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ATTACHMENT D
Oregon EFSC Meeting
June 29, 2018
2018 Rulemaking: Phase 2 - CO2 Standards

DIRECTOR

800 SUMMER STREET NE
SALEM, OR 97310
503-373-0701

NOTICE OF PROPOSED RULEMAKING
INCLUDING STATEMENT OF NEED & FISCAL IMPACT

CHAPTER 345
DEPARTMENT OF ENERGY
ENERGY FACILITY SITING COUNCIL

FILED

05/28/2018 5:20 PM
ARCHIVES DIVISION
SECRETARY OF STATE

FILING CAPTION: Update carbon dioxide (CO₂) emissions standards based on current natural gas-fired energy facility technology.

LAST DAY AND TIME TO OFFER COMMENT TO AGENCY: 06/29/2018 10:30 AM

The Agency requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing negative economic impact of the rule on business.

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Oregon Department of Energy
550 Capitol St. NE
Salem, OR 97301

Filed By:
JASON SIERMAN
Rules Coordinator

HEARING(S)

Auxiliary aids for persons with disabilities are available upon advance request. Notify the contact listed above.

DATE: 06/29/2018

TIME: 9:00 AM

OFFICER: Jason Sierman

ADDRESS: Meitner Conference Room

Oregon Department of Energy

550 Capitol St. NE

Salem, OR 97301

NEED FOR THE RULE(S):

EFSC's CO₂ emissions standards impose the net CO₂ emissions rate thresholds for large scale fossil-fueled energy facilities sited in Oregon. There are three CO₂ emissions standards, one for base load gas plants, one for non-base load power plants, and one for nongenerating energy facilities. The CO₂ standards apply to those energy facilities within EFSC's jurisdiction that apply for new site certificates and also existing site certificate holders making requests for certain types of amendments to their existing site certificates.

As specified under ORS 469.503(2) and OAR 345-024-0500 through -0720, EFSC's current CO₂ emissions standards limit the net CO₂ emissions rate of base load gas plants and non-base load power plants to 0.675 lb. CO₂/kWh, and limit the net CO₂ emissions rate for nongenerating energy facilities to 0.504 lb. CO₂/hp-hr for nongenerating energy facilities. These two emissions rates are written in different units for different technologies, but are equivalent to each other. Facilities subject to these standards must comply with them by offsetting the facility's gross lifetime CO₂ emissions that occur in excess of the applicable net emissions rate limit set in the standards (either 0.675 lb. CO₂/kWh or the equivalent 0.504 CO₂/hp-hr) via one of the compliance pathway options outlined in rule. To date, all applicants have complied with the standards by making monetary offset payments to a qualified organization (The Climate Trust).

The purpose of EFSC's CO₂ emissions standards is two-fold. The first purpose, the efficiency purpose, is to encourage applicants proposing a fossil-fueled energy facility to build the most efficient facility possible, thereby directly reducing the gross amount of CO₂ emitted from fossil-fueled energy facilities sited within EFSC's jurisdiction. The second purpose, the offset purpose, is to indirectly reduce the net amount of greenhouse gases (GHGs) attributable to fossil-fueled energy facilities sited within EFSC's jurisdiction by requiring certificate holders to offset CO₂ emissions occurring in excess of EFSC's CO₂ emissions standards.

ORS 469.503(2)(a) and OAR 345-024-0570 authorize EFSC to update the emissions standard for base load gas plants through rulemaking any time EFSC finds that the efficiency of a combined cycle, combustion turbine (CCCT), natural gas-fired energy facility that is commercially demonstrated and operating in the United States has improved relative to the benchmark efficiency specified in OAR 345-024-0570. This authority gives EFSC the ability to ensure that the net CO₂ emissions rates of CO₂ emitting energy facilities sited within EFSC's jurisdiction remain 17% below the CO₂ emissions rate of the most efficient gas plant operating in the U.S. at any given time. OAR 345-024-0610 and OAR 345-024-0640 also authorize EFSC to modify the standard for non-base load power plants and the standard for nongenerating energy facilities. These rules require both the standard for non-base load power plants and the standard for nongenerating energy facilities to remain equal to the standard for base load gas plants. OAR 345-024-0510 requires EFSC to consider and balance at least thirteen principles, set in rule, in adopting new CO₂ standards for fossil-fueled power plants .

