>Require more onsite emission reductions that improve local environment</i>	Please see Response 270
	<i>Protect the integrity of the cap by strengthening the Reserve rules</i>	Please see Response 298
	<i>This important step toward a clean energy future</i>	Thank you for your comment
	<i>Thank you!</i>	Thank you for your comment
Carroll, Terence	<i>We have moral imperative to act quickly and do as much as we can as state</i>	Thank you for your comment
	<i>CAR is not perfect, but we absolutely need to take this first step</i>	Thank you for your comment
	<i>A carbon tax or strongly controlled cap-and-trade program will be a necessity</i>	Thank you for your comment
Carson, Chris	<i>Must use best climate science, 2% per years is not enough</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>This is of the utmost importance to bring us climate stability</i>	Thank you for your comment
	<i>A full 8% per year is the reality of what is needed</i>	Please see Response 14 Please see Response 195
	<i>This is a life and death emergency – do not settle for compromises</i>	Thank you for your comment

	<i>We are watching – make the climate and the well-being of all a priority</i>	Thank you for your comment
<i>Cascade Natural Gas</i>	<i>Regulating Non-Sources Exceeds Ecology’s Legal Authority</i>	Please see Response 4
	<i>RCW 70.235.020 Does Not Authorize Ecology to Regulate NGDs</i>	Please see Response 4
	<i>Chapter 70.94 RCW Does Not Authorize Ecology to Regulate Non-Sources</i>	Please see Response 5
	<i>Ecology Doesn’t Have Legal Authority to Establish Emission Credit Program</i>	Please see Response 5
	<i>Clarify NGDs Are Not Liable for the Emissions of EITEs During Exemption</i>	Please see Response 160
	<i>Modify baseline to account for changes to Covered Parties</i>	Please see Response 160
	<i>Should note rely on Reserve to cover baseline changes</i>	Please see Response 160
	<i>Should postpone first compliance period until 2020</i>	Please see Response 218
	<i>Should exempt natural gas companies if national program adopted</i>	Please see Response 149
	<i>Should exempt natural gas companies if I-732 passes</i>	Please see Response 224
	<i>Ecology’s assumed average demand growth for natural gas too low</i>	Please see Response 46
	<i>Should consider weather variation in setting baselines</i>	Please see Response 158
	<i>Should revise CAR to avoid unintended environmental and economic effects</i>	Please see Response 61
	<i>Must coordinate with UTC to ensure consistent with other state laws</i>	Please see Response 82
	<i>Should revise unnecessary geographic and project-based restrictions</i>	Please see Response 268
	<i>Should authorize alternative compliance payments and variance procedure</i>	Please see Response 227
	<i>Should work with UTC to clarify process for ERU issuance</i>	Please see Response 256
	<i>Should allow diesel/gas-to-natural gas fuel switching for transportation sector</i>	Please see Response 248
	<i>Should use therms instead of MWh as official unit of measure</i>	Please see Response 256
	<i>Should clarify treatment of federal facilities</i>	Please see Response 130
<i>Reporting/verification for natural gas companies is unnecessarily onerous</i>	Please see Response 278	
<i>Should conduct evaluation of ERU project potential and ERU availability</i>	Please see Response 262	
<i>Covered parties should not be penalized for incorrectly issued ERUs</i>	Please see Response 232	
<i>Center for Biological Diversity</i>	<i>CAR must achieve GHG reduction consistent with state goals and objectives</i>	Please see Response 196
	<i>Focus on an allowances ignores other necessary regulatory options</i>	Please see Response 273
	<i>Lack of program cap defeats the effectiveness of allowance trading program</i>	Please see Response 114
	<i>Value of reductions is undermined by unlimited use of poorly defined offsets</i>	Please see Response 270
	<i>Must address GHG emissions and climate impacts of biomass</i>	Please see Response 145
	<i>GHG emissions from combustion of wood are quantifiable and substantial</i>	Please see Response 146
	<i>Biomass harvests decrease the carbon sequestration capacity of forests</i>	Please see Response 146
	<i>No basis for ignoring the CO₂ emissions from combustion of woody biomass</i>	Please see Response 146
<i>Center for Resource Solutions</i>	<i>Companies buy renewable energy to go beyond what government requires</i>	Please see Response 113
	<i>When voluntary parties enter mandatory market, incentive disappears</i>	Please see Response 113
	<i>CAR should lower emission limits to account for voluntary renewable energy</i>	Please see Response 113

	<i>VRE market promotes clean energy development and economic growth</i>	Please see Response 113
	<i>CAR must adequately recognize the carbon-reduction value of VRE</i>	Please see Response 113
	<i>If not meeting Green-e standards, WA voluntary sales may not qualify</i>	Please see Response 113
	<i>Covered Parties shouldn't qualify for ERUs from renewable energy</i>	Please see Response 275
	<i>ERUs from covered parties would be double crediting those reductions</i>	Please see Response 275
	<i>ERUs from alternative energy generation should not be allowed</i>	Please see Response 275
	<i>ERUs used/retired must be only from emissions reduction at covered parties</i>	Please see Response 275
	<i>Washington RECs should not be surplus unless emission limits lowered also</i>	Please see Response 113
	<i>Please clarify if ERU retirement will lower emissions at regulated units</i>	Please see Response 113
	<i>Does 2% going to Reserve mean emissions are 2% less than they would be</i>	Please see Response 294
	<i>Reserve doesn't prevent RECs from being used for out-of-state compliance</i>	Please see Response 113
	<i>We support provisions to prevent double counting</i>	Please see Response 298
	<i>Clarify requirements for emission reductions vs emission-reducing activities</i>	Please see Response 242
	<i>Possible error in WAC 173-442-160(5)(c)</i>	The error was fixed in the final rule
	<i>Recommend changes to WAC 173-442-240(2)(c)(i) and (ii)</i>	Please see Response 113
<i>Chadsey, Meg</i>	<i>I am a scientist who works on the environmental impacts of carbon pollution</i>	Thank you for your comment
	<i>As written, CAR will not result in truly meaningful reductions</i>	Please see Response 197
	<i>Understand that goal is politically challenging, but climate doesn't care</i>	Thank you for your comment
	<i>Need to use best available science recommendations</i>	Please see Response 4 Please see Response 195
	<i>This is an opportunity for Washington to demonstrate climate leadership</i>	Please see Response 85
	<i>Precedent set will either galvanize action by others or let them off the hook</i>	Please see Response 85
	<i>We really only have one chance to get this right</i>	Thank you for your comment
	<i>Support the recommendations by the Washington Environmental Council</i>	Thank you for your comment
	<i>Thank you for your hard work</i>	Thank you for your comment
<i>Chelan County PUD</i>	<i>Appreciate inclusion of all eligible renewable resources as ERUs</i>	Thank you for your comment
	<i>Appreciate change removing incentives for industrial relocation</i>	Thank you for your comment
	<i>CPP implementation plan should be mass-based and trading-ready</i>	Thank you for your comment
	<i>Work on CPP transition needs to start as soon as practicable</i>	Thank you for your comment
	<i>ERU generation shouldn't be limited to entities with compliance obligations</i>	Please see Response 236
	<i>Letting more parties in makes more ERUs available</i>	Please see Response 236
	<i>Reasonable limit would be to limit ownership to those who generate</i>	Please see Response 236
	<i>ERU ownership not as restrictive in CAR as Ecology had described</i>	Please see Response 236
	<i>Clarify renewable energy credit definition</i>	Please see Response 254
	<i>Clarify ERUs from energy efficiency use are not limited to first year</i>	Please see Response 256

Clark Public Utilities	<i>Appreciate Ecology efforts, but needs more work to get real reductions</i>	Thank you for your comment
	<i>Should exempt electric sector from rule and harmonize with CPP</i>	Please see Response 88
	<i>Trading program under CPP is better mechanism</i>	Please see Response 88
	<i>Any baseline should exclude 2012</i>	Please see Response 158
	<i>Energy efficiency credit should be for life of measure not just first year</i>	Please see Response 256
	<i>Should encourage and support transportation electrification</i>	Please see Response 247
	<i>I-937 qualified RECs should be allowed even if generated out-of-state</i>	Please see Response 254
	<i>Should grant program waiver for hours when operating for reliability reasons</i>	Please see Response 105
Clean Energy	<i>Supplier of transportation natural gas</i>	Thank you for your comment
	<i>CAR is better approach than carbon tax</i>	Thank you for your comment
	<i>Concerned that landfills are not exempt</i>	Please see Response 142
	<i>Concerned about unintended consequences from CAR</i>	Please see Response 248
	<i>Important to not create unintended barriers to natural gas for transportation</i>	Please see Response 248
	<i>Need to address fugitive methane, but don't jeopardize possible credits</i>	Please see Response 248
Climate Action Reserve	<i>Strongly supports inclusion of offsets</i>	Please see Response 267
	<i>Reconsider requirement for offsets to be in-state only</i>	Please see Response 268
	<i>Reconsider requirement that ERUs be "additional to existing law or rule"</i>	Please see Response 242
	<i>Strongly encourages allowing forestry-related sequestration for credits</i>	Please see Response 245
	<i>Specific indicators for organic protocols are unclear and need revising</i>	Please see Response 244
	<i>ODS Project Protocol should be eligible also</i>	Please see Response 250
	<i>Should specify what level of assurance needed for verification</i>	Please see Response 288
Climate Solutions, Natural Resources Defense Council, NextGen Climate America, Sierra Club, Union of Concerned Scientists, and Washington Environmental Council	<i>Appreciate the changes from the first draft</i>	Thank you for your comment
	<i>More work needed to strengthen the rule</i>	Thank you for your comment
	<i>Baseline-and-credit approach is flawed</i>	Please see Response 274
	<i>Need aggregate cap for whole program</i>	Please see Response 114
	<i>Need to base aggregate cap on best available science</i>	Please see Response 195
	<i>Use of offsets is unprecedented approach</i>	Please see Response 272
	<i>Serious concerns about double-counting</i>	Please see Response 275
	<i>Reserve account structure needs more work</i>	Please see Response 293
	<i>Improvements to rule on curtailment are good, but still need more work</i>	Please see Response 118
	<i>Shouldn't include voluntary participants that don't have reduction obligations</i>	Please see Response 137
		Please see Response 138
	<i>Electric sector following CPP should be at least as stringent as under CAR</i>	Thank you for your comment
	<i>Should exempt biofuels</i>	Please see Response 144
<i>EITEs should be brought in immediately</i>	Please see Response 173	

	<i>Concerns about credit trading and liquidity</i>	Please see Response 238
	<i>Concerns about linkage with other state programs</i>	Please see Response 274
	<i>UTC may allow costs to be passed along, resulting in windfall profits</i>	Please see Response 115
	<i>Ecology should embrace broadest interpretation of its authority</i>	Thank you for your comment
	<i>Shouldn't allow companies to buy their way out of program</i>	Thank you for your comment
	<i>Allowed offsets percentage is too high – 100% is unprecedented</i>	Please see Response 270
	<i>Concerned about resources required for tracking and verification</i>	Please see Response 240
	<i>Concerned about sufficiency of ERU availability</i>	Please see Response 262
	<i>Should expand definition of additionality to cover all business-as-usual</i>	Please see Response 242
	<i>Should eliminate all regulated-sector offset opportunities</i>	Please see Response 275
	<i>Should restrict reliance on offsets by allowing for only portion of obligations</i>	Please see Response 270
	<i>Offset projects should have rigorous approval process with public input</i>	Please see Response 260
	<i>Reserve account charging rate insufficient</i>	Please see Response 293
	<i>Use of offsets may mean Reserve account never gets fully charged</i>	Please see Response 293
	<i>Should not prioritize Reserve – structure so everything gets done</i>	Please see Response 298
	<i>Treating all ERU sources as fungible encourages curtailment and leakage</i>	Please see Response 296
	<i>Hybrid of offsets and ERUs may undermine EJ efforts</i>	Please see Response 71
	<i>Charge Reserve at 3.5% or do variable stream of ERUs</i>	Please see Response 293
	<i>Need to prevent windfall profits from curtailment</i>	Please see Response 118
	<i>Eliminate loopholes in curtailment definition</i>	Please see Response 117
	<i>Make EITE output-based mechanism apply to all facilities</i>	Please see Response 171
	<i>Add definition for “market exit”</i>	Please see Response 115
	<i>Voluntary participation should be eliminated or severely limited</i>	Please see Response 137 Please see Response 138
<i>Climate Trust</i>	<i>Program needs to set clear price signal</i>	Please see Response 86
	<i>Need to acknowledge other policies and be consistent</i>	Please see Response 242
	<i>Need to credit early actions</i>	Please see Response 157
	<i>Need to leverage existing standards</i>	Please see Response 238
	<i>Need to clarify the earliest acceptable version of third-party offset protocols</i>	Please see Response 244
	<i>Should add acceptable CARB-compliant offset protocols to CAR</i>	Please see Response 251
<i>Cornell, Cheri</i>	<i>Executive Director of CoolMom.org</i>	Thank you for your comment
	<i>Climate action is a moral imperative</i>	Thank you for your comment
	<i>Intergenerational equity is important</i>	Please see Response 40
	<i>Going slowly on reducing carbon emissions is wholesale generational theft</i>	Thank you for your comment
	<i>CAR is decent start, but can do better</i>	Thank you for your comment
	<i>Must base on best available science – need 8%</i>	Please see Response 14

		Please see Response 195
	<i>Need to reach beyond CAR to bring more tools to fight climate change</i>	Please see Response 317
<i>Cornell, Phil</i>	<i>Clean air is everyone's right and must be protected</i>	Thank you for your comment
<i>Cowlitz County</i>	<i>Landfills do not fit the intent of CAR</i>	Please see Response 142
	<i>Concerned about unintended consequences of force-fitting landfills into CAR</i>	Please see Response 142
	<i>Estimate they'd pay penalties of over \$80 million from 2017-2035</i>	Please see Response 142
	<i>Suggest alternatives for control of GHGs from landfills</i>	Please see Response 142
<i>Cowlitz County Board of Commissioners</i>	<i>Landfills do not fit the intent of CAR</i>	Please see Response 142
	<i>No way to avoid increase in gas generation at landfills over time</i>	Please see Response 142
	<i>Would cost over \$80 million to comply from 2017-2035</i>	Please see Response 142
	<i>Can't pass costs along to customers</i>	Please see Response 142
	<i>Supports alternatives for control of GHGs from landfills</i>	Please see Response 142
<i>Cowlitz County Public Works</i>	<i>Landfills do not fit the intent of CAR</i>	Please see Response 142
	<i>No way to avoid increase in gas generation at landfills over time</i>	Please see Response 142
	<i>Would cost over \$80 million to comply from 2017-2035</i>	Please see Response 142
	<i>Can't pass costs along to customers</i>	Please see Response 142
	<i>Supports alternatives for control of GHGs from landfills</i>	Please see Response 142
	<i>Haste to produce CAR may create unintended consequences</i>	Thank you for your comment
	<i>Supportive of state-incentivized waste diversion requirements</i>	Thank you for your comment
<i>Cowlitz County PUD</i>	<i>Market-based, multi-state, multi-sector allowance trading program is best</i>	Please see Response 274
	<i>Clarify role of CAR under duplicative regulations</i>	Please see Response 242
	<i>Should regulate power sector under CPP instead of CAR</i>	Please see Response 88
	<i>Need to provide regulatory certainty</i>	Please see Response 91
	<i>Should allow all RECs to be eligible, even out-of-state</i>	Please see Response 254
	<i>Allow entities to create ERUs without becoming voluntary participants</i>	Please see Response 236
	<i>Provide ERU credit for the whole life of energy efficiency measure</i>	Please see Response 256
	<i>Provide safeguards in case Reserve or markets not fully functional</i>	Please see Response 293
	<i>Define how value of ERUs is secure if not property rights</i>	Please see Response 235
	<i>Support transportation conversion projects to generate ERUs</i>	Please see Response 247
<i>Crawford, Tom</i>	<i>Concerned about carbon pollution and its effects on real people</i>	Thank you for your comment
	<i>Rejoiced at the recent King County Superior Court ruling</i>	Please see Response 1

	<i>Now is the time for bold action on this front</i>	Thank you for your comment
	<i>Concerned that proposed rule doesn't go near far enough</i>	Please see Response 4
	<i>Court ruling provides solid legal basis for moving much further than proposed</i>	Please see Response 3
<i>Crowley, Lin</i>	<i>CAR proposal is a good start</i>	Thank you for your comment
	<i>Consider setting the target of 8% of emission reduction</i>	Please see Response 14 Please see Response 195
	<i>EJ committee should evaluate rule impact on highly impacted communities</i>	Please see Response 73
	<i>EJ committee should make recommendations to address air quality disparity</i>	Please see Response 74
	<i>We all have to breathe air</i>	Thank you for your comment
<i>Cullenward, Danny</i>	<i>California carbon market significantly oversupplied at present</i>	Please see Response 263
	<i>Buying credits from oversaturated market doesn't lead to GHG reductions</i>	Please see Response 263
	<i>CAR designed to allow covered parties to comply by purchasing allowances</i>	Please see Response 263
	<i>Legal authority to extend CARB beyond 2020 is uncertain</i>	Please see Response 263
	<i>CAR should account for impacts of allowing purchases of CA credits</i>	Please see Response 263
	<i>Assumption in CBA that California credit is equal to ERU is incorrect</i>	Please see Response 263
<i>Curtz, Thad</i>	<i>My wife and I have two grandchildren</i>	Thank you for your comment
	<i>Scientific consensus is we need an 80% reduction from 1990 levels by 2050</i>	Please see Response 195
	<i>We know current official estimates of climate effects are ten years behind</i>	Thank you for your comment
	<i>I do not think that the current draft of the rule covers enough emissions</i>	Please see Response 123
	<i>Rate of reductions that it will produce isn't sufficient</i>	Please see Response 196
	<i>Please strengthen rule</i>	Thank you for your comment
<i>Department of Defense</i>	<i>Military installations have successfully reduced their GHG emissions</i>	Thank you for your comment
	<i>Already covered by other mandates</i>	Thank you for your comment
	<i>Request exemption for military facilities</i>	Please see Response 130
<i>Department of Energy – Hanford</i>	<i>May not be possible to reduce emissions and stay in compliance with TPA</i>	Ecology disagrees. The CAR provides a wide range of options for compliance and does not require on-site emissions reductions.
	<i>May not be able to meet reductions and stay on timeline in Consent Decree</i>	Ecology will establish a baseline GHG emissions value during the first three years of operation for the WTP plant. CAR provides alternate scenarios for compliance

		so US DOE Hanford is not limited to reducing processing capacity.
	<i>Paying for offsets totally reliant on Congressional funding not in their control</i>	The federal Clean Air Act does not exempt federal facilities from regulatory requirements due to the lack of appropriations. The WTP plant may begin partial operations in 2022 with full operation by 2036. Should the GHG emissions from the WTP exceed a program threshold, Ecology would expect USDOE Hanford to manage its facility for compliance with the CAR.
	<i>Request exemption for Hanford Site</i>	Please see Response 130
<i>Dick, Diane</i>	<i>I support the CAR in its latest revision</i>	Thank you for your comment
	<i>I urge you not to make it less stringent</i>	Thank you for your comment
	<i>Don't exempt solid waste landfills</i>	Landfills are not exempted from coverage under the CAR. Please see Response 142.
	<i>Clarify if complete combustion/oxidation are only petroleum/natural gas exemptions</i>	Please see Response 128
	<i>Need to address fugitive emissions from petroleum products and natural gas</i>	Please see Response 128
<i>Eachus, Laura</i>	<i>Thrilled that Governor Jay Inslee is taking action to reduce carbon pollution</i>	Thank you for your comment
	<i>Thank you!</i>	Thank you for your comment
	<i>If any change is needed, it would be to make it stronger</i>	Thank you for your comment
	<i>Reductions should be in line with current scientific findings</i>	Please see Response 195
	<i>Make sure offsets can't lead to double-counting</i>	Please see Response 275
	<i>Increase size of the reserve account</i>	Please see Response 293
	<i>Thank you for your work on this – keep it up!</i>	Thank you for your comment
<i>Energy Recovery Council</i>	<i>Should exempt solid waste management activities</i>	Please see Response 142
	<i>Waste-to-energy should not be regulated</i>	Please see Response 147
	<i>WTE is recognized source of GHG reductions</i>	Please see Response 147
	<i>Cap-and-trade programs poorly suited for waste sector</i>	Ecology disagrees. The CAR is not a cap and trade program. It provides a wide variety of options for compliance. Because the waste sector contributes a significant amount of greenhouse gas emissions in

		Washington it is appropriate that those emissions be included in the CAR.
	<i>Key benefit of WTE is methane reduction</i>	Thank you for your comment
	<i>Should pursue alternative policy mechanisms instead</i>	Thank you for your comment
	<i>WTE should generate ERUs</i>	Please see Response 252
	<i>CAR should use CPP as model</i>	Ecology believes that the commenter's reference to the CPP means that Ecology should issue allowances and use an allowance-based program design. As explained in Response 274, Ecology disagrees.
<i>Erickson, Peggi</i>	<i>Please do not tell us there are "legal realities" that force us to compromise</i>	Thank you for your comment
	<i>Must decrease fossil fuel emissions 7% per year according to science</i>	Please see Response 195
	<i>Must do much better than the current CAR</i>	Thank you for your comment
	<i>If Washington mobilizes as we did for WWII we can meet the higher goal</i>	Thank you for your comment
	<i>We cannot afford to do so little to reduce emissions</i>	Thank you for your comment
<i>Evergreen Carbon</i>	<i>Scope of rule is limited – encourage broader application</i>	Please see Response 123
	<i>Don't delay bringing in EITs</i>	Please see Response 173
	<i>Encourage use of scientifically-based compliance threshold</i>	Please see Response 195
	<i>Need additional categories for baselines between 25,000-70,000 MT CO₂e</i>	Please see Response 123 Please see Response 139
	<i>3% reduction should be starting spot</i>	Please see Response 195 Please see Response 196
	<i>Multiple compliance pathways are complicated and data quality questionable</i>	Ecology disagrees. The CAR provides multiple pathways and a wide array of options for compliance so that individual companies and facilities that face different circumstances can choose options that best fit their needs.
	<i>Limiting ERUs to in-state will put unknown pressure on carbon market</i>	Ecology disagrees. Our rationale for restricting emission reduction projects to in-state projects and programs is in Response 268.
	<i>Shouldn't allow California allowances</i>	Please see Response 263 Please see Response 264
	<i>Recommend inclusion of additional offset protocols</i>	Please see Response 244
	<i>CHP section provides no guidance</i>	Please see Response 258

	<i>CAR encourages devolution of company's aspirations</i>	Thank you for your comment
	<i>Don't include wastewater without viable methodology</i>	Please see Response 240
	<i>Consider sequestration and other offset programs</i>	Please see Response 245
	<i>Verification section needs additional clarification</i>	Please note verification clarifications made starting on page 129
	<i>There are issues with verification programs</i>	Please note clarifications made starting on page 129
	<i>Need clarity on how credits are moved and tracked from other sources</i>	Please see Response 292
<i>Food and Water Watch</i>	<i>CAR goals not aggressive enough to protect planet</i>	Please see Response 195
	<i>CAR is not a serious attempt to address climate crisis</i>	Please see Response 317
	<i>Economic analysis documents are fundamentally flawed</i>	Ecology disagrees. For a more detailed response, please see the Economic Analysis section starting on page 29.
	<i>Must adopt more aggressive reduction goals</i>	Please see Response 196
	<i>Cap-and-trade will not help Washington achieve its reduction goals</i>	Please see Response 197
	<i>Many examples of failed market-based systems</i>	Please see Response 197
	<i>Offsets do not achieve real, permanent, or additional emissions reductions</i>	Please see Response 240
	<i>Cap-and-trade undermines the Clean Air Act</i>	Ecology disagrees. The CAR is not a cap and trade program, however it does contain some market elements. Nothing in the CAR conflicts with the state Clean Air Act.
	<i>Should abandon CAR and all market-based mechanisms</i>	Please see Response 197
	<i>Should adopt source-by-source command and control system</i>	Please see Response 263 Please see Response 270
<i>Front and Centered</i>	<i>CAR proposal is good start</i>	Thank you for your comment
	<i>Opportunities to strengthen rule</i>	Thank you for your comment
	<i>Reductions should be based on best available science</i>	Please see Response 195
	<i>Rule should cover all sectors including agriculture</i>	Please see Response 124
	<i>Need to define "sensitive members of the population" per CAA</i>	Ecology is developing the CAR pursuant to the state Clean Air Act. The statute states that "[i]t is the intent of this chapter to secure and maintain levels of air quality that protect human health and safety, including the most sensitive members of the population, to comply with the requirements of the federal clean air act, to prevent injury to plant, animal life, and property, to foster the

		<p>comfort and convenience of Washington’s inhabitants, to promote the economic and social development of the state, and to facilitate the enjoyment of the natural attractions of the state.” RCW 70.94.11. The term “sensitive members of the population” is neither defined by the statute, nor has Ecology defined the term in subsequent air quality regulations. Ecology has chosen, at this time, to not define “sensitive members of the population,” and it is beyond the scope of this rule for Ecology to conduct a cumulative impacts analysis and monitor highly impacted communities. However, it is within the scope of the Environmental Justice Advisory Committee to conduct a cumulative impacts analysis that defines “sensitive members of the population” and maps sensitive populations across the State. This analysis of highly impacted communities would be part of the environmental justice criteria the EJAC defines and uses to award reserve ERUs (pending Ecology approval). At this time, we are also not expanding the EJAC’s official responsibilities (e.g., to advising on implementation of the Clean Air Rule), but may consider doing so in a future round of rulemaking.</p>
	<i>Create a rule including EJ criteria</i>	<p>Please see Response 80 Please see Response 81</p>
	<i>Need accountability and monitoring through EJ committee</i>	<p>Please see Response 78 Please see Response 79</p>
	<i>Should expand EJ committee’s role beyond use of ERUs</i>	<p>Please see Response 74</p>
	<i>Members of EJ committee must be from affected communities</i>	<p>Please see Response 69 Please see Response 70</p>
	<i>Should eliminate voluntary participants provisions</i>	<p>Please see Response 137</p>
	<i>Doesn’t support reduced compliance targets for EITEs</i>	<p>Ecology disagrees and is providing an alternative compliance path for EITE industries as described in Response 99.</p>

	<i>EJ should be top priority for Reserve</i>	Please see Response 293
Grey, Trygve	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Thank you for your comment
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Grunewald, Jim	<i>The current version of the CAR does not adequately address the need</i>	Please see Response 195 Please see Response 196
	<i>It is of utmost importance that the CAR truly leads to the needed reductions</i>	Please see Response 317
	<i>Strongly urge you to set reduction targets based on the latest science</i>	Please see Response 195
	<i>Washington State can lead the effort to save our planet for our children</i>	Thank you for your comment
	<i>Should rewrite the rule to guide our state to real reductions, not offsets</i>	Please see Response 240
	<i>Carbon offsets present real problems in achieving necessary reductions</i>	Please see Response 240
	<i>Thank you for hearing the concerns and needs generations to come</i>	Thank you for your comment
Gunn, Brian	<i>Attended Olympia hearing but had to leave before called on</i>	Thank you for your comment
	<i>The CAR doesn't do nearly enough to combat climate change</i>	Please see Response 317
	<i>CAR should follow the best science and lay out a path to 9-10% reductions</i>	Please see Response 195
	<i>Need a plan that leaves dirty, polluting fossil fuels/natural gas in the ground</i>	Please see Response 317
	<i>CAR doesn't challenge us to make change in our lifestyles to reduce footprint</i>	Please see Response 317
	<i>Instead it tacitly gives permission to remain complacent</i>	Thank you for your comment
	<i>Coddling industry and failing to galvanize citizen participation is foolhardy</i>	Thank you for your comment
	<i>Ecology should strive to do better</i>	Thank you for your comment
Hanski, Kathryn	<i>Need a much stronger CAR</i>	Please see Response 317
	<i>Ask for a requirement of 6-10% reduction that applies to all emitters</i>	Please see Response 14 Please see Response 195
Hargrove, Bourtai	<i>Proposed CAR is feeble</i>	Thank you for your comment
	<i>In April, cumulative CO₂ levels reached 407.42 ppm</i>	Thank you for your comment
	<i>CO₂ emissions continue to rise with frightening speed</i>	Thank you for your comment
	<i>Climate scientists are warning us that it is crucial to reduce emissions by 8%</i>	Please see Response 14

		Please see Response 195
	<i>Ecology proposes a mere 1% reduction which will do little or nothing</i>	Please see Response 196
	<i>We are in a planetary emergency</i>	Thank you for your comment
	<i>Gradualism and compromise no longer possible – forget politics</i>	Thank you for your comment
	<i>Set a science-based goal of 8% carbon emission reductions</i>	Please see Response 14 Please see Response 195
	<i>We have no choice or we will condemn our children and grandchildren</i>	Thank you for your comment
<i>Hargrove, Jim (Sen.)</i>	<i>Request that CAR recognize use of wood products to reduce emissions</i>	Please see Response 165
<i>Harlan, Rick</i>	<i>Please toughen the CAR</i>	Thank you for your comment
	<i>Less than 2% a year is less than 4 times what science says is needed</i>	Please see Response 14 Please see Response 195
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 240
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126
	<i>Utilities should be held to the stronger requirements of CAR instead of CPP</i>	Please see Response 90
	<i>Lack of hearings in Seattle excluded the voices of front line communities</i>	Please see Response 19
<i>Hazen, Libby</i>	<i>I am very concerned about the future health of our planet and our children</i>	Thank you for your comment
	<i>Ecology should uphold the landmark climate court decision</i>	Please see Response 1
	<i>Please use this opportunity wisely</i>	Thank you for your comment
	<i>Thank you for your willingness to listen to public comment</i>	Thank you for your comment
<i>Heenan, John</i>	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment

Henrikson, Lars	<p><i>I found a major flaw in Socrata's software that should be fixed immediately Users on mobile devices hit the submit button and nothing happens The message is being submitted, and it shows up in the comments section Hitting the submit button worked, but the user had no way of knowing Works fine from laptop That should be corrected as soon as possible Thanks for your attention to this important issue</i></p>	<p>Thank you for letting us know about this glitch. We informed Socrata, who investigated the problem. Because you discovered this fact late in the comment period, Socrata was not able to fix it before the comment period closed. However, they did send us the following reply: "Our engineering team has successfully modified the behavior of the contact form. It now prevents people from pressing the button multiple times, and in our tests that should completely resolve the issue you were previously seeing." We believe this problem is now corrected and future public commenters will not experience the same situation. We appreciate your discovery of the problem.</p>
Hiss, Joseph	<p><i>CAR proposal falls far short of what is needed Proposal is for 1-2%, but an annual reduction of 8% will be needed Update the plan's emission targets to correspond to the latest research The most knowledgeable persons in this field have found the CAR too weak</i></p>	<p>Thank you for your comment Please see Response 14 Please see Response 195 Please see Response 13 Thank you for your comment</p>
Hoffman, John	<p><i>Works at the Ash Grove Cement Company plant in Seattle I support the idea that Washington industry needs to be energy efficient CAR requires reductions for both fuel combustion and chemical processes "Process emissions" cannot be controlled except by shutting down Same process emissions will then occur somewhere else Overall emissions from cement manufacturing would increase, not decrease Don't increase emissions globally and eliminate my job Please rethink your approach</i></p>	<p>Thank you for your comment Thank you for your comment Please see Response 99 Please see Response 99 Please see Response 99 Please see Response 99 Please see Response 99 Please see Response 99 Thank you for your comment</p>
Horman, Trisha	<p><i>Works at the Ash Grove Cement Company plant in Seattle I support the idea that Washington industry needs to be energy efficient CAR requires reductions for both fuel combustion and chemical processes "Process emissions" cannot be controlled except by shutting down Same process emissions will then occur somewhere else</i></p>	<p>Thank you for your comment Thank you for your comment Please see Response 99 Please see Response 99 Please see Response 99</p>

