



## **Preliminary Regulatory Analyses:**

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Including the:

- Preliminary Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

Imports from Centralized Electricity  
Markets:

Chapter 173-441 WAC, Reporting of  
Emissions of Greenhouse Gases and Chapter  
173-446 WAC, Climate Commitment Act  
Program Rule

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For the

**Climate Pollution Reduction Program**

Washington State Department of Ecology  
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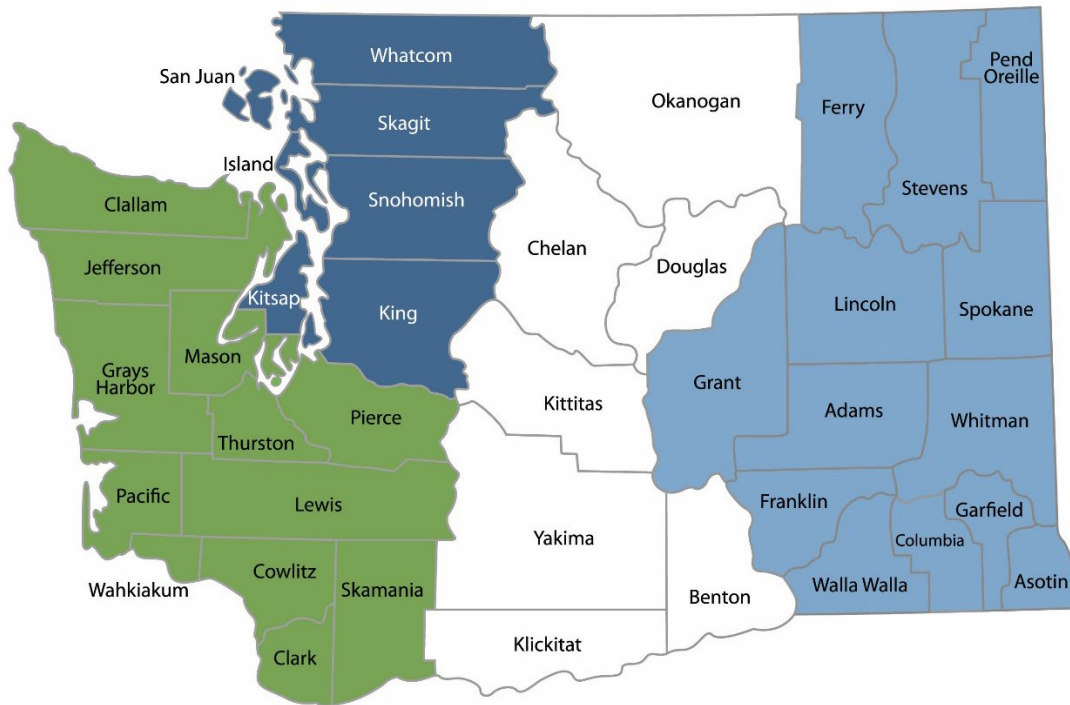
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Region	Counties served	Mailing Address	Phone
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<b>Northwest</b>	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
<b>Central</b>	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
<b>Eastern</b>	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
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# Preliminary Regulatory Analyses

Including the:

Preliminary Cost-Benefit Analysis

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Administrative Procedure Act Determinations

Regulatory Fairness Act Compliance

Centralized Electricity Markets

Chapter 173-441 WAC, Reporting of Emissions  
of Greenhouse Gases and Chapter 173-446  
WAC, Climate Commitment Act Program Rule

Climate Pollution Reduction Program  
Washington State Department of Ecology

Olympia, WA

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# Abbreviations and Acronyms

APA	Administrative Procedure Act
CAISO	California Independent System Operator
CARB	California Air Resources Board
CBA	Cost-Benefit Analysis
CCA	Climate Commitment Act
CEM	Centralized electricity market
CETA	Clean Energy Transformation Act
CO <sub>2</sub> e	Carbon dioxide equivalent
CTAM	Carbon Tax Assessment Model
EDAM	Extended Day-Ahead Market
EIM	[Western] Energy Imbalance Market
EPE	Electric power entity
FJD	First jurisdictional deliverer
GHG	Greenhouse gas
LBA	Least-Burdensome Alternative Analysis
MWh	Megawatt hour
MT	Metric ton
NAICS	North American Industry Classification System
RCW	Revised Code of Washington
RFA	Regulatory Fairness Act
SCC	Social cost of carbon
SPP	Southwest Power Pool
UTC	[WA] Utilities and Transportation Commission
WA	Washington State
WAC	Washington Administrative Code

# Executive Summary

This report presents the determinations made by the Washington State Department of Ecology as required under Chapters 34.05 RCW and 19.85 RCW, for the proposed amendments related to centralized electricity markets, to the Reporting of Emissions of Greenhouse Gases rule (Chapter 173-441 WAC; “GHG reporting rule”) and Climate Commitment Act Program Rule (Chapter 173-446 WAC; “CCA rule”). This includes the:

- Preliminary Cost-Benefit Analysis (CBA)
- Least-Burdensome Alternative Analysis (LBA)
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

All determinations are based on the best available information at the time of publication. We encourage feedback (including specific data) that may improve the accuracy of this analysis.

## Background

In 2021, the Washington Legislature passed the Climate Commitment Act (CCA), which established a Cap-and-Invest Program to help Washington meet greenhouse gas (GHG) emission limits by statutory deadlines (RCW 70A.45.020). Ecology adopted the CCA rule (Chapter 173-460 WAC) to implement the CCA law, in conjunction with amendments to the GHG reporting rule (Chapter 173-441 WAC), in 2022. The CCA law (Chapter 70A.65 RCW), requires Ecology to adopt a methodology in rule to address imported electricity associated with centralized electricity markets (CEMs) by October 1, 2026.<sup>2</sup>

This rulemaking intends to identify and establish compliance obligations for entities that import specified sources of electricity to Washington (WA) through centralized electricity markets. Supporting changes to Chapter 173-441 WAC will make sure appropriate data is available.

## Summary of the proposed rule amendments

The proposed rule amendments would:

- Amend reporting requirements in the GHG reporting rule (Chapter 173-441 WAC):
  - Amending the definition of “Electric Power Entity” (EPE).
  - Changing annual report submission requirements.
  - Adding, removing, or changing definitions specific to EPE reporting requirements.
  - Expanding data requirements and calculation methods from the Energy Imbalance Market (EIM) to all CEMs.
  - Specifying how EPEs must report imported CEM electricity from specified sources.

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<sup>2</sup> RCW 70A.65.080(1)(c)

- Expanding documentation requirements.
- Specifying GHG emissions equations and applicability.
- Amending requirements for registration of import or export sources.
- Making changes without material impacts:
  - Clarify language and update terminology.
  - Remove obsolete requirements and language.
- Amend the CCA rule (Chapter 173-446 WAC):
  - Adding definitions consistent with the GHG reporting rule.
  - Amending covered emissions to reflect electricity imported from CEMs.

### Costs and benefits of the proposed rule amendments

Ecology estimates rule impacts over 20 years, and compares those streams of costs and benefits occurring over time using present values. A present value accounts for inflation as well as the opportunity cost of having funds later instead of now. We estimated the following costs and benefits of the proposed rule, with qualitative impacts summarized below the table. For full discussion of costs and benefits (or cost-savings) including illustrative examples, see chapters 3 and 4.

Table 1. Total 20-year present value costs and benefits, millions of dollars

Type of impact	Low 20-year cost	High 20-year cost	Low 20-year benefit	High 20-year benefit
Reporting	\$0.37	\$0.37	qualitative	qualitative
Obligations and allocations	\$497.37	\$1,174.08	\$497.37	\$1,174.08
CEM functions	none or minor	none or minor	qualitative	qualitative
<b>Total quantifiable estimate</b>	<b>\$497.74</b>	<b>\$1,174.45</b>	<b>\$497.37</b>	<b>\$1,174.08</b>

Qualitative benefits include:

- Benefits of CEM import emissions reporting:
  - Improved GHG emissions tracking and accuracy.
  - Facilitation of programs that rely on accurate GHG emissions data as discussed in the following bullets.
  - Accurate data to assign compliance obligations under the CCA rule.
  - Improved CCA program implementation and planning.
- Benefits of CEMs functioning efficiently in WA. Supporting benefits provided by CEMs, through specification of how CEM importers are identified and how compliance obligations are assigned. Benefits include:
  - Cost-efficiency and cost-savings.
  - Improved availability and integration of renewable resources, and feasibility of efficiently meeting statutory GHG reduction goals.
  - Improved grid reliability and matching of generating resources and demand.
  - Reduced renewable resource curtailment when supply exceeds local demand.
  - Improved allocation of emissions-generating resources that are more efficient.

While we expect costs and benefits (cost-savings) of new compliance obligations and new no-cost allowance allocations to be equal in the aggregate over time, there are also potential situations in which these costs exceed cost-savings, leading to additional incentives to reduce GHG emissions. In such situations, costs would be up to GHG allowance prices (assumed to be between \$30 and \$180 per metric ton of carbon-equivalent (MT CO<sub>2</sub>e) for this analysis), while benefits would be reflected by the avoided Social Cost of Carbon (ranging from \$450 per MT CO<sub>2</sub>e emitted in 2027, and rising in subsequent years) and additional avoided impacts of climate change to the environment, economy, overburdened communities, and vulnerable populations. For examples and additional references, see Chapter 4.

We conclude, based on a reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the proposed rule amendments, as compared to the baseline, that the benefits of the proposed rule amendments are greater than the costs.

### **Least-Burdensome Alternative**

We considered the following alternative rule requirements, and did not include them in the proposed rule amendments. This list includes alternatives that were suggested by the public during development of the rule, with the intent of mitigating negative impacts, including environmental harms, on vulnerable populations and overburdened communities, and equitably distributing benefits.

- Assign the market operator as the deemed market importer.
- Update emissions factor calculations.
- Addressing carbon leakage.
- Alternative scope.
- Adopt a load-based approach.
- Explicitly define “deemed market importer” for specified and unspecified power.

After considering alternatives, within the context of the goals and objectives of the authorizing statutes, we determined that the proposed rule represents the least-burdensome alternative of possible rule requirements meeting the goals and objectives.

### **Regulatory Fairness Act**

We calculated the estimated per-employee costs to comply with the proposed rule amendments, based on the costs estimated in Chapter 3 of this document. As discussed in chapters 3 and 4, there is uncertainty about how costs and cost-savings will be distributed. In some cases, the businesses that incur costs will also receive cost-savings (e.g., a utility participating in a CEM), but in other cases they may be separate businesses. To capture various possibilities, we estimated the following average compliance costs per business in 2027 (the first year the proposed rule amendments are likely to result in costs).

Table 2. Costs per business

<b>Cost estimate type</b>	<b>Cost</b>	<b>Cost-savings</b>	<b>Net cost</b>
Low estimate	\$321,929	(\$320,955)	\$974
High estimate	\$926,079	(\$925,105)	\$974

Then, based on costs per business and business size (small or large), we calculated costs per employee, as summarized in the tables below.

Table 3. Costs per employee, net costs

<b>Business size</b>	<b>Cost per employee</b>
Small	\$42
Largest	\$1

Table 4. Cost per employee, gross costs (no offsetting cost-savings)

<b>Business size</b>	<b>Low cost per employee</b>	<b>High cost per employee</b>
Small	\$13,779	\$39,638
Largest	\$358	\$1,029

Table 5. Cost per employee, cost-savings

<b>Business size</b>	<b>Low benefit per employee</b>	<b>High benefit per employee</b>
Small	(\$13,737)	(\$39,596)
Largest	(\$357)	(\$1,028)

We conclude that the proposed rule amendments are likely to have disproportionate impacts on small businesses, with regard to compliance costs, but may disproportionately benefit small businesses that receive cost-savings. As we cannot confidently identify cases in which businesses will see only costs, only cost-savings, or both, Ecology has conservatively included elements in the proposed rule to mitigate this disproportion, as far as is legal and feasible.

Because our macroeconomic model aggregates homogeneous sectors of the economy, all estimated costs and cost-savings under the proposed rule amendments would occur within the same industry grouping: Electric power generation, transmission, and distribution. This means the costs of new compliance obligations and the benefits of new no-cost allowance allocations net out to zero impact. This leaves estimated reporting costs as the net inputs into the model.

Estimated additional reporting costs under the proposed rule amendments are relatively small compared to the electricity sector and state economy as a whole. As a result, the model simulations did not identify any impacts to statewide employment or output. They also did not identify any impacts to employment or output at the industry grouping level.

# Chapter 1: Background and Introduction

## 1.1 Introduction

This report presents the determinations made by the Washington State Department of Ecology as required under Chapters 34.05 RCW and 19.85 RCW, for the proposed amendments related to centralized electricity markets, to the Reporting of Emissions of Greenhouse Gases rule (Chapter 173-441 WAC; “GHG reporting rule”) and Climate Commitment Act Program Rule (Chapter 173-446 WAC; “CCA rule”) rules. This includes the:

- Preliminary Cost-Benefit Analysis (CBA)
- Least-Burdensome Alternative Analysis (LBA)
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

The Washington Administrative Procedure Act (APA; RCW 34.05.328(1)(d)) requires Ecology to evaluate significant legislative rules to “determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the law being implemented.” Chapters 1 – 5 of this document describe that determination.

The APA also requires Ecology to “determine, after considering alternative versions of the rule...that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives” of the governing and authorizing statutes. Chapter 6 of this document describes that determination.

The APA also requires Ecology to make several other determinations (RCW 34.05.328(1)(a) – (c) and (f) – (h)) about the rule, including authorization, need, context, and coordination. Appendix A of this document provides the documentation for these determinations.

The Washington Regulatory Fairness Act (RFA; Chapter 19.85 RCW) requires Ecology to evaluate the relative impact of proposed rules that impose costs on businesses in an industry. It compares the relative compliance costs for small businesses to those of the largest businesses affected. Chapter 7 of this document documents that analysis, when applicable.

All determinations are based on the best available information at the time of publication. We encourage feedback (including specific data) that may improve the accuracy of this analysis.