In January 2000, EFSC found that the most efficient gas plant operating in the U.S. had a heat rate of 6,955 Btu/kWh (~49% efficiency). Based on this finding, EFSC took action through a rulemaking in 2000 and a rulemaking in 2002 to update its CO₂ standards and update the benchmark heat rate in OAR 345-024-0570 to 6,955 Btu/kWh. EFSC updated the CO₂ standards to their current values of 0.675 lbs. CO₂/kWh for base load gas plants and non-base load power plants and 0.504 lbs. CO₂/hp-hr for nongenerating energy facilities by calculating a 17% reduction from 6,955 Btu/kWh (5,773 Btu/kWh), then converting 5,773 Btu/kWh to 0.675 lbs. CO₂/kWh by multiplying 5,773 Btu/kWh by a conversion factor of 0.000117 lbs. CO₂/Btu. There are 0.746 kWh per 1 hp-hr, and 0.675 lbs. CO₂/kWh multiplied by 0.746 kWh/hp-hr equals 0.504 lbs. CO₂/hp-hr.

Neither the benchmark heat rate, nor any of the net CO₂ emissions rate thresholds have been updated since the 2000 and 2002 rulemakings. Yet, over that same time period, the power industry has experienced continuous improvements in power plant efficiency. In other words, EFSC's CO₂ emissions standards are out of date and, if not updated to reflect the most efficient current technology, could eventually allow an applicant to propose an energy facility that would not be required to offset a portion of its CO₂ emissions at all. If a proposed fossil-fueled energy facility is not required to offset its CO₂ emissions at all, the two-fold purpose of EFSC's CO₂ emissions standards would no longer be met.

DOCUMENTS RELIED UPON, AND WHERE THEY ARE AVAILABLE:

73.09.02.010_FR_EPC - EPC FINAL PERFORMANCE TEST REPORT - Grand River Energy Center Unit 3, Kiewit Engineering & Design Co., October 25, 2017.

Analysis of 13 Principles for Amending the Carbon Dioxide (CO₂) Standards, Oregon Department of Energy, May 30, 2017.

FISCAL AND ECONOMIC IMPACT:

The proposed amendments would decrease each of the three CO₂ emissions standards by roughly 9 percent. The Oregon Department of Energy (ODOE) estimates this decrease would continue to allow the siting, construction, and operation of fossil-fueled energy facilities to be economically achievable. The impact the proposed 9 percent decrease would have on the overall costs of siting, constructing, and operating a fossil-fueled energy facility would be small. To illustrate the magnitude of impact the proposed 9 percent decrease to the CO₂ emissions standards would have relative to the total cost to site, construct and operate a fossil-fueled energy facility, we can compare what it would cost a new hypothetical energy facility to comply with the existing CO₂ standards (using the existing monetary offset rate of \$1.90/ton and the existing applicable CO₂ emissions standard of either 0.675 lbs. CO₂/kWh or 0.504 lbs. CO₂/Btu) to what it would cost that same new hypothetical energy facility to comply with the proposed CO₂ standards (using the existing monetary offset rate of \$1.90/ton and the proposed applicable CO₂ emissions standard of either 0.614 lbs. CO₂/kWh or 0.458 lbs. CO₂/Btu). Expressing compliance costs under the existing and proposed CO₂ standards in terms of a percentage of the total cost to site, construct, and operate the facility for 30 years offers the best comparison.

Hypothetical base load gas plant

A hypothetical base load gas plant with a nominal generating capacity of 370 megawatts, an emission rate of 0.782 lbs. CO₂/kWh (6,688 Btu/kWh heat rate), and operating 7,884 hours per year (90% operating capacity) for 30 years.

The estimated cost to comply with the existing CO₂ standard of 0.675 lbs. CO₂/kWh would be \$10.38 million dollars and the estimated cost to comply with the proposed CO₂ standard of 0.614 lbs. CO₂/kWh would be \$16.26 million dollars. Compliance cost estimates are based on calculation methods specified in rule and statute.

The estimated total cost to site, construct and operate the facility for 30 years is around \$3.32 billion dollars. Cost estimates to site, construct and operate the facility are based on data from the 7th Power Plan from the Northwest Power and Conservation Council.

The cost to comply with the existing CO₂ standard as a percentage of the total cost to site, construct, and operate the facility for 30 years is 0.31% (\$10.38M / \$3.32B). The cost to comply with the proposed CO₂ standard as a percentage of the total cost to site, construct, and operate the facility for 30 years is 0.49% (\$16.26M / \$3.32B).