	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Takes pride that Ash Grove is environmental leader</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Howe, Jared	<i>1.7% per year is insufficient</i>	Please see Response 196
	<i>Current science indicates that reductions of 8% per year are needed</i>	Please see Response 14 Please see Response 195
	<i>CAR only covers two-thirds of the state's carbon emissions – also insufficient</i>	Please see Response 139
	<i>CAR utterly fails to protect our children from climate change</i>	Thank you for your comment
	<i>Ecology has been given a court order to follow climate science</i>	Please see Response 1
	<i>The path to climate stability is becoming more challenging by the day</i>	Ecology agrees that addressing climate change requires urgent action.
	<i>Create stronger reduction targets, based on the science</i>	Please see Response 195
Howe, Whitney	<i>Attached is a picture of me with my daughter Mona</i>	Thank you for your comment
	<i>We are the last generation with ability to reverse course to climate chaos</i>	Thank you for your comment
	<i>We need to reduce carbon emissions by 8% per year to get stability</i>	Please see Response 14 Please see Response 195
	<i>Draft CAR cuts emissions by 1.7% - nowhere near where we need to be</i>	Please see Response 196
	<i>Judge Hill ordered you to write a clean air rule based on current science</i>	Please see Response 1
	<i>Your appeal of this ruling is shameful, as is the weak draft rule you wrote</i>	Please see Response 2
	<i>Washington should be the leader on this</i>	Please see Response 85
	<i>Citizens should not have to sue and protest to force Ecology to do their job</i>	Ecology notes that we are developing our rule pursuant to our authority under the Washington Clean Air Act. We started working on this rule in September 2015 in response to a directive by Governor Inslee, well in advance of any ruling in the <i>Foster</i> litigation. Previously, Governor Inslee had sponsored legislation to provide Ecology with the authority to develop a cap and trade program for greenhouse gas emissions. The Legislature failed to act on that proposed legislation. However, we are continuing to use the tools available to us to take action to address climate change, a top agency priority. The Clean Air Rule is an important

		first step in establishing an economy-wide cap on carbon emissions in Washington.
	<i>Remove the ability to double count offsets and limit overall use of offsets</i>	Please see Response 275
	<i>Cover vehicle and agricultural emissions</i>	Please see Response 124 Please see Response 139
	<i>Hold utilities to the stronger requirements of the CAR and not the CPP</i>	Please see Response 90
	<i>Seek input from communities will be most affected by climate change</i>	Ecology sought input from a wide variety of stakeholders in developing the CAR.
	<i>For the sake of my daughter and countless other children like her, fix the rule</i>	Thank you for your comment
<i>Hunt, David</i>	<i>I appreciate both Governor Inslee's and Ecology's leadership and hard work</i>	Thank you for your comment
	<i>Shield CAR from political whims by issuing it under the authority of the court</i>	Please see Response 3
	<i>Appeal of the court order seeks to cut plaintiffs out of the process</i>	Please see Response 2
	<i>Rule must show greater commitment to current and future generations</i>	Thank you for your comment
	<i>I recommend that Governor Inslee withdraw the appeal</i>	Please see Response 2
	<i>Need to reissue improved regulations under the authority of the court ruling</i>	Please see Response 3
	<i>The best generally accepted science requires 8% annual reductions</i>	Please see Response 195
	<i>CAR only requires reductions of 1.7% per year on designated large polluters</i>	Please see Response 196
	<i>CAR only covers two-thirds of the state's emissions</i>	Please see Response 139
	<i>Overall state reduction is closer to 1%</i>	Please see Response 196
	<i>Rule completely ineffective in protecting the climate for future generations</i>	Please see Response 197
	<i>Disagree that Ecology can go no further in reductions than specified in law</i>	Please see Response 11
	<i>AG's ruling states the law requires no action, meaning it doesn't limit action</i>	Please see Response 11
	<i>Draft CAR falls short of even cutting emissions per the 2008 law</i>	Please see Response 196
	<i>CAR uses offsets and carbon trading in systems spanning North America</i>	Please see Response 271 Please see Response 272
	<i>Trading system is inherently flawed</i>	Please see Response 197
	<i>The Rule's treatment of biomass as carbon neutral is overly broad</i>	Please see Response 145 Please see Response 146
<i>Converting carbon sinks to carbon emissions is not carbon neutral</i>	Please see Response 145 Please see Response 146	
<i>Need to bring industry into rule ASAP, not waiting</i>	Please see Response 220	
<i>Industrial Customers of Northwest Utilities</i>	<i>EITEs sensitive to cost of electricity</i>	Ecology agrees that EITEs may be sensitive to increases in fuel and power prices.
	<i>CAR arbitrarily affects electric customer rates</i>	Please see Response 62
	<i>Delay for EITEs impacts PUD rates during grace period</i>	Please see Response 174
	<i>Natural gas fired burners are important for transition away from coal</i>	Thank you for your comment

	<i>CAR may lead to leakage and more emphasis on coal plants out-of-state</i>	Please see Response 101
	<i>Unclear how to generate ERUs when under CPP</i>	Because Ecology has not yet determined the implementation plan for the CPP, we have not determined how or whether ERUs will be generated by the power sector once the CPP is in effect.
	<i>ERU market may be unstable</i>	Please see Response 262 Please see Response 265
	<i>CAR should exempt electric sector</i>	Please see Response 150
	<i>Should lift geographic limits on ERUs</i>	Please see Response 268
	<i>Should create new compliance pathways</i>	Please see Response 228 Please see Response 244
	<i>Should provide credit for early actions</i>	Please see Response 157 Please see Response 158
	<i>Should be subject to cost cap</i>	Please see Response 225
	<i>Should increase eligible CARB allowances to 25%</i>	Please see Response 265
	<i>Should modify REC to ERU conversion rate</i>	Please see Response 257
	<i>Supports filing from AWB</i>	See responses to AWB
	<i>Industrial sector should be exempt from CAR</i>	Please see Response 99
	<i>Already reduced emissions 20.3% since 2000</i>	Thank you for your comment
	<i>Already reduced electricity consumption 20.9% and natural gas by 8.5%</i>	Thank you for your comment
	<i>Should get GHG credits for reductions and for CHP</i>	Emission reduction projects that meet the criteria of the CAR are eligible to generate ERUs. See Response 240. CHP is a type of project that can generate ERUs provided applicable criteria are met.
<i>Industrial Energy Consumers of America</i>	<i>Most cost-effective way to reduce GHG emissions is to make things here</i>	Please see Response 99
	<i>EITE electricity cost shifting impacts to economy haven't been considered</i>	Please see Response 62
	<i>Need to hold imported goods to the same GHG standards as domestic</i>	The CAR regulates greenhouse gas emissions generated within Washington state. Ecology lacks clear legal authority under the Clean Air Act to regulate emissions from goods manufactured outside the state.
	<i>Should not use social cost of carbon to calculate costs and benefits</i>	Please see Response 36 Please see Response 37
<i>Inland Power</i>	<i>Should combine this rulemaking with CPP</i>	Please see Response 88

	<i>CAR should be technology agnostic</i>	The CAR does not require or favor one type of technology over another
	<i>All parties should be allowed to generate and transfer ERUs</i>	Please see Response 236
	<i>Energy efficiency ERUs should last more than first year</i>	Please see Response 236
<i>International Emissions Trading Association</i>	<i>Emissions trading is climate policy tool of choice to keep costs down</i>	Thank you for your comment
	<i>Measurable environmental outcomes matter</i>	Thank you for your comment
	<i>Cap-and-trade is best, but not what CAR is – would be better</i>	Please see Response 274
	<i>Should enable near and longer-term market linkages and policy alignment</i>	Please see Response 86
	<i>Borrow, learn, and leverage existing programs</i>	Ecology is doing so to the best of our abilities given constraints on statutory authority
	<i>Avoid duplicative and non-complementary measures</i>	See above
	<i>CAR is artificially constrained by approach to trading – make broader</i>	Please see Response 274
	<i>Non-compliance entity market participation</i>	Please see Response 235 Please see Response 236
	<i>Need to ensure common nomenclature and standards</i>	Ecology is attempting to do this to the extent possible given differences in program design
	<i>Well-positioned to develop strong, best-in-class offsets system</i>	Thank you for your comment
	<i>Offsets reduce costs while preserving environmental integrity</i>	Please see Response 267
	<i>Offsets drive innovation</i>	Thank you for your comment
	<i>Offsets provide economic benefits and preserve competitiveness</i>	Please see Response 267
	<i>Offsets help drive levels of ambition and linkages</i>	Please see Response 267
	<i>Need to empower third-party registry</i>	Please see Response 292
	<i>There are big ERU Registry unknowns</i>	Please see Response 292
	<i>Need transparency and engagement</i>	Please see Response 292
	<i>Should support and coordinate with compatible markets</i>	Please see Response 86 Please see Response 274
	<i>Should link with other systems</i>	Please see Response 86
	<i>Should avoid ERU and offset usage limits</i>	Please see Response 265 Please see Response 268
<i>Should avoid imposition of artificial geographic limitations</i>	Please see Response 268	
<i>Should take steps to avoid and manage leakage</i>	Please see Response 99	
<i>Should explore how to best ensure parity between imports and exports</i>	Please see Response 99	
<i>Invenery</i>	<i>As drafted, CAR is not efficient or effective way to meet GHG reduction goals</i>	Thank you for your comment
	<i>CAR will create illiquid, ineffectual carbon market with high compliance costs</i>	Please see Response 262

		Please see Response 263
	<i>Will be impetus for premature shutdown of efficient natural gas plant</i>	Please see Response 106 Please see Response 107
	<i>CAR is based on shaky legal ground</i>	Please see Response 4 Please see Response 5
	<i>CAR violates Takings Clause of US Constitution</i>	Please see Response 7
	<i>Penalizes Invernergy because it is only covered independent power producer</i>	Please see Response 64
	<i>Disadvantages imposed on in-state generators are arbitrary and capricious</i>	Please see Response 151 Please see Response 152
	<i>Invernergy should be exempt</i>	Please see Response 152
	<i>Baseline methodology should be revised to account for early action</i>	Please see Response 158
	<i>CAR exceeds Ecology's statutory authority</i>	Please see Response 4
	<i>CAR may interfere with reliability standards</i>	Please see Response 105 Please see Response 222
	<i>Treatment of Invernergy same as its less efficient competitors is unfair</i>	Please see Response 65
	<i>Ecology has clear authority to adopt CPP</i>	Thank you for your comment
	<i>Should exempt Invernergy from CAR until CPP is finalized or do CPP only</i>	Please see Response 88 Please see Response 89
	<i>Robust trading platform with fungible credits is necessary to reduce costs</i>	Please see Response 274
	<i>Ecology should issue tradable, fungible compliance instruments</i>	Please see Response 274
	<i>Use of ERUs instead of allowances will result in unintended consequences</i>	Please see Response 274
	<i>Must apply CAR in a fair and equitable manner</i>	Please see Response 65
	<i>Must provide covered parties a broad array of compliance options</i>	Please see Response 228
	<i>Need additional information and clarification about Reserve</i>	Please see Response 293 Please see Response 294 Please see Response 295 Please see Response 296 Please see Response 297
<i>Jacobs, Diane</i>	<i>You are the last generation who can put us on a path to climate stability</i>	Thank you for your comment
	<i>Current science indicates 8% reduction of emissions is needed immediately</i>	Please see Response 14 Please see Response 195
	<i>Please improve the rule to eliminate double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 267 Please see Response 272
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126
	<i>Utilities should be held to stronger requirements of the CAR instead of CPP</i>	Please see Response 90
	<i>Not holding hearings in Seattle excluded voices of front line communities</i>	Please see Response 19

<i>Kaiser Aluminum</i>	<i>Mainly concerned with leakage and growth</i>	Please see Response 99
	<i>Some EITEs will have heavier burden due to active/inactive cycles</i>	Please see Response 168
	<i>Concerned demand for ERUs will overwhelm supply</i>	Please see Response 261 Please see Response 262 Please see Response 263
	<i>Program needs safety valves</i>	Please see Response 221 Please see Response 222 Please see Response 223 Please see Response 224 Please see Response 225 Please see Response 226
	<i>Concerned that access to external markets will be limited or nonexistent</i>	Please see Response 265
	<i>Need to clarify intent about retiring ERUs placed in Reserve</i>	Please see Response 295
	<i>Need to clarify various effects of vintage years</i>	Please see Response 233
	<i>Should allow use of ERUs a company makes at its own out-of-state facilities</i>	Ecology considered providing EITE industries with the option of generating ERUs from emission reduction projects at an out-of-state facility within the same corporate family. That option ultimately wasn't supported by many EITEs, and so Ecology proceeded instead with the efficiency-based alternative compliance pathway for EITEs that is in the current rule.
	<i>Proposes alternative emission reduction pathway options</i>	Please see Response 175 and Response 182. While Ecology will confirm Kaiser's statement that there are only 3 facilities comparable to it, if this is true, there are not enough members of the sector to produce a meaningful efficiency distribution. As a result, the process in WAC 173-442-070(b)(3) would be used, setting the reduction rate for Kaiser at an equivalent to the rate for non-EITE parties.
<i>Need to ensure confidentiality of production data</i>	Please see Response 193	
<i>Kaminski, Robert</i>	<i>1.7% is far too low to bring much meaningful reduction</i>	Please see Response 196
	<i>Needs to set stronger precedent for other states to follow with higher rate</i>	Please see Response 85
	<i>Risk of double counting is high, as is the potential for exploitation</i>	Please see Response 275

	<i>I am disheartened that this rule does not cover agriculture or transportation</i>	Please see Response 124 Please see Response 126
	<i>I hope there is something being done to help rein these other sources in</i>	Please see Response 139
	<i>A tax on vehicle miles traveled, credits to public transit users, would help</i>	That is outside the scope of Ecology's authority and this rulemaking
	<i>Should have held hearing in Seattle or the surrounding area</i>	Please see Response 19
	<i>Low-income and indigenous persons couldn't provide spoken testimony</i>	Please see Response 19
	<i>Thank you for the extraordinarily difficult work that you all do</i>	Thank you for your comment
KapStone	<i>Proposed CAR penalizes early action</i>	Please see Response 157
	<i>Must modify rule to account for reductions to date</i>	Please see Response 157
	<i>Should provide flexibility on baseline</i>	Please see Response 158
	<i>Need to recognize existing CHP systems</i>	Existing CHP systems are already in the baseline, and so cannot meet the additional criterion for generating ERUs. As described in response 258, Ecology intends to include a CHP protocol through a future rulemaking.
Keller, Jan	<i>The re-drafted CAR specifies GHG emission reductions of 1.7% per year</i>	Please see Response 196
	<i>Should instead base on current science which indicates 8% per year needed</i>	Please see Response 14 Please see Response 195
	<i>CAR only covers two-thirds of the state's carbon pollution</i>	Please see Response 123 Please see Response 139
	<i>We must work to make reductions in as wide a variety of industries</i>	Please see Response 123 Please see Response 139
	<i>Ecology not constrained by goals set by legislature in 2008</i>	Please see Response 11
	<i>The courts have given you support and backing to do what is necessary</i>	Please see Response 3
	<i>Judge determined that the state has a "mandatory duty"</i>	Please see Response 1
	<i>The Legislature's 2008 goals are out-of-date and don't supersede reality</i>	Please see Response 13
	<i>So there's no way they can be a ceiling that limits the CAR, just a floor</i>	Please see Response 11
	<i>Concerned that the CAR encourages offsets rather than forcing reductions</i>	Please see Response 272
	<i>Ecology says "multiple strategies" are needed—reductions not from CAR</i>	Please see Response 317
	<i>That is not acceptable. Nothing like that is waiting in the wings.</i>	Please see Response 317
<i>Strengthen the CAR so that it really gives us clean air and a stable climate</i>	Please see Response 195 Please see Response 196	
King County	<i>King County has strong record of action on GHG emissions</i>	Thank you for your comment
	<i>King County making progress to prepare for climate change</i>	Thank you for your comment

	<i>Request CAR strengthen climate goals</i>	Please see Response 195 Please see Response 196
	<i>CAR should be comprehensive and compatible</i>	Please see Response 123 Please see Response 139
	<i>Support provisions to avoid leakage</i>	Thank you for your comment
	<i>Need to reinvest in solutions</i>	Thank you for your comment
	<i>Need to recognize landfill best practices that reduce emissions</i>	Please see Response 142
	<i>Need to design carbon offsets carefully</i>	Please see Response 272
	<i>Support energy co-generation and biofuel development</i>	Thank you for your comment
<i>King County Solid Waste</i>	<i>Cedar Hills facility well under CAR threshold</i>	Cedar Hills Landfill has previously reported GHG emissions in excess of 200,000 MT CO ₂ e per year, well in excess of the threshold for coverage under the CAR. More recently Cedar Hills has resubmitted reporting data indicating that their GHG emissions are approximately 75,000 MT CO ₂ e per year, below the threshold for coverage. Ecology has not yet evaluated the resubmitted data to determine whether such a substantial reduction in GHG emissions is valid.
	<i>Many steps taken at Cedar Hills to capture and reduce fugitive methane</i>	Thank you for your comment
	<i>CAR should measure progress over time</i>	The CAR will measure progress over time.
	<i>Should exclude biogenic sources</i>	Please see Response 145
<i>Kitchen, Chris</i>	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
<i>Klickitat County PUD</i>	<i>Revise CAR to recognize landfill as source of ERUs</i>	Please see Response 252
<i>Klumpp, Liz</i>	<i>I stayed for about 2 hours of the hearing – you were calm, cool and helpful</i>	Thank you for your comment

	<i>I do believe you all are putting your best foot forward to address the problem</i>	Thank you for your comment
	<i>Thanks for the good work your team does</i>	Thank you for your comment
<i>Knutsen, Leif</i>	<i>WEC form letter</i>	See response to form letter below
	<i>Help end tax funded pollution of the commons</i>	Thank you for your comment
	<i>Capitalism is a failed paradigm that hurts the planet</i>	Thank you for your comment
	<i>Carbon tax is better than cap-and-trade</i>	Thank you for your comment
<i>Kunzler, Joe</i>	<i>I think our air is just fine</i>	Thank you for your comment
	<i>I don't think downloading costs to low and fixed income folks is the way to go</i>	Ecology does not believe that implementation of the CAR will result in significant increases in fuel and electricity prices. See Response 226.
	<i>Not appropriate to target two of Skagit County's biggest employers</i>	The CAR covers only the largest emitters of GHG emissions in the state. See Response 139. Because of the urgency of the threat posed by climate change, Ecology has concluded it is appropriate to require emission reductions from these large emitters.
	<i>If you really want to reduce CO₂ emissions, start by amply funding transit</i>	This suggestion is outside the scope of Ecology's authority and this rulemaking.
	<i>Please put this CAR or my ideas to a referendum and let the voters decide</i>	Please see Response 15
<i>Kuzura, Oleksandr</i>	<i>I am a college student and I'm concerned</i>	Thank you for your comment
	<i>Outdoors is a wonderful rejuvenating experience that makes us better people</i>	Thank you for your comment
	<i>1.7% reductions aren't enough to make a stable climate</i>	Please see Response 196
	<i>Why do you take conservative action when resources and support are there</i>	Thank you for your comment
	<i>Be brave</i>	Thank you for your comment
	<i>You hold the key and the power</i>	Thank you for your comment
<i>Lagerberg, Rose</i>	<i>Commend the Governor for taking action</i>	Thank you for your comment
	<i>This policy could help transform Washington's economy</i>	Thank you for your comment
<i>Lans, Ken</i>	<i>CAR in its current form will not achieve needed reductions</i>	Please see Response 196 Please see Response 197
	<i>Climate change is the biggest public health threat of the 21st century</i>	Ecology agrees that climate change is a significant public threat. See Response 20.

	<i>Adoption of the CAR is a critical step in addressing our emission sources</i>	Thank you for your comment
	<i>CAR must get real, near-term, and meaningful reductions in emissions</i>	Please see Response 196 Please see Response 197
	<i>Must be based on best available science</i>	Please see Response 195
	<i>Emissions in developed world economies need to drop at least 4% a year</i>	Please see Response 195
	<i>Draft CAR contains too many loopholes and will fail to drive real reductions</i>	Please see Response 197
	<i>Must be based on best available science – 1.7% a year doesn't cut it</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Baseline and credit is unworkable</i>	Please see Response 197
	<i>Needs to be an explicit aggregate cap</i>	Please see Response 114
	<i>Offsets need to be much more limited and restricted to new reductions</i>	Please see Response 272
	<i>Voluntary participants should not be allowed</i>	Please see Response 137
	<i>If voluntary participants allowed, should have a emission reduction pathway</i>	Please see Response 138
	<i>Sends the wrong signal to other states that wish to follow our lead</i>	Please see Response 85
	<i>Do the right thing</i>	Thank you for your comment
<i>Linet, Cynthia</i>	<i>Climate change is the existential threat of our time.</i>	Thank you for your comment
	<i>We are already seeing the ravages of climate change</i>	Thank you for your comment
	<i>Our kids won a great victory in the courts</i>	Please see Response 1
	<i>The CAR does not begin to satisfy the court's decision</i>	Please see Response 1
	<i>The CAR only decreases emissions by 1% a year when 8% is needed</i>	Please see Response 14 Please see Response 195
<i>Little, James W.</i>	<i>Thank you for your leadership in reducing GHG emissions in our state</i>	Thank you for your comment
	<i>I ask you to make this rule more effective</i>	Thank you for your comment
	<i>Establish more aggressive emission</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Don't allow for carbon offsets from sectors already covered by the cap</i>	Please see Response 275
	<i>Protect the integrity of the cap by strengthening the Reserve rules</i>	Please see Response 275
	<i>Complete a robust rule that helps our state have a cleaner energy future</i>	Please see Response 317
<i>Local Government Coalition for Renewable Energy</i>	<i>WTE is most protective method for managing non-recycled solid waste</i>	Thank you for the information and views provided.
	<i>WTE is not part of waste sector but is part of GHG solution</i>	
	<i>WTE mitigates climate change</i>	
	<i>WTE encourages recycling</i>	

Loew, Marie	<i>Husband works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>"Process emissions" cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate jobs</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Loew, Rebecca	<i>Brother works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate jobs</i>	Please see Response 99
		<i>Please rethink your approach</i>
Loew, Sean	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>"Process emissions" cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
		<i>Please rethink your approach</i>
Loew, Tammy	<i>Son works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate jobs</i>	Please see Response 99
		<i>Please rethink your approach</i>
Loew, Therese	<i>Family member works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99

	<i>Don't increase emissions globally and eliminate jobs</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Low Carbon Fuels Coalition	<i>Support objective of proposed rule</i>	Thank you for your comment
	<i>Concerned that CAR may prove counterproductive to reducing GHGs</i>	Thank you for your comment
	<i>All biogenic carbon should be exempt from rule, not just biomass</i>	Please see Response 144 Please see Response 145 Please see Response 146
Maast (Marst?), Jean	<i>Thanks for the public comment opportunity.</i>	Thank you for your comment
	<i>Draft CAR inadequate to meet current and future needs</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>All members of our state need to participate</i>	Please see Response 17 Please see Response 18 Please see Response 19
	<i>Draft CAR exempts too many sectors</i>	Please see Response 123 Please see Response 139
	<i>Washington citizens need to make lifestyle changes now.</i>	Thank you for your comment. Lifestyle changes are beyond the scope of this rule.
	<i>Stop coddling – campaign to wake us up</i>	Thank you for your comment
	<i>Offer initiatives for fuel efficient car purchases</i>	Initiatives for fuel efficient car purchases are beyond the scope of this rule
	<i>Mandate emissions testing state wide</i>	Mandating statewide emissions testing for vehicles is beyond the scope of this rule.
	<i>Improve public transportation</i>	Please see Response 127
	<i>Regulate homeowner gas powered fuel emissions</i>	Please see Response 139
	<i>Not only industry must reduce emissions – each person must and can</i>	Thank you for your comment. Requiring emission reductions from individuals is beyond the scope of this rule
	<i>This rule is appallingly inadequate – shows disrespect for the people</i>	Thank you for your comment
<i>Ecology can do better – listen to scientists, children, and all of us who care</i>	Thank you for your comment	
MacMullen, Dana	<i>It is beyond me that Ecology is thinking of enacting CAR</i>	Thank you for your comment
	<i>This is trace amount, 400 ppm, of a benign substance, carbon dioxide</i>	Please see Response 20
	<i>Should put the science to numerous tests and allow to be vigorously debated</i>	Please see Response 20
	<i>How can Ecology stand by a group of "scientists" who refuse to debate</i>	Please see Response 20

	<i>Unconscionable to lay taxes on perceived "polluters"</i>	The CAR is not a tax – please see Response 9
	<i>No choice but to trickle down the taxes on everyone including the poorest</i>	Ecology does not believe that implementation of the CAR will result in significant increases in fuel and electricity prices. See Response 226.
	<i>Take this subject to the Legislature and tell them to make the decisions on it</i>	Please see Response 15 Please see Response 16
	<i>It is up to the people to decide through representative government</i>	Please see Response 15
Madsen, Ellen	<i>I attended the hearing at the Red Lion</i>	Thank you for your comment
	<i>Was surprised at how many people didn't understand how democracy works</i>	Thank you for your comment
	<i>Ecology could be presenting a much better plan for carbon reduction</i>	Please see Response 317
	<i>Plan presented was the best possible within their legislative constraints</i>	Thank you for your comment
	<i>I appreciate everyone who showed up</i>	Thank you for your comment
	<i>People didn't understand essential role of carbon reduction in Washington</i>	Thank you for your comment
	<i>Our major challenge is transportation</i>	Please see Response 126 Please see Response 139
	<i>Tougher action on business is good, but transportation is key</i>	Please see Response 127 Please see Response 139
Maranville, Nancy	<i>Carbon dioxide in the atmosphere has passed 400 ppm</i>	Thank you for your comment
	<i>Emissions must be dramatically reduced to avert serious consequences</i>	Please see Response 11
	<i>Draft CAR has drastically inadequate measures</i>	Please see Response 14
	<i>Need to use latest climate science as basis for carbon reduction requirement</i>	Please see Response 195
	<i>Currently the rule relies on outdated science from 2008</i>	Please see Response 196
	<i>Make the CAR strong, meaningful and match the seriousness of the problem</i>	
Marsh, Robert	<i>A greater annual reduction is needed than 1.7%.</i>	Please see Response 196
	<i>Annual reduction needs to be based on current climate science</i>	Please see Response 14 Please see Response 195
	<i>Any rule should be consistent with global climate goals.</i>	Please see Response 14 Please see Response 195
	<i>Basing carbon reductions on the 2008 statute is neglecting current science</i>	Please see Response 11
	<i>The CAR should demonstrate how ambitious it is</i>	Thank you for your comment
Marshall, Danial	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment

	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Marshall, Steve	<i>Flaw in rule permits organizations to generate GHGs and buy their way out</i>	Please see Response 273
	<i>State should adopt cap and invest strategy</i>	As described in Response 274, Ecology lacks clear legal authority to auction or otherwise charge for allowances. Therefore the CAR is unable to generate revenue in the ways that cap and trade programs can.
	<i>Out-of-state market will displace Washington State investments</i>	Please see Response 265 Please see Response 271
	<i>No mechanism to make CTR programs priority</i>	Please see Response 249
	<i>Wind projects in Washington would be especially useful</i>	Wind projects are eligible to generate ERUs provided they meet the criteria in the rule. Please see Response 254, Response 255, Response 256, and Response 257.
	<i>Good projects won’t get funded if companies can buy out-of-state credits</i>	Please see Response 265 Please see Response 271
Maryon (no last name given)	<i>Concerned about emissions coming from military flight operations.</i>	Please see Response 130
	<i>Believes Whidbey Island, Fairchild, and JBLM all over CAR threshold</i>	Please see Response 130
	<i>Should comply with the Paris accords and mandate an accounting</i>	Please see Response 84
Mazza, Patrick	<i>Gov. Inslee’s directive to draft rule set a precedent</i>	Thank you for your comment
	<i>The CAR falls short of meeting CAA’s directive to protect our air</i>	Please see Response 1 Please see Response 14
	<i>Loopholes in the draft rule allow double counting</i>	Please see Response 275
	<i>Science says we need 8% annual GHG cut and curve rapidly getting steeper</i>	Please see Response 195 Please see Response 196
	<i>Court order requiring Washington state to limit climate pollution</i>	Please see Response 1
	<i>State must issue final rule by the end of the year</i>	Ecology agrees
	<i>No more time for delay - first six months of 2016 were the hottest on record</i>	Thank you for your comment
	<i>CAR is not an adequate response to the Clean Air Act mandate</i>	Please see Response 1 Please see Response 14

	<i>CAR is not a climate crisis rule – it is a business as usual rule</i>	Thank you for your comment
	<i>Ecology agrees we need to update existing statutory limits</i>	Please see Response 13
	<i>Everyone understands the 2008 limits are inadequate</i>	Please see Response 13
	<i>Can't abide by 2008 limits and meet requirements of the CAA</i>	Please see Response 11
	<i>Legal points about authority and scope are important</i>	Thank you for your comment
	<i>We need a climate crisis rule for a climate crisis world – please give us one</i>	Thank you for your comment
McKinley, Ellen	<i>I am profoundly perplexed about failure to address climate change</i>	Thank you for your comment
	<i>We need to take significant action to prevent catastrophic consequences</i>	Thank you for your comment
	<i>We are already nearing tipping points that are dramatic and irreversible</i>	Thank you for your comment
	<i>Under the Public Trust doctrine, the state must preserve the atmosphere</i>	Please see Response 1 Please see Response 14
	<i>The annual reduction must be greater than the current rule provides</i>	Please see Response 14 Please see Response 195
	<i>Based on best available science greater percentage reductions are required</i>	Please see Response 14 Please see Response 195
	<i>8% minimum is a good start</i>	Please see Response 14 Please see Response 195
	<i>How will melting glaciers impact hydro power generation</i>	Ecology has not analyzed the impact of glacial melt on hydro power in Washington
Meis, David	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Morgan, Georgianna	<i>WEC form letter</i>	Please see WEC Form Letter response
	<i>"Spread the wealth" on more than just oil, coal, etc.</i>	Thank you for your comment
	<i>Let's take additional steps to protect our forests</i>	Please see Response 245 Please see Response 246
	<i>Offer incentives to farm to take steps to reduce emissions</i>	Please see Response 124
	<i>Provide money to improve recycling</i>	Providing money to improve recycling is beyond the scope of this rule.
	<i>Offer incentives to change primary energy sources</i>	By requiring GHG emission reductions from major emitters in Washington, Ecology believes the CAR provides an incentive for

		lower carbon energy. However, the CAR is only one piece of Washington's overall climate portfolio. See Response 317.
Morgan, Tess	<i>International and domestic companies should be held responsible</i>	The CAR establishes GHG emission standards within Washington State. Emissions that occur outside Washington are beyond the scope of this rule.
	<i>Coal plants should be regarded as part of this rule</i>	Please see Response 125
	<i>Support the closure of all coal plants nationwide</i>	This is outside the scope of this rulemaking and is beyond Ecology's authority.
	<i>All business and government entities should be covered under this rule</i>	Please see Response 123 Please see Response 139
	<i>The Paris Treaty international guidelines should be leading decision-making</i>	Please see Response 84
	<i>Eliminate fossil fuels and replace with solar and wind</i>	This is outside the scope of this rulemaking and is beyond Ecology's authority.
	<i>Retrain displaced workers and improve of public transportation</i>	This is outside the scope of this rulemaking and is beyond Ecology's authority. See also Response 126.
	<i>Cancer and public health costs should be added into the projected dangers</i>	Please see Response 36 Please see Response 37
	<i>Ecological stewardship is of great importance to me</i>	Thank you for your comment
Morris, Arvia	<i>Gov. Inslee's directive to draft rule set a precedent</i>	Thank you for your comment
	<i>The CAR falls short of meeting CAA's directive to protect our air</i>	Please see Response 1 Please see Response 14 Please see Response 195
	<i>Loopholes in the draft rule allow double counting</i>	Please see Response 275
	<i>Science says we need 8% annual GHG cut and curve rapidly getting steeper</i>	Please see Response 14 Please see Response 195
	<i>Court order requiring Washington state to limit climate pollution</i>	Please see Response 1
	<i>State must issue final rule by the end of the year</i>	Ecology agrees
	<i>No more time for delay - first six months of 2016 were the hottest on record</i>	Please see Response 220
	<i>CAR is not an adequate response to the Clean Air Act mandate</i>	Please see Response 1 Please see Response 14
	<i>CAR is not a climate crisis rule – it is a business as usual rule</i>	Thank you for your comment
	<i>Ecology agrees we need to update existing statutory limits</i>	Please see Response 13
	<i>Everyone understands the 2008 limits are inadequate</i>	Please see Response 13
	<i>Can't abide by 2008 limits and meet requirements of the CAA</i>	Please see Response 11

	<i>Legal points about authority and scope are important</i>	Thank you for your comment
	<i>We need a climate crisis rule for a climate crisis world – please give us one</i>	Thank you for your comment
<i>Mueller, Kevin</i>	<i>Works at Ash Grove Cement Company</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
<i>National Biodiesel Board</i>	<i>Represents more than 90% of domestic biodiesel production</i>	Thank you for your comment
	<i>Agree with rationale for rule</i>	Thank you for your comment
	<i>Should follow IPCC lead and exempt biofuels as carbon neutral</i>	Please see Response 145 Please see Response 146
	<i>CAR as presented is inconsistent in treatment of biogenic fuels</i>	Please see Response 145 Please see Response 146
	<i>Don't think any fossil fuels should be exempt from CAR</i>	Please see Response 139
	<i>If they don't turn feedstocks into biofuel, they rot and produce CO₂ anyway</i>	Thank you for your comment
	<i>Should incentivize use of carbon-neutral energy</i>	Please see Response 145 Please see Response 146
<i>National Waste and Recycling Association, Solid Waste Association of North America, and Coalition for Renewable Natural Gas</i>	<i>Landfills should be exempt from CAR</i>	Please see Response 143 Please see Response 144
	<i>Landfills are essential public facilities</i>	Please see Response 149
	<i>Emissions already successfully regulated and EPA just strengthened rules</i>	Please see Response 143 Please see Response 243
	<i>Diverting waste from large landfills could increase emissions</i>	Please see Response 143
	<i>Leading carbon reduction and cap-and-trade programs exempt landfills</i>	Please see Response 143
	<i>Biogenic emissions should be excluded from CAR</i>	Please see Response 146
	<i>Ecology should treat landfill gas the same way it treats woody biomass</i>	Please see Response 147
	<i>Landfills should generate ERUs</i>	Please see Response 143 Please see Response 252
	<i>Landfill emissions are difficult to measure – only rely on EPA models</i>	Please see Response 143
	<i>Need clarification on early action credits</i>	Please see Response 157
	<i>Emissions must be measurable and quantifiable</i>	Please see Response 143
	<i>Can't enforce caps on landfills – reductions/exceedances can't be measured</i>	Please see Response 143
<i>Newman, John</i>	<i>Ecology is wrong saying there are no adverse effects from CAR</i>	Please see Response 198