### 1.1.1 Background

In 2021, the Washington Legislature passed the Climate Commitment Act (CCA), which established a Cap-and-Invest Program to help Washington meet greenhouse gas (GHG) emission limits in statute (RCW 70A.45.020). Ecology adopted the CCA rule (Chapter 173-460 WAC) to implement the CCA law, in conjunction with amendments to the GHG reporting rule (Chapter 173-441 WAC), in 2022. The CCA law (Chapter 70A.65 RCW), requires Ecology to adopt

a methodology in rule to address imported electricity associated with centralized electricity markets (CEMs) by October 1, 2026.<sup>3</sup>

This rulemaking intends to identify and establish compliance obligations for entities that import specified sources of electricity to Washington through centralized electricity markets. Supporting changes to Chapter 173-441 WAC will make sure appropriate data is available.

The CEMs addressed in the rulemaking include:

- California Independent System Operator’s (CAISO) Western Energy Imbalance Market (EIM).
- CAISO’s Extended Day-Ahead Market (EDAM).
- Southwest Power Pool’s (SPP) Markets+ initiative (currently underway).

## 1.2 Summary of the proposed rule amendments

The proposed rule amendments would:

- Amend reporting requirements in the GHG reporting rule (Chapter 173-441 WAC):
  - Amending the definition of “Electric Power Entity” (EPE).
  - Changing annual report submission requirements.
  - Adding, removing, or changing definitions specific to EPE reporting requirements.
  - Expanding data requirements and calculation methods from the EIM to all CEMs.
  - Specifying how EPEs must report imported CEM electricity from specified sources.
  - Expanding documentation requirements.
  - Specifying GHG emissions equations and applicability.
  - Amending requirements for registration of import or export sources.
  - Making changes without material impacts:
    - Clarify language and update terminology.
    - Remove obsolete requirements and language.
- Amend the CCA rule (Chapter 173-446 WAC):
  - Adding definitions consistent with the GHG reporting rule.
  - Amending covered emissions to reflect electricity imported from CEMs.

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<sup>3</sup> RCW 70A.65.080(1)(c)

## 1.3 Reasons for the proposed rule amendments

The purpose of these updates is to identify and establish compliance obligations for entities importing electricity from specified sources to Washington State through CEMs. Supporting changes to the GHG reporting rule would ensure that appropriate data are available. Additionally, this rulemaking will allow CEM operators to put the necessary data infrastructure in place to track importing entities.

Existing requirements in the GHG reporting rule do not provide sufficient data to fully identify GHG emissions from electricity imported through CEMs. Similarly, the existing CCA rule does not adequately specify how these emissions are reflected in covered emissions under the Cap-and-Invest Program, or detail how compliance obligations are assigned for them. This means electricity currently imported from CEMs is not fully captured in compliance obligations under the Cap-and-Invest Program, though the CCA law conceptually includes them as covered emissions.

Finally, in the absence of clear expectations for how electricity imports and importers would be defined and tracked, and how compliance obligations would be assigned, CEM operators face uncertainty in establishing and investing in data infrastructure and processes that would appropriately track information needed for reporting. This could limit CEM participation, efficiency, and ability to provide CEM benefits such as reduced energy costs and diversified power sources.

We note, however, that during this rulemaking Ecology identified that issues such as addressing emissions leakage<sup>4</sup> and requirements for unspecified electricity imports will require additional development. These issues will be addressed in a future rulemaking.

## 1.4 Document organization

The chapters of this document are organized as follows:

- **Chapter 2 - Baseline and the proposed rule amendments:** Description and comparison of the baseline (what would occur in the absence of the proposed rule amendments) and the proposed rule requirements.
- **Chapter 3 - Likely costs of the proposed rule amendments:** Analysis of the types and sizes of costs we expect impacted entities to incur as a result of the proposed rule amendments.
- **Chapter 4 - Likely benefits of the proposed rule amendments:** Analysis of the types and sizes of benefits we expect to result from the proposed rule amendments.

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<sup>4</sup> Emissions leakage, or an underreporting of GHG emissions that were generated out-of-state, is a common concern among this rulemaking's interested parties. Emissions leakage may result from "secondary dispatch," whereby fossil generating sources in regions without carbon pricing backfill electricity that is deemed/attributed to regions with carbon pricing. In other words, if the supply of clean energy is "used up" by regions that have carbon pricing, and regions without carbon pricing use fossil fuels to make up the difference, leakage may then occur.



- **Chapter 5 - Cost-benefit comparison and conclusions:** Discussion of the complete implications of the CBA.
- **Chapter 6 - Least-Burdensome Alternative Analysis:** Analysis of considered alternatives to the contents of the proposed rule amendments.
- **Chapter 7 - Regulatory Fairness Act Compliance:** When applicable. Comparison of compliance costs for small and large businesses; mitigation; impact on jobs.
- **Appendix A - APA Determinations:** RCW 34.05.328 determinations not discussed in chapters 5 and 6.

# Chapter 2: Baseline and Proposed Rule Amendments

## 2.1 Introduction

We analyzed the impacts of the proposed rule amendments relative to the existing rule, within the context of all existing requirements (federal and state laws and rules). This context for comparison is called the baseline and reflects the most likely regulatory circumstances that entities would face if Ecology does not adopt the proposed rule.

## 2.2 Baseline

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

For this rulemaking, the baseline includes:

- The CCA law, Chapter 70A.65 RCW (“Greenhouse Gas Emissions – Cap and Invest Program”).
- Section 2200 of the WA Clean Air Act, RCW 70A.15.2200 (“Classification of air contaminant sources – Registration – Fee – Registration program defined – Adoption of rules requiring persons to report emissions of greenhouse gases”).
- The existing GHG reporting rule, Chapter 173-441 WAC (“Reporting of Emissions of Greenhouse Gases”).
- The existing CCA rule, Chapter 173-446 WAC (“Climate Commitment Act Program Rule”).
- Engrossed Second Substitute Senate Bill 6058, Chapter 352, Laws of 2024, Sec. 11 (“Carbon market linkage – California- Québec carbon market”).
- RCW 19.405 (“Washington Clean Energy Transformation Act”; CETA).
- California Air Resources Board (CARB) Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Title 17 California Code of Regulations (CCR), Div. 3, Ch. 1, Subchapter 10, Article 2).
- CARB California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms (Title 17 CCR, Div. 3, Ch. 1, Subchapter 10, Article 5).
- The Federal Power Act (16 USC Ch. 12).
- Federal Energy Regulatory Commission (FERC) regulation and approval of market tariffs.<sup>5</sup>

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<sup>5</sup> Federal Energy Regulatory Commission, 2021. Order approving settlement agreement (Docket No. AD20-14-000). Retrieved from [www.ferc.gov/sites/files/2021-04/AD20-14-000-041521.pdf](http://www.ferc.gov/sites/files/2021-04/AD20-14-000-041521.pdf). Current CAISO tariff: [Conformed-Tariff-as-of-Apr1-2024.pdf \(caiso.com\)](http://www.ferc.gov/sites/files/2021-04/AD20-14-000-041521.pdf). See also publicly available CAISO FERC filings and orders: [California ISO - Regulatory filings and orders \(caiso.com\)](http://www.ferc.gov/sites/files/2021-04/AD20-14-000-041521.pdf). Markets+ Tariff: [final filed markets plus tariff 20230329 1045 \(2\).pdf \(spp.org\)](http://www.ferc.gov/sites/files/2021-04/AD20-14-000-041521.pdf)

## 2.3 Proposed rule amendments

The proposed rule amendments would:

- Amend reporting requirements in the GHG reporting rule (Chapter 173-441 WAC):
  - Amending the definition of “Electric Power Entity” (EPE).
  - Changing annual report submission requirements.
  - Adding, removing, or changing definitions specific to EPE reporting requirements.
  - Expanding data requirements and calculation methods from the EIM to all CEMs.
  - Specifying how EPEs must report imported CEM electricity.
  - Expanding documentation requirements.
  - Specifying GHG emissions equations and applicability.
  - Amending requirements for registration of import or export sources.
  - Making changes without material impacts:
    - Clarify language and update terminology.
    - Remove obsolete requirements and language.
- Amend the CCA rule (Chapter 173-446 WAC):
  - Adding definitions consistent with the GHG reporting rule.
  - Amending covered emissions to reflect electricity imported from CEMs.

### 2.3.1 Amending the definition of “Electric Power Entity” (EPE) (173-441)

#### Baseline

The existing GHG reporting rule defines “electric power entity” (EPE) as including any of the following that supply electric power in WA:

- Electricity importers and exporters.
- Retail providers, including multijurisdictional retail providers.
- Asset controlling suppliers.

#### Proposed

The proposed rule amendments would expand the definition of EPE to include any of the above entities that transact electric power in WA.

#### Expected impact

This proposed amendment would extend reporting requirements to electricity importers and exporters, retail providers, and asset controlling suppliers that transact electric power in the state. This would result in reporting costs for entities that transact power in WA but are not

suppliers, and benefits of comprehensive GHG emissions data collection related to electricity transactions in the state if that data is not being collected under the baseline.

Definitions do not, in and of themselves, have impact beyond how the defined terms are used in the rule. Where definitions inform the coverage, scope, or type(s) of impacts under the proposed rule amendments, associated costs and benefits associated with those sections of the rule, below, include the relevant baseline and proposed definitions.

### **2.3.2 Changing annual report submission requirements (173-441)**

#### **Baseline**

Under the baseline GHG reporting rule, EPEs must submit two annual reports:

- A report based on “best available information” by March 31 of each year.
- A final report by June 1 of each year.

#### **Proposed**

The proposed rule amendments would require each EPE to submit a single annual report by June 1 of each year.

#### **Expected impact**

This proposed amendment would reduce reporting costs for EPEs, by not requiring a preliminary report by March 31 of each year. Ecology believes that a single annual report is sufficient to provide necessary GHG emissions reporting data to meet program needs. This would also be consistent with similar requirements for EPE reporting in other jurisdictions.

### **2.3.3 Adding, removing, or changing definitions specific to EPE reporting requirements (173-441)**

#### **Baseline**

The baseline GHG reporting rule includes multiple definitions specific to EPEs, including:

- “Direct delivery of electricity” is electricity that meets any of the following criteria:
  - The facility has a first point of interconnection at a WA scheduling point or within a power system.
  - The electricity is scheduled for delivery from the specified source to a WA scheduling point or a power system via a continuous physical transmission path from interconnection of the facility in the balancing authority in which the facility is located to the WA scheduling point or power system.
  - There is an agreement to dynamically transfer electricity from the facility to a WA scheduling point or power system.
- “Electricity importer” means any of the following:
  - For electricity that is scheduled with an e-tag to a final point of delivery into a balancing authority area located entirely within WA, the electricity importer is

identified on the e-tag as the purchasing-selling entity on the last segment of the tag's physical path with the point of receipt located outside WA and the point of delivery located inside WA.

- For facilities physically located outside WA with the first point of interconnection to a balancing authority area located entirely within WA when the electricity is not scheduled on an e-tag, the electricity importer is the facility operator or owner.
- For electricity imported through a centralized market, the electricity importer is the retail provider, marketer, or asset controlling supplier that conducts an electricity transaction through the Western Energy Imbalance Market operated by the California Independent System Operator (EIM) that results in EIM power being delivered to final point of delivery in WA.
- For electricity from facilities allocated to serve retail electricity customers of a multijurisdictional electric company, the electricity importer is the multijurisdictional electric company.
- If the importer identified based on electricity scheduled with an e-tag to a final point of delivery into a balancing authority area located entirely in WA is a federal power marketing administration over which WA does not have jurisdiction, and the federal power marketing administration has not voluntarily elected to comply with this chapter, then the electricity importer is the next purchasing-selling entity in the physical path on the e-tag, or if no additional purchasing-selling entity over which WA has jurisdiction, then the electricity importer is the electric utility that operates the Washington state transmission or distribution system, or the generation balancing authority.
- For electricity that is imported into the state by a federal power marketing administration and sold to a public body or cooperative customer or direct service industrial customer located in WA pursuant to section 5 (b) or (d) of the Pacific Northwest Electric Power Planning and Conservation Act of 1980, P.L. 96-501, the electricity importer is the federal marketing administration.
- If the importer identified under (c)(vi) of this subsection has not voluntarily elected to comply with this chapter, then the electricity importer is the public body or cooperative customer or direct service industrial customer;
- For electricity that is imported into the state to a designated scheduling point inside the balancing authority area of a federal power marketing administration, the importer is the purchasing-selling entity on the e-tag at the last point on the physical path that is not the sink;
- If the importer identified based on electricity imported into the state to a designated scheduling point inside the balancing authority area of a federal power marketing administration is a federal power marketing administration

that has not elected to voluntarily comply with this chapter, then the importer is the retail provider with which the scheduling point is associated.

- For electricity from facilities allocated to a consumer-owned utility inside WA from a multijurisdictional consumer-owned utility, the electricity importer is the consumer-owned utility inside WA.
- “First jurisdictional deliverer” (FJD) means the owner or operator of an electric generating facility in Washington state or an electricity importer.
- “Generation providing entity” (GPE) means a facility or generating unit operator, full or partial owner, party to a contract for a fixed percentage of net generation from the facility or generating unit, party to a tolling agreement with the owner, or exclusive marketer for the facility or generating unit recognized by Ecology.
- “Imported electricity” means electricity generated outside WA with a final point of delivery within the state.
- “Specified source” means a facility, unit, or asset controlling supplier that is permitted to be claimed as the source of electricity delivered. The reporting entity must have either full or partial ownership in the facility or a written power contract to procure electricity generated by that facility or unit or from an asset controlling supplier at the time of entry into the transaction to procure electricity.
- “Unspecified source” means a source of electricity that is not a specified source at the time of entry into the transaction to procure electricity.
- “Electricity transaction” means the purchase, sale, import, export or exchange of electric power.
- “Exported electricity” means electricity generated inside WA and delivered to serve load located outside WA. This includes electricity delivered from a first point of receipt inside WA, to the first point of delivery outside WA, with a final point of delivery outside WA. Exported electricity delivered across balancing authority areas is documented on e-tags with the first point of receipt located inside WA and the final point of delivery located outside WA. Exported electricity does not include electricity generated inside WA then transmitted outside of WA, but with a final point of delivery inside WA. Exported electricity does not include electricity generated inside WA that is allocated to serve WA retail customers of a multijurisdictional retail provider, consistent with a cost allocation methodology approved by the WA UTC and the utility regulatory commission of at least one additional state in which the multijurisdictional retail provider provides retail electric service.
- “Power contract” means a written document, including associated verbal or electronic records if included as part of the written power contract, arranging for the procurement of electricity. Power contracts may be, but are not limited to, power purchase agreements, enabling agreements, electricity transactions, and tariff provisions, without regard to duration, or written agreements to import or export on behalf of another entity, as long as that other entity also reports to Ecology the same imported or

exported electricity. A power contract for a specified source is a contract that is contingent upon delivery of power from a particular facility, unit, or asset-controlling supplier's system that is designated at the time the transaction is executed.