Hypothetical non-base load gas plant

For a hypothetical non-base load gas plant with a nominal generating capacity of 370 megawatts, an emission rate of 0.782 lbs. CO₂/kWh (6,688 Btu/kWh heat rate), and operating 5,256 hours per year (60% operating capacity) for 30 years.

The estimated cost to comply with the existing CO₂ standard of 0.675 lbs. CO₂/kWh would be \$6.24 million dollars and

the estimated cost to comply with the proposed CO₂ standard of 0.614 lbs. CO₂/kWh would be \$9.77 million dollars. Compliance cost estimates are determined based on calculation methods specified in rule and statute.

The estimated total costs of siting, constructing and operating the facility is around \$2.64 billion dollars. Cost estimates to site, construct and operate the facility are based on data from the 7th Power Plan from the Northwest Power and Conservation Council.

The cost to comply with the existing CO₂ standard as a percentage of the total cost to site, construct, and operate the facility for 30 years is 0.24% (\$6.24M / \$2.64B). The cost to comply with the proposed CO₂ standard as a percentage of the total cost to site, construct, and operate the facility for 30 years is 0.37% (\$9.77M / \$2.64B).

Hypothetical nongenerating fossil-fueled energy facility

For a hypothetical nongenerating fossil-fueled energy facility with a nominal compressor capacity of 10,000 horsepower, an emission rate of 0.936 lb. CO₂/hp-hr (8,000 Btu/hp-hr heat rate), and operating 3,000 hours per year for 30 years.

The estimated cost to comply with the existing CO₂ standard of 0.504 lbs. CO₂/kWh would be \$406,296 dollars and the estimated cost to comply with the proposed CO₂ standard of 0.458 lbs. CO₂/kWh would be \$449,559 dollars. Compliance cost estimates are determined based on calculation methods specified in rule and statute.

The total costs of siting, constructing and operating a nongenerating facility are difficult to quantify because the project scope of a nongenerating facility is not as predictable as the project scope for a base load or non-base load facility. Without a clear way to estimate these costs, the cost to comply with the existing and proposed CO₂ standards as a percentage of the total cost to site, construct, and operate the facility for 30 years is not available.

COST OF COMPLIANCE:

(1) Identify any state agencies, units of local government, and members of the public likely to be economically affected by the rule(s). (2) Effect on Small Businesses: (a) Estimate the number and type of small businesses subject to the rule(s); (b) Describe the expected reporting, recordkeeping and administrative activities and cost required to comply with the rule(s); (c) Estimate the cost of professional services, equipment supplies, labor and increased administration required to comply with the rule(s).

(1) The proposed amendments are not expected to impact state agencies or units of local government. The general public is also not expected to be impacted. Applicants for site certificates for fossil-fueled energy facilities would see an increase in compliance costs as a fraction of the total cost to site, construct, and operate the facility. A very rough estimate of what these increases may be is given above.

(2)(a) Few, if any, small businesses would be subject to the proposed rule changes. EFSC rules apply to applicants for, and holders of, site certificates for large energy facilities as defined in ORS 469.300. Applicants for site certificates are usually large corporations or subsidiaries of large corporations. Nevertheless, a small business could become an applicant or certificate holder. The only industry or business affected by these rules are those related to developing, building or operating energy facilities. Because the proposed update of the CO₂ emissions standards is not expected to significantly increase the costs to comply with the CO₂ standards as a percentage of the overall cost to site, construct

and operate a fossil-fueled energy facility, and because few, if any small businesses are applicants or certificate holders, the proposed rules are not expected to result in significant adverse impacts on small businesses.

Furthermore, while it is possible for a site certificate holder to be a small business, as defined under ORS 183.336, the burden of any such small business to comply with all applicable siting standards prescribed in Oregon's energy facility siting statutes and rules cannot be diminished in any way. Therefore, while the costs of compliance for an energy facility to meet Oregon's applicable siting standards may vary depending on the type and location of a proposed facility, the costs of compliance will not vary depending on the type of business entity applying for a site certificate. Therefore, regardless of an applicant's characterization as a small business or not, EFSC could not reduce any significant adverse economic impact of the rule for potential small business applicants.

(2)(b) None anticipated because few, if any, small businesses would be subject to the proposed rule changes.

(2)(c) None anticipated because few, if any, small businesses would be subject to the proposed rule changes.