	<i>CAR is not enough to lower GHG emissions where we need</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>We need an EIS on this issue</i>	Please see Response 21 Please see Response 22
	<i>All government bodies are responsible for public health, safety and welfare</i>	Thank you for your comment
	<i>Ecology should incorporate Dr. Hansen's science into any GHG rule</i>	Please see Response 14 Please see Response 195
<i>Northwest and Intermountain Power Producers Coalition</i>	<i>Market-based cap-and-trade program would be better</i>	Please see Response 274
	<i>Should adopt standardized terminology and provide additional definitions</i>	Ecology has attempted to use standardized terminology wherever possible. Ecology has made a number of clarifications, including adding definitions, in response to comments received.
	<i>Ecology has full authority to issue allowances under CAA</i>	Please see Response 274
	<i>Third parties should be able to own ERUs</i>	Please see Response 235 Please see Response 236 Please see Response 237
	<i>Should ensure parity between in-state and out-of-state electric generation</i>	Please see Response 101
	<i>Should ensure exported electricity not subject to multiple offset requirements</i>	Please see Response 87
	<i>If not issuing allowances, please provide detailed explanation why not</i>	Please see Response 274
	<i>If not allowing third parties to participate, please provide rationale</i>	Please see Response 235 Please see Response 236 Please see Response 237
	<i>If not ensuring import parity, please provide rationale</i>	Please see Response 101 Please see Response 112
	<i>If not ensuring export parity, please explain why not and legal restrictions</i>	Please see Response 87
	<i>Ecology has full authority under existing CAA to implement allowances</i>	Please see Response 274
<i>Northwest Energy Coalition</i>	<i>30% emissions reductions by 2035 is insufficient</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Rule doesn't cover all emissions and more comprehensive approach needed</i>	Please see Response 123 Please see Response 139
	<i>Lack of coverage over imported power encourages leakage</i>	Please see Response 101 Please see Response 112
	<i>CAR should treat EITE curtailment and electric generator total exit the same</i>	Please see Response 115

<i>Add mandatory exit due to permanent shutdown to CAR applicability section</i>	As described in Response 88, the power sector will eventually be covered by the CPP. Ecology therefore concluded that there is no need to add a mandatory exit provision for power plants that permanently close as the likelihood of such a closure occurring before the CPP takes effect is low.
<i>Should address temporary curtailment by electric generators</i>	Please see Response 115
<i>UTC should address possible CAR impacts on assets and subsidization</i>	Thank you for your comment. UTC's authority over utilities is separate and distinct from Ecology's authority, and any requirements of UTC are beyond the scope of this rule. However, Ecology expects that compliance costs associated with the CAR are likely to be those considered appropriate for cost recovery as they are part of a regulatory requirement.
<i>Agree with CAR's proposed transition to CPP</i>	Thank you for your comment
<i>Eligibility and process for ERU projects unclear</i>	Please see our discussion of Criteria for emission reductions, starting on page 110.
<i>Energy efficiency pathway needs additional specifications</i>	Please see Response 185 Please see Response 186
<i>ERUs from efficiency should also reflect transmission/distribution losses</i>	Please see Response 257 Ecology also understand there are different factors to address on this topic (e.g., including transmission and distribution losses).
<i>ERUs from efficiency should reflect multi-year savings</i>	Please see Response 256
<i>Should use higher energy-to-carbon conversion rate</i>	Please see Response 257
<i>CAR may downgrade utilities' I-937 compliance</i>	Please see Response 255
<i>Voluntary participants should be subject to reduction pathways also</i>	Please see Response 138
<i>Double counting seems prevalent in CAR</i>	Please see Response 275
<i>Should establish statewide aggregate cap</i>	Please see Response 114
<i>Should periodically revisit reserve requirement levels</i>	Please see Response 293 Please see Response 299
<i>Should periodically lower emission reduction pathways to keep to overall cap</i>	Please see Response 115
<i>Shares goal of reducing GHG emissions</i>	Thank you for your comment

Northwest Food Processors Association	<i>Opposes state solutions such as carbon taxes or mandatory cap-and-trade</i>	Ecology disagrees. Given the urgency that the threat of climate change poses to Washington, we cannot wait to act and are using our existing authority to develop a program that will achieve GHG emission reductions.
	<i>CAR needs more specificity</i>	Ecology has made a variety of changes in response to comments received.
	<i>Recommend withdrawing CAR and do more stakeholder work</i>	Please see Response 17
	<i>Supports AWB's comments</i>	Please see our responses to AWB's comments
	<i>Should set bottom tracking threshold at 70,000 MT CO₂e instead of 50,000</i>	Please see Response 132
	<i>EITE approach won't produce defensible benchmarks or reduction pathways</i>	Please see our discussion of the site-specific EITE approach starting pages 84 through 86 (Sectors).
	<i>Should include stakeholders in benchmark development</i>	Please see Response 190
	<i>Should allow EITEs option to opt-out of EITE coverage</i>	Please see Response 168 Please see Response 169
	<i>Should allow EITEs to request modification of determinations</i>	Please see Response 167 Please see Response 190
	<i>Should not limit use of allowances</i>	Please see Response 265
	<i>Need to revise Reserve language</i>	Please see Response 293 Please see Response 298
	<i>Should develop registry tracking system</i>	Please see Response 292
<i>Needs clarity in Enforcement section</i>	Please see Response 301 Please see Response 305	
<i>Should make production data confidential business information</i>	Please see Response 193	
Northwest Gas Association	<i>Represents regulated, investor-owned natural gas distribution companies</i>	Thank you for your comment
	<i>Support efforts to reduce air pollution and GHG emissions</i>	Thank you for your comment
	<i>Question Ecology's authority to indirectly regulate natural gas consumers</i>	Please see Response 4
	<i>ERUs are only compliance pathway available to natural gas companies</i>	Please see Response 149 Please see Response 229
	<i>Must provide natural gas to consumers when demanded – no option not to</i>	Please see Response 83
	<i>Unsure whether market for RECs will be able to accommodate new demand</i>	Please see Response 262
	<i>Can't identify emission reduction projects it could do that might qualify</i>	Please see Response 244
	<i>Transportation conversion is great opportunity but CAR is silent on topic</i>	Please see Response 247 Please see Response 248
	<i>CAR doesn't account for variations in weather or organic demand growth</i>	Please see Response 160

	<i>Economic analysis grossly underestimates costs and job losses</i>	Please see Response 48 Please see Response 49 Please see Response 51 Please see Response 52 Please see Response 53
	<i>Will increase energy bills across state</i>	Please see Response 61 Please see Response 62
	<i>Higher costs will cause people to choose dirtier fuels like wood</i>	Please see Response 103
	<i>Natural gas companies limited in costs they can pass along to customers</i>	Please see Response 82 Please see Response 83
Northwest Industrial Gas Users	<i>Represents diverse group of businesses</i>	Thank you for your comment
	<i>Question statutory authority and legal status (see AWB's comments)</i>	Please see Response 4
	<i>CAR will impose substantial compliance costs on large gas customers</i>	Please see Response 61
	<i>CAR runs risk of both economic and emissions leakage</i>	Please see Response 99 Please see Response 100 Please see Response 101 Please see Response 102 Please see Response 103
	<i>Low hanging fruit already gone – already make significant improvements</i>	Please see Response 45
	<i>CAR arbitrarily limits ERUs from out-of-state</i>	Please see Response 6 Please see Response 268
	<i>Ecology didn't conduct realistic feasibility assessment for ERU projects</i>	Please see Response 34 Please see Response 262
	<i>ERUs will be limited and expensive when available</i>	Please see Response 32 Please see Response 33 Please see Response 43 Please see Response 57 Please see Response 262
	<i>Inclusion of natural gas companies is troubling and problematic</i>	Please see Response 149
	<i>CAR runs counter to current state energy policy objectives</i>	Thank you for your comment
	<i>CAR creates uncertainty regarding CHP</i>	Please see Response 258
	<i>SBEIS falls short of requirements and is factually incorrect</i>	Please see Response 48 Please see Response 49
	<i>SBEIS did not adequately assess potential increase in fuel costs</i>	Please see Response 41
	<i>CBA woefully incomplete if not simply inaccurate regarding increased costs</i>	Please see Response 35
<i>Ecology made no attempt to quantify cost or availability for ERUs</i>	Please see Response 32 Please see Response 33 Please see Response 34	

	<i>CBA greatly overestimates benefit to the state</i>	Please see Response 36 Please see Response 37
	<i>CAR creates great amount of uncertainty</i>	Thank you for your comment
Northwest Innovation Works	<i>Developing highly efficient methanol plant at Port of Kalama</i>	Thank you for your comment
	<i>Applaud Ecology for being sensitive to industry</i>	Thank you for your comment
	<i>CAR provides no guidance on how Ecology will set efficiency rates</i>	Please see Response 185 Please see Response 186
	<i>So high efficiency, not reasonable to expect more reductions at all</i>	Please see Response 168
	<i>Any required reductions should be proportionate to relative efficiency</i>	Please see Response 167 Please see Response 168
	<i>Could base reductions on proportionate percentile</i>	Please see Response 167 Please see Response 168
	<i>WAC 173-442-070(3)(b)(i) and (ii) are written backward and should be fixed</i>	Ecology has clarified the language in response to the comment.
	<i>Should also exempt natural gas that is used as feedstock</i>	Please see Response 141
Northwest Natural	<i>Believe climate change is real and supports efforts to reduce GHG emissions</i>	Thank you for your comment
	<i>CAR is extremely complicated</i>	Thank you for your comment
	<i>Does not support executive order and believes there are better strategies</i>	Please see Response 94
	<i>CAR may violate law by imposing emissions standards on non-emitters</i>	Please see Response 4
	<i>Requirement for ERUs and RECs to come from in-state is unconstitutional</i>	Please see Response 5
	<i>Unclear how UTC is going to treat compliance costs for CAR</i>	Please see Response 82
	<i>Compliance obligations should be contingent on ERU availability</i>	Please see Response 225 Please see Response 262
	<i>Need protection for low-income customers</i>	Please see Response 226
	<i>No information about availability of ERUs – no ability to plan or budget</i>	Please see Response 262
	<i>Should require majority of ERUs from in-state, but rest could be out-of-state</i>	Please see Response 265 Please see Response 268
	<i>Compliance timeline too tight</i>	Please see Response 218
	<i>Utility is responsible for EITE emissions once facility falls below threshold</i>	Please see Response 160
	<i>Should continue tracking EITEs forever and not hold utilities responsible</i>	
	<i>Unclear how Ecology will run ERU program</i>	Please see our discussion of program specifics starting on page 107 (ERU fundamentals)
	<i>Should add natural gas to the CHP provisions in the CAR</i>	Please see Response 244 Please see Response 258
<i>Better to use therms instead of MWh as required by rule</i>	Please see Response 256	

	<i>Program should have a sunset date</i>	Please see Response 300
<i>Northwest Pulp and Paper</i>	<i>Trade association representing 13 member companies and 16 mills</i>	Thank you for your comment
	<i>CAR fails to adequately address competitiveness challenges</i>	Please see Response 99
	<i>Critical that CAR has adequate safeguards to prevent leakage</i>	Please see Response 99
	<i>Appreciates commitment by Ecology to address unique aspects of EITEs</i>	Thank you for your comment
	<i>To extent consistent, support AWB's comments</i>	Please see our response to AWB's comments
	<i>Baselines should be based on emissions data for 3 years of its choosing</i>	Please see Response 159
	<i>Should clarify facility with EITE NAICS code excluded when below threshold</i>	Please see Response 134
	<i>Unclear if production data requirement is facility-specific or sector-specific</i>	Please see Response 179
	<i>EITE provisions meant to help could instead be more stringent requirements</i>	Please see Response 168 Please see Response 172
	<i>One-size-fits-all doesn't work</i>	Please see Response 99 Please see Response 169
	<i>Problem with determining baseline at facilities making multiple products</i>	Please see Response 181
	<i>Output-based approach penalizes early actors</i>	Please see Response 172
	<i>Output-based approach penalizes CHP</i>	Please see Response 258
	<i>Impossible to generate accurate efficiency benchmarks</i>	Please see Response 184
	<i>EITE regulation has no implanting criteria or limits on authority – needs both</i>	Please see Response 185
	<i>Bad public policy to penalize EITEs with higher reduction rates</i>	Please see Response 168 Please see Response 172 Please see Response 185 Please see Response 186 Please see Response 188 Please see Response 189
	<i>Typo in WAC 173-442-070(3)(b) – written backwards</i>	Please see Response 192
	<i>Approach detailed in Equation 1 is flawed – could hurt instead of help</i>	Please see Response 191
	<i>Compliance should be based on current production, not historic</i>	Please see Response 176
	<i>EITE pathway should be optional, not mandatory</i>	Please see Response 169
	<i>Supports CHPs generating ERUs, CAR currently penalizes CHP systems</i>	Please see Response 244 Please see Response 258
	<i>No assurance ERUs will be available</i>	Please see Response 225 Please see Response 262
	<i>Out-of-state allowances should be allowed throughout the program</i>	Please see Response 265 Please see Response 268
<i>Needs cost-containment measure if compliance costs threaten viability</i>	Please see Response 221	
<i>Should add provisions regarding zero emission fuels</i>	Please see Response 146 Please see Response 147	

		Please see Response 157
	<i>Enforcement provisions are unduly punitive</i>	Please see Response 302 Please see Response 305
	<i>Third-party verification requirements are excessive</i>	Please see Response 278
	<i>Should remove the EITE provisions from the CAR;</i>	Please see Response 156
	<i>Rule for EITEs should not begin prior to 2023</i>	Please see Response 175
	<i>Should work with the EITE sectors to develop an array of compliance options</i>	Please see Response 156
<i>Nucor</i>	<i>Founded in 1904, significant contributor to state economy</i>	Thank you for your comment
	<i>About 2/3 of emissions are process emissions – inherent to steel production</i>	Please see Response 153 Please see Response 154
	<i>No feasible alternative is currently available to reduce these emissions</i>	Please see Response 153 Please see Response 154
	<i>Under CAR, Nucor would lose market share and leakage would occur</i>	Please see Response 99
	<i>Leakage would lead to increase in net emissions worldwide</i>	
	<i>Indirect impacts of CAR would also increase leakage</i>	
	<i>CAR's EITE rules do not protect from leakage impacts</i>	
	<i>Vagueness on EITE sectors, reduction rates and means of compliance</i>	Please see Response 177 Please see Response 186 Please see Response 244 Please see Response 262 Please see Response 263 Please see Response 265 Please see Response 268
	<i>Barriers to using out-of-state ERUs limits ability to use offset projects</i>	Please see Response 268
	<i>Complexity of ERU project development creates significant risks</i>	Please see Response 262
	<i>EITE benchmarking requires data that are not available to Ecology</i>	Please see Response 184
	<i>Provisions meant to help EITEs might actually be more stringent, not less</i>	Please see Response 168 Please see Response 172
	<i>Should exempt EITEs or redesign EITE program</i>	Please see Response 156
	<i>Should exempt process emissions</i>	Please see Response 154
	<i>Should include emissions from purchased power in benchmarking analysis</i>	Please see Response 183
<i>Exempt facilities that are more efficient than sector average</i>	Please see Response 155	
<i>Should withdraw proposal and continue to revise</i>	Please see Response 17	
<i>Osborn, Rachael and John</i>	<i>Draft rule falls short of what is needed – not going to get a second chance</i>	Please see Response 195 Please see Response 196
	<i>Encourage substantially more aggressive steps to limit GHG emissions</i>	Please see Response 196
	<i>Should establish an aggregate cap on GHG emissions</i>	Please see Response 114

	<i>Should be based on best science-based limits</i>	Please see Response 195
	<i>Should limit use of offsets</i>	Please see Response 268
	<i>Concerned about Ecology's capacity to set up and regulate a "registry"</i>	Please see Response 292
	<i>Strong oversight and regulation is essential to ensuring the validity of offsets</i>	Please see Response 240
	<i>Should avoid double credit and double counting</i>	Please see Response 275 Please see Response 276
	<i>Should encourage the growth of biofuels</i>	Please see Response 145
	<i>Should exempt biomass used for fuels to nurture this way to move beyond oil</i>	
<i>Pacific Gas and Electric</i>	<i>Encourage full linkage with other programs</i>	Please see Response 86
	<i>Full linkage helps prevent leakage</i>	
	<i>If no full linkage with other programs, need to compensate for leakage</i>	
<i>Pacific Power</i>	<i>Should not regulate electric generators under the CAR</i>	Please see Response 88 Please see Response 91 Please see Response 151
	<i>Electric sector is fundamentally interconnected and regional in nature</i>	Please see Response 88
	<i>Natural gas plants like Chehalis facilitate emissions reductions</i>	Please see Response 107
	<i>Ecology failed to consider potential adverse environmental consequences</i>	Please see Response 21
	<i>Need to re-do SEPA analysis</i>	Please see Response 21
	<i>Should address electric sector separately from CAR – do CPP instead</i>	Please see Response 88
	<i>If regulated under CAR, must make changes to avoid leakage</i>	Please see Response 102
	<i>Should be clear generating units only regulated under one rule, not both</i>	Please see Response 91
	<i>Even though less stringent, CPP actually results in lower overall emissions</i>	Please see Response 92 Please see Response 93
	<i>For now, harmonize goals as part of CPP Implementation Plan</i>	Please see Response 88 Please see Response 89 Please see Response 96 Please see Response 98
	<i>ERUs should not be restricted to resources physically located in Washington</i>	Please see Response 268
	<i>Definition of curtailment should not exclude electric generating units</i>	Please see Response 116
	<i>Additionality definition should include all programs for GHG reductions</i>	Please see Response 242
<i>Should exempt emissions already regulated by California's program</i>	Please see Response 87	
<i>Pfeiffer, Ben</i>	<i>We are adding carbon dioxide at an increasing rate</i>	Thank you for your comment
	<i>We now know that we have been underestimating our emissions of methane</i>	Thank you for your comment
	<i>Imperative that Ecology proceed to promptly implement clean air standards</i>	Thank you for your comment
	<i>Latest draft rules provides weak measures and falls short of what is needed</i>	Please see Response 195

		Please see Response 196
	<i>Should use latest climate science as the basis for reduction requirements</i>	Please see Response 195
	<i>Pleased that the draft rule covers natural gas electricity plants</i>	Thank you for your comment
	<i>Must ensure CPP reductions requirements are at least as strong as CAR</i>	Please see Response 92
	<i>Must make meaningful reductions as we transition to clean energy</i>	Thank you for your comment
<i>Phipps, Bill</i>	<i>Climate change is happening now and much faster than anyone expected</i>	Thank you for your comment
	<i>We are facing a crisis now – must act now</i>	Thank you for your comment
	<i>We must stop mining coal and Bakken oil</i>	Thank you for your comment
	<i>We must stop exporting coal to Asia</i>	Thank you for your comment
	<i>We are counting on you to act now</i>	Thank you for your comment
	<i>If we need a 8% reduction in emissions then we should go for 16% reduction</i>	Please see Response 14 Please see Response 195
<i>Pinckert, Mary</i>	<i>“Do all you can to cap carbon emissions to the lowest levels now!”</i>	Thank you for your comment
<i>Platts, Harriet</i>	<i>Please consider a science-based rule</i>	Please see Response 14 Please see Response 195
	<i>we need to be working toward CO₂ reduction projections of 7-8%</i>	Please see Response 14 Please see Response 195
	<i>Otherwise, why go through trouble of establishing a rule</i>	Thank you for your comment
<i>Port of Moses Lake</i>	<i>Should evaluate EITEs on life cycle analysis basis</i>	Please see Response 165
	<i>Add provision for ISO 14064 standard or similar</i>	
	<i>Life cycle analysis standard should qualify for reduced compliance obligation</i>	
	<i>Draft CAR hasn’t been sufficiently vetted for unintended consequences</i>	Please see Response 17
	<i>All cost is relevant, especially to clean tech companies</i>	Please see Response 48 Please see Response 49 Please see Response 51
<i>Port Townsend AirWatchers</i>	<i>Technical issues with webinar may prevent some participation</i>	Thank you. This is helpful information for Ecology to have for future public meetings. Ecology is trying to use technology to help provide expanded opportunities for public participation. Reports from participants about ease of use and availability (or lack thereof) are extremely helpful to us in

		making decisions about future webinar formats.
	<i>Increase required GHG reductions</i>	Please see Response 146
	<i>Biogenic CO₂e should be included or increase reductions to compensate</i>	Please see Response 146
	<i>Port Townsend Paper example – should be covered earlier</i>	
	<i>Reengineer to require real, significant reductions in actual emissions</i>	Please see Response 197
	<i>Cap-and-trade doesn't help affected communities</i>	Please see Response 198
	<i>Need limits on credits – should be very small percentage of required amount</i>	Please see Response 270
	<i>Military operations have significant emissions</i>	Please see Response 130
	<i>Tough to include end users – aggregated emissions by military should be in</i>	Please see Response 130
Pratt, Geddy	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Provonsha, Ryan	<i>Nobody ever said implementing legislation like the CAR would be easy</i>	Thank you for your comment
	<i>We certainly don't deny that jobs and profitability are helpful for the state</i>	Thank you for your comment
	<i>We do deny industry needs unlimited rights to pollute to remain solvent</i>	Thank you for your comment
	<i>What other way is there to create safeguards for ourselves in a civil society</i>	Thank you for your comment
	<i>Remind my government they are doing the right thing in upholding the CAR</i>	Thank you for your comment
	<i>We ask you to exercise foresight and remain conscientious</i>	Thank you for your comment
	<i>Help us and our society to have a livable future</i>	Thank you for your comment
	<i>Don't be afraid to uphold what the courts have already decided</i>	Please see Response 1
Public Generating Pool	<i>CAR could distort price signals in electricity markets and cause leakage</i>	Please see Response 59 Please see Response 62 Please see Response 102
	<i>Should recognize regional nature of electric sector, don't just shift emissions</i>	Please see Response 88
	<i>Appreciate alignment with CPP</i>	Thank you for your comment
	<i>Application of common baselines and targets misses actions already taken</i>	Please see Response 158
	<i>Requiring natural gas electric generators is counterproductive</i>	Please see Response 150

	<i>Still need to work on transition from CAR to CPP</i>	Please see Response 96 Please see Response 97
	<i>CAR undermines ability to benefit from trading-ready options of CPP</i>	Please see Response 97
	<i>CAR doesn't have sufficient incentives for transportation electrification</i>	Please see Response 247
	<i>Should modify electric sector target</i>	Please see Response 151
	<i>Should develop transition plan for CPP</i>	Please see Response 96
	<i>Should account for hydro variability</i>	Please see Response 158
	<i>Should ensure sufficient and predictable supply of compliance options</i>	Please see Response 262
	<i>Should align treatment of biogenic emissions with other laws and policies</i>	Please see Response 145
Puget Sound Clean Air Agency	<i>Should ensure we address needs of communities affected by climate change</i>	Please see Response 73 Please see Response 76 Please see Response 79 Please see Response 80
	<i>Should review how rule addresses equity and EJ and make adjustments</i>	Please see Response 73 Please see Response 76 Please see Response 79 Please see Response 80
	<i>Should clarify the connection between reevaluation and permitting reviews</i>	Please see Response 216
	<i>Should clarify that project types will be updated as they become available</i>	Please see Response 244
	<i>Support rules ability to generate ERUs from transportation sector</i>	Thank you for your comment
	<i>Support proposed framework to encourage reductions from multiple sectors</i>	Thank you for your comment
	<i>Need to clarify what "deny a compliance report" means</i>	Please see Response 206
	<i>Should include mechanism to track effects of program on air pollution</i>	Please see Response 78
	<i>Should delete WAC 173-442-330 – unnecessary</i>	Please see Response 214
	<i>Don't agree with language of WAC 173-442-330(4)</i>	Please see Response 214
	<i>Should update Enforcement section to avoid unintended consequences</i>	Please see Response 305
	<i>Should delete WAC 173-442-340(4) – unnecessary</i>	Please see Response 215
<i>Should allow other methods of delivery of reports</i>	Reports are submitted electronically in a format specified by the agency and must be signed. Reports are not submitted by email or mail. The submissions are complicated and need to be submitted in a standardized format for inclusion in our database. WAC 173-442-360 contains contact information for other forms of communication including "requests, notifications, and communications."	

	<i>Should identify appropriate mechanisms and pathways to fund CAR work</i>	Thank you for your comment
Puget Sound Energy	<i>CAR will increase net regional emissions from power sector</i>	Please see Response 101
	<i>CAR will lead to unacceptable rate increases for utility customers</i>	Please see Response 61 Please see Response 62
	<i>CAR violates Washington State law</i>	Please see Response 4
	<i>Ecology lacks authority to promulgate CAR</i>	Please see Response 4
	<i>Violates APA and CAA by imposing emissions standards on non-emitters</i>	Please see Response 4 Please see Response 5
	<i>Violates SEPA by failing to consider if CAR has <u>any</u> probable adverse effects</i>	Please see Response 21 Please see Response 26
	<i>CAR will drive fuel substitution and increase in-state emissions</i>	Please see Response 103
	<i>CAR will discourage emission reductions in the transportation sector</i>	Please see Response 111
	<i>CAR will drive expensive development projects at unachievable pace</i>	Please see Response 166 Please see Response 262
	<i>CAR violates the Dormant Commerce Clause of the US Constitution</i>	Please see Response 6
	<i>CAR discriminates by limiting offsets to in-state projects and programs</i>	Please see Response 6
	<i>CAR discriminates by limiting imports of allowances over time</i>	Please see Response 6
	<i>CAR discriminates and regulates extraterritorially by restricting ERUs</i>	Please see Response 6
	<i>Other states could not adopt rules like CAR without extraterritorial impacts</i>	Please see Response 6
	<i>Ecology cannot show there are no non-discriminatory alternatives to CAR</i>	Please see Response 6
	<i>CAR will increase regional electric power sector GHG emissions</i>	Please see Response 101
	<i>CAR will undermine the federal Clean Power Plan</i>	Please see Response 98
	<i>CAR should not regulate the electric power or natural gas sectors</i>	Please see Response 149 Please see Response 150
	<i>CAR fails to analyze or provide certainty of future ERU availability and price</i>	Please see Response 262
	<i>ERU uncertainty makes it impossible for utilities to ensure least-cost service</i>	Please see Response 166
	<i>ERU market uncertainty will lead to rate increases for utility customers</i>	Please see Response 62
	<i>ERU market uncertainty is compounded by variable weather patterns</i>	Please see Response 166
	<i>CAR provisions on ERU generation are fundamentally flawed</i>	Please see Response 255 Please see Response 256
	<i>CAR misunderstands how utility conservation programs work</i>	Please see Response 255 Please see Response 256
	<i>CAR fails to understand the regulatory approval process for utilities</i>	Please see Response 255 Please see Response 256
	<i>CAR fails to recognize that electric utilities are regulated unit-by-unit</i>	Please see Response 136
<i>Possible “double-compliance” required for power exports to California</i>	Please see Response 87	
<i>CAR should not regulate the electric power sector</i>	Please see Response 150 Please see Response 151	

	<i>Power sector will achieve significant reductions without CAR</i>	Please see Response 151
	<i>CAR will discourage emission reductions in transportation sector</i>	Please see Response 111
	<i>CAR should not regulate natural gas sector</i>	Please see Response 149
	<i>Natural gas is part of the solution, not the problem</i>	Please see Response 149
	<i>Regulating natural gas sector will harm economy and job market</i>	Please see Response 83
	<i>Should allow unlimited ERU banking and borrowing</i>	Please see Response 266
	<i>Should specify thresholds apply to units, not multi-unit aggregates</i>	Please see Response 136
	<i>Should allow electric sector to generate and use ERUs based on fleet</i>	Please see Response 136
	<i>Should not restrict eligible offset ERU generating activities to in-state</i>	Please see Response 268
	<i>Should not limit the use of external allowances for compliance over time</i>	Please see Response 265
	<i>Should not restrict eligible external carbon markets to “multi-sector” markets</i>	Please see Response 269
	<i>Should increase the opt-out emissions threshold and clarify opt-out process</i>	Please see Response 132
	<i>Clarify no involuntary “opt-outs” of the program</i>	Please see Response 116
	<i>Clarify how natural gas companies are affected if customer opts in or out</i>	Please see Response 160
	<i>Clarify how process for opting in after previously opting out</i>	Please see Response 138
	<i>Clarify whether electric sector sources are eligible for Reserve ERUs</i>	Please see Response 297
	<i>Clarify “harmonizing of ERU generation with reduced GHG emissions”</i>	Please see Response 276
<i>Puget Soundkeeper</i>	<i>Ocean acidification is result of climate change</i>	Thank you for your comment
	<i>Decreasing carbon emissions is how to fight acidification</i>	Please see Response 315
	<i>Strong Clean Air Rule is needed</i>	Thank you for your comment
	<i>Ecology has obligation to protect waters of Puget Sound</i>	Please see Response 315
<i>Rafacz, Ed</i>	<i>I work at the Ash Grove Cement Company plant in Seattle as Chief Chemist</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>CO₂ from the chemical process of making cement should be exempt</i>	Please see Response 153
	<i>Has unique lifecycle – concrete reabsorbs most CO₂ emitted by calcination</i>	Thank you for your comment
	<i>Concrete carbonation acts as a carbon sink to reduce atmospheric CO₂</i>	Thank you for your comment
	<i>Local cement is the most effective approach to reduce emissions</i>	Thank you for your comment
	<i>CAR may make uncompetitive on global market</i>	Please see Response 99
	<i>Cement constitutes 7 to 15% of concrete's total mass</i>	Thank you for your comment
	<i>Cement responsible for 1% of greenhouse gases emitted in the US</i>	Thank you for your comment
	<i>CAR risks significant impacts to cement industry for just 1-5% of emissions</i>	Thank you for your comment
<i>Washington rules should not give unfair advantage to imported cement</i>	Please see Response 183	

	<i>Don't increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
<i>Rathbone, Bruce A.</i>	<i>Make the CAR stronger</i>	Please see Response 14 Please see Response 195
	<i>Need to significantly reduce global warming pollution</i>	Thank you for your comment
	<i>Use this opportunity to be a climate leader</i>	Please see Response 85
	<i>Should set an overall cap to ensure that total emissions decline over time</i>	Please see Response 114
	<i>Should achieve real emission reductions beyond business as usual</i>	Please see Response 139
	<i>Should require offset credits used are limited and meet strict standards</i>	Please see Response 270
	<i>Must only count offsets once</i>	Please see Response 275
	<i>Must prevent polluting industries from profiting unfairly from the program</i>	Please see Response 118
	<i>Give industries incentives to reduce their emissions or get out of business</i>	Thank you for your comment
<i>REC Silicon</i>	<i>Should exempt companies that can show they are carbon negative</i>	Please see Response 165
	<i>Should reward companies using best technology in their industry</i>	Please see EITE section starting on page 81.
	<i>Should provide economic hardship temporary exclusion</i>	Please see Response 117
	<i>Should contain provisions to encourage renewable energy companies</i>	Please see Response 113
<i>Reilly, Deborah</i>	<i>I support those 19 people who are fasting for tougher clean air regulations</i>	Thank you for your comment
	<i>We need stronger not weaker regulations on carbon</i>	Thank you for your comment
<i>Reinel, Brian</i>	<i>Should extend this rule as far as possible to transportation and aerospace</i>	Please see Response 126 Please see Response 139
	<i>SeaTac's residents are "front-line" community disproportionately affected</i>	Please see Response 72
<i>Renewable Fuels Association</i>	<i>Biofuels are part of solution</i>	Please see Response 145
	<i>CAR doesn't recognize benefits from biofuels</i>	Please see Response 145
	<i>Biofuels do not contribute to climate change</i>	Please see Response 145
	<i>Exempting biofuels is consistent with other policies and programs</i>	Please see Response 145
	<i>Exempting biofuels doesn't trigger "poison pill" provision</i>	Please see Response 144
	<i>CAR is clearly not a low carbon fuel standard</i>	
	<i>Failure to exempt biofuels conflicts with renewable fuel standards</i>	
<i>Renewable Northwest</i>	<i>CAR must address double counting in order to maintain integrity</i>	Please see Response 275
	<i>Reserve account must ensure all priorities are allocated sufficient ERUs</i>	Please see Response 293