## Proposed

The proposed rule amendments would add, remove, or change various definitions specific to EPEs:

- The proposed amendments would add definitions of:
  - “Centralized electricity market” (CEM) means an electricity market organized and operated by a market operator and approved by the Federal Energy Regulatory Commission to provide wholesale electricity to market participants through a system of bidding and generation resource offers that are used to determine the dispatch of electricity from market participants. Examples of existing and proposed CEMs include the Energy Imbalance Market and Extended Day-Ahead Market operated by the California Independent System Operator, and the Markets+ market operated by the Southwest Power Pool.
  - “Deemed market importer” means a market participant that successfully offers electricity from a resource into a CEM and is assigned, designated, deemed, or attributed to be serving WA electric load by the methodologies, processes, or decision algorithms that are put in place by the market operator of that CEM and approved by the Department of Ecology.<sup>6</sup> For the Energy Imbalance Market, the deemed market importer is the participating resource scheduling coordinator.
  - “Extended Day-Ahead Market” (EDAM) means the Extended Day-Ahead Market operated by the California Independent System Operator.
  - “Market operator” means the legal entity that operates and maintains a CEM.
  - “Market participant” means an EPE that has an agreement with a CEM operator and participates in that CEM in accordance with the rules and procedures of that market, as well as with an approved tariff that governs the operations of the CEM.
  - “Markets+” means the Markets+ centralized day ahead electricity market designed by the Southwest Power Pool.
  - “Surplus electricity” means an amount of electricity generated by a resource in excess of the resource’s existing obligations to provide electricity to purchasing entities.
- The proposed amendments would remove definitions of:
  - “First jurisdictional deliverer” (FJD).

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<sup>6</sup> We note that this is intended to provide additional clarity in the rule based on CEM request during development of the proposed rule. It is not, however, intended to provide an exhaustive list of deemed market importers.

- “Generation providing entity” (GPE).
- The proposed amendments would amend definitions of:
  - “Direct delivery of electricity”:
    - Replace “power system” throughout with “balancing authority area located entirely in WA”.
    - Add, “or the facility has a first point of interconnection within a CEM and electricity from that facility is attributed to WA by the CEM”
  - “Electricity importer”:
    - Change the sub-definition related to electricity imported through a centralized market to state, “For imported electricity assigned, designated, deemed, or attributed to Washington through a CEM, the electricity importer is the deemed market importer.”
  - “Electricity transaction”:
    - Add that, “An electricity transaction also includes the successful offer of energy from a resource located in WA to a CEM or from a resource located outside Washington that is attributed to WA by the CEM, and the purchase of energy by a WA utility from a CEM.”
  - “Exported electricity”:
    - Clarify that exported electricity delivered across balancing authority areas may be documented on e-tags, but is not necessarily so.
  - “Imported electricity”:
    - Add that imported electricity “includes electricity transferred into or attributed to WA by a CEM but does not include electricity imported into Washington by a market operator to obtain or provide emergency assistance under applicable emergency preparedness and operations reliability standards of the North American Electric Reliability Corporation or Western Electricity Coordinating Council.”
  - “Power contract”:
    - Clarify that power contracts arrange for the sale or procurement of electricity, rather than just procurement.
  - “Specified source”:
    - Add that, “Electricity reported as specified source must be contracted to a Washington retail provider or must be surplus electricity, as determined by methodologies approved by Ecology.”

## Expected impact



Definitions do not, in and of themselves, have impact beyond how the defined terms are used in the rule. Where definitions inform the coverage, scope, or type(s) of impacts under the proposed rule amendments, associated costs and benefits associated with those sections of the rule, below, include the relevant baseline and proposed definitions.

### **2.3.4 Expanding data requirements and calculation methods from the EIM to all CEMs (173-441)**

#### **Baseline**

The baseline GHG reporting rule requires EPEs to report imports and exports in megawatt-hours (MWh) disaggregated by the first point of receipt or final point of delivery, and separately report imports and exports from unspecified sources, the EIM, and each specified source.

#### **Proposed**

The proposed rule amendments would replace the EIM with CEMs.

#### **Expected impact**

This proposed rule amendment would result in expansion of the types of CEMs the GHG reporting rule applies to. This would, in turn, contribute to costs associated with reporting emissions from electricity from these markets, as well as benefits of supporting centralized market functions, efficiencies, and use in WA.

### **2.3.5 Specifying how EPEs must report imported CEM electricity (173-441)**

#### **Baseline**

The baseline GHG reporting rule:

- Requires reporting entities to separately report power from the EIM.
- Requires EPEs to report exports in MWh and their GHGs emissions for unspecified sources disaggregated by each final point of delivery outside of WA, and for specified sources disaggregated by each final point of delivery outside of WA.
- Does not specify reporting requirements for retail providers reporting net purchases from centralized markets.
- Specifies that reporting includes retail sales from the EIM.
- Application for, and maintenance of, asset controlling supplier status includes listing electricity generating facilities for which they are the first jurisdictional deliverer.

#### **Proposed**

The proposed rule amendments would:

- Require reporting entities to report electricity from CEMs:
  - For the EIM, for 2023-2026, retail providers receiving electricity facilitated through the EIM are the electricity importers. If the market operator identifies

deemed market importers that offer energy attributed to WA before 2026, those are the deemed market importers beginning in the following year.

- Each deemed market importer must separately report electricity assigned, designated, deemed, or attributed to WA by an originating CEM.
- Each deemed market importer must annually calculate, report, and verify GHG emissions for the electricity they offered that was designated, deemed, or attributed to WA.
- Add a requirement that for electricity dispatched by a CEM, EPEs must report specified electricity sales attributed to market participants outside WA or exported from the market to entities outside WA, for unspecified and specified sources disaggregated by recipient.
- Add a requirement that retail providers must report net purchases from CEMs based on annual total purchases from each separate market.
- In the baseline specification that reporting includes retail sales from the EIM, replace the EIM with each CEM.
- In the application and maintenance requirements for asset controlling suppliers, replace first jurisdictional deliverers with deemed market importers.

### **Expected impact**

This proposed rule amendment would contribute to overall reporting costs, as well as costs associated with designation of importers and attribution of electricity. It would also contribute to benefits of:

- Accurate identification of electricity imports from centralized markets and who is importing that power.
- Participation and development of CEMs.
- Data collection supporting the state's statutory goals related to GHG emissions tracking, planning, and reductions.

Based specifically on proposed rule language related to regulatory timing and transition, Washington Energy Imbalance Market (EIM) importers would not be considered deemed market importers for reporting years 2023-2026. Since only deemed market importers would be required to report emissions associated with specified power CEM imports, this means these reporting costs and benefits would not occur until the 2027 reporting year. Similarly, these costs and benefits would not occur for imports from future CEMs such as EDAM and Markets+ until they launch operations (currently expected in May 2026 and in 2027, respectively). We therefore assume reporting costs and benefits would not occur until reporting year 2027.

## **2.3.6 Expanding documentation requirements (173-441)**

### **Baseline**

The baseline GHG reporting rule requires EPEs to retain documentation of e-tags, power contracts, settlements data, and all other relevant information to confirm procurements and deliveries, for verification.

### **Proposed**

The proposed rule amendments would add documentation requirements for any other reports provided by the market operator to the EPE documenting electricity attributed to WA for which that EPE is the deemed market importer.

### **Expected impact**

This proposed rule amendment would result in minor costs of retaining additional documents, as well as benefits of maintaining verifiable records underlying GHG emissions reporting.

## **2.3.7 Specifying GHG emissions equations and applicability (173-441)**

### **Baseline**

Under the baseline GHG reporting rule, GHG emissions must be calculated for specified sources using the equation in WAC 173-444-040(4), where emissions are the product of the number of MWh and 0.437 MT CO<sub>2</sub>e/MWh.

The baseline rule also requires calculation of GHG emissions for specified sources using an equation provided in rule.

### **Proposed**

The proposed rule amendments would remove the reference to WAC 173-444-040(4), and replace it with a numerically equivalent equation in which emissions are the product of the number of MWh, an unspecified emissions factor, and a transmission loss multiplier. The unspecified emissions factor would be 0.428 MT CO<sub>2</sub>e/MWh, and the transmission loss multiplier would be 1.02. The simplified equation would therefore be MWh multiplied by 0.437, equivalent to the baseline equation.

The proposed rule would also specify that the equation for specified electricity emissions also applies to specified electricity deemed, designated, assigned, or attributed by a CEM.

### **Expected impact**

We do not expect this proposed rule amendment to result in costs or benefits, beyond clarity in which equation must be used facilitating compliance. This is because the newly proposed equation is numerically equivalent to the baseline equation in Chapter 173-444.

## **2.3.8 Amending requirements for registration of import or export sources (173-441)**

### **Baseline**

The baseline GHG reporting rule requires reporters of specified facilities or units for imported or exported electricity to register their anticipated specified sources to be provided corresponding emissions factors, by March 31 of each year. If they miss the registration deadline for submitting a certificate of representation for a designated representative for the

reporter (60 days before reporting deadlines), they must use the emissions factor provided by Ecology.

The baseline rule also specifies required registration information, and whether emissions are from new facilities or additional capacity at existing facilities, for specified facilities or units of imported or exported electricity.

### **Proposed**

Under the proposed rule amendments, deemed market importers would be included in the types of specified facilities or units required to register their anticipated specified sources, by a registration deadline of February 1<sup>st</sup> of each year.

The amendments would also add required information to be provided for registration, and specify that EPEs must be able to demonstrate that the market operator designated, assigned, deemed, or attributed the energy from those sources to WA.

Finally, the amended rule would require EPEs to provide settlement records or other documentation requested by Ecology, by May 1 of each year.

### **Expected impact**

These proposed rule amendments are likely to result in additional or expanded reporting costs. They would also contribute to benefits of:

- Accurate identification of electricity imports from centralized markets and who is importing that power.
- Participation and development of CEMs.
- Data collection supporting the state's statutory goals related to GHG emissions tracking, planning, and reductions.

## **2.3.9 Making changes without material impacts (173-441)**

### **Baseline**

The baseline GHG reporting rule requires EPEs to report imports and exports in MWh disaggregated by the first point of receipt or final point of delivery, and to separately report imports and exports from unspecified sources, the EIM, and each specified source.

It also requires EPEs that report electricity from unspecified sources to report when unspecified power came from the EIM.

### **Proposed**

The proposed rule amendments would clarify that point of receipt and point of delivery reports must use an e-tag code only where applicable. They would also delete the requirement to report when unspecified power came from the EIM.

### **Expected impact**

These proposed amendments are not likely to result in costs or benefits as compared to the baseline, beyond clarity. Since e-tag codes are not applicable to all power transactions, the

clarification that they must be used only when applicable would reduce confusion for covered entities. Under the collective proposed rule amendments, the requirement to report unspecified power from the EIM would become obsolete, and so its removal would not have material impact given the other proposed amendments would collect necessary information about specified imports from CEMs.

### **2.3.10 Adding definitions consistent with the GHG reporting rule (173-446)**

#### **Baseline**

The baseline CCA rule contains multiple definitions related to the scope, structure, function, and requirements of the Cap-and-Invest Program. It does not include definitions of new terms that this rulemaking also proposes to add to the GHG reporting rule, including “centralized electricity markets” and “deemed market importer”.

#### **Proposed**

This proposed rule amendment would add definitions to the CCA rule, to make it consistent with proposed amendments to the GHG reporting rule. It would define the following by explicit reference to the reporting rule:

- Centralized electricity market.
- Deemed market importer.

#### **Expected impact**

These proposed amendments would facilitate consistency between terms in the CCA rule and GHG reporting rule. Definitions do not, in and of themselves, have impact beyond how the defined terms are used in the rule. Where definitions inform the coverage, scope, or type(s) of impacts under the proposed rule amendments, costs and benefits associated with those sections of the rule, below, include the relevant baseline and proposed definitions.

### **2.3.11 Amending covered emissions to reflect electricity imported from CEMs (173-446)**

#### **Baseline – compliance obligations**

The baseline CCA rule defines emissions that are covered under the Cap-and-Invest Program, beginning with reported emissions under the GHG reporting rule, and modifying those reported emissions to only those that are not exempt and are covered by the program. This includes allotment provisions to avoid double-counting emissions or counting emissions the rule does not apply to.

As part of those provisions, the CCA rule specifically states that it, “provides details on allotment for covered emissions that are potentially attributable to multiple parties and provides direction for allotment when such emissions may be reported by multiple facilities, suppliers, or first jurisdictional deliverers of electricity.” It also notes that it only describes the process for determining which covered or opt-in entity is responsible for a given metric ton of

covered emissions after exemptions are accounted for, and does not expand the definition of covered emissions itself.

The subsection relevant to this rulemaking defines the allotment of covered emissions for first jurisdictional deliverers of imported electricity:

- Emissions from imported electricity are covered for the first jurisdictional deliverer that is importing electricity.
- If the importer is a federal power marketing administration that is not voluntarily complying with the Cap-and-Invest Program, the importer is the next purchaser-seller on the e-tag. Otherwise, the utility receiving the electricity is the importer.
- If the importer is a federal power marketing administration that is voluntarily participating in the Cap-and-Invest Program, then the utilities buying from it may provide (by agreement) that the federal power marketing administration is assuming the compliance obligation for emissions from the imported electricity.
- For the first compliance period (2023-2026), the importer for electricity from the EIM is the purchaser in WA that receives it. If the first jurisdictional deliverer generates and has a compliance obligation for the electricity that is transferred through the EIM, and that electricity is then delivered into WA, there is no second compliance obligation for it.