DESCRIBE HOW SMALL BUSINESSES WERE INVOLVED IN THE DEVELOPMENT OF THESE RULE(S):

Because there is no anticipated impact to small businesses, small businesses were not involved in the development of the proposed rule. However, small businesses and others will have the opportunity to comment on the proposed rule through the close of the public hearing and public comment period.

WAS AN ADMINISTRATIVE RULE ADVISORY COMMITTEE CONSULTED? YES

RULES PROPOSED:

345-024-0550, 345-024-0570, 345-024-0590, 345-024-0620

AMEND: 345-024-0550

RULE SUMMARY: This rule provides EFSC's regulatory standards related to carbon dioxide emissions for the siting of base load gas plants.

CHANGES TO RULE:

345-024-0550

Standard for Base Load Gas Plants ¶¶

To issue a site certificate for a base load gas plant, the Council must find that the net carbon dioxide emissions rate of the proposed facility does not exceed 0.675~~14~~ pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis. For a base load gas plant designed with power augmentation technology as defined in OAR 345-001-0010, the Council shall apply the standard for a non-base load power plant, as described in OAR 345-024-0590, to the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. The Council shall determine whether the base load carbon dioxide emissions standard is met as follows:¶¶

(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility. The Council shall adopt site certificate conditions to ensure that the predicted carbon dioxide emissions are not exceeded on a new and clean basis.¶¶

(2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0560, or any combination thereof. The Council shall determine

the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant's offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. The amount of greenhouse gas emissions means the pounds of carbon dioxide and the carbon dioxide equivalent of other greenhouse gases. For methane, one pound of methane is equivalent to 25 pounds of carbon dioxide. For nitrous oxide, one pound of nitrous oxide is equivalent to 298 pounds of carbon dioxide.¶

(3) If the applicant elects to comply with the standard using the means described in OAR 345-024-0560(2), the Council shall determine the amount of greenhouse gas emissions reduction that is reasonably likely to result from each of the proposed offsets. In making this determination, the Council shall not allow credit for offsets that have already been allocated or awarded credit for greenhouse gas emissions reduction in another regulatory setting. The fact that an applicant or other parties involved with an offset may derive benefits from the offset other than the reduction of greenhouse gas emissions is not, by itself, a basis for withholding credit for an offset. The Council shall base its determination of the amount of greenhouse gas emission reduction on the following criteria and as provided in OAR 345-024-0680:¶

(a) The degree of certainty that the predicted quantity of greenhouse gas emissions reduction will be achieved by the offset.¶

(b) The ability of the Council to determine the actual quantity of greenhouse gas emissions reduction resulting from the offset, taking into consideration any proposed measurement, monitoring and evaluation of mitigation measure performance.¶

(c) The extent to which the reduction of greenhouse gas emissions would occur in the absence of the offsets.¶

(4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of a gas turbine vendor and shall submit a written design information report to the Department sufficient to verify the facility's designed new and clean heat rate and its nominal electric generating capacity at average annual site conditions for each fuel type. In the report, the certificate holder shall include the proposed limits on the annual average number of hours of facility operation on distillate fuel oil, if applicable. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR 345-024-0560.

Statutory/Other Authority: ORS 469.470, 469.503, 469.501

Statutes/Other Implemented: ~~ORS~~469.503, 469.5031

AMEND: 345-024-0570

RULE SUMMARY: This rule states the means by which EFSC can modify its regulatory standard related to carbon dioxide emissions for the siting of base load gas plants.

CHANGES TO RULE:

345-024-0570

Modification of the Standard for Base Load Gas Plants ¶

The Council may by rule modify the carbon dioxide emissions standard for base load gas plants in OAR 345-024-0550 if the Council finds that the most efficient stand-alone combined cycle, combustion turbine, natural gas-fired energy facility that is commercially demonstrated and operating in the United States has a net heat rate of less than ~~6,955~~326 Btu per kilowatt hour higher heating value adjusted to ISO conditions. In modifying the carbon dioxide emission standard, the Council shall determine the rate of carbon dioxide emissions per kilowatt hour of net electric output of such energy facility, adjusted to ISO conditions and reset the carbon dioxide emissions standard at 17 percent below this rate.

Statutory/Other Authority: ORS 469.470, 469.501, 469.503

Statutes/Other Implemented: ~~ORS~~469.501, 469.503

AMEND: 345-024-0590

RULE SUMMARY: This rule provides EFSC's regulatory standards related to carbon dioxide emissions for the siting of non-base load power plants.