	<i>Reserve must be charged with emission reductions not from curtailments</i>	Please see Response 296
	<i>Ecology must retire Reserve ERUs to address double counting</i>	Please see Response 275
	<i>Electric generators should not get ERUs if emissions shifted out-of-state</i>	Please see Response 112
	<i>Electric generators under CPP should reduce at least as much as CAR</i>	Please see Response 92
<i>Republic Services</i>	<i>Landfills do not fit the intent of the proposed CAR</i>	Please see Response 143 Please see Response 144
	<i>Forcing landfills to comply with CAR will result in leakage</i>	Please see Response 100
	<i>Landfills have been significant “positive” and are ahead of other sectors</i>	Please see Response 143 Please see Response 243
<i>Rittenhouse, Ryan</i>	<i>Please make your rules as strong as possible and continue to improve them</i>	Please see Response 14 Please see Response 195
	<i>We are already far behind what we need to do in terms of carbon reduction</i>	Thank you for your comment
	<i>Washington needs to be a leader</i>	Please see Response 85
<i>Robin, Vicki</i>	<i>Concerned about emissions coming from military flight operations.</i>	Please see Response 130
	<i>Believes Whidbey Island, Fairchild, and JBLM all over CAR threshold</i>	Please see Response 130
	<i>Why is Ecology not talking about regulating the “military industrial complex”</i>	Please see Response 130
	<i>Ecology’s pie chart hides the military’s inordinate contribution to problem</i>	Please see Response 130
	<i>Should comply with the Paris accords and mandate an accounting</i>	Please see Response 130
	<i>Request Ecology make it known military is an industry over CAR threshold</i>	Please see Response 130
	<i>Request Ecology change public materials to reflect military</i>	The public materials are correct as presented and currently include military emissions
	<i>Wants personal reply to this comment with Ecology’s stated intentions</i>	As required by the APA, this CES is Ecology’s official response. If you would like additional information beyond what is contained in this document, please contact Ecology’s Air Quality Program.
<i>Romanelli, Karen</i>	<i>We need Clean Air Rule that will protect the lives of children on this planet</i>	Thank you for your comment
<i>Romitti, Clayton</i>	<i>Family member works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate jobs</i>	Please see Response 99

	<i>Please rethink your approach</i>	Thank you for your comment
Rosauer, Michael	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
Ruby Canyon Engineering	<i>Recommend all third-party verifiers be ANSI accredited</i>	Please see Response 291
	<i>Clarify if same verification company can be used for annual GHG reports</i>	Please see Response 280
	<i>Clarify if verification site visits for GHG and CAR be combined</i>	Please see Response 280
	<i>Clarify whether WAC 173-442-220 and 173-441-085 are different</i>	Please see Response 279
	<i>Should require a reasonable level of assurance for all verifications</i>	Please see Response 288
	<i>Should define significant change in emissions as 10% change from last year</i>	Please see Response 286
	<i>Should remove Climate Action Reserve from section 173-441-085(7)(a)(iii)</i>	Please see Response 291
	<i>Clarify if any services or any consulting services</i>	Please see Response 284
	<i>Clarify if any services includes previous third-party verifier visits</i>	Please see Response 284
	<i>Should add the word “consulting” to phrase “any services”</i>	Please see Response 284
	<i>Should define materiality for verification of ERUs and Compliance Reports</i>	Please see Response 289
	<i>Clarify whether projects already verified need additional verification for CAR</i>	Please see Response 287
<i>Should prohibit use of same verifier for 3 consecutive periods (9 years)</i>	Please see Response 285	
Savers	<i>Should find broader set of options and a process for certified waste activities</i>	Please see Response 244
	<i>Should add language to WAC 173-442-160(7) to allow more flexibility</i>	
Schaeffer, Jim	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate jobs</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Schiltz, Martin	<i>Family member works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>CAR will put Washington EITEs out of business by foreign competitors</i>	Please see Response 99
	<i>Making cement close to home is best</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate jobs</i>	Please see Response 99

	<i>Please rethink your approach</i>	Thank you for your comment
	<i>Company strives to be an environmental leader and has family-wage jobs</i>	Thank you for your comment
<i>Schmidt-Pathmann, Philipp</i>	<i>Waste Incineration with energy and material recovery is a large contributor to reducing the carbon footprint.</i>	Please see Response 147
	<i>Current landfill practices are not sufficient and only pretreated with a TOC (Total Organic Content) of less than 3% should be accepted.</i>	This is outside the scope of the current rulemaking.
<i>Seattle City Light</i>	<i>Concerned if CAR effectively positions us to be trading ready under CPP</i>	Please see Response 97
	<i>CAR may result in leakage</i>	Please see Response 101
	<i>Should begin development of CPP Implementation Plan</i>	Please see Response 88
	<i>Have concerns about ERUs – may jeopardize existing carbon market</i>	Please see Response 239
	<i>Maritime and airport operations should be opportunities for reductions</i>	Please see Response 249
	<i>Clarify definitions of emission reduction pathway and requirement</i>	Please see Response 217
	<i>Clarify definition of vintage year</i>	Please see Response 233
	<i>Should reconsider exempting TransAlta</i>	Please see Response 108
	<i>Baselines should be consistent with CPP</i>	Please see Response 158
	<i>“Pathway” is wrong terminology – should be “requirement”</i>	
	<i>Clarify if ERUs are different than carbon offsets</i>	Please see Response 231
	<i>Clarify if exempt entities can generate ERUs</i>	Please see Response 236
	<i>Concerned about unintended negative impacts to established carbon market</i>	Please see Response 239
	<i>Clarify ERU activities and programs</i>	Please see Response 244
	<i>Clarify limitations on allowances</i>	Please see Response 265
	<i>Clarify Registry</i>	Please see Response 292
	<i>Clarify Reserve</i>	Please see Reserve section starting on page 133.
	<i>Clarify terminology regarding ERUs</i>	Please see Response 231
<i>Semo, Romeo</i>	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
<i>SGL</i>	<i>Clarify third party verifiers section – define how process will work</i>	Please see the third party verification section starting on page 129.
	<i>Remove redundancy/conflict from WAC 173-441-085(7) and 173-442-220(6)</i>	Please see Response 279

<i>Should specify "other forms of noncompliance with this chapter"</i>	Please see Response 282
<i>Should define term "emissions level"</i>	Please see Response 312
<i>Clarify requirements regarding adverse verification statement</i>	Please see Response 290
<i>Requirement to provide data in 5 working days too stringent</i>	Please see Response 313
<i>Clarify relationship between WAC 173-441-086(1)(d) and 173-441-086(4)</i>	Please see Response 311
<i>Should define "positive verification statement"</i>	Please see Response 290
<i>Penalty provision vague and difficult to implement</i>	Please see Response 302
<i>Should not be subject to penalties if doing correction to GHG report</i>	Please see Response 304
<i>Remove redundancy between WAC 173-441-090 and 173-442-340</i>	Please see Response 306
<i>Small GHG emitters should not pay for costs to administer CAR program</i>	Please see Response 314
<i>Should provide consideration for technical limitations or restrictions on costs</i>	Please see Response 261
<i>Should provide an avenue for evaluation based on overall climate impact</i>	Please see Response 165
<i>Should include cessation due to economic hardship in curtailment definition</i>	Please see Response 117
<i>EITE list should consider manufacturers actually located in state</i>	Please see Response 120
<i>Should add definition for "first compliance period"</i>	Sufficiently clear in context of rule
<i>Should add definition for "efficiency reduction rate"</i>	Sufficiently clear in context of rule
<i>Should add definition for "efficiency intensity distribution"</i>	Sufficiently clear in context of rule
<i>Should add definition for "banked ERU"</i>	Sufficiently clear in context of rule
<i>Should add definition for "registry-specific protocol" (vs. methodology)</i>	Sufficiently clear in context of rule
<i>Should add definition for "ERU process"</i>	Sufficiently clear in context of rule
<i>Should add definition for "allowances"</i>	Please see Response 231
<i>Should add definition for "expired ERU"</i>	Please see Response 234
<i>WAC 173-442-030(3) is a calculation, not a requirement – needs clarification</i>	Please see Response 134
<i>Should change the phrase "covered party" throughout WAC 173-442</i>	Please see Response 133
<i>Why should voluntary participants give notice before opting out</i>	Please see Response 137
	Please see Response 138
<i>Should clarify language regarding baseline GHG emission value</i>	Please see Response 158
<i>Should add phrase "Adjustment may not apply retroactively."</i>	Please see Response 162
<i>Should clarify decision to determine which method used for baseline</i>	Please see Response 161
<i>Should make various language changes in WAC 173-442-060</i>	Please see Response 194
<i>Should issue regulatory order prior to subject period to allow time to comply</i>	Please see Response 212
<i>Should clarify how ERU records should be kept</i>	Please see Response 292
<i>Clarify meaning of WAC 173-442-160(2)(c)</i>	Please see Response 277
<i>Clarify meaning of external GHG programs</i>	Please see Response 269
<i>Should change language of WAC 173-442-220(1)</i>	Please see Response 303
<i>Must define report format or not require its use</i>	Please see Response 201
<i>Should clarify what records must be kept</i>	Please see Response 202
<i>Should fix language in WAC 173-442-210(5) to avoid timing trap</i>	Please see Response 203
<i>Clarify if Ecology will not allow correction of older reports</i>	Please see Response 204

	<i>Clarify how to resolve differences of opinion whether error has occurred</i>	Please see Response 205
	<i>Clarify meaning of “denial of compliance report”</i>	Please see Response 206
	<i>Should delete WAC 173-442-210(8)(a)</i>	Please see Response 207
	<i>Clarify how third party verifier can fulfill contradictory requirements</i>	Implementation guidance forthcoming
	<i>Remove redundancy between WAC 173-442-220(5) and 173-442-210(5)</i>	Please see Response 208
	<i>Should define how ERU expires</i>	Please see Response 234
	<i>Clarify interaction of WAC 173-442-130, 173-442-160 & 173-442-240(1)(a)(ii)</i>	Please see Response 119
	<i>Curtailment ERUs allocated to Registry at year end seems arbitrary</i>	Please see Response 118
	<i>Clarify timing of WAC 173-442-340</i>	Please see Response 301
	<i>Clarify submission methods of reports</i>	Please see Response 201
<i>Sherman-Peterson, Deejah</i>	<i>You cannot, you must not kick this can down the road any longer</i>	Thank you for your comment
	<i>CAR still woefully insufficient to achieve the reductions necessary</i>	Please see Response 14 Please see Response 195
	<i>Must use current and best available science to set reduction goals</i>	Please see Response 14 Please see Response 195
	<i>Unfortunately, our state legislators are not doing their job</i>	Thank you for your comment
	<i>We are relying on you to craft the strongest rules now</i>	Thank you for your comment
<i>Sherman-Peterson, Ron</i>	<i>1.7% per year reduction is not enough</i>	Please see Response 196
	<i>Need to require a full 8% reduction per year statewide</i>	Please see Response 14 Please see Response 195
	<i>Need to base your requirements on valid current science</i>	Please see Response 14 Please see Response 195
	<i>No double counting offsets</i>	Please see Response 275
	<i>Real reductions are needed, limit the use of offsets</i>	Please see Response 275
	<i>Agricultural emissions should be covered</i>	Please see Response 124
	<i>Vehicle emissions should be covered</i>	Please see Response 126 Please see Response 139
	<i>Utilities should be held to the stronger requirements of CAR instead of CPP</i>	Please see Response 90
	<i>1.7% per year reduction is not enough</i>	Please see Response 196
<i>Shevham, Michael</i>	<i>No one really believes in climate change/rampant carbon levels</i>	Please see Response 20
	<i>This is just a means to take our money for larger government</i>	Thank you for your comment
	<i>Stop increasing taxes and adding regulations for nonexistent climate change</i>	The CAR is not a tax – please see Response 9
	<i>If there is “warming” it is not human caused</i>	Please see Response 20
	<i>Stop all this nonsense and leave our business climate alone</i>	Please see Response 20

	<i>There is no proof of “climate change”</i>	Please see Response 20
	<i>This is just a scare tactic for the uninformed</i>	Please see Response 20
Shimeall, Nancy	<i>We may be too late – some scientists believe we are</i>	Thank you for your comment
	<i>Clean Air Rule is a chance</i>	Thank you for your comment
	<i>Must make rule strong so that we all have a chance to stabilize the climate</i>	Thank you for your comment
	<i>Must push past deniers and set 8% CO₂e as our goal</i>	Please see Response 14 Please see Response 195
	<i>Change is hard and we all have to change, in small and large ways</i>	Thank you for your comment
	<i>Thank you</i>	Thank you for your comment
Skanderup, Kristi	<i>Thank you for leading on climate</i>	Thank you for your comment
	<i>We need you to set the targets on what science says we need to do</i>	Please see Response 14 Please see Response 195
	<i>“Thank you!”</i>	Thank you for your comment
Skarin, Ellen	<i>Pleased that Washington is taking a leadership role in reducing emissions</i>	Thank you for your comment
	<i>I applaud the effort made by the proposed rules</i>	Thank you for your comment
	<i>Should have more aggressive emission reduction targets</i>	Please see Response 196
	<i>Should not allow carbon offsets to come from sectors already covered by cap</i>	Please see Response 275
	<i>Should strengthen Reserve rules</i>	Please see Response 293 Please see Response 298
	<i>We are charged with stewardship of the environment and all of creation</i>	Thank you for your comment
	<i>Make the strongest possible rules for reducing emissions quickly</i>	Thank you for your comment
Smith, Jeremy	<i>Works at the Ash Grove Cement Company plant in Seattle</i>	Thank you for your comment
	<i>I support the idea that Washington industry needs to be energy efficient</i>	Thank you for your comment
	<i>CAR requires reductions for both fuel combustion and chemical processes</i>	Please see Response 99
	<i>“Process emissions” cannot be controlled except by shutting down</i>	Please see Response 99
	<i>Same process emissions will then occur somewhere else</i>	Please see Response 99
	<i>Overall emissions from cement manufacturing would increase, not decrease</i>	Please see Response 99
	<i>Don’t increase emissions globally and eliminate my job</i>	Please see Response 99
	<i>Please rethink your approach</i>	Thank you for your comment
Sommer, Heidi	<i>Horrible that Governor Jay Inslee appealed the ruling to get carbon cap done</i>	Please see Response 2
	<i>No question that Climate Change is happening</i>	Thank you for your comment

South Puget Sound Asian Pacific Islander Coalition	<i>We realize that Climate Change is a global problem</i>	Thank you for your comment
	<i>Local communities can play major role in implementing an effective strategy</i>	Thank you for your comment
	<i>Communities of color are sometimes adversely impacted by high emissions</i>	Thank you for your comment
	<i>Often located near EITEs and may be directly exposed to harmful conditions</i>	Thank you for your comment
	<i>CAR's EJ Committee will hold carbon-emitting industries accountable</i>	The purpose of the CAR EJAC is to assign ERUs so designated by Ecology to covered parties as described by Response 71. Ecology will establish emission reduction pathways for EITE facilities consistent with WAC 173-442-060 or 070.
	<i>Committee will help protect the rights of vulnerable communities</i>	Please see Response 74
	<i>Committee should include representation from communities of color</i>	Please see Response 69
	<i>Committee should also have role in conducting an impact analysis</i>	Please see Response 73
	<i>Should also review disparities in air quality in highly impacted areas</i>	Please see Response 73
Spokane City Council	<i>Request Spokane WTE Facility be exempt from CAR</i>	Please see Response 147
	<i>If not totally exempt, biogenic portion of emissions should be exempt</i>	Please see Response 145
	<i>Credit should be given for energy creation at WTE Facility</i>	Please see Response 244
	<i>Credit should be given for avoided tons of CO₂ from recycling/composting</i>	Please see Response 165
	<i>Carbon-reducing investments should be valued higher than buying "credits"</i>	Please see Response 273
Spokane Utilities Division	<i>Extensive benefits from WTE</i>	Thank you for your comment
	<i>More than half their emissions are biogenic</i>	Thank you for your comment
	<i>Court decision may prevent them from buying ERUs</i>	Please see Response 148
	<i>Ecology should consider WTE as an EITE</i>	Please see Response 122
	<i>City has already invested in many projects to reduce emissions</i>	Please see Response 157
	<i>WTE Facility should be exempt from CAR</i>	Please see Response 147
	<i>State should exempt statutory obligations of local governments</i>	Please see Response 148
	<i>Biogenic portion of emissions should be exempt</i>	Please see Response 145
	<i>Credit should be provided for energy creation at WTE</i>	Please see Response 244
	<i>Credit should be given for avoided tons of CO₂ from recycling/composting</i>	Please see Response 165
	<i>Carbon-reducing investments should be valued higher than buying "credits"</i>	Please see Response 273
Stahre, Grace	<i>We have responsibility to future generations to ensure environment is viable</i>	Thank you for your comment
	<i>We even have a court verdict saying this is so</i>	Please see Response 1
	<i>This is affecting who I am voting for on every level, including the governor</i>	Thank you for your comment
	<i>Meet the court mandated requirements</i>	Please see Response 1
	<i>Do not rely so much on offsets to meet any goals</i>	Please see Response 270

	<i>Partner with environmental groups to meet and exceed what we need</i>	Please see Response 195 Please see Response 196
	<i>Set an example for the nation – we are wealthy, we can afford it</i>	Thank you for your comment
	<i>Revised version improvement over original</i>	Thank you for your comment
	<i>Should contribute 2% of reduction pathway, not 2% of annual decrease</i>	Please see Response 293
	<i>Should clarify 2% contribution, allocation, and retirement</i>	Please see Response 293
	<i>Should change wording of WAC 173-442-240(2)(b) to avoid double counting</i>	Please see Response 275
	<i>WAC 173-442-240(3)(b)(iv) should only apply to reducing covered emissions</i>	Please see Response 71
	<i>Should eliminate exemptions from the definition of curtailment</i>	Please see Response 115
	<i>Should maintain annual decrease in reduction pathway in all cases</i>	The CAR requires that covered parties meet an emission reduction requirement as prescribed by WAC 173-442-060 or 070. This corresponds to an annual emissions decrease of 1.7 percent, or in the case of WAC 173-442-070, an efficiency improvement of 0.7 to 2.7 percent per year. Please see Response 171 and Response 172 for more details on the EITE emission reduction pathway.
<i>Stockholm Environmental Institute – U.S.</i>	<i>Should use Reserve ERUs to ease covered party's restart burden</i>	Please see Response 118
	<i>Should clarify that compliance threshold applied on a facility basis</i>	Please see Response 136
	<i>Should define "aggregate emission reduction limit"</i>	Please see Response 114
	<i>Should clarify purpose or function of an ERU</i>	Please see Response 230 Please see Response 231
	<i>Should use more accurate terms like "annual emission limit"</i>	Please see Response 5
	<i>"Efficiency reduction rate" and "efficiency intensity distribution" are unclear</i>	Please see Response 192
	<i>Should correct wording of WAC 173-442-070(3)(b)(i) and (ii)</i>	Please see Response 192
	<i>Should clarify additionality requirements in WAC 173-442-160</i>	Please see Response 242 Please see Response 243
	<i>Should either eliminate WAC 173-442-160(2)(c) or clarify its intent</i>	Please see Response 277
	<i>Should disallow methane capture subcomponent of Grazing Land protocol</i>	Please see Response 253
	<i>Should require voluntary participants to have a reduction requirement</i>	Please see Response 138
	<i>Should clarify meaning and implications of WAC 173-442-040(4)(c)</i>	Please see Response 96 Please see Response 97
	<i>Should clarify third parties cannot establish a registry account or hold ERUs</i>	Please see Response 237
	<i>Should clarify WAC 173-442-170(1)(a) and (2)(a)</i>	Please see Response 265
<i>Stoel Rives</i>	<i>Should clarify if compliance threshold is single source or company aggregate</i>	Please see Response 136

	<i>Should clarify if compliance periods are fixed three year blocks</i>	Please see Response 210
	<i>Should clarify if “covered party” applies regardless of emission rate</i>	Please see Response 133
	<i>Should clarify responsibilities of covered party below 70,000 tpy threshold</i>	Please see Response 133
	<i>Should clarify how it is possible to meet requirement of WAC 173-442-200(6)</i>	Please see Response 211
	<i>Should clarify just one regulatory order for all time or each compliance period</i>	Please see Response 213
	<i>Should clarify and define “petroleum product producers”</i>	Please see Response 308
	<i>Should clarify why a reporting rule contained in WAC 173-442</i>	Please see Response 179
	<i>Should clarify if refiners/importers must report emissions for each product</i>	Please see Response 199
	<i>Should clarify meaning of WAC 173-441-050(3)(d)(vii)</i>	Please see Response 310
	<i>Should clarify if calculations per WAC 173-441-130 are used for any purpose</i>	Please see Response 199
	<i>Should clarify why “facility” definition includes extra language and meaning</i>	Please see Response 13
	<i>Should clarify why WAC 173-441-120 designates suppliers as “facilities”</i>	Please see Response 307
	<i>Should clarify how WAC 173-441-050 doesn’t contradict WAC 173-442-120</i>	Please see Response 307
	<i>Should clarify if WAC 173-441 describes what a distributor must report</i>	Please see Response 129
	<i>Should clarify if fuel distributors are covered parties under WAC 173-442</i>	Please see Response 199
	<i>Should clarify if WAC 173-442 double counts emissions from distributors</i>	Please see Response 199
	<i>Should clarify “export” requirements of WAC 173-441-120(2)(h)(ii)(A)</i>	Please see Response 199
	<i>Should explain where Ecology get sector information for benchmarking</i>	Please see Response 180
	<i>Should clarify mechanism for covering increases in production</i>	Please see Response 163
	<i>Should clarify effect of efficiency intensity distribution on reduction pathway</i>	Please see Response 217
	<i>Should clarify who is responsible to supply benchmarking information</i>	Please see Response 179
	<i>Should define third party</i>	Please see Response 237
	<i>Should clarify if there is a process or time line for assignment of ERUs</i>	Please see Response 260
	<i>Should clarify if there is process for approving ERU generation methodology</i>	Please see Response 260
	<i>Should clarify if there are external reduction programs that meet all criteria</i>	Please see Response 269
	<i>Should clarify if confirmed from CARB that AB-32 allowances may be used</i>	Please see Response 265
	<i>Should clarify the difference between “retirement” vs. “withdrawal” of an ERU</i>	Please see Response 234
Stonington, Louise	<i>Thank you for your work on regulations to promote cleaner air</i>	Thank you for your comment
	<i>Encourage more rigorous regulation</i>	Thank you for your comment
	<i>Should reduce 8% per year, required for at least 90% of state’s emissions</i>	Please see Response 14 Please see Response 195
	<i>Oppose the use of offsets, as they delay and diminish emission reductions</i>	Please see Response 270 Please see Response 271
	<i>Reductions from biomass should include loss of carbon absorption</i>	Please see Response 144 Please see Response 145
	<i>Audubon study found 314 species will lose more than 50% of range by 2080</i>	Thank you for your comment
	<i>It is time for strong action</i>	Thank you for your comment

Tesoro	<i>Should delay implementation</i>	Please see Response 218
	<i>Legislative authority has not been granted for CAR</i>	Please see Response 14 Please see Response 16
	<i>CAR is neither complete nor workable</i>	Please see Response 219
	<i>Incurring a reduction obligation in 2017 is not rational – no time to plan</i>	Please see Response 218 Please see Response 219
	<i>More time is needed to establish a rational and equitable reporting system</i>	Please see Response 292
	<i>Should not have any reduction obligation for 3 years after legislature OKs</i>	Please see Response 16
	<i>Supports new projects accommodated outside the cap</i>	Please see Response 267
	<i>Concerns about adequacy and availability of Reserve credits</i>	Please see Response 293
	<i>Permitted projects using Reserve credits shouldn't have to reduce also</i>	Please see Response 293
	<i>Need to discuss what is going to happen if aren't enough credits in Reserve</i>	Please see Response 293
Thompson, TJ	<i>WEC form letter</i>	See WEC Form Letter response
	<i>Emissions are only one aspect of controlling CO₂</i>	Please see Response 317
	<i>We never talk about carbon sinks – forests</i>	Please see Response 246
	<i>Being destroyed by "development" – must not ignore</i>	Thank you for your comment
Townsend, Darlene A.	<i>We are running out of time to maintain a habitable planet</i>	Thank you for your comment
	<i>Rules must be as strong and enforceable as possible</i>	Please see Response 11
	<i>Have all possible loopholes eliminated</i>	Please see Response 123 Please see Response 139
	<i>Our legislature must act in concert with Governor Inslee</i>	Thank you for your comment
Townsend, Patricia	<i>Please make the rule stronger to require more restrictions on CO₂ emissions</i>	Please see Response 196 Please see Response 317
	<i>I am a scientist and knowledgeable of the effects of climate change</i>	Thank you for your comment
Tozzi, Lauren	<i>State has a constitutional obligation to protect natural resources</i>	Please see Response 1
	<i>We owe the children a science based rule</i>	Please see Response 14 Please see Response 195
Traeger, Bill	<i>Works at the Ash Grove Cement Company in Spokane</i>	Thank you for your comment
	<i>CAR's inclusion of unavoidable process emissions is an error</i>	Please see Response 99
	<i>Process emissions are necessary to create cement</i>	Please see Response 99
	<i>CAR will jeopardize Ash Grove viability and increase CO₂ emissions</i>	Please see Response 99
	<i>Closure of the Seattle plant would force importation of cement from</i>	Please see Response 99

	<i>We are a trade-exposed industry competing</i>	Please see Response 99
	<i>Please do not force businesses to rely on imported</i>	Please see Response 99
	<i>Don't create program that fails in its intent and risks Washingtonians' futures</i>	Thank you for your comment
	 	
Treadway, Carolyn	<i>The Clean Air Rule as proposed is completely inadequate</i>	Please see Response 1
	<i>Carbon Pollution must be reduced by at least 8%, 1.7% not enough</i>	Please see Response 4 Please see Response 195 Please see Response 196
	<i>What we are facing is the end of the world as we know it</i>	Thank you for your comment
	<i>Washington state CAN lead the way.</i>	Please see Response 84
	<i>Do not let lack of political will get in the way. Our future is at stake.</i>	Thank you for your comment
	 	
UC Davis	<i>Allowances must be linked to ongoing business decisions to properly work</i>	Thank you for your comment
	<i>Revenue neutrality means no revenue recycling</i>	Thank you for your comment
	<i>Pass-through of costs should reflect marginal cost of ERUs</i>	Thank you for your comment
	<i>Current version of CAR does not have formal cost containment</i>	Please see Response 225
	<i>Ability to use credits from other programs tempers lack of price containment</i>	Please see Response 263
	<i>No mechanism for placing floor on ERU prices, just ceiling</i>	Please see Response 86
	<i>CAR has several potential incentive effects</i>	Thank you for your comment
	<i>Alternative ERU generation options could lead to inequitable benefits</i>	Thank you for your comment
	<i>Double counting is a possibility</i>	Please see Response 275
	<i>CAR could stifle innovation due to limitations on ERU generation</i>	Thank you for your comment
	<i>Output-based updating distorts abatement and pricing decisions of firms</i>	Thank you for your view on the benchmarking process and our proposal to update the emission requirement every 3 years "output based updating," based on actual production rates.
	<i>CAR benchmark compares facility to itself, results in proportionate reductions</i>	Please see Response 120 Please see Response 121
	<i>Traditional approach to identifying EITEs criticized for being too simplistic</i>	Thank you for your comment
	<i>Traditional metrics don't measure how sensitive firms are to cost changes</i>	See Response 158
<i>Including 2016 in baseline calculations has negative effects</i>	Thank you for your comment	
<i>Should consider eliminating 2016 from baseline</i>	We believe that the potential to reduce efficiency just to get a higher emission allowance in one year will not overly skew the five-year average for a source. If the source is so blatant in its reporting that Ecology can detect and omit that year we will be able to make that correction.	

	<i>Program would reward business for taking action already planned</i>	See response above and Response 158
	<i>Liquidity and transparency are important for success of ERU market</i>	Thank you for your comment
	<i>Three-year compliance window risks default in case of bankruptcy</i>	Thank you for your comment
	<i>Ability to buy/sell future vintage emissions instruments important to success</i>	Please see Response 274
	<i>Small number of firms participating could lead to problems like hoarding</i>	Ecology believes there will be sufficient ERU availability. Please see Response 225 and Response 262. In the event that Ecology observes behavior that indicates hoarding, Ecology may consider rule revisions to address that issue.
<i>Umphred, Neal</i>	<i>“Keep on keepin’ on...”</i>	Thank you for your comment
<i>United Steelworkers</i>	<i>Supports emissions reductions policies overall, including CAR</i>	Thank you for your comment
	<i>We do not have to choose between economic and environmental progress</i>	Thank you for your comment
	<i>CAR should do everything possible to prevent leakage</i>	Please see Response 99
	<i>Washington should try to harmonize leakage policies with other states</i>	Please see Response 99 Please see Response 121
	<i>Should prioritize complementary policies that promote domestic content</i>	Please see Response 77
	<i>Urge funding research to support study of carbon footprint of imported goods</i>	Thank you for your comment. Please also see Response 165
	<i>CAR’s compliance flexibility is good</i>	Thank you for your comment
<i>University of Washington</i>	<i>Should define “external emission markets”</i>	Ecology believes these terms are sufficiently clear as used.
	<i>Should define “external registry program”</i>	
	<i>Should define “external GHG emission reduction programs”</i>	
	<i>Should define “external program”</i>	
	<i>Consider defining the term “external”</i>	
	<i>Consider defining the term “allowance”</i>	Please see Response 231
	<i>Generally agree that ERUs must originate from reductions occurring in-state</i>	Thank you for your comment
	<i>Should eliminate limits on allowances if price exceeds national price by 10%</i>	Please see Response 225
<i>US Oil</i>	<i>CAR has disproportionate impact on small domestic refiners</i>	Thank you for your comment
	<i>Total program costs may be unmanageable for small refiner</i>	Thank you for your comment
	<i>Should include provisions acknowledging small refiners and reducing burden</i>	Thank you for your comment
	<i>Delayed entrance of petroleum product importers unfair to refiners</i>	Please see Response 159
	<i>Local economic impacts of regulation may be significant and harmful</i>	Thank you for your comment
	<i>Lack of credit for early efficiency efforts – need flexibility to compensate</i>	Please see Response 158

	<i>Covering non-stationary source emissions should not be refiner's obligation</i>	Please see Response 199
	<i>Regulatory process issues should be addressed</i>	Please see Response 17
	<i>Program start date of 2017 doesn't provide time to adjust</i>	Please see Response 218
	<i>Should contain an economic hardship exemption</i>	Please see Response 221
Velez, Virginia	<i>The actual scientific requirement is closer to an 8% annual GHG</i>	Please see Response 14 Please see Response 195
	<i>Please go back to the table and write consistent, better rules now</i>	Thank you for your comment
Vieira, John	<i>Your obstinate behavior follows the lower primates</i>	Thank you for your comment
	<i>You should be ashamed of your selves</i>	
	<i>Youngsters have to go to court to challenge your weak and faint science</i>	
	<i>From additional email: Tell Inslee to obey the court decision</i>	Please see Response 1
WaferTech	<i>Should establish a maximum reduction rate for low-efficiency EITEs</i>	Please see Response 185
	<i>Should provide a hold harmless provision for ERU exchanges</i>	Please see Response 232
	<i>Should add "Accredited ISO 14064 registrars" to recognized GHG programs</i>	Please see Response 291
	<i>Please clarify what happens if Registry is insufficient</i>	Please see Response 293
Wainstein, Michelle	<i>Please take this opportunity to defend our children's essential resources</i>	Thank you for your comment
	<i>Support expert scientific legal briefs demanding constitutional and moral rule</i>	Please see Response 14
	<i>Current rule needs to be 10x stronger</i>	Please see Response 196
	<i>Please support a cut in pollution of 8% this year, 9% next, and more after</i>	Please see Response 14 Please see Response 195
Walkinshaw, Brady (Rep.)	<i>Thanks for strong commitment to the environment</i>	Thank you for your comment
	<i>Efforts must be based in science and approached through EJ lens</i>	Please see Response 14 Please see Response 195
	<i>I encourage you to be bold</i>	Thank you for your comment
	<i>Concerned CAR does not go far enough</i>	Please see Response 196
	<i>Should require a reduction in emissions far greater than 1.7% per year</i>	Please see Response 14 Please see Response 195 Please see Response 196
	<i>Also should have stronger compliance requirements</i>	Thank you for your comment
Warnick, Judy (Sen.)	<i>CAR will not produce any discernable climate improvement in Washington</i>	Please see Response 20
	<i>Will diminish economic competitiveness</i>	Please see Response 49 Please see Response 53