The baseline CCA rule also specifies that Ecology may adjust covered emissions based on new reported information, new assigned emissions levels, or to compensate for changes in methodology.

#### **Baseline – allocation of no-cost allowances**

In section 230, the baseline CCA rule also defines how no-cost allowances are distributed to electric utilities under the Cap-and-Invest Program. Allowances are a form of compliance instrument that can be used to satisfy compliance obligations for GHG emissions. Utilities subject to the WA Clean Energy Transformation Act (CETA; Chapter 19.405 RCW) are eligible to receive no-cost allowances to use for compliance, monetize by consigning them to the allowance market, or bank for future use. By allocating no-cost allowances to electric utilities, the CCA program helps them mitigate the impacts of the following on retail electricity prices and ratepayers:

- Utility compliance obligations.
- Increased wholesale electricity prices passed on to utilities by generators, marketers, or importers that have compliance obligations.

Allocations are based on the “cost burden effect”. This effect is calculated by multiplying the electricity load from each type of source by the emissions factor for that source, and then adding up those emissions across all types of sources (i). The equation below summarizes the cost burden effect calculation.

$$\text{cost burden effect} = \sum(\text{load}_{\text{source type } i} * EF_{\text{source type } i})$$

The CCA rule states that initial allocations will be adjusted as necessary to account for the difference between applicable reported emissions for prior years and the number of no-cost allowances allocated. Allocations may also be adjusted based on updated forecasts.

### **Proposed**

The proposed rule amendments include the following changes to the baseline covered emissions discussed above, to allocate covered emissions (and resulting compliance obligations) for electricity imported from CEMs:

- Importers are identified using the GHG reporting rule.
- If the importer is a federal power marketing administration, it may voluntarily comply for either all sales into WA or for attributions to WA in a CEM for which it is a deemed market importer. In this case the federal power marketing administration takes on the associated compliance obligation.<sup>7</sup>
- Requirements related to EIM power during the first compliance period are deleted.
- The compliance obligation is only determined once for electricity from an electric generating facility in WA that is sold into a CEM, and is then assigned, designated, deemed, or attributed back into WA by that market.

### **Expected impact**

These proposed amendments, in combination with proposed amendments to the GHG reporting rule, would establish compliance obligations for emissions associated with specified sources of electricity imported through CEMs. Ecology would assign these obligations to those entities identified as CEM importers, distributing compliance obligations in line with actual importing behavior of each EPE. This would result in compliance costs for those entities facing new compliance obligations associated with CEM imports.<sup>8</sup>

Since new information also influences the cost burden effect that Ecology uses to allocate no-cost allowances to electric utilities, we also expect these proposed amendments to result in additional allocation of no-cost allowances to match the aggregate increase in compliance obligations. Additional no-cost allowances would be a benefit to those receiving them, as they can choose to:<sup>9</sup>

- Use (“retire”) the allowances to meet compliance obligations.

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<sup>7</sup> This specification is based in Engrossed Second Substitute Senate Bill 6058 (“Carbon market linkage – California-Québec carbon market”; Chapter 352, Laws of 2024, Sec. 11). The act takes effect January 1, 2025 only if Initiative Measure No. 2117 is not approved by a vote of the people in the 2024 general election.

<sup>8</sup> Note that this rulemaking only addresses emissions from specified sources. Ecology will address unspecified sources of emissions associated with electricity imports from centralized electricity markets in a future rulemaking.

<sup>9</sup> Utilities may choose to take one or more of these actions, depending on what they perceive as optimal behavior over time. This would be based on expectations about compliance needs, electricity purchases and sources, relative current and future costs, demand, and multiple other factors used in each utility’s business decisions.

- Consign the allowances to the allowance market, to receive money for them based on the market's settlement price. This allows utilities to offset compliance costs incurred by importers further up their electricity supply chain.
- Bank the allowances for future use, including potential retirement or consignment in future years.

Whereas we expect these costs and benefits to be the same in the aggregate over time, it is possible for there to be transitional periods during which they are not. This is because of current uncertainty about the process that will be used to update forecasts and adjust no-cost allowance allocations.<sup>10</sup> Depending on how no-cost allowance adjustments are made, and how they occur over time as new information becomes available, there may be periods during which there are differences between the numbers of new compliance obligations and new no-cost allowances. Each of these circumstances has its own net costs and benefits, depending on whether new demand for allowances (from compliance obligations) is less than or greater than new supply (from no-cost allowance allocations).

Based specifically on proposed rule language related to regulatory timing and transition, EIM importers would not be considered deemed market importers for reporting years 2023-2026. Since only deemed market importers would be required to report emissions associated with specified power CEM imports, this means the above costs and benefits associated with new compliance obligations and new no-cost allowance allocations would not occur until the 2027 reporting year. Similarly, these costs and benefits would not occur for imports from future CEMs such as EDAM and Markets+ until after they launch operations (currently expected in May 2026 and in 2027, respectively). We therefore assume these costs and benefits would not occur until reporting year 2027.

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<sup>10</sup> Note that the process for this adjustment is currently under development, and we expect it to be forthcoming in late 2024.



# Chapter 3: Likely Costs of the Proposed Rule Amendments

## 3.1 Introduction

We analyzed the likely costs associated with the proposed rule amendments, as compared to the baseline. The proposed rule amendments and the baseline are discussed in detail in Chapter 2 of this document.

## 3.2 Cost analysis

The proposed rule amendments would:

- Amend reporting requirements in the GHG reporting rule (Chapter 173-441 WAC):
  - Amending the definition of “Electric Power Entity” (EPE).
  - Changing annual report submission requirements.
  - Adding, removing, or changing definitions specific to EPE reporting requirements.
  - Expanding data requirements and calculation methods from the EIM to all CEMs.
  - Specifying how EPEs must report imported CEM electricity.
  - Expanding documentation requirements.
  - Specifying GHG emissions equations and applicability.
  - Amending requirements for registration of import or export sources.
  - Making changes without material impacts:
    - Clarify language and update terminology.
    - Remove obsolete requirements and language.
- Amend the CCA rule (Chapter 173-446 WAC):
  - Adding definitions consistent with the GHG reporting rule.
  - Amending covered emissions to reflect electricity imported from CEMs.

### Analytic approach

While the impacts of many rulemakings can be divided into costs and benefits of each proposed amendment to a rule, this rulemaking includes multiple proposed amendments across two rules, that work in concert to affect covered parties. As a result, we have grouped costs (and benefits; see Chapter 4) into three categories:

1. Reporting and necessary underlying compliance behaviors:
  - Costs of electricity tracking, including effort to deem, designate, assign, or attribute electricity.

- Costs and benefits of documentation and recordkeeping.
  - Costs of reporting.
  - Benefits of electricity tracking and reporting.
2. New obligations and allocations:
    - Costs of meeting newly assigned compliance obligations.
    - Benefits of new no-cost allowance allocations.
  3. Centralized electricity market function:
    - Benefits of clear requirements and expectations

While parts of the categories above could be roughly grouped by whether they are amendments to the GHG reporting rule or the CCA rule, some impacts are likely to arise from amendments to both rules. For example, amendments to the reporting rule may result in a specific cost, while corresponding benefits may come from those amendments in conjunction with amendments to the CCA rule.

### **3.2.1 Costs: Reporting and underlying behaviors**

#### **3.2.1.1 CEM impacts**

The proposed rule amendments would affect the types of tracking infrastructure, processes, and documentation used by CEMs when entities in WA purchase power. While the amendments specify needs particular to the WA reporting rule and CCA rule, we note that there are multiple baseline attributes, requirements, and initiatives that make it difficult to tell what, if any, difference the proposed amendments would make to how CEM market operators support participating EPE compliance with WA rules and laws. These include:

- Pre-planning initiatives and enhancements based on WA statutory requirements.<sup>11</sup>
- Existing needs to facilitate transactions across zones that have or do not have compliance costs associated with GHG emissions.
- Facilitation of transactions across states with different regulatory requirements.
- Existing forecasting, tracking, and documentation processes.

We note also that there is significant uncertainty about future CEM participation and distribution of participants, as multiple markets are poised to operate in WA. The business decisions of large electricity providers such as the Bonneville Power Administration (BPA) also potentially affect the degree, scope, planning, and timing of any adjustments or enhancements CEMs may need to make.

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<sup>11</sup> See, for example: CAISO, 2022. Washington State Western Energy Imbalance market Greenhouse Gas Enhancements. Issue Paper/Straw Proposal. August 17, 2022; CAISO, 2022. Washington State Western Energy Imbalance market Greenhouse Gas Enhancements. Draft Final Proposal. September 22, 2022.

Overall, multiple aspects of CEM processes are likely to change over time to meet ongoing needs of market participants. As a result, we do not expect the proposed rule amendments to significantly impact existing needs and plans as compared to the baseline. In the absence of the rule amendments, CEMs are likely to develop suitable approaches as necessary to meet the needs of market participants and CEM efficiency and cost-savings goals. Although these may differ from those developed under the proposed amendments, they are not necessarily differentiable in terms of effort or cost.

### 3.2.1.2 Electricity importer compliance

To estimate the costs electricity importers would face under the proposed rule, as compared to the baseline, we considered the number of current and potential future importers. We then applied a range of estimated costs to different types of importers, based on whether they currently report EIM imports, currently report emissions (as they emit more than the reporting threshold of 10,000 MT CO<sub>2</sub>e), or don't currently report (emit below the threshold).

We identified 21 existing EPE reporters that reported purchases from the EIM in 2022, importing a total of 353,550 MWh.<sup>12</sup> We also identified a total of 30 EPE GHG emissions reporters.<sup>13</sup> Finally, we identified 53 potential importers based on lists of regulated entities listed by the UTC.<sup>14</sup>

WA is forecasted to significantly increase electricity consumption over coming decades, as well as need to significantly increase electricity imports to meet this demand.<sup>15</sup> To avoid underestimating additional reporting costs under the proposed amendments, we assumed that over the next 20 years, all 53 identified EPEs could become importers. We assumed:

- Since the 21 identified EIM energy importers are already purchasing from a CEM, they will continue to do so.
- The 9 EPEs that emit more than 10,000 MT CO<sub>2</sub>e, but do not currently report EIM purchases, will begin importing through a CEM beginning in the second year.
- The 20 remaining EPEs will need to increase delivery of electricity and begin importing as well, but since their emissions are currently below 10,000 MT CO<sub>2</sub>e, they will not meet reporting thresholds until after the 9 additional EPE reporters above.

As this scenario would move from 21 importers to 53 over 20 years, we assumed an average of 2 new importers per year.

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<sup>12</sup> Data reported to Ecology under WAC 173-441-124(3)(a)(v), which requires reporting entities to separately report power obtained from the Energy Imbalance Market. Note: EIM-related reporting was not available for other years.

<sup>13</sup> Ibid.

<sup>14</sup> WA Utilities and Transportation Commission, 2024. Energy Resources List. <https://www.utc.wa.gov/regulated-industries/utilities/energy/energy-resources-list>.

<sup>15</sup> WA Department of Commerce, 2021. Washington 2021 State Energy Strategy. Updated in WA Department of Commerce, 2023. 2023 Biennial Energy Report.

Based on the California Air Resources Board's (CARB's) 2018 rulemaking that adjusted requirements for reporters,<sup>16</sup> including those that purchase energy from CEMs, we assumed reporters would incur average reporting costs of:

- \$974 in the first year of reporting.
- \$487 in subsequent years.

As discussed in Chapter 2, we do not expect costs to be incurred until 2027. Starting that year, we calculated total new reporting costs by year.

Total estimated annual costs ranged from \$14,124 to \$26,786, depending on the number of CEM energy importers reporting in a given year, and whether it is their first year of reporting imports from CEMs. When considering flows of costs over time, Ecology calculates the present value of costs. A present value discounts future dollar values into current dollars, accounting for both inflation and the opportunity cost of having funds later instead of now.<sup>17</sup> We estimated the 20-year present value cost of additional reporting effort as approximately \$368,000 over 20 years. This is equivalent to an average annual present value cost of \$17,527 over the next 20 years.

### 3.2.1.3 Sources of uncertainty

One of the goals of this rulemaking is to establish a reporting structure that would provide comprehensive information about electricity imports from centralized markets, and about their associated GHG emissions. This comprehensive data does not currently exist. As such, there are multiple factors that introduce uncertainty to our cost estimates for reporting:

- Growth in importers:
  - Currently, Ecology has data on MWh imported from the EIM for data year 2022, and we used this as the starting point for cost estimates in the previous section. It is likely that imports will grow, as electricity demand in the state increases substantially over time. At the same time, WA will have access to more centralized markets over time, with the likely addition of CAISO's Extended Day-

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<sup>16</sup> California Air Resources Board, 2018. Staff report: Initial statement of reasons. Public hearing to consider the proposed amendments to the regulation for the mandatory reporting of greenhouse gas emissions. (Updated to current dollars using US Bureau of Labor Statistics, 2024. Consumer price index.) We note that additional reporting costs were included in this report, reflecting costs of approximately \$5,000-7,000 to new reporters that would not report at all under their baseline, and would therefore face additional verification costs under the amended rule. In the context of our rulemaking, this would apply to importers that exclusively import power through CEMs and do not have any other covered emissions resulting from their electricity supply portfolio. We do not believe this is likely, however, as EPEs are likely to meet increasing demand over time by mixing various power sources including energy purchases from the Bonneville Power Administration, which carries a diversified generation and purchase portfolio.

<sup>17</sup> Present values calculated using a 1 percent discount rate based on the 20-year historic average real rate of return on I Bonds. US Treasury Department, 2024. I bonds interest rates. Historic data collected twice-yearly by Ecology since September 1998.

Ahead Market (EDAM) and the Southwest Power Pool's Markets plus (Markets+) centralized markets.