CHANGES TO RULE:

345-024-0590

Standard for Non-Base Load Power Plants ¶

To issue a site certificate for a non-base load power plant, the Council must find that the net carbon dioxide emissions rate of the proposed facility does not exceed 0.675~~14~~ pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis. For a base load gas plant designed with power augmentation technology as defined in OAR 345-001-0010, the Council shall apply this standard to the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. The Council shall determine whether the carbon dioxide emissions standard is met as follows:¶

(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility, the limitation on the hours of generation for each fuel type and the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate. For a base load gas plant designed with power augmentation technology, the Council shall base its determination of the incremental carbon dioxide emissions on the proposed design of the facility, the proposed limitation on the hours of generation using the power augmentation technology and the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate with power augmentation technology. The Council shall adopt site certificate conditions to ensure that the predicted carbon dioxide emissions are not exceeded on a new and clean basis; however, the Council may modify the parameters of the new and clean basis to accommodate average conditions at the times when the facility is intended to operate and technical limitations, including operational considerations, of a non-base load power plant or power augmentation technology or for other cause.¶

(2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0600 or any combination thereof. The Council shall determine the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant's offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. The amount of greenhouse gas emissions means the pounds of carbon dioxide and the carbon dioxide equivalent of other greenhouse gases. For methane, one pound of methane is equivalent to 25 pounds of carbon dioxide. For nitrous oxide, one pound of nitrous oxide is equivalent to 298 pounds of carbon dioxide.¶

(3) If the applicant elects to comply with the standard using the means described in OAR 345-024-0600(2), the Council shall determine the amount of greenhouse gas emissions reduction that is reasonably likely to result from each of the proposed offsets. In making this determination, the Council shall not allow credit for offsets that have already been allocated or awarded credit for greenhouse gas emissions reduction in another regulatory setting. The fact that an applicant or other parties involved with an offset may derive benefits from the offset other than the reduction of greenhouse gas emissions is not, by itself, a basis for withholding credit for an offset. The Council shall base its determination of the amount of greenhouse gas emission reduction on the following criteria and as provided in OAR 345-024-0680:¶

(a) The degree of certainty that the predicted quantity of greenhouse gas emissions reduction will be achieved by the offset.¶

(b) The ability of the Council to determine the actual quantity of greenhouse gas emissions reduction resulting from the offset, taking into consideration any proposed measurement, monitoring and evaluation of mitigation measure performance.¶

(c) The extent to which the reduction of greenhouse gas emissions would occur in the absence of the offsets.¶

(4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of an equipment vendor and shall submit a written design information report to the Department sufficient to verify the facility's designed new and clean heat rate and its nominal electric generating capacity at average annual site conditions for each fuel type. For a base load gas plant designed with power augmentation technology, the certificate holder shall include in the report information sufficient to verify the facility's designed new and clean heat rate, tested under parameters the Council orders pursuant to section (1), and the nominal electric generating capacity at average site conditions during the intended use for each fuel type from the operation of the proposed facility using the power augmentation technology. The certificate holder shall include the proposed limit on the annual average number of hours for each fuel used, if applicable. The certificate holder shall include the proposed total number of hours of operation for all fuels, subject to the limitation that the total annual average number of hours of operation per year is not more than 6,600 hours. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the gross carbon dioxide emissions from the facility and the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR 345-024-0600.¶¶

(5)(a) Every five years after commencing commercial operation, the certificate holder shall report to the Council the facility's actual gross carbon dioxide emissions. The certificate holder shall calculate actual gross carbon dioxide emissions using the new and clean heat rate and the actual hours of operation on each fuel during the five-year period or shall report to the Council the actual measured or calculated carbon dioxide emissions as reported to either the Oregon Department of Environmental Quality or the U.S. Environmental Protection Agency pursuant to a mandatory carbon dioxide emissions reporting requirement.¶¶

(b) The certificate holder shall specify its election of method used to measure or calculate carbon dioxide emissions in the notification report described at section (4) of this rule. That election, once made, shall apply for each five year period unless the site certificate is amended to allow a different election. If the certificate holder calculates actual carbon dioxide emissions using the new and clean heat rate and the actual hours of operation, the certificate holder shall also report to the Council the facility's actual annual hours of operation by fuel type. If the actual gross carbon dioxide emissions exceed the projected gross carbon dioxide emissions for the five-year period calculated under section (4), the certificate holder shall offset any excess emissions for that period and shall offset estimated future excess carbon dioxide emissions using the monetary path as described in OAR 345-024-0600(3) and (4) or as approved by the Council.¶¶