		Please see Response 54
	<i>CAR may even create leakage</i>	Please see Response 99
	<i>Has the hallmarks of unilateral decision-making</i>	Please see Response 17
	<i>Legislature extensively considered and rejected the cap-and-trade</i>	Please see Response 16
	<i>CAR ignores problems that were brought to light during legislative session</i>	Thank you for your comment
	<i>Will have negative effect on many businesses in district</i>	Please see Response 49 Please see Response 53 Please see Response 54
	<i>All residents will be affected by higher gas and utility prices</i>	Please see Response 61 Please see Response 62
	<i>CAR penalizes anyone who uses fossil fuels</i>	Please see Response 61 Please see Response 62 Please see Response 102
	<i>Legislature never authorize such expansive reading of CAA</i>	Please see Response 4
	<i>Solutions must come from elected officeholders and carried out by agencies</i>	Please see Response 15 Please see Response 16
Washington Association of Wheat Growers	<i>Appreciate agriculture excluded from rule</i>	Please see Response 124
	<i>Compliance costs for other industries will be passed along, including to them</i>	Please see Response 51 Please see Response 61 Please see Response 62 Please see Response 102
	<i>CBA should include pass-through costs for food production also</i>	Please see Response 51
Washington Business Alliance	<i>Should leverage forestry assets to generate ERUs</i>	Please see Response 245
	<i>Excluding sequestration is missed opportunity</i>	Please see Response 246
	<i>Need consistency across ERU compliance categories</i>	Thank you for your comment
	<i>Need to include reasonably ascertainable upstream/downstream benefits</i>	Please see Response 165
	<i>Need to include displaced benefits (e.g., advanced wood products)</i>	Please see Response 165
	<i>Need to establish a concrete, defensible threshold for permanence</i>	Please see Response 241
	<i>Need to establish process to identify/certify new ERU generation protocols</i>	Please see Response 244 Please see Response 260
	<i>Should ensure benchmarking doesn't make compliance harder for EITEs</i>	Please see Response 168
Washington Business for Climate Action	<i>Represents businesses from diverse range of sectors</i>	Thank you for your comment
	<i>Appreciate Governor's leadership</i>	Thank you for your comment
	<i>Protection of natural capital is critical to region's economy</i>	Thank you for your comment
	<i>State can and should accelerate investments in clean energy</i>	Please see Response 66

		Response 317
	<i>Should base reductions on best available science</i>	Please see Response 14 Please see Response 195
	<i>Many improvements to revised CAR</i>	Thank you for your comment
	<i>Double counting is still a problem in the new version</i>	Please see Response 275
	<i>Must ensure all loopholes are eliminated and real reductions made</i>	Please see Response 123 Please see Response 139
	<i>Do not rule out sequestration as means of ERU generation</i>	Please see Response 245
	<i>State should move to a low-carbon economy</i>	Thank you for your comment
Washington Farm Bureau	<i>CAR exceeds Ecology's authority</i>	Please see Response 4 Please see Response 5
	<i>Higher industry and fuel costs will be passed along to farmers</i>	Please see Response 51 Please see Response 54
	<i>CBA and SBEIS do not adequately address increased costs</i>	Please see Response 51 Please see Response 54
	<i>Money spent on this rule will not be available for investing</i>	Thank you for your comment
	<i>At very least wait until we know if I-732 will pass</i>	Please see Response 224
Washington Policy Center	<i>CAR assumes Ecology can judge firm's efficiency, but even owners can't</i>	Please see Response 184
	<i>Assuming regulators can correctly balance reductions is recipe for failure</i>	Thank you for your comment
	<i>Should honestly highlight gap between needed and available information</i>	Please see Response 184
	<i>CAR's limits on allowances are arbitrary and have no justification</i>	Please see Response 265
	<i>No reason to count reduction of a MT CO₂e differently in 2023 vs. 2022</i>	Please see Response 264
	<i>Need to be consistent in treatment of foreign environmental effects</i>	Please see Response 268
	<i>Current rule is at odds with science-based approach</i>	Please see Response 195
Washington PUD Association	<i>Limiting alternative ERU generation technologies is arbitrary and capricious</i>	Please see Response 34
	<i>Hydroelectric and nuclear generation should be eligible to generate ERUs</i>	Please see Response 244 Please see Response 254
	<i>CAR not coordinated with other laws, it conflicts</i>	Please see Response 94
	<i>Should do SIP for CPP along with CAR in single rulemaking</i>	Please see Response 88
	<i>Should consider relationship between CAR and CPP</i>	Please see Response 88 Please see Response 89 Please see Response 94
	<i>If move forward separately, should try to coordinate more and do new SEPA</i>	Please see Response 26
	<i>Baseline dates should be changes – 2012 was outlier</i>	Please see Response 158
	<i>Ramp up for CPP is in conflict with CAR requirement to reduce</i>	Please see Response 88

	<i>Need to coordinate between CPP and CAR</i>	Please see Response 88 Please see Response 89 Please see Response 94
	<i>Support alternative baseline as explained by Public Generating Pool</i>	Please see Response 158
	<i>Landfills should be ERU generating, not covered party</i>	Please see Response 143
	<i>Legislative intent of woody biomass rule was to cover landfill gas also</i>	Please see Response 145
	<i>HW Hill Landfill should be excluded from rule</i>	Please see Response 143
	<i>Should add definition for "participating party"</i>	Please see Response 236
	<i>Should remove verification requirement in WAC 173-442-160(2)(d)</i>	Energy efficiency data are verified by state agencies
	<i>Should count efficiency measures over entire life of action not just first year</i>	Please see Response 256
	<i>Should add "transportation measures" as ERU generating activities</i>	Please see Response 244 Please see Response 247
	<i>Should do a yearly cost benefit evaluation of market tools established in CAR</i>	Please see Response 67
	<i>Should include waiver for reliability</i>	Please see Response 222
	<i>Specific regulatory language edits provided</i>	Please see response cites above
<i>Washington Refuse and Recycling Association</i>	<i>Waste industry is also very competitive</i>	Thank you for your comment
	<i>CAR may encourage leakage</i>	Please see Response 100
	<i>Want to discourage possible diversion to smaller, less technical landfills</i>	Please see Response 142
	<i>Passing along increased costs of compliance runs counter to EJ goals</i>	Please see Response 51
	<i>Need to continue to work with industry to fix proposed rule</i>	Thank you for your comment
<i>Washington State Department of Commerce</i>	<i>CAR generally aligns well with existing Energy Independence Act rules</i>	Please see Response 242
	<i>Should include additional safeguards to ensure savings are additional</i>	Please see Response 255
	<i>Should establish baseline standard as 1.5% of utility's retail load</i>	Please see Response 255
	<i>Common baseline will result in real reductions</i>	Please see Response 255
<i>Washington State Department of Health</i>	<i>Appreciate reducing GHGs and other pollutants</i>	Thank you for your comment
	<i>Should include process for EJ considerations in ERU project approval</i>	Please see Response 79
	<i>Many public health effects from climate change</i>	Thank you for your comment
	<i>Must take drastic action now to address the problem</i>	Thank you for your comment
<i>Washington State Energy Facility Site Evaluation Council</i>	<i>Should provide credit for early actions taken</i>	Please see Response 157
	<i>Grays Harbor Energy's mitigation program is consistent with CAR</i>	Please see Response 157
	<i>Should give them credit for previous efforts</i>	Please see Response 157
	<i>This rule will be very expensive for truckers</i>	Please see Response 102

Washington Trucking Associations	<i>If diesel is more expensive here, gives out-of-stater drivers a cost advantage</i>	Please see Response 102
Waste Connections	<i>CAR will have significant unintended consequences to solid waste industry</i>	Thank you for your comment
	<i>New federal rules for landfills are adequate for regulating carbon emissions</i>	Please see Response 243
	<i>Not appropriate to combine previous mandatory steps with cap-and-trade</i>	Please see Response 142
	<i>Landfills are exempt from other cap-and-trade programs</i>	Please see Response 142
	<i>Should be allowed to get credit for early actions already taken</i>	Please see Response 157
	<i>Landfills should generate ERUs for methane capture programs</i>	Please see Response 252
	<i>CAR precludes a number of innovative projects from generating ERUs</i>	Please see Response 244
	<i>Landfills are essential public facilities</i>	Thank you for your comment
	<i>Landfills account for only a fraction of GHG emissions and have reduced</i>	Thank you for your comment
	<i>Reductions must be measurable and quantifiable – not possible for landfills</i>	Please see Response 142
	<i>Should exempt landfills from CAR</i>	Please see Response 142
Waste Management	<i>Landfills should be exempt from CAR like in other cap-and-trade programs</i>	Please see Response 142
	<i>Landfills are already regulated and EPA just strengthened requirements</i>	Please see Response 243
	<i>Landfills provide environmentally sound and essential public service</i>	Thank you for your comment
	<i>Landfill emissions are difficult to measure and are based on models</i>	Please see Response 142
	<i>Should treat biogenic carbon as carbon neutral</i>	Please see Response 145
Watt, Mary	<i>We need bold action now to avoid climate change disaster</i>	Please see Response 195
	<i>The proposed rule not enough – need more than 1.7% for 2/3 of emissions</i>	Please see Response 196
	<i>Need to reduce carbon emissions by at least 8% per year</i>	Please see Response 14 Please see Response 195
Western Environmental Law Center	<i>Ecology has constitutional duty to cap and regulate carbon emissions</i>	Ecology disagrees that the Clean Air Rule violates any statutory or constitutional obligations. As discussed in Response 1, the King County Superior Court clearly held that Ecology can take other factors besides science into account when developing the rule. Please see Response 14 and Response 195
	<i>CAR as revised does not comply with the Foster court order</i>	Please see Response 1
	<i>Ecology's existing efforts are inadequate</i>	Please see Response 196
	<i>Ecology has a mandatory, statutory duty to protect air quality</i>	Please see Response 1 Please see Response 14

<i>Ecology has a constitutional duty to protect public trust resources</i>	Please see Response 1
<i>Kids have an inalienable right to live in a healthful and pleasing environment</i>	Thank you for your comment
<i>Ecology has legal authority and duty to issue science-based rule</i>	Please see Response 14 Please see Response 195
<i>Ecology must do its part to reach global climate stabilization levels</i>	Please see Response 14 Please see Response 195
<i>Ecology must use its authority to protect public health</i>	Please see Response 14 Please see Response 195
<i>CAR must protect the waters of the state</i>	Please see Response 14
<i>CAR must mitigate against ocean acidification</i>	Please see Response 14 Please see Response 315
<i>CAR violates Ecology obligations because it legalizes dangerous levels</i>	Please see Response 14
<i>Ecology must base its rule on best available science</i>	Please see Response 14 Please see Response 195
<i>Best available science says get CO₂ levels below 350 ppm by 2100</i>	Please see Response 195
<i>Restoration of the Earth's energy balance</i>	Thank you for your comment
<i>Targeting reductions to allow more than 2° warming is unlawful</i>	Please see Response 1 Please see Response 14 Please see Response 195
<i>Protect waters of the state and marine life from acidification</i>	Please see Response 14 Please see Response 315
<i>CAR must be aimed at 350 ppm and mandate annual reductions of 8%</i>	Please see Response 14 Please see Response 195
<i>Additional 100 qtC must be sequester through reforestation</i>	Please see Response 246
<i>Forest carbon sequestration is an integral component of recovery</i>	Please see Response 245 Please see Response 246
<i>Ecology failed to properly analyze forest health management methods</i>	Addressing or analyzing forest health management methods are beyond the scope of this rule, which is to establish emission standards for GHG emissions in Washington.
<i>Ecology failed to mandate soil protection and enhancement</i>	Please see Response 246
<i>CAR is not targeted to reach 250 ppm by the end of the century</i>	Please see Response 14 Please see Response 195
<i>Ecology's proposed reduction is roughly 1% per year</i>	The CAR requires covered entities to reduce their GHG emissions at a rate of 1.7 percent per year starting in 2017.
<i>CAR regulates an insufficient number of sources</i>	Please see Response 123 Please see Response 139

<i>Ecology must regulate transportation emissions</i>	Please see Response 126 Please see Response 139
<i>Ecology must regulate emissions from new and retrofitted buildings</i>	Please see Response 316
<i>Ecology must regulate industrial forestry</i>	Ecology has concluded that currently the protocols for estimating GHG emissions from industrial forestry practices are not well developed, and that emissions from individual entities would be far below the 70,000-100,000 MT CO ₂ e per year threshold for coverage under the CAR. Ecology has therefore not included emissions from industrial forestry in the rule.
<i>Ecology must regulate emissions from agriculture</i>	Please see Response 124
<i>Ecology must regulate consumption-based emissions</i>	Ecology has no requirement to do a consumption-based emissions inventory. RCW 70.235.020 and 70.94.151 prescribe Ecology's greenhouse gas reporting requirements and anticipate the reporting of direct greenhouse gas emissions. Nowhere is Ecology directed to also report consumption-based greenhouse gas emissions.
<i>Ecology must lower threshold for covered parties</i>	Please see Response 139
<i>CAR illegally delays compliance, contradicts finding urgent action needed</i>	Please see Response 220
<i>Emissions threshold arbitrarily does not continue to decrease after 2035</i>	Please see Response 140
<i>CAR arbitrarily relies on flawed GHG reporting system</i>	Ecology disagrees. The state GHG reporting program has been in place since 2012, and meets the requirements prescribed by the Legislature for GHG emissions reporting in Chapter 70.235 RCW and RCW 70.94.151.
<i>CAR's reliance on offsets is flawed</i>	Please see Response 231 Please see Response 270 Please see Response 272
<i>CAR allows Ecology to delegate responsibility to other state agencies</i>	Nothing in the CAR requires Ecology to delegate responsibilities to other state agencies. While covered parties have the option of meeting their compliance obligation by purchasing allowances from other carbon markets, this in no way

		constitutes a delegation of responsibility. See Response 271.
	<i>Excessive role envisioned for allowances imposes costs and denies benefits</i>	Please see Response 271
	<i>Ecology must create opportunities for public involvement in implementation</i>	The Clean Air Rule creates an Environmental Justice Advisory Committee – this Committee is responsible for assigning ERUs reserved for such purpose by Ecology to projects that they deem provide important co-benefits in environmental justice areas. There will also be opportunities for public involvement and comment during subsequent revisions of the Clean Air Rule.
	<i>CBA is flawed</i>	Please see Response 48 Please see Response 49
	<i>Social cost of carbon requires reductions based on science</i>	Please see Response 36 Please see Response 37
	<i>Ecology is required to consider real costs and benefits of CAR</i>	Please see Response 48 Please see Response 49
	<i>US Social cost of carbon undervalues rights of future generations</i>	Please see Response 38 Please see Response 40
	<i>Ecology's estimates improperly discount future generations</i>	Please see Response 38 Please see Response 40
	<i>Ecology's estimates are inadequate</i>	Please see Response 36 Please see Response 37 Please see Response 38 Please see Response 39 Please see Response 40
	<i>CAR arbitrarily emulates cap-and-trade programs that are failing</i>	The Clean Air Rule is not a cap-and-trade program. Governor Inslee sponsored legislation in the 2015 legislative session that would have authorized Ecology to develop a cap-and-trade program for greenhouse gas emissions similar to that of California. However, the Legislature failed to act on that legislation. Recognizing the urgency to act on climate change, Governor Inslee then directed Ecology to develop the Clean Air Rule using existing statutory authority.

		<p>The Clean Air Rule is a “baseline-credit” program to reduce greenhouse gases. It establishes a baseline of emissions, then requires reductions from that baseline. In contrast, cap-and-trade programs issue allowances for greenhouse gas emissions. Those allowances are either allocated to covered entities, or auctioned. Covered entities must then acquire sufficient allowances to cover their emissions; the amount of allowances on the market is reduced over time.</p> <p>Ecology concluded that our approach in the Clean Air Rule will result in greenhouse gas emission reductions. The rule covers about two-thirds of the emissions in the state, and is projected to reduce statewide emissions from our current 92 million metric tons CO₂e per year to about 74 million metric tons per year in 2035.</p> <p>Leakage is a concern in any carbon program that directly or indirectly places an additional cost on greenhouse gas emissions, potentially driving industries out of state to areas where such costs are not incurred and ultimately increasing greenhouse gas emissions. Ecology has developed provisions in the Clean Air Rule that should substantially mitigate against leakage by creating efficiency targets for energy intensive and trade exposed industries, those industries that are most susceptible to leakage. Ecology will continue to work with industries and monitor how the Clean Air Rule impacts industries sensitive to leakage, revising the Clean Air Rule as necessary.</p>
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	<i>Cap-and-trade programs alone to not reduce emissions</i>	Please see Response 197
	<i>Existing cap-and-trade programs suffer leakage</i>	Please see Response 99
	<i>Ecology has legal tools it needs to reduce emissions to 350 ppm by 2100</i>	Please see Response 317
	<i>100% renewable energy system possible by 2050</i>	Please see Response 317 Please see Response 318
	<i>Transition to 100% clean and renewable energy by 2050 is necessary</i>	Please see Response 317 Please see Response 318
	<i>Ecology has other policy options</i>	Please see Response 317 Please see Response 318
	<i>Ecology should develop a Clean Energy Fund</i>	Please see Response 317 Please see Response 318
	<i>Ecology must establish emission standards for green buildings</i>	Please see Response 316
	<i>Expand Renewable Portfolio Standard to require 80% renewable power</i>	Please see Response 317 Please see Response 318
	<i>Ecology should create schedule to phase out fossil fuel vehicles by 2050</i>	Please see Response 317 Please see Response 318
	<i>Ecology should recommend optional policy changes to the Legislature</i>	Please see Response 318
	<i>Even without legislative changes, Ecology has authority it needs</i>	Please see Response 3 Please see Response 274 Please see Response 317
<i>Western Power Trading Forum</i>	<i>CAR isn't compatible with California program or options under CPP</i>	Please see Response 86 Please see Response 97
	<i>CAR will be ineffective in reducing state electric sector emissions</i>	Please see Response 88
	<i>CAR will cause leakage</i>	Please see Response 101
	<i>CAR unlikely to facilitate development of viable carbon market</i>	Please see Response 85
	<i>Should encourage linkage with other programs and make CAR more cohesive with existing GHG trading programs</i>	Please see Response 86
<i>Western States Petroleum Association</i>	<i>CAR is incomplete and missing detail – requires reading between the lines</i>	Thank you for your comment
	<i>CAR is missing key definitions</i>	Thank you for your comment
	<i>Concepts are abstracted across sections and hard to follow</i>	Thank you for your comment
	<i>Key information to demonstrate a workable program hasn't been presented</i>	Thank you for your comment
	<i>Concerned about availability of ERUs</i>	Please see Response 262
	<i>Concerned about workability and cost-effectiveness of CAR</i>	Thank you for your comment
	<i>With sufficient time, might be able to plan for program changes</i>	Please see Response 218
	<i>Lack of proactive planning is significant gap in rule development</i>	Please see Response 17
	<i>Not reasonable to start obligation period in 2017</i>	Please see Response 218

<i>ERUs not even available until 2018</i>	Please see Response 262
<i>Phased approach would be better – get it right rather than get it early</i>	Please see Response 219
<i>Should use independent criteria to determine which industries are EITE</i>	Please see Response 121
<i>Ecology hasn't said why they picked what they picked</i>	Please see Response 121
<i>Under criteria in CAR now, petroleum producers are "trade exposed"</i>	Please see Response 121
<i>Lack of objective criteria is significant gap in rule, is arbitrary and capricious</i>	Please see Response 121
<i>Should state what petroleum products are covered rather than reverse</i>	Please see Response 129
<i>Should cover petroleum products in first phase of phased approach</i>	Please see Response 159
<i>Should not use Subpart MM for reporting</i>	Please see Response 199
<i>Including biofuels ignores carbon sequestration in plant material</i>	Please see Response 145
<i>Should leave existing reporting requirements in WAC 173-441</i>	Please see Response 199
<i>Reporting scheme in CAR leads to double counting and misallocation</i>	Please see Response 199
<i>Legislature only expected petroleum producers to report using DOL data</i>	Please see Response 199
<i>Changing reporting system violates RCW 70.94.151</i>	Please see Response 199
<i>Proposed reporting system more complicated with less accurate results</i>	Please see Response 199
<i>Reliance on Subpart MM is flawed</i>	Please see Response 199
<i>Traceability is issue – refiner may not know product's final destination</i>	Please see Response 199
<i>Exemptions are unclear because refineries buy/sell intermediates</i>	Please see Response 199
<i>Subpart MM leads to unnecessary reporting burdens</i>	Please see Response 199
<i>Subpart MM less accurate than DOL data</i>	Please see Response 199
<i>Placing obligation at rack instead of gate gets it closer to point of combustion</i>	Please see Response 199
<i>DOL data is confidential</i>	Please see Response 199
<i>Petroleum product sector has no control over consumer purchases</i>	Please see Response 199
<i>Historic baseline ignores potential for increased overall demand</i>	Please see Response 159
<i>Should normalize GHG reduction obligation based on market share</i>	Please see Response 159
<i>Ecology should not establish "conservative" export values</i>	Please see Response 199
<i>Should allow use of historic DOL reports where exports are audited</i>	Please see Response 199
<i>Instead of using a historic baseline, use actual volumes sold at rack</i>	Please see Response 199
<i>Baseline should be single highest GHG emission year between 2010-16</i>	Please see Response 158
<i>CAR method penalizes refiners for executing maintenance</i>	Please see Response 158
<i>Reserve could be good tool for adjusting baselines to accommodate growth</i>	Please see Response 163
<i>Reserve needs more detail</i>	Please see Response 163
<i>No information about availability of ERUs</i>	Please see Response 262
<i>Concern about availability of in-state ERUs</i>	Please see Response 262
<i>Concern that supply of offset projects may be limited, especially early on</i>	Please see Response 262
<i>Quick program startup means no opportunity to develop ERUS</i>	Please see Response 262
<i>Covered parties will have no confidence to buy ERUs</i>	Thank you for your comment
<i>Constraints about out-of-state and vintage years are confusing</i>	Please see Response 265

	<i>Unclear of allowances could “exit” an external program and “enter” CAR</i>	Please see Response 264
	<i>Should not rely on Quebec or California allowance prices</i>	Please see Response 60
	<i>Must assume CARB allowances will be available in CAR</i>	Please see Response 265
	<i>CBA greatly understates the cost of CAR</i>	Please see Response 49
	<i>No guarantee ERUs will be available at any price</i>	Please see Response 262
	<i>EITE provisions may hurt instead of help</i>	Please see Response 168
	<i>Automatic baseline increase should be allowed</i>	Please see Response 163
	<i>Credit verification provisions too strict</i>	Please see Response 278
	<i>Stated penalties are too high and punitive</i>	Please see Response 302
	<i>Should perform SEPA analysis on direct effects of CAR, not indirect</i>	Please see Response 26
	<i>Availability of Reserve credits should directly impact viability of projects</i>	Please see Response 293
	<i>SEPA analysis should use newer data</i>	Please see Response 28
WestRock	<i>Installed efficient CHP system in 2009 at cost of about \$100 million</i>	Thank you for your comment
	<i>CAR language unclear whether applies to all or just new CHP systems; Not treating existing CHP systems same would be unfair and should allow ERUs</i>	Please see Response 258
	<i>Forest products industry is part of solution</i>	Please see Response 245
	<i>CHP is not accounted for in baseline</i>	Please see Response 157 Please see Response 258
Weyerhaeuser	<i>Need clarity on many provisions regarding EITEs</i>	Please see Response 170 Please see Response 186
	<i>Should clarify what constitutes a sector, including NAICS codes</i>	Please see Response 177
	<i>Should clarify if Ecology expects facilities to submit data on their competitors</i>	Please see Response 179
	<i>Should clarify if output-based baseline is same as GHG emission intensity</i>	Please see Response 186
	<i>Should be an administrative mechanism to adjust baselines</i>	Please see Response 163
	<i>Creating distribution for each sector will be formidable challenge</i>	Please see Response 184
	<i>Should clarify if covered parties below threshold are included in calculations</i>	Please see Response 178
	<i>Facilities are too different to ever be able to compare apples to apples</i>	Please see Response 177
	<i>WAC 173-442-070(3)(b) is counterintuitive</i>	Please see Response 192
	<i>Should clarify how RR factor in algorithm will be calculated</i>	Please see Response 186
	<i>Should clarify if ERUs and allowances are basically the same</i>	Please see Response 231
	<i>Offset scheme is very limiting</i>	Please see Response 268
	<i>EITE relief is insufficient</i>	Please see Response 156 Please see Response 169
	<i>Should re-think its approach for pulp and paper EITE</i>	Please see Response 156
<i>Uncertainty for EITE section is significant</i>	Please see Response 170 Please see Response 186	

	<i>Could determine pulp and paper need no additional emission reductions</i>	Please see Response 156
	<i>Could use step approach – easy to calculate</i>	Please see Response 156
	<i>Third-party verification is excessive and lacks justification</i>	Please see Response 278
	<i>Enforcement authority is quite extraordinary and out-of-bounds with CAA</i>	Please see Response 302
Wichar, Den Mark	<i>Washington's Clean Air Rule cannot be too strict; Compromise would be somewhat dirty and toxic air -- Support strictest science-based air regulations</i>	Please see Response 195
	<i>Current & future generations rely on you to do that</i>	Thank you for your comment
Williams NW Pipeline	<i>Applicability section is unclear</i>	Please see Response 134
	<i>Should clarify applicability section with "whichever is first" provisions</i>	Please see Response 134
	<i>Should incorporate facility's designed output level into baseline calculations; methods don't account for modified operations 2012-16</i>	Please see Response 158
	<i>Should provide additional calculation method for modified operations</i>	Please see Response 163
	<i>Should use discretionary approval for methane reduction activities</i>	Please see Response 244
Wilson, Dan	<i>In CR-102, I noticed that you referenced business and environmental stakeholders but nothing regarding Labor's involvement</i>	Thank you for your comment. This was indeed an oversight on Ecology's part. We deeply regret the error and are thankful for Labor's participation in our stakeholder process.
	<i>Not sure if that was intentional or a mistake.</i>	
	<i>The United Steelworkers were a part of the CERT here in Washington, as well as partnering with Kaiser and other businesses here in our state</i>	
	<i>We have engaged early on over carbon emissions reductions and the preservation of our good paying middle class jobs.</i>	
Woodward, Mikala	<i>I'm here because I have 2 children I love more than I ever thought possible</i>	Thank you for your comment
	<i>I spend a lot of time fending off my fear and despair about the world</i>	Thank you for your comment
	<i>I am here to ask for that rule based on science and based on love</i>	Please see Response 195
Woolley, Deborah	<i>I am asking for leadership in our moral duty to steward the planet</i>	Thank you for your comment
	<i>Current science tells us larger reductions are necessary</i>	Please see Response 195
	<i>Ecology says cannot do stronger rule due to a lack of legislative support</i>	Please see Response 196
	<i>Effects of climate change are upon us and are rapidly worsening</i>	
	<i>We need to reduce carbon emissions by 8-10% starting now</i>	
	<i>We need the Governor and Ecology to take the lead</i>	
	<i>Mandate across-the-board reductions in carbon emissions of 8-10% per year</i>	
	<i>Even if the state is sued and loses in court</i>	
	<i>Please create a Clean Air Rule that mandates what we need to make</i>	

<i>Working Group on Seafood and Energy</i>	<i>Seafood companies and tribes will benefit from reduced carbon levels</i>	Thank you for your comment
	<i>Welcome cap on carbon emissions</i>	Thank you for your comment
	<i>Should avoid ruling out offsets from sequestration on land or in saltwater</i>	Please see Response 245
	<i>Should permit use of offsets from energy efficiency improvements</i>	Please see Response 244
<i>Yakima Public Services</i>	<i>Should exclude all biogenic CO₂ emissions from CAR</i>	Please see Response 145
	<i>Should exclude landfills from CAR if subject to new federal standards</i>	Please see Response 142
	<i>Should exclude new sources and expanding existing sources</i>	Please see Response 154
	<i>Should clarify ERU retirement, especially for those with on-going benefits</i>	Please see Response 234
	<i>Should revise "efficiency reduction rate" to "efficiency improvement rate"</i>	Please see Response 192
	<i>Should revise WAC 173-442-070(3)(b)(i) and (ii) for lower output-based firms</i>	Please see Response 185 Please see Response 192
	<i>Should clarify rate calculations in WAC 173-442-070(3)(b)(i) and (ii)</i>	Please see Response 192
	<i>Should clarify what information a facility is required to supply</i>	Please see Response 179
	<i>Should clarify the methodology used to analyze EITEs</i>	Please see Response 189
	<i>Should keep production records confidential</i>	Please see Response 193
	<i>Have other concerns as well</i>	Thank you for your comment
<i>Ziegler, Bob</i>	<i>Retired biologist for more than 3 decades at Department of Fish and Wildlife</i>	Thank you for your comment
	<i>I know the hostile political environment and constraints Ecology works under</i>	Thank you for your comment
	<i>I know this has led Directors to tell staff their client to reach compromises</i>	Thank you for your comment
	<i>We live in a post Paris Climate Agreement world</i>	Please see Response 84
	<i>Science tells us we must be more aggressive in reducing GHG emissions</i>	Please see Response 195
	<i>We need to reduce our GHG emissions 8% each year if we start right now</i>	
	<i>Positive but not enough that Ecology is proposing to reduce emissions 1.7%</i>	Please see Response 196
	<i>CAR falls so short of what is needed</i>	
	<i>Any rule with inadequate limits to prevent significant impacts would need EIS</i>	Please see Response 21
	<i>All government bodies have responsibility for public health and safety</i>	Thank you for your comment
<i>Should incorporate Dr. Hansen's science into CAR</i>	Please see Response 195	

Form Letters

Ecology received a number of email submissions with identical or nearly identical content. Due to the large number of these submissions, we are providing the comment content and Ecology response here and listing the names of submitters starting on page 287.

Faith Action Network

The following form letter was received via email from 18 commenters. The content of each email was the same except for the submitter's contact information.

*From: Submitter name and email address
To: ECY RE AQComments
Subject: Make the Clean Air Rule more effective*

As a member of Faith Action Network, I want to thank you for using your leadership to reduce greenhouse gas emissions in our state through the executive rulemaking process. However, I ask you to make this rule more effective by establishing more aggressive emission reduction targets, by not allowing for carbon offsets to come from sectors that are already covered by the cap, and by protecting the integrity of the cap by strengthening the rules that set aside pollution to allow for new growth. We ask you and the Dept. of Ecology to complete a robust rule that helps our state to have an even cleaner energy future for our children and their children.

Thank you.

Ecology response

Thank you for your comments. Ecology agrees that the Clean Air Rule is an important step in reducing Washington's greenhouse gas emissions. However, it is only one piece of Washington's work to address climate change. It was never intended to serve as the sole policy for achieving greenhouse gas emissions in Washington.

In 2008, the legislature adopted Chapter 70.235 RCW, which contains provision on limiting greenhouse gas emissions. The statute establishes greenhouse gas emission reduction limits for the state, requiring a return to 1990 levels by 2020, cutting 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.⁵⁶ RCW 70.235.040 then directs Ecology to periodically make recommendations to the state legislature to update these greenhouse gas reduction limits.

Ecology determined that the greenhouse gas emission reduction limits currently established in state law are the appropriate limits to guide emission reductions in the Clean Air Rule for the emissions covered by the rule. The Clean Air Rule covers about two-thirds of the statewide greenhouse gas emissions; Ecology concluded it would not be equitable to require entities responsible for two-thirds of the state emissions to reduce their GHG emissions by more than their proportional share to meet the statutory limits. The 1.7 percent annual reduction for covered parties will achieve about

⁵⁶ RCW 70.235.020.

two-thirds of the 2035 limit, resulting in a projected savings of just under 20 million metric tons of CO₂e per year in 2035 compared to business as usual.

Ecology agrees that we are not restricted by the reduction limits in RCW 70.235.020 in achieving emission reductions under the Clean Air Rule. However, we have concluded that basing the emission reductions on the limits that are currently in law is a reasonable first step for our initial economy-wide regulation capping greenhouse gas emissions.

Regarding “offsets,” Ecology has chosen to allow companies to reduce their emissions through the use of emission reduction projects or programs (commonly called “offsets” or “carbon credits”). These projects or programs can be used to generate emission reduction units, which can then be used to satisfy compliance obligations. The program structure of the Clean Air Rule is designed to cover greenhouse gas emissions across Washington’s economy, and about 93 or 94 percent of Washington’s emissions fall into capped sectors of the economy. Limiting projects or programs that can generate emission reduction units to sectors outside the cap would greatly restrict the use of projects and programs from sectors such as transportation and electricity. Given the fact that emissions from transportation contribute approximately 46 percent of the state’s emissions, Ecology concluded that achieving emission reductions in that sector is a top priority, and allowing emission reduction projects and programs such as commute trip reduction programs to generate emission reduction units will provide incentives for more of these programs in the future. Ecology is therefore allowing projects from capped sectors to generate emission reduction units.

The Clean Air Rule includes a reserve of emission reduction units as a way to maintain a hard cap while preserving the capacity for business growth. The reserve also has features to address double counting, and promote projects as advised by the Environmental Justice Advisory Committee. The reserve is filled with ERUs contributed by covered parties. In most cases, increasing the size of the reserve means increasing the compliance obligation of the covered parties. The reserve rate in the Clean Air Rule represents Ecology’s current best estimate of the rate needed to provide sufficient emission reduction units to cover the needs of the reserve. While there is uncertainty as to the actual demand for growth or number of emission reduction units that will accrue in the reserve due to curtailment, Ecology expects that the current reserve rate will result in a small but net positive reserve account that grows each year through the first two compliance periods. Ecology will be monitoring the state of the reserve as the Clean Air Rule is implemented and will consider contribution rate adjustments in the future as needed.

Fuse Washington Form Letter

The following form letter was received via email from 29 commenters. The content of each email was substantially the same except for the submitter's contact information. Three submitters made minor edits to the form letter.

From: Submitter name bounce@list.fusewashington.org
To: ECY RE AQComments
Subject: We can do better: No coal exports!

Dear Ms. Rees and Mr. Clark:

Thank you for the opportunity to comment on the revised draft of the Washington State Department of Ecology Clean Air Rule that aims to cap global warming pollution in Washington State.