- This increase in imports will likely increase the number of importers, as well as the amounts of energy imported, but we cannot predict the extent to which the number of importers will grow, versus larger increases in individual reporters' MWh imported. This will depend on the internal business decisions of each EPE considering purchases from a CEM.
- Our reporting cost estimates are based on estimated costs per reporting importer. To reduce the likelihood of underestimating reporting costs based on a low assumption of importer growth, we conservatively assumed that all entities listed by the UTC would eventually become importers, and that their total emissions across all power sources would reach a level that would require emissions reporting under the GHG reporting rule.
- Distribution of imports and reporting effort:
  - We based reporting cost estimates on average reporting costs per importer. For reporters with significantly larger quantities of imports, from a complex set specified sources, the effort to track, report, and maintain documentation may be larger. Similarly, for reporters with limited quantities of imports, this effort may be smaller.
  - The decisions of large market participants, such as a federal power marketing administration, to participate in a CEM could also affect the distribution of reporting costs. If such large entities take on the larger reporting burden, it could be lessened for their purchasers.

### **3.2.2 Costs: New obligations and allocations**

To estimate costs associated with new compliance obligations established and assigned under the proposed rule amendments, we considered current imports, potential growth trajectories over time, and potential allowance price profiles.

#### **3.2.2.1 Electricity imports over time**

Based on the 2022 reporting year, EPEs purchased 353,550 MWh of electricity from the EIM.<sup>18</sup> As a share of total current electricity consumption in the state, this is approximately 0.4 percent.<sup>19</sup> The WA Department of Commerce (Commerce) estimates that electricity use will double by 2050, and need about half of this electricity to be provided via imports.<sup>20</sup>

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<sup>18</sup> Data reported to Ecology under WAC 173-441-124(3)(a)(v), which requires reporting entities to separately report power obtained from the Energy Imbalance Market. Note: EIM-related reporting was not available for other years.

<sup>19</sup> US Energy Information Administration, 2022. State Electricity Profiles. Release date: November 2, 2023. <https://www.eia.gov/electricity/state/>; US Department of Energy, 2015. State of Washington Energy Sector Risk Profile.

<sup>20</sup> WA Department of Commerce, 2021. Washington 2021 State Energy Strategy. Updated in WA Department of Commerce, 2023. 2023 Biennial Energy Report.

At the same time, the 2019 Clean Energy Transformation Act (CETA; SB 5116, 2019<sup>21</sup>) commits the state to an electricity supply free of GHG emissions by 2045. CETA applies to all electric utilities serving retail customers in the state. It requires them to:<sup>22</sup>

- Phase out coal-fired electricity by 2025.<sup>23</sup>
- Have GHG emissions neutral portfolios (serving some load with natural gas, but offsetting those emissions with other actions) by 2030.
- Supply electricity that is entirely renewable or non-emitting (without offsets) by 2045.

This means as electricity consumption and imports increase significantly over time, emissions associated with them must nonetheless decrease under the baseline.

To estimate GHG emissions in the state coming from electricity consumption, we considered consumption-based emissions modeled in the Carbon Tax Assessment Model (CTAM) developed by Commerce, and adjusted for CETA.<sup>24</sup> Total GHG emissions from electricity sourced from non-renewable and GHG-emitting resources (coal, natural gas, cogeneration, or petroleum) were estimated to fall from 5.48 million MT CO<sub>2</sub>e in 2025, to 310,000 MT CO<sub>2</sub>e by 2044, before falling to zero in 2045.<sup>25</sup>

The share of emissions associated with electricity provided by CEMs is highly uncertain. These markets present opportunities for WA to import more electricity from states with greater capacity for renewable electricity sources such as wind and solar. So on the low end, imports from CEMs could be largely, if not fully, of renewable electricity. On the high end, imports could theoretically reflect the majority of modeled GHG emissions if in-state production and contracted imports (outside of CEMs) shift entirely to renewable sources. We chose to make simplifying, though conservative assumptions that:

- Imports from CEMs would increase as a share of total electricity consumption, from 0.4 percent to either 40 or 50 percent.
- The above shares would also apply proportionally to total GHG emissions associated with electricity consumed in the state.

This resulted in between approximately 21,000 and 727,000 MT CO<sub>2</sub>e of GHG emissions associated with electricity imports from CEMs in a given year, varying by year over the next 20 years. We emphasize that these estimates are based on the simplifying proportional

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<sup>21</sup> Chapter 288, Laws of 2019. <https://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5116-S2.SL.pdf?q=20210822161309>

<sup>22</sup> See <https://www.commerce.wa.gov/growing-the-economy/energy/ceta/ceta-overview/> for more information and links about CETA.

<sup>23</sup> We note that while CETA requires utilities to phase out use of coal-generated resources, CETA does not include coal-fired resources from a limited-duration wholesale retail purchase. This means utilities could continue to import coal-generated electricity from out of state resources through CEMs.

<sup>24</sup> Spreadsheet developed during the 2022 CCA rulemaking to estimate electricity-related emissions over time.

<sup>25</sup> WA Department of Commerce, 2022. Carbon Tax Assessment Model. Version 4.2, base case January 2021. Adjusted to reflect CETA requirements and zero carbon tax.

assumptions above, and these numbers would be lower if electricity imported from CEMs relies more heavily on renewable and non-emitting sources.

### **3.2.2.2 Allowance prices over time**

The price of GHG allowances in the CCA Cap-and-Invest program are also uncertain over time, with additional uncertainty currently created by:

- Uncertain expectations formed by market participants.
- Potential linkage of the WA market with the California-Québec market.
- CARB's consideration of changes to the California cap-and-trade market.

We therefore considered a range of assumed prices, based on past modeling of allowance market trajectories and adjusted assumptions based on new information or intended to account for some of the uncertainty above, including potential allowance market linkage. Overall, assumed prices ranged from approximately \$30 to \$180 in a given year over the next 20 years.

### **3.2.2.3 Total costs**

Multiplying allowance prices by the range of estimated GHG emissions associated with electricity imports from CEMs, we estimated total annual costs (aggregated across all CEM importers) of between \$7 million and \$119 million. Total costs increase as a larger proportion of GHG emissions is assumed to come from CEM imports, and fall as the decrease in total GHG emissions outweighs CEM import growth.

When considering flows of costs over time, Ecology calculates the present value of costs. A present value discounts future dollar values into current dollars, accounting for both inflation and the opportunity cost of having funds later instead of now.<sup>26</sup> We estimated the 20-year present value cost of new compliance obligations as between \$497 million and \$1.2 billion over 20 years, with the first year of costs occurring in 2027.

### **3.2.2.4 Sources of uncertainty**

As discussed above, there is uncertainty in both the quantity of imports from CEMs, as well as in allowance prices. We estimated costs of new compliance obligations in the aggregate (the total across the state), as substantial uncertainty also exists about how many EPEs will choose to participate in CEMs, how much they will choose to import, and what the sources of that electricity will be:

- CEM participation: The distribution of compliance obligation costs across importers would depend on the number of importers. If large marketer entities, such as a federal power marketing administration, choose to participate in a CEM, and would also take on the associated compliance obligation, they would incur larger costs than average. As a

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<sup>26</sup> Present values calculated using a 1 percent discount rate based on the 20-year historic average real rate of return on I Bonds. US Treasury Department, 2024. I bonds interest rates. Historic data collected twice-yearly by Ecology since September 1998.

result, smaller entities with which they do business would not incur these compliance costs. (Note that compliance costs may be passed on through wholesale electricity prices. These potential costs to consumers would be offset by allocations of no-cost allowances to retail utilities. See Section 4.2.2 for discussion.)

- **Importer volumes:** The distribution of costs across importers will also depend on how much electricity each purchases from a CEM. Larger volumes of purchases (if the electricity comes from GHG-emitting sources; see next bullet) would be associated with a larger compliance obligation and higher total cost. Smaller volumes of purchases would have a lower total cost.
- **Electricity sources:** We cannot predict the resources that will be used to generate the electricity that WA electricity importers will purchase from CEMs. This would impact the proportion (and quantity) of GHG emissions associated with CEM imports. If resources assigned by CEMs are largely renewable or non-emitting, costs would be lower. Conversely, if those resources largely emitted GHGs, costs would be higher. Ultimately, due to CETA requirements, a larger proportion of imports would need to be non-emitting or renewable over time. But electricity dispatches based on CEM cost-effectiveness and efficiency goals, as well as the type of electricity being offered at any given time, make it difficult to predict which sources will be used.

### **3.2.3 Costs: Centralized electricity market function**

We do not expect the proposed rule amendments related to compliance obligations to result in compliance costs to CEMs, as compared to the baseline. CEMs themselves would not be subject to compliance obligations. For discussion of CEM efforts to develop infrastructure aligned with the proposed rule amendments, see Section 3.2.1.

### **3.2.4 Costs: Environmental justice**

We do not expect the proposed rule amendments to result in negative impacts in the context of overburdened communities and vulnerable populations. The proposed amendments do not impose costs on these communities or populations. Further, we expect compliance costs that could otherwise be passed on to retail electricity consumers to be mitigated by allocation of no-cost allowances (see Chapter 4).



# Chapter 4: Likely Benefits of the Proposed Rule Amendments

## 4.1 Introduction

We analyzed the likely benefits associated with the proposed rule amendments, as compared to the baseline. The proposed rule amendments and the baseline are discussed in detail in Chapter 2 of this document.

## 4.2 Benefits analysis

The proposed rule amendments would:

- Amend reporting requirements in the GHG reporting rule (Chapter 173-441 WAC):
  - Amending the definition of “Electric Power Entity” (EPE).
  - Changing annual report submission requirements.
  - Adding, removing, or changing definitions specific to EPE reporting requirements.
  - Expanding data requirements and calculation methods from the EIM to all CEMs.
  - Specifying how EPEs must report imported CEM electricity.
  - Expanding documentation requirements.
  - Specifying GHG emissions equations and applicability.
  - Amending requirements for registration of import or export sources.
  - Making changes without material impacts:
    - Clarify language and update terminology.
    - Remove obsolete requirements and language.
- Amend the CCA rule (Chapter 173-446 WAC):
  - Adding definitions consistent with the GHG reporting rule.
  - Amending covered emissions to reflect electricity imported from CEMs.

### Analytic approach

While the impacts of many rulemakings can be divided into costs and benefits of each proposed amendment to a rule, this rulemaking includes multiple proposed amendments across two rules, that work in concert to affect covered parties. As a result, we have grouped costs (and benefits; see Chapter 4) into three categories:

1. Reporting and necessary underlying compliance behaviors:
  - Costs of electricity tracking, including effort to deem, designate, assign, or attribute electricity.

- Costs and benefits of documentation and recordkeeping.
  - Costs of reporting.
  - Benefits of electricity tracking and reporting.
2. New obligations and allocations:
    - Costs of meeting newly assigned compliance obligations.
    - Benefits of new no-cost allowance allocations.
  3. Centralized electricity market function:
    - Benefits of clear requirements and expectations.

While parts of the categories above could be roughly grouped by whether they are amendments to the GHG reporting rule or the CCA rule, some impacts are likely to arise from amendments to both rules. For example, amendments to the reporting rule may result in a specific cost, corresponding benefits may come from those amendments in conjunction with amendments to the CCA rule.

#### **4.2.1 Benefits: Reporting and underlying behaviors**

The proposed rule amendments would result in access to comprehensive data on GHG emissions associated with imports of electricity from CEMs. Informational benefits are difficult to quantify, as data and information are used to improve planning and implementation of regulatory programs.

The data collected as a result of the proposed amendments would:

- **Improve GHG emissions tracking and accuracy:** The authorizing statute for the reporting rule (Chapter 70A.15 RCW) requires Ecology to adopt rules that require GHG emitters to report emissions if they are at least 10,000 MT CO<sub>2</sub>e, and the baseline rule does this for most other GHG emissions, including most EPE emissions. While the baseline reporting laws and rules include coverage of emissions associated with electricity purchased in CEMs, we are unable to practically quantify and assign responsibility for those emissions. The proposed rule amendments would create a structure that more fully achieves the objectives of the authorizing statute for the reporting rule, by specifying the requirements and processes for quantifying these emissions and identifying the deemed market importers that must report them.

Having a better understanding of these emissions would also facilitate the programs that rely on accurate GHG emissions data, as discussed in the following bullets.

Consistency with, and support of, requirements under chapters 70A.45 and 70A.65 RCW are also objectives of the authorizing reporting statute.

- **Facilitate assigning compliance obligations:** The proposed amendments to reporting requirements would allow Ecology to have accurate data to assign compliance obligations under the CCA rule. Without this data, we cannot accurately, consistently, and equitably identify CEM importers, or determine how much GHG was emitted during

generation of that electricity. Under the baseline, these emissions are not accounted for in reporting or in the Cap-and-Invest Program, as there is not yet a consistent process and approach to do so.

- Improve CCA program implementation and planning: The CCA law defines the scope of covered GHG emissions and tasks Ecology with implementing a cap on covered GHG emissions and a program to track, verify, and enforce compliance with the cap through use of compliance instruments. The overall goal is ensuring GHG emissions reductions consistent with the “Limiting Greenhouse Gas Emissions” law (Chapter 70A.45 RCW). To achieve this objective, Ecology needs comprehensive data on GHG emissions, which in turn requires clear and consistent processes and expectations for covered CEM importers, as well as consistent tracking infrastructure and documentation underlying that data.

## **4.2.2 Benefits: New obligations and allocations**

CEM import data and associated GHG emissions identified under the proposed rule amendments would impact compliance obligations under the CCA program (see Section 3.2.2) but would also impact the allocation of no-cost allowances to CETA-covered retail utilities. These allocations are intended to mitigate the costs of CCA compliance obligations, whether their costs are incurred directly (by utilities) or indirectly and passed on in wholesale prices (by a generator or marketer that sells to a utility).

New data gathered under the proposed rule amendments would influence the cost burden effect that Ecology uses to allocate no-cost allowances. As a result, we expect the proposed amendments to result in additional allocation of no-cost allowances to match the aggregate increase in compliance obligations. Additional no-cost allowances would be a benefit to those receiving them, as they can choose to:<sup>27</sup>

- Use (“retire”) the allowances to meet compliance obligations.
- Consign the allowances to the allowance market, to receive payment for them based on the market’s settlement price. This allows utilities to offset compliance costs incurred by importers further up their electricity supply chain.
- Bank the allowances for future use, including potential retirement or consignment in future years.

