



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

**Concise Explanatory Statement**  
**Chapter 173-407 WAC**  
**Greenhouse Gas Mitigation Requirements**  
**and Emissions Performance Standard for**  
**Power Plants**

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*Summary of rulemaking and response to comments*

February, 2018  
Publication no. 18-02-007

## Publication and Contact Information

This publication is available on the Department of Ecology's website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1802007.html>

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# **Concise Explanatory Statement**

## **Chapter 173-407 WAC Greenhouse Gas Mitigation Requirements and Emissions Performance Standard for Power Plants**

Air Quality Program  
Washington State Department of Ecology  
Olympia, Washington 98504-7600

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# Introduction

The purpose of a Concise Explanatory Statement is to:

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

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

Title: Greenhouse Gas Mitigation Requirements and Emissions Performance Standard for Power Plants (formerly Carbon Dioxide Mitigation Program, Greenhouse Gases Emissions Performance Standard and Sequestration Plans and Programs for Thermal Electric Generating Facilities.)

WAC Chapter(s): Chapter 173-407 WAC

Adopted date: February 21, 2018

Effective date: March 24, 2018

To see more information related to this rulemaking or other Ecology rulemakings please visit our web site: <http://ecology.wa.gov/About-us/How-we-operate/Rulemaking>

## Reasons for Adopting the Rule

This rulemaking amends Chapter 173-407 WAC Greenhouse Gas Mitigation Requirements and Emissions Performance Standard for Power Plants (formerly Carbon Dioxide Mitigation Program, Greenhouse Gases Emissions Performance Standard and Sequestration Plans and Programs for Thermal Electric Generating Facilities).

Ecology is adopting the revised Chapter 173-407 WAC for the following reasons:

- To comply with RCW 80.80.040 by adopting the most recent greenhouse gas emissions performance standard (standard) from WAC 194-26-020.
- To simplify future updates to the standard by referencing WAC 194-26-020 for any new standard implemented after the effective date of this rule.
- To be consistent with greenhouse gas emissions reporting required by EPA and Chapter 173-441 WAC by replacing the carbon dioxide conversion factors in Part I of this rule with the emission factors from 40 C.F.R., Part 98, Table C-1.
- To reduce unnecessary monitoring requirements by allowing certain facilities that are subject to the standard to have the option to use carbon dioxide emission factors from 40 C.F.R. Part 98, Table C-1.

- To reduce unnecessary emission testing requirements by allowing facilities that become subject to the standard after the effective date of this rule to have the option to use methane and nitrous oxide emission factors from 40 C.F.R. Part 98, Table C-2.
- To require applicant controlled mitigation projects to be operational within one year after the start of commercial operation, and allow extensions.
- To align this rule with Chapters 80.70 and 80.80 RCW.
- To make technical clarifications, correct errors, and improve readability.

## Differences Between the Proposed Rule and Adopted Rule

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

The following list includes differences between the proposed rule filed on October 4, 2017 and the adopted rule filed on February 21, 2018:

### WAC 173-407-005

- In subsection (a), change “WAC 173-407-010 through 173-407-090” to “WAC 173-407-010 through 173-407-080” to match with the sections included in Part I.
- In subsection (c), change “WAC 173-407-300 through 173-407-400” to “WAC 173-407-300 through 173-407-320” to match with the sections included in Part III.

### WAC 173-407-006

- Replace the “adoption date of this rule in February 2018” with “February 21, 2018,” the actual rule adoption date, to make the rule easier to understand.

### WAC 173-407-050 (1)

- Add “...” in the equation because it was mistakenly removed.
- In subsection (e), move “in effect on the date in WAC 173-407-006” to directly after “Table C-1” to connect the date reference to what it applies to.

### WAC 173-407-060 (1)(a)

- Add “The facility does not need to submit any mitigation plan if the calculated mitigation quantity is less than or equal to zero.” to provide clarification.

### WAC 173-407-120 (1)(a)

- Add “commercial” in front of operation to match with the defined term in WAC 173-407-110.

### WAC 173-407-130 (2)

- Replace the “rule effective date, March 2018” with “March 24, 2018,” the actual rule effective date, to make the rule easier to understand.
- Replace the “the day before the rule effective date, March 2018” with “March 23, 2018” to make the rule easier to understand.



WAC 173-407-130 (3)(b)

- Change “sequestration method” to “sequestration methods” because we mistakenly changed the term to singular in the proposed language.