I commend Governor Jay Inslee for responding to legislative inaction by pursuing rulemaking to reduce Washington state's carbon pollution to protect current and future generations from the impacts of climate change and air pollution. This type of policy could help transform Washington's economy into one that is more sustainable and equitable.

The Department made significant changes to the previously released draft rule, including the addition of a reserve account, a registry system, and initial steps toward an aggregate cap over all covered sectors of the economy. These changes have made this a stronger rule than the draft originally released. However, I remain deeply concerned that the proposed Clean Air Rule is insufficient to achieve the state's carbon reduction goals and sets a dangerous precedent for other jurisdictions to follow. I encourage you to make the following changes to strengthen this rule:

I urge the Department to consider more aggressive emissions reduction targets consistent with best available science.

The Department chose to depend on offsets as the primary source of emission reductions. In addition to being an unprecedented approach that could limit the impact of the rule; the fact that offsets can include projects within the capped sectors raises the significant issue of double counting and may cause the Clean Air Rule to fail to achieve the state-mandated emissions reductions. Additionally, the ability to use offsets to meet 100% of your reduction obligation means that there may be no emissions reductions on site, which fails to address the high co-pollutant impacts to fence-line communities.

Adding a reserve account to accommodate for economic growth and compensate for double counting was a key recommendation of the environmental community. While I appreciate that Ecology heeded this advice, more work needs to be done to properly structure this account, including its size, charging, and other considerations to make it workable.

The Clean Air Rule relies on limited authority and cannot be the comprehensive carbon reduction package Washington needs, with revenue raised from emissions and reinvested

into continuing to solve the critical problems of carbon emissions and climate change. However, we believe that even with the limitations presented the Clean Air Rule could still be a stronger mechanism for emissions reductions than this draft reflects.

Thank you for your hard work.

Ecology response

Thank you for your comment. Ecology appreciates all the feedback and suggestions provided by stakeholders, and many of the changes we made in the proposed Clean Air Rule were in response to this feedback.

Ecology agrees that the Clean Air Rule is an important step in reducing Washington's greenhouse gas emissions. However, it is only one piece of Washington's work to address climate change. It was never intended to serve as the sole policy for achieving greenhouse gas emissions in Washington.

In 2008, the legislature adopted Chapter 70.235 RCW, which contains provision on limiting greenhouse gas emissions. The statute establishes greenhouse gas emission reduction limits for the state, requiring a return to 1990 levels by 2020, cutting 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.⁵⁷ RCW 70.235.040 then directs Ecology to periodically make recommendations to the state legislature to update these greenhouse gas reduction limits.

Ecology determined that the greenhouse gas emission reduction limits currently established in state law are the appropriate limits to guide emission reductions in the Clean Air Rule for the emissions covered by the rule. The Clean Air Rule covers about two thirds of the statewide greenhouse gas emissions; Ecology concluded it would not be equitable to require entities responsible for two thirds of the state emissions to reduce their GHG emissions by more than their proportional share to meet the statutory limits. The 1.7 percent annual reduction for covered parties will achieve about two thirds of the 2035 limit, resulting in a projected savings of just under 20 million metric tons of CO_{2e} per year in 2035 compared to business as usual.

Ecology agrees that we are not restricted by the reduction limits in RCW 70.235.020 in achieving emission reductions under the Clean Air Rule. However, we have concluded that basing the emission reductions on the limits that are currently in law is a reasonable first step for our initial economy-wide regulation capping greenhouse gas emissions.

Ecology disagrees with commenters' characterization of the use of offsets as unprecedented. Ecology has chosen to allow companies to reduce their emissions through the use of emission reduction projects or programs (commonly called "offsets" or "carbon credits"). These projects or programs can be used to generate emission reduction units, which can then be used to satisfy compliance obligations. The use of emission reduction projects or programs to mitigate greenhouse gas emissions is the oldest and one of the most tested type of greenhouse gas regulatory programs in the United States. This policy framework already exists in Washington (RCW 80.70) and has been used to mitigate the carbon dioxide emissions of certain power plants in Washington since the early 2000s.

⁵⁷ RCW 70.235.020.

The program structure of the Clean Air Rule is designed to cover greenhouse gas emissions across Washington's economy, and about 93 or 94 percent of Washington's emissions fall into capped sectors of the economy. When an emission reduction occurs as a result of a project or program in a capped sector two things happen. One, the project or program generates an emission reduction, which is real and measurable and credited to the entity which causes the project or program to happen. Two, the overall emissions in that economic sector drop by the amount of that emission reduction, but in some cases (and particularly with transportation emissions) it can be difficult if not impossible to provide credit for that emission reduction since it occurs sector-wide. These two effects happen simultaneously. This "double counting" occurs in any greenhouse gas reduction system based on a cap in which emission reduction projects or programs occur in capped sectors.

Ecology has concluded that the benefits of providing incentives for emission reduction projects or programs in capped sectors outweighs concerns or impacts regarding double counting. Because virtually all of Washington's emissions fall into capped sectors of the economy, limiting projects or programs that can generate emission reduction units to sectors outside the cap would greatly restrict the use of projects and programs from sectors such as transportation and electricity. Given the fact that emissions from transportation contribute approximately 46 percent of the state's emissions, Ecology concluded that achieving emission reductions in that sector is a top priority, and allowing emission reduction projects and programs such as commute trip reduction programs to generate emission reduction units will provide incentives for more of these programs in the future. Ecology is therefore allowing projects from capped sectors to generate emission reduction units.

Commenters raise concerns that allowing emission reduction units ("offsets") to meet 100 percent of a covered party's obligation under the rule will not allow for on-site reductions on-site and will create local air quality impacts for fence-line communities. Ecology disagrees. First, the ability to use emission reduction units for compliance is a key design element of the rule, as it allows covered entities a wide variety of approaches so that they can comply in a less burdensome way while still achieving emission reductions. The use of emission reduction units is also essential for indirect emitters (*e.g.*, petroleum fuel suppliers and natural gas distributors) to meet their compliance obligations, as these entities have no direct control over the emissions associated with petroleum fuel and natural gas combusted in the state. Second, it is important to note that only stationary sources such as power plants, landfills, and other industrial facilities have any ability to make direct reductions of greenhouse gas emissions. As noted above, indirect emitters, which constitute approximately three quarters of the emissions covered by the Clean Air Rule, do not control the amount of fuel or gas burned, and so cannot make direct emission reductions. Third, there is a limit to the emission reductions that many stationary sources can make on-site, especially for facilities with processes that generate greenhouse gas emissions from the chemical processes used to manufacture product, such as aluminum smelters and cement kilns. Finally, while Ecology recognizes that reductions in direct greenhouse gas emissions provide reductions in criteria air pollutants, the failure to require direct emission reductions at a facility does not result in adverse air quality impacts. There are air quality regulations and permits in place to protect against air quality impacts.

The Clean Air Rule includes a reserve of emission reduction units as a way to maintain a hard cap while preserving the capacity for business growth. The reserve also has features to address double counting, and promote projects as advised by the Environmental Justice Advisory Committee. The reserve is filled with ERUs contributed by covered parties. In most cases, increasing the size of the reserve means increasing the compliance obligation of the covered parties. The reserve rate in the

Clean Air Rule represents Ecology's current best estimate of the rate needed to provide sufficient emission reduction units to cover the needs of the reserve. While there is uncertainty as to the actual demand for growth or number of emission reduction units that will accrue in the reserve due to curtailment, Ecology expects that the current reserve rate will result in a small but net positive reserve account that grows each year through the first two compliance periods. Ecology will be monitoring the state of the reserve as the Clean Air Rule is implemented and will consider contribution rate adjustments in the future as needed.

Sierra Club Form Letter

The following form letter was received via email from 1,721 different commenters (although some commenters submitted more than one form letter, as is noted on the submitted list below). The content of each email was identical except for the submitter's contact information.

*From: KnowWho Services <noreply@knowwho.services>
Subject: It's™s time to reduce climate pollution⁵⁸
To: ECY RE AQComments*

Dear Clean Air Rule comments,

I urge you to ensure the Clean Air Rule uses the latest climate science as the basis for the carbon reduction requirements for the big climate polluters in our state. Currently the rule relies on outdated science from 2008. The rule must reflect current science.

I am pleased that the draft rule covers natural gas electricity plants especially as some of our utilities are planning for even more natural gas plants. However, when regulations for electricity are shifted from the state-based Clean Air Rule to the federally-based Clean Power Plan, Ecology must ensure the reductions requirements are at least as strong as the Clean Air Rule and based on current science.

All across the state, citizens are clamoring for a transition off of dirty fossil fuels to the abundant clean energy alternatives. This Clean Air Rule must ensure climate polluters are making meaningful reductions as we pave the way for clean energy.

Sincerely,

*Name
Address
City, State Zip
Email
Phone*

Ecology response

Thank you for your comment. Ecology agrees that the Clean Air Rule is an important step in reducing Washington's greenhouse gas emissions. However, it is only one piece of Washington's work to address climate change. It was never intended to serve as the sole policy for achieving greenhouse gas emissions in Washington.

In 2008, the legislature adopted Chapter 70.235 RCW, which contains provision on limiting greenhouse gas emissions. The statute establishes greenhouse gas emission reduction limits for the state, requiring a return to 1990 levels by 2020, cutting 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.⁵⁹ RCW 70.235.040 then directs Ecology to periodically make recommendations to the state legislature to update these greenhouse gas reduction limits.

⁵⁸ This is unedited and how each email subject line was actually received.

⁵⁹ RCW 70.235.020.

Ecology determined that the greenhouse gas emission reduction limits currently established in state law are the appropriate limits to guide emission reductions in the Clean Air Rule for the emissions covered by the rule. The Clean Air Rule covers about two thirds of the statewide greenhouse gas emissions; Ecology concluded it would not be equitable to require entities responsible for two thirds of the state emissions to reduce their GHG emissions by more than their proportional share to meet the statutory limits. The 1.7 percent annual reduction for covered parties will achieve about two thirds of the 2035 limit, resulting in a projected savings of just under 20 million metric tons of CO₂e per year in 2035 compared to business as usual.

Ecology agrees that we are not restricted by the reduction limits in RCW 70.235.020 in achieving emission reductions under the Clean Air Rule. However, we have concluded that basing the emission reductions on the limits that are currently in law is a reasonable first step for our initial economy-wide regulation capping greenhouse gas emissions.

As commenters' point out, Ecology ultimately intends for emissions from the power sector to be covered by the implementation plan for the federal Clean Power Plan instead of the Clean Air Rule. The Clean Power Plan is currently subject to litigation and has been stayed by the DC Circuit Court of Appeals. Due to this stay and the fact that the Clean Power Plan requirements would not take effect until several years after the effective date of the Clean Air Rule, Ecology's planning for the implementation plan for the Clean Air Rule is at an early stage. However, it is Ecology's intent for the implementation plan to require further emission reductions than those required by the Clean Power Plan. Ecology will conduct an open, inclusive public process to develop the state's plan under the Clean Power Plan, including an appropriate level of emission reduction.

Washington Environmental Council (WEC) Form Letter

The following form letter was received via email from 961 different commenters (although some commenters submitted more than one form letter, as is noted on the submitted list below). The content of most emails was identical except for the submitter's contact information. However, some commenters chose to customize the form letter by either adding or deleting information. The non-customized form letter language reads as follows:

*From: Submitter name and email address
Subject: Make the Clean Air Rule more effective
To: ECY RE AQComments*

Thank you for the opportunity to comment on the revised draft of the Washington State Department of Ecology Clean Air Rule that aims to cap global warming pollution in Washington State.

I commend Governor Jay Inslee for responding to legislative inaction by pursuing rulemaking to reduce Washington state's carbon pollution to protect current and future generations from the impacts of climate change and air pollution. This type of policy could help transform Washington's economy into one that is more sustainable and equitable.

The Department made significant changes to the previously released draft rule, including the addition of a reserve account, a registry system, and initial steps toward an aggregate cap over all covered sectors of the economy. These changes have made this a stronger rule than the draft originally released. However, I remain deeply concerned that the proposed Clean Air Rule is insufficient to achieve the state's carbon reduction goals and sets a dangerous precedent for other jurisdictions to follow. I encourage you to make the following changes to strengthen this rule:

- Urge the Department to consider more aggressive emissions reduction targets consistent with best available science.*
- The Department chose to depend on offsets as the primary source of emission reductions. In addition to being an unprecedented approach that could limit the impact of the rule; the fact that offsets can include projects within the capped sectors raises the significant issue of double counting and may cause the Clean Air Rule to fail to achieve the state-mandated emissions reductions. Additionally, the ability to use offsets to meet 100% of your reduction obligation means that there may be no emissions reductions on site, which fails to address the high co-pollutant impacts to fence-line communities.*
- Adding a reserve account to accommodate for economic growth and compensate for double counting was a key recommendation of the environmental community. While I appreciate that Ecology heeded this advice, more work needs to be done to properly structure this account, including its size, charging, and other considerations to make it workable.*

The Clean Air Rule relies on limited authority and cannot be the comprehensive carbon reduction package Washington needs, with revenue raised from emissions and reinvested into continuing to solve the critical problems of carbon emissions and climate change.

However, we believe that even with the limitations presented the Clean Air Rule could still be a stronger mechanism for emissions reductions than this draft reflects.

Thank you for your hard work.

Name

Address

City, State Zip

Ecology response

Thank you for your comment. Ecology appreciates all the feedback and suggestions provided by stakeholders, and many of the changes we made in the proposed Clean Air Rule were in response to this feedback. Ecology disagrees that the Clean Air Rule will set “dangerous precedent” for other jurisdictions to follow. While Ecology’s objective in developing the Clean Air Rule was to reduce greenhouse gas emissions in Washington, we believe that the rule can also serve as an example of another tool for other jurisdictions to use in addressing climate change.

Ecology agrees that the Clean Air Rule is an important step in reducing Washington’s greenhouse gas emissions. However, it is only one piece of Washington’s work to address climate change. It was never intended to serve as the sole policy for achieving greenhouse gas emissions in Washington.

In 2008, the legislature adopted Chapter 70.235 RCW, which contains provision on limiting greenhouse gas emissions. The statute establishes greenhouse gas emission reduction limits for the state, requiring a return to 1990 levels by 2020, cutting 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.⁶⁰ RCW 70.235.040 then directs Ecology to periodically make recommendations to the state legislature to update these greenhouse gas reduction limits.

Ecology determined that the greenhouse gas emission reduction limits currently established in state law are the appropriate limits to guide emission reductions in the Clean Air Rule for the emissions covered by the rule. The Clean Air Rule covers about two thirds of the statewide greenhouse gas emissions; Ecology concluded it would not be equitable to require entities responsible for two thirds of the state emissions to reduce their GHG emissions by more than their proportional share to meet the statutory limits. The 1.7 percent annual reduction for covered parties will achieve about two thirds of the 2035 limit, resulting in a projected savings of just under 20 million metric tons of CO₂e per year in 2035 compared to business as usual.

Ecology agrees that we are not restricted by the reduction limits in RCW 70.235.020 in achieving emission reductions under the Clean Air Rule. However, we have concluded that basing the emission reductions on the limits that are currently in law is a reasonable first step for our initial economy-wide regulation capping greenhouse gas emissions.

Ecology disagrees with commenters’ characterization of the use of offsets as unprecedented. Ecology has chosen to allow companies to reduce their emissions through the use of emission reduction projects or programs (commonly called “offsets” or “carbon credits”). These projects or programs can be used to generate emission reduction units, which can then be used to satisfy

⁶⁰ RCW 70.235.020.

compliance obligations. The use of emission reduction projects or programs to mitigate greenhouse gas emissions is the oldest and one of the most tested type of greenhouse gas regulatory programs in the United States. This policy framework already exists in Washington (RCW 80.70) and has been used to mitigate the carbon dioxide emissions of certain power plants in Washington since the early 2000s.

The program structure of the Clean Air Rule is designed to cover greenhouse gas emissions across Washington's economy, and about 93 or 94 percent of Washington's emissions fall into capped sectors of the economy. When an emission reduction occurs as a result of a project or program in a capped sector two things happen. One, the project or program generates an emission reduction, which is real and measurable and credited to the entity which causes the project or program to happen. Two, the overall emissions in that economic sector drop by the amount of that emission reduction, but in some cases (and particularly with transportation emissions) it can be difficult if not impossible to provide credit for that emission reduction since it occurs sector-wide. These two effects happen simultaneously. This "double counting" occurs in any greenhouse gas reduction system based on a cap in which emission reduction projects or programs occur in capped sectors.

Ecology has concluded that the benefits of providing incentives for emission reduction projects or programs in capped sectors outweighs concerns or impacts regarding double counting. Because virtually all of Washington's emissions fall into capped sectors of the economy, limiting projects or programs that can generate emission reduction units to sectors outside the cap would greatly restrict the use of projects and programs from sectors such as transportation and electricity. Given the fact that emissions from transportation contribute approximately 46 percent of the state's emissions, Ecology concluded that achieving emission reductions in that sector is a top priority, and allowing emission reduction projects and programs such as commute trip reduction programs to generate emission reduction units will provide incentives for more of these programs in the future. Ecology is therefore allowing projects from capped sectors to generate emission reduction units.

Commenters raise concerns that allowing emission reduction units ("offsets") to meet 100 percent of a covered party's obligation under the rule will not allow for on-site reductions on-site and will create local air quality impacts for fence-line communities. Ecology disagrees. First, the ability to use emission reduction units for compliance is a key design element of the rule, as it allows covered entities a wide variety of approaches so that they can comply in a less burdensome way while still achieving emission reductions. The use of emission reduction units is also essential for indirect emitters (*e.g.*, petroleum fuel suppliers and natural gas distributors) to meet their compliance obligations, as these entities have no direct control over the emissions associated with petroleum fuel and natural gas combusted in the state. Second, it is important to note that only stationary sources such as power plants, landfills, and other industrial facilities have any ability to make direct reductions of greenhouse gas emissions. As noted above, indirect emitters, which constitute approximately three quarters of the emissions covered by the Clean Air Rule, do not control the amount of fuel or gas burned, and so cannot make direct emission reductions. Third, there is a limit to the emission reductions that many stationary sources can make on-site, especially for facilities with processes that generate greenhouse gas emissions from the chemical processes used to manufacture product, such as aluminum smelters and cement kilns. Finally, while Ecology recognizes that reductions in direct greenhouse gas emissions provide reductions in criteria air pollutants, the failure to require direct emission reductions at a facility does not result in adverse air quality impacts. There are air quality regulations and permits in place to protect against air quality impacts.

The Clean Air Rule includes a reserve of emission reduction units as a way to maintain a hard cap while preserving the capacity for business growth. The reserve also has features to address double counting, and promote projects as advised by the Environmental Justice Advisory Committee. The reserve is filled with ERUs contributed by covered parties. In most cases, increasing the size of the reserve means increasing the compliance obligation of the covered parties. The reserve rate in the Clean Air Rule represents Ecology's current best estimate of the rate needed to provide sufficient emission reduction units to cover the needs of the reserve. While there is uncertainty as to the actual demand for growth or number of emission reduction units that will accrue in the reserve due to curtailment, Ecology expects that the current reserve rate will result in a small but net positive reserve account that grows each year through the first two compliance periods. Ecology will be monitoring the state of the reserve as the Clean Air Rule is implemented and will consider contribution rate adjustments in the future as needed.

WEC form letter customization

In addition to the commenters who submitted the form letter as above, some commenters submitted customized form letters. If the customized letter brought up new or different points than the form letter, Ecology included them with other written comments and provided a response above. Comments that make the same substantive points as the form letter despite customized language are not responded to individually. Ecology considers the response above as being the full answer to those comments.

Commenter Index – Individual Submissions

The following notes each commenter who provided oral or written comments to Ecology *except* those who provided form letters. Individuals submitting form letter comments are noted starting on page 287.

3	
3Degrees	186

A

Abramson, Mary	162
Ackerman, Laura.....	143
Albert, Donna.....	145
Alcoa	187
Alliance for Jobs and Clean Energy.....	187
Alter, Jennifer	188
American National Standards Institute ...	188
Amundson, Bruce	145
Anderson, Glen	188
Anderson, Theodore L.	188
Andrews, Cate.....	189
Ash Grove Cement Company	189
Association of Washington Business.....	190
Association of Western Pulp and Paper Workers.....	191
Austell, Carey	191
Avista	191

B

Bachelder, Karen.....	192
Bagley, Charles and Nancy.....	193
Bajzarowicz, Janusz	162
Baker Blagg, Merna.....	162
Baker, Bruce	194
Bali, Chrisha	146
Barnoski, Robert	162
Bean, David.....	163
Beemer, Gregory.....	194
Beggs, Breean	143
Bekkers, Vicki.....	194
Benton PUD	195
Berg, Ericka	163
Bishop, Scott.....	163
Bizeau, Paul	163

Black Hills Audubon Society.....	195
Black, Megan	195
Bliss, Rodger.....	195
Boeing	195
Bohl, Coral.....	163
Bone, Margaret W.....	163
Boyd, Stephen.....	164, 196
BP.....	196
Bradley, Dave	197
Bremer, John	164
Brewer, Gretchen	160
Briggs, Robert.....	164
Brockway, Abby	146, 164
Brown, Elyce.....	198
Brown, Sheila.....	146, 164
Burdick, John and Karolyn	164

C

Calkins, Jennifer	146
Calvert, Jennifer.....	143
Caplow, Diana.....	164
Carlson, Joel.....	164
Carr, Mary M.	198
Carr, Timothy.....	165
Carroll, Terence	198
Carruthers, Cathy	146
Carson, Chris.....	198
Cascade Natural Gas	199
Castle, Carol.....	165
Castle, Truman.....	147, 165
Center for Biological Diversity.....	199
Center for Resource Solutions	199
Chadsey, Meg	200
Chapin, David	165
Chelan County PUD	200
Clark Public Utilities.....	201
Clean Energy.....	201
Climate Action Reserve	201
Climate Solutions.....	201
Climate Trust	202
Coalition for Renewable Natural Gas	228
Connon, Alec	147
Cornell, Cheri.....	147, 202
Cornell, David.....	165
Cornell, Phil	203

Cosgrove, Michael	165
Costa, Valerie.....	165
Cowlitz County	203
Cowlitz County Board of	
Commissioners.....	203
Cowlitz County Public Works	203
Cowlitz County PUD	203
Crandall, Heather	166
Crawford, Tom.....	203
Crowley, Lin	204
CT	166
Cullenward, Danny	204
Curtz, Thad	204

D

D’Angelo, Chiara Rose.....	147, 180
D’Angelo, Debra.....	147
Daugherty, John	166
Davidson, Todd.....	147
de Vargas, Sally Jo Gilbert	148
Department of Defense	204
Department of Energy – Hanford	204
Deppe, Christine	148
Deppe, Marco.....	148
Deppe, Sarah.....	148
Deppe, Tim	148
Derooy, Beth	166
Deseck-Piazzon, Dianna	166
Deshmane, Atul.....	166
Diaz, Astrid.....	167
Dick, Diane	205
Dinh, Arielle	167
Donaldson, Lynne	167
Drake, Barb	148
Druffel, Pauline.....	144
Duncan, Brian	167

E

Eachus, Ann	167
Eachus, James	167
Eachus, Laura.....	205
Energy Recovery Council.....	205
Erickson, Peggi	206
Eulberg, Lois.....	167
Evergreen Carbon	206

F

Fain, Athena.....	148
Faris, Janice and Larry	168
Finkelstein, Ellen	168
Finley, Andrea.....	168
Finley, Scott	168
Food and Water Watch	207
Foster, Michael	149, 161
Front and Centered.....	207

G

Gainer, CJ	169
Gersdorf-Duncan, Sierra.....	149
Grey, Trygve.....	209
Grove, Dan.....	169
Grunewald, James	169
Grunewald, Jim.....	209
Gunn, Brian.....	209

H

Hanika, James	149
Hanski, Kathryn	169, 209
Hargrove, Bourtai	209
Hargrove, Jim.....	210
Harlan, Rick	210
Haught, Lunell	169
Hawes, Forrest	149
Hazen, Libby.....	210
Heath, Elizabeth	170
Heege, Caroline.....	149
Heenan, John.....	210
Heller, Miles	161
Henderson, Stew	149
Hendrikson, Lars.....	170
Henrikson, Lars.....	211
Herrera, Martin	170
Hiss, Joe	149
Hiss, Joseph.....	211
Hodgin, Richard.....	149, 170
Hoffman, John.....	211
Holm, Patricia A.	170
Holstein, John	171
Horman, Trisha	211
Hornig, Charles	171
Horwitz, Matthew	171
Howe, Jared.....	212
Howe, Whitney	212

Humphreys, Alec	160
Hunt, David.....	213
Hunter, Rhonda.....	171

I

Industrial Customers of Northwest Utilities.....	213
Industrial Energy Consumers of America	214
Inland Power	214
International Emissions Trading Association.....	215
Invenegy	215
Irvine, Linda.....	172
Isaac, Carol	172

J

Jacobs, Diane	216
Jones, Nathaniel	150
Jorgensen, Walter.....	150

K

Kaiser Aluminum.....	217
Kaminski, Azmyth	150
Kaminski, Robert	150, 217
KapStone.....	218
Kastner, John.....	172
Keller, Jan	218
Keller, Jennifer.....	150
Kidde, Andrew	150
King County.....	218
King County Solid Waste	219
Kitchen, Chris	219
Klapstein, Annette.....	172
Klein, Charna	172
Klickitat County PUD.....	219
Klumpp, Liz	219
Knutsen, Leif.....	220
Koenig, Tiffany.....	172
Koski, Jessica.....	150
Kunzler, Joe	220
Kuzura, Oleksandr	220

L

Lacky, Orion	173
Lagerberg, Rose	220
Laine, Kelen.....	151
Landrum, Jerry	173

Lange, Marc	173
Langhans, Sue.....	151
Lans, Ken	220
Lenander, Sue	151
Linet, Cynthia	151
Linnet, Cynthia	221
Little, James W.	221
Local Government Coalition for Renewable Energy	221
Locascio, Gillian.....	173
Locasio, Gillian.....	151
Lockhart, Alice	152, 173
Loew, Marie.....	222
Loew, Rebecca.....	222
Loew, Sean.....	222
Loew, Tammy	222
Loew, Therese.....	222
Lou	152
Low Carbon Fuels Coalition.....	223
Luchessa, Scott	174
Luckey, Nicole.....	152
Lyons, Zachary	174

M

MacMullen, Dana	223
Madsen, Ellen	224
Mandell, Gabriel	152
Mandell, Randy.....	174
Mandell, Valery	154
Mangaliman, Jill	154
Manzo, Stephanie.....	174
Maranville, Nancy.....	224
Marcus, Elizabeth (Lisa).....	155, 174
Marsh (Maast?), Jean	223
Marsh, Robert	155, 224
Marshall, Danial.....	224
Marshall, Steve	225
Martinez, Priscila	175
Maryon	225
Mayers, Marilyn.....	175
Mazza, Patrick.....	155, 225
McDonald, Rachel	175
McGee, Debra.....	175
McKinley, Ellen.....	226
McPherson, William	161
Meier, Randy.....	155
Meis, David.....	226
Michel, Morgan.....	175

Miller, Anne	156
Miller, Fred	156, 176
Montez, Heidi	176
Morgan, Georgianna	226
Morgan, Tess.....	227
Morris, Arvia.....	227
Mueller, Kevin	228

N

National Biodiesel Board.....	228
National Waste and Recycling Association.....	228
Natural Resources Defense Council	201
Newman, John.....	228
NextGen Climate America.....	201
Nguyen, Deana.....	176
No name provided.....	186
Norman, Nancy.....	176
Northwest and Intermountain Power Producers Coalition.....	229
Northwest Energy Coalition	176, 229
Northwest Food Processors Association.....	230
Northwest Gas Association.....	231
Northwest Industrial Gas Users	232
Northwest Innovation Works	233
Northwest Natural.....	233
Northwest Pulp and Paper.....	234
Nucor.....	235

O

Obey, Doug.....	176
Olson, Court.....	156
Osborn, Rachael and John.....	235
Osgood, Margaret	176

P

Pacific Gas and Electric	236
Pacific Power	236
Pallant, Joseph.....	176
Pan, Eliza	177
Parks, Sharon	177
Pederson, Matthew.....	144
Perk, David	156, 177
Peterson, Lea-Anne.....	177
Peterson, Rhonda	177
Pfeiffer, Ben	236
Phipps, Bill.....	237

Piazzon, Gary A.....	178
Piel, Sofia.....	178
Pinckert, Mary.....	237
Platts, Harriet	237
Poirier, Hanna	178
Port of Moses Lake	237
Port Townsend AirWatchers.....	237
Pratt, Geddy	238
Provonsha, Ryan	238
Pruitt-Hamm, Bruce.....	178
Public Generating Pool	238
Puget Sound Clean Air Agency	239
Puget Sound Energy.....	240
Puget Soundkeeper.....	241

Q

Quayle, Annette	178
-----------------------	-----

R

Rafacz, Ed	241
Rasmussen, James.....	156
Rathbone, Bruce.....	178
Rathbone, Bruce A.....	242
Rathbone, Lora.....	179
REC Silicon	242
Reilly, Deborah	242
Reinel, Brian	242
Renewable Fuels Association	242
Renewable Northwest	242
Republic Services.....	243
Richmond, Linda.....	179
Ripley, Theresa	179
Rittenhouse, Ryan.....	243
Rivkis, Grace.....	156
Roberts, Michael	179
Robin, Vicki.....	243
Robinson, Laura	179
Rogers, Andrea	157
Romanelli, Karen	243
Romitti, Clayton.....	243
Rosauer, Michael	244
Rose, Chiara	180
Rose, Maggie	180
Ruby Canyon Engineering.....	244
Rudnick, Deborah	180
Rumansila, Elena	157
Rutherford, Robert	180

S

Sacks, Bert	180
Sacks, Ivy	180
Savers	244
Scavezze, Barb	157
Schaeffer, Jim	244
Schiltz, Martin.....	244
Schmidt-Pathmann, Philipp	157, 181, 245
Schoettler, Joanne	157
Schramm, Jenifer	181
Scilletta, Alex.....	157
Scott, Nolen.....	181
Seattle City Light	245
Segal, Joyce.....	181
Semo, Romeo.....	245
SGL	245
Sherman-Peterson, Deejah.....	181, 247
Sherman-Peterson, Ron.....	181, 247
Shevham, Michael.....	247
Shimeall, Nancy	158, 182, 248
Sierra Club	201
Simmons, Scott	144
Skanderup, Kristi	182, 248
Skarin, Ellen.....	248
Smith, Jeremy	248
Solid Waste Association of North America.....	228
Sommer, Heidi	248
Sosin-Rocha, Madeleine	182
South Puget Sound Asian Pacific Islander Coalition.....	248
Spiegel, Jessica	144
Spokane City Council	249
Spokane Utilities Division	249
Squires, Storey	182
Stahre, Grace.....	249
Stair, Ruchi	158
Stair, Sherri	182
Stewart, Deborah.....	183
Stocker, Karen.....	183
Stockholm Environmental Institute – U.S.	250
Stoel Rives	250
Stonington, Louise	251
Strevey, Emma.....	158
Sullivan, Terry	183
Swackhammer, Chuck	183

T

Tanowitz, Wendy	158
Taylor, Brenna	183
Terry, Doris.....	183
Tesoro	252
Thompson, Steve.....	183
Thompson, TJ	252
Thornberg, Lace	183
Throop, Dean	184
Todd-Mandler, Connie.....	184
Tong, Jonathan.....	184
Townsend, Darlene A.	252
Townsend, Patricia.....	184, 252
Tozzi, Lauren	252
Traeger, Bill	252
Travena, John.....	184
Treadway, Carolyn.....	158, 253
Treadway, Roy.....	184
Tufft, Margaret.....	184
Turner, Rachell	185

U

UC Davis.....	253
Umphred, Neal.....	254
Union of Concerned Scientists.....	201
United Steelworkers.....	254
University of Washington	254
US Oil	254

V

Vance, Jo.....	158
Velez, Virginia.....	255
Vieira, John.....	255
Vincin, Robert.....	185
Voget, Rich	158
Voli, Carlo.....	159

W

WaferTech.....	255
Wainstein, Michelle	255
Waldref, Amber	145
Walkinshaw, Brady.....	255
Warnick, Judy	255
Washington Association of Wheat Growers.....	256
Washington Business Alliance	256
Washington Business for Climate Action	256

Washington Environmental Council.....	201
Washington Farm Bureau	257
Washington Policy Center	257
Washington PUD Association	257
Washington Refuse and Recycling Association.....	258
Washington State Department of Commerce	258
Washington State Department of Health	258
Washington State Energy Facility Site Evaluation Council	258
Washington Trucking Associations	258
Waste Connections.....	259
Waste Management.....	259
Watt, Mary	159, 259
Weise, Daniel.....	185
West, Rusty	159
Western Environmental Law Center.....	259
Western Power Trading Forum.....	264
Western States Petroleum Association ...	264
WestRock.....	266
Weyerhaeuser.....	266
Whittaker, Rod.....	162
Wichar, Den Mark	267
Williams NW Pipeline	267
Wilson, Bea.....	159, 185
Wilson, Dan	145, 267
Witt, Jill MacIntyre.....	159
Wood, Tana.....	185
Woodward, Mikala	159, 267
Woolley, Deborah.....	159, 267
Working Group on Seafood and Energy.	268
Worster, John	185

Y

Yakima Public Services	268
------------------------------	-----

Z

Ziegler, Bob	268
--------------------	-----

Commenter Index – Faith Action Network Form Letter

The following notes each commenter who provided form letter comments. The names are as submitted to Ecology, including some apparent typos. We apologize if we have misspelled your name.