### **4.2.2.1 Value of additional no-cost allowances**

Corresponding to our assumptions and estimated new compliance obligations in Section 3.2.2, we estimated annual increases in the allocation of no-cost allowances based on the cost burden effect equation (see Section 2.3.11 for detailed discussion of no-cost allowance allocation). Conceptually, these values are equal, and compliance obligations are offset by no-cost

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<sup>27</sup> Utilities may choose to take one or more of these actions, depending on what they perceive as optimal behavior over time. This would be based on expectations about compliance needs, electricity purchases and sources, relative current and future costs, demand, and multiple other factors used in each utility’s business decisions.

allowance allocations in the aggregate – this way, GHG emissions are accounted for in the CCA program while mitigating potential impacts to electricity ratepayers.

Using the process and assumptions used to estimate compliance obligation costs, we estimated between approximately 21,000 and 727,000 MT CO<sub>2e</sub> of GHG emissions associated with electricity imports from CEMs in a given year, varying by year over the next 20 years. We emphasize that these estimates are based on simplifying proportional assumptions about GHG emissions associated with CEM imports, and these numbers would be lower if electricity imported from CEMs relies more heavily on renewable and non-emitting sources.

Similarly, we assumed the same allowance prices as in our cost estimates, of between approximately \$30 and \$180 in a given year over the next 20 years. Just as these are the prices that CEM importers with new compliance obligations would need to pay, they are the prices that utilities could receive by monetizing their additional no-cost allowances. We note that utilities also have the option of banking allowances, and consigning them at a later date when they expect allowance prices to be higher. We made the simplifying and conservative assumption that utilities would consign allowances in the year they are allocated.

Multiplying allowance prices by the range of estimated new no-cost allowances allocated under the proposed rule, we estimated the total value of this benefit as between \$7 million and \$119 million in a given year over the next 20 years.

When considering flows of benefits over time, Ecology calculates the present value of benefits. A present value discounts future dollar values into current dollars, accounting for both inflation and the opportunity cost of having funds later instead of now.<sup>28</sup> We estimated the 20-year present value benefit of new no-cost allowance allocations as between \$497 million and \$1.2 billion over 20 years.

#### **4.2.2.2 Net impact comparing to compliance obligation costs**

Under the baseline and the proposed rule amendments, the allocation of no-cost allowances is based on a cost burden effect equation (see Section 2.3.11 for discussion of the cost burden effect calculation and allocation of no-cost allowances) that is materially similar to the process used to calculate GHG emissions and assign compliance obligations (accounting for exempt emissions and emissions outside the scope of the CCA program).

This means in the aggregate the costs and benefits associated with the proposed rule amendments' impact on compliance obligations and no-cost allowance allocations will be the same – though they may impact different entities. New compliance obligations would be assigned to importers of electricity from CEMs, and new no-cost allowances would be allocated to retail electric utilities covered by CETA. In some cases, the same entities may incur costs and receive benefits, while in others they would be different entities. This means that in the

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<sup>28</sup> Present values calculated using a 1 percent discount rate based on the 20-year historic average real rate of return on I Bonds. US Treasury Department, 2024. I bonds interest rates. Historic data collected twice-yearly by Ecology since September 1998.

aggregate (across all impacted parties) the costs and benefits of these proposed amendments would net out to zero, but the distribution may vary, as discussed in the next section.

#### **4.2.2.3 Relative distribution of benefits and costs**

It is difficult to predict the relative distributions of these costs and benefits, due to the collective sources of uncertainty discussed in Section 3.2.2. Recall that related to costs these included:

- CEM participation: The distribution of compliance obligation costs across importers would depend on the number of importers. If large marketer entities, such as a federal power marketing administration, choose to participate in a CEM, and would also take on the associated compliance obligation, they would incur larger costs than average. As a result, smaller entities with which they do business would not incur these compliance costs.
- Importer volumes: The distribution of costs across importers will also depend on how much electricity each purchases from a CEM. Larger volumes of purchases (if the electricity comes from GHG-emitting sources; see next bullet) would be associated with a larger compliance obligation and higher total cost. Smaller volumes of purchases would have a lower total cost.

The distribution of benefits would similarly depend on the choices of utilities:

- If utilities choose to directly participate in a CEM, they would incur compliance costs associated with allowance purchases, but would also receive corresponding no-cost allowances.
- If utilities choose to purchase from an intermediary marketer that is a CEM participant, the marketer may incur allowance purchasing costs, while the utility would receive corresponding no-cost allowances based on data about the marketer's purchases.

It is also possible that entities that are neither marketers nor utilities will choose to participate in CEMs. In this case, they would incur a compliance obligation, but since they are not marketing that electricity or selling it to retail consumers, there would not be a corresponding allocation of no-cost allowances. In this scenario, aggregate compliance obligations would be larger than aggregate no-cost allowance allocations. The net impact in this case requires additional understanding of the resulting incentives to reduce GHG emissions (identical to how the overall CCA program works). We discuss this scenario and other cases in which aggregate compliance obligations could exceed no-cost allowance allocations below in Section 4.2.2.4.

#### **4.2.2.4 Sources of uncertainty**

Whereas we expect these costs and benefits to be the same in the aggregate over time, it is possible for there to be transitional periods during which they are not, or cases in which new obligations are not fully mitigated in the aggregate by no-cost allowance allocations:

- Possible transitional mismatch: This is because of current uncertainty about the process that will be used to update forecasts and adjust no-cost allowance allocations.<sup>29</sup> Depending on how no-cost allowance adjustments are made, and how they occur over time as new information becomes available, there may be periods during which there are differences between the numbers of new compliance obligations and new no-cost allowances. Each of these circumstances has its own costs and benefits, depending on whether new demand for allowances (from compliance obligations) is less than or greater than new supply (from no-cost allowance allocations). It is not likely, however, that new allocations of no-cost allowances will exceed new compliance obligations, as adjustments to allocations are based on new reported data and/or forecasts, and so would be more likely to lag new compliance obligations than to precede them.
- Aggregate obligations exceed no-cost allowance allocations: As discussed in Section 4.2.2.3, if non-utility covered entities participate in a CEM, but are not acting as marketers and do not market that power to utilities, aggregate obligations may exceed allocations. In this case, new demand for allowances would exceed new supply.

If, in the aggregate, new compliance obligations exceed new no-cost allowance allocations, there would be a net increase in allowance market demand (more new demand for allowances than new supply of potentially consigned allowances). This would put upward pressure on allowance prices, and increase incentives to reduce emissions for entities whose marginal costs of GHG emissions abatement are lower than the new allowance price. The degree to which prices and GHG emissions reductions would adjust would depend on multiple aspects including but not limited to:

- Relative excess demand for allowances.
- Expectations about the allowance market, prices, and the future.
- Individual entity marginal GHG emissions abatement costs.
- Risk tolerance.
- Intertemporal decisions about allowance purchases, banking, and retirement.

We therefore cannot quantify the impacts of the above scenario, but note that allowance price increases would be accompanied by GHG emissions reductions, and the value of GHG emissions reductions can be quantified using the Social Cost of Carbon (SCC). The SCC uses multiple climate and economic models together, to estimate the cost to society of each metric ton of CO<sub>2</sub> (or CO<sub>2</sub>-equivalent) emitted in a specific year. The EPA's most-recent estimates of the SCC at a 1.5% discount rate (the closest to the one percent discount rate based on relatively risk-free returns on federal bonds we use in this analysis) begin at \$450 per MT CO<sub>2</sub>e emitted in

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<sup>29</sup> Note that the process for this adjustment is currently being developed, and we expect it to be forthcoming in late 2024.

2027, rising to \$554 per MT CO<sub>2</sub>e emitted in 2045.<sup>30</sup> Given the potential allowance price paths modeled or considered for this analysis or for similar cap-and-trade markets (between roughly \$30 and \$180, these benefits of GHG emissions reductions are likely to exceed allowance price increases that happen due to increased demand or constrained supply.

### 4.2.3 Benefits: Centralized electricity market function

It is not clear to what degree or how efficiently CEMs would be able to operate in WA under the baseline. This is because of complex and uncertain factors such as baseline CCA law's requirements for covered emissions (including those from imported electricity, though Ecology is tasked with adopting a rule that specifies the process for their inclusion), the lack of a specified mechanism to identify deemed market importers, and potential difficulties EPEs that participate in CEMs could have in demonstrating compliance with the law. This could create enforcement challenges and undermine the effectiveness of regulatory oversight and Ecology's ability ensure the state meets statutory GHG emissions reduction goals.

Market operators may also:

- Incur higher transaction costs under the baseline, due to a need for additional risk management measures. These costs could then be passed on to consumers through higher electricity prices, without mitigation such as no-cost allowance allocations to utilities.
- Encounter difficulties ensuring fair competition or preventing electricity market manipulation, due to a lack of clear guidance. This could reduce CEM efficiency and raise costs.
- Be reluctant to invest in infrastructure upgrades or new technologies, which could create gaps in market coverage. Where coverage is possible, it could still be inefficient, and carry risks of grid instability, congestion, or failure due to lacking infrastructure.

As a result, the proposed specifications of CEM importer identification and compliance obligation responsibility support EPEs and consumers receiving the benefits of CEMs operating in WA. These include:<sup>31</sup>

- Cost-efficiency and cost-savings. For example, CEM participants were estimated to receive various benefits of cost savings:
  - During the 4<sup>th</sup> quarter of 2023, EIM participants attained nearly \$400 million in cost-savings.<sup>32</sup>

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<sup>30</sup> US Environmental Protection Agency, 2023. Supplementary Material for the Regulatory Impact Analysis for the Final Rulemaking, "Standards of Performance for new, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and natural Gas Sector Climate Review". November 2023. Updated to current dollars using U Bureau of Labor Statistics, 2024. Consumer Price Index.

<sup>31</sup> For more discussion and examples, see CAISO, 2022. Washington State Western Energy Imbalance market Greenhouse Gas Enhancements. Presentation, September 29, 2022.

<sup>32</sup> CAISO, 2024. WEIM benefits report shows another historic milestone. News Release January 31, 2024.

- 2022 modeling of benefits of the EDAM estimated that the West could save over \$500 million per year in operating costs and similar annual savings from avoiding additional capacity investments.<sup>33</sup> Separate 2023 modeling estimated cost savings for five specific participants of nearly \$500 million annually.<sup>34</sup>
- Improved availability and integration of renewable resources, and feasibility of efficiently meeting statutory GHG reduction goals.
- Improved grid reliability and matching of generating resources and demand.
- Reduced renewable resource curtailment when supply exceeds local demand.
- Improved allocation of emissions-generating resources that are more efficient.

### Source switching – an illustration

Access to efficiently functioning CEMs in WA would facilitate switching to lower-emitting generation sources, whether they emit no GHGs, or emit less if they still emit GHGs. Using default emissions factors in the baseline CCA rule’s allocation of no-cost allowances, one MWh of electricity could emit the following amounts of GHGs:<sup>35</sup>

- Natural gas generation: 0.4354 MT CO<sub>2</sub>e.
- Coal generation: 1.0614 MT CO<sub>2</sub>e.
- Unspecified: 0.437 MT CO<sub>2</sub>e.
- Renewable or non-emitting: 0 MT CO<sub>2</sub>e.

If the proposed rule amendments facilitate access to efficient CEMs, switching to renewable sources would save between 0.4354 and 1.0614 MT CO<sub>2</sub>e per MWh. We note that source switching is already expected to occur to a large degree under CETA requirements, but it may be more feasible or more cost-effective using CEMs with greater access to diversified or better-timed generating sources.<sup>36</sup> Depending on relative pricing, market participation could be incentivized, and could result in importers switching to specified renewables rather than unspecified resources. Using the EPA’s SCC values for a 1.5 percent discount rate<sup>37</sup>, for example years 2030 and 2040, this would be a benefit to society of approximately:

- \$203 to \$495 per MWh of electricity switched in 2030.

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<sup>33</sup> CAISO, 2024. EDAM: Extended Day-Ahead market fact sheet.

<sup>34</sup> Brattle, 2023. Extended Day-Ahead Market Benefit Study. Presentation August 30, 2023.

<sup>35</sup> Default emissions rates used in WAC 173-446-230.

<sup>36</sup> We note that while CETA requires utilities to phase out use of coal-generated resources, CETA does not include coal-fired resources from a limited-duration wholesale retail purchase. This means utilities could continue to import coal-generated electricity from out of state resources through CEMs.

<sup>37</sup> US Environmental Protection Agency, 2023. Supplementary Material for the Regulatory Impact Analysis for the Final Rulemaking, “Standards of Performance for new, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and natural Gas Sector Climate Review”. November 2023. Updated to current dollars using U Bureau of Labor Statistics, 2024. Consumer Price Index.



- \$228 to \$556 per MWh of electricity switched in 2040.

The above example considers default emissions factors and switching from unspecified or specified GHG-emitting resources, to those that do not emit GHGs. But this does not capture the differences between site-specific emissions factors of different generating resources that would bid in CEMs. For example, two natural gas generating resources may be available, with different emissions factors. If a CEM dispatches the more-efficient of the two, cost-savings would be accompanied by reduced GHG emissions as well. Using emissions factors for the two facilities of 0.44 MT CO<sub>2</sub>e/MWh and 0.45 MT CO<sub>2</sub>e/MWh, each MWh of electricity switched to the more emissions-efficient resource would generate avoided-SCC benefits of between \$14 and \$16 per MWh.

#### 4.2.4 Benefits: Environmental justice

The proposed rule amendments may offer environmental justice and economic justice benefits in various ways. By establishing a process to identify importers and the generating sources of their electricity imports from CEMs, the amendments would facilitate the CCA program's reduction of GHG emissions and contribution to climate change. Climate change has been consistently identified as more-heavily harming already economically, physically, or infrastructurally vulnerable populations:<sup>38, 39</sup>

- Heat events are more harmful to people without access to air conditioning, with existing health conditions and higher cumulative health burden, and in neighborhoods with less tree canopy and more paved surfaces.

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<sup>38</sup> For detailed discussion, citations, and examples of the impacts of climate change on overburdened communities and vulnerable populations, as well as the broader economy, see: WA Department of Ecology, 2022. Final Regulatory Analyses for Chapter 173-446 WAC, Climate Commitment Act Program. Publication no. 22-02-047. September 2022.