WAC 173-407-160 (formerly WAC 173-407-230)

- Replace the “effective date of this rule in March 2018” with “March 24, 2018,” the actual rule effective date, throughout this section to make the rule easier to understand.
- In subsection (1)(c)(iv)(B), add “and produces” in front of “less than 25 MW of electricity” because it was mistakenly omitted.

WAC 173-407-200 (1)

- Add “to ecology” to clarify who the facility should submit the sequestration plan to.
- Add “propose to” before “begin sequestration” to clarify when the facility should submit the sequestration plan.

WAC 173-407-200 (2)

- Add “propose to” before “begin sequestration” to clarify when the facility should submit the sequestration plan.

WAC 173-407-220

- Add “to” before “ecology” in the first paragraph of this section because it was mistakenly omitted.
- In subsection (1)(b)(ii)(D), change “volume” to “quantity” to correct the wording used in the rule.

WAC 173-407-240

- Add “Note: Ecology is the agency responsible for enforcing this section.” to provide clarification that Ecology is the authorizing agency for enforcing Part II of this rule.
- Revise subsection (4) to read “Enforcement of a violation of notice of an order of approval must follow the requirements of chapter 70.94 RCW, as implemented by the permitting authority....” to provide clarification.

WAC 173-407-320 (1)

- Add “in effect at the time the long-term financial commitment is signed” to provide clarification.

We also revised the following provisions to improve readability and change passive voice to active voice to comply with agency policies (we underline where the changes take place).

WAC 173-407-005

- Change the first sentence of this section from “There are three separate parts to this rule” to “This rule has three separate parts.”

WAC 173-407-050

- In subsection (1)(b), change “When a unit or facility is allowed to use multiple fuels, the maximum allowed hours on the highest CO<sub>2</sub> producing fuels must be used for each fuel until the total of all hours per fuel add up to the allowable annual hours.” to “A unit or

facility allowed to use multiple fuels must use the maximum allowed hours on the highest CO<sub>2</sub> producing fuels for each fuel until the total of all hours per fuel add up to the allowable annual hours.”

- In subsection (1)(c), change “When a new unit or facility is allowed to use multiple fuels without restriction in its order of approval, this calculation must be performed assuming that the fuel with the highest CO<sub>2</sub> emission rate is used 100 percent of the time.” to “A new unit or facility allowed to use multiple fuels without restriction in its order of approval must perform this calculation assuming that the fuel with the highest CO<sub>2</sub> emission rate is used 100 percent of the time.”
- In subsection (1)(d), change “When the annual operating hours are restricted for any reason” to “When the order of approval restricts the annual operating hours for any reason”
- In first paragraph of subsection (5), change “Calculate the quantity of CO<sub>2</sub> to be mitigated” to “Calculate the CO<sub>2</sub> mitigation quantity”.
- In subsection (5)(d), change “A cogeneration credit may be used” to “A facility may use a cogeneration credit.”

#### WAC 173-407-060

- In subsection (1)(a), change “A CO<sub>2</sub> mitigation plan must be approved as part of the order of approval.” to “The facility must have an approved CO<sub>2</sub> mitigation plan as part of the order of approval.”
- In subsection (1)(b), change “why more time is needed to implement the mitigation plan” to “why the facility needs more time to implement the mitigation plan.”
- In subsection (3)(b)(i), change “The lump sum payment amount must be paid to the independent qualified organization no later than one hundred twenty days after the start of commercial operation.” to “The applicant must pay the lump sum payment amount to the independent qualified organization no later than one hundred twenty days after the start of commercial operation. ”
- In subsection (3)(b)(ii), change “The partial payments must be paid ... The first twenty percent of the total payment must be paid to the independent qualified organization... A payment of the same amount... must be paid by the anniversary date of the initial payment for the next four consecutive years.” to “The applicant must make partial payments... The applicant must pay the first twenty percent of the total payment to the independent qualified organization... An applicant must make a payment of the same amount... by the anniversary date of the initial payment for the next four consecutive years.”
- In subsection (4)(d), change “The permitting authority must determine the permanent carbon credits to be resold are offset by other CO<sub>2</sub> mitigation method(s).” to “The permitting authority must determine the permanent carbon credits proposed for resale are offset by other CO<sub>2</sub> mitigation method(s).”
- In subsection (5), change “The direct investment cost of the applicant controlled mitigation project, including funds used for selection, monitoring, and evaluation of mitigation projects, cannot be required by the permitting authority to exceed the cost of total payment to a third party per WAC 173-407-060(3).” to “The permitting authority cannot require the direct investment cost of the applicant controlled mitigation project, including funds used for selection, monitoring, and evaluation of mitigation projects, to exceed the cost of the total payment to a third party per WAC 173-407-060(3).”