Derie, Joann
Derleth, Penny
Dunning, Karen
Gibson, Richard
Hartmann, Lorraine
Heyman, Jay
Hodgin, Richard
Huffman, Darcy
Jeffries, Chris
Keefe, George
Lewis, Anne
Marxes
McPherson, William
Morrison, Susan
Ninburg, Pat
Richardson, Judi
Schoen, David
Steppert, John

Commenter Index – Fuse Washington Form Letter

The following notes each commenter who provided form letter comments. The names are as submitted to Ecology, including some apparent typos. We apologize if we have misspelled your name.

Commenters noted in *bold italics* customized their form letter submission in some way.

Albright, Gary

Banghart, Robert

Bohart, Scott

Bookter, Christian

Bradley, Christie D.

Brake, Lynda

Brake, William

Burk, Paula J.

Clark, Kevin C.

Coontz, Sharron

Eventoff, Franklin N.

Faste, Andrea M.

Harris, James

Hoffer, William J.

Howe, Jared

Horman, Nancy S.

Jones-Umberger, Stanley

L, Jj

Long, Ronald D.

Mork, Stuart E.

Partsch, Cornelius

Shelan, Norma J.

Thompson, Clay M.

Townsend, Darlene A.

Urias, Victoria

Wagner, Kenneth John

Wells, Raymond

Wilson, Steve

Wright, Joanne

Commenter Index – Sierra Club Form Letter

The following notes each commenter who provided form letter comments. The names are as submitted to Ecology, including some apparent typos. We apologize if we have misspelled your name.

Multiple submissions from the same name are noted with an “x” and the total number of submissions received.

G G	Aragon, Alicia	Barrera-Kolb, Markus
K G	Arakawa, Clarice	Barrett, Rick
A L	Armstrong, Seth	Bartholet, Mary
C W	Arntson, David	Bartlett, Faye
Abbott, GD	Aronica, Lori	Bartlett, Vivian
Adams, Deborah	Arthur, Bill	Barton, Gail
Adams, Marsha	Ashmun, August	Bastow, Megan
Aegerter, Bob	Asmus, Sigrid	Bates, James
Affleck, Carol	Atkins, Ted	Bauer, David
Agard, Lisa	Atkinson, Martha	Bauman, Neil
Agnelli, Donald	Attapattu, Jeevake (x2)	Bauman, Sarah (x3)
Ahmed, Shamim	Austerman, Darla	Bayer, John
Aiello, Frank	Austin, Bonny Jean	Beaman, Lisa (x2)
Akeia, Randa	Avery, Judy	Bean, Susan
Akins, Judith	Avinger, Linda	Bear, Steve
Albee, Matthew	B, Matt	Beaven, Jane
Albert, Kathy	B, Shary	Becht, Bill
Albrecht, Peter	Backman, Lara	Bechtholt, Susan
Albright, Gary	Bahls, Peter	Beck, Marsha
Alexander, Mike	Bahr, Dennis	Becker, Vicki
Alexandra, Kathryn	Bailey, David	Beckham, Ron
Alger, Karen	Bailey, Dori	Beierle, Richard
Allen, Caroline	Bain, William & Gail	Bell, Dottie
Allen, Cathy	Baine, David	Bemm, Richard
Allen, Mackall	Bajwa, Ravinder	Benes, Ken
Allen, Marlene	Baker, Michelle	Bennani, Julie Slocum
Allen, Teresa	Baker, Norman (x2)	Bennett, Ed
Allert, Rachael	Bakko, Theresa	Benoit, Ken
Allrud, Sydney	Ballew, Louann	Benson, Brian
Alonso, Joyce	Balmer, D	Benson, David
Andersen, Barb	Baltin, Brian	Bentham, Felicia
Anderson, Jude	Banga, Rob (x2)	Berentson, Anna
Anderson, Lyle	Banghart, Robert	Berger, Alex
Anderson, Matthew	Bannerman, Lynne	Bergner, Rich
Anderson, Nancy	Barber, Kristin	Beringer, Mark (x2)
Anderson, Ray	Barcott, Nick	Berkshires, Nova
Aniballi, Brett	Barnes, Bob	Bessler, Mike
Annabel, Patrick	Barnes, Kris	Best, Mary
Ansbaugh, Shannon	Barnes, Noel	Beven, Michele

Billings, David
Bilous, Oleksii
Birch, Becky
Bishop, Scott
Bissett, Cheryl
Blad, David
Blair, David
Blair, Jeff
Blair, Judy
Blake, Anna
Blanchard, Don
Blanchfield, Kathleen
Blitzer, Mark
Blome, Michael
Bloss, Jerry
Blue, Sapphire
Blumenthal, Robert
Blumer, Janet
Boguske, Matthew
Bohart, Scott
Bohn, Nina
Boland, Tim
Bonfield, Barbara
Bonilla, Myrtelina
Bontecou, Leslie
Bookter, Christian
Bordelon, Tika
Borso, Pamela
Bowen, Patty
Bowlby, Ed
Boyce, Bob
Boyce, Michael
Boyd, Kayla
Boyne, Jonathan
Braden, Sandy
Bradley, Joyce
Brant, Daniel
Brassel, S
Brauss, Laurie
Brayton, Patricia
Bremer, Jill
Bremer, John
Bremer, John
Bremner, Debbie
Brevig, Lynn
Brewster, Teresa
Brinkhaus, Andrew
Brist, Lori
Britton, Craig

Brooke, Cody
Brookman, Craig
Brooks, Beverley
Brooks, Beverley
Brouillette-Jobe, S
Brown, Denise
Brown, Doug (x2)
Brown, Jessica
Brown, Jimmy (x2)
Brown, Kelly
Brown, Tina (x2)
Brownell, Alan
Brownfield, Joan
Brownfield, Sally
Bruell, Barbara
Brush, Jaime
Bryan, Carol
Buch, Anthony
Buch, Tony
Buchanan, Brad
Buchanan, Carlin
Buczek, Judith
Budnik, Dave
Buell, Rebecca
Buer, Gro
Bukis, Karen
Bukovnik, Jan
Bumford, Magdalene
Burch, Ilse
Burke, Heather
Burkhardt, Helga
Burns, Tim
Burr, Eric
Burrill, Lanny
Burrow, Jacob
Butler, Judith
Bye Susan
Byrnes, Coleman
Caboose, Michael
Caddock, Joy
Caffey, Carolyn
Caliandro, Peter
Call, Beth
Calvert, Jennifer
Camp, David
Campbell, D (x8)
Campbell, Shannon
Canny, Maureen
Canonica, Charlene

Capwell, Deborah
Carlson, Joel (x2)
Carlson, Kenneth
Caron, April
Caron, Catherine
Carone, Gary
Carpenter, Shannon
Carpenter, Sue Ellen
Carr, Mary (x2)
Carroll, Scott
Carterman, Kathryn
Carver, Amelia
Cash, Pamela
Castner, Rebecca
Ceravolo, Tracy & Caroline
Chakraborty, Srijan
Chamberlain, Mary Lee
Chambers, Terri
Chan, Guy
Chanen, Philip
Chasse, Joe
Chesick, Katherine
Chesnut, Joanna
Chessin, Meta
Childs, Constance (x3)
Ching, Lynette
Chiu, Kevin
Christensen, Steven
Chudy, Cathryn
Chuka, Paula
Chung, Linda
Church, David
Cieslak, Urszula
Ciske, Sandra (x2)
Clancy, John
Clark, Christine
Clark, Heinke
Clark, Julianne
Clark, Marlene
Clark, Roger
Clay, Gretchen
Clinch, Farah
Cloud, Thomas
Cloughley, Robyn
Clumpner, Margaret
Cody, Sharon
Cofer, Randy
Cogan, Marjorie
Cole, Sandra

Coleman, Ronald
Colley, Edward
Collins, Keleigh
Collins, Lauren
Collins, Mary
Collmer, Sarah (x2)
Colson, Lynn
Comish, Thomas
Condit, Philip
Conlan, Mike
Conn, Patrick
Conrad, Norm
Consolazio, Kim
Cook, Klouise
Cooke, Sarah
Cooper, Trina
Cope, Wendy
Copeland, William
Cordero, Ann
Cornali, Delfino
Cornell, Wendy
Corr, Nancy
Cosman, David
Couture, Ray
Covert-Bowlds, Chris
Cowan, Keith
Cox, Kim
Cox, Lanie
Cox, Lorri
Cox, Thomas
Craig, Laura
Crain, Jovon
Crane, Kimberly
Crawford, Phil
Croasdale, Kathlene
Crocker, Layne
Croley, Valerie
Cross, Carlton
Crow, Laura
Crowe, Linda
Crystal, Lakota
Csepreghy, Kinga
Cummins, Marvin
Cunningham, Brenda
Cunningham, Elizabeth
Cunningham, Janette
Curci, Marjorie
Curry, Karen
Curry, Stephen

Curtis, Colleen
Curtis, Helen
Curtz, Thad
Dahlgren Shelley
Dale, Felicia
Daley, Suzann
Dalleck, Lynne (x2)
Dalton, David
Daniels, Cathleen
Daniels, Kathleen (x2)
Daniels-Lee, David (x2)
Darcy, Kevin
Darden, Ruth
Daroczy, Eugen
Darr, Allie
Davidson, Bard
Davidson, E Barbara
Davis, Amanda
Davis, James
Davis, Jean
Davis, Sherry
Davison, William
Day, Pijper
De Rooy, Constance
Deal, Brandie
Dedrick, John
Defatta, Jude
Defoe, Martha
Delaney, Martha
Delgiudice, Barbara
Demartin, Renee
Denike, Susan
Denning, Asphodel
Dennison, Joni
Denys, Gayle
Derleth, Penny
Deruiter, Sophie
Desantis, Megan
Deutsch, Eileen
Devine, Tom
Devlin, Felicity
Dewald, Carol (x2)
DeWees, Kathryn
Dick, Nicole
Dickey, Kim
Dickinson, Amanda
Dicus, Laura
Digiacomio, Ronald
Dilabio, Gena

Dimmitt, Rafe
Dingmon, Karen
Dinzes, Deborah
Dipaul, Christopher
Dixson, Cynthia
Dobkevich, Judith
Dobson, Teri
Domke, Del
Dong, Derick
Doran, Patricia
Doucette, Wayne
Dray, Joe
Driscoll, Bill
Druffel, Pauline
Drummer, Shelli
Dubarry, Roxanne
DuBois, Barbara
Duffie, Sonia
Duke, Elizabeth
Dunlap, Tracey
Dunn, David
Dunneback, David
Durbine, Steve
Durga, Sharon
Durnell, Tim
Durr, Rebecca
Duwors, Louise
Dwight, Genevieve
Dye, Herbert
E, Sherry
Earhart, John
Eastman, Deborah
Eaton, Lorena
Eaton, Rachel
Ebert, Erik
Edain, Marianne
Eddington, Marianne
Eddy, John
Eddy, John
Eddy, Mike
Edele, Lynne
Edgington, Gary
Edison, John
Edwards, David L. (x2)
Edwards, Ola
Efron, Deborah (x2)
Ehle, Lisa
Eidenschink, Susan
Eikenberry, Bruce

Eisenberg, Ethan
Elder, Delwin
Elder, Heather
Eldridge, Sara
Elkins, Anne
Eller, Aisling
Elliott, Allen
Elliott, Leonard
Ellis, Carol (x2)
Else, Carol
Elstad, Clarence
Emerson, Maria
Emineth, Tim
Eng, Judy
Engel, Vianna
Enger Linda
Engler, Pamela
Erckmann, Jim
Erckmann, Lynn
Erickson, Daniel
Erickson, Jane
Erickson, Steve
Eriksen, Melissa
Eschen, John
Espe, Gregory
Espe, John (x2)
Eul erg, Lois
Evenson, Leslie
Eventoff, Franklin
Everitt-Emery, Karen
Eyman, Karen
Fahrenwald, Gill
Fain, Glenn
Fairburn, D.
Faletti, Diane
Fawcett, Gay
Fay, Aidan
Feldman, Andrew
Fellows, Paul
Fenigsohn, David
Fenstermaker, Lois
Ferraz, Mark
Ferrier, Wendy
Feyre-cild, Aislinn
Fields-Lardie, Wendy
Fields-Lardie, Wendy
Finch, Carolyn
Finley, Andrea
Fisher, Judith

Fitz, Collette
Fleming, Gail
Fletcher, Carolyn & Robert
Fletcher, Kathy
Fly, Peggy
Flynn, John
Ford, Lindsey
Fosburgh, Eric
Foss, Steve
Foster, Michael
Fox, Claire
Fox, Jody & Amanda
Fox, Larry
Francisco, Richard
Franko, Glenn
Franzmann, Paul
Fredrich, Victoria
Freels, Jeff
Freeman, Polly
Freeman, Rhonda
Freestone, William
French, Dawn
Friedman, Jim
Friedrick, Stephen
Friend, Robin
Fritch, Alyce
Fritts, Heidi Mcbride
Froebe, Jillian
Frost, Scott
Frymire-McKay, Susan M.
Fuhlman, Gail
Fuller Wilson, Sandra
Fuller, George
Fyfe, Eugenie
Gainer, C
Gale, Maradel
Gallagher, Kevin
Gallagher, Mary
Gandolfo, Deborah
Garcia, Charlie
Gardner, Alicia
Gardner, Joy
Gardner, Peggy
Gardner, Samantha
Garratt, Stephen
Gartner, Crystal
Gates, Tim
Gehri-Bergman, Sandra
Gelder, Donna

George, Diane
George, Kelly
Gigliotti, Robert
Gilbert, Steven
Gilbertson, John
Giles, Jim & Sharon
Gillis, Marian
Gillis, Robin
Gillmer, Marianne
Gillooly, Niele
Gilman, Christina
Gilman, Daniel
Gilmore, Thomas
Gilroy, Bryan
Gindt, Jennifer (x2)
Ginsburg, Joe
Gist, Rebecca
Glaskova, Lena
Glass, Rebecca
Glasser, Hannah
Glickman, Don
Glidden, Hal
Glinert, Jill
Glover, John
Glover, Julia
Godzich, Mika
Goglio, Remy
Gohl, Joy
Gold, Richard
Goldberg, Marshall
Golding, Will
Goldsmith, David
Goldthwait, Barbara & John
Golis, Desirae
Golladay, Arlene
Gomez, Rosa
Good, Linda
Goodson, Sally
Goodwin, Bradford
Gordon, John
Gottlieb, Olga S.
Grady, Dalton
Grajczyk, Joyce
Grannis, Christopher
Grassl, Richard
Gravette, Kristina
Gray, Alice
Gray, Patrick
Grayland, Victoria

Green, Elaine
Green, Jack
Green, Judith
Green, Steve
Grenfell, Patricia
Grewal, Kamal
Grimm, Robert
Grimmett, Kathy
Grindstaff, Duane
Groom, Gene
Gross, David
Grout, Jon
Grunbaum, Arthur
Grunkemeyer, Brian
Gudz, Betsy
Guerrero, Peter
Gulden, Ingrid
Gunn, Gerri
Guobis, Thomas
Gurnett, Greg
Gyncild, Brie
H, Carole
Habib, David
Hackenberg, Karen
Hackman, Wilma
Hackwith, Gloria
Hadlock-King, Josephine
Hafer, Sarah
Hafkey, Kara
Haggard, Margot
Hahn, Carol
Haight, Melissa
Hale, Norm
Hall, C. Victor
Hall, Heather
Hall, Victoira
Hallman, Holly
Halpern, Lisa (x2)
Hamacek, Lu
Hamer, Suzanne
Hamilton, Donna
Hammond, Christie
Hancock, Cassie
Hancock, Kathleen
Hand, David
Hanna, Shirley
Hansen, Bob
Hansen, Jess
Hansen, Sherry

Hanson, Donna
Hanson, Eric
Hanson, Mike
Hanson, Sam
Hardi, Cynthia
Hardi, Roger
Harper, Andy
Harper, Wendy
Harris, Christina
Harris, Kathleen
Harris, Pamela
Harrison, Howard
Harter, Patti
Hartsell, Paula
Hartsoch, Elizabeth
Hartung, Ann
Hartwell, Donna
Harty, Florence
Harvey, Jo
Hashimoto, Sharon
Hashmi, Margaret
Haskin, Richard
Hassel, Alice
Hassing, Leona
Hatten, Rick
Haver, Ginny
Haverfield, Heather
Hawk, Ronald
Hayes, Jenny
Hearne, Leonard
Heavyrunner, Mia
Heckman, Heidi
Hedgepath, Janet
Hedger, Lloyd
Heiman, Wendy
Heinrich, Jane
Henderson, Patricia
Henry, Mayellen
Henry, Wendy
Hepfer, Anne
Hepp, Nancy
Herman, Brandon
Hermes, Gerald
Herndon, Sandra
Hewitt, Holly
Heyneman, Amy
Heywood, David
Heywood, Susan
Hickman, Jennifer

Hiesfelter, Jon
Higgins, Andrea
Hildreth, Maureen
Hill, Barbara & Michael
Hill, Cheri
Hill, Michael
Hill, Pamela
Hines, Nancy
Hinton, Colleen
Hirsch, Barbara
Hirst, Eric
Hitchner, Joan & David
Hoagland, Vicky
Hodgin, Jeri
Hoerler, Megan
Hoffman, Christopher
Hogan, Rita
Holcomb, Lorraine
Holland, Tanya
Hollinger, Chris
Hollis, Adam
Holman, Robert
Holmberg, Daniel
Holstein, John
Holtzman, Julie
Holz, Lynne
Hood, Carolina
Hook, Patrick
Hoopough, David
Hoover, Karolyn
Hoover, Kimberly
Hopkin, John
Hopkins, Tom
Horman, Nancy (x2)
Horton, Keith
Houghtaling, Leonard
Howard, Gwen
Howard, Karen (x2)
Howard, Toni
Howe, Jared
Howe, Kim
Hu, Katy
Huddlestone, Laura
Huff Huff, Sean M.
Hughes, Kevin
Hughes, Laurel (x2)
Hulbert, Susan
Hummel, Jeff
Humphrey, Linda

Hunner, Walter
Hunter, Wendy
Hurd, Julia
Hurst, Darcia
Huxel, Kent
Ichikawa, Jeri
Ionina, Kate
Ivey-Black, Robin
Jacks, Toni
Jackson, Patricia & Randall
Jacky, S
Jacobsen, Michelle
Jacobson, Larry
Jacquemin, Deborah
James, L
James, Sibyl
Jamison, Vanessa
Janer, Marta
Jensen, Angela
Jensen, Robert
Jessup, Holly
Jeter, Randal
Johnsen, Frank
Johnson, Erik
Johnson, Jay (x4)
Johnson, Lorraine D.
Johnson, Mary Lou
Johnson, Matt
Johnson, Nicholas
Johnson, Richard
Johnson, Tracy
Johnston, Dena
Johnston, Jill
Johnston, Lloyd
Johnston, Mark
Jones, Beverly
Jones, Clayton
Jones, Jennifer
Jones, Jessica
Jones, Kathleen
Jones, Terri
Jones, Wendy
Jordan, Dorothy
Jordan, Janet
Jorgensen, Walter
Joseph, Kathryn
Justis, Denny (x2)
Kachook, Olga (x2)
Kaeufer, Edward

Kagen, Davida
Kamitsuna, Emiko (x2)
Kane, Saralee
Kaplan, Robert B.
Karlson, Fred
Kato, Michael
Katz, Aviva
Kaumans, Troy
Kaur, Jaspreet
Kaylen, Sharon
Keating, Michelle
Keefer, Kelly
Keeley, James
Keenan, Leslie
Kehl, Winifred
Kellam, Nick
Kelly, Angela
Kelly, Carolyn
Kelly, Odette
Kelman, Barry
Kemp, Dana (x2)
Kemp, Kindy
Kendall, David
Kennedy, Alys
Kenney, Sherri
Keogh, M K Wiebe
Kerr, Celia
Kessinger, Jerry
Kessler, Harrie
Kestell, Kathy
Kikawa, K
Kildall, Bill
Kilgore, Nancy
Kilgore, Susan
Kimball, Marsha
Kimmerling, Marilyn
King, Arline
King, Christopher
King, Nancy
Kirishian, Jeanette
Kiter, Jackie
Klotz, Nancy
Kluge, Ilse
Knoll, Linda
Knopf, Paul
Knoth, Mary
Knudson, Cynthia
Koehnen, Mark
Koeller, Pam

Koester, Martha
Kohlenberg, Brianna
Kohn, Teresa
Kolakosky, Linda
Kolstad, Patricia
Koomjian, Cassie
Koopman, W
Korn, Meryle (x2)
Kors, Jeanette
Koski, Jessica
Kosola, Joy
Kowalczyk, Dariusz
Kozlowski, Ted
Kr, Mu
Kraft Jr, Ed
Krause, Fayette
Krieger, James
Kriner, Kristine
Kroger, Jane
Krohne, Sheryl
Kroll, Jean
Krupicka, Kristen
Krygier, Mary
Kuciej, Walter (x2)
Kulinski, Sarah
Kulp, Angela
Kuzma, Ken
La, E
Ladd, Marc
Lagerberg, Rose
Lagerstrom, Richard (x2)
Laik, Jeff
Laik, Judith
Lair, Phil
Lamb, Barbara
Lamb, David
Lambert, John
Laney, Kathleen
Lange, Kathleen
Langeveld, Howard
LaPorte, Candace
Larrick, Maggie
Larson, Brian (x2)
Larue, Erik
Larue, Robyn
Lau, Barbara
Lavonne, Nadine
Lawrence, Christopher
Laws, David & Judith

Lawson, Gene (x2)
Layden, Pat
Lazaroff, Ann
Lazzarini, Howard (x2)
Le Vee, Ilene
Learned, Robert (x3)
Lebing, Wytold
Lederer, Lisa
Lee, Paula
Lee, Scott
Leed, Mark
Leeper, Kimberly
Lefevers, John
Lehmann, Kim
Leija, Phillip (x3)
Lemmon, Lanea
Lengel, Dennis
Lenski, Francis
Lentz, Hugh
Lenz, T.
Lenzen, Patricia
Leon Guerrero, A
LeonJones, Miranda
Lester, Anne
Levengood, Mark
Levine, Adam
Levine, Emily
Lewandowski, Mark
Lewin, Larry
Lewis, Brenda
Lewis, Brian
Lewis, Christy (x4)
Lewis, Emily
Lewis, Joyce
Lewis, Stefan
Leyrer, Bill
Liberty, Sabrina
Lichtenberg, Carol
Liesemer, Kirk & Kate
Lim, Jason (x2)
Lin, Jeannette
Lind, M. G.
Lindberg, Robert
Lindsay, Cathy
Lindsey, JJ
Lineweaver, Margaret
Link, Virgene
Linn, David
Liszak, Jerry

Littlejohn, Julie
Lockett, Jennifer
Loeser, Karen
Loewen, Kandace
Lofton, Saab
Logan, Teresa
Lohavanichbutr, Kamol &
Pawadee
Longeway, Claire
Loomis, Gregory
Looney, William
Lorenz, Lara
Lorenz, Penny
Losie, David
Lou, Ray
Lovellford, Peggy
Low, Sammy
Lowry, Elizabeth
Lowther, Larry
Lucerne, Eve-Marie
Ludlam, Travis
Ludwig, Joe
Lueer, Suzanne
Lundheim, Vanassa
Luper, Drew
Lurie, Gale
Lusk, Chester
Lutz, Jennifer
Luxton, Larry
Lybarger, Lisa
Lyman, Michael
Lyman, Teresa
Lymworth, Bhavana
Lynch, Sharon
Lynn, Bethany
Lynott, Sean
Maas, Monique
Macarthur, Janice
MacArthur, June & Ronald
MacArthur, Ron
Macdonald, Alexis
Macdougall, Mike
Macgregor, Susan
Macguire, Michael
Mackey, Sally
Macleod, Dianna
Macrae, Duncan
MacRae, James
Macslarrow, Jack

Madole, Cathy
Maeda, Angela
Magai, Marian
Maghakian, Michael & Dawn
Magliola, Lawrence
Magner, Millie
Magrath, Sef
Mahar, Mary Lee
Mahder, Debbie
Males, Jerahmeel Rueben
Malle, Josh
Mallory, Jesse
Manetti, Christina
Manson, Connie
March, Leslie
Marett, Susan
Markley, Shannon (x2)
Marks, Diane (x2)
Marsden, Pauline
Martin, Arnie
Martin, Cher
Martin, Cheryl
Martin, Jeanne
Martin, Liza (x2)
Martin, Melodie
Martin, Nathalie
Martinez, Catherine & Hal
Martinovic, Mirjana
Martinson, Julie
Martynowych, Peter
Marx, Janet
Mass, Ursula
Massey, Linda
Matera, Stephen
Matheny-White, Pat
Mathews, Holger
Matos, Luis
Matson, Kathleen
Matson, Kathleen
Matzke, Tina
Maurus, Robert
May, Annie
Mayer, Corey
Mayer, David
Mc Guire, Tim
Mc Neil, Beverly
Mcallister, Denise
Mcbee, Dean
McBeth, Kathe

Mcbride, Margie
McCain, Tom
McCarty, Charles
McCary, Kim
McCleary, Donna
Mcclintock, Gloria
Mcclurg, Jan
McCluskey, Sharon
Mccluskey, Sue
Mcconaghy, Michael
Mcconaughey, Jeff
McConnell, Charles
McCormick, Helene
McCormick, Helene
McCormmach, Lesley (x2)
Mccoy, Debbie
Mccray, Donni
Mccutcheon, Meghan
McDonald, Colleen
Mcdonald, Kimberly
McDonough, Gail
McDonough, Rebecca (x2)
Mcglannan, Dorian
Mcgovern, John
Mcgrath, Anna
Mcguire, Dan
Mcinteer, Dennis
Mcinturff, David
Mckasy, Peggy
McKay, Amy
Mckenna, Lori
Mckinley, Ellen
McMahon, Kevin
McMurry, Nan (x2)
McNabb, Cindi
Mcnae, Marjorie
Mcneil, Mona
Mcqueen, Teresa
Mcrae, Susan
Meier, Randy
Melik, Ella (x2)
Meline, Melinda
Mendez, Lauren
Mercier, Lyssa
Merlino, Steven
Merritt, Heather
Merritt, Jeanne
Messinger, Lisa
Metcalf, Virginia

Metcalf, Janel
Meyer, Cindi
Meyer, Edgar
Meyer, Emily
Meyer, Margaret
Meyer, Richard
Meyer, Robert
Michaels, Brenda
Michaels, Lara
Michaelson, Raelyn
Michalove, Carla
Micheel, Barbara
Michel, Morgan
Mickey, Susan
Miknaitis, Gajus
Millard, Janet
Miller, Alexandra
Miller, Bonnie
Miller, Grace
Miller, Jeanne
Miller, Mary Ellen
Miller, Mitch
Miller, Oralia
Miller, Sharon
Milligan, Don
Milligan, Keith
Milne, Lorree
Mineard, Monte
Miner, Ralph
Minster, Priscilla
Mitchell, Peter
Mitchell, Ronnie
Mixson, Estella
Moedritzer, Mike
Moidel, Jeffrey
Moir, Cynthia
Moller, Richard
Monprode, Lorraine
Moody, Michael
Moon, Sierra
Moore, Amber
Moore, Benita
Moore, Robert
Moore, Ron & Marci
Moore, Sadie
Morehead, Maria
Morgan, Chris
Morgan, Kay
Morgan, Monique

Morris, Hayla
Morrow, Michael
Morse, Tyler
Mortelmans, Hans
Mott, Robert
Motteler, Catherine
Mousis, John
Muck, Timothy
Mueller, Hans
Mulcare, James
Muniz, Bernadette
Murgittroyd, Milburn & Dorine
Murphy, Maryann
Murray, Barbara
Murray, Dan
Murray, Susanne
Murti, Gudrun
Musgrave, Lee
Myers, Holly
Mynar, Jim
Naccarato, Gordon
Neal, Ursula
Neary, Sally
Needham, Chris
Nehring, Paul
Nelson, Jennifer
Nelson, Joan
Nelson, Katherine
Nelson, Lin
Nelson, Linda
Nelson, Nancy
Nerin, Bill
Neubauer, Erin
Nevins, Stephen
Nevins, Teresa
Newman, Ray
Newton, Gabriel
Niatum, Duane
Nichols, Stephen
Nicholson, Rita
Nicolai, Jane
Niendorf, John
Nizhnikov, Arne
Noll, Richard
Noon, Ted
Nordby, Pat
Norick, Robert
Novick, Christine
Novikova, Nikole

Nuechterlein, Laura
Nuess, Mike
Nustad, Courtney
O'Brien, Beth
Offutt, Lynn
O'Grady, Shawn
Olney, Twyla
Olsen, Carol
Olson, Victoria
Olson, Wade
Onufer, Mary
Oppenheimer, Lina
O'Reilly, Forrest
Orme, Kevin
Orr, Lou
Orr, Noel
O'Steen, Barbara
Ostrom, Karl
Otis, Anne
Otto, K
Otto, Tyler
Oulman, Lynne
Overstreet, Amanda
Overturf, Jeff
Pacheco, Helen
Packard, Elaine
Packer, Robert
Palka, John & Yvonne
Parker, Deborah
Parkhurst, Terry
Parsley, Patricia
Partida, Kathy
Patterson, Eugenia
Patterson, Jane
Pauley, Jean
Pauley, Marcia
Pavcovich, Michelle
Pearson, Rachel
Peha, David
Penchoen, Gregory
Pendergast, Betsy
Pendle, Carolyn
Peniston, Gary
Penn, K
Pennington, Sharyn
Pepper, Nancy
Perkins, Anne
Perkins, Christine
Perkins, Sid

Perret, Jennifer
Peters, Shirley
Peters, Thom
Peterson, Marta
Pfeilschiefter, Kate
Pfister, Alice
Phelps, Elaine
Phillips, Anne
Phillips, Christopher
Phillips, Cindy
Phillips, Glenn
Phinney, Barbara
Pickering, Karen
Pierson, James
Pierson, Rae
Piocos-Lehman, Stephanie
Pitiger, Susan
Pittman, Jennifer
Plancich, Richard
Plitt, Kathryn
Popoff, Dave (x2)
Pottinger, Catherine
Potts, Paul
Pratt, Adrienne
Pratt, Debbi
Pratt, Ted
Press, Jay
Price, Mara
Prime, Jennifer
Primrose, John
Prinz, Johni
Provost, Lin
Ptaszenski, Allyson
Puffer, Deidre
Purcell, Cynthia
Quinlan, Vona
Quirk, Louise
Raamot, Patricia
Rabenstein, Lynn
Radcliff, Eugene
Radford, Sally
Radovich, Gordon
Rains, Pamela
Ramos, Deborah
Ramos, Miguel
Ramos, Myra
Ranstrom, Patricia
Raven, Warren
Rawlings, Maureen

Read, Helen
Read, Lisa
Reading, Toniann
Redmond, Jeanette
Reed, Anne
Rees, Melissa
Reeves, Valerie
Regan, Nora
Reid, Diane
Reilly, Deborah
Reilly, Linda
Reskusich, Helen
Resnick, Mark
Resnick, Maryann
Ress, Richard
Reuter, Kalama
Rhett, Carolyn
Rice, Karol
Richmond, Carole
Richter, Laney
Riddle, Charles
Ridgway, Roger
Rigano, Kimberly
Riker, Jennifer
Riley, Alan & Joann
Riley, Thomas
Rillos, Travis
Rimbos, Peter
Rinonos, Connie
Rintoul, Micheal
Riopelle, Robert
Rivendell, Laura
Roane, Ed
Robbins, Monica
Roberg, Kathryn
Roberts, Dan
Roberts, Jim
Roberts, Joanne
Roberts, Nancy
Roberts, Paul
Robertson, Don
Robeson, Ernie
Robinson, Fatima
Robinson, Lisa
Robinson, Phyllis
Roche, John
Rodgers, Sandra
Rodiek, Bob (x2)
Rodriguez, Carie

Roehm, Dave
Roesch, Lynn
Rogalla, Alex
Rohrer, Bonnie
Rolle, Lory
Rolsky, Robert
Rosen, Michael
Rosenblum, Lynn
Rosenkotter, Barbara
Ross, Ahnne
Ross, Catherine
Ross, David
Ross, Heather
Rothenberg, Florie
Rouse, Mary
Roush, Gwendolyn
Rousseau, Daniel
Rowland, James L. (x2)
Royer, Alice
Royer, Carol
Rubcic, Daniele
Rudolph, Joyce
Rufer, Jacob
Ruha, Catherine
Rulifson, Debra
Rullman, Linda
Rumburg, Kimberley
Rumiantseva, Elena
Russell, Dave
Russell, Tamara
Russo, Jay
Rutzick, Rebecca
Rutzick, Sharon
Ryan, Terrance
Saarinen, Tamara
Saccomanno, Vienna
Sagen-Hughes, Laura
Sailer, John
Sakura, Peter
Salter, Sarah
Sammeth, Michele
Sample, Steve & Brenda
Sanders, Ann
Sargent, Jean
Saupp, Janet
Saxe, Terry
Saxton, Tom
Scavezze, Barb
Schabram, Kira