<sup>39</sup> For more recent findings on climate change impacts and valuations, see also:

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- Wildfire smoke is similarly more harmful to people with existing health conditions and higher cumulative health burden, without access to air purification, and with limited or more-costly access to healthcare. This is compounded if smoke occurs concurrently with a heat event, and people cannot safely stay in hot homes.
- Flooding is more difficult to prevent, evacuate, or adapt to for populations with limited financial resources and infrastructural access.

By also resulting in new allocations of no-cost allowances to utilities, the proposed amendments mitigate the risk of compliance costs being passed on to consumers in electricity prices.

As noted in Section 4.2.2, there are potential scenarios in which no-cost allowance allocations lag or do not match the quantity of new compliance obligations under the proposed rule amendments for some types of CEM participants or during transitional timeframes. In these cases, incentives to reduce GHG emissions further support reduced contribution to climate change. They may also result in increased revenues to the state to fund climate change mitigation and adaptation projects that also reduce the impacts of climate change on communities and heating/cooling costs, such as energy-efficient affordable housing, home electrification and weatherization, improved transportation access, and improvements to air quality monitoring in overburdened neighborhoods.

# Chapter 5: Cost-Benefit Comparison and Conclusions

## 5.1 Summary of costs and benefits of the proposed rule amendments

Ecology estimates rule impacts over 20 years, and compares those streams of costs and benefits occurring over time using present values. A present value accounts for inflation as well as the opportunity cost of having funds later instead of now. We estimated the following costs and benefits of the proposed rule, with qualitative impacts summarized below the table. For full discussion of costs and benefits (or cost-savings) including illustrative examples, see chapters 3 and 4.

Table 6. Total 20-year present value costs and benefits, millions of dollars

Type of impact	Low 20-year cost	High 20-year cost	Low 20-year benefit	High 20-year benefit
Reporting	\$0.37	\$0.37	qualitative	qualitative
Obligations and allocations	\$497.37	\$1,174.08	\$497.37	\$1,174.08
CEM functions	none or minor	none or minor	qualitative	qualitative
Total quantifiable estimate	\$497.74	\$1,174.45	\$497.37	\$1,174.08

Qualitative benefits include:

- Benefits of CEM import emissions reporting:
  - Improved GHG emissions tracking and accuracy. The proposed amendments would create a structure that more fully achieves the objectives of the authorizing statute for the reporting rule, by specifying the requirements and processes for quantifying emissions associated with electricity imports through CEMs and identifying the deemed market importers that must report them.
  - Facilitation of programs that rely on accurate GHG emissions data as discussed in the following bullets. Consistency with, and support of requirements under chapters 70A.45 and 70A.65 RCW are also objectives of the authorizing reporting statute.
  - Accurate data to assign compliance obligations under the CCA rule. Without this data, we cannot accurately, consistently, and equitably identify CEM importers, or determine how much GHG was emitted during generation of that electricity. Under the baseline, these emissions are not accounted for in reporting or in the Cap-and-Invest Program, as there is not yet a consistent process and approach to do so.
  - Improved CCA program implementation and planning: The CCA law defines the scope of covered GHG emissions and tasks Ecology with implementing a cap on covered GHG emissions and a program to track, verify, and enforce compliance with the cap through use of compliance instruments. The overall goal is ensuring

GHG emissions reductions consistent with the “Limiting Greenhouse Gas Emissions” law (Chapter 70A.45 RCW). To achieve this objective, Ecology needs comprehensive data on GHG emissions, which in turn requires clear and consistent processes and expectations for covered CEM importers, as well as consistent tracking infrastructure and documentation underlying that data.

- Benefits of CEMs functioning efficiently in WA. Supporting benefits provided by CEMs, through specification of how CEM importers are identified and how compliance obligations are assigned. Benefits include:
  - Cost-efficiency and cost-savings. For example, CEM participants were estimated to receive various benefits of cost savings:
    - During the 4<sup>th</sup> quarter of 2023, EIM participants attained nearly \$400 million in cost-savings.<sup>40</sup>
    - 2022 modeling of benefits of the EDAM estimated that the West could save over \$500 million per year in operating costs and similar annual savings from avoiding additional capacity investments.<sup>41</sup> Separate 2023 modeling estimated cost savings for five specific participants of nearly \$500 million annually.<sup>42</sup>
  - Improved availability and integration of renewable resources, and feasibility of efficiently meeting statutory GHG reduction goals.
  - Improved grid reliability and matching of generating resources and demand.
  - Reduced renewable resource curtailment when supply exceeds local demand.
  - Improved allocation of emissions-generating resources that are more efficient.

### **Variability in costs and benefits**

While we expect costs and benefits (cost-savings) of new compliance obligations and new no-cost allowance allocations to be equal in the aggregate over time, there are also potential situations in which these costs exceed cost-savings, leading to additional incentives to reduce GHG emissions. In such situations, costs would be up to GHG allowance prices (assumed to be between \$30 and \$180 per MT CO<sub>2</sub>e for this analysis), while benefits would be reflected by the avoided Social Cost of Carbon (ranging from \$450 per MT CO<sub>2</sub>e emitted in 2027, and rising in subsequent years) and additional avoided impacts of climate change to the environment, economy, overburdened communities, and vulnerable populations. For examples and additional references, see Chapter 4.

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<sup>40</sup> CAISO, 2024. WEIM benefits report shows another historic milestone. News Release January 31, 2024.

<sup>41</sup> CAISO, 2024. EDAM: Extended Day-Ahead market fact sheet.

<sup>42</sup> Brattle, 2023. Extended Day-Ahead Market Benefit Study. Presentation August 30, 2023.

## **5.2 Conclusion**

We conclude, based on a reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the proposed rule amendments, as compared to the baseline, that the benefits of the proposed rule amendments are greater than the costs.

# Chapter 6: Least-Burdensome Alternative Analysis

## 6.1 Introduction

RCW 34.05.328(1)(c) requires Ecology to “...[d]etermine, after considering alternative versions of the rule and the analysis required under (b), (c), and (d) of this subsection, that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated under (a) of this subsection.” The referenced subsections are:

- (a) Clearly state in detail the general goals and specific objectives of the statute that the rule implements;
- (b) Determine that the rule is needed to achieve the general goals and specific objectives stated under (a) of this subsection, and analyze alternatives to rule making and the consequences of not adopting the rule;
- (c) Provide notification in the notice of proposed rulemaking under RCW 34.05.320 that a preliminary cost-benefit analysis is available. The preliminary cost-benefit analysis must fulfill the requirements of the cost-benefit analysis under (d) of this subsection. If the agency files a supplemental notice under RCW 34.05.340, the supplemental notice must include notification that a revised preliminary cost-benefit analysis is available. A final cost-benefit analysis must be available when the rule is adopted under RCW 34.05.360;
- (d) Determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.

In other words, to be able to adopt the rule, we must determine that the requirements of the rule are the least burdensome set of requirements that achieve the goals and objectives of the authorizing statute(s).

We assessed alternative proposed rule content, and determined whether they met the goals and objectives of the authorizing statute(s). Of those that would meet the goals and objectives, we determined whether those chosen for inclusion in the proposed rule amendments were the least burdensome to those required to comply with them.

## 6.2 Goals and objectives of the authorizing statute

The authorizing statutes for these rules are Chapter 70A.65, Greenhouse Gas Emissions – Cap and Invest Program and Chapter 70A.15, Washington Clean Air Act.

The goals and objectives are to:

- Implement a cap on greenhouse gas emissions from covered entities and a program to track, verify, and enforce compliance with the cap through the use of compliance instruments, in order to ensure the reduction of greenhouse gas emissions consistent with the limits established in RCW 70A.45.020.

- Adopt a methodology for addressing imported electricity associated with a centralized electricity market.
- Regulate first jurisdictional deliverer importing electricity into the state and the cumulative annual total emissions associated with the imported electricity exceeds 25,000 metric tons of carbon dioxide equivalent.
- Require persons to report the emissions of greenhouse gases where those emissions from electricity meet or exceed 10,000 metric tons of carbon dioxide equivalent annually.
- Consider opportunities to implement the program in a manner that allows linking the state's program with those of other jurisdictions.

In 2020, the legislature updated the state's GHG emissions limits that are to be achieved by 2030, 2040, and 2050, based on current science and emissions trends, to support local and global efforts to avoid the most significant impacts from climate change. Achieving the GHG emissions reductions required by these limits will require coordinated, comprehensive, and multisectoral implementation of policies, programs, and laws, as other enacted policies are insufficient to meet the limits. Chapter 70A.65 includes a goal of ensuring that the government provides clear policy and requirements, financial tools, and other mechanisms to support achieving the GHG emissions limits.

### **6.3 Alternatives considered and why they were excluded**

We considered the following alternative rule requirements, and did not include them in the proposed rule amendments. This list includes alternatives that were suggested by the public during development of the rule, with the intent of mitigating negative impacts, including environmental harms, on vulnerable populations and overburdened communities, and equitably distributing benefits. Each section below explains why we did not include these alternatives.

- Assign the market operator as the deemed market importer.
- Update emissions factor calculations.
- Addressing carbon emissions leakage.
- Alternative scope.
- Adopt a load-based approach.
- Explicitly define “deemed market importer” for specified and unspecified power.

### **6.3.1 Assign the market operator as the deemed market importer**

We considered a compliance back-stop approach which would only assign the market operator as the deemed or “designated” market importer<sup>43</sup> (i.e., the entity with a compliance obligation) if the market operator is unable or unwilling to assign a deemed market importer itself. Some interested parties would prefer to assign compliance obligations only to generating sources, and not the market operator. Interested parties are concerned that a market operator could be responsible for GHG emissions that it did not generate, as the market operator merely facilitates transactions. The reason we considered the compliance back-stop was to ensure there is always some entity with a compliance obligation. After this alternative was reviewed in light of interested party comments, we assessed that this alternative may be more burdensome to parties that are required to comply because of the potential that they would be responsible for emissions that they did not generate. In addition, at this time the only operational centralized electricity market does assign a deemed market importer, so there is no current need for this backstop. Our assessment may change in the future if other viable alternatives are not readily available.

### **6.3.2 Update emissions factor calculations**

We considered updating emissions factor calculations to reflect a contemporary mix of electricity generating sources for unspecified sources. This concern stems from an interest in ensuring that GHG emissions are reported as accurately as possible.

Ecology needs to ensure consistency with emissions factors that exist elsewhere (e.g., in CETA). We did propose minor changes to the emissions factor calculation to account for transmission loss. This alternative would not meet the goal of requiring emissions from electricity to be reported because the true emissions may be undercounted and could potentially contribute to carbon leakage.

### **6.3.3 Addressing carbon emissions leakage**

We considered additional provisions related to secondary dispatch or carbon emissions leakage in this rule. Many interested parties are concerned that participation in CEMs, particularly EDAM and Markets+, could “use up” clean electricity and thereby require additional generation from emitting sources to “back-fill” demand, particularly by states without carbon pricing.

The CCA legislative findings commit Washington to minimizing carbon leakage. However, the legislature gave no specific direction to make additional, leakage-specific changes in this rule. Ecology anticipates that it will address leakage at some point in future rulemakings but, as market designs remain in flux, we do not have sufficient data to make appropriate changes at this time. Addressing leakage before we have sufficient data could lead to inaccuracies during future regulatory actions.

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<sup>43</sup> Over the course of rule development, the words “designated” and “deemed” have been used interchangeably. We similarly use them interchangeably in this chapter, to reflect input received from interested parties during development of the proposed rule.



### **6.3.4 Alternative scope**

We considered alternative scopes for this rulemaking, such as one unified rulemaking to address current and future CEMs, including for specified and unspecified sources of electricity. We initially favored a single unified approach. However, some entities, such as TransAlta, expressed concerns about making rules for markets (i.e., EDAM and Markets+) while they are still under development.

We did not change the scope of the rulemaking to focus solely on one market over another. However, we decided to focus on a specific subset of electricity imports from CEMs: specified sources. The rule language still applies to existing and future CEMs including the Energy Imbalance Market, the Extended Day Ahead Market, and Markets+. Additionally, the rule language addresses other issues related to the reporting of greenhouse gas emissions for entities importing specified sources of electricity to Washington. However, Markets+ is expected to allow both specified and unspecified sources of electricity. Our narrowed rulemaking scope will apply to Markets+ insofar as SPP allows the marketplace to include specified imports. Future rulemakings will touch upon unspecified sources of electricity from CEMs. Note that unspecified power, in the context of bilateral trades (not CEMs) is still being addressed by the narrowed scope.

### **6.3.5 Adopt a load-based approach**

We considered adopting a load-based approach to assigning compliance obligations. Interested parties are concerned that assigning compliance obligations to electricity importers is suboptimal and inefficient; they say it is better to put compliance obligations on the load-serving entity that caused the import to occur.

The concept of importing electricity is central to our statutory framework. We have grounded our rule in the concept of a first jurisdictional deliverer to ensure the point of compliance is placed on electricity when it is imported into the state, rather than on electricity generation that occurs out-of-state. Additionally, California has stated they will not change the point of regulation to a load-based approach. If we adopted a load-based approach, that would likely preclude linkage with California's markets, which would not meet the goal of considering opportunities to implement the program in a manner that allows linking the state's program with those of other jurisdictions.

### **6.3.6 Explicitly define “deemed market importer” for specified and unspecified power**

Before we narrowed the scope of this rulemaking to focus on specified market imports, we considered explicitly defining the deemed or “designated” market importer for specified and unspecified sources of electricity. Previous drafts of the rule language tasked market operators with making this designation. Interested parties expressed several concerns with this approach: (1) it gives market operators too much discretion; (2) it may be inconsistent with recent Federal Energy Regulatory Commission (FERC) guidance, which clarifies that how a state chooses to address GHG emissions is “exclusively” within the state's jurisdiction; and (3) it does not provide sufficient direction for market operators to follow.

The main reason we did not define the term explicitly for specified and unspecified power ultimately relates to our change in scope. As part of the scope change, we narrowed the definition of deemed market importer to apply only to specified market imports. Additionally, we provided an example to clarify that for the Energy Imbalance Market – the only market that is currently operational – the deemed market importer would be the participating resource scheduling coordinator.