#### WAC 173-407-070

- In subsection (2), change “to show how the requirements will be satisfied before an order of approval can be issued.” to “to show how the applicant will satisfy the requirements before the permitting authority can issue an order of approval.”

#### WAC 173-407-130

- In subsection (3), change “Compliance with the GHG EPS may be through the use of” to “A facility may comply with the GHG EPS through the use of.”

#### WAC 173-407-140

- In subsection (1)(a), change “These data must be monitored and reported as directed by WAC 173-407-160.” to “The facility must monitor and report these data as directed by WAC 173-407-160.”
- In subsection (1)(d), change “This adjustment must be based on records of fuel usage and representative heat contents approved by ecology.” to “The facility owner or operator must base this adjustment on records of fuel usage and representative heat contents approved by ecology.”
- In subsection (1)(e), change “Adjustment for GHG emissions that are sequestered. All GHG emissions that are permanently sequestered through an approved sequestration method(s) during the calendar year can be subtracted from the total pounds of GHG emitted during that year.” to “Adjustment for sequestered GHG emissions. A facility owner or operator can subtract the quantity of GHG emissions that are permanently sequestered through an approved sequestration method(s) during the calendar year from the total pounds of GHG emitted during that year.”

#### WAC 173-407-150

- In subsection (2)(a), change “The usage and heat content of fuels and fuel feed stocks provide energy input to the baseload electric cogeneration facility or unit. These data must be monitored and reported as directed by WAC 173-407-160.” to “The usage and heat content of fuels and fuel feed stocks that provide energy input to the baseload electric cogeneration facility or unit. The facility or unit owner or operator must monitor and report these data as directed by WAC 173-407-160.”
- In subsection (2)(e), change “This adjustment must be based on records of fuel usage and representative heat contents approved by ecology.” to “The owner or operator must base this adjustment on records of fuel usage and representative heat contents approved by ecology.”
- In subsection (2)(f), change “Adjustment for GHG emissions that are sequestered. All GHG emissions that are permanently sequestered through an approved sequestration method(s) during the calendar year can be subtracted from the total pounds of GHG emitted during that year.” to “Adjustment for sequestered GHG emissions. An owner or operator can subtract the quantity of GHG emissions that are permanently sequestered through an approved sequestration method(s) during the calendar year from the total pounds of GHG emitted during that year.”
- In subsection (3), change “To the extent possible, the facility-specific formula must be based on. . . . The formula must be specific to the equipment installed, thermal energy uses, and specific operating conditions of the facility.” to “To the extent possible, ecology and the facility must base the facility-specific formula on . . . Ecology and the facility must ensure that the formula is specific to the equipment installed, thermal energy uses, and specific operating conditions of the facility.”

#### WAC 173-407-220

- In subsection (1)(a)(i), change “The cost estimate for the sequestration project must be revised annually ....” to “The owner or operator must revise the cost estimate for the sequestration project must be revised annually....”
- In subsection (1)(b)(i), change “A current site map showing the boundaries of the permanent sequestration project containment system(s) and all areas where GHG will be stored.” to “A current site map showing the boundaries of the permanent sequestration project containment system(s) and all areas where the system(s) will store GHG.”
- In subsection (1)(b)(ii)(C), change “and any land use restrictions that exist at the time of the application or will be placed on the site in the future” to “and any land use restrictions that exist at the time of the application or the applicant will place on the site in the future”
- In subsection (1)(b)(ii)(D), change “The proposed calculated maximum volume of GHG to be sequestered and areal extent of the location where GHG will be stored using a method acceptable to and filed with ecology” to “The proposed calculated maximum volume of sequestered GHG and areal extent of the location where the facility will store GHG using a method acceptable to and filed with ecology.”
- In subsection (2)(a), change “Public notice must be made only after all information required by ecology has been submitted and applicable preliminary determinations, if any, have been made... The sequestration plan or sequestration program must be available for public inspection in at least one location near the proposed project.” to “Ecology will make a public notice only after the owner or operator of the facility submits all information required by ecology and Ecology makes all applicable preliminary determinations... The owner or operator of the facility must make the sequestration plan or sequestration program available for public inspection in at least one location near the proposed project.”
- In subsection (2)(b)(iii), change “and all comments received during the public comment period have been considered.” to “and Ecology has considered all comments received during the public comment period.”