(6) For a base load gas plant designed with power augmentation technology, every five years after commencing commercial operation, the certificate holder shall report to the Council the facility's actual hours of operation using the power augmentations technology for each fuel type. If the actual gross carbon dioxide emissions, calculated using the new and clean heat rate, tested under parameters the Council orders pursuant to section (1), and the actual hours of operation using the power augmentation technology on each fuel during the five-year period exceed the projected gross carbon dioxide emissions for the five-year period calculated under section (4), the certificate holder shall offset any excess emissions for that period and shall offset estimated future excess carbon dioxide emissions using the monetary path as described in OAR 345-024-0600(3) and (4) or as approved by the Council.

Statutory/Other Authority: ORS 469.470, 469.501, 469.503

Statutes/Other Implemented: ~~ORS~~ 469.501, 469.503

AMEND: 345-024-0620

RULE SUMMARY: This rule provides EFSC's regulatory standards related to carbon dioxide emissions for the siting of nongenerating energy facilities.

CHANGES TO RULE:

345-024-0620

Standard for Nongenerating Energy Facilities ¶¶

To issue a site certificate for a nongenerating energy facility that emits carbon dioxide, the Council must find that the net carbon dioxide emissions rate of the proposed facility does not exceed ~~0.504458~~ pounds of carbon dioxide per horsepower hour. The Council shall determine whether the carbon dioxide emissions standard is met as follows:¶¶

(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility. In determining gross carbon dioxide emissions for a nongenerating facility, the Council shall calculate carbon dioxide emissions for a 30-year period unless the applicant requests, and the Council adopts in the site certificate, a different period. The Council shall determine gross carbon dioxide emissions based on its findings of the reasonably likely operation of the energy facility. The Council shall use a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel (higher heating value) and a rate of 161 pounds of carbon dioxide per million Btu of distillate fuel (higher heating value), if the applicant proposes to use such fuel. If the applicant proposes to use any other fossil fuel, the Council shall adopt by rule an appropriate carbon dioxide content rate for the fuel.¶¶

(2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0630 or any combination thereof. The Council shall determine the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant's offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. The amount of greenhouse gas emissions means the pounds of carbon dioxide and the carbon dioxide equivalent of other greenhouse gases. For methane, one pound of methane is equivalent to 25 pounds of carbon dioxide. For nitrous oxide, one pound of nitrous oxide is equivalent to 298 pounds of carbon dioxide.¶¶

(3) If the applicant elects to comply with the standard using the means described in OAR 345-024-0630(1), the Council shall determine the amount of greenhouse gas emissions reduction that is reasonably likely to result from each of the proposed offsets. In making this determination, the Council shall not allow credit for offsets that have already been allocated or awarded credit for greenhouse gas emissions reduction in another regulatory setting. The fact that an applicant or other parties involved with an offset may derive benefits from the offset other than the reduction of greenhouse gas emissions is not, by itself, a basis for withholding credit for an offset. The Council shall base its determination of the amount of greenhouse gas emission reduction on the following criteria and as provided in OAR 345-024-0680:¶¶

(a) The degree of certainty that the predicted quantity of greenhouse gas emissions reduction will be achieved by the offset.¶¶

(b) The ability of the Council to determine the actual quantity of greenhouse gas emissions reduction resulting from the offset, taking into consideration any proposed measurement, monitoring and evaluation of mitigation measure performance.¶¶

(c) The extent to which the reduction of greenhouse gas emissions would occur in the absence of the offsets.¶¶

(4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of an equipment manufacturer and shall submit a written design information report to the Department sufficient to verify the facility's designed rate of fuel use and its nominal capacity for each fuel type. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR

345-024-0630.¶

(5) In the site certificate, the Council shall specify the schedule by which the certificate holder shall provide offsets. In the schedule, the Council shall specify the amount and timing of offsets the certificate holder must provide to an offset credit account. In determining the amount and timing of offsets, the Council may consider the estimate of total offsets that may be required for the facility and the minimum amount of offsets needed for effective offset projects. The Department shall maintain the record of the offset credit account.

Statutory/Other Authority: ORS 469.470, 469.501, 469.503

Statutes/Other Implemented: ~~ORS 469.501, 469.503~~