Because the narrowed rule does not address unspecified imports from CEMs, many of the concerns that interested parties raised do not apply. Ecology may revisit these concerns and consider alternative approaches in a later rulemaking related to importing unspecified power through CEMs.

## **6.4 Conclusion**

After considering alternatives, within the context of the goals and objectives of the authorizing statute, we determined that the proposed rule represents the least-burdensome alternative of possible rule requirements meeting the goals and objectives.

# Chapter 7: Regulatory Fairness Act Compliance

## 7.1 Introduction

The Regulatory Fairness Act (RFA; RCW 19.85.070) requires Ecology to perform a set of analyses and make certain determinations regarding the proposed rule amendments. This chapter presents the:

- Analysis of relative compliance cost burden.
- Consideration of lost sales or revenue.
- Cost-mitigating elements of the rule, if required.
- Small business and local government consultation.
- Industries likely impacted by the proposed rule.
- Expected impact on jobs.

A small business is defined by the RFA as having 50 or fewer employees, at the highest ownership and operator level. Estimated compliance costs are determined as compared to the baseline (the regulatory environment in the absence of the proposed rule amendments, limited to existing federal and state requirements). Analyses under the RFA only apply to costs to “businesses in an industry” in Washington State. This means the impacts, for this part of our analyses, are not evaluated for government entities.

## 7.2 Analysis of relative compliance cost burden

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

The average affected small business likely to be covered by the proposed rule amendments employs about 12 people.<sup>44</sup> The largest ten percent of affected businesses employ an average of 900 people.<sup>45</sup> Many of the entities potentially impacted by the proposed rule are also governments, and are excluded from this analysis. Based on cost estimates in Chapter 3, we estimated compliance costs per employee. As discussed in chapters 3 and 4, there is uncertainty about how costs and cost-savings will be distributed. In some cases, the businesses that incur costs will also receive cost-savings (e.g., a utility participating in a CEM), but in other cases they may be separate businesses. To capture various possibilities, we estimated the following average compliance costs per business in the first year the proposed rule amendments are likely to result in costs.

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<sup>44</sup> Dun & Bradstreet, 2024. Market Insight database.

<sup>45</sup> Excludes outlier of nearly 400,000 employees at a parent multinational investment firm. Without the exclusion, this average rises to 396,500 employees.

Table 7. Costs per business

<b>Cost Estimate Type</b>	<b>Cost</b>	<b>Cost-Savings</b>	<b>Net Cost</b>
Low estimate	\$321,929	(\$320,955)	\$974
High estimate	\$926,079	(\$925,105)	\$974

Then, based on costs per business and business size (small or large), we calculated costs per employee, as summarized in the tables below.

Table 8. Costs per employee, net costs

<b>Business Size</b>	<b>Cost per employee</b>
Small	\$42
Largest	\$1

Table 9. Cost per employee, gross costs

<b>Business size</b>	<b>Low cost per employee</b>	<b>High cost per employee</b>
Small	\$13,779	\$39,638
Largest	\$358	\$1,029

Table 10. Cost per employee, cost-savings

<b>Business size</b>	<b>Low benefit per employee</b>	<b>High benefit per employee</b>
Small	(\$13,737)	(\$39,596)
Largest	(\$357)	(\$1,028)

We conclude that the proposed rule amendments are likely to have disproportionate impacts on small businesses, with regard to compliance costs, but may disproportionately benefit small businesses that receive a benefit of cost-savings. As we cannot confidently identify cases in which businesses will see only costs, only cost-savings, or both, Ecology has conservatively included elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

### 7.3 Action taken to reduce small business impacts

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

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

- a) Reducing, modifying, or eliminating substantive regulatory requirements;
- b) Simplifying, reducing, or eliminating recordkeeping and reporting requirements;
- c) Reducing the frequency of inspections;

- d) Delaying compliance timetables;
- e) Reducing or modifying fine schedules for noncompliance; or
- f) Any other mitigation techniques including those suggested by small businesses or small business advocates.”

We considered all of the above options, the goals and objectives of the authorizing statutes (see Chapter 6), and the scope of this rulemaking. We limited compliance cost-reduction methods to those that:

- Are legal and feasible.
- Meet the goals and objectives of the authorizing statute.
- Are within the scope of this rulemaking.

### **Substantive regulatory requirements**

The authorizing statutes do not allow Ecology to reduce, modify, or eliminate substantive regulatory requirements for any covered entities under the reporting rule or CCA rule. The areas of the rule reflecting these statutory requirements are captured in the scope of the rules, and include program coverage, compliance timetables or support of consistency with potentially linked jurisdictions, and penalties. Ecology does not have discretion in these substantive regulatory requirements.

The baseline rule and proposed amendments also allow for a federal power marketing administration to take on compliance obligations in place of small entities that purchase imported electricity from them.

### **Recordkeeping and reporting requirements**

Recordkeeping and reporting requirements in the baseline rule and in the proposed rule amendments rely largely on maintaining consistency with other programs, using known operations data and information, and using standardized common calculations. Ecology developed the proposed amendments to reporting requirements to provide information necessary for the data’s use in the CCA program, and at the same time to be feasible for importers and CEM processes, based on interested party input.

### **Inspections**

This rulemaking does not address inspections, and inspections are not required under the baseline rules.

### **Compliance timetables**

Compliance deadlines are specified in the authorizing statutes. Ecology cannot use its discretion to change these deadlines. We note also that the proposed amendments would remove some of the phased-in compliance timelines that were included in the baseline rules when they were first adopted but are no longer necessary. As part of the 2022 rulemaking amending the reporting rule, Ecology received information that EPEs (many of which are small) desired later deadlines for the new program. While the statute specifies the reporting deadline, the rule

amendments adopted at that time allowed EPEs to submit a provisional report by that deadline, followed by a final report two months later as proposed by interested parties. After gaining experience with the reporting program, reporters are more likely to be able to meet the statutory deadline, and may save costs of developing and submitting separate preliminary reports.

### **Penalties and noncompliance**

The statute specifies many elements related to noncompliance, and could not be changed.

### **Other reductions of burden**

Ecology also considered multiple alternative requirements during development of the proposed rule. These were found to either impose more burden on covered parties, or to not meet the goals and objectives of the authorizing statutes. See chapter 6 for discussion of these alternatives.

## **7.4 Small business and government involvement**

We involved small businesses and local governments in its development of the proposed rule amendments, using the following methods. Recipients and attendees include members of the public, local governments, small businesses, and business associations.

- Emails sent to meeting requirements one day prior to meetings as a reminder.
- Rule development meeting reminders via gov delivery to all rulemaking subscribers.
- Informational session #1 – July 25, 2023.
- Informational session #2 – August 2, 2023.
- Draft language input review meeting #1 – August 12, 2023.
- Draft language input review meeting #2 – August 16, 2023.
- Listening session – August 18, 2023.
- Individual meetings (by request) with:
  - BPA – August 31, 2023.
  - Western Power Trading Forum – September 6, 2023.
  - Public Generating Pool –September 11, 2023.
- Informational meeting with CAISO – September 12, 2023.
- Informational meeting with Southwest Power Pool – September 28, 2023.
- First informal comment period – July 25 to August 25, 2023.
- Second informal comment period – October 5 to October 30, 2023.
- Third informal comment period – November 8 to November 27, 2023.
- Draft language input review meeting #3 – January 24, 2024.
- Individual meetings (by request) with:
  - CARB- March 25, 2024
  - CARB & CAISO- April 10, 2024

CARB- May 3, 2024, Attendees variously included local and state government:

- City of Issaquah.
- City of Shoreline.

- City of Tacoma.
- Office of the Attorney General.
- Puget Sound Clean Air Agency.
- Spokane Regional Clean Air Agency.
- WA Department of Commerce.
- WA Department of Health.
- WA Public Ports Association.
- WA Department of Transportation.
- WA Parks and Recreation Commission.
- Washington State Parks and Recreation Commission.
- Washington Utilities and Transportation Commission.

## 7.5 North American Industry Classification System (NAICS) codes of impacted industries

The proposed rule amendments likely impact the following industries, with associated NAICS codes. NAICS definitions and industry hierarchies are discussed at <https://www.census.gov/naics/>.

- 221122          Electric power distribution
- 221118          Other electric power generation

## 7.6 Loss of sales or revenue and impacts on jobs

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

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

We used the REMI E3+ model for Washington State to estimate the impact of the proposed rule amendments on directly affected markets, accounting for dynamic adjustments throughout the economy. The model accounts for variables including but not limited to:

- Inter-industry impacts.
- Price changes, including wages.
- Interstate and international trade.

- Population or labor market changes.
- Dynamic adjustment of all economic variables over time.

Because the REMI model aggregates homogeneous sectors, all estimated costs and cost-savings under the proposed rule amendments would occur within the same industry grouping: Electric power generation, transmission, and distribution. This means the costs of new compliance obligations and the benefits of new no-cost allowance allocations net out to zero impact. This leaves estimated reporting costs as the net inputs into the model.

Estimated additional reporting costs under the proposed rule amendments are relatively small compared to the electricity sector and state economy as a whole. As a result, the model simulations did not identify any impacts to statewide employment or output. They also did not identify any impacts to employment or output at the industry grouping level.

While we did not identify any employment or output impacts of the proposed rule as a whole, there may be distributional impacts within the electricity sector in WA. As discussed in chapters 3 and 4, there is considerable uncertainty about how costs and cost-savings (benefits) would be distributed across electricity importers participating in CEMs and electric utilities. Traditionally, competitive businesses with higher net operating costs would face downward pressure on output and their use of labor.

Electricity importers may also face different incentives and limitations (e.g., obligations to meet demand, government or nonprofit structures, limited local competition or geographic monopolies, regulations governing electricity rates, or variable timing of available generating resources). Where ability to respond with changes to employment or output (positive or negative) are limited, impacts may instead manifest as changes to planned infrastructure investments or timing.



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# Appendix A: Administrative Procedure Act (RCW 34.05.328) Determinations

**A. RCW 34.05.328(1)(a) – Clearly state in detail the general goals and specific objectives of the statute that this rule implements.**

See Chapter 6.

**B. RCW 34.05.328(1)(b) –**

**1. Determine that the rule is needed to achieve the general goals and specific objectives of the statute.**

See Chapters 1 and 2.

**2. Analyze alternatives to rulemaking and the consequences of not adopting this rule.**

In 2021, the Washington Legislature passed the Climate Commitment Act (CCA), which established a Cap-and-Invest Program to help Washington meet greenhouse gas (GHG) emission limits by 2050. The CCA statute directs Ecology to adopt rules to implement the provisions of the program (RCW 70A.65.220.). To align with the requirements of the CCA, this rulemaking will adopt amendments to Chapter 173-441 WAC (Reporting of Emissions of Greenhouse Gases) and Chapter 173-446 WAC (Climate Commitment Act Program Rule).

As of 2024, two centralized electricity markets will be serving Washington with a third one under development. The rulemaking is necessary to ensure that specified sources of electricity imported into the state from centralized electricity markets can be identified and counted as covered emissions in the Cap-and-Invest Program. Currently, there is lack of clear methodologies and procedures to assign compliance obligations on the importing entity. Additionally, this rulemaking will allow centralized electricity market operators to put in place the necessary data infrastructure to track importing entities and report that information to Ecology. The rule may also address other issues related to reporting of GHG for entities importing electricity to Washington.

If this rule is not adopted, it is likely that the operators of these centralized electricity markets would not put in place the necessary data infrastructure to allow Washington to track and capture the necessary compliance obligation for importing entities. It is also possible that GHG emissions associated with the electricity from these centralized electricity markets would go uncovered under the program, reducing the effectiveness of the Cap-and-Invest Program and potentially creating a barrier to linking the program with other capped jurisdictions. Finally, as this source of emissions is predicted to grow substantially in the future, these problems would only grow over time and increasingly impact compliance.

Please see the Least Burdensome Alternative Analysis, Chapter 6 of this document, for discussion of alternative rule content considered.

**C. RCW 34.05.328(1)(c) - A preliminary cost-benefit analysis was made available.**

When filing a rule proposal (CR-102) under RCW 34.05.320, Ecology provides notice that a preliminary cost-benefit analysis is available. At adoption (CR-103 filing) under RCW 34.05.360, Ecology provides notice of the availability of the final cost-benefit analysis.

**D. RCW 34.05.328(1)(d) – Determine that probable benefits of this rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.**

See Chapters 1 – 5.

**E. RCW 34.05.328 (1)(e) - Determine, after considering alternative versions of the analysis required under RCW 34.05.328 (b), (c) and (d) that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated in Chapter 6.**

Please see Chapter 6.

**F. RCW 34.05.328(1)(f) - Determine that the rule does not require those to whom it applies to take an action that violates requirements of another federal or state law.**

- This rule does not require covered parties to violate existing federal and state laws and rules. The requirements of this rule do not conflict with EPA reporting requirements for greenhouse gases and do not alter reporting requirements in other states.

**G. RCW 34.05.328 (1)(g) - Determine that the rule does not impose more stringent performance requirements on private entities than on public entities unless required to do so by federal or state law.**

As specified by RCW 70A.65.080(1)(c), compliance obligations in this rule only applies to electricity imported from centralized electricity markets.

**H. RCW 34.05.328 (1)(h) Determine if the rule differs from any federal regulation or statute applicable to the same activity or subject matter.**

No. This rule does not differ from any federal regulation or statute applicable to the same activity or subject matter.

- If **yes**, the difference is justified because of the following:
  - (i) A state statute explicitly allows Ecology to differ from federal standards.
  - (ii) Substantial evidence that the difference is necessary to achieve the general goals and specific objectives stated in Chapter 6.

**I. RCW 34.05.328 (1)(i) – Coordinate the rule, to the maximum extent practicable, with other federal, state, and local laws applicable to the same subject matter.**

We are coordinating this rule to the maximum extent practicable, with other federal, state, and local laws applicable to the same subject matter. There are overlaps in the interested parties and Ecology staff working on these rules, which facilitates coordination. We are also coordinating rulemaking with the requirements of RCW 19.405, the Clean Energy Transformation Act. Additionally, Ecology is working to make the rule consistent where possible with similar state law in California to facilitate potential program linkage, per RCW 70A.65.060(3).