#### WAC 173-407-160 (formerly WAC 173-407-230)

- In subsection (1)(a), change “Measurement will be on an hourly or daily basis and recorded in a form suitable for...” to “The facility will measure on an hourly or daily basis and record the measurements in a form suitable for...”
- In subsection (1)(b), change “The required monitoring can be accomplished through” to “The facility can accomplish required monitoring through.”
- In subsection (1)(b)(iii), change “Measurements will be on an hourly or daily basis and recorded in a form suitable for...” to “Each facility will measure on an hourly or daily basis and record the measurements in a form suitable for...”
- In subsection (1)(c)(ii)(D), change “Continuous emission monitors for CO<sub>2</sub> under (c)(ii) of this subsection must be installed at...” to “A facility or unit must install continuous emission monitors for CO<sub>2</sub> under (c)(ii) of this subsection at...”
- In subsection (1)(c)(iii)(A)(I), change “For the first year of operation, N<sub>2</sub>O emissions will be estimated....” to “For the first year of operation, facility owner or operator will estimate N<sub>2</sub>O emissions...”
- In subsection (1)(c)(iii)(A)(II), change “For succeeding years, N<sub>2</sub>O emissions will be estimated ... The emission factor must be derived through testing N<sub>2</sub>O emissions...” to “For succeeding years, facility operator or owner will estimate N<sub>2</sub>O emissions... Facility owner or operator must derive the emission through testing N<sub>2</sub>O emissions...”

- In subsection (1)(c)(iv)(A)(I), change “For the first year of operation, CH<sub>4</sub> emissions will be estimated...” to “For the first year of operation, the facility owner or operator will estimate CH<sub>4</sub> emissions...”
- In subsection (1)(c)(iv)(A)(II), change “For succeeding years, CH<sub>4</sub> emissions will be estimated using generating unit specific emission factors ...The emission factor must be derived through testing CH<sub>4</sub> emissions...” to “For succeeding years, the facility owner or operator will estimate CH<sub>4</sub> emissions using generating unit specific emission factors ... The facility owner or operator must derive the emission factor through testing CH<sub>4</sub> emissions...”
- In subsection (1)(d)(i), change “Fossil fuel usage must be monitored by measuring continuous fuel volume or weight as appropriate for the fuel used. Measurement must be on an hourly or daily basis and recorded in a form suitable for use in calculating GHG emissions.” to “Facility owner and operator must monitor fossil fuel usage by measuring continuous fuel volume or weight as appropriate for the fuel used. Facility owner and operator must measure on an hourly or daily basis and record the measurements in a form suitable for use in calculating GHG emissions.”
- In subsection (1)(d)(ii), change “Renewable fuel usage must be monitored by measuring continuous fuel volume or weight as appropriate for the fuel used. Measurement must be on an hourly or daily basis and record measurements in a form suitable for use in calculating GHG emissions.” to “Facility owner or operator must monitor renewable fuel usage by measuring continuous fuel volume or weight as appropriate for the fuel used. Facility owner or operator must measure on an hourly or daily basis and record the measurements in a form suitable for use in calculating GHG emissions.”
- In subsection (1)(d)(iii), change “Renewable fuel feedstocks must be monitored by measuring the fuel volume or weight, as appropriate, as the feedstocks are used in the combustion process. Measurement must be on an hourly or daily basis and recorded in a form suitable for use in calculating GHG emissions.” to “Facility owner or operator must monitor renewable fuel feedstocks by measuring the fuel volume or weight, as appropriate, as the feedstocks are used in the combustion process. Facility owner or operator must measure on an hourly or daily basis and record the measurements in a form suitable for use in calculating GHG emissions.”
- In subsection (1)(d)(iv), change “Renewable resources used in the production of electricity must be monitored continuously...” to “Facility owner or operator must monitor renewable resources used in the production of electricity continuously...”
- In subsection (1)(d)(v), change “Heat content of fossil fuels must be tested at least once per calendar year.” to “Facility owner or operator must test heat content of fossil fuels at least once per calendar year.”
- In subsection (1)(d)(vi), change “Renewable fuel heat content must be tested monthly or with a different frequency approved by ecology. A different frequency must be based on the variability of the heat content of the renewable fuel.” to “Facility owner or operator must test renewable fuel heat content monthly or with a different frequency approved by ecology. The facility owner or operator must base the different frequency on the variability of the heat content of the renewable fuel.”
- In subsection (1)(d)(vi)(A), change “monitoring of the heat content of the renewable fuels is not required.” to “ecology does not require monitoring of the heat content of the renewable fuels.”
- In subsection (1)(d)(vii), change “Heat content of renewable fuel feedstocks must be tested monthly or on a different schedule approved by ecology. A different schedule will be based