Schaible, Jennifer
Schalka, Julie
Scharbach, John
Schaufler, Paul
Scheer, David
Schetzer, Kathryn
Scheuer, Teri
Schiffman, Jessica
Schmidt, Kevin
Schneider, Loxi
Scholl, Dale
Schreifels, Mary
Schroeder, Val
Schuchart, Lawrence
Schuster, Mike
Schwab, Judith
Schwartz, Eric
Schwartz, Phebe
Schwellinger, Toni
Scollon, Suzanne
Scott, Bonnie (x5)
Scott, Howard
Scott, Jack
Scott, Mark
Scott, Nolen
Scott, Raeann
Scott, Ronna
Scotts, T
Scribner, Denee
Seater, Kim
Sebring, Roy
Seeburger, John
Segal-Mains, Caitlin
Segretti, Fiona
Sellars, Beth
Sestak, Mark
Sevin, Lesa
Sextro, Ann
Sextro, Robert
Seymour, Jane Ellen
Shackelford, Mary
Shafransky, Paula
Sharbono, Melanie
Sharp, Ryan
Shaughnessy, Diane
Sheaffer, Chuck
Shearer, Allison
Sheats, Melanie
Shemet, Laverne & Paul

Sherman, Leslie
Sherwin, John
Sherwood, Lydia
Shields, Sarah
Shimeall, Nancy
Shoemaker, Randy
Shumway, Bill
Sibelman, Benjamin
Sikes, Lewis
Silva, Will
Silverman, Goldie
Silverthorne, William
Simanton, John
Simpson, Mark
Sipple, William
Sivarajan, Deepa
Skager, Theresa
Skenazy, Judith
Skindziel, Dawn
Slack, Kelley
Slosky, Ron
Smith, Angela
Smith, Chris
Smith, Dance (x2)
Smith, Diane
Smith, James
Smith, Joanne
Smith, Mary
Smith, Michael
Smith, Peter
Smith, Robert
Smith, Sandra
Smith, T.
Smith, Timothy
Snapp, Seth
Snell, Ronald
Snow, Albert
Snow, Donna
Soltess, Robert
Somerville, Diana
Sondik, Sheila
Sosin, Madeleine
Spalding, Cathy
Spaziani, Robin
Spear, Annie
Speer, Cheryl
Speers, Alice & Doug
Spellman, Linda
Spence, Michael

Spencer, Mari
Spinazze, Bonnie
Sprague, Jennifer
Sprute, Mary
St Martin, Peter & Darlene
Staab, Barbara & Charles
Staats, Alycia
Stallings, Martin
Stansfield, Jack (x2)
Starseed II, Lozz Venus (x2)
Starzman, Robin
Steege, Ted
Steilberg, Peter
Steinhardt, Helene
Steinman, Ken
Stetler, David
Stevens, Summer (x2)
Stieber, Frank
Stiffler, Tonya
Stiglich, Lynn
Stine, Kurt
Stobbe, Donald
Stockdale, Ann
Stockton, Suzanne
Stoeckel, Suzanne
Stone, Bruce
Stone, Lee
Stoneberger, Lorie
Stonecipher, Donna
Stoner, Marlis
Stout, Sherry
Strang, Arnold
Strickland, Eycke
Strickland, Sara
Stroble, Sharon
Sullivan, Brian
Sullivan, Diane
Sullivan, Jean
Sullivan, Mark (x2)
Sullivan, Terry
Sullivan, Theresa
Summer, Indigo
Sun, Helen
Sunde, Violet
Supan, Colette
Sutherland, Charlotte
Sutton, Sheila
Swadener, Ann (x2)
Swanson, Craig

Swanson, Marley
Swenson, E
Swenson, Erik
Swindler, Darece
Swoffer, Thomas
Sword, Carol
Sydnor, Giles
Syevens, Shirley
Symonds, Bonnie
Szeliski, Annie
Tabb, Carole
Tam, Susanna
Taylor, Alanna
Taylor, Douglas
Taylor, Lloyd & Elizabeth
Taylor, Mason
Taylor, Polly
Taylor, Ricky
Tea, Shelley
Teach, Jean
Temkin, Paula
Teubner, Patty
Thomas, Elissa
Thomas, Mark
Thompson, Linda
Thompson, Clay
Thompson, Gay
Thompson, Steve
Thompson, TJ
Thompson-Brody, Raina
Thomsen, Airdrie
Thomsen, Don
Thomson, Jean
Thomson, Robert (x2)
Thorn, Debbie
Thorne, Eugene
Thornsby, Jean
Thornton, George
Thorward, Minda (x2)
Titilah, Jennifer
Tobias, Alice
Todd, Damion
Tooley, Ruth
Torchia, Carol
Torrey, Norma
Townsend, Darlene
Townsend, Johnny
Townsend, Kathryn
Tozzi, Lauren

Travis, Teri
Treadway, Carolyn & Roy
Trescone, Thomas
Trimmell, Tara
Trumbo, Kristine
Tsang, Christina
Tucker-Dolan, Patricia
Tufft, Margaret
Turksel, Judy
Turner, Deborah Jean
Tuthill, Shawn
Tylczak, Katherine Alice
Tyrie, Elaine
Ulrich, Joseph
Ulrich, Robert
Umphred, Neal
Unger, Lisa
Unwin, Jim
Urias, Victoria
Uzuner, Selim
Valenti, Frank
Valentine, Carolyn
Van Cleve, Margie
Van Diest, Renetta
Van Houten, Andrea
Van Ness, Mary
Van Zant, Peter & Alix
Vandenberg, Nancy
Varanitsa, Oleg
Varner, Lisa
Vawter, Rose
Vawter, Rose
Veith, Joachim
Vinson, Kathryn
Vodonos, Irina
Von Borstel, Carol
von Christierson, Peter
Von Dohlen, Lindy
Von Tobel, Robert
Voorhees, Virginia
Voorhees, Virginia
Wade, Bruce
Wagner, Benjamin
Wagner, Florence
Wagner, Rick
Wahosi, M
Wainstein, Leonard
Walker, Dorothy
Walker, Lori

Walker, Marjorie
Walker, Mary
Walker-Ward, Ginelle
Wallace, Matt
Wallace, Nadine
Wallace, Susan
Wallesz, David & Barbara
Walter, Jonathan
Wang, Tracy
Ward, Lindsay
Warden, Patricia
Warner, Cherie
Warren, Emilie
Washienko, Kathy
Watchie, Joanne
Wayne, Dorothy
Weatherby, Brian
Weaver, Julene
Weaver, Kerry
Webb, Dean
Weber, Marty
Webster, Pamela
Weed, Thomas
Weedman, Janet
Weiden, Laura
Weigner, Steven
Weinstein, Diane
Weinstein, Elyette
Weinstock, Jason
Weis, Karen
Weis, Marie
Weishaupt, Greg
Weiskopf, Daniel
Welch, Peggy Mee (x2)
Wells, Raymond
Welty, Leslie
Wenzel, Scott
West, Lisette
West, Russel
Westerhold, Andrew
Westre, Willard
Weyer, Diane
Wheadon, Robert R
Wheeler, Jerry
Whitacre, Julie
Whitaker, Mark
White, Earl
White, Jane
White, Nancy

White, Virginia
Whitehead, Boots
Whitehurst, Carol
Whitney, Richard
Whittle, Andrew
Wichar, Den Mark
Wickstorm, Stefanie
Wickwire, Mary
Wikowsky, Teri
Wilbur, Robert (x2)
Wiley, J
Wilkerson, Ryan
Wilkins, Alixandre
Wilkins, Mary Jo
Will, Laverne
Williams, Alan
Williams, Bruce
Williams, Ernie
Williams, Karen
Williamson, Michelle
Williamson, Nancy
Williamson, Summer
Willoughby, Emily
Wilmes, Jeannine
Wilson, Barbara
Wilson, Bea
Wilson, Doris (Jody)
Wilson, Jan
Wilson, Laurel
Wilson, Patricia
Wilson, Sharon
Wilson, Steve
Wilton, Laraine
Wineman, Marian
Winger, Michael
Winkel, David
Winnie, Stuart
Winstanley, William
Woestwin, Carl
Wolejsza, Nicholas
Wolf, Robert
Wolf, Torah
Wolfe, Ann
Wolfe, Kathleen
Wolfley, Debra
Wood Francis
Wood, Thelma
Wood, Wilbur
Woodbridge, Jennifer

Woodbury, Lori
Woodruff, Anita
Woodworth, J.
Woodworth, J.
Wright, Carolyne
Wright, Catherine
Wright, Dale & Pamela
Wright, Joanne
Wright, Lisa
Wrightington, Nancy
Wyatt, Jennifer
Yee, Justin
Yencich, Joseph
Yogev, Yonit
York, Traci
Young, Anett
Young, Gail
Young, Jeanne
Young, KC
Young, Melissa
Young, Robert
Young, William
Youngers, Otto
Z., Gwyddon
Zapf, Fred
Zatrine, Barbara
Zavareei, Hamid
Zeff, Barbara
Zeigler, Bob
Zerr, Laura
Zimmer, Cheryn
Zimmerman, Howard
Zontek, Ken
Zugel, Joann
Zumwinkle, Lynn
Zuni, Raynell
Zyskowski, Stanley

Commenter Index – WEC Form Letter

The following notes each commenter who provided form letter comments. The names are as submitted to Ecology, including some apparent typos. We apologize if we have misspelled your name. Multiple submissions from the same name are noted with an “x” and the total number of submissions received.

Commenters noted in *bold italics* customized their form letter submission in some way.

G H (x2)	Bagley, Nancy	Borso, Pam (x2)
K H	Bailey, Elaine	Bott, Amanda
D R	Bailey, Stephen	Boyd, Marilyn
C W	Bainbridge, Claudia	Boyd, Sarah
Abbott, GD	Baker, Sonia	Boynton, Robin
Abelson, Maris	Bale, Jacob	Braaten, Chrystyne
Abullarade, Janne	Ball, Daryl	Brand, James
Achar, Mythri	Ballew, LouAnn	Brandt, Robert
Adams, Audrey	Baltin, Brian (x2)	Brant, Daniel (x2)
Adams, Catherine	Bannerman, Lynne	Brash, John
Adams, Marsha	Barcott, Nick	Bremer, John
Adams, Marty (x2)	Barger, Naomi	Bremner, Debbie
Adler, Paul	Barnes, Lisa	Britton, Craig
Agard, Lisa	Barnes, Noel	Britton, Melissa
Airolidi, Sara (x2)	Bartholet, Mary	Brown, Barbara (x2)
Alexander, Richard W. (x4)	Bartlett, Faye	Brown, Doug
Alexandra, Kathryn	Bates, James	Brown, Louise
Allen, Teresa (x2)	Bechtholt, Susan	Brown, Robert
Alskog, Laura	Bennett, Gary	Brown, Scott
Alva, Margaret	Bensinger, Irene	Brown, Tina
Alvey, Richard & Donna	Berg, Ericka	Bruell, Barb
Anderson, Beverly	Bernthal, Jim	Bubelis, Wally
Anderson, Glen	Betz-Zall, Jonathan	Buch, Anthony
Anderson, Marie	Bianchi, John	Buekw, Heather
Andrade, Christian & Lea	Biery, Boni	Bunin, Alan
Angell, Thomas	Bilous, Oleksii	Burdick, Penny
Ann Dow, Mary	Birdsell, Dale	Burke, Jack
Armstrong, Seth	Bisiar, Rosemarie	Burkhardt, Helga
Arntson, David (x2)	Blair, Frances	Burns, Linda
Ashley, Mark	Bland, Barbara	Burns, Tim
Aszman, Jan	Blitzer, Mark	Butler, ElsaMarie
Atmore, Wendy	Blomberg, Nickolas	Call, Beth
Attapattu, Jeevake	Blue, Sapphire	Callahan, Judy
Aufhauser, Suki	Boatsman, Carolyn	Calvert, Jennifer
Austin, Gayle	Bohn, Nina	Cannon, Lauren
Avinger, Linda	Bonfield, Barbara	Canonica, C
AW, Malcolm	Bonsteel, Chuck	Canright, Lois
B, Shary	Booth, T William	Canright, Mark
Bachus, Jeanette	Bordelon, Tika	Carlson, Joel

Carone, Gary
Carpenter, Thomas
Carver, Marilyn
Casey, Meg
Castner, Rebecca
Caya, Jamie
Chadd, Edward
Chalupnik, Janet
Chamberlain, Gary
Chambers, Penny
Chan, Guy
Chapman, James & Shirley
Chaus, June
Chertok, Leslie
Chesick, Katherine (x2)
Chilson, Jerry
Chiu, Kevin
Christ, Mlou
Christensen, Steven
Christoferson, Joy
Clark, Susan
Clay, Gretchen
Cliff, Oliver
Cohen, Judith
Colley, Edward
Collins, Lyle
Collins, Wilfred
Collmer, Sarah
Colony, Stephanie
Colson, Lynn
Colter, Alfred
Condit, Stephen
Conlan, Mike
Conley, Phyllis
Conn, Patrick
Connon, Alec
Connor, Robert
Conrad, Norm (x2)
Cooley, Christine
Coontz, Sharron
Copas, Dr
Copeland, William
Corbin, Susan
Corkrum, Gordon
Cornell, Wendy
Corr, Nancy
Cottrell, Chris
Courtright, Rosemary
Covington, Diana

Cowan, Keith
Craig, Diana
Craig, Melissa
Cramton, David
Creager, C
Croasdale, Kathlene
Cronin, James
Cross, Elizabeth
Crossley, Jim & Margie
Crystal, Lakota (x4)
Culbert, Laurette
Cunningham, Elizabeth
Cunningham, Janette
Curry, Stephen (x3)
Curtis, Helen (x2)
Curtright, Shari
Cushing, Tom
D, Jeroen
Dahlgren, Shelley
Dahlke, Jason
Dale, Eric
Dalland, Inge
Dalton, David
Darden, Ruth
Dauel, Alta
DAvanzo, Alan
Davidson, Heather
Davies, Charlene
Davies, Donald
Davis, Dorothy Jane
Davis, Virginia
Davis, Wm
Davison, Todd
de la Rosa, Marco
de la Rosa, Raul
Deal, Brandie
DeLateur, Marc
DeNise, Max
Denning, Asphodel (x2)
Denys, Gayle
Derlyth, Penny (x2)
Devlin, Felicity
Dickinson, Christina
DiGiacomo, Ron
Dignan, George
Dimmitt, Rafe
Dingmon, Karen
Dix, John
Dixon, Kathy

Dobson, Bruce
Dodson, Linda
Dolph, Phyllis
Doran, Patricia
Dorfman, Ellen
Dorn, Nathan
Dornbush, Jean
Drake, Barb
Driessnack, Robert
Dryden, Dianna
Dulin, M (x2)
Duncan, Kate
Dungan, Marilyn
Dunkeld, Raichle
Dunkelman, Maxine
Dunn, Kara
Duskin-Smith, Martha
Dwinell, Danny
Dyson, Christina
E, Sherry
Eastey, Sally
Edain, Marianne (x2)
Eddy, John
Efron, Deborah (x2)
Ellenberger, Charles
Ellingham, Nancy
Ellingsen, Mari
Ellsworth, Linda
Elohim, Shemayim
Else, Carol
Engh, Mary Jane
Engle, Ray
Engler, Pamela
Erckmann, Lynn
Ericson, Hilarie
Eriksen, Melissa
Eschen, John
Espe, Greg
Evans, Alexa
Evans, Chad
Evans, Susan
Fairchild, Christie
Farrell, Nancy (x2)
Faste, Andrea
Fenwick, Kevin
Ferch, Carol
Ferm, Mary
Ferrara, Kathleen
Ferraris, Alfred

Fiertz, Carol
Fisher, Amy
Fisher, Jini (x2)
Fleming, Tracy
Fletcher, Ann
Forbes, Micky
Forschler, Frederick H.
Fortman, Scott
Fosmark, Tami
Foster, Michael
Fox, Brett
Franko, Glenn
Franzmann, Paul
Freeman, Polly
Freestone, William
French, Nina
Friedrick, Stephen
Fritch, Alyce
Froemsdorf, Leah
Gabriel, Robert
Gale, Maradel
Galipeau, Andrew
Gallagher, Mary
Gamble, Richard
Garber, Margaret
Gaya, Adam
George-Minetti, Tyler
Getz, Jade
Gilbert, Clark
Gilbert, Michele
Giles, James
Gilroy, Bryan
Girling, Morgan
Gish, William
Gleckler, Jim
Glover, Julie
Godshalk, Katrina
Goebel, John
Goff, Bobbi
Golding, Will
Golley, Linda
Gomez, Erin
Gordon, John
Gosney-Wrede, Gail (x2)
Goucher, Janice
Grace, Sally
Graham, Margaret
Grassl, Richard
Gravette, Kristina

Gray, Alice D,
Gray, Pamela
Green, Elaine
Greenwald, Beatrice
Grindstaff, Duane
Grinslade, Kathy
Gubelman, Erin
Guenther, George
Guillory, Chris
Guobis, Tom
Gustafson, Jill
Gutierrez, Ariel
H., Tess
Habib, David
Hall, David
Hall, Heather
Hallman, Holly
Hamblin, Codi
Hamer, Suzanne
Hamilton, Donna
Hansen, Amy
Hansen, John
Hanski, Kathryn
Hardy, John
Harris, Pamela
Harrison, Howard
Harrison, Kristen
Harter, Patti
Hartke, Spring
Hartmann, Lorraine
Harvey, Jo
Hashmi, Margaret
Haskin, Richard
Hawley, Jonathon
Hawtre, Jill
Heavyrunner, Mia
Hedgepath, Janet (x2)
Hedger, Lloyd
Heffler, Les
Heggie, Paige
Hendershot, Kaleigh
Hendershott, Tracy
Henderson, Ellen (x2)
Hennon, Mark
Henrikson, Denise
Henrikson, Lars
Henry, Carole
Henry, Mayellen
Hepburn, Carol

Heron, Carrie
Hersch, Steve (x2)
Heyneman, Amy
Heywood, David
Higgins, Andrea
Hill, Cheri
Hill, Michael & Barbara
Hines, Nancy
Hodgin, Jeri
Hoerler, Megan
Hogan, Frances
Holcomb, Peter (x2)
Holman, Cherie
Holtzman, Julie
Holzer, Barry
Hopkins, Tom
Hoshiko, Derek
Howard, Karen
Howe, Jared
Huang, Grace
Huddleston, Laura
Hughes, Kevin
Hughes, Laurel
Hulbert, Susi
Hunner, Walter
Hunt, Mary
Hurd, Julia (x2)
Hurst, Darcia (x2)
Hutchinson, Barry
Hutton, Joann
Igoe, Pauline
Iluna, Mana
Ireland, JoAnn
Jacky, S
Jacobson, Lawrence
James, Dillinger
Janet, Kay
Jansen, Linda
Janssen, Kristine
Janzen, Gayle
Jarrard, Sue
Jatul, Cynthia
Jean, Gwyn
Jenkner, Gerlind
Jenne, Jan
Jensen, Beth
Jensen, Louetta
Jeter, Randal
Johnsen, Frank

Johnson, Geraldine
Johnson, Joel
Johnson, Lorraine D. (x2)
Johnson, Matt
Johnson, Monica
Johnson, Richard (x2)
Johnson, Thomas
Johnson-Burke, Joyce
Jolles, Arnold
Jones, Clayton
Jones, Kaija
Jones, Richard D
Jordan, Dorothy
Jordan, Nancy
Juhl, Brandon
Justis, William
Kaczmarek, Polly
Kalen, Sharon
Kane, Alexis
Kane, Arlene
Karlson, Fred
Karns, Larry
Kaufman, Devon
Kay, Susan
Keating, Michelle
Keeler, Timothy
Keiser, K M
Kelly, J
Kelly, JoAnne
Kemp, Kindy
Kemper, Kathleen
Kennedy, Alys
Kennedy, Janey
Kennedy, Richard
Kenney, Sherri
Kessinger, Jerry
Kestell, Kathy
Key, Christopher
Keyt, Barbara
Kilgore, Nancy
Kilgore, Susan
Kimball, Marsha
Kiplinger, Susan
Kittredge, Kit
Klapstein, Annette
Kleyn, Jeanne
Knechtel, Gwendolyn
Knudson, Dorothy
Kongs, Julie

Koopman, William
Korn, Meryle A. (x2)
Kotz, Emily
Kovalenko, Andrew
Kowalczyk, Peter
Kriner, Kristine
Krippner, Paul
Kromminga, Geri
Laforge, Evonne
Laieski, Caleb
Lamb, Barbara
Lambert, John
Landau, Judith (x2)
Landon, Christine
Langeveld, Howard
Larrabee, Consuelo
Larsen, Charlene
Larson, R. A.
LaRue, Erik
Laurenzi, Adrian
Lavenhar, Sara
LaVonne, Nadine (x2)
Lawrence, Toni
Lawson, Gene
Lazzarini, Howard
Leckenby, Patricia
Lee, Carrie
Leed, Mark
Leeper, Kimberly
Lemberg, Eric
Lengel, Elizabeth
Lenihan, Colleen
Lenski, Francis
Lenzen, Patricia A,
Leombruno, Steve
Levelle, Rachel (x3)
Levine, Adam
Lewis, Brian
Lewis, Christy (x2)
Lewis, Joyce
Lewis, Laura
Libbey, Thomas
Liebermann, Jerry (x2)
Ligrano, Raymond
Lillie, Mary
Lim, Jason
Lin, Peter
Lindberg, Robert
Link, Virgene

Linn, David
Lionz, Gloria
Lipsky, Dorothy
Little, James (x2)
Little, Nancy
Littooy, Johannes A,
Llewellyn, Birgit
Lloyd, Jack
Lockett, Jennifer
Lockhart, Alice (x2)
Lofquist, Erland
Lofton, Saab
Logan, Eada
Loomis, Gregry
Loreen, Ernie
Lou, Ray
Low, Sammy (x2)
Lowney, Kathleen (x2)
Ludlam, Travis
Luria, Eric
Luxem, David
Lykins, Chris
Lyman, Teresa
Mabbott, MaryAnn (x2)
Mach, Alex
Mackey, Melvin
Madison, Trevor
Magana, Maria
Magdalena, Amari
Magliola, Lawrence
Mahlis, Larry
Manetti, Christina
Mangat, Navneal
Marcus, Elisabeth (Lisa)
Marks, Jana
Maroncelli, James
Marsh, Greg
Marshall, Lydia
Martin, Ann
Martin, Cassie
Martin, Jeanne
Martin, Melodie
Martinez, Nora
Marvin, Bill
Masler, Kaya
Masonis, Rob
Massey, Linda
Masters, Mary
Mathews, Lou

Matsui, Vicky
Matthay, Anita
McCain, Char
McCartan, Ellen
McCarthy, Ai
McClain, R S
McClure, Leslie
McCutcheon, Meghan
McDonald, Kim
McGovern, John
McGuire, Henry
McKee, Dave
McKim, Tina
McLaughlin, Julia
McNae, Marjorie
McPherson, William
Meier, Randy
Mejia, Theresa
Melton, Ric
Menne, Barbara
Mergler, Gerald
Merritt, Heather
Meyer, Margaret
Meyer, Robert
Micheli, Carmela
Millar, Riff
Miller, Alexandra
Miller, Sharon
Miller, Travis
Mills, Edward
Mills, Kenneth
Mims, Johnny
Miner, Ralph E.
Mitchell, Cheryl
Mitchell, David
Mitchell, Wendy
Moir, Cynthia
Monprode, Lorraine
Montague, Dan & Pat
Moore, Janet
Moore, Kristine
Moore, Ronald
Morgan, Bobbie
Morgan, Chris
Morgan, Nancy
Morgan, Shannon
Morrison, Susan
Morrow, France
Morse, Tyler

Mosman, Paula
Mower, Amy (x2)
Mulcare, James
Murawski, Heather
N, Mary
Naidu, Arun
Najafi, Behnosh
Nakano, Gwen
Nakata, Kristi
Nakayama, Garry
Neal, Ursula
Nelson, Katherine
Nelson, Paul
Newcomb, Anne
Nguyen, Binh
Nichols, James H. III
Nickerson, Donna J.
Nielsen, Diana
Niendorf, John
Nightingale, Terry
Nihem, Diana
Noble, Cyndee
Noon, Teddy
Novikova, Nikole
Nussbaum, Laureen
Nystrom, Roger
Obrien, Cheryl
O'Grady, Shawn
O'Halloran, E. (x2)
Oliveri, Tom
Olsson, Phil
Onufer, Mary
O'Reilly, Forrest
Otto, Tyler
Ouellette, Ty
Page, Charles
Page, Peggy
Paine, James
Palamuso, Mike
Palios, Philip
Pan, Eliza
Pantier, Gina
Papadakis, Christy
Parker, Deborah
Parker, L
Parshall, Sharon
Parsley, Adina
Patterson, Ronald
Pauley, Jean

Pavcovich, Michelle
Payton, Fay
Peck, Sharon
Peele, Nancy
Peha, David & Julie
Penchoen, Gregory
Perez, Aldora
Perk, David
Perron, Patricia
Peters, Carol
Peterson, Kristina
Pewzner, Randi
Pinckert, Mary
Piocos-Lehman, Stephanie
Pittman, Jennifer
Pleasant, Jackie
Popejoy, Evelyn
Popoff, Dave
Porter, Alexander III
Porter, Gary
Post, Tina
Potter, Syd
Pottinger, Catherine
Potts, Paul
Pratt, Ted
Prentice, Selden
Price, James & Sharon
Price, Mara
Provost, Lin
Putnam, Alethea
Rabenstein, Lynn
Rall, Ben
Ramon, Laura
Ramos, Debbie
Rants, Rozanne
Rapuzzi, Jennifer
Rasmussen, Pat
Rathbone, Lora
Read, Barbara (x2)
Reading, Toniann
Reason, Letitia (x2)
Reasons, Jo & Joe
Rechetnick, James
Redmond, Jeanette
Reep, Irene
Reid, Brian
Reilly, Linda
Reineke, Toni
Renner, Jeff

Rettig, Jan
Reynolds, Tom
Rhodes, Lila
Richardson, Donald
Richman, Dore
Richoux, Jeanette
Riggs, Madeline (x3)
Rimawi, Bonnie
Rimbos, Peter
Ring, Susan
Ringland, Elinor
Riordan, Janet
Roberts, Justin
Rockstad, Carol
Rode, Forrest
Rodgers, Sandra
Rodman, Constance
Roehm, Dave
Rogers, James
Rohrer, Bonnie & Doug
Rolfs, Angie
Rolland, Janna
Romatka, Rainer
Rorabeck, Ladonna
Roseen-Czaplicki, Jill
Rosenkotter, Barbara (x2)
Ross, Ahnne
Ross, Catherine
Ross, E
Roth, Arlene
Rothenberg, Florie
Royer, Alice (x2)
Rumiantseva, Elena (x2)
Rummerfield, Mike
Russo, Jay
S, Barb
S. Gottlieb, Olga
Saalwaechter, Susie
Saarinen, Tamara
Saccomanno, Vienna
Sadek, Deena
Sakaki, Terumi
Salovich, Nancy
Sanford, Robert
Schaufler, Paul
Schmidt, Kevin
Schmitt, Rick
Schoettler, Joanna
Schuchart, Lawrence

Schulz, Laura
Schwab, Judith
Schwartz, Ronlyn
Schwartz, Susan
Schwede, Bette Ann
Schwinberg, Jean
Scribner, Denee
Seeburger, John
Selin, Rita
Sepessy, Lona
Sextro, Ann
Sheaffer, Chuck (x2)
Shearer, Cornelia
Sheffield, Mary
Sherman, Barbara
Shilling, Bruce
Shimada, Shirley & Mas
Shimeall, Nancy
Shubert, Stephen
Sibley, Carol
Sim, Barbara
Simpson, Joe
Singer, Phillip
Skantze, Vanessa
Slocum, Jean
Slosky, Ron
Smith, Carol
Smith, Diane
Smith, Mechelle
Smith, Michael
Smith, Peter
Smith, Sandra
Smith, Stephanie
Snow, Blaine (x2)
Snow, Donna
Solum, Mary
Sowers, Jeff
Speer, Cheryl
Spencer, Martha (x2)
Sprague, Jennifer
Springer, Stan
Sprute, Mary
Staeheli, Margaret
Staley, Sheri
Stalter, Cari
Stanley, Carol
Starbuck, Judith
Starseed, Lozz
Steadman, Jane

Steig, Andrea
Steijn, Alice
Steinhardt, Helene
Stepp, Michelle
Stevens, Mary
Stewart, Fanette
Stewart, Mary
Stewart, Mickie
Stobie, Keith
Stockbridge, Allen
Stoeckel, Sue
Strichartz, James
Stroming, Ahren
Stumbaugh, Kelly
Sucher, Martha
Sullivan, Diane
Swan, Alice
Swart, Luke
Sweeney, Leslie
Swoffer, Thomas (x2)
Sydnor, Giles (x2)
Szumlas, Nick
Tait Dong, Diane
Talbert, Paul
Talbot, Diana
Tallman, Scott
Tamler, Carolyn
Tan, Shirlee
Tanager, Linda
Tandoo, James M.
Tanowitz, Wendy
Tasker-Thompson, Mary Ann
Tatom, Andy (x2)
Taylor, Brenna
Taylor, Elizabeth
Taylor, Jennifer
Taylor, Liz
Taylor, Martha
Taylor, Mason
Teach, Jean
Teed, Cornelia
Thayne, Melinda
Theiler, Donald
Thiese, Alan
Thirloway, Melissa
Tho, Lisa
Thoma, Chris
Thomas, Jean
Thomas, Kat

Thompson, Joe
Thompson, Muhammad
Thompson, Robert
Thompson, Steve (x2)
Thompson, Sunny
Thompson, Terry
Thomsen, Don
Thorn, Debbie
Thorne, Eugene (x2)
Tobias, Alice
Tooley, Ruth
Townsend, Darlene
Tozzi, Lauren
Trasoff, Stephanie
Travis, Teri
Treadway, Carolyn
Treadway, Roy
Treat, Lynne
Trimarco, Julia
Tull, Jack
Tuohy, Marilyn
Turksel, Judy
Tylczak, Katherine Alice
Underwood, Dennis
Urias, Victoria
Uyenishi, Steve
Uzuner, Selim (x2)
van Ry, Meredith
Vandegrift, Debra
Vergillo, Anthony
Vodonos, Irina
von Christierson, Peter
Vose, Anngelle
Voss, Barbara
Wade, Marilyn
Wagner, Jenee
Wainstein, Leonard

Wale, Liisa
Wallrabenstein, James M
Walsh, Jason
Walter, Rhoda
Wang, Tracy (x2)
Ward, Matthew
Ward, Troy Faith
Warden, Patricia
Warner, Cherie
Wasserman, Linda
Wayne, Dorothy
Wayrynen, James
Weathersby, William
Webb, Dean
Weed, Ardeth L.
Weick, Lynette
Weigand, Jodi
Weinstein, Diane
Weinstein, Elyette
Weir, Tom & Kristi
Wenzel, Scott
West, G.
Westbrook, Laura
Westra, Jennifer
Wettengel, Thomas
Weyer, Diane
Wheeler, Jerry (x2)
Whitaker, Mark
Whitbeck, Robert
White, Nancy (x2)
White, Virginia
Whitney, Richard
Whittle, Andrew
Wickwire, Mary
Widman, Jared
Wiederhold, Joe (x3)
Wilcox, Mary Jo

Wilhelm, Wendy
Wilkie, Susan
Wilks, Andrew
Williams, Chris
Willis, Peggy
Wilson, Bea (x2)
Wilson, Dianne
Wilson, Doris (Jody)
Wilson, Marcia
Wilson, Patricia D.
Wilson, Sandra F
Wilson, Susan
Wineman, Marian
Winn, Thomas
Winstanley, William
Winters, Larry
Wirth, Mark
Witte, Amanda
Wolfe, Barton
Wolfe, Kathleen
Wood, Carolyn
Wood, Francis
Woodard, Merryl
Woodruff, James
Woodruff, Jan
Woods, Michael
Woolley, Deborah
Worley, Robert
Yencich, Joseph A.,
Yogev, Yonit
Young, KC (x2)
Young, Shelley
Young, William
Yribar, Rita
Zeviar Dorothy

Appendices

Due to the size of this document Ecology has decided to make the appendices into separate files so it is easier to download. Below is a list of the appendices available for this Concise Explanatory Statement for this rulemaking:

[Appendix A: Copies of written comments from withdrawn first proposed rule](#)

[Appendix B: List of written commenters](#)

[Appendix C: Transcript from July 7, 2016 public hearing](#)

[Appendix D: Transcript from July 12, 2016 public hearing](#)

[Appendix E: Transcript from July 14, 2016 public hearing](#)

[Appendix F: Transcript from July 15, 2016 public hearing](#)