on the variability of the heat content of the renewable fuel feedstocks. The heat content of the fuel feedstocks must be measured in the form they are used in the combustion process.” to “Facility owner or operator must test the heat content of renewable fuel feedstocks monthly or on a different schedule approved by ecology. Ecology will approve the different schedule based on the variability of the heat content of the renewable fuel feed-stocks. The facility owner or operator must measure the heat content of the fuel feedstocks in the form they are used in the combustion process.”

- In subsection (1)(d)(vii)(A), change “monitoring of the heat content of the renewable fuel feedstocks is not required.” to “ecology does not require monitoring of the heat content of the renewable fuel feedstocks.”
- In subsection (2), change “The results of the monitoring required by this section must be reported to ecology and the permitting authority annually.” to “Facility owner or operator must report the results of the monitoring required by this section to ecology and the permitting authority annually.”
- In subsection (2)(a), change “Annual emissions of CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> that occurred in the previous calendar year and sup-porting information must be reported to ecology and the permitting authority by January 31st of each calendar year. The report may be an Excel™ or CSV format copy of the report submitted to EPA per 40 C.F.R. Part 75 with N<sub>2</sub>O and CH<sub>4</sub> emissions appended to the report.” to “Facility owner or operator must report annual emissions of CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> that occurred in the previous calendar year and supporting information to ecology and the permitting authority by January 31st of each calendar year. The facility owner or operator may submit the report as an Excel™ or CSV format copy of the report submitted to EPA per 40 C.F.R. Part 75 with N<sub>2</sub>O and CH<sub>4</sub> emissions appended to the report.”
- In subsection (2)(b), change “Annual emissions of CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> that occurred in the previous calendar year and supporting information must be reported to ecology and the permitting authority by January 31st of each calendar year” to “Facility owners or operators must report annual emissions of CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> that occurred in the previous calendar year and supporting information to ecology and the permitting authority by January 31st of each calendar year.”

#### WAC 173-407-300

- In subsection (1), change “at the time commitment is signed.” to “at the time the parties sign the commitment.”
- In subsection (2)(c), change “in effect on the date the commitment is signed. A power plant in a long-term financial commitment with multiple power plants meeting the following criteria is deemed to be in compliance with the GHG EPS.” to “in effect on the date the parties sign the commitment. Ecology deems a power plant named in a long-term financial commitment with multiple power plants meeting the following criteria to be in compliance with the GHG EPS.”
- In subsection (2)(c)(iii), change “unless it has been subject to a: (A) Change in ownership; or” to “unless it has:(A) Changed ownership; or.”
- In subsection (3), change “If compliance with the GHG EPS for a long-term financial commitment cannot be determined based on the conditions in subsection (2) of this section, procedures in WAC 173-407-140 or 173-407-150 must be used to determine compliance with the GHG EPS.” to “If ecology cannot determine compliance with the GHG EPS for a long-term financial commitment based on the conditions in subsection (2) of this section,

ecology must use procedures in WAC 173-407-140 or 173-407-150 to determine compliance with the GHG EPS.”

- In subsection (4), change “Long-term purchase of coal transition power is exempt from...” to “This rule exempts long-term purchase of coal transition power from...”

#### WAC 173-407-310

- In subsection (1), change “for the period that the baseload electric generation is supplied to the electrical company.” to “On request for assistance from the UTC,...for the period that the investor-owned utility contracts for the baseload electric generation”

## **Response to Comments**

Ecology accepted comments from October 4 to November 14, 2017 and held a public hearing on November 7, 2017. Two people attended the public hearing in person and ten people participated online via webinar. Ecology received no comments at the hearing, by mail or online by filling out the public comment form.